



Index of Living and
Fossil Echinoids 1924-1970

PORTER M. KIER
and
MARY HURD LAWSON

SERIES PUBLICATIONS OF THE SMITHSONIAN INSTITUTION

Emphasis upon publication as a means of "diffusing knowledge" was expressed by the first Secretary of the Smithsonian. In his formal plan for the Institution, Joseph Henry outlined a program that included the following statement: "It is proposed to publish a series of reports, giving an account of the new discoveries in science, and of the changes made from year to year in all branches of knowledge." This theme of basic research has been adhered to through the years by thousands of titles issued in series publications under the Smithsonian imprint, commencing with *Smithsonian Contributions to Knowledge* in 1848 and continuing with the following active series:

Smithsonian Contributions to Anthropology
Smithsonian Contributions to Astrophysics
Smithsonian Contributions to Botany
Smithsonian Contributions to the Earth Sciences
Smithsonian Contributions to the Marine Sciences
Smithsonian Contributions to Paleobiology
Smithsonian Contributions to Zoology
Smithsonian Studies in Air and Space
Smithsonian Studies in History and Technology

In these series, the Institution publishes small papers and full-scale monographs that report the research and collections of its various museums and bureaux or of professional colleagues in the world of science and scholarship. The publications are distributed by mailing lists to libraries, universities, and similar institutions throughout the world.

Papers or monographs submitted for series publication are received by the Smithsonian Institution Press, subject to its own review for format and style, only through departments of the various Smithsonian museums or bureaux, where the manuscripts are given substantive review. Press requirements for manuscript and art preparation are outlined on the inside back cover.

S. Dillon Ripley
Secretary
Smithsonian Institution

Index of Living and
Fossil Echinoids 1924-1970

Porter M. Kier
and Mary Hurd Lawson



SMITHSONIAN INSTITUTION PRESS

City of Washington

1978

ABSTRACT

Kier, Porter M., and Mary Hurd Lawson. Index of Living and Fossil Echinoids 1924–1970. *Smithsonian Contributions to Paleobiology*, number 34, 182 pages, 1978.—All new taxa of fossil and living echinoids described from 1924 to 1970 are listed with their age, geographic and stratigraphic occurrence, and bibliographic citation.

OFFICIAL PUBLICATION DATE is handstamped in a limited number of initial copies and is recorded in the Institution's annual report, *Smithsonian Year*. SERIES COVER DESIGN: The trilobite *Phacops rana* Green.

Library of Congress Cataloging in Publication Data

Kier, Porter M.

Index of living and fossil echinoids 1924–1970.

(Smithsonian contributions to paleobiology ; no. 34)

Bibliography: p.

Includes index.

1. Sea-urchins. 2. Sea-urchins, Fossil. I. Lawson, Mary Hurd, joint author. II. Title. III. Series: Smithsonian Institution. Smithsonian contributions to paleobiology ; no. 34. [DNLM:

1. Sea urchins—Classification. 2. Paleontology. W1 SM454G no. 34 / QL382 K47i]
QE701.S56 no. 34 [QL384.E2] 560'.8s [593'.95] 77-608074

Contents

	<i>Page</i>
Introduction	1
Class ECHINOIDEA Leske	1
Subclass PERISCHOECHINOIDEA M'Coy	1
Superorder MEGALOPODACEA Durham	1
Order BOTHRIOCIDAROIDA Zittel	1
Family BOTHRIOCIDARIDAE Klem	1
Order ECHINOCYSTITOIDA Jackson	2
Family ECHINOCYSTITIDAE Gregory	2
Family LEPIDESTHIDAE Jackson	2
Family LEPIDOCENTRIDAE Lovén	3
Family Uncertain	4
Order PALAECHINOIDA Haeckel	4
Family PALAECHINIDAE M'Coy	4
Family CRAVENECHINIDAE Hawkins	5
Order CIDAROIDA Claus	5
Family ARCHAEOCIDARIDAE M'Coy	5
Family MIOCIDARIDAE Durham and Melville	6
Family CIDARIDAE Gray	7
Subfamily HISTOCIDARINAE Mortensen	7
Subfamily CTENOCIDARINAE Mortensen	7
Subfamily GONIOCIDARINAE Mortensen	8
Subfamily STEREOCIDARINAE Lambert	10
Subfamily RHABDOCIDARINAE Lambert	11
Subfamily CIDARINAE Gray	14
Family PSYCHOCIDARIDAE Ikeda	18
Family DIPLOCIDARIDAE Gregory	19
Order Uncertain	19
Family Uncertain	19
Subclass EUECHINOIDEA Bronn	19
Superorder DIADEMATACEA Duncan	19
Order ECHINOTHURIOIDA Claus	19
Family ECHINOTHURIIDAE Thomson	19
Subfamily ECHINOTHURIINAE Thomson	19
Subfamily PHORMOSOMATINAE Mortensen	20
Order DIAEMATOIDA Duncan	21
Family DIAEMATIDAE Gray	21
Family MICROPYGIDAE Mortensen	22
Family ASPIDODIAEMATIDAE Duncan	22
Family Uncertain	22
Order PEDINOIDA Mortensen	22
Family PEDINIDAE Pomel	22
Family Uncertain	23

	<i>Page</i>
Order PYGASTEROIDA Durham and Melville	23
Family PYGASTERIDAE Lambert	23
Superorder ECHINACEA Claus	24
Order SALENIODA Delage and Hérouard	24
Family ACROSALENIIDAE Gregory	24
Family SALENIIDAE L. Agassiz	25
Subfamily SALENIINAE L. Agassiz	25
Order HEMICIDAROIDA Beurlen	27
Family HEMICIDARIDAE Wright	27
Family PSEUDODIADEMATIDAE Pomel	28
Order PHYLOSOMATOIDA Mortensen	30
Family PHYLOSOMATIDAE Pomel	30
Family STOMECHINIDAE Pomel	33
Family Uncertain	35
Order ARBACIOIDA Gregory	35
Family ARBACIIDAE Gray	35
Order TEMNOPLEUROIDA Mortensen	37
Family GLYPHOCYPHIDAE Duncan	37
Family TEMNOPLEURIDAE A. Agassiz	38
Family TOXOPNEUSTIDAE Troschel	43
Family Uncertain	44
Order ECHINOIDA Claus	45
Family ECHINIDAE Gray	45
Family ECHINOMETRIDAE Gray	46
Family STRONGYLOCENTROTIDAE Gregory	46
Family PARASALENIIDAE Mortensen	47
Superorder Uncertain (ECHINACEA or DIADEMATA)	47
Order ORTHOPSIDA Mortensen	47
Family ORTHOPSIDAE Duncan	47
Doubtful Genera of Regular Echinoids	48
Superorder GNATHOSTOMATA Zittel	49
Order HOLECTYPOIDA Duncan	49
Suborder HOLECTYPINA Duncan	49
Family HOLECTYPIDAE Lambert	49
Family ANORTHOPYGIDAE Wagner and Durham	49
Family DISCOIDIDAE Lambert	50
Suborder ECHINONEINA H. L. Clark	50
Family ECHINONEIDAE Agassiz and Desor	50
Family CONULIDAE Lambert	51
Family GALERITIDAE Gray	52
Family Uncertain	52
Suborder CONOCLYPINA Haeckel	52
Family CONOCLYPIDAE Zittel	52
Family OLIGOPYGIDAE Duncan	53
Suborder Uncertain	55
Family Uncertain	55
Order CLYPEASTEROIDA A. Agassiz	55
Suborder CLYPEASTERINA A. Agassiz	55

	<i>Page</i>
Family CLYPEASTERIDAE L. Agassiz	55
Family ARACHNOIDIDAE Duncan	60
Subfamily ARACHNOIDINAE Duncan	60
Subfamily AMMOTROPHINAE Durham	60
Suborder LAGANINA Mortensen	60
Family FIBULARIIDAE Gray	60
Family LAGANIDAE A. Agassiz	64
Family NEOLAGANIDAE Durham	66
Suborder SCUTELLINA Haeckel	66
Family SCUTELLIDAE Gray	66
Family PROTOSCUTELLIDAE Durham	67
Family EOSCUTELLIDAE Durham	68
Family DENDRASTERIDAE Lambert	68
Family ECHINARACHNIIDAE Lambert	69
Family MONOPHORASTERIDAE Lahille	71
Family MELLITIDAE Stefanini	72
Family ASTRICLYPEIDAE Stefanini	73
Family ABERTELLIDAE Durham	74
Family SCUTASTERIDAE Durham	74
Suborder ROTULINA Durham	74
Family ROTULIDAE Gray	74
Suborder Uncertain	74
Family Uncertain ..	74
Superorder ATELOSTOMATA Zittel	74
Order CASSIDULOIDA Claus	74
Order GALEROPTYGOIDA Mintz	74
Family GALEROPTYGIDAE Lambert	74
Family CLYPEIDAE Lambert	75
Family NUCLEOLITIDAE L. Agassiz and Desor	76
Family ECHINOLAMPADIDAE Gray	78
Family FAUJASIIDAE Lambert	82
Family ARCHIACIIDAE Cotteau and Triger	83
Family CASSIDULIDAE L. Agassiz and Desor	83
Family CLYPEOLAMPADIDAE Kier	86
Family PLIOLAMPADIDAE Kier ..	87
Family APATOPYGIDAE Kier	88
Family Uncertain	88
Order HOLASTEROIDA Durham and Melville	89
Family COLLYRITIDAE d'Orbigny	89
Subfamily COLLYRITINAE Beurlen	89
Order DISASTEROIDA Mintz	89
Family DISASTERIDAE A. Gras	90
Family ACROLUSIIDAE Mintz	90
Family TITHONIIDAE Mintz	90
Family HOLASTERIDAE Pictet	90
Suborder URECHININA H. L. Clark	94
Family URECHINIDAE Duncan	94
Order POURTALESIOIDA Mintz	94

	<i>Page</i>
Family PORTALESIIDAE A. Agassiz	94
Family STENONASTERIDAE Lambert	94
Family SOMALIASTERIDAE Wagner and Durham	94
Family Uncertain	95
Order SPATANGOIDA Claus	95
Suborder TOXASTERINA A. G. Fischer	95
Family TOXASTERIDAE Lambert	95
Suborder HEMIASTERINA A. G. Fischer	98
Family HEMIASTERIDAE Clark	98
Family PALAEOSTOMATIDAE Lovén	102
Family PERICOSMIDAE Lambert	102
Family SCHIZASTERIDAE Lambert	103
Suborder MICRASTERINA A. G. Fischer	110
Family MICRASTERIDAE Lambert	110
Family BRISSIDAE Gray	111
Family UNIFASCIIDAE Cooke	120
Family SPATANGIDAE Gray	120
Family LOVENIIDAE Lambert	121
Suborder ASTEROSTOMATINA A. G. Fischer	122
Family ASTEROSTOMATIDAE Pictet	122
Suborder Uncertain	124
Family Uncertain	124
Order NEOLAMPADOIDA Philip	125
Suborder NEOLAMPADINA Philip	125
Family NEOLAMPADIDAE Lambert	125
Superclass GNATHOSTOMATA or ATELOSTOMATA	125
Order Uncertain	125
Doubtful Nominal Genera of Echinoids	125
Literature Cited	126
Index	148

Index of Living and Fossil Echinoids 1924-1970

*Porter M. Kier
and Mary Hurd Lawson*

Introduction

Fifty years have passed since Lambert and Thiéry compiled their list of living and fossil echinoids. Since that time many new species and genera have been described. The result has been an increasing need for an update to this compilation. To satisfy this need we have prepared this supplement to Lambert and Thiéry's work.

The list was prepared from the citations in the *Zoological Record* from 1924 to 1970. Citations before 1924 are included if they were absent in Lambert and Thiéry. In every case we saw the original reference and checked for species that might have been missed. Where possible we have brought up to date the stratigraphic information; in particular we have tried to find the latest age determinations for the stratigraphic occurrences of the fossil species. No attempt has been made to revise the taxonomic assignment of the species because we felt it would have been necessary to see the type specimens. Time did not permit this. Our index has strictly followed the classification of the *Treatise on Invertebrate Paleontology* even where we disagree with it. Within five years we intend to publish a supplementary revision that will include all the new taxa for the years 1971-1975. For this reason we ask all users of this work to inform us of any errors, deletions, or additions.

Porter M. Kier and Mary Hurd Lawson, Department of Paleobiology, National Museum of Natural History, Smithsonian Institution, Washington, D. C. 20560.

The present list is arranged by taxonomic hierarchy with the geological time sequence indicated by headings at the generic and specific levels. Within a generic or specific entry, brackets enclose locality information and parentheses enclose further levels of geological time or stratigraphic information.

ACKNOWLEDGMENTS.—We wish to thank the staffs of the Smithsonian Institution and the United States Geological Survey libraries—in particular, Mrs. Carolyn Hahn and Mr. Jack Marquardt for their invaluable assistance in locating many hard-to-obtain books. We also thank Ms. Donna Copeland for typing this paper.

Class ECHINOIDEA Leske

Subclass PERISCHOECHINOIDEA M'Coy

Superorder MEGALOPODACEA Durham

Order BOTHRIOCIDAROIDA Zittel

Family BOTHRIOCIDARIDAE Klem

Genus *Bothriocidaris* Eichwald

UPPER ORDOVICIAN

B. eichwaldi Männil, 1962:152-156, 187-189, figs. 3b, 6, 7, 11, 12, 14-17, pl. 1: figs. 6-9, pl. 3: figs. 1-4, pls. 4, 5. [Baltic States, U.S.S.R.] (Pirgu Stage.)

B. parvus Männil, 1962:156–160, 187, 189, figs. 3v, 8, 9, pl. 2: figs. 3–4, pl. 3: fig. 5. [Baltic States, U.S.S.R.] (Vormsi Stage.)

Genus *Neobothriocidaris* Paul

ORDOVICIAN

Neobothriocidaris Paul, 1967:535. Type-species: *N. peculiaris* Paul, 1967:528–531, 535, fig. 3, pl. 84: figs. 1–4, pl. 85: figs. 9–11. [Ayrshire, Scotland.] (Middle and upper Ashgill.)
N. minor Paul, 1967:531–533, 535, figs. 2, 4, pl. 85: figs. 5–8. [Ayrshire, Scotland.]

Order ECHINOCYSTITOIDA Jackson

Family ECHINOCYSTITIDAE Gregory

Genus *Pronechinus* Kier

UPPER PERMIAN

Pronechinus Kier, 1965:461–462. Type-species: *P. anatoliensis* Kier, 1965:462–463, figs. 23–24, pl. 58: fig. 4, pl. 59: fig. 3. [Turkey.]

Genus *Eupholidocidaris* Kier

In the *Treatise*, Kier (Durham et al., 1966:U302) considers *Eupholidocidaris* Kier a subjective synonym of *Proterocidaris* de Koninck.

MISSISSIPPIAN

Eupholidocidaris Kier, 1956:15. Type-species: *E. brightoni* Kier, 1956:16–17, figs. 1–2, pl. 1. [Ireland.]

PENNSYLVANIAN

E. belli Kier, 1957a:326–328, fig. 1. [Texas, U.S.A.]

Genus *Fournierechinus* Jackson

MISSISSIPPIAN

Fournierechinus Jackson, 1929:67. Type-species: *F. deneensis* Jackson, 1929:67–72, pl. 9, pl. 10: figs. 1–2. [Belgium.] (Lower Viséan.)

Genus *Jacksonechinus* Lambert

In the *Treatise*, Kier (Durham et al., 1955: U302) provisionally considers this genus a subjective synonym of *Proterocidaris* de Koninck.

PENNSYLVANIAN

Jacksonechinus Lambert, 1935e:39–40. Type-species: *J. andrewi* Lambert, 1935e:40, pl. 1: figs. 1–3. [Egypt.]

Genus *Pholidocidaris* Meek and Worthen

MISSISSIPPIAN

P. tornacensis Jackson, 1929:64–66, pl. 5: fig. 7, pl. 10: figs. 3–6. [Belgium.] (Tournaisian.)

Genus *Rhenechinus* Dehm

LOWER DEVONIAN

Rhenechinus Dehm, 1953:88–93. Type-species: *R. hopstatter* Dehm, 1953:88–94, figs. 1–2, pl. 5. [Germany.]

Family LEPIDESTHIDAE Jackson

Genus *Lepidesthes* Meek and Worthen

PENNSYLVANIAN

L. grandis Kier, 1958a:20–23, figs. 21–22, pl. 8A. [Texas, U.S.A.]

L. alta Kier, 1958a:17–20, figs. 15–20, pl. 7. [Tennessee, U.S.A.] (Meramecian.)

L. formosa Termier and Termier, 1950:99, 102, pl. 231: fig. 21. [Morocco, North Africa.] (Upper Viséan.)

L. howsei Jackson, 1926:529, pl. 30. [England.]

L.? *martini* Spreng and Howe, 1963:937–938, figs. 6E–I. [Missouri, U.S.A.]

MISSISSIPPIAN TO UPPER DEVONIAN

L. warrenensis Cooper, 1931b:532–538, figs. 1–2. [U.S.A.]

Genus *Meekechinus* Jackson

MISSISSIPPIAN

M.? *herbornensis* Bindemann, 1938: 203–220, figs. 1–2, pl. 1: figs. 1–12, pl. 2: figs. 1–5, pl. 3: figs. 1–4, pl. 4: figs. 1–2. [Germany.]

Family LEPIDOCENTRIDAE Lovén**Genus *Lepidocentrus* Müller**

MISSISSIPPIAN

L. mammillatus Jackson, 1929:21–22, pl. 1: figs. 12a–d. [Belgium.] (Viséan.)

UPPER DEVONIAN

L.? *thomasi* Belanski, 1928:181–183, pl. 13: figs. 1–16. [Iowa, U.S.A.]

LOWER DEVONIAN

L. lenneanus Wolburg, 1933:47–49, fig. 3, pl. 3. [Germany.]

Genus *Albertechinus* Stearn

UPPER DEVONIAN

Albertechinus Stearn, 1956:741–744. Type-species: *A. montanus* Stearn, 1956:744–746, fig. 1, pl. 81: figs. 1–3. [Alberta, Canada.] (Fairholme Fm.)

Genus *Aulechinus* Bather and Spencer

UPPER ORDOVICIAN

Aulechinus Bather and Spencer, 1934:558. Type-species: *A. grayae* Bather and Spencer, 1934:558. [Scotland.]

Genus *Cavanechinus* Brown

MIDDLE DEVONIAN

Cavanechinus Brown, 1967:158–159. Type-species: *C. warreni* Brown, 1967: 160, fig. 1, pl. 4: figs. 1–2. [South of Yass, New South Wales, Australia.]

Genus *Deneechinus* Jackson

MISSISSIPPIAN

Deneechinus Jackson, 1929:22. Type-species: *D. tenuispinus* Jackson, 1929:22–24, pl. 1: fig. 11. [Belgium.] (Lower Viséan.)

Genus *Ectinechinus* MacBride and Spencer

UPPER ORDOVICIAN

Ectinechinus MacBride and Spencer, 1938:95. Type-species: *E. lamonti* MacBride and Spencer, 1938: 95, figs. 2a–b, 5e, 7d, 10b, 11b, pl. 12: figs. 4–6, pl. 13: figs. 3–4, pl. 14: figs. 4–5, pl. 15: fig. 5. [Scotland.] (Ashgillian.)

Genus *Eothuria* MacBride and Spencer

UPPER ORDOVICIAN

Eothuria MacBride and Spencer, 1938:95. Type-species: *E. beggi* MacBride and Spencer, 1938:95, figs. 5f, 7e, 8c, 13–15, pl. 15: figs. 6–9, pl. 16: figs. 1–5, pl. 17: figs. 1–5. [Scotland.] (Ashgillian.) MacBride and Spencer (1938:95) created a new order Megalopoda and family Eothuriidae for *Eothuria*. Durham (1966:377) erected a superorder Megalopodacea.

Genus *Hyattechinus* Jackson

MISSISSIPPIAN

H. dixonii Hawkins, 1935b:243–246, fig. 2, pl. 15: figs. 1–3. [Wales, Great Britain.]
H. elegans Jackson, 1929:24–30, fig. 5, pl. 4: figs. 2–3, 4a–g, pl. 5: figs. 5a–r. [Belgium.] (Tournaisian.)
H. laudoni Kier, 1965:463, 464, figs. 3F, 25, pl. 58: fig. 1, pl. 59: figs. 1–2. [Montana, U.S.A.]
H. toreumaticus Hawkins, 1935b:246–248, fig. 3, pl. 14: fig. 2. [Wales, Great Britain.]

Genus *Lepidechinoides* Olsson

DEVONIAN

L. huntii Cooper, 1931a:132–137, figs. 1B, 1C, 1F, 2A, pl. 18: figs. 1–7. [U.S.A.] (Skaneateles Fm.)

L. whitnalli Cooper, 1931a:137-139, figs. 1D-E, pl. 19: figs. 4-8. [U.S.A.]

Genus *Lepidechinus* Hall

MISSISSIPPIAN

- L. belgicus* Jackson, 1929:46-47, pl. 5: figs. 1-2. [Belgium.] (Lower Viséan.)
L. cooperi Kier, 1958a:15-17, figs. 11-12, pl. 6. [Iowa, U.S.A.] (Kinderhookian.)

Genus *Perischodomus* M'Coy

MISSISSIPPIAN

- P. fraiponti* Jackson, 1929:48-50, pl. 5: figs. 3-4. [Belgium.] (Lower Viséan.)

Genus *Porechinus* Dehm

LOWER DEVONIAN

- Porechinus* Dehm, 1961:4-5. Type-species: *P. porosus* Dehm, 1961:4-5, fig. 2, pl. 1: figs. 1-4. [West Germany.]

Family Uncertain

Genus *Devonocidaris* Thomas

UPPER DEVONIAN

- D. dumoni* Maillieux, 1935:11-14, pl. 2: figs. 2-6. [Belgium.] (Frasnian.)
D. hacquaerti Maillieux, 1935:9-11, pl. 2: figs. 1-1d. [Belgium.] (Frasnian.)
D. jacksoni Thomas, 1924:500-505, pl. 50: fig. 36, pl. 51: figs. 1-26, pl. 52: figs. 1-4, pl. 53: figs. 1-7, pl. 54: figs. 1-6. [Iowa, U.S.A.]
D. primaevus Belanski, 1928:184-186, pl. 13: figs. 29-34. [Iowa, U.S.A.]
D. thomasi Stainbrook, 1937: 899-901, pl. 1: figs. 5-7, 9. [U.S.A.]

Order PALAEOCHINOIDA Haeckel

Family PALAEOCHINIDAE M'Coy

Genus *Palaechinus* M'Coy

MISSISSIPPIAN

- P. canadensis* Kier, 1953:65-69, figs. 1-4. [Canada. Kier referred to genus as *Palaechinus* Lovén (nom. van.)] (Upper Kinderhookian or lower Osagean.)
P. globulus Jackson, 1929:30-33, pl. 2: figs. 10-14. [Belgium. Jackson referred to genus as *Palaechinus* Lovén (nom. van.)] (Tournaisian.)
P. merriami Kier, 1965:458-459, fig. 17, pl. 57: fig. 2. [Nevada, U.S.A.]
P. sprengi Kier, 1954:252-254, figs. 1-2. [Canada. Kier referred to genus as *Palaechinus* Lovén (nom. van.)].
P. tetrastichus Kier, 1958a:12-14, figs. 6-10, pl. 5B. [U.S.A.]
P. visetensis Jackson, 1929:33-36, fig. 7, pl. 2: figs. 1-9. [Belgium. Jackson referred to genus as *Palaechinus* Lovén (nom. van.)] (Viséan.)

Genus *Lovenechinus* Jackson

MISSISSIPPIAN

- L. gordonii* Kier, 1965:459-460, figs. 18-20, pl. 58: fig. 2. [Nevada, U.S.A.] (Lower Mississippian.)
L. hunanensis Ozaki, 1939:565-567, pl. 30: figs. 1-7. [Central China.] (Shihtengtse Ls.)
L. jacksoni Demanet, 1931:1-9, figs. 1-7. [Belgium.] (Lower Dinantian.)

Genus *Melonechinus* Meek and Worthen

MISSISSIPPIAN

- M. chuseni* Chao, 1942:202-204, fig. 1. [China.] (Upper part of Yentse Series.)
M. heckeri Faas, 1941:74-75, fig. 9, pl. 10: fig. 9. [Leningrad Province, U.S.S.R.]

Genus *Donbassechinus* Faas

In the *Treatise* Kier (Durham et al., 1966:U309) provisionally considers this genus a subjective synonym of *Melonechinus* Meek and Worthen.

MISSISSIPPIAN

Donbassechinus Faas, 1941:73. Type-species: *D. kumpani* Faas, 1941:73-74, figs. 6-8, pl. 10: figs. 6-8. [Don Basin, U.S.S.R.]

Family CRAVENECHINIDAE Hawkins

Genus *Cravenechinus* Hawkins

MISSISSIPPIAN

Cravenechinus Hawkins, 1946:195. Type-species: *C. uniserialis* Hawkins, 1946:195-197, fig. 1. pl. 13. [England.] (Viséan.)

Genus *Gotlandechinus* Regnéll

UPPER SILURIAN

Gotlandechinus Regnéll, 1956:158-160. Type-species: *G. balticus* Regnéll, 1956:160-163, figs. 1-2, pl. 1: fig. 4. [Sweden.] (Lower Ludlow.)

Genus *Xenechinus* Kier

LOWER PERMIAN

Xenechinus Kier, 1958b:889-890. Type-species: *X. parvus* Kier, 1958b:890-892, figs. 1-3, pl. 114: figs. 8-12. [Texas, U.S.A.] (Wolfcampian.)

Order CIDAROIDA Claus

Family ARCHAEOCIDARIDAE M'Coy

Genus *Archaeocidaris* M'Coy

PERMIAN

A. barroisi Mathieu, 1949:39-42, pl. 1: figs. 2-12, 15. [Tunis, North Africa.]
A. cowleyi Boos, 1929:249-250, pl. 27: figs. 3-3c. [Oklahoma-Kansas, U.S.A.] (Lower Permian.)
A. manhattanensis Mathieu, 1949:41, pl. 1: fig. 1. [Texas, U.S.A.]

PENNSYLVANIAN

A. immanis Kier, 1958a:3-7, figs. 1-2, pl. 1, pl. 2, pl. 3A. [Oklahoma, U.S.A.]

A. meurevillensis Dehée, 1927:290-293, pl. 7. [France.] (Westphalian.)
A. mosquensis A. Ivanov (in litt.), Yakovlev, 1939:70, pl. 13: figs. 23-26. [U.S.S.R.]
A. subwortheni Faas (in litt.), Yakovlev, 1939:69-70, pl. 13: figs. 10-12. [U.S.S.R.]

MISSISSIPPIAN

A. aliquantula Kier, 1958a:7-8, pl. 3C. [Iowa, U.S.A.] (Kinderhookian.)
A. propinqua Jackson, 1929:17-18, fig. 3, pl. 1: figs. 5a-b. [Belgium.] (Tournaisian.)
A. setosa Jackson, 1929:11-12, pl. 1: 11-12, pl. 1: figs. 6a-b. [Belgium.]

UPPER DEVONIAN

A. fraxinensis Maillieux, 1940:28-30, pl. 2: figs. 18-21a. [Belgium.] (Frasnian.)

Genus *Echinocrinus* L. Agassiz

According to Fell (Durham et al., 1966:U317) in the *Treatise*, this genus is considered an objective synonym of *Archaeocidaris* (suppressed ICZN Op. 370, 1955).

PENNSYLVANIAN

E.? *jacksoni* Spreng and Howe, 1963:936-937, figs. 6C-D. [Missouri, U.S.A.] (Missourian.)
E.? *remotus* Spreng and Howe, 1963:936, figs. 6A-B. [Missouri, U.S.A.] (Virgilian.)

Genus *Permocidaris* Lambert

In the *Treatise* Fell (Durham et al., 1966:U317) provisionally considers *Permocidaris* a subjective synonym of *Archaeocidaris*.

PERMIAN

P.? *timorensis* Wanner, 1941:298-302, fig. 1, pl. 25: figs. 11-19. [Timor (Island), South Malay Archipelago.]

Genus *Lepidocidaris* Meek and Worthen

MISSISSIPPIAN

L. squamosa (Meek and Worthen) var. *anglica*
Hawkins, 1935b:240–242, fig. 1, pl. 14: fig. 1.
[England.] (Tournaisian.)

Genus *Polytaxicidaris* Kier

MISSISSIPPIAN

Polytaxicidaris Kier, 1958a:10–11. Type-species: *P. dyeri* Kier, 1958a:11–12, fig. 5, pl. 4B, pl. 5A. [Indiana, U.S.A.] (Osagean.)
P. lirata Kier, 1965:456–457, fig. 13, pl. 56, pl. 57: fig. 1, pl. 58: fig. 3. [Oklahoma, U.S.A.]

Genus *Silurocidaris* Regnéll

UPPER SILURIAN

Silurocidaris Regnéll, 1956:165–166. Type-species: *S. clavata* Regnéll, 1956:166–167, pl. 1: figs. 1–3, pl. 2: figs. 1–2, pl. 4: figs. 3–5. [Sweden.] (Lower Ludlow.)

Genus *Xenocidaris* Schultze

UPPER DEVONIAN

X. caheni Maillieux, 1935:6–8, pl. 1: fig. 1–1d. [Belgium.] (Frasnian.)
X. mariaeburgensis Maillieux, 1940:33–36, pl. 2: figs. 2–17. [Belgium.] (Frasnian.)
X. mariaeburgensis Maillieux praemut. *major* Maillieux, 1940:37–38, pl. 2: figs. 22–22b, pl. 3: figs. 1–21. [Belgium.] (Frasnian.)

Family MIOCIDARIDAE Durham and Melville

Miocidaridae Durham and Melville, 1957:252.

Genus *Miocidaris* Döderlein

LOWER JURASSIC

M. dubari Lambert, 1931b:11–13, pl. 1: figs. 1–6. [North Africa.] (Lower Domerian.)

M. tenuispina Mortensen, 1934a:394–398, figs. 1–3, pl. 21: fig. 2. [England.] (Liassic.)
M. turneri Lörcher, 1930:261–262, pl. 19: figs. 4a–c. [Germany.]

TRIASSIC

M. barzaviae Jekelius, 1932:43–44, pl. 2: figs. 24–26. [Rumania.]
M. curmaturi Jekelius, 1932:43, pl. 2: figs. 21–22. [Rumania.]
M. timorensis Bather, 1929:227–232, pl. 257: figs. 18–20. [Timor (Island), Indonesia.]

LOWER TRIASSIC

M. pakistanensis Linck, 1955:490–493, figs. 1–4. [Pakistan.]

PERMIAN

M. connorsi Kier, 1965:453–456, pl. 55: figs. 1–3. [Texas, U.S.A.] (Bell Canyon Fm., Upper Permian.)
M. permica Wanner, 1941:302–310, figs. 2–3, pl. 25: figs. 1–10, 20–27, pl. 26: figs. 1–6, 23. [Timor (Island), South Malay Archipelago.]
M. platyacantha Nisiyama, 1966:155–156, pl. 1: fig. 3. [Japan.] (Basleonian.)
M. spinulifera Nisiyama, 1966:155, pl. 1: figs. 1–2. [Japan.] (Basleonian.)

