International Bryozoology Association Bulletin

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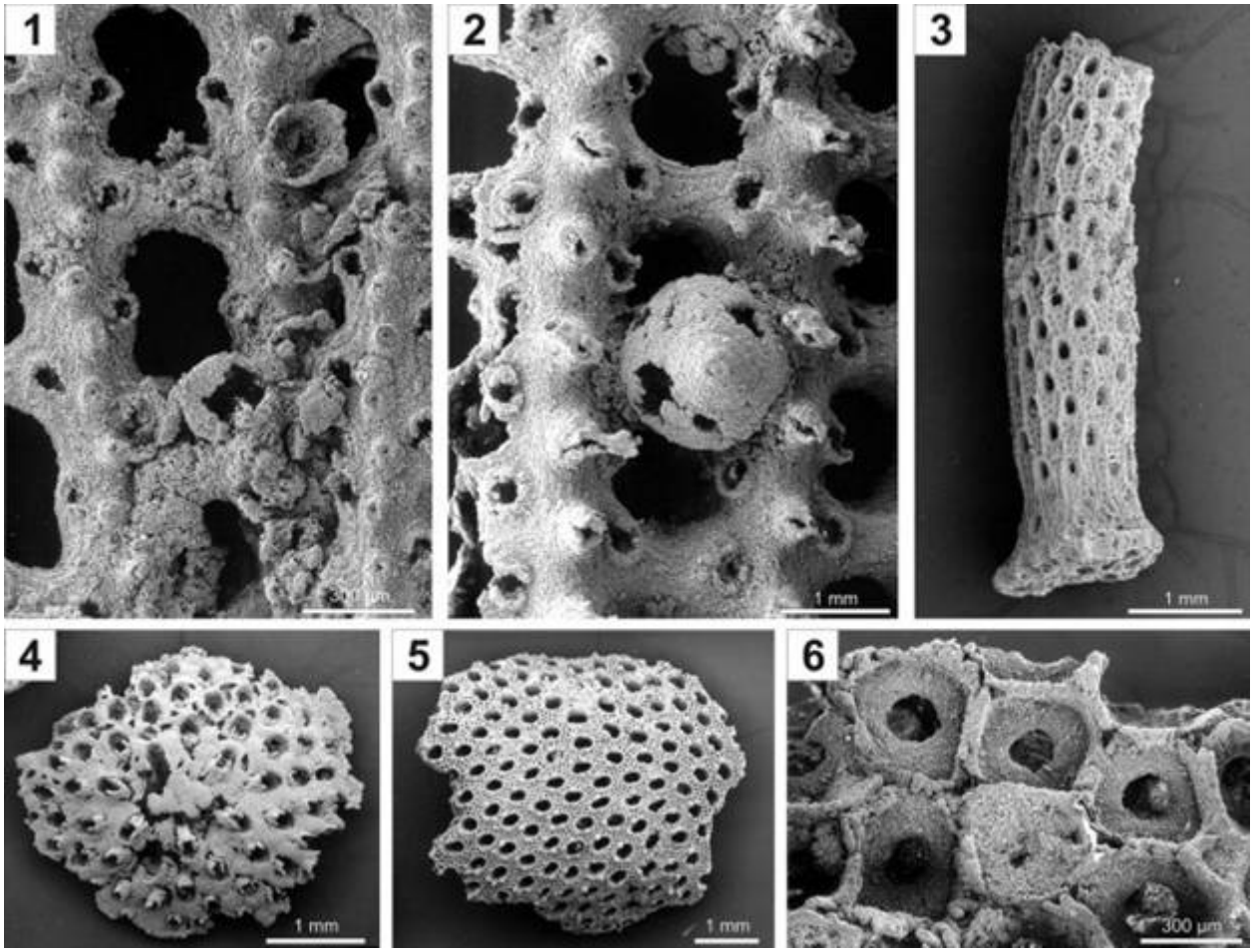
News from the Membership

Andrej Ernst. I am working mainly on Devonian bryozoans of Europe now, including at the present moment Germany, Spain, some material from Czech Republic (thanks to Kamil Zágoršek!), and very interesting material from the Middle Devonian of Morocco. German and Spanish material reveal to be very abundant and diverse, and mostly unexplored. Otherwise, I have an amazing material from the Upper Carboniferous of Spain (see Figure). Unfortunately, my efforts to contact any specialists from Spain working there on Devonian and Carboniferous were unsuccessful. If anybody is interested in collaboration, I would be very glad. I also continue some research on Permian bryozoans of Oman and Iran. Some first publications about these results should appear soon, as well as our paper with Hans Arne Nakrem on Ellesmere Permian bryozoans. Some other publications of mine and colleagues about Ordovician bryozoans (France, India and North America) are also in press and should appear next year. Furthermore, I also work on some Lower Carboniferous faunas of Europe (collaboration with Patrick Wyse Jackson).



Figures: Silicified bryozoans from the Upper Carboniferous of Spain: 1, 2 – Fenestellid sp. indet (with ovicells!); 3 – *Streblascopora* sp.; 4, *Fistulipora* sp.; 5 – *Leioclema* sp.; *Tabulipora* cf. *stragula* Karklins, 1986.

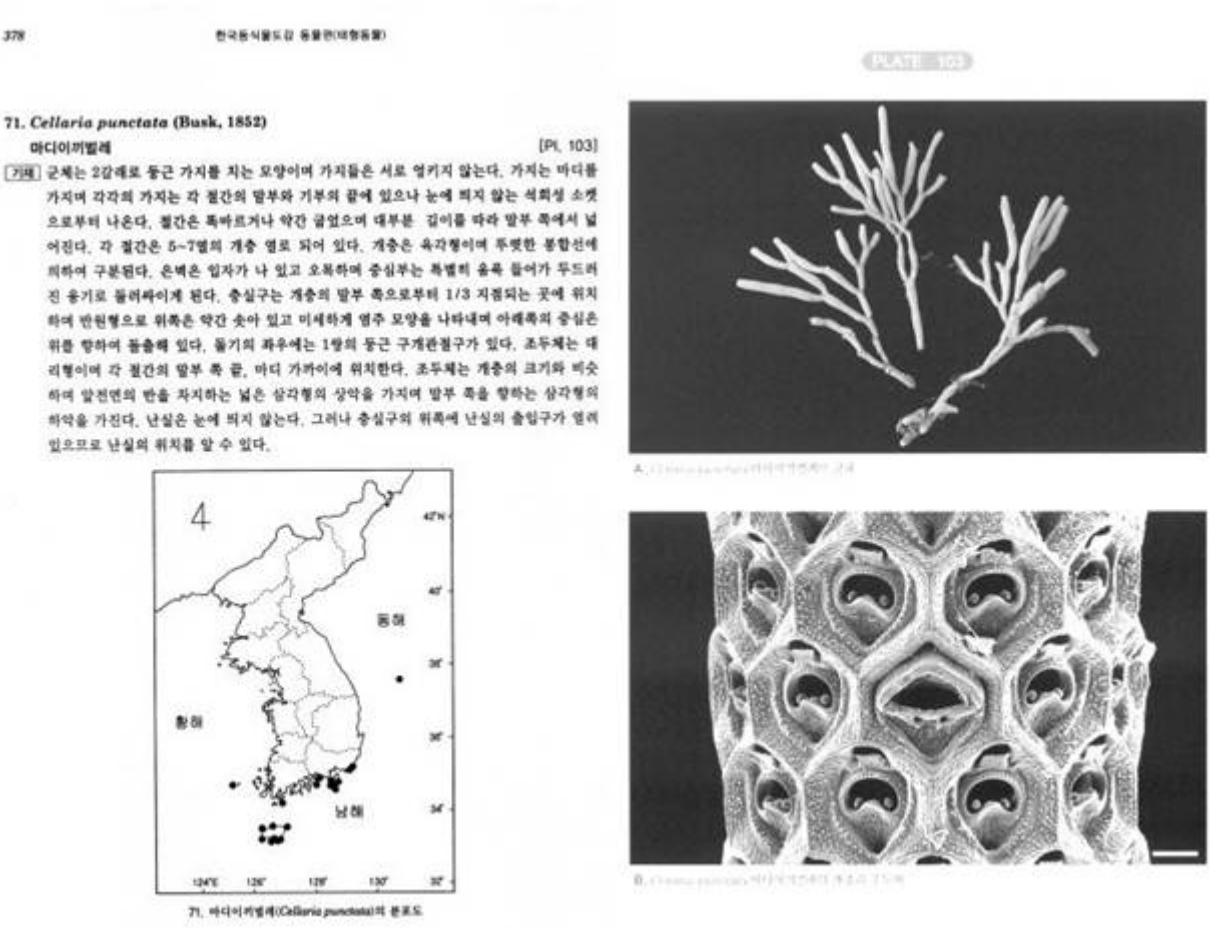
Marcus Key. I have received the J. A. Valentine Visiting Professorship in the Department of Marine Science at the University of Otago in Dunedin New Zealand. This will allow me to travel to New Zealand in the spring of 2007 during my sabbatical to work with Abby Smith! We are all excited to work on bryozoan mineralization!