Genus *Anaulocidaris* Zittel

UPPER JURASSIC

A. tuberculata Mortensen, 1937:18–19, pl. 2: figs. 11–16. [Germany.]

TRIASSIC

A. vinassai Boni, 1939:328–332, pl. 17: figs. 6–10, 17. [Italy.]

Genus *Dicyclocidaris* Fell

UPPER TRIASSIC

Dicyclocidaris Fell, 1950:83. Type-species: *D. den-*

ticulata Fell, 1950:83–85, figs. 1–3. [New Zealand.] (Karnian.)

Genus *Lenticidaris* Kier

LOWER TRIASSIC

Lenticidaris Kier, 1968a:1000–1001. Type-species: *L. utahensis* Kier, 1968a:1001–1004, fig. 1, pl. 121: figs. 1–2, pl. 122: figs. 1–3, pl. 123: figs. 3–9. [Utah, U.S.A.]

Genus *Pachycidaris* Thiéry

JURASSIC

Pachycidaris Thiéry, 1928:180. Type-species: *P. thieryi* Collignon and Lambert. [Europe.] (Oxfordian.)

LOWER JURASSIC

P. bergouniouxii Mercier, 1937c:18, pl. 1: figs. 5–7. [France.] (Domerian.)
P. jeanneti Mercier, 1937c:17, pl. 1: figs. 1–2. [France.] (Toarcian.)
P. piveteaui Mercier, 1937c:18–19, pl. 1: fig. 8. [France.] (Toarcian.)

Genus *Triadocidaris* Döderlein

TRIASSIC

T. coronensis Jekelius, 1932:44, pl. 2: figs. 20a–c. [Rumania.]

UPPER TRIASSIC

T. lungauensis Tollmann in Kristan-Tollmann, Tollmann and Geysant, 1969:21–23, pl. 3: figs. 3–6, pl. 6: figs. 5–8. [Tarntal Mountains, Austria.] (Rhaetic.)

Family CIDARIDAE Gray

Genus *Minicidaris* Deraniyagala

MIOCENE

Minicidaris Deraniyagala, 1961:153. Type-species:

M. minihagali Deraniyagala, 1961:154, pl. 5: figs. 3–4. [Ceylon.]

Subfamily HISTOCIDARINAE Mortensen

Genus *Histocidaris* Mortensen

RECENT

H. acutispina Mortensen, 1927b:248–250, figs. 4–5, pl. 50: figs. 1–2, pl. 52: fig. 2, pl. 77: fig. 4. [Malaysia.]
H. australiae Mortensen, 1928:66. [Off coast of New South Wales, Australia.]
H. carinata Mortensen, 1928:66. [Off Kyushu Island, South Japan.]
H. crassispina Mortensen, 1928:66. [Off New South Wales, Australia.]
H. denticulata Koehler, 1927:10–14, pl. 1: figs. 1–3, 6, 7, pl. 2: fig. 1, pl. 23: fig. 1. [Bay of Bengal, Indian Ocean.]
H. formosa Mortensen, 1928:65–66. [Kei Islands, Indonesia Malay Archipelago.]
H. magnifica Mortensen, 1927b:245–248, figs. 1–3, pls. 48–49, pl. 76. [Malaysia.]
H. nuttingi Mortensen, 1926:6–7, pl. 1: figs. 1–2, 4, pl. 2: fig. 6, pl. 3: fig. 9, pl. 4: figs. 11–12. [Off Havana, Cuba.]
H. recurvata Mortensen, 1928:66. [Kei Islands, Indonesia Malay Archipelago.]

MIDDLE MIOCENE

H. geneffensis Lambert, 1931d:204, pl. 5: fig. 50. [Egypt.] (Helvetian.)
H. oranensis Lambert, 1931c:83–84, pl. 3: figs. 24–25. [Algiers, North Africa.] (Upper Sahelian = Upper Tortonian.)

OLIGOCENE

H. mckayi Fell, 1954:30–32, fig. 15, pls. 7A–J, pl. 9D, pl. 12G, pl. 13C, pl. 14E. [New Zealand.] (Duntroonian to Waitakian.)

Subfamily CTENOCIDARINAE Mortensen

Genus *Ctenocidaris* Mortensen

RECENT

C. polyplax Mortensen, 1950a:296–297, pl. 8: figs. 1, 2, 8, pl. 9: fig. 4. [Antarctic Ocean.]

Genus *Austrocidaris* H. L. Clark

RECENT

- A. gigantea* H. L. Clark, 1925a:28, pl. 3: figs. 1-2. [Antarctic, South Victoria Land, off Coulman Island.]
- A. platyacantha* H. L. Clark, 1925a:29-30, pl. 2: fig. 1. [Antarctic seas (south of Coulman and Balleny Islands).]

MIOCENE

- A. operta* Philip, 1964:463-464, figs. 5d-e, pl. 61: figs. 5-6, pl. 64: figs. 1-4, 8. [Southeastern Australia.]

Genus *Eurocidaris* Mortensen

RECENT

- E. nutrix* Thomson var. *longispina* Mortensen, 1928:67. [Heard Island, Southern Ocean.]
- E. rugosa* Koehler, 1926:17-23, pl. 99: figs. 4-9, pl. 100: figs. 1-6, pl. 101: figs. 1-7, pl. 102: figs. 1-7, pl. 119: fig. 2. [Antarctic.]

Genus *Homalocidaris* Mortensen

RECENT

- Homalocidaris* Mortensen, 1928:67. Type-species: *Austrocidaris gigantea* H. L. Clark. [Antarctic.]

Genus *Notocidaris* Mortensen

RECENT

- N. platyacantha* H. L. Clark var. *contracta* Koehler, 1926:13-14, pl. 94: fig. 5, pl. 96: figs. 1-6, pl. 99: fig. 5. [Antarctic.]
- N. remigera* Mortensen, 1950a:298-299, pl. 5: figs. 1-2, pl. 8, figs. 3-4. [Antarctic Ocean.]
- N. spinosa* Koehler, 1926:14-17, pl. 97: figs. 1-6, pl. 98: figs. 1-7, pl. 99: figs. 1-3, pl. 112: fig. 7, pl. 114: fig. 7, pl. 119: fig. 6. [Antarctic.]

MIDDLE PLIOCENE

- N. vellai* Fell, 1954:43-45, pl. 15A-M. [New Zealand.] (Lower-upper Nukumaruan.)

Subfamily GONIOCIDARINAE Mortensen

Genus *Goniocidaris* Desor in Agassiz and Desor

RECENT

- G. alba* Mortensen, 1928:67. [Off Kyushu Island, South Japan.]
- G. australiae* Mortensen, 1928:68. [Off the coast of New South Wales, Australia.]
- G. balinensis* Mortensen, 1932b:148-151, figs. 1-4, pl. 1: figs. 1-5, pl. 11: fig. 7, pl. 13: figs. 11-14. [Bali Sea, East Indies.]
- G. corona* Baker, 1968:200-203, fig. 1, pl. 1. [North-eastern New Zealand.]
- G. crassa* Mortensen, 1928:68. [Mindanao Island, south of Philippine Islands.]
- G. impressa* Koehler, 1926:24-28, pl. 91: figs. 1-8, pl. 92: figs. 1-5, 8-14, pl. 119: fig. 1. [Antarctic.]
- G. indica* Mortensen, 1939b:3-6, figs. 1-2, pl. 1: figs. 1-4, pl. 5: figs. 4, 7, pl. 6: figs. 17-18, [In Indian Ocean between Pemba Island and East Africa.]
- G. magi* Pawson, 1964:67-70, figs. 1-4, pl. 1. [New Zealand.]
- G. sibogae* Mortensen, 1928:68. [Molucca Sea, Malay Archipelago.]
- G. spinosa* Mortensen, 1928:67. [Amboina, Indonesia.]

PLIOCENE

- G. mortenseni* Chapman and Cudmore, 1934:139-140, pl. 14: figs. 23, 27. [South Australia.]
- G. tubaria* (Lamarck) *hallettensis* Philip, 1964:458-460, figs. 4g, 4j, 4l, pl. 66: figs. 1, 2, 12, pl. 67: figs. 4-6. [Southeastern Australia.]

MIOCENE

- G. praecipua* Philip, 1964:455-456, figs. 4i, 4k, 4m, pl. 61: figs. 10-12. [Southeastern Australia.]

OLIGOCENE

- G. hebe* Fell, 1954:37-39, pls. 4A-J, 7D, 8D. [New Zealand.] (Dunroonian to Hutchinsonian.)
- G. holguinensis* Sánchez Roig, 1949:31. [Cuba.]
- G. murrayensis* Chapman and Cudmore, 1934:138-139, pl. 14: figs. 20-22. [South Australia.]

G. pusilla Fell, 1954:39-40, pls. 5H, 13D, 14C. [New Zealand.] (Otaian.)

EOCENE

G. habanensis Sánchez Roig, 1949:30-31, pl. 1: fig. 5. [Cuba.]

Genus *Adelcidaris* Cotton and Godfrey

In the *Treatise* Fell (Durham et al., 1966:U325) states that *Adelcidaris* is a nomen vanum for *Goniocidaris*.

RECENT

Adelcidaris Cotton and Godfrey, 1942:217. Type-species: *Goniocidaris tubaria* (Lamarck.)

Subgenus *Goniocidaris* (*Aspidocidaris*) Mortensen

RECENT

Goniocidaris (*Aspidocidaris*) Mortensen, 1928:67. Type-species: cited as *Goniocidaris clypeata* Döderlein. According to Fell (Durham et al., 1966:U325) the type is *Goniocidaris alba* Mortensen. [Japan, Indonesia, Australia, New Zealand.]

Subgenus *Goniocidaris* (*Cyrtocidaris*) Mortensen

RECENT

Goniocidaris (*Cyrtocidaris*) Mortensen, 1927b:264. Type-species: *G. tenuispina* Mortensen, 1927b:264-269, figs. 10-11, pl. 57: figs. 1-2, pl. 58: fig. 1, pl. 59: fig. 2, pl. 61: figs. 6-8, pl. 63: fig. 5, pl. 73: figs. 5-6, pl. 79: figs. 1-3. [Philippines.]

G. (C.) tenuispina Mortensen var. *major* Mortensen, 1927b:270-272, fig. 13, pl. 58: fig. 2, pl. 79: fig. 9. [Philippines.]

G. (C.) tenuispina Mortensen var. *tuberculata* Mortensen, 1927b:269-270, fig. 12, pl. 57: fig. 3, pl. 59: fig. 1, pl. 61: figs. 9-11, pl. 73: figs. 7-8, pl. 79: figs. 4-8. [Philippines.]

Subgenus *Goniocidaris* (*Discocidaris*) Mortensen

RECENT

Goniocidaris (*Discocidaris*) *peltata* Mortensen, 1927b:261-264, fig. 9, pls. 55-56, pl. 74: figs. 4-5, pl. 78: figs. 9-12. [Malaysia.]

Genus *Delocidaris* Philip

MIOCENE

Delocidaris Philip, 1964:464-466. Type-species: *Goniocidaris prunispinosa* Chapman and Cudmore.

Genus *Psilocidaris* Mortensen

RECENT

Psilocidaris Mortensen, 1927b:282-283. Type-species: *P. echinulata* Mortensen, 1927b:283-285, fig. 18, pl. 60: figs. 1-2, pl. 61: figs. 4-5, pl. 63: fig. 4, pl. 73: figs. 3-4, pl. 78: figs. 3-5. [Malaysia.]

Genus *Rhopalocidaris* Mortensen

RECENT

Rhopalocidaris Mortensen, 1927b:272-273. [Philippines.] Type-species: *Cidaris* (*Discocidaris*) *hirsutispinus* de Meijere. [Malay Archipelago.]

R. hirsutispinus (de Meijere) var. *viridis* Mortensen, 1927b:273-275, fig. 14, pl. 61: fig. 2, pl. 73: figs. 1-2, pl. 78: figs. 6-8. [Philippines.]

R. rosea Mortensen, 1928:68. [Japanese seas (Sagami Sea; off Goto Island).]

R. rosea Mortensen *tenuis* Mortensen, 1928:68-69. [Off Kei Islands, Indonesia.]

Genus *Schizocidaris* Mortensen

RECENT

S. fasciata Mortensen, 1927b:280-282, fig. 17, pl. 61: fig. 3, pl. 74: fig. 3, pl. 78: fig. 2. [Philippines.]

Subfamily STEREOCIDARINAE Lambert

UPPER EOCENE

Genus *Stereocidaris* Pomel

RECENT

- S. excavata* Mortensen, 1932b:151-154, fig. 5, pl. 2: figs. 1-2, pl. 3: figs. 1-5, pl. 4: fig. 2, pl. 11: figs. 1-2. [South Africa.]
- S. grandis* (Döderlein) var. *hyatorina* Mortensen, 1928:69. [Off Kyushu, South Japan.]
- S. grandis* (Döderlein) var. *rubra* Mortensen, 1927b:301, pl. 68: figs. 1-2. [Malaysia.]
- S. granularis* Mortensen, 1928:69. [Philippines, Molucca Sea.]
- S. hawaiiensis* Mortensen, 1928:69. [Hawaiian seas.]
- S. indica* Döderlein var. *philippinensis* Mortensen, 1928:71. [Philippine seas.]
- S. nascaensis* Allison, Durham and Mintz, 1967:10-13, figs. 1-4, 15-20. [West from Chile.]
- S. purpurascens* Mortensen, 1928:70. [Off Kei Islands, Indonesia.]
- S. reducta* Mortensen, 1939b:7-9, fig. 3, pl. 2: figs. 1-4, pl. 5: fig. 1, pl. 6: figs. 14-16. [Maldive Islands, Indian Ocean.]
- S. sceptriferoides* Döderlein var. *lamellata* Mortensen, 1927b:304-306, fig. 22, pls. 71-72, pl. 74: figs. 8-9, pl. 78: figs. 13-14. [Malaysia.]
- S. sceptriferoides* Döderlein var. *lanceolata* Mortensen, 1928:71. [Sagami Sea, Japan.]
- S. squamosa* Mortensen, 1928:70. [Saya de Malha Bank, Indian Ocean.]
- S. stylifera* Mortensen, 1928:69. [Philippines.]
- S. sulcatispinis* Mortensen, 1928:70. [Off Celebes, Kei Islands, Indonesia.]
- S. tubifera* Mortensen, 1928:70. [Kei Islands, Philippines.]
- S. tubifera* Mortensen var. *impressa* Mortensen, 1928:70. [Kei Islands, Philippines.]

MIDDLE PLIOCENE

- S. hutchinsoni* Fell, 1954:35-36, pls. 6A-D, 6F-H, 6J-L, 9E. [New Zealand.] (Nukumaruan.)

LOWER PLIOCENE

- S. grandis* (Döderlein) *fusana* Nisiyama, 1966:159-160, pl. 1: fig. 4. [Japan.] (Kurotaki Fm.)

- S. cudmorei* Philip, 1964:440-441, figs. 1a-d, 1i-j, pl. 60. [Southeastern Australia.]
- S. fosteri* Philip, 1964:441-442, figs. 1f-g, pl. 59: fig. 6, pl. 65: fig. 3. [Southeastern Australia.]
- S.?* *hispidata* Philip, 1964:444-446, fig. 1h, pl. 61: figs. 8-9. [Southeastern Australia.]
- S. inermis* Philip, 1964:442-444, figs. 2b, 2c, 2e, 2f, pl. 59: figs. 1-3, 7, 8. [Southeastern Australia.]
- S.?* *intricata* Philip, 1964:446-447, fig. 1e, pl. 59: fig. 4. [Southeastern Australia.]

MIDDLE EOCENE

- S. destefanii* Innocenti, 1924:41-43, pl. 2: figs. 1-6. [Istria, former Italian province ceded to Yugoslavia in 1947.]

CRETACEOUS

- S. baileyi* Fell, 1962:27-29, pl. 1: figs. 1-3. [California, U.S.A.]
- S. bolli* Krenkel, 1928:13-14, pl. 1: figs. 4-12. [Germany. Nomen nudum for *Cidaris spinosa* Boll, 1846.]
- S. jaekeli* Krenkel, 1928:15-16, pl. 1: figs. 18-24. [Germany.]
- S. jaekeli* Krenkel var. *laticor* Krenkel, 1928:17, pl. 1: figs. 21-22. [Germany.]
- S. jaekeli* Krenkel var. *undulifera* Krenkel, 1928:16-17, pl. 1: figs. 23-24. [Germany.]
- S. rugensis* Krenkel, 1928:15, pl. 1: figs. 15-17. [Germany. Nomen nudum for *Cidaris alatus* Boll, 1846.]

UPPER CRETACEOUS

- S. jaekeli* Krenkel var. *grandior* Krenkel, 1928:16, pl. 1: figs. 18-20. [Germany.] (Upper Senonian.)

LOWER CRETACEOUS

- S. hudspethensis* Cooke, 1955:89, pl. 18: figs. 1-4. [Texas, U.S.A.] (Lower Cenomanian to upper Albian.)

Genus *Phalacrocidaris* Lambert

PLEISTOCENE/PLIOCENE

S. (Phalacrocidaris) japonica (Döderlein) *multi-pora* Nisiyama, 1966:161–162, pl. 1: figs. 5–6. [Japan.] (Koshiha Fm.)

Genus *Typocidaris* Pomel

In the *Treatise* Fell (Durham et al., 1966:U325) considers *Typocidaris* a subjective synonym of *Stereocidaris*.

PALEOCENE

T. danica Ravn, 1928:23–25, fig. 7, pl. 2: figs. 9–12. [Denmark.] (Danian.)
T. rosenkrantzi Ravn, 1928:21–23, fig. 6, pl. 1: figs. 9–15, pl. 2: fig. 13. [Denmark.] (Danian.)

UPPER CRETACEOUS

T. baumbergeri Jeannet, 1934d:1–3, fig. 1, pl. i: figs. 1–2. [Austria.] (Urgonian.)
T. falgarsensis Lambert, 1933d:184–185, pl. 1: figs. 2–5. [Spain.] (Maestrichtian.)

LOWER CRETACEOUS

T. thalebensis Lambert, 1931c:68, fig. 4. [Algiers, North Africa.] (Albian.)

Genus *Chorocidaris* Ikeda

RECENT

Chorocidaris Ikeda, 1941:85–86. Type-species: *C. micca* Ikeda, 1941:85–86, pl. 6: figs. 1–8. [Japan.]

Genus *Compsocidaris* Ikeda

RECENT

Compsocidaris Ikeda, 1939a:160–161. Type-species: *C. pyrsacantha* Ikeda, 1939a:160–164, pls. 7–10. [Bonin Islands (Japan), Western Pacific Ocean.]

Subfamily RHABDOCIDARINAE Lambert

Genus *Rhabdocidaris* Desor

LOWER CRETACEOUS

R. arginensis Weber, 1934:22–23, 80, pl. 3: figs. 7a–g. [Crimea, U.S.S.R.] (Hauterivian.)
R. brasiliensis Maury, 1936:262–263, pl. 2: figs. 4–5. [Brazil.] (Middle Albian.)
R. buraganensis Weber, 1934:23, 80, pl. 3: figs. 8a–e. [Crimea, U.S.S.R.] (Hauterivian.)

UPPER JURASSIC

R. boehmi Bantz, 1969:7, pl. 3: fig. 1. [Bavaria.] (Lower Tithonian, Malm Zeta_{1/2}, facies of Solnhofen.)
R. coteau Jeannet, 1929:37–39, fig. 17, pl. 4: figs. 7–9, pl. 5: figs. 31–33, 41–43. [Switzerland.] (Lower Kimmeridgian.)
R. desori Jeannet, 1929:26–28, figs. 1, 4, 13–14, pl. 3: figs. 7–10, pl. 5: fig. 44. [Switzerland.] (Lower Kimmeridgian.)
R. mayri Bantz, 1969:7–8, pl. 7: fig. 1. [Bavaria.] (Lower Tithonian, Malm Zeta₂.)
R. nunlisti Jeannet, 1929:13–14, pl. 2: figs. 2–3, pl. 5: figs. 10–12. [Switzerland.] (Lower Kimmeridgian.)
R. orbignyiformis Jeannet, 1929:35–37, pl. 4: figs. 5–6, pl. 5: figs. 28–30, 37–39. [Switzerland.] (Upper Kimmeridgian.)
R. rauraca Jeannet, 1929:39–40, pl. 4: figs. 10–12, pl. 5: figs. 16–18. [Switzerland.] (Upper Rauracian.)
R. stingelini Jeannet, 1929:41, pl. 2: fig. 11, pl. 5: figs. 34–36. [Switzerland.] (Upper Kimmeridgian.)
R. yailensis Weber, 1934:21–22, 79–80, pl. 3: fig. 6. [Crimea, U.S.S.R.] (Sequanian.)

MIDDLE JURASSIC

R. bigoti Mercier, 1931:94–97, figs. 1–4. [France.] (Upper Bathonian.)
R. kisombyensis Lambert, 1936c:12, pl. 1: figs. 5–7. [Madagascar, off East Africa.] (Bathonian.)
R. turbeti Lambert, 1933b:33, pl. 3: fig. 8. [North Africa.] (Bajocian.)

LOWER JURASSIC

R. chouberti Lambert, 1937:42, pl. 4: figs. 12-13.
[Morocco.] (Upper Domerian.)

Genus *Actinocidaris* Mortensen

RECENT

Actinocidaris Mortensen, 1928:73. [Hawaii.] Type-species: *Phyllacanthus thomasi* A. Agassiz and H. L. Clark.

Genus *Chondrocidaris* A. Agassiz

RECENT

C. brevispina H. L. Clark, 1925a:11, pl. 1: figs. 1-2.
[Loyalty Islands, Southwestern Pacific Ocean.]

MIOCENE

C. problepteryx H. L. Clark, 1945:314-315, pl. 41: fig. E. [Fiji, South Pacific Ocean.]

LOWER MIOCENE

C. marianica Nisiyama, 1966:171-172, pl. 1: figs. 19-20. [Mariana Island, West Pacific Ocean.]

MIOCENE/UPPER OLIGOCENE

C. clarkii Chapman and Cudmore, 1934:141-142, pl. 13: figs. 15-17, pl. 15: fig. 31. [South Australia.]

Genus *Megacidaris* Thiéry

LOWER JURASSIC

M. cottreaui Mercier, 1937c:19-20. [France.] (Toarcian.)

Genus *Parhabdocidaris* Thiéry

UPPER JURASSIC

Parhabdocidaris Thiéry, 1928:181. [Europe.] Type-species: *Rhabdocidaris varusensis* Cotteau.

Genus *Phyllacanthus* Brandt

RECENT

P. forcipulatus Mortensen, 1936b:307-309, 1 fig., pl. 10: figs. 1-4, pl. 11: figs. 1-4, pl. 12: figs. 1-10. [Indian Ocean.]
P. irregularis Mortensen, 1928:74. [West and south Australia.]
P. irregularis Mortensen *kimberi* Cotton and Godfrey, 1942:216-217, pl. 12: figs. 1-2. [South Australia.]

PLEISTOCENE

P. tylotus H. L. Clark, 1945:313-314, pl. 41: fig. D. [Fiji, South Pacific Ocean.]

MIDDLE PLIOCENE

P. serratus Philip, 1963d:219, fig. 2e, pl. 25: figs. 1, 2, 4. [Southeastern Australia.]

MIOCENE

P. clarkii (Chapman and Cudmore) *impensus* Philip, 1963d:217-218, fig. 5c, pl. 25: figs. 9-10, pl. 26: figs. 2, 5, 9. [Southeastern Australia.]
P. dubius Brandt var. *sundaica* Martin in Jeannot and Martin, 1937:223-224. [Java, Indonesia.]
P. wellmanae Fell, 1954:51-53, pls. 1C, 1D, 2. [New Zealand.] (Kapitean.)

LOWER PLIOCENE/UPPER OLIGOCENE

P. duncani Chapman and Cudmore, 1934:131-133, pl. 12: figs. 7-9, pl. 15: fig. 33. [South Australia.]

MIDDLE MIOCENE/LOWER OLIGOCENE

P. duncani Chapman and Cudmore *gambierensis* Philip, 1963d:213-214, fig. 4, pl. 23: figs. 2, 10, pl. 24: figs. 1-3. [Southeastern Australia.] (Janjukian.)
P. titan Fell, 1954:49-51, pls. 1B, 3, 10A, 11D. [New Zealand.] (Duntroonian-Waiauian.)

LOWER CRETACEOUS

- P. texanus* Whitney and Kellum, 1966:245–248, pl. 2: figs. 13–14. [Texas, U.S.A.] (Trinity Group. Aptian.)
- P. tysoni* Whitney and Kellum, 1966:244–245, pl. 2: figs. 4–6. [Texas, U.S.A.] (Trinity Group. Aptian.)

Genus *Leiocidaris* Desor

In the *Treatise* Fell (Durham et al., 1966:U330) considers *Leiocidaris* a subjective synonym of *Phyllacanthus*.

UPPER OLIGOCENE

- L. cojimarensis* Lambert and Roig in Sánchez Roig, 1949:31. [Cuba. Although Lambert and Roig considered this species Miocene, Brodermann (1949:324) says it is Upper Oligocene.]
- L. spinidentatus* Palmer in Sánchez Roig, 1949:32, pl. 1: fig. 3. [Cuba. Brodermann (1949:324) says it is Upper Oligocene.]

MIDDLE EOCENE

- L. mortenseni* Lambert, 1933a:30, pl. 1: figs. 18–21. [Madagascar, off East Africa.] (Lutetian.)

LOWER EOCENE

- L. cottreai* Lambert in Lambert and Pérébasquine, 1929:474, pl. 38: figs. 6, 7. [North Africa.]

CRETACEOUS

- L. leoni* Lambert and Roig in Sánchez Roig, 1926:33–34, pl. 4: figs. 5, 6. [Cuba.]

UPPER CRETACEOUS

- L. madrugensis* Sánchez Roig, 1949:29–30, 32, pl. 1: figs. 2, 4. [Cuba.] (Maestrichtian.)
- L. sanfilippo* Checchia-Rispoli, 1932a:2–5, figs. 1–2, pl. 1: figs. 1–6. [North Africa.] (Maestrichtian.)
- L. stefaninii* Shalem, 1933:19–22, pl. 2: figs. 1a–d. [Palestine.] (Cenomanian.)

- L. tripolitana* Checchia-Rispoli, 1933b:3–6, fig. 1, pl. 1: figs. 1–4, pl. 2: figs. 1–3. [North Africa.] (Maestrichtian.)

LOWER CRETACEOUS

- L. karakachi* Weber, 1934:42–43, 83, pl. 7: figs. 2a–c. [Crimea, U.S.S.R.] (Barremian.)
- L. thiebaudi* Jeannet, 1955:555–557, pl. 26: figs. 1–7. [Angola, southwest Africa.] (Albian.)

UPPER JURASSIC

- L. rollieri* Jeannet, 1933d:4–6, pl. 1: figs. 4, 8, 10. [Switzerland. First figured in Jeannet (1931).] (Lower Sequanian.)
- L. tobleri* Jeannet, 1933d:2–4, pl. 1: figs. 1–3, 6, 7, 11. [Switzerland. First figured in Jeannet (1931).] (Lower Kimmeridgian.)

Genus *Porocidaris* Desor

RECENT

- P. sibogae* Mortensen, 1934a:166. [Malaysia, off Kei Islands.]

UPPER EOCENE

- P. lopezi* Sánchez Roig, 1953c:137, pl. 1: fig. 4. [Cuba.]

PALEOCENE

- P. farafrensis* Hassan, 1969:15–16, pl. 1: figs. 1–5. [Farafra Oasis, Upper Egypt.] (Landanian.)

Genus *Prionocidaris* A. Agassiz

RECENT

- P. baculosa* (Lamarck) var. *lineata* H. L. Clark, 1925a:14. [Indian Ocean, Seychelles and Natal islands.]
- P. badia* H. L. Clark, 1925a:14–15, pl. 2: fig. 2. [Mauritius Island, Indian Ocean.]
- P. bispinosa* (Lamarck) var. *laevis* H. L. Clark, 1938:371–372, pl. 26: fig. 1. [Western Australia.]

P. bispinosa (Lamarck) var. *nigrobrunnea* Mortensen, 1928:74. [Shark's Bay, Western Australia.]

PLEISTOCENE-PLIOCENE/LOWER MIOCENE

P. malindiensis Stephenson, 1968:560-562, figs. 1f, 1h-i, 2f-i. [Kenya, East Africa.] (Baratumu and Midadoni Beds.)

LOWER MIOCENE

P. praeverticillata Stephenson, 1968:555-560, figs. 1a-c, 2a-e. [Kenya, East Africa.] (Baratumu Beds. Aquitanian-Burdigalian.)

MIOCENE/UPPER OLIGOCENE

P. scoparia Chapman and Cudmore, 1934:134-135, pl. 12: figs. 10-11, pl. 15: figs. 28-30. [South Australia.]

OLIGOCENE

P. haasti Fell, 1954:54-55, pls. 10C, 11F-H. [New Zealand.] (Dunroonian-Otaian.)

MIDDLE EOCENE

P. marchalli Fell, 1954:54, pls. 8B, 8C, 8I, 9C. [New Zealand.] (Bortonian.)

Subfamily CIDARINAE Gray

Genus *Cidaris* Leske

RECENT

C. cidaris (Linnaeus) var. *meridionalis* Mortensen, 1928:71. [Bay of Biscay-Canaries-Madeira, North Atlantic.]

C. mabahissae Mortensen, 1939b:9-11, fig. 4, pl. 1: figs. 5-6, pl. 4: fig. 4, pl. 5: fig. 5, pl. 6: figs. 3, 5, 8, 12, 13. [Maldivé Islands, Indian Ocean off southern India.]