Scott Lidgard was among 8 professors at the University of Chicago honored with an award for graduate student mentorship. Said Scott in a message to Dennis Gordon, "It felt very good as it came from students with whom I had worked."

Kevin Tilbrook. The monograph is out and it looks fantastic even if I do say so myself (*Ed. note: see Bryozoan Bookstall, this issue*). Frankly, it should do as it has been kicking around for years – quite some gestation period! If you want a copy, but do not think that you are on the list that John & Dorothy Soule used then contact Henry Chaney at the Santa Barbara Museum of Natural History and I am sure that he will be will to supply you with one.

As for me now, well I am still looking for that elusive next academic position. (I was very pleased to note that the two Andrei's have been housed!). I am looking for a lectureship, a position in a museum, or the like – anyone feel like putting a proposal together with me!? I feel gutted at the prospect that this monograph might be the last thing I write about bryozoans. I would miss Bryozoology terribly, and I think that I would be a loss to bryozoan taxonomy (if that is not too immodest of me to say)! I have a great passion for them and I want to carry on producing papers and monographs for a long while yet, but no one wants to employ taxonomists anymore. But I am far more than just a taxonomist, and taxonomy is far more useful than just popping a name on a species. Everyone harps on about the demise in taxonomic and systematic expertise, and that efforts should be made to train up the next generation of taxonomists – well I am it, and the future ain't looking too jolly, I can say! Nowadays, grant proposals have to promote ecological, evolutionary or genetic studies with any taxonomic component alluded to in some forelock-tugging apology, an aside. This shouldn't be how it is. Taxonomy is the groundwork upon which all other biological disciplines are based (if done properly). I'm a taxonomist and I am bloody proud of it. I know my stuff and I am good at what I do. I should be able to apply for grants just to do taxonomy, no apologies. This is especially true of bryozoans as there are probably as many Recent species still to be discovered as have been noted to date; someone just has to go looking for them and recognise them as new when they see them. But that counts for nothing under the current funding criteria.
Help, anyone, help!

Jieun Seo. I have published *Illustrated Encyclopedia of Fauna & Flora of Korea vol. 40 Bryozoa* last winter. It was published by Department of Education & Human Resources Development. Altogether 122 Korean bryozoans were described and illustrated with SEM. It was written in Korean for the Korean scientists. (See next page).



71. *Cellaria punctata* (Busk, 1852)

마디이끼벌레 [Pl. 103]

기재 군체는 2갈래로 둥근 가지를 치는 모양이며 가지들은 서로 엉키지 않는다. 가지는 마디를 가지며 각각의 가지는 각 절간의 말부와 기부의 끝에 있으나 눈에 띄지 않는 석회성 소켓으로부터 나온다. 절간은 톡바르거나 약간 굽었으며 대부분 길이를 따라 말부 쪽에서 넓어진다. 각 절간은 5~7열의 개충 열로 되어 있다. 개충은 육각형이며 투엣한 봉합선에 의하여 구분된다. 은벽은 입자가 나 있고 오목하며 중심부는 특별히 울룩 들어가 두드러진 융기로 둘러싸이게 된다. 충실구는 개충의 말부 쪽으로부터 1/3 지점되는 곳에 위치하며 반원형으로 위쪽은 약간 솟아 있고 미세하게 염주 모양을 나타내며 아래쪽의 중심은 위를 향하여 돌출해 있다. 돌기의 좌우에는 1쌍의 둥근 구개관절구가 있다. 조두체는 대리형이며 각 절간의 말부 쪽 끝, 마디 가까이에 위치한다. 조두체는 개충의 크기와 비슷하며 알전면의 반을 차지하는 넓은 삼각형의 상악을 가지며 말부 쪽을 향하는 삼각형의 하악을 가진다. 난실은 눈에 띄지 않는다. 그러나 충실구의 위쪽에 난실의 출입구가 열려 있으므로 난실의 위치를 알 수 있다.

71. 마디이끼벌레(*Cellaria punctata*)의 분포도

Pages from Jieun Seo's description of Korean bryozoans published in *Illustrated Encyclopedia of Fauna & Flora of Korea,* Volume 40 (Bryozoa).

Judy Winston. The NSCA-SPNHC meeting in Albuquerque in May 2006 gave me the chance to travel to nearby Santa Fe and visit Alan and Marge Cheetham in their beautiful retirement home. Alan and Marge are both looking great, New Mexico suits them. Their home is an elegant Santa Fe style adobe with an enclosed courtyard garden. They were wonderful hosts and took me to see old Santa Fe and for lunch at the famous La Fonda Inn where they entertained me with stories of Alan's youth in New Mexico and the best sapopillas in the world. My new email address:

judith.winston@vmnh.virginia.gov.

Emmy Wöss reports that **Vesna Milankov** from Pancevo, Serbia, spent a month with her at the University of Vienna, Department of Freshwater Ecology, made possible by a WUS Austria scholarship awarded to Vesna. The WUS (World University Service) has been working on the promotion of higher education in various countries and the WUS Austria has developed a regional focus in reconstruction and advancement process of higher education on South Eastern Europe. In Serbia, Vesna is currently a student at the Department of Hydrobiology Faculty of Biology, University of Belgrade. She is very interested in studying various aspects of freshwater bryozoology and really great company in field as well as laboratory work.

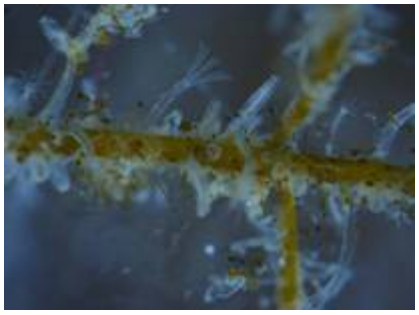
Emmy Wöss and Vesna Melankov (shown right and left in both photos) studying freshwater bryozoans in the lab and field in Austria.

Patrick Wyse Jackson has recently published the book *The Chronologers' Quest: episodes in the search for the age of the Earth* (Cambridge University Press, 2006). It provides a excellent account of this geological question. For further details see “Bryozoan Bookstall” in this issue of the *IBA Bulletin*.

New IBA Members

Judith Fuchs. Hello! I am a new member of the IBA and would like to briefly introduce myself. I first started to work on bryozoans in an undergraduate project in Aarhus, Denmark. It was really exciting to investigate features of the ciliary feeding mechanism of a freshwater bryozoan species. In spring 2006, I started my PhD "Taxonomy and Systematics of Swedish Bryozoa" at the Department of Zoomorphology, University of Göteborg, Sweden. I work together with Matthias Obst (Kristineberg Marine Research Station, Sweden), also a member of the IBA, and Per Sundberg (University of Göteborg). In this project, we want to revise and describe the bryozoans of Swedish waters by combining molecular and morphological datasets. Part of the data will be summarised in the "Encyclopedia of the Swedish Flora and Fauna" (http://www.artdata.slu.se/english/). One of our interests also lies in the description of the morphology (nervous system and musculature) of bryozoan larvae by using immoctochemistry and confocal microscopy.
This year, we started out our project by sampling bryozoans along the Swedish west coast, and we are currently working on getting the first data for our phylogenetic comparisons.
I am very excited to work on these amazing animals and look into their enigmatic phylogenetic relationships. I am already looking forward to the congress of the IBA next year and to get to know more about the work of all the researchers sharing the interest for bryozoans.

Two pictures I recently took during a course at the Friday Harbor Laboratories, US:



Part of a *Bowerbankia* colony.

Specimen of *Cristatella mucedo*, showing the horseshoe-shaped lophophore.

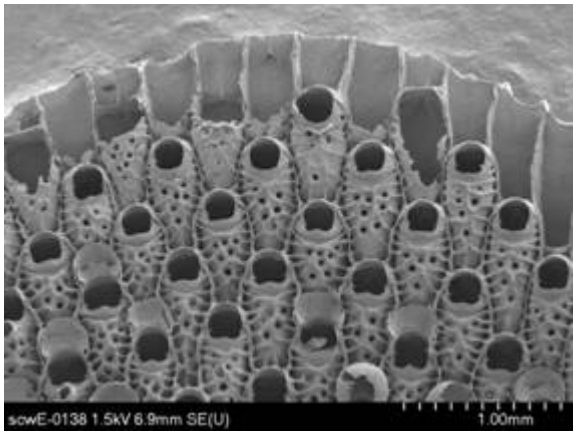
Chiara Lombardi: I am a second year PhD student at the University of Pavia (Italy) (with Professor Anna Occhipinti Ambrogi) and at the Environmental Research Centre ENEA La Spezia (with Dr. Silvia Cocito).

I have been working on Bryozoa since September 2002. During my thesis degree I investigated zooid size variation and growth banding in the bryozoan *Pentapora fascialis*, collected from the Mediterranean Sea and the Atlantic Ocean, in order to test the rate of *Pentapora* growth with variation in seawater temperatures. My degree thesis was recently published in the journal Marine Biology:

The influence of seawater temperature on zooid size and growth rate in *Pentapora fascialis* (Bryozoa: Cheilostomata). Chiara Lombardi, Silvia Cocito , Anna Occhipinti-Ambrogi and Keith Hiscock. Mar. Biol., 149(5): 1103-1009.

During my PhD work I am expanding my knowledge of *Pentapora* by means of deeper investigation of morphological and ecological aspects of specimens from Mediterranean and Atlantic sites. In August 2006 I visited Dr. Joanne Porter (Institute of Biological Sciences, University of Wales Aberystwyth) for two weeks to collect Atlantic *Pentapora* samples, learn basic molecular techniques and work on the Hitachi FESEM. This is in order to establish a phylogeography of the Pentaporidae with the main question 'Are *P. fascialis* and *P. foliacea* the same or two different species?'. An interesting collaboration based on a combination of molecular methods and morphological studies of specimens has been initiated.

I am looking forward to participating in the forthcoming Larwood Meeting in 2007 in Naples in February and to the IBA Conference in North Carolina in July!



Growing edge of *Pentapora fascialis* colony from Martins Heaven (Wales, UK), Atlantic Ocean, (5 August 1957, from Museum of Natural History, London). Magnification x 35.

My name is Vesna Milankov. I am not only fresh member of IBA, but also a freshwater one! I have BSc. in Biology, and come from Serbia, currently working at Institute for Biological Research "Sinisa Stankovic" at Department for Water Protection and Hydroecology.

I got interested in Bryozoans during my student days so my diploma thesis was: "*Bryozoa – general features, diversity, research methods and presence in the researched area in Serbia and Montenegro"* conducted at Institute for Zoology, Faculty of Biology, University of Belgrade.

So until now I have made little contribution to global knowledge on fresh water bryozoans but I on my way to make some more, that way I am currently in Austria, at University of Vienna learning from Mag. Dr.Emmy Wöss from Department of Freshwater Ecology University of Vienna**.** I had contacted her and also met her in Zagreb, Croatia, when her exhibition of bryozoans "Neptunschleier & Co." started at the Natural History Museum there

(7. April 2006). During that occasion, she invited me to come to Austria to work with her and to supervise my work.

So, I got one month scholarship grant from Austrian Exchange Service (ÖAD) for carrying out a research project "Biodiversity and distribution of Bryozoans in Austria in Comparison with the Bryozoans Fauna in Serbia". The subject of a project is a taxonomic and faunistic investigation of bryozoan species in the floodplains of the March River and Danube River in Austria

Fields of my professional interests are:

- Bryozoans - identification, distribution and ecology with a special aspect on ecological interactions with other organisms in the benthic community
- Freshwater ecosystems, Water protection, Water quality, Sustainable development,
- Composition and structure of bottom communities, Spatial and temporal distribution
- Surveys of environmental conditions, Population's dynamics in unpolluted and polluted environment,
- Ecological methodology, Statistical methods in ecology

During the training course which I am taking at University of Vienna with guidance of Mag. Dr. Emmy Wöss I am learning standardised sampling methods of colonies and dormant stages of Bryozoans and also taking course in the field of ultra structure and histology which will be applied to determine statoblast morphology by using techniques of Electro Scanning Microscopy with cooperation of a Dr. Manfred Walzl from Department of Theoretical Biology, Morphology section, University of Vienna.

Hope to be successful member of Bryozoans Community and looking forward for our future cooperation, Best regards, Vesna Milankov

“How I Discovered Bryozoans….” Part 2

Editor’s note: I recently asked IBA members to recall how they happened to discover bryozoology as a field of research. Was there a particular event, person, or circumstance that kindled their interest? Here is the second installment of responses. Additional responses will be printed in subsequent issues. New contributions are welcome.

Paul Taylor:
A combination of happy and fortunate circumstances: how I got started in bryozoology

As a small child I had two major interests: railways and marine life. I developed the second of these when spending many happy hours 'fishing' (mostly for invertebrates) in rock pools at Thornwick Bay on the Yorkshire coast during family holidays. My interest in fossils came slightly later and was the result of the serendipitous discovery. While tracing the trackbed of the old Hull & Barnsley Railway I came across a fossil-rich quarry in the Jurassic Kellaways Beds at a place called South Cave, rural home of my grandmother’s family. Examining the fossils there gave me hours of pleasure. I began my formal education in geology at the age of 14 when the chance departure of a surveying teacher from my technical school in Hull left a gap in the timetable. As there was nobody else on the staff capable of teaching surveying, the school offered its stranded pupils the option of studying either economics, taught by a history teacher, or geology, taught by a couple of geography teachers. Naturally, I opted for the latter and effectively sacrificed the promise of monetary wealth for a much more satisfying career.

One of the two geography teachers co-opted to teach geology encouraged me to stick with the subject and persuaded me that the University of Durham was my best option for a degree in geology. This might have been something to do with the fact that he himself was a Durham graduate. Whatever, I was successful in my school exams and commenced reading for a BSc degree in geology at Durham in the autumn of 1971. A requirement of this degree was to undertake a six week period of independent geological mapping. It was common practice in those days to select a field area where accommodation could be found cheaply or for free via friends or relatives. My grandmother's sister had migrated from South Cave to Northleach in Gloucestershire, a county well known for its fossil-rich Jurassic rocks. She had married the chief gamekeeper on a large agricultural estate, over which I would be granted free access to roam with my hammer, which made Northleach a perfect choice for my fieldwork.

The critical part of the tale came with the discovery during my fieldwork of some mysterious fossils forming patches on the surfaces of shells. I had no idea what they were so showed them to my lecturer in palaeontology when I returned to Durham. You may already have guessed it but the mystery fossils were bryozoans and the aforesaid lecturer was Gilbert Larwood. I believe I was the first of Gilbert's undergraduate students ever to show any serious interest in bryozoans, something he was more than happy to encourage. Partly spurred by the knowledge that there was a possibility of the British Museum (Natural History) requiring a specialist researcher in fossil bryozoans sometime in the near future (those were the days!), after graduating with a BSc I stayed on at Durham to undertake research on Jurassic bryozoans supervised by Gilbert, resulting in a PhD in 1977. British Prime Minister Mrs Thatcher's draconian financial measures put a freeze on civil service recruitment and the anticipated post at the BM(NH) was delayed until 1979, but this gave me the opportunity to

spend two years as a postdoc in Swansea where John Ryland, Peter Hayward and John Thorpe taught me a great deal about recent bryozoans.

These are the bare facts of my career path into bryozoology. For those who believe in the supernatural I should introduce just one more twist into the story. Many years after becoming a bryozoologist I learnt that the first Durham conference of the IBA had been based at Van Mildert College in September 1971. Van Mildert College was the very college where I began my student life in Durham the following month. Indeed I may even have slept in a bed last used by a bryozoologist. Could it be that Van Mildert College somehow retained the infectious aura of bryozoology within its walls?

Alan Cheetham. Ever the contrarian, I decided on a career in paleontology while still an undergraduate at a mining and engineering college. For a senior thesis, I chose to work on Pennsylvanian bryozoans, rather than a group known to be geologically "useful," such as fusulinids. Then I further confounded my advisors by doing another about-face, deciding on a graduate school in the Gulf Coast, rather than some more "classically" bryozoan region, such as Cincinnati, where my thin-sectioning skills, such as they were, would have been more highly honed. Down on the delta, my allegiance switched to the wonderful world of Mesozoic and Cenozoic cheilostomes, although my first publication wasn't even on bryozoans (can you believe ostracodes?). When finally I went to London for a post-doc at the Natural History Museum, for the very first time I had advisors who actually knew something about bryozoans.

Andrej Ernst: My acquaintance with bryozoans happened as I was a student at the Tomsk University, Russia. During the last school years I had sampled a large collection of fossils from the Lower Carboniferous rocks in vicinity of my home town Karatau in Kazakhstan. As I started my study in Tomsk, I tried to get specialized in ostracods. However, I recognized later that it was not my thing. In meantime, I met Ariadna M. Jaroshinskaya, who was working on Palaeozoic bryozoans. She introduced me to bryozoans, and I recognized many of them from my Karatau collection. Bryozoans fascinated me, and I decided to devote my diploma thesis to them. It was 1993, since this time I continue my studies on bryozoans.