MIOCENE

C. aculeata Martin in Jeannet and Martin, 1937: 219-220, fig. 3. [Dutch East Indies, West Pacific Ocean.]

C. cojimarensis Lambert and Roig in Sánchez Roig, 1926:32, pl. 3: fig. 3. [Cuba.]

OLIGOCENE

C. assulaciformis Malaroda, 1951:158-159, pl. 2: figs. 6, 7, 11-13. [Italy.]

C. pelettensis Castex, 1930:13-14, pl. 1: fig. 1. [France.] (Stampian.)

C. vepres Lambert, 1931c:79, pl. 3: fig. 22. [West Sarno, Algeria.] (Stampian.)

UPPER OLIGOCENE

C. duncani Socin, 1942:48-49. [India and Somaliland.] (Chattian.)

EOCENE

C. gymnozona Arnold and H. L. Clark, 1927:9-11, pl. 1: fig. 1-3. [Jamaica, Caribbean Sea.]

C. sigillum Lambert, 1931c:78, pl. 3: figs. 20-21. [Algiers, North Africa.]

UPPER EOCENE

C. dubaleni Castex, 1930:12-13. [France.] (Bartonian or Stampian.)

C. hemispinosa Lambert, 1933d:188-189, pl. 1: figs. 6-9. [Spain.] (Probably Lutetian.)

C. isnardi Lambert, 1924a:7. [France.] (Bartonian.)

UPPER CRETACEOUS

C. mahafalensis Besairie, 1930:226, pl. 22: fig. 5. [Madagascar, east coast of Africa.] (Upper Senonian-Campanian.)

C. majungensis Lambert, 1933a:11-12, pl. 1: figs. 4-7. [Madagascar, east coast of Africa.] (Mastrichtian.)

C. meslei Lambert, 1931c:72, pl. 3: fig. 17. [Algiers, North Africa.] (Santonian.)

LOWER CRETACEOUS

C. enissalensis Weber, 1934:30, 81, pl. 5: fig. 1. [Crimea, U.S.S.R.] (Upper Valanginian.)

C. mullerriedi Lambert, 1935c:365-366, pl. 16: figs. 13-14. [Mexico.] (Aptian.)

C. theodosiae Weber, 1934:33, 34, 81, 82, pl. 5: figs. 10a-e. [Crimea, U.S.S.R.] (Hauterivian-Valanginian.)

TRIASSIC

- C. anellatus* De Gregorio, 1930b:29, pl. 6: figs. 12-15. [Italy.]
C. ecki Assmann, 1925:517-518, pl. 9: figs. 7-10. [Germany.]
C. longispina Assmann, 1937:22-23, pl. 5: figs. 7-10. [Germany.]
C. mirandus De Gregorio, 1930b:29, pl. 6: fig. 11. [Italy.]
C. percostatus De Gregorio, 1930b:29, pl. 6: figs. 16-17. [Italy.]
C. remifera Assmann, 1937:23-24, pl. 5: fig. 17. [Germany.]
C. tuberculinus De Gregorio, 1930b:29, pl. 6: figs. 5-6. [Italy.]

UPPER TRIASSIC

- C. aculeata* Leonardi and Lovo, 1950:10, pl. 1: fig. 8. [Italy.] (St. Cassian Beds. Karnian.)
C. crenulata Leonardi and Lovo, 1950:6, pl. 2: figs. 27-29. [Italy.] (St. Cassian Beds. Karnian.)
C. dorsata Braun var. *coronata* Leonardi and Lovo, 1950:8, pl. 2: fig. 20. [Italy.] (St. Cassian Beds. Karnian.)
C. dorsata Braun var. *jugulata* Leonardi and Lovo, 1950:7-8, pl. 2: figs. 15-19. [Italy.] (St. Cassian Beds. Karnian.)
C. gilletteae Lambert, 1927b:8-9, figs. 1-2. [Mikulschütz, formerly in Silesia, Germany, now in Poland. New name for *C. transversa* von Meyer (1847:576). Figured by Schauroth (1859:293-294, pl. 1: figs. 8a-d).] (Norian.)
C. magna Leonardi and Lovo, 1950:5, pl. 2: fig. 26. [Italy.] (St. Cassian Beds. Karnian.)
C. pusilla f. Leonardi and Lovo, 1950:8, pl. 1: fig. 7. [Italy.] (St. Cassian Beds. Karnian.)
C. pyramidalis Leonardi and Lovo, 1950:10, pl. 2: fig. 25. [Italy.] (St. Cassian Beds. Karnian.)
C. raibiana Bather var. *capitata* Leonardi and Lovo, 1950:9, pl. 1: figs. 9-10, pl. 2: figs. 11-14. [Italy.] (St. Cassian Beds. Karnian.)
C. scrobiculata Braun var. *rumerlensis* Leonardi and Lovo, 1950:6-7, pl. 1: figs. 3-5. [Italy.] (St. Cassian Beds. Karnian.)

- C. staulinensis* Leonardi and Lovo, 1950:6, pl. 2: fig. 30. [Italy.] (St. Cassian Beds. Karnian.)
C. trigona (Münster) var. *cuspidata* Leonardi and Lovo, 1950:7, pl. 1: fig. 6. [Italy.] (St. Cassian Beds. Karnian.)
C. zardinii Leonardi and Lovo, 1950:9-10, pl. 2: figs. 21-24, 26b. [Italy.] (St. Cassian Beds. Karnian.)

PERMIAN

- C. bitauniensis* Wanner, 1941:310-311, pl. 26: figs. 7-10, 24. [Timor Island, South Malay Archipelago.]
C. jonkeri Wanner, 1941:311-312, pl. 26: figs. 11-13. [Timor Island, South Malay Archipelago.]

Genus *Dorocidaris* A. Agassiz

In the *Treatise* Fell (Durham et al., 1966:U331) considers *Dorocidaris* a subjective synonym of *Cidaris*.

RECENT

- D. lorioli* Koehler, 1927:21-23, pl. 3: figs. 2-5. [Andaman Islands, Bay of Bengal.]

MIOCENE

- D. henjamensis* Clegg, 1933:17-18, pl. 2: figs. 3a-c. [Persia (Iran).]

OLIGOCENE

- D. exilis* Lambert, 1931c:79, pl. 3: fig. 23. [Algiers, North Africa.]

CRETACEOUS

- D. molinetti* Lambert, 1931e:299-300, fig. 3, pl. 17: figs. 14-15. [Cuba.]

UPPER CRETACEOUS

- D. basseae* Besairie and Lambert, 1930:115, pl. 9: figs. 7-9. [Zululand, East Africa.] (Turonian.)

- D. besairiei* Lambert, 1936c:23, pl. 3: figs. 1-6. [Madagascar, off East Africa.] (Upper Campanian.)
- D. ciryi* Lambert, 1935f:513-515, pl. 57: figs. 1-2. [Spain.] (Cenomanian.)
- D. demujiensis* Sánchez Roig, 1949:30, pl. 1: fig. 1. [Cuba.]
- D. eybrunnensis* Daqué, 1939:79, pl. 3: fig. 12. [Germany.] (Lower Turonian to Upper Cenomanian.)
- D. garciai* Sánchez Roig, 1952c:2, pl. 1: fig. 3. [Cuba.]
- D. madrugensis* Sánchez Roig, 1949:29-30, 32, pl. 1: figs. 2, 4. [Havana, Cuba.]
- D. taouzenis* Lambert, 1933b:61, pl. 2: figs. 1-3. [North Africa.] (Cenomanian.)

LOWER CRETACEOUS

- D. bitakensis* Weber, 1934:37, 82, pl. 6: figs. 2a-e. [Crimea, U.S.S.R.] (Barremian.)
- D. urcustensis* Weber, 1934:38-39, 82-83, pl. 6: figs. 4a-h. [Crimea, U.S.S.R.] (Hauterivian.)

Genus *Balanocidaris* Lambert

LOWER CRETACEOUS

- B. darderi* Lambert, 1935b:360, pl. 41: fig. 8. [Spain.] (Aptian.)
- Cidaris (Balanocidaris) deserti* El-Din Mahmoud, 1955:158-159, pl. 18: figs. 1-3. [Egypt.] (Middle Albian.)
- B. tingitana* Lambert, 1933b:62, pl. 2: figs. 7-9. [North Africa.] (Valanginian.)

UPPER JURASSIC

- B. japonica* Nisiyama, 1966:166-167, pl. 1: figs. 15-18. [Japan.] (Probably Callovian to Tithonian.)

MIDDLE JURASSIC

- B. besairiei* Lambert, 1933a:9, pl. 1: figs. 1-3. [Madagascar, east coast of Africa.] (Perhaps Lower Bajocian.)

UPPER TRIASSIC

- B. migliorinii* Venzo, 1934b:157-158, pl. 13: figs. 13a-b. [Rhodes Island, Southeastern Aegean Sea.] (Ladinian-Raiblian.)
- B. subdorsata* Venzo, 1934b:156-157, pl. 13: figs. 11-12. [Rhodes Islands, Southeastern Aegean Sea.] (St. Cassian Beds to Raiblian. Karnian.)

Genus *Cyathocidaris* Lambert

UPPER CRETACEOUS

- C. septemtrionalis* Schmitz, 1970:37-38, pl. 1: figs. 1-2. [Northern Germany.] (Senonian.)

Genus *Eucidaris* Pomel

RECENT

- E. australiae* Mortensen, 1950a:291-293, figs. 1-4, pl. 8: figs. 5-7, pl. 9: figs. 3, 5, 6. [Western Australia.]
- E. clavata* Mortensen, 1928:73. [St. Helena and Ascension, off west coast of Africa, South Atlantic Ocean.]
- E. tribuloides (Lamarck) africana* f. *attenuata* A. M. Clark, 1955:51, pl. 2. [Gold Coast of Africa.]

LOWER MIOCENE/OLIGOCENE

- E. strombilata* Fell *felli* Philip, 1963d:202, pl. 22: figs. 1, 2, 5, 9. [Southeastern Australia.] (Janjukian and Longfordian(?).)

LOWER OLIGOCENE

- E. coralloides* Fell, 1954:46, pls. 11B, 11C. [New Zealand.] (Whaingaroan.)

LOWER OLIGOCENE/UPPER EOCENE

- E. strombilata* Fell, 1954:47-48, pls. 8A, 8E-H, 8J, 10B, 11E. [New Zealand.]

Genus *Hesperocidaris* Mortensen

RECENT

- Hesperocidaris* Mortensen, 1928:73, 74. [California, U.S.A., Western Panama and Ecuador.] Type-species: *Dorocidaris panamensis* A. Agassiz.
- H. asteriscus* H. L. Clark, 1948:233-234, pl. 36: fig. 4, pl. 37: figs. 5-6. [Panama, off Medidor Island.]
- H. houstoniana* A. H. Clark, 1939:12-16, pl. 4: figs. 10-11, pl. 5: figs. 12-14. [Galápagos Islands, off Ecuador.]

Genus *Kionocidaris* Mortensen

RECENT

- Kionocidaris* Mortensen, 1932b:165. Type-species: *K. striata* Mortensen, 1932b:165-168, figs. 9, 11-12, pl. 5: fig. 7, pl. 9: figs. 4-6, pl. 11: figs. 3, 9, pl. 12: figs. 1-2, pl. 13: figs. 4, 6-7. [Natal coast, Africa.]
- K. striata* Mortensen var. *teretispina* Mortensen, 1932b:168, fig. 10, pl. 13: fig. 5. [Natal coast, Africa.]

Genus *Lissocidaris* Mortensen

RECENT

- Lissocidaris* Mortensen, 1939b:11-12. Type-species: *L. fusca* Mortensen, 1939b:12-14, figs. 5-6, pl. 3: figs. 1-3, pl. 5: fig. 2, pl. 6: figs. 1, 2, 6, 19. [Maldivé Islands, off southern India.]

Genus *Paracidaris* Pomel

UPPER JURASSIC

- P. loppei* Castex, 1947:26, pl. 1: fig. 1. [France.] (Upper Sequanian.)
- P. nunlisti* Jeannet, 1927:393-396, pl. 12: figs. 1-6b. [Switzerland.] (Argovian.)

MIDDLE JURASSIC

- P. lagorgettei* Lambert, 1933c:173-174, pl. 7: figs. 5-7. [France.] (Callovian.)

UPPER TRIASSIC

- P. jeanneti* Lambert, 1924c:448-450, figs. 1-2. [Switzerland.] (Rhaetian.)

Genus *Plegiocidaris* Pomel

- S. bracteata* (A. Agassiz) var. *albidens* H. L. Clark, 1925a:23-24. [Ceylon, west of Kaltusa and Macclesfield Bank, Indian Ocean.]
- S. bracteata* (A. Agassiz) var. *mauritiana* Mortensen, 1932b:161-162, pls. 7-8, pl. 9: figs. 10-11, pl. 12: figs. 3-5, 7. [Mauritius, Indian Ocean.]
- S. cingulata* Mortensen, 1932b:162-164, figs. 7-8, pl. 1: fig. 6, pl. 11: fig. 6, pl. 13: figs. 8-10. [Indian Ocean.]
- S. effluens* Mortensen, 1927b:285-292, fig. 19, pl. 59: fig. 3, pl. 62: figs. 1-2, pl. 65: figs. 1-4, pl. 75: figs. 1-2, pl. 80: figs. 1-6. [Malaysia.]

LOWER CRETACEOUS

- P. biassalensis* Weber, 1934:11, 12, 78, pl. 2: figs. 1a-k. [Crimea, U.S.S.R.] (Barremian.)
- P. lamberti* Weber, 1934:13, 79, pl. 12: figs. 1a-c. [Crimea, U.S.S.R.] (Barremian-Hauterivian.)
- P. lemoinei* Lambert in Démoly, 1928:142, pl. 1: figs. 9-13. [France.] (Hauterivian.)
- P.?* *orientalis* El-Din Mahmoud, 1955:159, pl. 18: figs. 4, 7. [Egypt.] (Middle Albian.)

JURASSIC

- P. huguenini* Lambert, 1931c:60-61. [France.]

UPPER JURASSIC

- P. helviorum* Lambert, 1932:262-263. [France.] (Tithonian? or Argovian.)
- P. kuchkaensis* Weber, 1934:9, 78, pl. 1: figs. 4a-d. [Crimea, U.S.S.R.] (Rauracian.)
- P. vogdti* Weber, 1934:11, 78, pl. 1: figs. 7a-c. [Crimea, U.S.S.R.] (Rauracian.)

MIDDLE JURASSIC

- P. ardesica* Thiéry in Thiéry, Lambert and Collignon, 1928:90-91, pl. 21: fig. 15. [France.] (Callovian.)

- P. babeaui* Cotteau var. *granulosa* Mercier, 1932: 149, pl. 2: fig. 5. [France.] (Upper Bathonian.)
- P. bifrons* Lambert, 1936c:12, pl. 1: figs. 10–11. [Madagascar, off East Africa.] (Bathonian.)
- P. caeliculus* Lambert, 1936c:11–12, pl. 1: figs. 1–3. [Madagascar, off East Africa.] (Bathonian.)
- P. jacobi* Basse and Lambert in Lambert, 1936c:11, pl. 4: figs. 1–3, 8. [Madagascar, off East Africa.] (Callovian.)
- P. mercieri* Lambert, 1933b:30–32, pl. 3: figs. 6–7. [North Africa.] (Lower Bathonian.)
- P. pseudohorrida* Lambert, 1936c:12, pl. 1: fig. 9. [Madagascar, off East Africa.] (Bathonian.)
- P. welschi* Lambert, 1935a:523–524, pl. 26: fig. 4. [France.] (Lower Bajocian.)

LOWER JURASSIC

- P. marizensis* Lambert, 1937:40, pl. 1: fig. 3. [Morocco. It was described without a specific name in 1933b, *Notes and Memoires*, 27:29, pl. 1: fig. 5.] (Domerian to late Pliensbachian.)
- P. morierei* Cotteau var. *nodosa* Mercier, 1937c:21–22, pl. 1: figs. 12–13. [France.] (Toarcian.)
- P. telrhemtensis* Lambert, 1937:41, pl. 1: fig. 4. [Morocco.] (Toarcian.)
- P. termieri* Lambert, 1937:39–40, pl. 1: figs. 1–2. [Morocco.] (Pliensbachian.)
- P. tingitana* Lambert, 1933b:29–30, pl. 1: figs. 11–12. [North Africa.] (Aalenian.)

UPPER TRIASSIC

- P. raibliana* (Bather) var. *rhodiensis* Venzo, 1934b: 159–160, pl. 13: figs. 14–15. [Rhodes Island, South-eastern Aegean Sea.] (Raiblian. Karnian.)

Genus *Stylocidaris* Mortensen

RECENT

- S. amboinae* Mortensen, 1928:71. [Amboina, off Mindanao, Indonesia.]
- S. annulosa* Mortensen, 1927b:296–299, fig. 21, pl. 63: fig. 1, pl. 64: figs. 1–3, pl. 65: fig. 8, pl. 75: fig. 3, pl. 80: figs. 7–11. [China Sea.]
- S.(?) fusispina* Mortensen, 1928:72–73. [Sagami Sea and Kagoshima Gulf, Japan.]

- S. laevispina* Mortensen, 1939b:15–17, figs. 7–8, pl. 2: fig. 5, pl. 4: figs. 1, 5, pl. 5: fig. 6, pl. 6: figs. 7, 10, 11. [Indian Ocean.]
- S.(?) longicollis* Mortensen, 1928: 72. [Amirante Islands, east of Tanganyika, Indian Ocean.]
- S. maculosa* Mortensen, 1928:72. [Sagami Sea, Japan.]
- S. reini* (Döderlein) var. *cladotrix* Mortensen, 1927b:293–295, fig. 20, pl. 65: figs. 5–7, pl. 66: fig. 1, pl. 67: fig. 1, pl. 75: fig. 4. [Malaysia.]
- S. reini* (Döderlein) var. *rubida* Mortensen, 1927b: 295–296, pl. 63: figs. 2–3, pl. 74: figs. 6–7. [Malaysia.]
- S. rufa* Mortensen, 1928:71–72. [Hawaii.]

TERTIARY

- S. (?) chapmani* Philip, 1963d:198–201, figs. 1b–c, 2a, pl. 22: figs. 6–8. [Southeastern Australia.] (Pre-Oligocene, pre-Janjukian.)

Genus *Menocidaris* Philip

MIOCENE

- Menocidaris* Philip, 1964:468–469. Type-species: *M. compta* Philip, 1964: 469–471, fig. 6, pl. 59: fig. 5, pl. 61: fig. 1, pl. 67: fig. 1. [Southeastern Australia.]

Family PSYCHOCIDARIDAE Ikeda

- Psychocidaridae* Ikeda, 1936b:486, pls. 33–34. Type-genus: *Psychocidaris* Ikeda. [Malaysia(?).]

Genus *Psychocidaris* Ikeda

RECENT

- Psychocidaris* Ikeda, 1935b:386. Type-species: *P. ohshimai* Ikeda, 1935b: 386–388, fig. 1. [Malaysia, Bonin Islands, Southeastern Asia.]

Genus *Caenocidaris* Thiéry

MIDDLE JURASSIC

- Caenocidaris* Thiéry, 1928:180. Type-species: *Cidaris cucumifera* Agassiz. [Europe.] (Bajocian.)

Genus *Merocidaris* Thiéry

MIDDLE JURASSIC

Merocidaris Thiéry, 1928:180. Type-species: *Cidaris honorinae* Cotteau. [Europe.] (Kimmeridgian-Bajocian.)

Genus *Tylocidaris* Pomel

PALEOCENE

- T. macneili* Cooke, 1959:12-13, pl. 1: figs. 3-5. [Alabama, U.S.A.] (Clayton Fm.)
T. pomifer (Boll) *herupensis* Wind, 1954:484, pl. 13: figs. 55-58. [Scandinavia.] (Upper Danian.)
T. pomifer (Boll) var. *masoviensis* Kongiel, 1958:5, 19, figs. 1-7, pl. 1: figs. 4-15. [Denmark.] (Danian.)
T. ravni Brotzen, 1959:47-49, figs. 14c, 14d, pl. 2: figs. 2-16. [Sweden.] (Middle Danian.)
T. rosenkrantzi Brotzen, 1959:45, figs. 15a, 15b, pl. 2: figs. 17-36. [Sweden.] (Middle Danian.)
T.? salina Cooke, 1959:12, pl. 1: figs. 12-14. [Alabama, U.S.A.] (Salt Mt. Ls.)
T. windi Brotzen, 1959:47, figs. 16a, 16b, pl. 1: figs. 20-23. [Sweden.] (Lower Danian.)

Family DIPLOCIDARIDAE Gregory**Genus *Diplocidaris* Desor**

LOWER CRETACEOUS

D. bicarinata Weber, 1934:28, 81, pl. 4: figs. 7a-k. [Crimea, U.S.S.R.] (Hauterivian.)

MIDDLE JURASSIC

- D. besairiei* Lambert, 1936b:116-117, pl. 6: figs. 1-10. [Madagascar, off East Africa.] (Bajocian.)
D. dubari Lambert, 1937:44-45, pl. 4: figs. 6-7. [Morocco.] (Bajocian to Bathonian.)
D. mauritanicus Jeannet, 1936b:607-611, figs. 1-2, pl. 37: figs. 1-3. [Morocco, North Africa.] (Bathonian to Bajocian.)
D. romani Mercier in Roché, 1939:304, fig. 10. [France.] (Bajocian.)

LOWER JURASSIC

D. menchikoffi Lambert, 1937:43-44, pl. 1: figs. 5-7. [Morocco.] (Upper Domerian.)

Order Uncertain**Family Uncertain****Genus *Lanternarius* Regnéll**

MIDDLE SILURIAN

Lanternarius Regnéll, 1956:171-172. Type-species: *L. latens* Regnéll, 1956:173-175, fig. 4, pl. 2: figs. 4-6. [Sweden.] (Wenlockian.)

Subclass EUECHINOIDEA Bronn**Superorder DIADEMATACEA Duncan****Order ECHINOTHURIOIDA Claus****Family ECHINOTHURIIDAE Thomson****Subfamily ECHINOTHURIINAE Thomson****Genus *Araeosoma* Mortensen**

RECENT

- A. alternatum* Mortensen, 1934a:164. [Off the Somali Coast, Indian Ocean.]
A. coriaceum Agassiz var. *indicum* Koehler, 1927:37-39, pl. 7: fig. 5, pl. 8: fig. 3, pl. 24: fig. 3. [Indian Ocean.]
A. owstoni Mortensen var. *nudum* Mortensen, 1934a:164. [Malaysia, Philippines, off Cape Vazella, Annam.]
A. parviungulatum Mortensen, 1934a:164. [Celebes Island, Buton Strait, Malaysia.]
A. paucispinum H. L. Clark, 1925c:4-5, pl. 2. [Off Natal Coast, South Africa.]
A. splendens Mortensen, 1934a:164. [Off Kei Islands, Malaysia.]
A. tessellatum (A. Agassiz) var. *carinatum* Mortensen, 1934a:163. [Off South Luzon, China Sea.]

PALEOGENE

- (?) *A. mortenseni* Ravn, 1928:37-38, pl. 4: figs. 42-45. [Denmark.] (Danian.)

UPPER CRETACEOUS

- (?) *A. brunnichi* Ravn, 1928:36-37, pl. 4: figs. 36-38. [Denmark.] (Upper Senonian.)

Genus *Asthenosoma* Grube

RECENT

- A. dilatatum* Mortensen, 1934a:165. [Off Jolo Island, Malaysia.]
A. intermedium H. L. Clark, 1938:378-380, pl. 26: figs. 2-3. [Great Barrier Reef, Australia.]
A. periculosum Endean, 1964:95-100, fig. 1, pl. 12: figs. 1-2. [Queensland, Australia.]
A. varium Grube *album* Mortensen, 1934a:165. [Off Tual, Kei Islands, Malaysia.]

UPPER CRETACEOUS

- A. (?) striatissimum* Ravn, 1928:39, pl. 4: figs. 40-41. [Denmark.] (Upper Senonian.)

Genus *Calveriosoma* Mortensen

RECENT

- Calveriosoma* Mortensen, 1934a:163. Type-species: *Calveria hystrix* Thomson. [North Atlantic-North Pacific.]

Genus *Hapalosoma* Mortensen

RECENT

- H. gemmiferum* Mortensen, 1934a:165. [Japanese Seas.]

Genus *Sperosoma* Koehler

RECENT

- S. antillense* Mortensen, 1934a:163. [Off Barbados (Island), Caribbean Sea.]

- S. armatum* Koehler, 1927:43-46, pl. 8: figs. 1, 6, pl. 25: fig. 3. [Indian Ocean.]
S. crassispinum Mortensen, 1934a:163. [Molucca Passage, Malaysia.]
S. tristichum Mortensen, 1934a:163. [Celebes Sea, Malaysia.]

Genus *Echinosoma* Pomel

RECENT

In the *Treatise* Fell (Durham et al., 1966:U346-U347) considers *Echinosoma* an objective synonym of *Tromikosoma*.

- E. australe* Koehler, 1926:38-43, pl. 107: figs. 1-2, pl. 108: figs. 1-2, pl. 109: figs. 9-10, pl. 121: fig. 2. [South Pacific.]

Subfamily PHORMOSOMATINAE Mortensen

Genus *Phormosoma* Thomson

RECENT

- P. placenta* Thomson var. *africana* Mortensen, 1934a:162. [Off South Africa.]

Genus *Hemiphormosoma* Mortensen

RECENT

- Hemiphormosoma* Mortensen, 1934a:162. Type-species: *H. paucispinum* Mortensen, 1934a:162. [Sulu Sea, Malaysia.]

Genus *Paraphormosoma* Mortensen

RECENT

- Paraphormosoma* Mortensen, 1934a:163. Type-species: *Phormosoma alternans* de Meijere. [Indonesia.]

Order DIADEMATOIDA Duncan

Family DIADEMATIDAE Gray

Genus *Diadema* Gray

RECENT

- D. clarki* Ikeda, 1939b:165–166, pl. 11: figs. 1–4. [Japan.]
D. palmeri Baker, 1967:240–243, fig. 1, pls. 1–2. [Northern New Zealand.]

LOWER MIOCENE

- D. vetus* Lambert, 1931c:84, pl. 3: fig. 26. [Algiers, North Africa.] (Aquitanian.)

UPPER EOCENE

- D.?* *principeana* Weisbord, 1934:41–43, pl. 3: figs. 11–13. [Cuba.]

Genus *Astropyga* Gray

RECENT

- A. magnifica* A. H. Clark, 1934:52–53. [Florida, U.S.A.]
A. nuptialis Tommasi, 1958:85–87, figs. 1–3. [San Pablo, Brazil.]

Genus *Centrostephanus* Peters

RECENT

- C. asteriscus* Agassiz and Clark var. *malayanus* Mortensen, 1939a:549–550; 1940b:313, pl. 37: figs. 1–2, pl. 76: figs. 5–9, 13, 19–21. [Kei Islands, Indonesia.]
C. besnardi Bernasconi, 1955:92. [Island of Trinidad, Brazil.]
C. nitidus Koehler, 1927:53–60, pl. 9: figs. 4–10, pl. 10: figs. 1, 3, 4, 8, 9, pl. 26: fig. 2. [Indian Ocean.]

LOWER MIOCENE

- C. sacyi* Lambert, 1928b:85–86, fig. 1. [France.] (Langhian-Burdigalian.)

Genus *Chaetodiadema* Mortensen

RECENT

- C. africanum* H. L. Clark, 1925c:2–3, pl. 1. [Off Natal Coast, South Africa.]
C. keiense Mortensen, 1939a:549; 1940b:226–229, pl. 32: figs. 3–8, pl. 72: figs. 1–5. [Kei Islands, Indonesia.]
C. sundararaji Devanesen, 1930:249. [Probably Indian Ocean.]

Genus *Eodiadema* Duncan

LOWER JURASSIC

- E. lacostei* Lambert, 1933b:41–44, pl. 1: figs. 14–17. [North Africa.]
E. thoralis Petitot, 1961[1959]:35–36, pl. 2: figs. 10–13. [Morocco.] (Domerian-late Pliensbachian.)

Genus *Eremopyga* Agassiz and Clark

RECENT

- E. debilis* Mortensen, 1940a:34–35; 1940b:213–215, pl. 26: figs. 3, 4, pl. 27: figs. 1–4, pl. 71: fig. 12. [Malaysia.]

Genus *Goniodiadema* Mortensen

RECENT

- Goniodiadema* Mortensen, 1939a:549; 1940b:237. Type-species: *G. mauritiense* Mortensen, 1939a:549; 1940b:238–241, pl. 28: figs. 1–2, pl. 73; figs. 8, 17–20. [Mauritius, Indian Ocean.]

Genus *Kierechinus* Philip

LOWER EOCENE

- Kierechinus* Philip, 1963b:1104–1109, figs. 1–3. Type-species: *Pedinopsis melo* Kier. [British Somaliland, East Africa.] (Upper Auradu.)

Genus *Palaeodiadema* Pomel

PALEOCENE/UPPER CRETACEOUS

- P.?* *multiforme* Ravn, 1928:49–52, pl. 5: figs. 7–10. [Denmark.] (Danian to Upper Senonian.)

P. gauthieri Lambert, 1931c:70–71, pl. 3: fig. 14.
[Algiers, North Africa.] (Turonian.)

Clark. [Locality unknown.] (Lower Cretaceous in
North America.)

Family MICROPYGIDAE Mortensen

Genus *Micropyga* A. Agassiz

RECENT

M. nigra H. L. Clark, 1925a:47–48, pl. 3: fig. 3,
pl. 4: figs. 1–2. [New Britain, Bismarck Archi-
pelago, South Pacific.]

Family ASPIDODIADEMATIDAE Duncan

Genus *Aspidodiadema* A. Agassiz

RECENT

A. africanum Mortensen, 1939a:548; 1940b:49–51,
pl. 2: figs. 11–12, pl. 63: figs. 1–4. [Off East Lon-
don, Union of South Africa.]

A. annulatum Koehler, 1927:61–63, pl. 11: figs. 1–6.
[Invisible Bank, Indian Ocean?]

A. arcitum Mortensen, 1939a:547–548; 1940b:46–
49, pl. 1: fig. 17, pl. 2: figs. 6–10, pl. 64: figs. 13–
17. [Off the Hawaiian Islands.]

A. hawaiiense Mortensen, 1939a:548; 1940b:56–58,
pl. 1: fig. 16, pl. 2: figs. 1–5, pl. 63: figs. 5–7.
[Hawaiian Islands.]

A. meijerei Döderlein var. *keiense* Mortensen,
1939a:548; 1940b:55, pl. 65: figs. 10–12. [Kei Is-
lands, Indonesia.]

Family Uncertain

Genus *Ancylucidaris* Miller

Upper Jurassic

Ancylucidaris Miller, 1929:335. Type-species: *A.*
spenceri Miller, 1929:335–336, figs. 1–3. [Wyo-
ming, U.S.A.] (Sundance Fm.)

Genus *Helodiadema* Mortensen

LOWER CRETACEOUS

Helodiadema Mortensen, 1939a:550; 1940b:339–
340, fig. 174. Type-species: *Cottaldia rotula* W. B.

Order PEDINOIDA Mortensen

Family PEDINIDAE Pomel

Genus *Pedina* L. Agassiz

UPPER-MIDDLE EOCENE

P. eocenica Sánchez Roig, 1949:41–42, pl. 3: fig. 6.
[Cuba.]

MIDDLE JURASSIC

P. madagascariensis Lambert, 1936c:19, pl. 4: figs.
23–24. [Madagascar, off East Africa.] (Callovian.)

Genus *Atlasaster* Lambert

In the *Treatise* Fell (Durham et al., 1966:U357)
considers *Atlasaster* a subjective synonym of *Pedina*.

LOWER JURASSIC

Atlasaster Lambert, 1931b:19–22. Type-species: *A.*
termieri Lambert, 1931b: 19–22, fig. 3, pl. 2: figs.
1–5. [North Africa.] (Lower Domerian.)

A. jeanneti Lambert, 1937:65–67, fig. 3, pl. 2: fig. 1,
pl. 4: figs. 21–22. [Morocco.] (Sinemurian.)

Genus *Coenopedina* A. Agassiz

RECENT

C. annulata Mortensen, 1940a:38; 1940b:108–110,
pl. 2: figs. 16–18, pl. 3: fig. 1, pl. 68: figs. 1–6, 17,
18. [Malaysia.]

C. capensis H. L. Clark, 1923:375, fig. 4, pl. 21: figs.
1–2. [South Africa. Clark refers to the genus as
Coenopedina Pomel (nom. null.).]