Dennis Gordon. It was when I was 15, at Mt Albert Grammar School in Auckland in 1960. We fifth-form biology students had to buy the 2-volume paperbacks "Animals Without Backbones" by the late great Ralph Buchsbaum. These books, with their fantastic photos of weird and wonderful invertebrates, immediately captured my interest, especially the lesser-known groups, which included the Bryozoa. That interest lay somewhat dormant until I came to study Zoology at Auckland University. In my third year as an undergraduate (1965), I had the opportunity to undertake a student project. I elected to do a survey of the intertidal bryozoans of Auckland Harbour. Looking back, I think the Bryozoa as a study group may have been suggested by a faculty member, either John Morton or Michael Miller, but what cemented the interest was a recent MSc thesis on the marine-fouling organisms of the port of Auckland by J.R.E. Harger. Bryozoans were strongly featured. That was the only available local guide to the group, but it was enough. I found living bryozoans to be rewarding of study and the following year I undertook my own MSc research (mainly ecological), based at Auckland University's Leigh Laboratory, adjacent to a seashore with 64 bryozoan species. I've never looked back. [In 2003 I published an article about bryozoans in *New Zealand*

Geographic that was, in its way, a tribute to Ralph Buchsbaum. This is now available as a PDF, freely available to any IBA member].
Cheers, Dennis

(*Ed. note: See "Bryozoan Bookstall" section of this Bulletin for information about obtaining Dennis' article*).

Larwood Symposium 2006 in Dublin, Ireland

MARY SPENCER JONES, Department of Zoology, The Natural History Museum, London, UK

This years Larwood Symposium was held on Friday, 10th March in the Geological Department at Trinity College, Dublin. **Patrick Wyse Jackson**, ably helped by **Margret Steinthorsdottir**, hosted the day. Nineteen bryozoologists from eight different countries attended the meeting.

Chaired by Patrick, the proceedings started with a talk on Jurassic bryozoans given by IBA president **Paul Taylor**. Paul & **Andrej Ernest** have been looking at the diversity, disparity and biogeography of bryozoans in this age where little is known about ectoprocts. Paul highlighted the fact that much of the work on the fauna has been undertaken in northern Europe; out of ninety-two records, eighty occur in this region. The low diversity, colony morphologies, where sheets and spots dominated, and the origin of cheilostomes were discussed.

Bjorn Berning was next up looking at Late Neogene bryogeography of southern Spain. He has been studying a Recent outcrop from off Morocco as a comparison against the Mediterranean fauna of eight million years ago. He measured autozooidal surface area and concluded that many Atlantic species were smaller than Pacific ones.
It also appears that Atlantic species often come into the Mediterranean but Mediterranean species do not leave, as the surface water comes in but outflow is at deeper levels and the larvae stay. He concluded that large differences occur between Miocene North Sea and Mediterranean faunas and Recent ones. This is probably due to transportation by shipping.

Looking at proteins in bryozoans is a new direction for **Jo Porter** and her colleagues from Aberystwyth. In other animal groups it is a technique, which has been used to see if organisms are under stress. Jo explained how proteomics works, presented results of a study on *Flustra foliacea* and showed how a two-dimensional gel gives much better resolution. Only two papers have been written about this technique using bryozoans, so there is lots of potential for further studies. Jo is hoping that cross-matching the bryozoan proteins against that found in other animals will hopefully allow a function to be assign for each protein.

The early morning session was concluded with a talk from **Andrej Ernest** on the Permian Bryozoa of Iran. Andrej and his colleagues have been looking at thin-sectioned material from four localities using morphological and statistical methods to look at the systematics and palaeo-biogeographical implications in the region. Several new species have been identified within the fauna with fenestellids and cystoporates dominating.

Resuming after coffee, Paul Taylor chaired the session with unpronounceable names!
Anton Tsyganov from Swansea talked about the molecular and morphological phylogeny of cyclostomes and ctenostomes. He explained why the use of “universal” primers had failed and talked about the development of specific 18S rRNA primers for his work. Anton then went on to discuss a method of larval analysis using confocal laser microscopy, a method that is faster than SEM and superior to existing fluorescent microscopy. This technique uses partial 3D reconstruction and Anton showed some excellent 3D footage of various larvae.

Andrea Waeschenbach then discussed the systematic position of the Lophophorata. This has been a topic of debate for many years. Deuterostomes or protostomes? Different techniques seem to suggest different lines. Andrea and colleagues have recently sequenced the first complete mitochondrial genome of *Flustrellidra hispida* and have found that it has a unique gene order. Mitogenomics is a technique looking at rare genomic changes and comparisons with other bilaterians have shown that some organisms, exhibit highly derived gene orders while others retain sections of the ancestral lophotrochozoan gene order. Results indicate that ancestral gene orders might in future be used to root phylogenetic trees and that mitochondrial DNA puts the Bryozoa firmly in the Lophotrochozoa.

The disappearance of rare phylactolaemates has been a major cause of concern in the past few years in UK Rivers. **Hanna-Leena Hartikainen** from Reading gave us a brief introduction into her work with Beth Okamura looking at the abundance of freshwater bryozoans in relation to nutrient levels. She explained her experimental studies at twelve sites, located near Environment Agency monitoring stations for access to their data on nutrient levels, discharge rates, etc., and how levels of abundances were calculated. Hanna found that high nutrient levels resulted in higher numbers of statoblasts, showing that the decline of phylactolaemates cannot be attributed to increasing nutrient levels. Interestingly altitude seems to be a significant factor.

Jasmine Sharpe from Aberystwyth then gave us an extremely interesting talk on differential fouling in *Pentapora foliacea*. She discussed the distribution and extant of microbial fouling on the cheilostome using a SEM approach. From her studies, it appears that fouling is consistently higher in newer regions of a colony and that proximal fouling is slightly higher than that distally.

Margret Steinthorsdottir gave us an overview of the PhD project she will be undertaking at Trinity College. Her study centres on the Hook Head locality, which has well preserved material in the limestone. Key aims of her thesis will be to revise the taxonomy and to look at the ecology and evolution of the Hook Head fauna.

The meeting then broke for an excellent sandwich lunch in the Geological Museum, where posters were perused and discussions continued.

The afternoon session started with the first of two talks given by **Eckart Håkansson.**
Eckart, Margret and **Scott Lidgard** have been looking at a transgression in Rhodes where major tectonic events are highlighted in five beds of Kolymbia limestone of which two contain *Celleporaria*.

Ursula Hara then gave us the second talk of the day on Jurassic bryozoans. She has been studying two Oxfordian localities, Zalas and the Holy Cross Mountains, in southern Poland. Ursula discussed the stratigraphy of the areas and the assemblages found within them. The biogeographical implications of these faunas seems to suggest that they will be of great significance in relation to when radiation started and what migration routes were taken.

Eckart's second talk discussed Late Permian environmental clines and bryozoan distribution in the North Atlantic region. He took us through the various changes that occurred during the Asselian and Artinskian. He then demonstrated how the Kazunian fauna had to cope with various different environmental pressures, such as high temperature and salinity gradients.

Distribution and assemblage of the proto-Atlantic seaway was discussed, and a comparison of proto-Atlantic and Tethys-Permian faunas was shown.

Patrick Wyse Jackson finished off the session with a "boring" discussion on a reinterpretation of the ichnogenus *Sanctum*. Patrick, along with Marcus Key and Michael Burns of Dickinson College, has been looking at Ordovician trepostome material from two quarries in Estonia. They found that hemispherical colonies were more susceptible to boring than ramose ones, and that borings on hemispherical colonies were more common on the upper surface. Trace evidence of the original organism was found in several specimens and shattered margins of burrows suggest mechanical destruction rather than dissolution. Other traces suggest a commensal lifestyle where the borer used the bryozoan to raise it above the sediment.

After the late afternoon break for coffee, **Francesco Toscano** and **Paul Taylor** tabled a wonderful opportunity for the Larwood meeting to take place in Naples. Although 2007 is a year in which normally there would be no meeting, due to the IBA in Boone, members universally expressed an interested in the invitation to hold the meeting in the Dipartimento di Scienze della Terra, University of Naples "Federico II". The promise of excursions to various archaeological sites resulted in a highly excited audience! Francesco will circulate more information concerning this meeting in the coming months.

The day concluded in the evening with a wonderful conference dinner at the Wyse Jacksons. Many thanks must go to Patrick's wife, **Vanessa** for organising the meal and to daughters, **Susanna** and **Katie** for their excellent waitress service!

Participants in the 2006 Larwood Symposium held at Trinity College, Dublin, Ireland.

IBA Becomes an ICZN Affiliate

In July, 2006 IBA President Paul Taylor was contacted by Dr Andrew Polaszek, Executive Secretary of the International Commission on Zoological Nomenclature concerning the possibility of a Memorandum of Cooperation from the IBA.

IBA members are certainly aware that the ICZN produces the internationally recognised and accepted Code for naming animals (on the web at: www.iczn.org/iczn/index.jsp), as well as resolving problems that arise with the names of animals.

In his letter to Paul Taylor, Dr. Polaszek wrote:

“The work of ICZN will become increasingly important in the face of current global problems facing the environment, biosecurity, biodiversity, conservation, and other issues affecting animals, such as climate change and avian flu. It will become even more essential to ensure the correctness of the scientific names of animals in documentation relating to import and export, quarantine, medicine and veterinary science, and conservation, e.g. red data lists and CITES.”

“In previous messages we have asked associated organisations for direct financial assistance, however modest, to contribute towards the costs of carrying out the functions of ICZN. While we greatly value this support, we realise that this is an unsustainable fundraising strategy for keeping ICZN running in perpetuity. We are therefore currently seeking not a financial contribution but a statement of approval of ICZN's role and products, in the form of the attached Memorandum of Cooperation. We hope that by building up a critical mass of support from the users of ICZN's products and services we can lobby for financial help from other donors.”

“Your signature on the attached MoC could therefore be critical for the future of ICZN and consequently for the maintenance of standards, sense and stability in animal names.”

Paul consulted with several IBA officers before signing the Memorandum of Cooperation. It was generally felt that this agreement would be strongly supported by the IBA membership. We might even consider providing some modest financial support to the ICZN, but this would have to be approved by IBA members at the regular business meeting next July in North Carolina.

The text of the Memorandum of Cooperation is reprinted on the next page.

International Commission on Zoological Nomenclature

Supported by the International Trust for Zoological Nomenclature (ITZN)

The Natural History Museum
Cromwell Road
London SW7 5BD
Tel: +44 (0)20 7942 5653
E-mail: iczn@nhm.ac.uk
Website: www.iczn.org

Memorandum of Cooperation

As signatories to this Memorandum of Cooperation with the International Commission on Zoological Nomenclature, we support the overall aim of the Commission, that of promoting "Standards, Sense and Stability for animal names in science". We endorse the activities of the Commission in producing and periodically revising the *International Code of Zoological Nomenclature*, and ruling on cases where animal nomenclature requires resolution.

We recognise that the Commission is a unique body of specialist scientists, truly international in its composition, who freely donate their services to the work of ICZN. Without the existence of ICZN, and particularly without the Code, animal scientific nomenclature would rapidly become unstable.

Now more than ever, with information technology revolutionising the way that animal taxonomy is undertaken and the means by which the results of taxonomic research are disseminated, ICZN has a central and crucial role to play in maintaining stability of animal names.

We also support ICZN's Mission and Vision statements:

Mission:

The International Commission on Zoological Nomenclature is dedicated to achieving stability and sense in the scientific naming of animals.

Vision:

The International Commission on Zoological Nomenclature (ICZN), acting in the capacity of adviser and arbiter, assists the zoological community through generation and dissemination of information on the correct use of the scientific names of animals.
This includes the publication of the International Code of Zoological Nomenclature and the Bulletin of Zoological Nomenclature containing applications to, and rulings by, the Commission.
ICZN will distribute this information as widely as possible, working towards the provision of a free service.

By signing this Memorandum of Cooperation we are therefore pleased to become ICZN Affiliates forthwith.

Signed: (Paul D. Taylor)

Date: July 17, 2006

Position in organisation: President

Organisation name or stamp: International Bryozoology Association

The Voigt Collection: Status Report, and the visit of Dennis Gordon in September 2006

JOACHIM SCHOLZ, Forschungsinstitut und Naturmuseum Senckenberg, Sektion Marine Evertebraten III (Bryozoologie), Senckenberganlage 25, D-60325 Frankfurt, Germany

Some years ago, on the occasion of the IBA conferences in Wellington 1995, and Panama 1998, the IBA supported the establishment of a Bryozoan centre at the Senckenberg Research Institute, with two international resolutions. These resolutions concerned the Ehrhard Voigt legacy and the curatorial care of the collection and they were both successful.

Unfortunately, when the collection arrived in 2005 (soon after the death of Ehrhard Voigt), we faced renovation of the 4th floor of the Senckenberg Research Institute (where the bryozoan collection is situated), necessitated by fire protection. The collection had to hibernate, waiting for better times to come. This renovation, which has also affected our research activities on Recent Bryozoa, is nearly finished. We have just started to reorganize the collections that had been kept in the central collection store. The collection of Heinrich Ristedt (about 15,000 samples from all over the world) is already back in its original place. The Ehrhard Voigt collection and library, filling about 180 carton boxes, is mostly still in the cellar (Fig. 1). We have, however, already transferred to the Bryozoology Section Voigt type and figured specimens. They were carefully sorted in 1999 by Klaus Euserhardt, thanks to funding from the Senckenberg Society. This input of Klaus Eiserhardt has greatly improved the value of the Voigt Collection as a data and research source for both bryozoology and evolutionary theory. The value of this collection is described in a separate comment by Dennis Gordon (below). Dennis visited us from Sept. 20 to Sept. 22 (Fig. 2) to see what has been achieved *vis à vis* the Voigt Collection.

Fig. 1. Dennis Gordon with boxes full of Ehrhard Voigt bryozoans in the central collection store, together with students of the "Senckenberg School" (training classes for technical assistants) who are currently helping in the bryozoology section.

Fig. 2. Friends meet at the museum.

It will take year if not decades to re-organize the whole collection of Ehrhard Voigt. We estimate its volume at about 300,000 boxes, among them real treasures like neoypes of von Hagenow material (Fig. 3, 4).

Fig. 3. Dennis examining boxes of Voigt type and figured specimens.

Fig. 4: Some of the originals of Ehrhard Voigt's Von Hagenow-revision.

Most curatorial work on the collection, and making it available, will be done by our staff member Mrs Brigitte Lotz. Moreover, our collections will steadily expand. Types and originals described by Andrej Ernst have been given to us, and Emmy Wöss announced plans

to donate a collection of freshwater bryozoans. Both Andrej and Emmy are our next visitors, presenting their respective research in colloquium talks in Frankfurt (Oct. 18 and Dec. 20). We are also in touch with Gisela Illies who informed us that she will donate her considerable collection of Jurassic and other bryozoans to the Senckenberg Institute. Meanwhile, our visitor information centre has been formally re-opened thanks to Dennis' visit, on Sept. 21 (fig. 5), and awaits further guests.

Fig. 5: Our visitors´ information centre (Dennis and Mrs Lotz, after a hard day in the Voigt collection).

The Importance of the Voigt Collection

DENNIS GORDON, Programme Leader: Aquatic Biodiversity & Biosecurity, National Institute of Water & Atmospheric Research, P.O. Box 14-901 Kilbirnie, Wellington, New Zealand

The Voigt Collection of Bryozoa is unexcelled anywhere in the world. While many other museums have excellent bryozoan collections, what makes the Voigt Collection unique and of supreme importance is the *exquisitely preserved* Cretaceous component, mainly from the European Chalk. The Cretaceous was the time of an explosive radiation of bryozoans of the order Cheilostomata. This order, which was the last of 8 bryozoan orders to evolve, originated only in the latest Jurassic but today dominates marine bryozoan faunas worldwide. Research on the Voigt Collection in the past decade has revealed that understanding the Cretaceous radiation is the key to understanding the modern fauna and how it evolved. Because bryozoans have skeletons, details of the evolution of body walls, reproductive structures, and polymorphs (with a variety of functions) are preserved in the skeletons. It has become clear from the last decade of research on Cretaceous bryozoans, that cheilostomes give some of the best evidence for evolution. Morphologies and structures that are abundant and normal in living taxa can be seen to have their origin in the Cretaceous and it is easy to trace their evolutionary development.

Moreover, the Cretaceous radiation (i.e. the explosive increase in taxonomic and morphological diversity) saw the diversification of numerous clades, some of which did not survive the K-T boundary extinction event. The Voigt Collection provides an unparalleled opportunity to determine the composition and evolution of successful and unsuccessful clades and to establish hypotheses concerning those features that survived the K-T transition and why. Such a study could have particular application to predicting the responses of living bryozoan faunas to environmental perturbations in modern seas, particularly those relating to climate change, i.e. the effect of changes in ocean temperature and CO_2 (lower dissolved carbonate and higher ocean acidity) and their effect on mineralization.

Some of the E. VOIGT type and published originals

Marine Bryozoans from the Indian EEZ and Antarctic Sea

SOJA LOUIS, Dept of Marine Biology, Microbiology & Biochemistry, School of Marine Sciences,
Cusat, Koch 1-16, Kerala, INDIA

I have been working on the taxonomy of bryozoans since 5 years under the scientific guidance of Dr. N. R. Menon, Emeritus Scientist, Cochin University of Science and Technology; I must admit that I am overwhelmed to see the diverse array of distinguishing features seen exclusively in bryozoans.

Bryozoans of the Indian EEZ (Exclusive Economic Zone) have not been explored by any marine biologist since a series of publications appeared in the early seventies. The classical work of Harmer (1926-1957) showed the species abundance of this group in the Indian Ocean. Menon (1967-1974) described in detail numerous species that occur along the coasts of India. Considering the importance of a study on the biodiversity of microbenthos, which is normally represented by representatives of this group from the benthic realm an enquiry on the taxonomy of bryozoans to understand the relevance of this group on the microbenthic communities of the Indian Ocean. The work includes taxonomy, bionomics, geographical distribution and fouling of bryozoans of the Indian EEZ and the Antarctic Sea. The present work would become an excellent addition to the bryozoan literature.