C. depressa Koehler, 1927:74–76, pl. 12: figs. 7–9.
[Indian Ocean. Koehler refers to the genus as
Coenopedina Pomel (nom. null.).]

C. diomedea Mortensen, 1939a:548–549; 1940b:
110–112, fig. 61, pl. 2: figs. 21–23, pl. 68: figs. 10–
14. [Gulf of Panama, off Cape Mala.]

C. superba H. L. Clark, 1925a:52-53, pl. 5: figs. 1-2. [Saya de Malha Banks, Indian Ocean. Clark refers to the genus as *Coenopedina* Pomel (nom. null.).]

Genus *Diademopsis* Desor

LOWER JURASSIC

D. behtensis Lambert, 1931b:14, pl. 1: figs. 16-17. [North Africa.] (Lotharingian.)

Genus *Hemipedina* Wright

CRETACEOUS

H. abreusense Sánchez Roig, 1949:36-37. [Cuba.]

UPPER JURASSIC

H. taurica Weber, 1934:55-56, 85-86, fig. 3, pl. 9: figs. 3a-b. [Crimea, U.S.S.R.] (Sequanian.)

Genus *Leiopedina* Cotteau

LOWER EOCENE

L. cienagensis Sánchez Roig, 1949:42-43, pl. 3: figs. 3-4. [Cuba. Although Sánchez Roig cites the age as Middle Eocene, Brodermann (1949:324) says this species is Lower Eocene.]

Genus *Micropedina* Cotteau

UPPER CRETACEOUS

M. olisiponensis (Forbes) var. *gongilensis* Brighton, 1925:17-19, fig. 5. [Nigeria, West Africa.] (Lower Turonian/Cenomanian?)

Genus *Phalacropedina* Lambert

UPPER JURASSIC

Hemipedina (*Phalacropedina*) *somaliensis* Currie, 1925:61-62, figs. 10, 10a-d, pl. 9: figs. 5a-b. [Somaliland, East Africa.] (Oxfordian-Corallian.)

Genus *Pseudorthopsis* Sánchez Roig

UPPER CRETACEOUS

Pseudorthopsis Lambert in Sánchez Roig, 1949:9, 37. [Cuba. Although Sánchez Roig says this species is Eocene, Brodermann (1949:312) cites the age as Upper Cretaceous.] Type-species: *Echinopedina cubensis* Cotteau.

EOCENE

P. rojasi Sánchez Roig, 1953c:137-138, pl. 1: fig. 5. [Cuba].

Genus *Pseudopedina* Cotteau

LOWER JURASSIC

P. atlantis Lambert, 1931b:15, pl. 1: fig. 13. [North Africa.] (Domerian.)

Genus *Stenechinus* Arnold and H. L. Clark

EOCENE

Stenechinus Arnold and H. L. Clark, 1927:13. Type-species: *S. regularis* Arnold and H. L. Clark, 1927:15-17, pl. 1: figs. 7-9. [Jamaica.]

S. perplexus Arnold and H. L. Clark, 1927:14-15, pl. 1: figs. 4-6. [Jamaica.]

Family Uncertain

Genus *Farquharsonia* Currie

MIDDLE JURASSIC

Farquharsonia Currie, 1927:416. Type-species: *F. somaliensis* Currie, 1927:416-420, figs. 3a-d. [Somaliland, East Africa.] (Callovian.)

Order PYGASTEROIDA Durham and Melville

Family PYGASTERIDAE Lambert

Genus *Pygaster* J. L. R. Agassiz

LOWER CRETACEOUS

P. gerthi Weaver, 1931:171-172, pl. 12: figs. 25-28. [Argentina.] (Aptian or Upper Barremian.)

MIDDLE JURASSIC

- P. daguini* Lambert, 1931b:17–19, pl. 2: fig. 6. [North Africa.] (Lower Domerian.)
- P. joleaudi* Besairie and Lambert in Lambert, 1933a:10, pl. 2: fig. 7. [Madagascar, off East Africa.] (Callovian.)
- P. langanoides* Agassiz *ranvillensis* Mercier, 1932: 213. [France.] (Upper Bathonian.)
- P. lourdinensis* Laube in Lambert, 1926b:121–122, pl. 10: figs. 4a–b. [Switzerland.] (Lower Bathonian.)
- P. microstoma* Lambert, 1933b:54–55, pl. 3: fig. 12. [North Africa.] (Toarcian.)

Genus *Plesiechinus* Pomel

LOWER JURASSIC

- P. hawkinsi* Jesionek-Szymańska, 1970:416–417, fig. 1A, pl. 1, pl. 2: figs. 1–2. [Nevada, U.S.A.] (Sunrise Fm., Sinemurian.)

Genus *Serpianotiaris* Jeannet

MIDDLE TRIASSIC

- Miocidaris* (*Serpianotiaris*) Jeannet, 1933a:1. Type-species: *M. (S.) hescheleri* Jeannet, 1933a:1–7, figs. 1–2, pl. 30: figs. 1–13. [Switzerland. Fell (Durham et al., 1966:U366a) placed this genus in "Order Uncertain" and "Family Uncertain." Kier (in ms.) considers it a miocidarid.] (Ladinian.)

Superorder ECHINACEA Claus

Order SALENIOIDA Delage and Hérouard

Family ACROSALENIIDAE Gregory

Genus *Acrosalenia* L. Agassiz

MIDDLE JURASSIC

- A. basseae* Lambert, 1936c:17–18, pl. 4: figs. 4–6. [Madagascar, off East Africa.] (Callovian.)
- A. gananensis* Stefanini, 1932:97–99, pl. 4: figs. 3a–f. [Somaliland, East Africa.] (Inferior Oolite.)
- A. mathildae* Lambert, 1935a:526–527, pl. 26: figs. 5–8. [France.] (Callovian.)

- A. microstoma* Besairie, 1936:128, pl. 8: figs. 13–14. [Madagascar, off East Africa.] (Upper Bathonian.)
- A. smelliei* Currie, 1925:53–54, figs. 4a–b, pl. 8: figs. 5a–b. [Somaliland, East Africa.] (Bathonian.)
- A. termieri* Lambert, 1931b:15–16, pl. 1: fig. 11. [North Africa.] (Bajocian, Inferior Oolite.)
- A. wylliei* Currie, 1925:52–53, figs. 3a–b, pl. 8: figs. 4a–c. [Somaliland, East Africa.] (Bathonian.)

LOWER JURASSIC

- A. somaliensis* Currie, 1925:50–52, figs. 2a–c, pl. 8: figs. 2a–c, 3. [Somaliland, East Africa.]
- A. zararensis* Lambert, 1937:56–57, pl. 1: figs. 12–13. [Morocco.] (Pliensbachian.)

Genus *Eurysalenia* Kier

UPPER CRETACEOUS

- Eurysalenia* Kier, 1966a:A63. Type-species: *E. minima* Kier, 1966a:A63–65, fig. 17. [Wyoming, U.S.A.] (Upper Campanian or lower Maestrichtian.)

Genus *Heterosalenia* Cotteau

UPPER JURASSIC

- H. suatensis* Weber, 1934:47–48, 83–84, pl. 7: figs. 8a–c. [Crimea, U.S.S.R.] (Sequanian.)

MIDDLE JURASSIC

- H. alloiteau* Zoeke, 1952:249–252, figs. 1–2, pl. 11b: figs. 1–3. [North Africa.] (Bathonian.)

Genus *Metacrosalenia* Currie

This genus is considered in the *Treatise*, Fell and Pawson (Durham et al., 1966:U325), a subjective synonym of *Heterosalenia* Cotteau.

MIDDLE JURASSIC

- Acrosalenia* (*Metacrosalenia*) Currie, 1925:55. Type-species: *Metacrosalenia pseudocidaroides* Currie, 1925:55–56, figs. 5a–b, pl. 8: figs. 6a–b. [Somali-

land, East Africa.] (Bathonian, in Currie (1927: 411).)

A. (M.) quadrimiliaris Currie, 1927:414-415, figs. 2a-d. [Somaliland, East Africa.]

Genus *Polysalenia* Mortensen

UPPER CRETACEOUS

Polysalenia Mortensen, 1932a:490. Type-species: *P. notabilis* Mortensen, 1932a:491-494, figs. 17-22, pl. 4: figs. 1-3. [Sweden.] (Upper Senonian.)

P. cottaldi Mortensen, 1932a:494-496, figs. 23-24, pl. 4: figs. 11-13. [Sweden.] (Upper Senonian.)

Genus *Recrosalenia* Currie

MIDDLE JURASSIC

Recrosalenia Currie, 1925:47-48. Type-species: *R. somaliensis* Currie, 1925:48-50, fig. 1, pl. 8: figs. 1a-e. [Somaliland, East Africa.] (Callovian or Bathonian.)

R. migiurtina Maccagno, 1947c:90-92, pl. 1: fig. 5. [Harar, Ethiopia.] (Callovian or Bathonian.)

Family SALENIIDAE L. Agassiz

Subfamily SALENIINAE L. Agassiz

Genus *Salenia* Gray

RECENT

S. scrippsae Zullo, Kaar, Durham and Allison, 1964: 339-343, figs. 3A-B, 4C-D, 6D-G, pl. 56: figs. 1-3. [Chile.]

S. sculpta Koehler, 1927:71-73, pl. 11: figs. 10-13, pl. 12: figs. 1, 2, 10, pl. 25: fig. 5. [Indian Ocean.]

S. unicolor Mortensen, 1934a:166. [Sagami Sea, Japan.]

MIDDLE MIOCENE

S. nipponica Morishita, 1965:64-66, figs. 1-4. [Japan.]

LOWER MIOCENE

S. novemprovincialis Nisiyama, 1966:187-188, pl. 2: figs. 6-9. [Japan.] (Kakinoura Fm.)

LOWER OLIGOCENE

S. schencki Zullo, Kaar, Durham and Allison, 1964: 343-346, figs. 4B, 5, 6A-C, pl. 56: fig. 5. [Oregon, U.S.A.]

EOCENE

S. persica Clegg, 1933:8-10, pl. 1: figs. 3a-d. [Persia, Iran.]

PALEOCENE

S. alta Hassan, 1969:18, pl. 1: figs. 9-10. [Kharga Oasis, Upper Egypt.] (Landanian.)

CRETACEOUS

S. pseudowhitneyi Ikins, 1940:65-66, pl. 4: figs. 5a-c. [Texas, U.S.A.]

S. scotti Ikins, 1940:66-67, pl. 5: figs. 1a-c. [Texas, U.S.A.]

S. whitneyi Cannon in Ikins, 1940:68-69, pl. 5: figs. 3a-c. [Texas, U.S.A.]

UPPER CRETACEOUS

S. alcaldei Sánchez Roig, 1949:44, pl. 2: figs. 14-17. [Cuba.] (Maestrichtian.)

S. hagenowi Nestler, 1965:989-991, figs. 8a-d, pl. 5: figs. 1a-c. [Rügen Island, Baltic Sea.] (Lower Maestrichtian.)

S. hawkinsi Checchia-Rispoli, 1948:169-172, figs. 1-2, pl. 1: figs. 1-4a. [North Africa.] (Cenomanian.)

S. hondoensis Cooke, 1953:6, pl. 1: figs. 3-4. [Texas, U.S.A.] (Campanian.)

S. intermedia Hassan, 1969:16-17, pl. 1: figs. 6-8. [Kharga Oasis, Upper Egypt.] (Upper Maestrichtian.)

S. lamberti Checchia-Rispoli, 1932a:6-11, fig. 3, pl. 2: figs. 1-5a. [North Africa.] (Maestrichtian.)

S. lobosa Nestler, 1965:991-993, figs. 9a-c, pl. 5: figs. 2a-c. [Rügen Island, Baltic Sea.] (Lower Maestrichtian.)

S. mathuri Chiplonker, 1937:61-62, pl. 6: figs. 3a-d. [India.] (Lower Cenomanian.)

S. somaliensis Hawkins, 1935a:48-49, figs. 1-2, pl. 6: figs. 9a-b. [British Somaliland, East Africa.] (Upper Senonian?)

S. trigonopyga Lambert, 1933a:13-14, pl. 1: figs. 25-27. [Madagascar, off East Africa.] (Upper Turonian.)

LOWER CRETACEOUS

- S. cottreawi* Lambert, 1931c:63-64, fig. 3, pl. 3: figs. 2-4. [Algiers, North Africa.] (Neocomian.)
S. dux Wright, 1967:17-19, fig. 2, pl. 1: figs. 1a-d. [Southwestern England.] (Upper Albian.)
S. kansasense Twenhofel, 1924:52, pl. 7: fig. 7. [Kansas, U.S.A.] (Comanche.)
S. leanderensis Ikins, 1940:64-65, pl. 4: figs. 4a-c. [Texas, U.S.A.] (Comanchean.)
S. phillipsae Whitney and Kellum, 1966:249-250, pl. 1: figs. 4-6. [Texas, U.S.A.] (Trinity Group. Aptian.)
S. similis White *lastroensis* Maury, 1936:268-269. [Brazil.] (Middle Albian.)
S. stenzeli Ikins, 1940:67-68, pl. 5: figs. 2a-c. [Texas, U.S.A.] (Comanchean.)

UPPER JURASSIC

S. taurica Weber, 1934:59-60, 86, fig. 5, pl. 9: figs. 6a-d. [Crimea, U.S.S.R.] (Sequanian.)

Genus *Salenocidaris* A. Agassiz

RECENT

- S. brachygnatha* Mortensen, 1934a:166. [Off Kermadec Islands, Southwest Central Pacific Ocean.]
S. hastigera (A. Agassiz) var. *acuminata* Mortensen, 1934a:166. [Malaysia.]
S. incrassata Mortensen, 1934a:166. [Gulf of Tomini, Celebes Island, Malaysia.]
S. miliaris (A. Agassiz) var. *indica* Mortensen, 1939b:23-24, pl. 6: fig. 9. [Maldiv Islands, off southern India, Indian Ocean.]
S. profundus (Duncan) var. *occlusa* Mortensen, 1934a:165. [Off Tristan da Cunha Island, South Atlantic Ocean.]

Genus *Salenidia* Pomel

PALEOCENE

S. danica Ravn, 1928:45-47, pl. 5: figs. 5a-c. [Denmark.] (Danian.)

- S. karakachi* Weber, 1934:61-62, 86, fig. 7, pl. 9: figs. 8a-g. [Crimea, U.S.S.R.] (Danian.)
S. selandica Ravn, 1928:48-49, pl. 5: figs. 6a-c. [Denmark.] (Danian.)

UPPER CRETACEOUS

- S. chabaudi* Castex, 1947:30, pl. 1: figs. 16-19. [France.] (Maestrichtian.)
S. scabra Nestler, 1965:987-989, figs. 7a-f, pl. 4: figs. 4-7. [Rügen Island, Baltic Sea.] (Lower Maestrichtian.)

Genus *Valsalenia* Mortensen

PALEOCENE

Valsalenia Mortensen, 1934a:165. Type-species: *Salenia garumnensis* Valette. [France.] (Lower Danian.)

UPPER CRETACEOUS

V. marquassuzai Castex, 1947:28-29, pl. 1: figs. 7-9. [France.] (Maestrichtian.)

Genus *Peltastes* L. Agassiz

In the *Treatise* Fell and Pawson (Durham et al., 1966:U379) consider *Peltastes* an objective synonym of *Hyposalenia* Desor.

PALEOCENE

P. ultimus Ravn, 1928:39-41, fig. 11, pl. 4: fig. 39. [Denmark.] (Danian.)

Genus *Goniophorus* L. Agassiz

UPPER CRETACEOUS

- G. scotti* Lambert in Scott, 1926:185-186. [Texas, U.S.A. Further described and illustrated in Lambert, 1927a:268; in Adkins, 1928:278, pl. 12: fig. 8; in Cooke, 1946:202, pl. 31: figs. 8-9.]
G. whitneyi Ikins, 1940:69-70, pl. 5: figs. 4a-c. [Texas, U.S.A.] (Comanchean.)

Order HEMICIDAROIDA Beurlen

Family HEMICIDARIDAE Wright

Genus *Hemicidaris* L. Agassiz

UPPER CRETACEOUS

H. palmirensis Sánchez Roig, 1949:34-35, pl. 1: figs. 8-9. [Cuba.]

LOWER CRETACEOUS

H. villadai Maldonado-Koerdell, 1953:27-28, pl. 1: figs. 22-24. [Mexico.] (Aptian.)

UPPER JURASSIC

- H. crenularis* (Lamarck) var. *alta* Kongiel, 1957: 13-14, 47, 62-63, pl. 2: figs. 5-6. [Pomerania, on the Baltic Sea.] (Upper Kimmeridgian.)
H. crenularis (Lamarck) var. *major* Lambert, 1933c: 177, pl. 7: fig. 12. [France.] (Rauracian.)
H. pilletti Lambert, 1927c:365. [France.] (Tithonian.)
H. sundancensis Miller, 1928:143-146, figs. 1-4. [Wyoming, U.S.A.] (Sundance Fm.)
H. tithonica Lambert, 1927c:364, fig. 1. [France.] (Tithonian.)

MIDDLE JURASSIC

- H. bihinensis* Currie, 1925:59-60, fig. 8, pl. 9: figs. 3a-b. [Somaliland, East Africa.] (Bathonian.)
H. castillionensis Lambert, 1933c:177, pl. 7: figs. 3-4. [France.] (Upper Bathonian.)
H. jaisalmerensis Sahni and Bhatnagar in Sahni, 1955:187. [Rajasthan, Northwest Indian Union.] (Callovian.)
H. luciensis d'Orbigny var. *hourcqi* Lambert, 1936c:17. [Madagascar, off East Africa.] (Bathonian.)
H. luciensis Cotteau *oolithicus* Mercier, 1932: 120-121, 166-167, fig. 19, pl. 4: figs. 6a-b. [France.] (Middle Bathonian.)

LOWER JURASSIC

H. termieri Lambert, 1931b:13-14, pl. 1: figs. 7-12. [North Africa.] (Lower Domerian.)

Genus *Asterocidaris* Cotteau

MIDDLE JURASSIC

- A. besairiei* Lambert, 1936c:16, pl. 1: figs. 22-24. [Madagascar, off East Africa.] (Callovian.)
A. ragoti Lambert, 1936c:15, pl. 4: figs. 11-13. [Madagascar, off East Africa.] (Callovian.)

Genus *Gymnocidaris* L. Agassiz

MIDDLE JURASSIC

- G. gortanii* Maccagno, 1947c:95-96, pl. 2: figs. 15, 15a-b. [Harar, Ethiopia.] (Bathonian/Callovian.)
G. lamberti Mercier, 1932:162-163, pl. 3: figs. 8a-c. [France.] (Upper Bathonian.)
G. madagascariensis Lambert, 1936b:118-119, pl. 6: figs. 13-16. [Madagascar, off East Africa.] (Bajocian.)
G. pustulosa Agassiz *nuda* Mercier, 1932:161, pl. 3: fig. 7. [France.] (Upper Bathonian.)

Genus *Hessotiara* Pomel

MIDDLE JURASSIC

H. zuberi Jeannet, 1953:176-177, pl. 1: figs. 1-5. [Switzerland.] (Lower Callovian.)

Genus *Heterodiadema* Cotteau

UPPER CRETACEOUS

- H. libyca* Desor *asiatica* Stefanini, 1928:164-166, pl. 19: figs. 4, 5, 6a-c, 7a-d, 8a-b. [Karakorum, Mongolia.] (Cenomanian.)
H. libycum Desor var. *nigeriense* Lambert, 1938b: 87-89, pl. 6: figs. 9, 9a-b. [Niger territory, French West Africa.] (Upper Cenomanian.)

Genus *Pseudocidaris* Étallon

LOWER CRETACEOUS

P. simulans Nisiyama, 1950b:29-30, pl. 4: figs. 1-2. [Japan.] (Aptian/Albian.)

JURASSIC

- P. deflippii* Stefanini, 1928:161-164, pl. 19: figs. 2a-e. [Karakorum, Mongolia.]
P. gortanii Maccagno, 1947b:121-122, fig. 1c, pl. 1: fig. 8. [Somaliland, East Africa.]
P. migliorinii Maccagno, 1947b:118-120, fig. 2, pl. 1: figs. 7-7a. [Somaliland, East Africa.]

UPPER JURASSIC

- P. tetragranulatus* Currie, 1925:57-58, figs. 6a-b, pl. 8: figs. 7a-c. [Somaliland, East Africa.] (Kimmeridgian.)
P. vogdti Weber, 1934:43-44, 83, pl. 7: figs. 3a-h. [Crimea, U.S.S.R.] (Tithonian.)

MIDDLE JURASSIC

- P. checchii* Maccagno, 1947c:92-95, pl. 1: figs. 6, 6a-b, pl. 2: figs. 13-13a. [Harar, Ethiopia.] (Bathonian/Callovian.)
P. collignoni Lambert, 1936c:13-14, pl. 1: figs. 12-16. [Madagascar, off East Africa.] (Upper Bathonian.)
P. levis Lambert, 1936c:13, pl. 4: fig. 7. [Madagascar, off East Africa.] (Callovian.)
P. truncata Lambert, 1936c:14, pl. 1: figs. 18-21. [Madagascar, off East Africa.] (Upper Bathonian.)

LOWER JURASSIC

- P. dubari* Lambert, 1937:49, fig. 1, pl. 1: fig. 9. [Morocco.] (Lower Liassic.)
P. leckwycki Lambert, 1937:50-51, pl. 4: figs. 8-9. [Morocco.] (Tithonian.)

Genus *Spherotiaris* Lambert and Thiéry

UPPER JURASSIC

- S. vivaldii* Besairie, 1930:197-198, pl. 11: figs. 4-7. [Madagascar, off East Africa.] (Upper Callovian/lower Lusitanian.)

MIDDLE JURASSIC

- S. meandrina* Agassiz var. *nervosa* Lambert, 1937:52-53, pl. 4: fig. 11. [Morocco.] (Bajocian.)

- S. meandrina* Agassiz var. *termieri* Lambert, 1937:51-52, pl. 4: fig. 10. [Morocco.] (Upper Bajocian.)

LOWER JURASSIC

- S. gignouxii* Mercier, 1937c:24-25, pl. 1: figs. 17-18. [France.] (Domerian.)
S. precincta Lambert, 1933b:36, pl. 3: fig. 9. [North Africa.] (Domerian.)

Family PSEUDODIADEMATIDAE Pomel

Genus *Pseudodiadema* Desor

LOWER CRETACEOUS

- P. elevatus* Whitney and Kellum, 1966:254-256, pl. 2: figs. 7-9. [Texas, U.S.A.] (Trinity Group. Aptian.)
P. grangeri Maury, 1936:270-271, pl. 2: figs. 1-2. [Brazil.] (Middle Albian.)
P. whitneyi Ikins, 1940:72-73, pl. 6: figs. 1a-c. [Texas, U.S.A. Cooke (1946:206) placed this species in *Loriolia*.] (Comanchean.)

UPPER JURASSIC

- P. kselensis* Devriès, 1956b:284-287, pls. 1-2. [Algiers, North Africa.] (Lusitanian.)

LOWER JURASSIC

- P. amellagense* Lambert, 1937:59-60, pl. 4: figs. 19-20. [Morocco.] (Upper Domerian to late Pliensbachian.)
P. renzi Jeannet, 1928c:221; 1928d:461-462, pl. 36: figs. 12-14, 16-18. [Switzerland.] (Lower Toarcian.)

UPPER TRIASSIC

- P. silbinense* Stefanini, 1923:51-55, pl. 5: figs. 1a-g, 2a-c. [Italy.] (Rhaetian.)

Genus *Acrocidaris* L. Agassiz

LOWER CRETACEOUS

- A. arginensis* Weber, 1934:54, 85, pl. 8: figs. 6a-b. [Crimea, U.S.S.R.] (Hauterivian.)

UPPER JURASSIC

- A. borissiaki* Weber, 1934:51-53, 84-85, pl. 8: figs. 3a-h. [Crimea, U.S.S.R.] (Sequanian.)
A. cazioti Lambert, 1926a:72-74, fig. 1. [France.] (Tithonian.)

MIDDLE JURASSIC

- A. crenulata* Mercier, 1935:29. [France.] (Bajocian.)

Genus *Diplopodia* M'Coy

UPPER CRETACEOUS

- D. cretacica* Sánchez Roig, 1949:35, pl. 1: figs. 10-11. [Cuba.]
D. gigantea Checchia-Rispoli, 1945 [1943]:88-89, pl. 1: figs. 5-6. [Somaliland, East Africa.] (Cenomanian.)
D. gileadensis Blanckenhorn, 1925 [1924]:86, pl. 7: figs. 3a-b. [Palestine, Israel.] (Upper Cenomanian.)
D. inexpectata Checchia-Rispoli, 1943b:317-318, fig. 1. [Somaliland, East Africa.] (Cenomanian.)

LOWER CRETACEOUS

- D. balkhanensis* Vialov, 1930:876-879, 900, pl. 1: figs. 1a-b, 2. [Asiatic Russia.] (Upper Hauterivian/lower Barremian.)
D. balkhanensis Vialov var. *aberans* Vialov, 1930:880-881, 900, pl. 1: figs. 3a-b, 4. [Asiatic Russia.] (Upper Hauterivian/lower Barremian.)
D. elegans Corroy, 1925:315-316, pl. 4: figs. 22-24. [France.] (Hauterivian.)
D. gentili Lambert, 1931c:27, pl. 2, fig. 1. [North Africa.] (Barremian.)
D. kultchitskyi Vialov, 1930:881-883, 900-901, pl. 1: figs. 6a-c. [Asiatic Russia.] (Upper Hauterivian.)
D. langei Vialov, 1930:888-889, 901, pl. 1: figs. 8a-c. [Asiatic Russia.] (Upper Hauterivian.)
D. renngarteni Vialov, 1930:883-885, 901, pl. 1: figs. 7a-b. [Asiatic Russia.] (Upper Hauterivian.)
D. vassilievskyi Vialov, 1930:885-888, 901-902, pl. 2: figs. 1a-c. [Asiatic Russia.] (Upper Hauterivian.)

Genus *Hypodiadema* Desor

UPPER JURASSIC

- Hemicidaris* (*Hypodiadema*) *gregoryi* Currie, 1925:58-59, fig. 7, pl. 9: figs. 2a-d. [Somaliland, East Africa.] (Corallian/Kimmeridgian.)
H. (H.) macfadyeni Currie, 1935a:44-45, pl. 6: figs. 2a-d. [British Somaliland, East Africa.] (Bathonian/Argovian.)

LOWER JURASSIC

- H. dubari* Lambert, 1933b:39-40, fig. 1. [North Africa.] (Domerian.)

Genus *Loriolia* Neumayr

UPPER CRETACEOUS

- L. clarki* Cooke, 1946:206, pl. 31: figs. 13-14. [Texas, U.S.A. For *Heterodiadema ornatum* Clark, 1915.] (Washita Group.)

LOWER CRETACEOUS

- L. rosana* Cooke, 1946:205-206, pl. 31: figs. 15-17. [Texas, U.S.A.] (Trinity Group.)

MIDDLE JURASSIC

- L. inaequalis* Agassiz var. *bathonica* Mercier, 1932:183-184, pl. 5: figs. 13a-b. [France.] (Upper Bathonian.)

Genus *Pedinopsis* Cotteau

LOWER EOCENE

- P. (?) melo* Kier, 1957b:845, figs. 1a-b, pl. 103: figs. 4-5. [British Somaliland, East Africa.] (Upper Auradu Series.)

LOWER CRETACEOUS

- P. engerrandi* Ikins, 1940:62, pl. 4: figs. 2a-c. [Texas, U.S.A.] (Comanchean.)
P. texana Cooke, 1955:90-91, pl. 19: figs. 1-6. [Texas, U.S.A.] (Upper Albian.)

P. yarboroughi Ikins, 1940:62–63, pl. 4: figs. 3a–c.
[Texas, U.S.A.] (Comanchean.)

Genus *Polydiadema* Lambert

EOCENE

P.(?) joaquinensis Alex Clark in Grant and Hertlein, 1938b:17–18, pl. 15: figs. 8–9. [U.S.A.] (Sierra Blanca Stage.)

LOWER CRETACEOUS

P. karakachi Weber, 1934:50–51, 84, pl. 8: figs. 2a–f. [Crimea, U.S.S.R.] (Hauterivian.)

UPPER CRETACEOUS

Leptarbacia andreui Sánchez Roig, 1949:35–36, pl. 2: figs. 1–2. [Cuba. See Fell and Pawson in the *Treatise* (Durham et al., 1966:U389). *Leptarbacia* Clark and Twitchell, 1915, is considered a synonym of *Polydiadema* Lambert.]

Genus *Polypedina* Lambert

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U389) consider *Polypedina* a subjective synonym of *Polydiadema* Lambert.

LOWER JURASSIC

Polypedina Lambert, 1933b:46. Type-species: *P. tounatensis* Lambert, 1933b:46–47, fig. 2, pl. 1: figs. 6–7. [North Africa.] (Lower Domerian.)

Genus *Tetragramma* L. Agassiz

UPPER CRETACEOUS

T. besairiei Lambert, 1933a:13, pl. 1: figs. 23–24. [Madagascar, off east coast of Africa.] (Upper Turonian.)

T. bosei Jones, 1938:130, pl. 12: figs. 6–7. [Mexico.] (Indidura Fm.)

T. tafermense Lambert, 1931c:94–95, pl. 3: fig. 33. [Tunis.] (Cenomanian.)

LOWER CRETACEOUS

T. cornuelli Corroy, 1925:405–406, pl. 4: figs. 19–21. [France.] (Upper Barremian.)

T. giganteum Lambert, 1935f:522–523, pl. 58: fig. 1. [Spain.] (Aptian.)

T. hourcqi Collignon, 1950:7–8, pl. 1: figs. 1–2b. [Madagascar, off East Africa.] (Albian.)

UPPER JURASSIC

T. pomeraniae Kongiel, 1957:20–22, 50–51, 65–67, pl. 4: figs. 1–3. [Pomerania, on Baltic Sea.] (Lower Kimmeridgian.)

MIDDLE JURASSIC

T. antsingyensis Lambert, 1936c:19, pl. 1: figs. 28–30. [Madagascar, off East Africa.] (Callovian.)

Genus *Trochotiara* Lambert

UPPER CRETACEOUS

T. russoi Lambert, 1931c:27, pl. 1: figs. 20–21. [North Africa.] (Cenomanian.)

Order PHYMOSOMATOIDA Mortensen

Family PHYMOSOMATIDAE Pomel

Genus *Phymosoma* Haime

EOCENE

P. peloria Arnold and H. L. Clark, 1927:18–20, pl. 2: figs. 1–3. [Jamaica.]

UPPER EOCENE

P. conceptionis Sánchez Roig, 1952c:3, pl. 1: figs. 1–2. [Cuba.]

P. dixie Cooke, 1941a:17, pl. 2: fig. 15, pl. 4: figs. 1–2, 9. [U.S.A.]

MIDDLE EOCENE

P. gigantea Sánchez Roig, 1953c:136, pl. 1: fig. 1. [Cuba.]

PALEOCENE

- P. subconicum* Ravn, 1928:59–60, pl. 6: fig. 5. [Denmark.] (Danian.)
P. trinitensis Cooke, 1961:10–11, pl. 2: figs. 1–3. [Trinidad, Caribbean Ocean.]

CRETACEOUS

- P. bybeei* Ikins, 1940:71–72, pl. 5: figs. 5a–c. [Texas, U.S.A.]

UPPER CRETACEOUS

- P. mortenseni* Checchia-Rispoli, 1932a:11–15, figs. 4–6, pl. 2: figs. 7–19. [North Africa.] (Maestrichtian.)
P. paronai Checchia-Rispoli, 1933b:11–14, figs. 5–7, pl. 2: figs. 4–7. [North Africa.] (Maestrichtian.)
P. raguini Lambert, 1931c:28–29, pl. 1: figs. 22–23. [North Africa.] (Cenomanian.)
P. riograndensis Maury, 1925:508–509, pl. 24: figs. 11–12. [Brazil.]
P. solignaci Lambert, 1931c:95, pl. 4: figs. 1–3. [North Africa.] (Santonian.)
P. tinocoi Marchesini Santos, 1960:18–20, fig. 4, pl. 5: figs. 1–3. [Brazil.] (Turonian.)
P. uncarinatum Lambert, 1933b:66, pl. 3: figs. 10–11. [North Africa.] (Santonian.)

UPPER JURASSIC

- P. cadenati* Castex, 1947:27–28, pl. 1: figs. 10–15. [France.] (Upper Sequanian.)

Genus *Cyphosoma* L. Agassiz

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U395) consider *Cyphosoma* a synonym of *Phymosoma* Haime.

UPPER CRETACEOUS

- C. palaestinense* Blanckenhorn, 1925 [1924]:87–88, pl. 7: figs. 4–6. [Palestine, Israel.] (Upper Turonian/lower Santonian.)
C. riograndensis Maury var. *parahybensis* Maury, 1930:112–115, pl. 5: figs. 3, 5. [Brazil.] (Maestrichtian.)

LOWER CRETACEOUS

- C. sanctaeluciae* Maury, 1936:266–267, pl. 4: figs. 4–5. [Brazil.] (Middle Albian.)

Genus *Dixieus* Cooke

Fell and Pawson (Durham et al., 1966:U396), in the *Treatise*, consider *Dixieus* a subjective synonym of *Phymosoma* Haime.

UPPER EOCENE

- Dixieus* Cooke, 1948:606–607. Type-species: *Phymosoma dixie* Cooke. [North America.]

Genus *Gauthieria* Lambert

PALEOCENE

- G. (?) parva* Kongiel, 1936a:2–3, 8. [Poland.] (Lower Siwak. Danian.)

UPPER CRETACEOUS

- G. sadeki* Lambert, 1931d:191, pl. 5: figs. 46–47. [Egypt.] (Cenomanian.)

Genus *Glyptocidaris* A. Agassiz

LOWER PLIOCENE

- G. crenularis* A. Agassiz *stenoazona* Nisiyama, 1966:194–195, pl. 2: figs. 10–11. [Japan.] (Kurotaki Fm.)

Subgenus *Glyptocidaris* (*Eoglyptocidaris*) Nisiyama

OLIGOCENE/EOCENE

- Glyptocidaris* (*Eoglyptocidaris*) Nisiyama, 1966:195–196. Type-species: *G. (E.) arctina* Nisiyama, 1966:196–197, fig. 7, pl. 3: figs. 5–7. [Japan.] (Paronai Fm.)

Genus *Jacquiertia* Mercier

LOWER JURASSIC

- Jacquiertia* Mercier, 1937a:419–420. Type-species: *Hemipedina parvula* Tornquist. (Toarcian.)

Mortensen and Mercier (1939) determined that the specimen Mercier identified as *Hemipedina parvula* Tornquist and for which he erected his genus *Jacquiertia* does not really belong to this species. Tornquist's species has perforate tubercles, whereas Mercier's has imperforate tubercles. Therefore, they erected a new species *Jacquiertia minuta* Mortensen and Mercier, and considered it the type-species of *Jacquiertia*. In the *Treatise*, Fell and Pawson (Durham et al., 1966:U400) likewise consider *J. minuta* as the type-species of *Jacquiertia*; however, because Mercier in his original description of *Jacquiertia* designated *Hemipedina parvula* Tornquist as the type-species, it remains the type-species regardless of the identity of the particular specimens upon which Mercier based his generic description. If the type specimens of *Hemipedina parvula* Tornquist belong to *Eodiadema* as suggested by Mortensen (1940b:177), then *Jacquiertia* is a subjective synonym of *Eodiadema*. If the type specimens of *Jacquiertia minuta* Mortensen and Mercier is generically distinct, then a new genus must be erected for this species.

J. minuta Mortensen and Mercier, 1939:59–61, figs. 1–2. [France.] (Charmouthien.)

Genus *Narindechinus* Lambert

MIDDLE EOCENE

Narindechinus Lambert, 1933a:30–31. Type-species: *N. checchiai* Lambert, 1933a:31, fig. 3, pl. 1: figs. 29–30. [Madagascar, off East Africa.] (Lutetian.)

Genus *Polyplacidia* Poretskaya

EOCENE

Polyplacidia Poretskaya, 1968a:287–289. Type-species: *P. armenica* Poretskaya, 1968a:290–293, figs. 1–6, pl. 1: figs. 1a–b, pl. 2: figs. 1a–c. [Armenia, U.S.S.R.]

Genus *Porosoma* Cotteau

EOCENE

P. kahleri Collignon, 1930:544–546, pl. 31: figs. 1, 1a–b. [Austria.]

P. lamberti Checchia-Rispoli, 1950b:22–24, pl. 1: figs. 1–1b. [East Africa, Migiurtinia, Northeast Somalia.]

MIDDLE EOCENE

P. lamberti Checchia-Rispoli, 1950a [1945–1946]: 22–24, pl. 1: figs. 1, 1a–b. [Somaliland, East Africa.]

UPPER CRETACEOUS

P. batalleri Lambert, 1933d:185–186, fig. 1, pl. 1: figs. 10–13. [Spain.] (Maestrichtian.)
P. reesidei Cooke, 1953:6–7, pl. 1: figs. 5–8. [Wyoming, U.S.A.] (Coniacian.)

Genus *Rachiosoma* Pomel

PALEOCENE

R. krimica Weber, 1934:64, 86–87, pl. 10: figs. 3a–c. [Crimea, U.S.S.R.] (Danian.)
R. pulaviense Kongiel, 1939:27–29, pl. 3: figs. 7–10. [Poland.] (Lower to middle Danian.)

UPPER CRETACEOUS

R. cottreai Lambert, 1936c:24, pl. 2: figs. 16–17. [Madagascar, off East Africa.] (Maestrichtian.)
R. hondoensis Cooke, 1953:8–9, pl. 3: figs. 4–5. [Texas, U.S.A.] (Upper Maestrichtian.)
R. stagnorum Lambert, 1931c:69, pl. 3: figs. 12–13. [Algiers, North Africa.] (Cenomanian.)

Subgenus *Rachiosoma* (*Rosadosoma*) Marchesini Santos

CRETACEOUS

R. (Rosadosoma) Marchesini Santos, 1960:13–14. [For type *Phymosoma riograndensis* Maury.]

Genus *Winkleria* Engel

Engel provisionally refers this genus to the Phymosomatidae.

UPPER CRETACEOUS

Winkleria Engel, 1964b:207. Type-species: *W. maastrichtensis* Engel, 1964b:207–210, figs. 1–4, pl. 1: figs. 1–10. [Netherlands.] (Maastrichtian.)

Genus *Thylechinus* Pomel

OLIGOCENE

T. sethuramae Vredenburg, 1922:414, pl. 30: fig. 3. [Burma.]

UPPER EOCENE

T. humei Lambert, 1931d:198, pl. 5: figs. 5–7. [Egypt.] (Priabonian?)

LOWER EOCENE

T. chardoni Lambert and Roch in Lambert, 1937: 83–85, pl. 3: figs. 1–5. [Morocco.]

T. dubari Lambert, 1937:85, pl. 4: figs. 24–25. [Morocco.]

Subgenus *Thylechinus* (*Egyptechinus*) Lambert

The subgenus *Egyptechinus* Lambert is considered by Fell and Pawson (Durham et al., 1966:U403) a synonym of *Thylechinus* (*Mistechinus*) de Loriol.

MIDDLE EOCENE

Thylechinus (*Egyptechinus*) Lambert, 1935e:41. Type-species: by monotypy *Egyptechinus cuvillieri* Lambert, 1935e:41, pl. 1: figs. 4–6. [Egypt.] (Upper Lutetian.)

Family STOMECHINIDAE Pomel

Genus *Stomechinus* Desor

JURASSIC

S. daguini Lambert, 1933b:50–51, pl. 1: fig. 21, pl. 3: fig. 5. [North Africa.]

UPPER JURASSIC

S. pulchellus Frenguelli, 1944:1–11, pl. 1: figs. 1–3. [Argentina.] (Tithonian.)

MIDDLE JURASSIC

S. bajocensis Lambert and Jeannet, 1928b:170. [France.] (Bajocian.)

S. lemoinei Lambert, 1931d:180–181, pl. 5: figs. 39–40. [Egypt.] (Bathonian.)

S. magnicornicolus Cooke, 1947:473–475, figs. 1–6. [U.S.A.] (Bajocian.)

S. polyporus Agassiz *nanus* Mercier, 1932:198, pl. 6: fig. 6. [France.] (Upper Bathonian.)

Genus *Circopeltis* Pomel

UPPER CRETACEOUS

S. senessei Lambert in Lambert and Valette, 1934: 50–51, pl. 6: figs. 11–12. [France.] (Coniacian.)

Genus *Diplechinus* Lambert

LOWER JURASSIC

Diplechinus Lambert, 1931b:15–16. Type-species: *D. hebbriensis* Lambert, 1931b:16–17, pl. 1: figs. 14–15. [North Africa, Morocco.] (Lower Domerian.)

Genus *Echintiara* Pomel

UPPER CRETACEOUS

E. perebaskinei Lambert in Lambert and Pérébasquine, 1929:472–474, pl. 38: figs. 1–5. [North Africa.] (Maastrichtian.)

MIDDLE JURASSIC

E. somaliensis Currie, 1927:420–422, figs. 4a-f. [Somaliland, East Africa.] (Bathonian.)

LOWER JURASSIC

E. arabica Melville, 1955:393–401, figs. 1–7, pl. 19: figs. 1a-5b. [Arabia.] (Lower Toarcian.)

Genus *Gomphechinus* Pomel

UPPER CRETACEOUS

G. collignoni Lambert, 1933a:15, pl. 2: figs. 1-3. [Madagascar, off east coast of Africa.] (Maestrichtian.)

Genus *Jeannetia* Mercier

LOWER JURASSIC

Jeannetia Mercier, 1937a:421-422. Type-species: *J. mortenseni* Mercier, 1937a:422-424, fig. 2. [France.] (Hettangian.)

Genus *Parastomechinus* Philip

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U404) consider *Parastomechinus* a synonym of *Jeannetia* Mercier.

MIDDLE JURASSIC

Parastomechinus Philip, 1963c:1111-1112. Type-species: *P. brightoni* Philip, 1963c:1112-1115, figs. 1-3, 5. [Wyoming, U.S.A.] (Twin Creek Fm. Bajocian/Callovian.)

Genus *Noetlingaster* Vredenburg

UPPER CRETACEOUS

- N. globulus* Devriès, 1967:173-174, pl. 1: figs. 7-9, pl. 2: figs. 10-13, pl. 4: figs. 6-11. [Turkey.]
N. hemisphaericus Devriès, 1967:174-175, pl. 1: figs. 3, 6, 9, pl. 2: figs. 14-16, pl. 4: figs. 12-14. [Turkey.]
N. lamberti Checchia-Rispoli, 1930b:20, figs. 12-14, pl. 1: fig. 2, pl. 3: fig. 1, pl. 4: fig. 1. [Africa.] (Maestrichtian.)
N. millosevichi Checchia-Rispoli, 1930b:14, figs. 6-11, pl. 2: figs. 3-4. [Africa.] (Maestrichtian.)
N. sanfilippoi Checchia-Rispoli, 1930b:6, figs. 1-5, pl. 1: fig. 1, pl. 3: fig. 2, pl. 4: fig. 2. [Africa.] (Maestrichtian.)

Genus *Phymotaxis* Lambert and Thiéry

UPPER OLIGOCENE/UPPER EOCENE

P. mansfieldi Cooke, 1941a:18, pl. 3: figs. 12-13, pl. 4: figs. 6-8. [U.S.A.]

Genus *Polycyphus* L. Agassiz and Desor

JURASSIC

P. rimuensis Stefanini, 1928:169-172, pl. 19: figs. 3a-g. [Karakorum, Mongolia.]

MIDDLE JURASSIC

P. hourcqi Lambert, 1936c:20, pl. 1: figs. 31-32. [Madagascar, off East Africa.] (Bathonian.)

Genus *Psephochinus* Pomel

JURASSIC

P. globosus Lambert, 1931c:18-19, pl. 1: figs.: 14-16. [North Africa.]

MIDDLE JURASSIC

- P. mazetieri* Mercier, 1932:201-202, fig. 13, pl. 7: fig. 2. [France.] (Upper Bathonian.)
P. newtoni Lambert, 1933a:10. [Madagascar, off East Africa.] (Callovian.)

LOWER JURASSIC

P. renzi Jeannet, 1928c:221; 1928d:462-463, pl. 36: figs. 10-11, 15. [Corfu Island, in Ionian Sea off northwest Greece.] (Lower Toarcian to upper Malm.)

Genus *Stomopneustes* L. Agassiz

OLIGOCENE

S. pristinus Jackson, 1937:229-230, pl. 12: fig. 1. [Mexico.]

UPPER EOCENE

S. antiquus Nisiyama, 1966:199–201, pl. 2: figs. 14–17, pl. 3: figs. 1–4. [Japan.] (Lutetian.)

Genus *Tiarechinopsis* Lambert

MIDDLE JURASSIC

Tiarechinopsis Lambert, 1936b:119. Type-species: *T. besairiei* Lambert, 1936b:120, pl. 6: figs. 17–21. [Madagascar, off East Africa.] (Bajocian.)

Genus *Triadechinus* Arnold and H. L. Clark

EOCENE

Triadechinus Arnold and H. L. Clark, 1927:20–21. Type-species: *T. multiporus* Arnold and H. L. Clark, 1927:21–22, pl. 1: figs. 10–11. [Jamaica, Caribbean Sea.]

Genus *Leiosoma* Cotteau

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U408) consider *Leiosoma* an objective synonym of *Trochalosoma*.

EOCENE

L. chondra Arnold and H. L. Clark, 1927:17–18, pl. 2: figs. 4–6. [Jamaica, Caribbean Sea.]

UPPER EOCENE

L. guadalupense Sánchez Roig, 1949:48–49, pl. 2: figs. 3–4. [Cuba.] (Although Roig considers it to be Eocene, Brodermann (1949:324) says it is Upper Eocene.)

Family Uncertain**Genus *Boletechinus* Cooke**

UPPER CRETACEOUS

B. mcglameryae Cooke, 1955:93, fig. 4, pl. 28: figs. 11–16. [Alabama, U.S.A.] (Upper Maestrichtian.)

Order ARBACIOIDA Gregory**Family ARBACIIDAE Gray****Genus *Arbacia* Gray**

PLIOCENE

A. rivuli Cooke, 1941a:10–11, pl. 1: figs. 4–6. [U.S.A.] (Waccamaw Fm.)
A. waccamaw Cooke, 1941a:10, pl. 1: figs. 1–3. [U.S.A.] (Waccamaw Fm.)

UPPER MIOCENE

A. crenulata Kier, 1963:11–15, figs. 3–7, pl. 1: figs. 1–5. [Florida, U.S.A.] (Tamiami Fm.)

Genus *Arbia* Cooke

UPPER OLIGOCENE

Arbia Cooke, 1948:606. Type-species: *Coelopleurus aldrichi* W. B. Clark. [Alabama, U.S.A.]

Genus *Atopechinus* Thiéry

MIDDLE JURASSIC

Atopechinus Thiéry in Thiéry, Lambert and Collignon, 1928:100–101. Type-species: *A. cellensis* Thiéry in Thiéry, Lambert and Collignon, 1928:100–101, pl. 31: fig. 16. [France.] (Bathonian.)

Genus *Baueria* Noetling

PALEOCENE

B. tessieri Roman and Debant, 1962a:245; 1962b:591–593, fig. 1, pl. 22b. [Senegal, West Africa.] (Lower Danian.)

Genus *Codiopsis* L. Agassiz

UPPER CRETACEOUS

C. doma Desmarests var. *conicus* Smiser, 1935b:34, pl. 2: fig. 10. [Belgium.] (Cenomanian.)

- C. douvillei* Vidal, 1921:9, pl. 2: fig. 5, pl. 4: fig. 9. [Spain.] (Santonian.)
C. fontei Vidal, 1921:10, pl. 1: figs. 20–22. [Spain.] (Maestrichtian.)
C. pierrensis Smiser, 1935b:35–36, pl. 3: figs. 2a–h. [Belgium.] (Maestrichtian.)
C. senessei Lambert in Lambert and Valette, 1934: 52–53, pl. 6: figs. 13–15. [France.] (Upper Turonian to Coniacian.)
C. stephensoni Cooke, 1953:8, pl. 1: figs. 9–11. [Texas, U.S.A.] (Upper Maestrichtian.)

LOWER CRETACEOUS

- C. sellardsi* Ikins, 1940:60–61, pl. 4: figs. 1a–c. [Texas, U.S.A.] (Comanchean.)

Genus *Coelopleurus* L. Agassiz

RECENT

- C. granulatus* Mortensen, 1934a:167. [Japan, Bay of Ambon.]
C. undulatus Mortensen, 1934a:166–167. [Sagami Sea, Japan.]
C. undulatus Mortensen var. *polymorphus* Mortensen, 1934a:167. [Korea Strait, Japan.]
C. undulatus Mortensen var. *ruber* Mortensen, 1934a:167. [Macclesfield Bank, Malaysia.]
C. vittatus Koehler, 1927:64–70, pl. 10: figs. 2, 5–7, 10, pl. 25: fig. 6, pl. 26: fig. 1. [Indian Ocean.]

MIOCENE

- C. singularis* Nisiyama, 1966:205–206, pl. 1: figs. 21–23. [Japan.] (Shirahama Fm.)

LOWER MIOCENE

- C. melitensis* Zammit-Maempel, 1969:42–46, fig. 1, pl. 6. [Malta.]

UPPER EOCENE

- C. carolinensis* Cooke, 1941a:9, pl. 2: figs. 1–3. [U.S.A.]

UPPER CRETACEOUS

- C. castroi* Maury, 1930:114–117, pl. 5: fig. 4. [Brazil.] (Campanian.)

Genus *Cotteaudia* Lambert and Thiéry

LOWER CRETACEOUS

- C. royoii* Lambert, 1928a:149–153, pl. 3: figs. 1–5. [Spain.] (Aptian.)

Genus *Murravechinus* Philip

MIOCENE

- Murravechinus* Philip, 1965:183–186. Type-species: *Coelopleurus paucituberculatus* Gregory. [South-east Australia.]

Genus *Glypticus* L. Agassiz

UPPER JURASSIC

- G. buxtorfi* Koechlin, 1947:83; 1948:334–336, figs. 1–2. [Switzerland.] (Upper Sequanian.)

Genus *Goniopygus* L. Agassiz

CRETACEOUS

- G. ameri* Lambert, 1931e:301, pl. 17: fig. 16. [West Indies, Cuba.]
G. sanchezi Lambert, 1931e:300–301, pl. 17: figs. 17–18. [Cuba, West Indies.]

UPPER CRETACEOUS

- G. coutini* Lambert, 1931c:29, pl. 1: figs. 24–25. [North Africa.]
G. cubanus Sánchez Roig, 1952c:2–3, pl. 1: fig. 9. [Cuba.]
G. jeanneti Sánchez Roig, 1949:54–55, pl. 2: figs. 7–8. [Cuba.]
G. lamberti Kühn, 1925:178–179, 186–187, fig. 1, pl. 11: fig. 1. [Austria.] (Upper Santonian.)
G. lemoinei Lambert, 1933a:16, pl. 2: figs. 4–6. [Madagascar, off East Africa.] (Upper Turonian.)
G. madrugensis Sánchez Roig, 1949:53–54, pl. 2: figs. 11–12. [Cuba.]

G. supremus Hawkins, 1924:313–316, pl. 18: figs. 1–2. [Jamaica, West Indies.] (Cenomanian-Turonian.)

LOWER CRETACEOUS

- G. atavus* Nisiyama, 1950b:30–32, pl. 4: figs. 3–4. [Japan.] (Aptian/Albian.)
G. bolaensis Jones, 1938:132, pl. 13: figs. 5–6, 8. [Mexico.] (Aurora Fm.)
G. royoii Lambert, 1928a:155–157, fig. 1. [Spain.] (Aptian.)
G. stocktonensis Smiser, 1936:459, pl. 62: figs. 7, 16. [Texas, U.S.A.] (Comanchean.)
G. zitteli Clark *telostocensis* Maldonado-Koerdell, 1953:38–39, pl. 2: figs. 38–40. [Mexico.] (Aptian.)

Subgenus *Tetragoniopygus* Fell and Pawson

PALEOCENE-CRETACEOUS

G. (Tetragoniopygus) Fell and Pawson in Durham et al., 1966:U412, fig. 306(4). [Europe, North America, Caribbean.] Type-species: *Goniopygus supremus* Hawkins.

Genus *Magnosia* Michelin

UPPER JURASSIC

M. cottreaui Lambert, 1931d:182, pl. 5: figs. 41–42. [Egypt.]

MIDDLE JURASSIC

- M. jacobii* Mercier, 1932:207–208, pl. 7: fig. 8. [France.] (Middle Bathonian.)
M. mortenseni Lambert, 1936c:20, pl. 1: figs. 33–34. [Madagascar, off East Africa.] (Callovian.)
M. termieri Lambert, 1931c:19–20, pl. 1: figs. 17–18. [North Africa.] (Vesulian, Middle Bathonian.)

Order TEMNOPLEUROIDA Mortensen

Family GLYPHOCYPHIDAE Duncan

Genus *Ambipleurus* Lambert

UPPER EOCENE

Ambipleurus Lambert, 1931d:198. Type-species:

Dictyopleurus douvillei Lambert. [Europe, Egypt, West Pakistan.] (Priabonian.)

LOWER EOCENE

A. rotundatus Kier, 1957b:847, figs. 1e–g, pl. 103: fig. 9. [British Somaliland, East Africa.] (Upper Auradu Series.)

Genus *Medocephalus* Jeannet

UPPER EOCENE

- Medocephalus* Jeannet, 1935b:559–560; 1936:3. Type-species: *M. fabrei* Jeannet, 1935b:559–560; 1936:3, figs. 1–2, pl. 1: figs. 1–3, pl. 2: figs. 1–4. [France.] (Upper Lutetian.)
M. castexi Jeannet, 1936a:7–9, figs. 6–10, pl. 1: figs. 8–10. [France.] (Upper Lutetian.)
M. daguini Jeannet, 1936a:5–7, figs. 3–5, pl. 1: figs. 4–7, pl. 2: figs. 10–12. [France.] (Upper Lutetian.)

Genus *Arachniopleurus* Duncan and Sladen

MIDDLE EOCENE

A. istriani Innocenti, 1924:43–44, pl. 2: figs. 7–10. [Istria (Peninsula), Yugoslavia.]

Genus *Dictyopleurus* Duncan and Sladen

UPPER EOCENE

- D. duncani* Lambert, 1931d:198. [India.]
D. douvillei Lambert, 1931d:197–198, pl. 5: figs. 1–4. [Egypt.] (Priabonian.)

Genus *Echinopsis* L. Agassiz

LOWER EOCENE

- E. firiyi* Lambert in Lambert and Jacquet, 1936: 346–348, pl. 21: figs. 6–8. [Senegal, West Africa.]
E. jacqueti Lambert in Lambert and Jacquet, 1936: 348, pl. 21: fig. 9. [Senegal, West Africa.]

Genus *Hebertia* Michelin

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U416) consider *Hebertia* a subjective synonym of *Echinopsis* L. Agassiz.

UPPER OLIGOCENE

H. jacksoni Lambert in Sánchez Roig, 1949:39-40, pl. 2: figs. 9-10. [Cuba.]

MIDDLE EOCENE

H. simplex Hawkins, 1924:317-318, pl. 18: figs. 4-5. [Jamaica, West Indies.]

UPPER CRETACEOUS

H. calvachei Sánchez Roig, 1949:40, pl. 3: figs. 1-2. [Cuba.]

H. pentagona Sánchez Roig, 1949:40-41, pl. 4: figs. 1-2. [Cuba. Erroneously referred elsewhere in text (page 40 and plate explanation) to "Pseudorthosis".]

Genus *Hemidiadema* L. Agassiz

MIDDLE JURASSIC

H. mortenseni Maccagno, 1947b:116-118, pl. 1: figs. 6, 6a-b. [Somaliland, East Africa.] (Callovian-Oxfordian.)

Genus *Radiocyphus* Cotteau

EOCENE

R. hungaricus Thirring, 1936:58-59, pl. 2: fig. 15. [Hungary.]

Family TEMNOPLEURIDAE A. Agassiz

Genus *Temnopleurus* L. Agassiz

RECENT

T. australis H. L. Clark, 1928:458-461, fig. 138. [South Australia.]

T. hardwickii (Gray) var. *impressus* Mortensen, 1942:226. [Gulf of Tschili, China.]

T. michaelsoni (Döderlein) var. *viridis* H. L. Clark, 1938:382. [Western Australia.]

MIOCENE/PLIOCENE

T. iranicus Douglas, 1928:11-12, pl. 12: fig. 11. [Persia (Iran).] (Upper Fars Fm.)

MIOCENE

T. latidunensis Clegg, 1933:18-19, pl. 2: figs. 5a-c. [Persian Gulf.]

T. persica Clegg, 1933:21-23, fig. 2, pl. 2: figs. 7a-d. [Persia (Iran).]

T. sundaicus Jeannet in Lambert and Jeannet, 1935:19-22, figs. 4-6, pl. 1: figs. 29-34, pl. 3: figs. 3-10. [Java, Indonesia.]

Genus *Prymnechinus* Koehler

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U418) consider *Prymnechinus* a subjective synonym of *Temnopleurus* L. Agassiz.

RECENT

Prymnechinus Koehler, 1927:109. Type-species: *P. proctalis* Koehler, 1927:110-112, pl. 17: figs. 11-12, 14. [Andaman Islands, Bay of Bengal, Indian Ocean.]

Genus *Coptopleura* Ikeda

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U418) consider *Coptopleura* a subjective synonym of *Temnopleurus* (*Toreumatica*) Gray.

RECENT

Coptopleura Ikeda, 1940:93. Type-species: *C. sema* Ikeda, 1940:93-96, pl. 6: figs. 1-5. [Malaysia, Southeast Asia.]

Genus *Amblypneustes* L. Agassiz

RECENT

A. pallidus (Lamarck) var. *subglobosus* Mortensen, 1942:227. [Southwest Australia.]

UPPER OLIGOCENE

A. corrali Lambert and Roig in Sánchez Roig, 1949:46, pl. 2: fig. 13. [Cuba.]

Genus *Arbacina* Pomel

OLIGOCENE

A. blancheti Lambert in Castex, 1930:17–18, pl. 1, figs. 2–4. [France.]

Genus *Asaphechinus* Philip

MIOCENE

Asaphechinus Philip, 1969:240–242. Type-species: *A. murrayensis* Philip, 1969:242–243, figs. 2a–c, 2e–g, pl. 5: figs. 1–4, 6, 7, pl. 12: fig. 5. [South-east Australia.] (Lonfordian.)

PLIOCENE/MIOCENE

A. singletoni Philip, 1969:244–247, figs. 3a, 3b, 3d, 3f, 3h, 3i, pl. 6: figs. 1–4, 8–12, pl. 12: figs. 3, 4, 7, pl. 13: fig. 4. [Southeast Australia.] (Cheltenhamian.)

MIOCENE

A. princeps Philip, 1969:243–244, figs. 3c, 3e, 3g, pl. 5: figs. 8–10, pl. 12: fig. 5, pl. 14: figs. 1–3. [Southeastern Australia.] (Lonfordian.)

OLIGOCENE

A. tasmanensis Philip, 1969:247–248, figs. 8g–i, pl. 6: figs. 5–7, pl. 15: fig. 2. [Southeast Australia.] (Janjukian.)

Genus *Asterechinus* Mortensen

RECENT

Asterechinus Mortensen, 1942:228. Type-species. *A. elegans* Mortensen, 1942:228. [Malaysia, off Admiralty Island, West Pacific Ocean.]

Genus *Brochopleurus* Fourtau

MIOCENE/LOWER PLIOCENE

B. pulcherrimus Nisiyama, 1966:237–238, pl. 5: figs. 12–15, pl. 6: figs. 4–5. [Japan.] (Komayama Fm.)

UPPER OLIGOCENE/LOWER MIOCENE

B. australiae Fell, 1949:17–19, pl. 1. [Australia.] (Janjukian.)

Genus *Cryptechinus* Philip

MIDDLE MIOCENE

Cryptechinus Philip, 1969:236–237. Type-species: *Psammechinus* (?) *humilior* Bittner.

Genus *Javanechinus* Jeannet

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U418) consider *Javanechinus* a synonym of *Desmechinus* H. L. Clark.

MIOCENE

Javanechinus Jeannet in Lambert and Jeannet, 1935:49–50. Type-species: *J. rembangensis* Jeannet in Lambert and Jeannet, 1935:50–51, figs. 65a, 66–68, pl. 2: figs. 35–37, pl. 4: figs. 17–18. [Java, Indonesia.]

J. erbi Jeannet in Lambert and Jeannet, 1935:51–53, figs. 65b, 69–72, pl. 2: figs. 38–40, pl. 4: figs. 19–20. [Java, Indonesia.]

Genus *Erbechinus* Jeannet

PLIOCENE

Erbechinus Jeannet in Lambert and Jeannet, 1935:16. Type-species: *E. erbi* Jeannet in Lambert and Jeannet, 1935:16–18, figs. 1–2, pl. 1: figs. 23–28, pl. 33: figs. 1–2. [Java, Indonesia.]

MIOCENE

E. gratus Nisiyama, 1966:234–235, fig. 19, pl. 5: figs. 5–8. [Japan.] (Shirahama Fm.)

Genus *Genocidaris* A. Agassiz

RECENT

- G. incerta* H. L. Clark, 1928:457-458, fig. 137.
[South Australia.]
G. splendens Mortensen, 1927c:28-29, figs. 3-9, pl. 2: figs. 3-4. [Canary Islands, off Northwest African coast.]

Genus *Grammechinus* Duncan and Sladen

MIOCENE/OLIGOCENE

- G. meridionalis* Philip, 1969:249-250, fig. 2h, pl. 4: figs. 10-13, pl. 14: figs. 5-6. [Southeast Australia.] [Janjukian-Batesfordian.]

Genus *Graphepleurus* H. L. Clark

MIOCENE

- Graphepleurus* H. L. Clark, 1945:315. Type-species: *G. granularis* H. L. Clark, 1945:315-317, pl. 41: figs. F-G. [Fiji, South Pacific Ocean.]