The bryozoans from the Indian EEZ were dredge sampled during the FORV Sagar Sampada, in October 1999 from transects extending from Cape Comorin to Dwaraka along the West coast and in July 2000 from Karaikal to Paradeep along the East coast.

The material for the study of Antarctic species was obtained from collections made from off-Prince Astrid Land during the Third Antarctic Expedition by ORV Sagar Kanya.

The present taxonomic work on the Indian EEZ bryozoans accounts the details of 102 species including 39 species of Anascan belonging to 23 genera of 17 families, 54 species of Ascophora belonging to 34 genera in 22 families, 4 species of cyclostomes of 4 genera and 3 families and 5 species of ctenostomes belonging to 5 genera in 4 families.

Of the 24 species of bryozoans from the Antarctic waters, 12 species of Anasca belonging to 10 genera of 5 families, 10 species of Ascophora belonging to 10 genera of 7 families and 2 cyclostomes of 2 genera and 2 families have been identified and described.

A total of 51 anascans, 64 ascophorans, six cyclostomes and five ctenostomes are described with the help of electronmicrographs. There are three new species *Chartella arabica* from the Cochin estuary, *Cleidochasma sampada* from the EEZ of India and *Iodictyum anomala* from the Antarctic waters. The list of species are given below.

TAXONOMIC LIST OF INDIAN BRYOZOANS

CLASS *GYMNOLAEMATA* (Allman, 1856)

Order CHEILOSTOMATA Busk, 1852

Suborder ANASCA Levinsen, 1909

Family - *Aeteidae* Smitt, 1867
Genus - *Aetea* Lamouroux, 1812
1 *Aetea anguina* (Linnaeus), 1758

Family - *Membraniporidae* Busk, 1854
Genus - *Acanthodesia* Canu and Bassler, 1919
2 *Acanthodesia* sp.
3 *Acanthodesia savarti* (Audouin), 1826

Family - *Electrinidae* d'Orbginy,1851
Genus - *Electra* Lamouroux, 1816
4 *Electra indica* Menon and Nair,1975
5 *Electra crustulenta* (Pallas), 1766
6 *Electra crustulenta* var. *borgii* Menon and Nair,1975
7 *Electra bengalensis* (Stoliczka), 1869
Genus - *Conopeum* Gray, 1848
8 *Conopeum reticulum* (Linnaeus), 1767

Family - *Calloporidae* Norman, 1903
Genus - *Parellisina* Osburn, 1940
9 *Parellisina curvirostris* (Hincks), 1862
Genus - *Crassimarginatella* Canu, 1900
10 *Crassimarginatella* sp.
Genus - *Cranosina* Canu and Bassler, 1933
11 *Cranosina coronata* (Hincks), 1881
Genus - *Alderina* Norman, 1903
12 *Alderina arabianensis* Menon and Nair, 1975

Family - *Antroporidae* Vigneaux, 1914
Genus - *Antropora* Norman, 1903
13 *Antropora erecta* (Silen,1941)
14 *Antropora granulifera* (Hincks,1880)
15 *Antropora tincta* (Hastings), 1930
16 *Antropora marginella* (Hincks), 1884
17 *Antropora claustracrassa* (Canu and Bassler), 1930
18 *Antropora* sp.

Family - *Calesharidae* Cook and Bock, 2001
Genus - *Caleschara* Mac Gillivray, 1880
19 *Caleschara levinsenii* Harmer, 1926
20 *Caleschara mexicana* Osburn, 1950
Family - *Heliodomidae* Vigneaux 1949
Genus - *Setosellina* Calvet, 1906
21 *Setosellina constricta* Harmer, 1926

Family - C*upuladriidae* Lagaaij, 1952
Genus - *Cupuladria* Canu and Bassler, 1919
22 *Cupuladria indica* Cook, 1965
23 *Cupuladria guineensis* (Busk), 1854

Family - *Flustridae* Fleming, 1828
Genus - *Chartella* Gray, 1848
24 *Chartella arabica* sp.novo

Family - *Quadricellariidae* Gordon 1984
Genus - *Nellia* Busk, 1852
25 *Nellia occulata* Busk,1852

Family - *Bugulidae* Gray, 1848
Genus - *Bugula* Oken, 1815
26 *Bugula neritina* (Linnaeus, 1758)
27 *Bugula cucullata* (Busk, 1867)

Family - *Epistomidae* Gregory, 1893
Genus - *Synnotum* Pieper, 1881
28 *Synnotum aegyptiacum* (Audouin, 1826)

Family - *Candidae* Busk, 1852
Genus - *Scrupocellaria* van Beneden, 1845
29 *Scrupocellaria ferox* Busk, 1852
Genus - *Caberea* Lamouroux, 1816
30 *Caberea lata* Busk, 1852

Family - *Onychocellidae* Jullien, 1882
Genus - *Smittipora* Jullien, 1882
31 *Smittipora abyssicola* (Smitt, 1873)

Family - *Steginoporellidae* Hincks, 1884
Genus - *Steginoporella* Smitt, 1873
32 *Steginoporella buskii* Harmer, 1900
Genus - *Labioporella* Harmer, 1926
33 *Labioporella sinuosa* (Osburn, 1940)

Family - *Thalamoporellidae* (Levinsen, 1909)
Genus - *Thalamporella* Hincks, 1887
34 *Thalamporella gothica* (Busk, 1856)
35 *Thalamporella hamata* Harmer, 1926
36 *Thalamporella expansa* Levinsen, 1909
37 *Thalamporella rozierii* (Audouin,1826)

Family - *Cellariidae* Hincks, 1880
Genus - *Cellaria* Ellis and Solander, 1786
38 *Cellaria johnsoni* Busk, 1958
39 *Cellaria punctata* (Busk), 1852

Family - *Cribrilinidae* (Hincks, 1879)

40 **Genus - *Puellina*** Jullien,1886
Puellina vulgaris Ryland and Hayward, 1992
41 **Genus - *Cribriliaria*** Canu and Bassler, 1929
Cribriliaria sp.

Family - *Trypostegidae* Gordon and Winston, 2005
Genus - *Trypostega* Levinsen, 1909
42 *Trypostega venusta* (Norman, 1864)

Family - *Adeonidae* (Busk, 1884)
Genus - *Adeona* Lamouroux, 1812
43 *Adeona foliacea* Lamouroux, 1816
Genus - *Adeonellopsis* Mac Gillivray, 1886
44 *Adeonellopsis arculifera* (Canu and Bassler, 1929)

Family - *Lepraliellidae* Vigneaux, 1949
Genus - *Celleporaria* Lamouroux, 1821
45 *Celleporaria pilaefera* (Lamouroux, 1821)
46 *Celleporaria granulosa* Haswell (1880)
47 *Celleporaria magnifica* Osburn, 1914
Genus - *Drephanophora* Harmer, 1957
48 *Drephonophora incisor* (Thornely), 1905

Family - *Smittinidae* (Levinsen, 1909)
Genus - *Parasmittina* Osburn, 1952
49 *Parasmittina aviculata* (Mawatari, 1952)
50 *Parasmittina egyptiaca* (Waters, 1909)
51 *Parasmittina hastingae* Soule and Soule, 1973
52 *Parasmittina parsevielli* (Audouin, 1826)
53 *Parasmittina signata* (Waters, 1889)
54 *Parasmittina spatulata* (Smitt), 1873
55 *Parasmittina tubula* (Kirkpatrick, 1888)
Genus - *Smittina* Norman, 1903
56 *Smittina landsborovi* (Johnston), 1847
57 *Smittina torques* Powell
58 *Smittina acutidentata* Harmer, 1957

Family - *Romancheinidae* Jullien, 1888
Genus - *Escharoides* Edwards, 1836
59 *Escharoides* sp.