Genus *Irenechinus* Fell

LOWER MIOCENE

- Irenechinus* Fell, 1963a:211. Type-species: *I. hentyi* Fell, 1963a:211-213, pl. 1 (pt.). [Victoria, Australia.]

Genus *Lamprechinus* Döderlein

RECENT

- L. sculptus* Mortensen, 1942:229. [Japan.]
L. sculptus Mortensen var. *hawaiiensis* Mortensen, 1942:229. [Polynesian Seas, Hawaii.]

Genus *Martinechinus* Jeannel

PLEISTOCENE-PLIOCENE

- Martinechinus* Jeannel in Jeannel and Martin, 1937:232. Type-species: *M. molengraaffi* Jeannel

in Jeannel and Martin, 1937:233-234, figs. 9a-e. [Timor, South Malay Archipelago.]

Genus *Mespilia* Desor

RECENT

- M. globulus* (Linné) var. *albida* H. L. Clark, 1925a: 93-94. [Locality unknown.]

Genus *Microcyphus* L. Agassiz

RECENT

- M. ceylanicus* Mortensen, 1942:227. [Ceylon and Andaman Islands, Bay of Bengal, Indo-Pacific Ocean.]
M. excentricus Mortensen, 1940a:46-47; 1943a:161-163, fig. 86, pl. 17: figs. 22-24. [Malaysia.]
M. keiensis Mortensen, 1942:227. [Kei Islands, Malaysia.]
M. maculatus L. Agassiz var. *godeffroyi* Mortensen, 1942:226. [Tonga, Society Islands?, Polynesian Seas.]
M. pulchellus H. L. Clark, 1928:462-463, fig. 139. [South Australia.]
M. rousseaui L. Agassiz var. *purpuratus* Mortensen, 1942:227. [Zanzibar, East Africa.]

MIOCENE

- M. javanus* Jeannel in Lambert and Jeannel, 1935: 45-47, figs. 56-59, pl. 2: figs. 19-23. [Java, Indonesia.]
M. javanus Jeannel var. *inornata* Jeannel in Lambert and Jeannel, 1935:47, fig. 60, pl. 2: figs. 24-26. [Java, Indonesia.]
M. melo Jeannel in Lambert and Jeannel, 1935: 47-49, figs. 61-64, pl. 2: figs. 27-29, 32-34. [Java, Indonesia.]

Genus *Opechinus* Desor

RECENT

- O. albus* Mortensen, 1942:228. [Kei Islands, Malaysia.]
O. albus Mortensen var. *virescens* Mortensen, 1942: 228. [Off Jolo Island, Malaysia.]

MIOCENE

- O. cheribonensis* Jeannet in Lambert and Jeannet, 1935:25-27, figs. 7-9, pl. 1: figs. 37-43, pl. 3: figs. 11-13. [Java, Indonesia.]
- O. collignoni* Jeannet in Lambert and Jeannet, 1935:27-29, figs. 10-13, pl. 1: figs. 53-54. [Java, Indonesia.]
- O. madurae* Jeannet in Jeannet and Martin, 1937: 228-230, figs. 7-8d. [Dutch East Indies, West Pacific Ocean.] (Jung.)

Genus *Pseudopechinus* Lambert and Thiéry

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U423) consider *Pseudopechinus* an objective synonym of *Opechinus* Desor.

TERTIARY

- Opechinus (Pseudopechinus) lamberti* Jeannet in Lambert and Jeannet, 1935:31-34, figs. 19-26, pl. 1: figs. 47-52, pl. 3: fig. 16, pl. 4: figs. 1-2. [Java, Indonesia.] (Probably Pliocene.)
- O. (P.) lorioli* Jeannet in Lambert and Jeannet, 1935:29-31, figs. 14-18, pl. 1: figs. 45-46, pl. 3: figs. 14-15. [Java, Indonesia.] (Probably Pliocene.)

MIOCENE

- O. (P.) percutus* Desor var. *oligoporus* Martin in Jeannet and Martin, 1937:232. [Dutch East Indies, West Pacific Ocean.] (Jung.)

Genus *Ortholophus* Duncan

In the *Treatise* Fell and Pawson (Durham et al., 1966:U424) consider *Ortholophus* a subjective synonym of *Paradoxechinus* Laube.

MIDDLE MIOCENE

- O. morganensis* Philip, 1969:255-257, figs. 6a-b, 6h, pl. 7: figs. 1-13. [Southeast Australia.] (Morgan Ls., Batesfordian or Balcombian.)
- O. venustus* Philip, 1969:259-260, figs. 6d, 6f, 6g, pl. 9: figs. 1-7, 9, 11-14. [Southeast Australia.] (Batesfordian/Longfordian.)

UPPER EOCENE

- O. bittneri* Philip, 1969:253-255, figs. 6c, 6e, 6i-j, pl. 11: figs. 13-21, pl. 13: figs. 2-3, 5-7. [South-east Australia. New name for *O.* (orig. *Coptechinus*) *lineatus* (Bittner, 1892) not *O. lineatus* Duncan, 1877).] (Tortachilla Ls.)

Genus *Paratrema* Koehler

RECENT

- Paratrema* Koehler, 1927:90-91. Type-species: *Pleurechinus doederleini* Mortensen. [Andaman Islands, Bay of Bengal, Indo-Pacific Ocean.]

Genus *Printechinus* Koehler

RECENT

- Printechinus* Koehler, 1927:97-98. Type-species: *P. impressus* Koehler, 1927:98-103, pl. 15: figs. 3-11, pl. 27: fig. 2. [Indian Ocean.]
- P. viridis* Mortensen, 1942:228. [Malaysia, East of Sumatra.]

PLIOCENE

- P. javanus* Lambert and Jeannet, 1935:23-24, pl. 1: figs. 35-36, pl. 4: figs. 9-10. [Java, Indonesia.] (Couches de Tremboel.)

Genus *Prionechinus* A. Agassiz

MIDDLE MIOCENE

- P. salomacensis* Lambert, 1928b:88, figs. 5-6. [France.] (Helvetian.)

LOWER MIOCENE

- P. duvergieri* Lambert, 1928b:86-87, figs. 3-4. [France.] (Langhian/Burdigalian.)

Genus *Pseudechinus* Mortensen

RECENT

- P. hesperus* H. L. Clark, 1938:395-397, fig. 35, pl. 27: fig. 1. [Western Australia.]

RECENT/PLEISTOCENE

P. flemingi Fell, 1958:36, pl. 3: figs. A, B, pl. 5: fig. a. [South and East New Zealand.]

Genus *Notechinus* Döderlein

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U425) consider *Notechinus* a subjective synonym of *Pseudechinus*.

RECENT

N. marionis Mortensen, 1936a:221–223, fig. 1, pl. 2: figs. 5–10, pl. 9: figs. 1–4. [Southern Ocean, off Marion Island.]

Pseudechinus (*Notechinus*) *sanctipauli* Dollfus, 1946:160–178, figs. 1–16, pls. 3–4. [Southern Ocean.]

Genus *Pseudodicoptella* Jeannet

PLIOCENE

Dicoptella (*Pseudodicoptella*) Jeannet in Lambert and Jeannet, 1935:44. Type-species: *D. (P.) reicheli* Jeannet in Lambert and Jeannet, 1935:44–45, figs. 54–55, pl. 1: fig. 22, pl. 4: figs. 11–13. [Dutch East Indies.]

Genus *Salmaciella* Mortensen

RECENT

Salmaciella Mortensen, 1942:226. Type-species: *Salmacis dussumieri* L. Agassiz. [Western-Indo-Pacific.]

Genus *Salmacis* L. Agassiz

RECENT

S. belli Döderlein var. *unicolor* Mortensen, 1942:226. [Coast of Queensland, Australia.]

S. roseoviridis Koehler, 1927:84–88, pl. 12: figs. 3–6, pl. 26: fig. 3. [Indian Ocean.]

S. rubricincta H. L. Clark, 1925a:86–87, pl. 5: figs. 3–4. [Saya de Malha, Indian Ocean.]

S. sphaeroides (Linnaeus) var. *variegata* Mortensen, 1942:226. [Malaysia, off Jolo; Amboina Islands.]

PLIOCENE

S. nuda Currie, 1930:174, pl. 16: fig. 3. [Mombasa Island, East Africa.]

Genus *Tatechinus* Philip

UPPER EOCENE

Tatechinus Philip, 1969:268–269. Type-species: *T. nudus* Philip, 1969:269–271, figs. 8a–f, 8i, pl. 4: figs. 7–9, 14–15, pl. 14: fig. 7, pl. 15: fig. 4. [South-eastern Australia.] (Tortachilla Ls.)

Genus *Temnotrema* A. Agassiz

RECENT

T. notium H. L. Clark, 1938:387–388, pl. 26: fig. 5. [Western Australia.]

T. pallescens H. L. Clark, 1925a:90–91, pl. 7: figs. 5–6. [Billiton Island, Indonesia, in Java Sea.]

T. phoenissa H. L. Clark, 1926:188–191, fig. 1. [Great Barrier Reef, Australia.]

T. siamense (Mortensen) var. *megaloplax* Mortensen, 1942:227. [Indo-Pacific, off Misol, Indonesia.]

T. siamense (Mortensen) var. *rubicundum* Mortensen, 1942:227. [Mauritius, east of Madagascar, in Indian Ocean.]

Genus *Dicoptella* Lambert

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U425) consider *Dicoptella* a synonym of *Temnotrema* A. Agassiz.

MIOCENE

D. agassizi Lambert and Thiéry var. *elevata* Jeannet in Lambert and Jeannet, 1935:38, figs. 37–39, pl. 2: fig. 6, pl. 4: fig. 7. [Java, Indonesia.]

D. agassizi Lambert and Thiéry var. *tenuis* Jeannet in Lambert and Jeannet, 1935:37–38, figs. 30–36, pl. 2: figs. 1–3, pl. 4: fig. 5. [Java, Indonesia.]

D. javana Jeannet in Lambert and Jeannet, 1935:40–41, figs. 45–47, pl. 2: figs. 16–18. [Java, Indonesia.]

D. leupoldi Jeannet in Lambert and Jeannet, 1935:38, fig. 40, pl. 2: figs. 7–9, pl. 4: fig. 8. [Java, Indonesia.]

D. tobleri Jeannet in Lambert and Jeannet, 1935: 39-40, figs. 41-44, pl. 2: figs. 10-15, pl. 4: figs. 6, 14. [Java, Indonesia.]

UPPER MIOCENE

D. promensis Currie, 1939:221-226, figs. 1-5, pl. 14: figs. 6a-c. [Burma, Southeast Asia.] (Pegu Stage.)

PALEOCENE

D. desioi Airaghi, 1934:65, pl. 5: fig. 2. [Libya, North Africa.]

Subgenus *Dicoptella* (*Paradicoptella*) Jeannet

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U425) consider *Paradicoptella* Jeannet a synonym of *Temnotrema* A. Agassiz.

MIOCENE

Dicoptella (*Paradicoptella*) Jeannet in Lambert and Jeannet, 1935:42. Type-species: *D. (P.) rutteni* Jeannet in Lambert and Jeannet, 1935: 42-44, figs. 51-53, pl. 4: fig. 16. [Java, Indonesia.]

Genus *Trigonocidaris* A. Agassiz

RECENT

T. indica Mortensen, 1942:229. [Madagascar, Indian Ocean.]

T. micropora Mortensen, 1942:229. [Malaysia.]

T. radiata Mortensen, 1942:228. [Kei Islands, Malaysia.]

T. versicolor Koehler, 1927:94-97, pl. 14: figs. 3-4, 6-10, 13, pl. 27: fig. 1. [Indian Ocean.]

Genus *Triplacidia* Bittner

LOWER OLIGOCENE/UPPER EOCENE

T. fraasi Loriol var. *boncevi* Gočev, 1928:40, 48, fig. 2. [Bulgaria.]

EOCENE

T. hungarica Vogl, 1921:128. [Hungary.]

MIDDLE EOCENE

T. trakyensis Pinar, 1951:37-38, figs. 1-2, 4, 7, 9, pl. 1b: figs. 2-3. [Turkey.] (Auversian. Lutetian.)

Genus *Zeugopleurus* Gregory

UPPER CRETACEOUS

Echinocyphus (*Zeugopleurus*) *glanoviensis* Kongiel, 1939:24-25, pl. 2: fig. 29, pl. 3: figs. 1-3. [Poland.] (Lower Turonian.)

Family TOXOPNEUSTIDAE Troschel

Genus *Cyrtechinus* Mortensen

RECENT

Cyrtechinus Mortensen, 1942:229. Type-species: *Psammechinus verruculatus* Lütken. [Tropical Western-Indo Pacific.]

Genus *Gymnechinus* Mortensen

RECENT

G. abnormalis H. L. Clark, 1925a:128-129, pl. 7: figs. 3-4. [Carcajos Carodos?]

G. pallidus Koehler, 1927:113-118, pl. 17: figs. 5, 13, 15, pl. 18: figs. 1-6, pl. 19: figs. 2-3, pl. 27: fig. 4. [Ceylon.]

Genus *Lytechinus* A. Agassiz

RECENT

L. thieryi Koehler, 1927:104-108, pl. 18: figs. 7-8, pl. 19, fig. 4, pl. 27: fig. 6. [Ceylon.]

L. variegatus (Leske) var. *pallida* H. L. Clark, 1925a:121. [Cape Verde Islands, Atlantic Ocean.]

L. williamsi Cheshier, 1968b:3-5, figs. 1-2, 3a, 3c-i, 4-5, table 1. [Buena Ventura, Panama (Atlantic).]

UPPER MIOCENE/?PLEISTOCENE

L. variegatus (Leske) *plurituberculatus* Kier, 1963: 15-19, figs. 8-11, pl. 2: figs. 1-2, pl. 3: fig. 1, pl. 4: fig. 4. [Florida, U.S.A.] (Caloosahatchee and Tamiami Fm.)

PLIOCENE

- L. crassus* H. L. Clark, 1945:317-318, pl. 41: figs. H-I. [Fiji, South Pacific Ocean.]
L. okinawa Cooke, 1954:46, pl. 9: figs. 3-5. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)

LOWER MIOCENE

- L. coreyi* Grant and Hertlein, 1938b:24, pl. 20: fig. 7. [California, U.S.A.] (Vasqueros.)
L. (?) milleri Grant and Hertlein, 1938b: 24-25, pl. 15: figs. 1-2. [California, U.S.A.] (Vaqueros.)

Genus *Mirechinus* Nisiyama

UPPER EOCENE

- Mirechinus* Nisiyama, 1966:239-240. Type-species: *M. mirabilis* Nisiyama, 1966:240-242, pl. 6: fig. 3, pl. 7: figs. 2,4. [Bonin Islands, Japan, West Pacific Ocean.] (Lutetian.)

Genus *Nudechinus* Clark

RECENT

- N. ambonensis* Mortensen, 1942:230. [Molucca Sea, Malaysia.]
N. ambonensis Mortensen var. *purpurascens* Mortensen, 1942:230. [Amboina, Malaysia.]
N. rubripunctatus H. L. Clark, 1925a:127-128, pl. 7: figs. 1-2. [Amirante Islands, Indian Ocean.]
N. scotiopremnus H. L. Clark var. *australiensis* Mortensen, 1942:230. [Western Australia.]

Genus *Pseudocentrotus* Mortensen

MIOCENE

- P. stenoporus* Nisiyama, 1966:247-249, pl. 7: figs. 3-7. [Japan.] (Shirahama Fm.)

Genus *Schizechinus* Pomel

PLIOCENE

- S. candeli* Lambert, 1931c:44-45, pl. 7: figs. 2-4. [North Africa.]

Genus *Scoliechinus* Arnold and Clark

EOCENE

- Scoliechinus* Arnold and H. L. Clark, 1927:23. Type-species: *S. axiologus* Arnold and H. L. Clark, 1927:23-24, pl. 2: figs. 7-8. [Jamaica, West Indies.]

Genus *Sphaerechinus* Desor

LOWER MIOCENE

- Sphaerechinus* [sic] *burdigalensis* Lambert, 1928b:90, fig. 2. [France.] (Upper Aquitanian.)

Genus *Tripneustes* L. Agassiz

MIDDLE MIOCENE

- T. tobleri* Jeannet, 1928a:17-19, fig. 2, pl. 2: figs. 1-3, pl. 6: figs. 4-6; 1928b:220. [Venezuela.] (Couches d'Ojo de Aqua.)
T. ventricosus (Lamarck) *austriacus* Tauber, 1951: 312-313, figs. 1-4. [Austria.] (Tortonian.)

LOWER MIOCENE

- T. magnificus* Nisiyama, 1966:243-245, pl. 6: figs. 2, 7, 9, pl. 7: fig. 1. [Mariana Island, West Pacific Ocean.] (Laulau Fm.)

Family Uncertain

Genus *Gagaria* Duncan

UPPER OLIGOCENE

- Thylechinus* (*Gagaria*) *chickasawhay* Cooke, 1941a: 14, pl. 2: figs. 17a-d. [U.S.A.]
T. (G.) mossomi Cooke, 1941a:13-14, pl. 1: figs. 6-9, pl. 2: fig. 16, pl. 3: figs. 6-9, pl. 4: figs. 3-5. [U.S.A.]

MIDDLE EOCENE

- G. foutatoroensis* Roman in Élouard and Roman, 1966:840-843, fig. 2, pl. 19. [Senegal, West Africa.] (Lower Lutetian.)

LOWER EOCENE

T. (G.) salis Cooke, 1941a:13, pl. 2: figs. 12-14.
[U.S.A.]

Order ECHINOIDA Claus

Family ECHINIDAE Gray

Genus *Echinus* Linné

RECENT

E. atlanticus Mortensen var. *helenae* Mortensen, 1942:230. [St. Helena Island, west coast of Africa, tropical Atlantic Ocean.]

E. multidentatus H. L. Clark, 1925a:115-116, pl. 6: figs. 1-2. [Challenger Sta. 170, near the Kermadec Islands, Pacific Ocean.]

E. stenoporus Mortensen, 1942:230. [South Africa.]

Genus *Dermechinus* Mortensen

RECENT

Dermechinus Mortensen, 1942:231. Type-species: *Echinus horridus* A. Agassiz. [Indo-Pacific.]

Genus *Gracilechinus* Fell and Pawson

RECENT/PLIOCENE

Gracilechinus Fell and Pawson in Durham et al., 1966:U431, fig. 322(1a). [England; Atlantic-Mediterranean-IndoPacific.] Type-species: *Echinus gracilis* A. Agassiz.

Genus *Paracentrotus* Mortensen

RECENT

P. grandis H. L. Clark, 1923:388, pl. 22: figs. 1-3. [South Africa.]

Genus *Polyechinus* Mortensen

RECENT

Polyechinus Mortensen, 1942:231. Type-species: *Paracentrotus agulhensis* Döderlein. [South Africa.]

Genus *Psammechinus* L. Agassiz and Desor

PLIOCENE

P. punicus Lambert, 1931c:103, pl. 4: figs. 10-12. [Tunis, North Africa.]

MIOCENE

P. dainellii Desio, 1929:299-301, pl. 39: figs. 2a-d. [Oasis of Giarabùb, east Cyrenaica, Libya.]

MIDDLE MIOCENE

P. newillei Lambert, 1928b:88. [France. Also described and figured in Lambert, 1928e:8, pl. 5: figs. 15-18. (Helvetian.)]

PALEOCENE

P. desioi Airaghi, 1934:64-65, pl. 5: fig. 1. [Libya, North Africa.]

OLIGOCENE

P. arnei Castex, 1947:30-31, pl. 1: fig. 5. [France.] (Lattorfian-Sannoisian.)

UPPER OLIGOCENE

P. floralanus Cooke, 1941a:15-16, pl. 3: figs. 10-11. [U.S.A.]

UPPER EOCENE

P.? *ocalanus* Cooke, 1941a:16, pl. 2, figs. 9-11. [U.S.A.]

MEDIAL EOCENE

P. santee Cooke, 1941a:15, pl. 2: figs. 7-8. [U.S.A.] (McBean Fm.)

LOWER CRETACEOUS

P. demolyi Lambert in Démoly, 1928:146, fig. [France.]

P. simplex Lambert, 1931c:66, pl. 3: figs. 6-7. [Algiers, North Africa.] (Aptian.)

Genus *Sterechinus* Koehler

RECENT

- S. dentifer* Koehler, 1926:34–36, pl. 104: figs. 1–4, pl. 120: fig. 1. [Antarctic.]
S. neumayeri (Meissner) var. *nigroalba* Mortensen, 1942:231. [Antarctic.]

Genus *Stirechinus* Desor

MIOCENE

- S. minor* Cotteau var. *couffoni* Cotteau, 1933: 542–543, pl. 26: figs. 5–6a. [France.]

Family ECHINOMETRIDAE Gray**Genus *Echinometra* Gray**

MIOCENE

- E. hondoana* Nisiyama, 1966:270–271, pl. 10: fig. 1. [Japan.] (Kozai Fm.)

Genus *Ellipsechinus* Lütken

CRETACEOUS

- Ellipsechinus palmeri* Lambert in Sánchez Roig, 1949:46–47, pl. 2: figs. 5–6. [Cuba. Although Sánchez Roig thinks it is possibly Pleistocene, Brodermann (1949:322) maintains it is Cretaceous.]

Genus *Echinostrephus* A. Agassiz

RECENT

- E. formosus* Mortensen, 1940a:50; 1943b:306, pl. 35: figs. 11–14. [Malaysia.]

MIOCENE

- E. saipanicum* Cooke, 1957:362, pl. 119: figs. 4–6. [Mariana Islands, West Pacific Ocean.]

Genus *Evechinus* Verrill

PLIOCENE/MIOCENE

- E. palatus* Philip, 1969:234–235, pl. 16: figs. 1–6. [Southeast Australia.] (Cheltenhamian.)

Genus *Heliocidaris* L. Agassiz and Desor

RECENT

- H. erythrogramma* (Valenciennes) var. *parvispina* H. L. Clark, 1938:404. [Southwest Australia.]

MIOCENE

- H. ludbrookae* Philip, 1965:192–194, fig. 4c, pl. 27: figs. 1–4, pl. 28: figs. 1–2. [Southeast Australia.]

Genus *Zenocentrotus* A. H. Clark

RECENT

- Zenocentrotus* A. H. Clark, 1932:5–7. Type-species: *Z. kellersi* A. H. Clark, 1932:7–10, pls. 1–3, pl. 4: fig. 1, pl. 5: fig. 1, pl. 6: fig. 3. [Niuafou Island (between Samoa and Fiji), South Pacific Ocean.]
Z. paradoxus A. H. Clark, 1932:10, pl. 5: fig. 2, pl. 6: figs. 1–2, pl. 7: figs. 1–2. [Niuafou Island, South Pacific Ocean.]

MIOCENE

- Z. peregrinus* Philip, 1965:194–195, fig. 4b, pl. 28: figs. 3–6, pl. 29: figs. 6, 9. [Southeast Australia.]

Family STRONGYLOCENTROTIDAE Gregory**Genus *Strongylocentrotus* Brandt**

RECENT

- S. djakonovi* Baranova, 1957:223–225, figs. 14a–i. [Bering Sea.]
S. intermedius Agassiz f. *longispina* Djakonov, 1938: 474–475, 497. [Japan Sea.]
S. polyacanthus Agassiz and Clark *apicimagis* Baranova, 1957:221–223, figs. 13a–e. [Bering Sea.]

PLIOCENE

S. magistrus Nisiyama, 1966:255-256, pl. 8: figs. 1-3. [Japan.] (Himi Fm.)

LOWER PLIOCENE/MIOCENE

S.? *octoporus* Nisiyama, 1966:256-258, pl. 8: figs. 7-8. [Japan.]

MIOCENE

S. antiquus Philip, 1965:189-191, figs. 3a-b, 4a, 4d, pl. 29: figs. 1-3. [Southeast Australia.]

S. minihagali Deraniyagala, 1961:154, pl. 5: fig. 10. [Ceylon, Indian Ocean.]

Genus *Allocentrotus* Mortensen

RECENT

Allocentrotus Mortensen, 1942:232. Type-species: *Strongylocentrotus fragilis* Jackson. [Vancouver, Canada, to Lower California, U.S.A.]

LOWER PLIOCENE

A. japonicus Nisiyama, 1966:258-260, pl. 8: figs. 4, 10-14, pl. 9: figs. 1-2, 4-6. [Japan.] (Kurotaki Fm.)

Genus *Hemicentrotus* Mortensen

RECENT

Hemicentrotus Mortensen, 1942:231. Type-species: *Sphaerechinus pulcherrimus* A. Agassiz. [Japan-North China.]

Family PARASALENIIDAE Mortensen

Genus *Parasalenia* A. Agassiz

RECENT

P. gratiosa A. Agassiz var. *boninensis* Mortensen, 1930:388, pl. 1: figs. 2-5. [North Pacific Ocean.]

MIOCENE

P. marianae Cooke, 1957:361-362, pl. 119: figs. 1-3. [Mariana Islands, West Pacific Ocean.]

Genus *Diplosalenia* Mortensen

EOCENE

Diplosalenia Mortensen, 1942:232. Type-species: *Parasalenia gosseleti* Cotteau. [France.]

Superorder Uncertain (ECHINACEA or DIADEMATA) or

Order ORTHOPSIDA Mortensen

Family ORTHOPSIDAE Duncan

Genus *Orthopsis* Cotteau

UPPER CRETACEOUS

O. casanovai Cooke, 1955:92-93, pl. 20: figs. 1-3. [Texas, U.S.A.] (Campanian.)

O. sanfilippoi Checchia-Rispoli, 1933b:6-11, figs. 2-4, pl. 1: figs. 5-15. [North Africa.] (Maestrichtian.)

LOWER CRETACEOUS

O. aguilerai Maldonado-Koerdell, 1953:28-29, pl. 1: figs. 25-27. [Mexico.] (Aptian.)

O. bahiaensis Brito, 1964:6-7, pl. 1: figs. 2-3, pl. 2: figs. 1-2. [Brazil.] (Albian.)

O. comalensis Whitney and Kellum, 1966:250-253, pl. 1: figs. 13-15. [Texas, U.S.A.] (Trinity Group. Aptian.)

O. royo Lambert, 1935f:523, pl. 58: figs. 3-5. [Spain.] (Aptian.)

O. titicacana Cooke, 1949b:84-85, pl. 22: figs. 1-5. [Peru.] (Aptian/Albian?)

UPPER JURASSIC

O. pomeraniae Kongiel, 1957:30-32, 53-55, 70-72, pl. 5: figs. 5-6. [Pomerania, on the Baltic Sea.] (Upper Kimmeridgian.)

Genus *Dubarechinus* Lambert

- Dubarechinus* Lambert, 1937:62–63. Type-species:
D. despujolsi Lambert, 1937:63, pl. 4: figs. 14–17.
 [Morocco.] (Upper Domerian.)
D. termieri Lambert, 1937:63–64, pl. 4: fig. 18.
 [Morocco.] (Upper Domerian.)

Doubtful Genera of Regular Echinoids**Genus *Besairiecidaris* Lambert****MIDDLE JURASSIC**

- Besairiecidaris* Lambert, 1936b:117–118. Type-species: *B. ankarensis* Lambert, 1936b:118, pl. 6: figs. 11–12. [Madagascar, off East Africa.] (Bajocian.)

Genus *Bramus* de Gregorio**PERMIAN**

- Cidaris* (*Bramus*) de Gregorio, 1930a:34. Type-species: *C. (B.) simplex* de Gregorio, 1930a: 34, pl. 12: figs. 13–14. [Italy.]
C. (B.) pirillus de Gregorio, 1930a:34, pl. 12: figs. 15–17. [Italy.]

Genus *Crinocidaris* de Gregorio**TRIASSIC**

- Cidaris* (*Crinocidaris*) de Gregorio, 1930b:29. Type-species: *Crinocidaris unicus* de Gregorio, 1930b: 29, pl. 6: figs. 29–31. [Italy. Fell and Pawson (Durham et al., 1966:U439) place it under "doubtful genera of regular echinoids."]

Genus *Firmacidaris* Lambert**LOWER JURASSIC**

- Firmacidaris* Lambert, 1937:45–46. Type-species: *Spherotiaris precincta* Lambert. [Morocco.] (Domerian.)

UPPER JURASSIC

- F. neumayri* Nisiyama, 1966:168, pl. 30: figs. 1–2. [Japan.] (Probably Callovian to Tithonian.)

Genus *Protocidaris* de Gregorio**PERMIAN**

- Cidaris* (*Protocidaris*) de Gregorio, 1930a:34. Type-species: *C. (P.) bencontestus* de Gregorio, 1930a: 34, pl. 12: figs. 20–21. [Italy.]

Genus *Radiolus* (auctt.)**TRIASSIC**

- R. adametzi* Jekelius, 1932:49–50, pl. 2: figs. 50a–b, 51a–b. [Rumania.]
R. alutensis Jekelius, 1932:49, pl. 2: fig. 46. [Rumania.]
R. antipai Jekelius, 1932:50–51, pl. 2: fig. 48. [Rumania.]
R. boletus Bather, 1929:239–241, pl. 258: figs. 36a–38. [Timor Island, Indonesia.]
R. culter Bather, 1929:241–243, pl. 258: figs. 39a–41b. [Timor Island, Indonesia.]
R. festuca Bather, 1929:244–245, pl. 258: figs. 46–48b. [Timor Island, Indonesia.]
R. fusus Bather, 1929:245–246, pl. 258: fig. 49. [Timor Island, Indonesia.]
R. herbichi Jekelius, 1932:50, pl. 2: fig. 45. [Rumania.]
R. racadaui Jekelius, 1932:49, pl. 2: figs. 47a–c. [Rumania.]
R. rostratus Körner, 1937:163–164, pl. 11: figs. 1a–c. [Peru.]
R. segmentatus Bather, 1929:236–238, pl. 258: figs. 27–29b. [Timor Island, Indonesia.]

UPPER TRIASSIC

- R. funginus* Wanner, Knipscheer and Schenk, 1952:68–69, pl. 3: figs. 1–4. [Indonesia.]

Genus *Vernius* de Gregorio**PERMIAN**

- Cidaris* (*Vernius*) de Gregorio, 1930a:34. Type-species: *C. (V.) elaboratus* de Gregorio, 1930a:34, pl. 12: figs. 18–19. [Italy.]

Superorder GNATHOSTOMATA Zittel

Order HOLECTYPOIDA Duncan

Suborder HOLECTYPINA Duncan

Family HOLECTYPIDAE Lambert

Genus *Holectypus* Desor

CRETACEOUS

- H. bullardi* Ikins, 1940:73-74, pl. 6: figs. 2a-c. [Texas, U.S.A.]
H. hondoensis Cannon in Ikins, 1940:74, pl. 6: figs. 3a-c. [Texas, U.S.A.]

UPPER CRETACEOUS

- H. boschmai* Engel, 1964a:235-236, pl. 14. [Southern Netherlands.] (Senonian.)
H. decoratus Sánchez Roig, 1949:56, pl. 1: figs. 6-7. [Cuba.]
H. khamirensis Clegg, 1933:6-7, fig. 1, pl. 1: figs. 1a-c. [Persia (Iran).]
H. larteti Cotteau var. *major* Blanckenhorn, 1925 [1924]:91-92, pl. 7: figs. 12a-d. [Palestine, Israel.] (Cenomanian.)
H. montalvensis Sánchez Roig, 1953c: 138, pl. 1: figs. 2-3. [Cuba.]
H. parvus Jones, 1938:133, pl. 13: figs. 1, 9-10. [Mexico.] (Indidura Fm.)
H. subpentagonalis Blanckenhorn, 1925 [1924]: 92-93, pl. 7: fig. 13. [Palestine, Israel.] (Upper Cenomanian.)

LOWER CRETACEOUS

- H. adkinsi* Smiser, 1936:461, pl. 62: figs. 12-15. [Texas, U.S.A.] (Comanchean.)
H. almeidae Rey, 1966:295-300, figs. 1-2, pl. 1: figs. 1-9. [Portugal.] (Hauterivian.)
H. engerrandi Lambert, 1927a:269. [Texas, U.S.A.] (Comanche Series.)
H. ovatus Whitney and Kellum, 1966:259-260, pl. 2: figs. 10-12. [Texas, U.S.A.] (Trinity Group. Aptian.)

MIDDLE JURASSIC

- H. leuthardti* Lambert, 1926b:118-122, pl. 10: figs. 1-2. [Switzerland.]

LOWER JURASSIC

- H. hians* Lambert, 1933b:55-56, pl. 1: fig. 10. [North Africa.] (Lower Domerian.)

Genus *Coenholectypus* Pomel

UPPER CRETACEOUS

- Holectypus* (*Caenholectypus*?) *macrostomus* Engel, 1964a:236-239, figs. 1-2. [Southern Netherlands.] (Senonian.)

LOWER CRETACEOUS

- H. (C.) nanus* Cooke, 1955:96, pl. 27: figs. 13-19. [Texas, U.S.A.] (Upper Albian.)
H. (Coenholectypus) peridoneus Nisiyama, 1950b: 32-33, pl. 4: figs. 5-7. [Japan.] (Aptian/Albian.)
H. (C.) planatus Roemer *aponensis* Cooke, 1961:6, pl. 2: figs. 4-5. [Venezuela.] (Middle Albian to Vraconian.)

Family ANORTHOPYGIDAE Wagner and Durham

Genus *Anorthopygus* Cotteau

UPPER CRETACEOUS

- A. paradoxus* Hawkins, 1935a:51-53, figs. 5-7, pl. 7: figs. 1a-c. [Somaliland, East Africa.] (Upper Senonian.)
A. riveroi Sánchez Roig, 1949:55-56, pl. 5: figs. 1-2. [Cuba.]

LOWER CRETACEOUS

- A. texanus* Cooke, 1946:219-220, pl. 34: figs. 9-12. [U.S.A.] (Washita Group.)

Family DISCOIDIDAE Lambert

Genus *Discoidea* Parkinson

UPPER CRETACEOUS

- D. dubertreti* Keller and Vautrin, 1937:148-150, fig. 47a, pl. 5: figs. 10-12. [Syria.] (Cenomanian.)
D. menchikoffi Lambert, 1937:76-77, pl. 1: figs. 19-22. [Morocco.] (Campanian.)
D. neglectus Lambert, 1931c:96, pl. 3: fig. 35. [Tunis, North Africa.] (Santonian.)
D. philocrania Lambert, 1933a:16, pl. 2: figs. 8-10. [Madagascar, off East Africa.] (Upper Senonian.)

LOWER CRETACEOUS

- D. rahbergensis* Jeannet, 1933b:370; 1933c:233, 1934d:4-5, pl. 1: figs. 10-18. [Austria.] (Hauterivian/Neocomian.)

Genus *Discoidea* Agassiz

UPPER CRETACEOUS

- D.?* *dendroides* Blanckenhorn, 1925 [1924]:93, pl. 7: fig. 14. [Palestine, Israel.] (Upper Cenomanian.)
D. minima Agassiz var. *inferior* Maczyńska, 1958: 97-98, 113-114, figs. 26a-b, 27, pl. 9: figs. 1-14. [Poland.] (Upper Turonian.)

LOWER CRETACEOUS

- D. karakaschi* Renngarten, 1926:91-93, 111-112, pl. 8: figs. 10-11, pl. 9: figs. 9-10. [Southern Russia.] (Upper Hauterivian to Lower Barremian.)

Genus *Camerogalerus* Quenstedt

UPPER CRETACEOUS

- C. bucaillei* Lambert and Jeannet, 1928b:138. [France.] (Cenomanian.)

Genus *Dixonia* Wagner and Durham

UPPER CRETACEOUS

- Dixonia* Wagner and Durham, 1964:170. Type-species: *Discoidea dixonii* Forbes in Dixon. [Europe.] (Aptian-Turonian.)

Genus *Lanieria* Duncan

UPPER CRETACEOUS

- L. uvaldana* Cooke, 1953:10, pl. 3: figs. 1-3. [Texas, U.S.A.] (Campanian.)

Suborder ECHINONEINA H. L. Clark

Family ECHINONEIDAE Agassiz and Desor

Genus *Echinoneus* Leske

RECENT

- E. abruptus* H. L. Clark, 1925a:177, pl. 10: figs. 1-3. [Zanzibar, East Africa.]

PLIOCENE

- E. burgeri* Grant and Hertlein, 1938b:104-105, pl. 22: figs. 1-3, 6, pl. 23: figs. 6-7. [California, U.S.A.]

OLIGOCENE

- E. sanchezi* Lambert, 1928c:21, figs. 1-2. [Cuba.]

UPPER OLIGOCENE

- E. robustus* Sánchez Roig, 1953c:140-141, pl. 3: figs. 1-2. [Cuba.]
E. rojasi Sánchez Roig, 1952c:5-6, pl. 3: figs. 4-5. [Cuba.]
E. tenuipetalum Sánchez Roig, 1952c:5, pl. 1: fig. 5. [Cuba.]

Genus *Duperieria* Roman

MIDDLE EOCENE

- Duperieria* Roman, 1968a (Abstract):103; 1968b: 120. [Biarritz (Basses-Pyrénées), southwest France.] (Lutetian.)

Genus *Paleoechinoneus* Grant and Hertlein

UPPER CRETACEOUS

- Paleoechinoneus* Grant and Hertlein, 1938b:105. Type-species: *P. hannai* Grant and Hertlein, 1938b:105-106, pl. 23: figs. 4-5. [Mexico.]

Family CONULIDAE Lambert

Genus *Conulus* Leske

CRETACEOUS

- C. mullerriedi* Lambert, 1935c:368, fig. 1. [Mexico.]
C. praenuntius Carter 1928:58. [Lincolnshire, England.] (Upper to middle Chalk, T.g. zone.)

UPPER CRETACEOUS

- C. campaniformis* Melikov and Endel'man, 1963:136-138, figs. 1-2. [North Caucasus, U.S.S.R.] (Lower Maestrichtian.)
C. castaneus (Brongniart) var. *plana* Popiel-Barczyk, 1958:61-62, 77-78, fig. 13, pl. 4: fig. 7, pl. 5: figs. 5-12. [Poland.] (Lower Turonian.)
C. castaneus (Brongniart) var. *rhotomagensis* Agassiz in Popiel-Barczyk, 1958: 59-61, 77, fig. 12, pl. 4: figs. 9-10, pl. 5: figs. 1-4. [Poland.] (Lower Turonian.)
C. chiapasensis Lambert, 1936e:3-4, pl. 1: figs. 5-6. [Mexico.] (Senonian (Campanian).)
C. chiesai Airaghi, 1939:256-257, pl. 11: figs. 1-2. [North Africa.] (Maestrichtian.)
C. cubensis Sánchez Roig, 1949:58-59. [Cuba.]
C. ellipticus (Zareczny) var. *rostrata* Popiel-Barczyk, 1958:58, 77, pl. 4: figs. 1-4. [Poland.] (Lower Turonian.)
C. matesovi Moskvina, 1959:251, pl. 3: figs. 2a-c. [Caucasus, U.S.S.R.]
C. parravanoii Checchia-Rispoli, 1932c:383-386, pl. 1: figs. 1a-b, pl. 2: fig. 4. [North Africa.] (Maestrichtian.)
C. rhotomagensis Agassiz var. *elevatus* Chiriac, 1957:66-68, pl. 2: figs. 2a-c, 3a-c. [Cuza Voda, Pester, Roumania.] (Turonian.)
C. sanfilippoi Checchia-Rispoli, 1930a:79-82, pl. 8: figs. 1-6. [Tripolitania, North Africa.] (Maestrichtian.)
C. stephensoni Cooke, 1953:11, pl. 3: figs. 8-13. [Texas, U.S.A.] (Santonian.)
C. subtrotundus (Mantell) var. *conoidea* Popiel-Barczyk, 1958:53-55, 76, fig. 8, pl. 2: figs. 5-8. [Poland.] (Lower Turonian.)
C. subtrotundus (Mantell) var. *subglobosa* Popiel-Barczyk, 1958:52-53, 75, fig. 7, pl. 2: figs. 1-4. [Poland.] (Lower Turonian.)

- C. tradis* Lees, 1928:659-661, fig. 12, pl. 46: figs. 1a-b. [Arabia.] (Senonian (Campanian).)
C. zinai Airaghi, 1939:256, pl. 10: fig. 9. [North Africa.] (Maestrichtian.)

LOWER CRETACEOUS

- C. grauensensis* Currie, 1943:23-25, figs. 4-7, pl. 3: figs. 1-6. [Ethiopia, Northeast Africa.] (Aptian.)

Genus *Pyrina* Desmoulin

CRETACEOUS

- P. barthouxi* Lambert, 1931d:192-193, pl. 5: fig. 45. [Egypt.] (Vraconian.)

UPPER CRETACEOUS

- P. arabica* Clegg, 1933:8, pl. 1: figs. 2a-c. [Arabia.]
P. avilensis Sánchez Roig, 1949:60-61, pl. 42: figs. 9-10. [Cuba.]
P. mexicana Lambert, 1936e:4-5, pl. 1: fig. 1. [Mexico.] (Upper Senonian.)
P. mortenseni Checchia-Rispoli, 1932c:389-391, pl. 2: figs. 1-3, pl. 3: figs. 1-2c. [North Africa.] (Maestrichtian.)
P. ovalis d'Orbigny *plana* Maczyńska, 1962:163-166, 181, figs. 9-12, pl. 5: figs. 1-28. [Poland.] (Cenomanian.)
P. parahybensis Maury, 1930:116-119, pl. 5: fig. 1. [Brazil.] (Campanian.)

LOWER CRETACEOUS

- P. hancockensis* Whitney and Kellum, 1966:260-261, pl. 2: figs. 1-3. [Texas, U.S.A.] (Trinity Group.) (Aptian.)
P. whitneyae Ikins, 1940:74-75, pl. 6: figs. 4a-c. [Texas, U.S.A. Cooke (1946:221) placed this species in *Globator*.] (Comanchean.)

Genus *Galeraster* Cotteau

MIDDLE EOCENE

- G. terkosensis* Pinar, 1951:38-40, figs. 3, 5-6, pl. 1b: fig. 1. [Turkey.] (Lutetian.)

Genus *Globator* Agassiz

PALEOCENE

G. ravni Nielsen, 1926:13-15, 22-23, figs. 6-7.
[Denmark.] (Danian.)

UPPER CRETACEOUS

G. dainellii Checchia-Rispoli, 1932c:391, pl. 1: figs. 2-2b, pl. 2: figs. 5-5c. [North Africa.] (Maestrichtian.)

G. depsangensis Stefanini, 1928:175-176, pl. 20: figs. 9a-d. [Karakorum, Mongolia.] (Senonian.)

G. vaughani Cooke, 1953:12, pl. 4: figs. 1-4. [Texas, U.S.A.] (Campanian.)

Genus *Pseudopyrina* Lambert

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U445) consider *Pseudopyrina* Lambert a subjective synonym of *Globator* Agassiz.

PALEOCENE

P. subcircularis Ravn, 1927:321-322, fig. 2, pl. 1: figs. 5a-c, 6a-c. [Denmark.] (Danian.)

P. subovalis Ravn, 1927:319-321, fig. 1, pl. 1: figs. 4a-d. [Denmark.] (Danian.)

UPPER CRETACEOUS

P. darderi Lambert, 1935b:362, pl. 41: figs. 5-6. [Spain.] (Upper Campanian.)

P. hourcqi Lambert, 1936c:24, pl. 2: figs. 11-12. [Madagascar, off East Africa.] (Upper Campanian.)

P. minuta Smiser, 1935b:42-43, pl. 4: figs. 3a-e. [Belgium.] (Maestrichtian.)

LOWER CRETACEOUS

P. orchoterenai Lambert, 1935d:370, pl. 16: figs. 15-17. [Mexico.] (Barremian.)

Genus *Pygopyrina* Pomel

UPPER CRETACEOUS

P. pusilla Stefanini, 1928:173-175, pl. 20: figs. 8a-e. [Karakorum, Mongolia.] (Cenomanian.)

Family GALERITIDAE Gray**Genus *Echinoconus* d'Orbigny**

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U47) consider *Echinoconus* a synonym of *Galerites* Lamarck.

UPPER CRETACEOUS

E. djiddensis Charles in Lambert and Charles, 1937:378-379, pl. 8: figs. 1-3. [Asia Minor.]

Family Uncertain**Genus *Chuniaster* Jeannet**

LOWER CRETACEOUS

Chuniaster Jeannet, 1933b:370; 1933c:233; 1934d:6.
Type-species: *C. rhenanus* Jeannet, 1933b:370; 1933c:233; 1934d:6, fig. 2, pl. 1: figs. 3-6. [Austria.] (Hauterivian.)

Suborder CONOCLYPINA Haeckel**Family CONOCLYPIDAE Zittel****Genus *Conoclypus* Agassiz**

MIDDLE MIOCENE

C. westraliensis Crespin, 1944:75-76, pl. 1: figs. 1-3. [Australia.]

EOCENE

C. boncevi Gočev, 1933:46-47, pl. 3: figs. 6a-b. [Bulgaria. Gočev referred to *Conoclypeus* Gray (nom. nud.).]

C. dallonii Lambert, 1933d:189-190, fig. 2. [Spain.]

MIDDLE EOCENE

C. besairiei Lambert, 1936a:207, pl. 24: figs. 10-11. [Madagascar, off East Africa. Lambert referred it to *Conoclypeus* Gray (nom. nud.).] (Lutetian.)

LOWER EOCENE

- C. gotshevi* Sapundzhieva, 1964:30, 58–59, pl. 14: figs. 2a–c. [Bulgaria.] (Ypresian.)
- C. lamberti* Villatte, 1966b:869–870, fig. 3, pl. 34: figs. 1, 4. [Spain.] (Ypresian.)
- C. pilgrimi* Davies, 1926:359–363, pl. 25: figs. 1–6, pl. 26: figs. 1–2. [India. Davies referred it to *Conoclypeus* Gray (nom. nud.).] (Laki Series.)
- C. pinfoldi* Gill, 1953:843–844, pl. 91: figs. 1–3. [Pakistan. Gill referred it to *Conoclypeus* Gray (nom. nud.).]
- C. warthi* Davies, 1926:363–367, pl. 26: figs. 3–6. [India. Davies referred it to *Conoclypeus* Gray (nom. nud.).] (Laki Series.)

CRETACEOUS

- C. sanctispiritensis* Sánchez Roig, 1949:63, pl. 21: figs. 5–6. [Cuba. Roig referred it to *Conoclypeus* Gray (nom. nud.).]

Family OLIGOPYGIDAE Duncan

Genus *Oligopygus* de Loriol

EOCENE

- O. alvarezii* Lambert and Roig in Sánchez Roig, 1926:82, pl. 11: figs. 3–5. [Cuba.]
- O. curasavica* Molengraaff, 1929:77–83, pl. 27: figs. 1–5, pl. 28: figs. 1–5. [Curaçao, Dutch West Indies.]
- O. hypselus* Arnold and H. L. Clark, 1927:28–29, pl. 4: figs. 6–8. [Jamaica.]
- O. jamaicensis* Arnold and H. L. Clark, 1927:28–29, pl. 4: figs. 9–11. [Jamaica.]
- O. ovumserpentis* (Guppy) var. *baldryi* Brighton, 1926b:360–366, figs. 1a–g, pl. 26: figs. e–h. [Peru.] (Atascadero Ls.)
- O. tuberculatus* Sánchez Roig, 1951:56–57, pl. 34: figs. 4–5. [Cuba.]

UPPER EOCENE

- O. camagueyensis* Sánchez Roig, 1949:162–163. [Cuba. Brodermann (1949:325) says it is Middle-Upper Eocene.]
- O. christi* Jeannet, 1928a:10–11, pl. 1: figs. 16–19,

- pl. 6: fig. 2; 1928b: 220–221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)
- O. circularis* Sánchez Roig, 1949:159–160, pl. 29: figs. 2–3. [Cuba. Brodermann (1949:325) says it is Middle-Upper Eocene.]
- O. collignoni* Lambert, 1931e:291, pl. 17: figs. 5–7. [Cuba. Although Sánchez Roig says it is Lower Oligocene, Brodermann (1949:325) places it in the Middle and Upper Eocene.]
- O. colsoni* Lambert, 1931e:290–291, pl. 17: figs. 1–4. [Florida, U.S.A.]
- O. costuliformis* Jeannet, 1928a:9–10, pl. 1: figs. 13–15; 1928b: 220–221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)
- O. cubensis* Lambert, 1931e:292. [Cuba. Although Sánchez Roig says it is Lower Oligocene, Brodermann (1949:325) places it in the Middle and Upper Eocene.]
- O. elongatus* Palmer in Sánchez Roig, 1949:166–167, pl. 30: figs. 4–5. [Cuba. Brodermann (1949:325) says it is Middle to Upper Eocene.]
- O. floridanus* Twitchell var. *laevis* Palmer in Sánchez Roig, 1949:166. [Cuba. Brodermann (1949:325) says it is Middle to Upper Eocene.]
- O. herreraii* Sánchez Roig, 1953c: 154–155, pl. 6: figs. 6–7, 9. [Cuba.]
- O. kugleri* Jeannet, 1928a:6–7, pl. 1: figs. 1–7, pl. 6: fig. 1; 1928b:220–221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)
- O. mullerriedi* Sánchez Roig, 1949:160–162, pl. 30: figs. 2–3. [Cuba. Brodermann (1949:325) says it is Middle to Upper Eocene.]
- O. nancei* Cooke, 1941b:305–306, figs. 1–3. [Venezuela.] (Upper Santa Anita.)
- O. pinguis* Palmer in Sánchez Roig, 1949:165, pl. 28: figs. 2–3. [Cuba. Brodermann (1949:325) says it is Middle to Upper Eocene.]
- O. putnamii* Israelsky, 1933a:275–276, pl. 18: figs. 1–4. [Mexico.]
- O. rotundus* Cooke, 1942:9, pl. 2: figs. 1–3. [U.S.A.]
- O. sanchezi* Lambert, 1931e:292, pl. 17: fig. 8. [Cuba. Although Sánchez Roig says it is Lower Oligocene, Brodermann (1949:325) places it in the Middle and Upper Eocene.]
- O. sanjosephi* Sánchez Roig, 1953c:155–156, pl. 7: figs. 1–2. [Cuba.]
- O. zyndeli* Jeannet, 1928a:7–8, pl. 1: figs. 8–9; 1928b:220–221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)

Genus *Bonaireaster* Pijpers

UPPER EOCENE

Bonaireaster Pijpers, 1933:84–86. Type-species: *B. rutteni* Pijpers, 1933:84–86, pl. 1: figs. 1–6. [Dutch West Indies, Netherland Antilles, off Venezuelan coast.]

Genus *Haimea* Michelin

UPPER EOCENE

- H. camagueyana* Sánchez Roig, 1949:122–123, pl. 50: figs. 6–7. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]
- H. globulosa* Sánchez Roig, 1949:124. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]
- H. hernandezii* Sánchez Roig, 1952c:11, pl. 6: fig. 5. [Cuba.]
- H. pusilla* Sánchez Roig, 1949:123. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]
- H. truncata* Sánchez Roig, 1949:124–125, pl. 50: figs. 8–9. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]

MIDDLE EOCENE

- H. cylindrica* Sánchez Roig, 1953c:141, pl. 3: figs. 6–7. [Cuba.]
- H. gigantea* Sánchez Roig, 1953c:143, pl. 3: fig. 11. [Cuba.]
- H. pentagona* Sánchez Roig, 1953c:142–143, pl. 3: figs. 8–9. [Cuba.]
- H. subcylindrica* Sánchez Roig, 1953c:141–142, pl. 3: figs. 4–5. [Cuba.]

Genus *Pauropygus* Arnold and Clark

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U448) consider *Pauropygus* a synonym of *Haimea* Michelin.

EOCENE

Pauropygus Arnold and H. L. Clark, 1927:30–32. Type-species: *Echinolampas ovumserpentis* Guppy. [Jamaica.]

PALEOGENE

P. clarki Lambert, 1931e:294, pl. 17: figs. 10–12. [Cuba.]

EOCENE

- P. altus* Arnold and H. L. Clark, 1927:33, pl. 4: figs. 15–17. [Jamaica.]
- P. convexus* Arnold and H. L. Clark, 1927:33–34, pl. 4: figs. 18–20. [Jamaica.]
- P. cylindricus* Arnold and H. L. Clark, 1927:34–35, pl. 4: figs. 12–14. [Jamaica.]
- P. elevatus* Arnold and H. L. Clark, 1927:35, pl. 5: figs. 1–3. [Jamaica.]
- P. latus* Arnold and H. L. Clark, 1927:35–36, pl. 5: figs. 4–6. [Jamaica.]
- P. meunieri* Lambert var. *inflata* Lambert in Lambert and Jacquet, 1936:351, pl. 23: figs. 9–10. [Senegal, West Africa.]
- P. meunieri* Lambert var. *latipetala* Lambert in Lambert and Jacquet, 1936:351, pl. 23: fig. 11. [Senegal, West Africa.]
- P. meunieri* Lambert var. *sulcata* Lambert in Lambert and Jacquet, 1936:351, pl. 23: fig. 12. [Senegal, West Africa.]
- P. parvipetalus* Arnold and H. L. Clark, 1927:38–39, pl. 5: figs. 13–15. [Jamaica.]
- P. platypetalus* Arnold and H. L. Clark, 1927:39, pl. 5: figs. 16–18. [Jamaica.]
- P. pyramidoides* Arnold and H. L. Clark, 1927:39–40, pl. 5: figs. 19–21. [Jamaica.]
- P. rotundus* Arnold and H. L. Clark, 1927:40–41, pl. 6: figs. 1–3. [Jamaica.]
- P. rugosus* Arnold and H. L. Clark, 1927:41, pl. 6: figs. 4–6. [Jamaica.]
- P. stenopetalus* Arnold and H. L. Clark, 1927:41–42, pl. 6: figs. 7–9. [Jamaica.]

UPPER EOCENE

P. stefaninii Lambert, 1931e:293–294, fig. 1, pl. 17: fig. 9. [Île Saint-Barthélemy, West Indies.]

Suborder Uncertain

Family Uncertain

Genus *Amblypygus* L. Agassiz

OLIGOCENE

A. checchiai Socin, 1942:52-53. [Somaliland, East Africa.]

UPPER EOCENE

A. douvillei Lambert in Sánchez Roig, 1949: 126-127, pl. 36: fig. 4. [Cuba.]

MIDDLE EOCENE

A. depressus Sánchez Roig, 1953c:144-145, pl. 3: fig. 10. [Cuba.]

Genus *Echinogalerus* König

UPPER CRETACEOUS

E. bohotnicensis Kongiel, 1950:316-317, 323-324, pl. 2: figs. 1-4. [Poland.] (Upper Maestrichtian.)

Genus *Rhopostoma* Cooke

PALEOCENE

Rhopostoma Cooke, 1959:26. Type-species: *Anachytes cruciferus* Morton. [New Jersey, U.S.A.]

Order CLYPEASTEROIDA A. Agassiz

Suborder CLYPEASTERINA A. Agassiz

Family CLYPEASTERIDAE L. Agassiz

Genus *Clypeaster* Lamarck

RECENT

C. chesheri Serafy, 1970:663-674, figs. 1, 2c, 2d, 3-7. [Caribbean-Gulf of Mexico.]
C. cyclopilus H. L. Clark, 1941:118-120, pl. 10: fig. 1. [Cuba.]

C. elongatus H. L. Clark, 1948:308-309, pl. 48: fig. 30, pl. 49: fig. 31, pl. 50: fig. 33. [Galápagos Islands, Eastern Pacific Ocean.]

C. euclastus H. L. Clark, 1941:120-121, pl. 10: fig. 2. [Cuba.]

C. eurychorius H. L. Clark, 1925c:10-11, pl. 3. [Off Natal Coast, South Africa.]

C. euryptetalus H. L. Clark, 1925d:99, pl. 11: figs. a-c. [Pacific Ocean.]

C. micropetalus H. L. Clark, 1925b:317-318, pl. 33. [Angola, southwest Africa.]

C. miniaceus H. L. Clark, 1925a:150-151, pl. 9: fig. 5. [Macclesfield Bank, Indian Ocean.]

C. oliveirai Krau, 1952:703-705, fig. 1, pls. 1-7. [Tropical Atlantic.]

C. oshimensis Ikeda, 1935a:103-104, pl. 7: figs. 1-5. [Japan.]

C. subdepressus (Gray) *lobulatus* Bernasconi, 1956: 35-36, fig. 2. [Brazil.]

PLEISTOCENE

C. canimarensis Palmer in Sánchez Roig, 1949:78. [Cuba.]

C. japonicus Döderlein *alta* Hayasaka and Morishita, P., 1947:44-45, pl. 2: figs. 2a-b. [China.] (Riukiu Ls.)

C. japonicus Döderlein *plana* Hayasaka and Morishita, P., 1947:44, pl. 4: figs. 3a-b. [Hsiaokangshan, Kaohsiungshien, Taiwan, China.] (Riukiu Ls.)

TERTIARY

C. eurychorus Arnold and H. L. Clark, 1934:141, pl. 1: figs. 1-2. [Jamaica.]

LOWER TERTIARY

C. chiapasensis Mullerried, 1951:211-216, figs. 1-3. [Mexico.]

PLIOCENE

C. blumenthali Lambert and Jeannet, 1928a:219. [Malaysia.]

C. brevipetalus Martin in Jeannet and Martin, 1937:246-247, fig. 29. [Java, Indonesia.]

- C. malumbangensis* Israelsky, 1933b:301–302, pl. 1: fig. 1. [Philippine Islands, South Pacific Ocean.]
C. mombasanus Currie, 1938:85–86, pl. 8: figs. 9a–c. [Kenya, east Africa.]
C. okinawa Cooke, 1954:47, pl. 11: figs. 1–2. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)

UPPER PLIOCENE

- C. marquerensis* Durham, 1950:41, pl. 43: figs. 2–3. [California, U.S.A.]

MIDDLE PLIOCENE

- C. revellei* Durham, 1950:41, pl. 43: figs. 1, 7. [California, U.S.A.]

MIOCENE

- C. abruptus* Sánchez Roig, 1926:49–50, pl. 8: fig. 2, pl. 9: fig. 1. [Cuba.]
C. aciculatus Checchia-Rispoli, 1925:31–33, fig. 10, pl. 11: fig. 5. [Southern Italy.]
C. aegyptiacus (Wright) Michelin var. *syrticus* Desio, 1934:197–198, fig. 11, pl. 19: fig. 1, pl. 20: fig. 1. [Libya.]
C. aichinoi Checchia-Rispoli, 1925:30–31, fig. 9, pl. 8: figs. 2, 2a–b, pl. 14: fig. 3. [Southern Italy.]
C. annandalei Koehler *caviventer* Deraniyagala, 1961:154, pl. 5: figs. 5–6. [Ceylon.]
C. borgesii Lambert, 1934:247–248, pl. 5: fig. 1. [Angola, southwest Africa.]
C. cermenatii Checchia-Rispoli, 1925:29–30, fig. 8, pl. 5: fig. 1, pl. 14: figs. 1, 1a–d. [Southern Italy.]
C. cerullii Checchia-Rispoli, 1925:40–42, fig. 15, pl. 1: fig. 3, pl. 5: figs. 3, 3a–c. [Southern Italy.]
C. cipollae Checchia-Rispoli, 1925:53–54, fig. 20, pl. 1: figs. 4, 4a, pl. 11: figs. 1, 1a–b, 2–4. [Southern Italy.]
C. concavus Cotteau *puertoricanus* Gordon, 1963: 635–636, fig. 2a, pl. 81: figs. 5–6. [Puerto Rico, West Indies.] (Cibao marl.)
C. cortesei Checchia-Rispoli, 1925:49–50, pl. 1: figs. 2–2a, pl. 20: figs. 1–3. [Southern Italy.]
C. defiorei Checchia-Rispoli, 1940a:13–14, fig. 7, pl. 1: figs. 2–2a. [Italy.]
C. epianthus Meznerics, 1941:87–88, pl. 2: fig. 1, pl. 3: fig. 2. [Hungary.]

- C. franchii* Checchia-Rispoli, 1925:43–44, fig. 17, pl. 18: figs. 1, 1a–b. [Southern Italy.]
C. henjamensis Clegg, 1933:25–26, pl. 3: figs. 2a–c, 3a. [Persian Gulf.]
C. julii Roman, 1952:408, footnote 2. [Antigua Island, British West Indies. For *Anomalanthus gregoryi* Lambert, 1915, not *Clypeaster gregoryi* Lambert, 1913.]
C. kemencensis Meznerics, 1941:88, pl. 2: fig. 3, pl. 3: fig. 6. [Hungary.]
C. kugleri Jeannet, 1928b:220. [Venezuela.]
C. lamegoii Marchesini Santos, 1958:14–15, 20–21, pl. 3: figs. 1–3. [Brazil.]
C. libycus Desio, 1929:321–322, fig. 33, pl. 34: figs. 1a–b. [Oasis of Giarabùb, Libya.]
C. maulwarensis Clegg, 1933:23–24, pl. 3: figs. 1a–c. [Persian Gulf.]
C. minihagali Deraniyagala, 1956:4, pl. 3: figs. 1–2. [Ceylon, Indian Ocean.]
C. mutellensis de Loriol var. *italica* Checchia-Rispoli, 1940a:4–5, fig. 1, pl. 2: figs. 1–1a. [Italy.]
C. paulinoi Marchesini Santos, 1958:15–16, 21, pl. 4: figs. 1–6. [Brazil.]
C. portentosus Desmoulin var. *turriculata* Checchia-Rispoli, 1940a:9–11, fig. 5, pl. 1: fig. 1. [Italy.]
C. pulchellus Checchia-Rispoli, 1925:23–24, fig. 6, pl. 13: figs. 3, 3a–b. [Southern Italy.]
C. saipanicus Cooke, 1957:362, pl. 119: figs. 14–17. [Mariana Island, West Pacific Ocean.]
C. tyrrenicus Checchia-Rispoli, 1925:27–29, fig. 7, pl. 8: figs. 1, 1a–b, pl. 14: fig. 2, pl. 22: figs. 1–1a. [Southern Italy.]
C. zamboninii Checchia-Rispoli, 1925:39–40, fig. 14, pl. 3: figs. 3, 4, 4a, 5, pl. 4: figs. 3–4, pl. 23: figs. 4–4a. [Southern Italy.]