Family - *Bitectiporidae* MacGillivray, 1895
Genus - *Metroperiella* Canu and Bassler, 1917
60 *Metroperiella pyriformis* Harmer, 1957
Genus - *Schizomavella* Canu and Bassler, 1917
61 *Schizomavella inclusa* (Thornely, 1905)

Family - *Watersiporidae* Vignaeux, 1949
Genus - *Watersipora* Neviani, 1895
62 *Watersipora subovoidea* (d' Orbigny, 1854)

Family - *Schizoporellidae* Jullien, 1903
Genus - *Schizoporella* Hincks, 1877
63 *Schizoporella cochinensis* Menon and Nair (1967)
64 *Schizoporella inarmata* Hincks (1884)

Family *Margarettidae* Harmer, 1957
Genus - *Margaretta* Gray, 1843
65 *Margaretta watersii* Canu and Bassler, 1930

Family - *Hippopodinidae* Levinsen, 1909
Genus - *Hippopodina* Levinsen, 1909
66 *Hippopodina californica* Osburn, (1952)

Family - *Cryptosulidae* Vigneaux, 1949
Genus - *Cryptosula* Canu and Bassler, 1925
67 *Cryptosula pallasiana* Moll, 1803

Family - *Actisecidae* Harmer, 1957
Genus - *Actisecos* Canu and Bassler, 1927
68 *Actisecos regularis* Canu and Bassler, 1927

Family - *Hippaliosinidae* Gordon and Winston, 2005
Genus - *Hippaliosina* Canu, 1918
69 *Hippaliosina acutirostris* Canu and Bassler (1929)

Family - *Microporellidae* (Hincks, 1879)
Genus - *Microporella* (Hincks, 1877)
70 *Microporella orientalis* Harmer (1957)
Genus - *Microporelloides* Soule, Chaney and Morris, 2003
71 *Microporelloides hawaiiensis* Soule et al., 2003
Genus - *Fenustrulina* Jullien, 1888
72 *Fenustrulina malusii* (Audouin, 1826)
Genus - *Calloporina* Neviani, 1895
73 *Calloporina sigillata* Canu and Bassler, 1929
74 *Calloporina sculpta* Canu and Bassler, 1929

Family - *Petraliellidae* Harmer, 1957
Genus - *Sinupetraliella* Stach, 1936
75 *Sinupetraliella affinis* Harmer, 1957

Genus - *Hippopetralliella* Stach, 1936
76 *Hippopetraliella magna* (D'Orbginy,1852)
Genus - *Mucropetraliella* Stach, 1936
77 *Mucropetraliella thenardii* (Audouin, 1826)
78 *Mucropetraliella phillipinensis* (Canu and Bassler, 1929)

Family - *Crepidacanthidae* Levinsen, 1909
Genus - *Crepidacantha* Levinsen, 1909
79 *Crepidacantha crinispina* (Canu and Bassler, 1929)

Family - *Cleidochasmatidae* Cheetham and Sandberg, 1964
Genus - *Cleidochasma* (Harmer, 1957)

80 *Cleidochasma biavicularium* (Canu and Bassler, 1929)
81 *Cleidochasma fallax* (Canu and Bassler, 1929)
82 *Cleidochasma protrusum* (Thornely),1905
83 *Cleidochasma sampada* sp. novo

Family - *Celleporidae* (Canu and Bassler, 1917)
Genus - *Lagenicella* Cheetham and Sandberg (1964)
84 *Lagenicella marginata* (Canu and Bassler, 1930)
85 *Lagenicella punctulata* (Gabb and Horn, 1862)

Family - *Phidoloporidae* Gabb and Horn, 1862
Genus - *Rhychozoon* Hincks, 1895
86 *Rhynchozoon compactum* (Thornely, 1905)
87 *Rhychozoon larreyi* (Audouin, 1826)
88 *Rhynchozoon globosum* Harmer, 1957
Genus - *Metacleidochasma* Soule, Soule and Chaney, 1991
89 *Metacleidochasma planulata* (Canu and Bassler, 1929)
Genus - *Triphyllozoon* Canu and Bassler, 1917
90 *Triphyllozoon tubulatum* (Busk), 1884
91 *Triphyllozoon philippiensis* (Busk), 1884

Family - *Conescharellinidae* Levinsen, 1909
Genus - *Conescharellina* d'Orbigny, 1852
92 *Conescharellina jacunda* Canu and Bassler, 1929

Unknown family
Genus - *Escharina* Milne Edwards, 1836
93 *Escharina pesanseris* (Smitt), 1873

Order CTENOSTOMATA Busk, 1852

Family - *Alcyonididae* Johnston, 1849
Genus - *Alcyonidium* Lamouroux, 1813
94 *Alcyonidium erectum* (Silen, 1942)

Family - *Victorellidae* Hincks, 1880
Genus - *Victorella* Kent, 1870
95 *Victorella pavida* Kent, 1870
Family - *Nollellidae* Harmer, 1915
Genus - *Nollella* (Gosse, 1855)
96 *Nollella papuensis* (Busk, 1886)
Genus - *Bowerbankia* Farre, 1837
97 *Bowerbankia gracilis* Leidy, 1855

Family - *Triticellidae* Sars, 1873
Genus *Triticella* (Dalyell, 1848)
98 *Triticella korenii* Sars, 1874

Order CYCLOSTOMATA Busk, 1852

Family - *Stomatoporidae* Pregens and Meunier, 1886
Genus - *Stomatopora* Bronn, 1825
99 *Stomatopora granulata* (Milne - Edwards, 1836)

Family - *Oncousoeciedae* Canu, 1918
Genus - *Proboscina* Audouin, 1826
100 *Proboscina lamellifera* Canu and Bassler, 1930

Family - *Crisiidae* Johnston, 1838
Genus - *Crisia* Lamouroux, 1812
101 *Crisia elongata* Milne - Edwards, 1838
Genus - *Filicrisia* d'Orbigny, 1853
102 *Filicrisia* sp.

TAXONOMIC LIST OF THE ANTARCTIC BRYOZOANS

CLASS *GYMNOLAEMATA* (Allman, 1856)

Order CHEILOSTOMATA Busk, 1852

Suborder ANASCA Levinsen, 1909

Family - *Calloporidae* Norman, 1903
Genus - *Ellisina* Norman, 1903
103 *Ellisina levata* (Hincks), 1882
Genus - *Amphiblestrum* Gray, 1848
104 *Amphiblestrum inermis* (Kluge), 1914

Family - *Chaperiidae* Jullien, 1881
Genus - *Icelozoon* Gordon, 1982
105 *Icelozoon lepralioides* (Kluge), 1914
Genus - *Chaperia* Jullien, 1881
106 *Chaperia quadrispinosa* Kluge, 1914
Genus - *Cleipochaperia* Uttley and Bullivant, 1972
107 *Cleipochaperia funda* Uttley and Bullivant, 1972

Family - *Onychocellidae* Jullien, 1882
Genus - *Chondriovelum* Hayward and Thorpe, 1988
108 *Chondriovelum adeliense* Hayward and Thorpe, 1988

Family - *Steginoporellidae* Hincks, 1884
Genus - *Steginoporella* Smitt, 1873
109 *Steginoporella magnilabris* (Busk, 1854)

Family - *Cellariidae* Hincks, 1880
Genus - *Cellaria* Ellis and Solander, 1786
110 *Cellaria tecta* Harmer, 1926
111 *Cellaria prealonga* Harmer, 1926
112 *Cellaria aurorae* Livingstone, 1928
Genus - *Swanomia* Hayward and Thorpe, 1989
113 *Swanomia membranacea* Hayward and Thorpe, 1989
Genus - *Melicerita* Edwards, 1836
114 *Melicerita obliqua* Thornely, 1924

Family - *Cribrilinidae* (Hincks, 1879)
Genus - *Reginella* Jullien, 1886

115 *Reginella* sp.

Family - *Escharellidae* Levinsen, 1909
Genus - *Escharella* Gray, 1848
116 *Escharella mammillata* Hayward and Thorpe, 1989
Genus - *Escharoides* Edwards, 1836
117 *Escharoides praestida* (Waters, 1904)

Family - *Sclerodomidae* Levinsen, 1909
Genus - *Cellarinella* Waters, 1904
118 *Cellarinella laytoni* Rogick, 1956

Family - *Smittinidae* Levinsen, 1909
Genus - *Smittina* Norman, 1903
119 *Smittina favulosa* Hayward and Thorpe, 1989
Genus - *Dakariella* Moyano, 1966
120 *Dakariella concinna* Hayward, 1993

Family - *Lacernidae* Jullien, 1888
Genus - *Lacerna* Jullien, 1888
121 *Lacerna watersii* Hayward and Thorpe, 1989

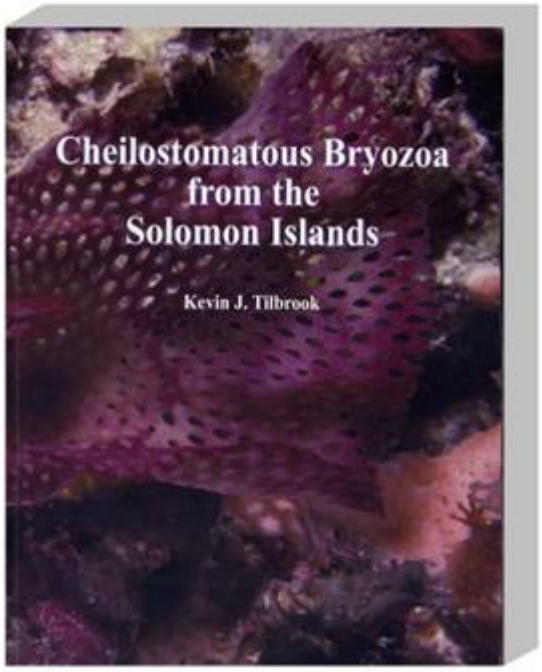
Family - *Phidoloporidae* Gabb and Horn, 1862
Genus - *Rhychozoon* Hincks, 1895
122 *Rhynchozoon tubulosum* (Hincks, 1880)
Genus - *Iodictyum* Harmer, 1957
123 *Iodictyum anomala* sp. novo
Genus - *Reteporella* Busk, 1884
124 *Reteporella parva* Hayward, 1993

Order CYCLOSTOMATA Busk, 1852

Family - *Plagioeciidae* Canu, 1918
Genus - *Plagioecia* Canu, 1918
125 *Plagioecia patina* (Lamarck, 1816)

Family - *Horneridae* Smitt, 1867
Genus - *Hornera* Lamouroux, 1821
126 *Hornera spinigera* Kirkpatrick,

Bryozoa Bookstall

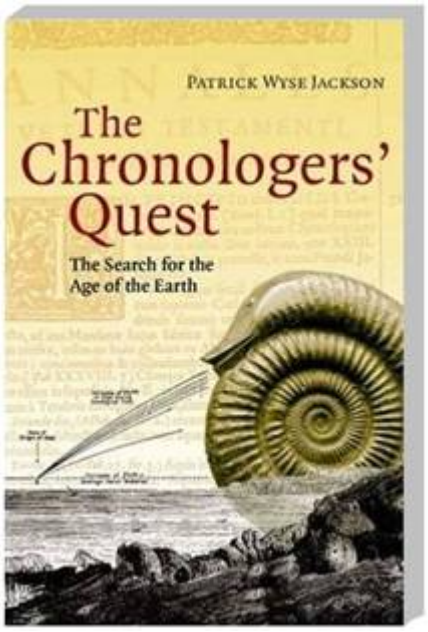


Tilbrook, Kevin J. 2006. *Cheilostomatous Bryozoa from the Solomon Islands.* Santa Barbara Museum of Natural History Monographs Number 4, Studies in Biodiversity Number 3.386pp.

This study outlines previous bryozoan taxonomic work from the tropical western Pacific Ocean and describes 184 species of cheilostome bryozoans. The 178 species known from the Solomon Islands include 72 new species. (Six non-Solomon Islands species are described for comparative purposes.) The described fauna belongs to 79 genera (five newly erected), within 44 families (two newly erected). There are 52 cheilostome species endemic to the Solomon Islands. Over half of these are known only from a single colony. Of the remainder: 24 species are known from the Coral Sea only; 38 species from the western Pacific; and 50 species within the Indo-West Pacific region. The final 15 species have been recorded outside these areas.

Wyse Jackson, Patrick. 2006. *The Chronologers' Quest. The Search for the Age of the Earth.* Cambridge University Press. Hardback. ISBN-13: 9780521813327 | ISBN-10: 0521813328.

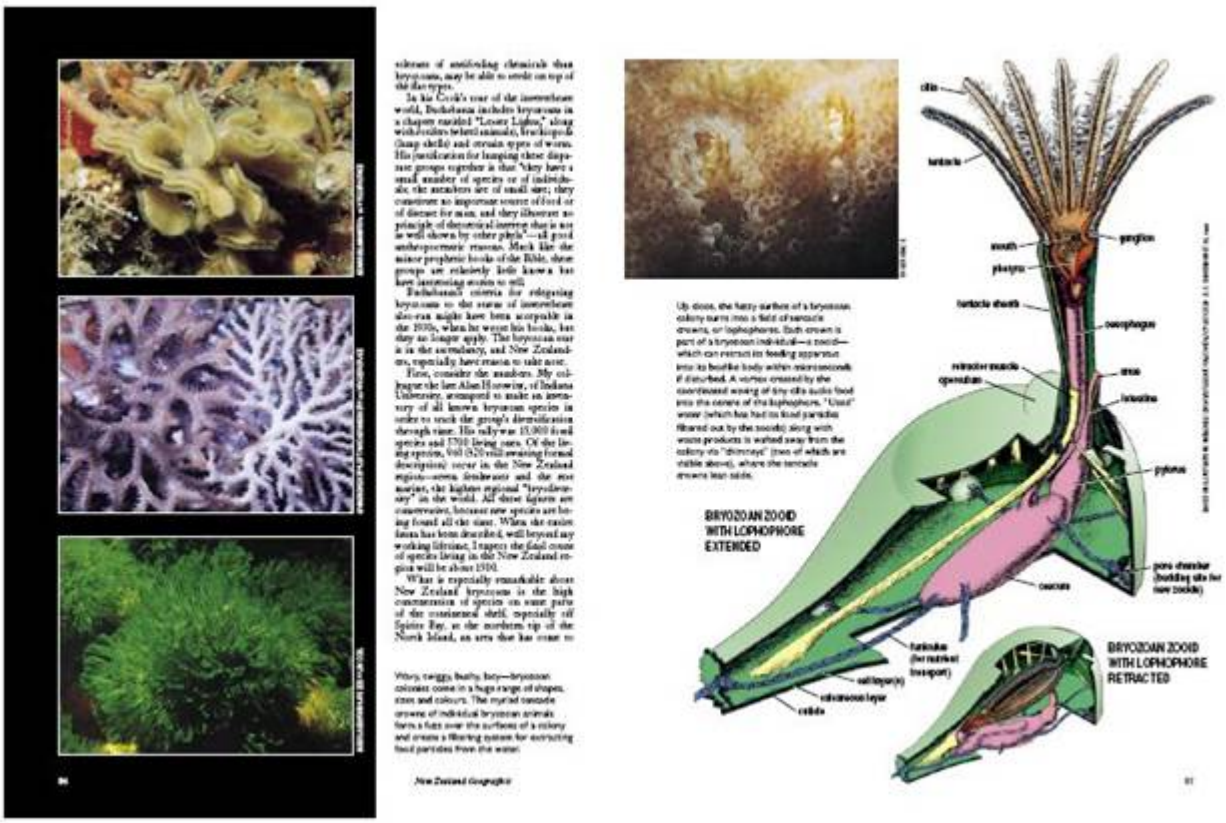
Contents: 1. The ancients: early chronologies; 2. Biblical calculations; 3. Models of Aristolean infinity and Sacred theories of the Earth; 4. Falling stones, salty oceans, and evaporating waters: early empirical measurements of the age of the Earth; 5. Thinking in layers: early ideas in stratigraphy; 6. An infinite and cyclical Earth and religious orthodoxy; 7. The cooling Earth; 8. Stratigraphic laws, uniformitarianism and the development of the geological column; 9. 'Formed stones' and their subsequent role in biostratigraphy and evolutionary theory; 10. The hour-glass of accumulated or denuded sediments; 11. Thermodynamics and the cooling Earth revisited; 12. Oceanic salination reconsidered; 13. Radioactivity: invisible geochronometers; 14. The universal problem and duck soup.



Ordering information available at
http://www.cambridge.org/catalogue/catalogue.asp?isbn=0521813328**.**

Gordon, Dennis. **2003.** Living Lace. *New Zealand Geographic* 61: 78-93.

Although not a new publication, this beautifully illustrated article is now *freely available to IBA members only* in pdf format. Copyright restrictions prohibit posting the file online, but members may receive it on request from either Dennis (d.gordon@niwa.co.nz) or from the IBA Secretary (tim.wood@wright.edu). A reduced sample page spread is shown below.



IBA Conference, July 1-7, 2007

Appalachian State University, Boone, North Carolina USA

IBA Colleagues:

Do you need a formal letter of invitation in order to attend the 14th International Bryozoology Association Meeting in Boone, USA July of 2007?

Such letters are commonly needed for:
1) Application for certain visas to enter the US (CHECK NOW to see if you need a visa to visit the USA).
2) Authorization from home institutions/departments for travel or travel support,
3) Inclusion in a portfolio for professional assessment (promotion/tenure).

I am pleased to send formal letters of invitation, but plan to do so only on request.

If you need a letter please send me an e-mail with the following information:
1. Your name and title.
2. Your home department and institution.
3. The proposed title of your talk (this can change when you submit your abstract).
4. Your complete mailing address.

If you have a special need, for example the letter needs to be addressed to someone besides you, just let me know.

Sincerely,

Steve Hageman
14th IBA Meeting Host, Boone USA
Department of Geology, Appalachian State University
Email: hagemansj@appstate.edu

IBA Meeting Web Site - www.iba.appstate.edu

On line registration to begin January 2007

Recent Publications

The following list includes works either published since the previous issue of the *IBA Bulletin* or else missed by previous issues. As always, members are encouraged to support future compilations by continuing to send complete citations to the IBA secretary at any time. Reprints will be gratefully received by the IBA archivist, Mary Spencer Jones.

Cocito, S., M. Novosel, Z. Pasari and M. M. Key, Jr. (2006). Growth of the bryozoan *Pentapora fascialis* (Cheilostomata, Ascophora) around submarine freshwater springs in the Adriatic Sea. Linzer Biologie Beiträge 38: 15-24.

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Dobretsov, S. and P.-Y. Qian (2006). Facilitation and inhibition of larval attachment of the bryozoan Bugula neritina in association with mono-species and multi-species biofilms. Journal of Experimental Marine Biology and Ecology 333(2): 263-274.

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