UPPER MIOCENE

- C. crassus* Kier, 1963:30–32, fig. 24, pl. 11: figs. 1–3, table 1. [Florida, U.S.A.] (Tamiami Fm.)
C. romani Kier, 1964a:610. [For *C. crassus* Kier, 1963, not L. Agassiz, 1840.]

MIDDLE MIOCENE

- C. cremai* Checchia-Rispoli, 1929b:26–29, fig. 1, pl. 2: figs. 1–6. [Cyrenaica, Libya.]
C. egregius Peron and Gauthier var. *dallonii* Lambert, 1938a:279–283, fig. 1. [North Africa.]

- C. garganicus* Checchia-Rispoli, 1938:46–48, pl. 2: figs. 1–3. [Monte Gargano, Italy.]
- C. insignis* Seguenza var. *distincta* Imbesi Smedile, 1958:42–43, pl. 21: fig. 5, pl. 22: figs. 2–2a. [Southern Italy.] (Tortonian?)
- C. insignis* Seguenza var. *robusta* Imbesi Smedile, 1958:24–25, pl. 8: figs. 2–2a. [Southern Italy.] (Helvetian.)
- C. kugleri* Jeannet, 1928a:19, pl. 2: figs. 4–6. [Venezuela.]
- C. millosevichi* Checchia-Rispoli, 1923:2–5, figs. 1–3, pl. 1: figs. 1, 1a–b. [Sardinia.]
- C. novaresei* Checchia-Rispoli, 1925:15–17, fig. 1, pl. 9: figs. 1, 1a–c, pl. 23: figs. 1–1a. [Southern Italy.] (Helvetian.)
- C. patae* Imbesi Smedile, 1958:27–28, pl. 8: figs. 3, 3a–b, pl. 9: figs. 1, 1a–b. [Southern Italy.] (Helvetian.)
- C. reidii* Wright var. *campanulata* Imbesi Smedile, 1958:39–40, pl. 16: fig. 3. [Southern Italy.] (Tortonian.)
- C. reidii* Wright var. *notha* Imbesi Smedile, 1958:31–32, pl. 11: figs. 2, 2a–b. [Southern Italy.] (Helvetian.)
- C. tariccoi* Checchia-Rispoli, 1923:5–7, fig. 4, pl. 1: figs. 2, 2a–b. [Sardinia.]
- C. tavanii* Imbesi Smedile, 1958:41–42, pl. 20: figs. 2, 2a–c, 3, 3a, pl. 22: figs. 1–1a. [Southern Italy.] (Tortonian.)
- C. trevisani* Imbesi Smedile, 1958:40–41, pl. 17: figs. 2, 2a–b, pl. 19: figs. 1, 1a–b. [Southern Italy.]
- C. tumescens* Imbesi Smedile, 1958:30–31, pl. 9: figs. 2, 2a–c, pl. 11: figs. 1, 1a–b. [Southern Italy.] (Helvetian.)

LOWER MIOCENE

- C. elevatus* Sánchez Roig, 1949:83–84, pl. 8: figs. 1–3, pl. 10: fig. 1. [Cuba.] (Güines Fm.)
- C. herrerae* Lambert in Sánchez Roig, 1926:49, pl. 8: fig. 1. [Cuba.]
- C. latirostris* Agassiz var. *prolata* Venzo, 1935:227, pl. 18: fig. 6. [Italy.] (Lower Aquitanian.)
- C. palmeri* Sánchez Roig, 1949:85. [Cuba. Although Sánchez Roig says it is Miocene, Brodermann (1949:319) places it in the Lower Miocene.]
- C. pinarensis* Lambert and Sánchez Roig, 1934:22–24, 2 figs. [Cuba. Although Lambert considers it Oligocene, Brodermann (1949:319) says it is Lower Miocene.]

- C. vasatensis* Lambert, 1928b:94–95; 1928e:15, pl. 6: figs. 1–2. [France.] (Langhian/Burdigalian.)

OLIGOCENE/MIOCENE

- C. dalpiazii* Socin, 1942:50–51. [Somaliland, East Africa.]
- C. moronensis* Sánchez Roig, 1951:41–42, pl. 23: fig. 1, pl. 24: fig. 1. [Cuba.]

OLIGOCENE

- C. brodermanni* Sánchez Roig, 1949:74–75, pl. 9: figs. 1–3. [Cuba. Brodermann (1949:319) says it is Upper Oligocene.]
- C. marinanus* Jackson, 1937:231, pl. 12: fig. 2, pl. 13: fig. 1. [Mexico.]
- C. ovatus* Palmer in Sánchez Roig, 1949:73–74. [Cuba. Brodermann (1949:319) says it is Upper Oligocene.]
- C. topilanus* Jackson, 1937:232, pl. 13: figs. 2–3. [Mexico.]

UPPER OLIGOCENE

- C. densus* Sánchez Roig, 1949:90–91, pl. 11: figs. 1–3. [Cuba.]
- C. guillermi* Sánchez Roig, 1952e:119–120, pl. 7: fig. 2. [Cuba.]
- C. guadalupense* Sánchez Roig, 1952e:121–122, pl. 6: fig. 2, pl. 10: fig. 2. [Cuba.]
- C. hernandezii* Sánchez Roig, 1949:94, pl. 50: figs. 1–2. [Cuba.]
- C. maribonensis* Sánchez Roig, 1949:77, pl. 9: figs. 6–7. [Cuba. Although Sánchez Roig says it is Pleistocene, Brodermann (1949:319) places it in the Upper Oligocene.]
- C. pileus* Israelsky, 1924:138, pl. 2: fig. 2, pl. 3: fig. 2. [Mexico.]
- C. planus* Sánchez Roig, 1949:93, pl. 9: figs. 4–5. [Cuba.]
- C. polygonalis* Sánchez Roig, 1949:84–85, pl. 7: figs. 1–2. [Cuba. Although Sánchez Roig says it is Lower Miocene, Brodermann (1949:320) says it is from the Upper Oligocene.]
- C. profundus* Sánchez Roig, 1949:91–92, pl. 6: figs. 1–3. [Cuba.]
- C. sanchezi* Lambert in Sánchez Roig, 1926:48–49, pl. 6: fig. 1, pl. 7: figs. 1–2. [Cuba.]

- C. sandovali* Sánchez Roig, 1949:89–90, pl. 13: figs. 1–2. [Cuba.]
C. sanrafaelensis Palmer in Sánchez Roig, 1949:75. [Cuba.]
C. tenuicoronae Palmer in Sánchez Roig, 1949:87, pl. 14: fig. 3. [Cuba. Although Sánchez Roig says it is Middle Oligocene, Brodermann (1949:320) considers it Upper Oligocene.]

LOWER OLIGOCENE

- C. lopezriosi* Sánchez Roig, 1953c:139, pl. 1: fig. 6. [Cuba.]

UPPER EOCENE

- C. calzadai* Via and Padreny, 1970:94–96, fig. 3b. [Can Vilet, Castelltersol, province of Barcelona, Spain.] (Biarritzian-Bartonian.)
C. moianensis Via and Padreny, 1970:90–93, fig. 1. [Moianés, province of Barcelona, Spain.] (Biarritzian-Bartonian.)

Genus *Anomalanthus* Bell

In the *Treatise*, Durham (Durham et al., 1966:U462) considers *Anomalanthus* a synonym of *Clypeaster* Lamarck.

OLIGOCENE

- A. elevatus* Sánchez Roig, 1952e:138–139, pl. 9: figs. 1–2. [Cuba.]
A. guadalupense Sánchez Roig, 1952e:136–137, pl. 7: fig. 1, pl. 15: fig. 2. [Cuba.]
A. rojasi Sánchez Roig, 1952e:138, pl. 14: figs. 1–2, pl. 16: fig. 1. [Cuba.]

UPPER OLIGOCENE

- A. gigas* Sánchez Roig, 1953a:54, pls. 1–2. [Cuba.]
A. oligocenicus Sánchez Roig, 1949:95, pl. 9: figs. 1–2. [Cuba.]
A. zanoletti Sánchez Roig, 1952e:137, pl. 12: figs. 1–2, pl. 13: fig. 1. [Cuba.]

Genus *Bunactus* Pomel

Durham (Durham et al., 1966:U462), in the *Treatise*, considers *Bunactus* an objective synonym of *Clypeaster*.

LOWER MIOCENE

- B. sanchezi* Lambert *altus* Sánchez Roig, 1952e:127, pl. 3. [Cuba.]
B. sanchezi Lambert *gigantea* Sánchez Roig, 1952e:127–128, pl. 2. [Cuba.]

OLIGOCENE

- B. aguayoi* Sánchez Roig, 1952e:126, pl. 1: fig. 1. [Cuba.]

UPPER OLIGOCENE

- B. santanae* Sánchez Roig, 1952e:126–127, pl. 1: fig. 2. [Cuba.]

Genus *Coronanthus* Lambert

In the *Treatise*, Durham (Durham et al., 1966:U463) considers *Coronanthus* a subjective synonym of *Clypeaster*.

RECENT

- Clypeaster* (*Coronanthus*) *pateriformis* Mortensen, 1948a:99. [Philippine Islands.]

OLIGOCENE

- C. (C.) artilesi* Sánchez Roig, 1952c:4–5, pl. 1: fig. 4. [Cuba.]
C. conceptionis Sánchez Roig, 1952e:128–129, pl. 8: figs. 1–2. [Cuba.]

Genus *Herrerasia* Sánchez Roig

Durham (Durham et al., 1966:U463) in the *Treatise* considers *Herrerasia* a subjective synonym of *Clypeaster*.

LOWER MIOCENE

- Herrerasia* Sánchez Roig, 1952e:135. Type-species: *Clypeaster profundus* Sánchez Roig. [Cuba.]

Genus *Hesperaster* H. L. Clark

RECENT

Hesperaster H. L. Clark, 1938:411. Type-species: *H. arachnoides* H. L. Clark, 1938:411-413, pl. 27: fig. 2. [Western Australia.]

QUATERNARY

H. crassus H. L. Clark, 1938:413-414, fig. 35A. [Western Australia.]

Genus *Orthanthus* Mortensen

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Orthanthus* a subjective synonym of *Clypeaster*.

RECENT

Clypeaster (Orthanthus) aloysioi Brito, 1959:1-4, fig. 1, pls. 1-2. [Brazil.]
C. (O.) durandi Cherbonnier, 1959b:370-372, figs. 8a-e, 9a-d. [French Guiana, South America.]

Genus *Paratinanthus* Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Paratinanthus* a subjective synonym of *Clypeaster*.

OLIGOCENE

P. lamberti Sánchez Roig, 1952e:132-133, pl. 16: fig. 2. [Cuba.]

Genus *Platyclypeina* Lambert and Thiéry

In the *Treatise* Durham (Durham et al., 1966: U463) considers *Platyclypeina* a synonym of *Clypeaster* Lamarck.

MIOCENE

Clypeaster (Platyclypeina) subcrustulum Desio, 1929:324-325, fig. 34, pl. 34: fig. 2. [Oasis of Giarabùb, Libya.]

Genus *Rhaphidoclypus* A. Agassiz

In the *Treatise*, Durham (Durham et al., 1966: U462) considers *Rhaphidoclypus* A. Agassiz a subjective synonym of *Clypeaster* Lamarck.

RECENT

Clypeaster (Rhaphidoclypus) fervens Koehler var. *hiradicus* Mortensen, 1948d:86-87, pl. 22: figs. 8, 10-11, pl. 65: fig. 12. [Japan.]
C. (R.) reticulatus (Linnaeus) var. *sundaicus* Mortensen, 1948d:77-78, pl. 17: figs. 3-10. [Indo-Pacific.]

OLIGOCENE

C. (R.) armadilloensis Sánchez Roig, 1953c:139-140, pl. 2: figs. 1-2. [Cuba.]

UPPER OLIGOCENE

R. costulatus Sánchez Roig, 1952e:130, pl. 13: fig. 2. [Cuba.]
R. rojasi Sánchez Roig, 1952e:130-131, pl. 5: fig. 2. [Cuba.]

Genus *Rojasaster* Sánchez Roig

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Rojasaster* a subjective synonym of *Clypeaster*.

UPPER OLIGOCENE

Rojasaster Sánchez Roig, 1952e:133-134. Type-species: *Clypeaster hernandezi* Sánchez Roig. [Cuba.]
R. camagueyanus Sánchez Roig, 1952e:134-135, pl. 4: figs. 1-2, pl. 6: fig. 1. [Cuba.]

Genus *Stolonoclypus* A. Agassiz

In the *Treatise*, Durham (Durham et al., 1966: U462) considers *Stolonoclypus* a subjective synonym of *Clypeaster* Lamarck.

RECENT

Clypeaster (Stolonoclypus) lutkeni Mortensen, 1948d:121-123, figs. 67-68, pl. 25: figs. 3-5, pl. 27:

fig. 3, pl. 68: figs. 21–22; 1948e:69. [West Indies.]
C. (S.) nummus Mortensen, 1948d:127, pl. 14: figs. 4–6, pl. 16: fig. 3, pl. 68: fig. 12; 1948e:69. [Tahiti, Society Islands, South Pacific Ocean.]

MIOCENE

- S. ichnusae* Checchia-Rispoli, 1928:12–17, fig. 3, pl. 2: fig. 4. [Sardinia.]
S. incertus Checchia-Rispoli, 1928:19–20, pl. 2: fig. 3. [Sardinia.]
S. pusillus Checchia-Rispoli, 1928:8–9, fig. 2, pl. 1: figs. 1–1a, pl. 3: fig. 6. [Sardinia.]

Genus *Tholeopelta* Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Tholeopelta* a subjective synonym of *Clypeaster*.

OLIGOCENE

T. herrerae Sánchez Roig, 1951:40–41. [Cuba.]

Genus *Zanolettia* Sánchez Roig

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Zanolettia* a subjective synonym of *Clypeaster* Lamarck.

OLIGOCENE

Zanolettia Sánchez Roig, 1951:39. Type-species: *Z. zanolettii* Sánchez Roig, 1951:40, pl. 23: figs. 2–3. [Cuba.]

UPPER OLIGOCENE

Z. gigantea Sánchez Roig, 1952c:3–4, pl. 12: figs. 1–2. [Cuba.]

Family ARACHNOIDIDAE Duncan

Subfamily ARACHNOIDINAE Duncan

Genus *Arachnoides* Leske

RECENT

A. tenuis H. L. Clark, 1938:415–417, pl. 27: figs. 3–4. [Western Australia.]

Genus *Fellaster* Durham

RECENT/PLIOCENE

Fellaster Durham, 1955:125–127, figs. 1f, 8i, 26f, 29b. Type-species: *Arachnoides zelandiae* Gray. [New Zealand.]

Subfamily AMMOTROPHINAE Durham

Ammotrophinae Durham, 1955:127. Type-genus: *Ammotrophus* H. L. Clark. [South Australia and Tasmania.]

Genus *Ammotrophus* H. L. Clark

RECENT

Ammotrophus H. L. Clark, 1928:471. Type-species: *A. cyclius* H. L. Clark, 1928:471–474, fig. 140. [South Australia.]
A. platyterus H. L. Clark, 1928:474–475, fig. 141. [South Australia.]

Genus *Scutellinoides* Durham

MIOCENE

Scutellinoides Durham, 1955: 128–129. Type-species: *Scutellina patella* Tate. [Australia.]

Suborder LAGANINA Mortensen

Genus *Pentedium* Kier

MIDDLE EOCENE

Pentedium Kier, 1967:989–990. Type-species: *P. curator* Kier, 1967: 990–993, figs. 1–3, pl. 129: figs. 3–4, pl. 130: figs. 2–7. [Georgia, U.S.A. Family is not known for this genus.]

Family FIBULARIIDAE Gray

Genus *Fibularia* Lamarck

Because of confusion concerning the type-species of this genus, some of these species probably belong to *Echinocyamus*.

RECENT

- F. craniolaris* H. L. Clark, 1928:477. [South Australia.]
F. plateia H. L. Clark, 1928:477-478, fig. 142. [South Australia.]

TERTIARY

- F. rhedeni* Lambert and Jeannet, 1928a:219. [Malaysia.]

UPPER TERTIARY

- F. scrobiculata* Lambert, 1931c:85, fig. 5, pl. 3: figs. 27-29. [Algiers, North Africa.]

MIOCENE

- F. dubarensis* Kier, 1957b:870-871, fig. 7c-e, pl. 104: figs. 9-11. [British Somaliland, East Africa.] (Dubar series.)
F. excavata H. L. Clark, 1945:320-321, pl. 42: figs. d-f. [Fiji, South Pacific Ocean.]
F. sandalina Szörényi, 1953:13, 60, pl. 5: figs. 6-6a. [Ukraine.]

MIDDLE MIOCENE

- F. sadeki* Lambert, 1931d:209, pl. 5: figs. 25-30. [Egypt.] (Helvetian.)
F. sulcata Lambert, 1928b:92, fig. 8. [France.] (Helvetian.)

LOWER MIOCENE

- F. junior* Lambert, 1928b:91-92, fig. 7. [France.] (Langhian/Burdigalian.)

OLIGOCENE

- F. africana* Checchia-Rispoli, 1929a:4-6, pl. 1: figs. 1-4. [Cyrenaica, Libya.]
F. cimex Lambert, 1938a:278-279, pl. 19: figs. 9-11. [Algeria, North Africa.]
F. cyrenaica Checchia-Rispoli, 1929a:6-8, pl. 1: figs. 5-8. [Cyrenaica, Libya.]

EOCENE

- F. abrardi* Lambert, 1924b:98, fig. 1. [France.]

UPPER EOCENE

- F. alabamensis* Cooke, 1959:31, pl. 9: figs. 20-22. [Alabama, U.S.A.] (Probably Moodys Branch Fm.)
F. minuta Palmer in Sánchez Roig, 1949:64-65. [Cuba.]

MIDDLE EOCENE

- F. barbadosensis* Kier, 1966b:4-7, figs. 1(pt.), 2(pt.), 3(pt.), 4, 5a, 6a(pt.), 8, 9, pl. 1: figs. 1-3. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)
F. farallonensis Cooke, 1961:16, pl. 4: figs. 1-6. [Trinidad, Caribbean Ocean.]

CENOZOIC/CAINOZOIC?

- F. jacksoni* Hawkins in Arnold and H. L. Clark, 1927:27-28, 76-77, pl. 4: figs. 3-5, pl. 22: figs. 1-3. [Jamaica, West Indies.]

Genus *Cyamidia* Lambert and Thiéry

EOCENE

- C. paucipora* Brunnschweiler, 1962:162-164, fig. 1. [Western Australia.] (Cuisian/Lutetian.)

Genus *Echinocyamus* van Phelsum

Because of confusion concerning the type-species of this genus, some of these species may belong to *Fibularia*.

RECENT

- E. apicatus* Mortensen, 1948d:195-196, figs. 98, 114, pl. 46: figs. 40-45; 1948e:71. [Australia.]
E. convergens Mortensen, 1948d:191-192, fig. 102b, pl. 46: figs. 56-58; 1948e:72. [Providence Island, West Indian Ocean.]
E. crenulatus H. L. Clark, 1925a:164-165, pl. 9: figs. 3-4. [Gambia, northwest Africa.]

- E. grandis* H. L. Clark, 1925a:165-166, pl. 9: figs. 6-8. [Gambia, northwest Africa and Seychelle Islands, Indian Ocean.]
- E. planissimus* H. L. Clark, 1938:422-423, pl. 27: figs. 5-8. [Western Australia.]
- E. terminalis* Grant and Hertlein, 1938b:48-49, figs. 5, 6a-b. [Mexico.]
- E. scaber* de Meijere var. *subconicus* Mortensen, 1948d:188, pl. 46: figs. 34-36; 1948e:71. [Malaysia, Kei Island.]

PLEISTOCENE

- E. prostratus* Nisiyama, 1968:50-52, figs. 31a-d. [Southern Japan, Ryukyu Island.]

MIOCENE

- E. chipolanus* Cooke, 1942:29-30, pl. 1: figs. 9-11. [U.S.A.] (Chipola Fm.)
- E. lipparinii* Airaghi, 1939:283-284, pl. 12: figs. 20-23. [North Africa.]
- E. parviporus* Kier, 1964b:1124-1125, figs. 331c-e, pl. 302: figs. 11-15. [Marshall Islands, West Pacific Ocean.]
- E. subpiriformis* Cottreau, 1933:544, pl. 27: figs. 3-3b. [France.]
- E. woodi* Currie, 1930:172, pl. 16: fig. 1. [East Africa.]

OLIGOCENE

- E. schoelleri* Castex, 1947:31. [France.]

UPPER OLIGOCENE

- E. avilensis* Lambert, 1931e:298-299, fig. 2. [Cuba. Although Sánchez Roig says it is Tertiary, Brodermann (1949:321) places it in Upper Oligocene of Cuba.]

EOCENE

- E. jacqueti* Lambert, 1936a:349-350, pl. 21: figs. 16-18. [Senegal, West Africa.]
- E. jeanneti* Lambert, 1931d:200, fig. 11, pl. 5: figs. 31-33. [Egypt.]
- E. rostratus* Lambert, 1929:193, figs. 1-2. [Madagascar, off east coast of Africa.]

UPPER EOCENE

- E. macneili* Cooke, 1959:32-33, pl. 9: figs. 6-8. [Alabama, U.S.A.] (Probably Moodys Branch Fm.)
- E. petalus* Kier, 1964b:1121-1124, fig. 330, pl. 302: figs. 1-7. [Marshall Islands, West Pacific Ocean.]

MIDDLE EOCENE

- E. bisexus* Kier, 1968b:12-21, figs. 11-23, pl. 3: figs. 1-6, pl. 4: figs. 1-2. [Georgia, U.S.A.]
- E. caribbeanensis* Kier, 1966b:7-8, figs. 10 (part), 11(part), 12a-d, pl. 1: figs. 4-5. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)
- E. basseae* Lambert, 1936c:30, pl. 3: fig. 26. [Madagascar, off East Africa.] (Lower Lutetian.)
- E. maropiensis* Lambert, 1936c:30, pl. 3: figs. 23-25. [Madagascar, off East Africa.] (Lower Lutetian.)

LOWER EOCENE

- E. cyphostomus* Lambert in Lambert and Jacquet, 1936:349, pl. 21: figs. 12-15. [Senegal, West Africa.]
- E. cyphostomus* Lambert var. *sulcata* Lambert in Lambert and Jacquet, 1936:349, pl. 21: fig. 15. [Senegal, West Africa.]
- E. planus* Lambert, 1933a:32-33, pl. 2: figs. 13-15. [Madagascar, off East Africa.]

UPPER CRETACEOUS

- E. kamrupensis* Das Gupta, 1929:26, pl. 2: fig. 3. [India.] (Upper Senonian.)

Genus *Eoscutum* Lambert

EOCENE

- Scutellina* (*Eoscutum*) *orientalis* Vialov and Manouilenko, 1939:151-153, 167-169, pl. 1: figs. 1, 2a-d, 3-4, 6. [U.S.S.R.] (Alaï stage.)
- S.* (*E.*) *orientalis* Vialov and Manouilenko var. *elongata* Vialov and Manouilenko, 1939:160-161, 174-175, pl. 2: figs. 4a-d. [U.S.S.R.] (Alaï stage.)
- S.* (*E.*) *orientalis* Vialov and Manouilenko var. *kalizkyi* Vialov and Manouilenko, 1939:155-156, 170-171, pl. 1: fig. 5. [U.S.S.R.] (Alaï stage.)

- S. (E.) orientalis* Vialov and Manouilenko var. *naliwkini* Vialov and Manouilenko, 1939:156-157, 171, pl. 2: figs. 5a-c. [U.S.S.R.] (Alai stage.)
- S. (E.) orientalis* Vialov and Manouilenko var. *pentagona* Vialov and Manouilenko, 1939:158-160, 172-174, pl. 2: figs. 2a-c, 3. [U.S.S.R.] (Alai stage.)
- S. (E.) orientalis* Vialov and Manouilenko var. *rotula* Vialov and Manouilenko, 1939:157-158, 171-172, pl. 1: figs. 7a-c, 8, pl. 2: figs. 1a-c. [U.S.S.R.] (Alai stage.)

Genus *Fibulariella* Mortensen

RECENT

- Fibularia (Fibulariella)* Mortensen, 1948d:219; 1948e:72. Type-species: *Fibularia acuta* Yoshizawa. [Indo-Pacific Ocean.]
- F. (F.) angulipora* Mortensen, 1948d:224-225, fig. 121, pl. 46: figs. 1-4, 12-14; 1948e:72. [Gulf of Siam.]
- F. (F.) oblonga* Gray var. *ambonensis* Mortensen, 1948d:223-224, pl. 46: figs. 10-11. [Malaysia and south, west, and north Australia.]

Genus *Lenicyamidia* Brunnschweiler

EOCENE

- Lenicyamidia* Brunnschweiler, 1962:165. Type-species: *L. compta* Brunnschweiler, 1962:165-169, figs. 2-3. [Western Australia.] (Cuisian/Lutetian.)

Genus *Leniechinus* Kier

MIDDLE EOCENE

- Leniechinus* Kier, 1968b:4-5. Type-species: *L. herricki* Kier, 1968b:5-12, figs. 1-3, 5-10, pl. 1: figs. 3-4, pl. 2: figs. 1-5. [Georgia, U.S.A.]

Genus *Lenita* Desor

EOCENE

- L. israelskyi* Grant and Hertlein, 1938b:49, pl. 8: figs. 6-7, 9. [U.S.A.]

Genus *Porpitella* Pomel

MIDDLE EOCENE

- P. micra* H. L. Clark, 1937a:248-249, figs. 1-3. [Alabama, U.S.A.] (Claiborne Fm.)
- P. paleocaenica* Villatte, 1966a:518-519, pl. 1: figs. 1-3. [France.]

Genus *Scutellina* L. Agassiz

EOCENE

- S. balcanica* Gočev, 1933:47, pl. 7: figs. 13-17. [Bulgaria.]
- S. conica* Gočev, 1933:48, pl. 7: figs. 18a-d. [Bulgaria.]
- S. transsylvanica* Barbu and Dragoș, 1957:647-649, pl. 2: figs. 3, 6, 8, 9, pl. 3: figs. 10-14, 18-19. [Rumania.] (Upper Lutetian.)
- S. transsylvanica* Barbu and Dragoș var. *oblonga* Barbu and Dragoș, 1957:650-653, pl. 2: figs. 2, 5. [Rumania.] (Upper Lutetian.)
- S. transsylvanica* Barbu and Dragoș var. *orbiculata* Barbu and Dragoș, 1957: 649-650, pl. 2: figs. 4, 7, pl. 3: figs. 15, 17, 20-21. [Rumania.] (Upper Lutetian.)

Genus *Tarphypygus* Arnold and H. L. Clark

EOCENE

- Tarphypygus* Arnold and H. L. Clark, 1927:42. Type-species: *T. ellipticus* Arnold and H. L. Clark, 1927:43, pl. 6: figs. 10-12. [Jamaica. West Indies.]
- T. notabilis* Arnold and H. L. Clark, 1927:43-44, pl. 6: figs. 13-15. [Jamaica, West Indies.]

UPPER EOCENE

- T. palmeri* Sánchez Roig, 1949:170. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:328) considers it Middle to Upper Eocene.]
- T. sulcatus* Sánchez Roig, 1949:170-171, pl. 50: fig. 5. [Cuba. Although Sánchez Roig says it is Upper Oligocene, Brodermann (1949:328) considers it Middle to Upper Eocene.]

Genus *Togocyamus* Oppenheim

PALEOCENE

- T. alloiteaui* Roman and Gorodiski, 1959:51-52, pl. 3: figs. 20-23. [Senegal.]

Family LAGANIDAE A. Agassiz

Genus *Laganum* Link

NEOGENE

- L. boschi* Martin in Jeannet and Martin, 1937: 253-254, figs. 35, 36a-b. [Dutch East Indies, West Pacific Ocean.]

RECENT

- L. boninense* Mortensen, 1948d:328-330, fig. 162b, pl. 55: figs. 1-3, pl. 70: fig. 12; 1948e:70. [Bonin Island (Japan), West Pacific Ocean.]
- L. centrale* H. L. Clark, 1925a:155-156, pl. 9: figs. 1-2. [Tongatabu Reefs, Tonga Archipelago, South Pacific Ocean.]
- L. depressum* L. Agassiz var. *alienum* Mortensen, 1948d:322-323, pl. 53: figs. 31-32; 1948e:69. [Indo-Pacific.]
- L. depressum* L. Agassiz var. *tenue* Mortensen, 1948d:319-322, pl. 53: figs. 3-4, 9; 1948e:69. [Indo-Pacific.]
- L. dickersoni* Israelsky var. *keiense* Mortensen, 1948d:327-328, fig. 199c, pl. 53: figs. 2-5, pl. 70: figs. 11, 13; 1948e:70. [Malaysia.]
- L. dyscritum* H. L. Clark, 1932:216-217, pl. 1: figs. 5-9. [Low Isles, Tuamotu Archipelago, South Pacific Ocean.]
- L. fudsiyama* Döderlein var. *africanum* Mortensen, 1948d: 342-344, pl. 55: fig. 10; 1948e:70. [Natal, eastern Union of South Africa.]
- L. fudsiyama* Döderlein var. *indicum* Mortensen, 1948b:8; 1948d:342, pl. 55: figs. 5-6, 11-13; 1948e:70. [Mauritius, Indian Ocean.]
- L. joubini* Koehler var. *formosum* Mortensen, 1948d:331, pl. 55: fig. 4; 1948e:70. [Mauritius, Indian Ocean.]
- L. mirable* H. L. Clark, 1925a:158-159, pl. 9: figs. 9-10. [Madras, southeast India.]

PLIOCENE

- L. dickersoni* Israelsky, 1933b:302-303, pl. 2: figs. 1-9. [Philippine Islands, South Pacific Ocean.]
- L. equaepetala* Israelsky, 1933b:303-304, pl. 2: figs. 10-12. [Philippine Islands.]
- L. fudsiyama* Döderlein *untensis* Cooke, 1954:48, pl. 9: figs. 7-11. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)

MIOCENE

- L. pachycraspedum* Nisiyama, 1968:73-74, pl. 15: figs. 9-10, 17. [Japan.] (Shirahama (Susaki) Fm.)

LOWER MIOCENE

- L. fudsiyama* Döderlein *takunagai* Otuka, 1938: 18-19, pl. 2: figs. 22-23. [Japan.] (Siroyama Ss.)

OLIGOCENE

- L. leptum* Jackson, 1937:233, pl. 13: fig. 4. [Mexico.]

UPPER EOCENE

- L. cubanum* Weisbord, 1934:48-50, pl. 4: figs. 8-10. [Cuba.]
- L. lamberti* Sánchez Roig, 1949:108-109, pl. 16: fig. 2. [Cuba. Although Sánchez Roig says it is Upper Oligocene, Brodermann (1949:323) considers it Middle to Upper Eocene.]
- L. ocalanum* Cooke, 1942:23-24, pl. 2: figs. 7-10. [U.S.A.]
- L. santanae* Sánchez Roig, 1949:109-110, pl. 15: figs. 1-2. [Cuba. Although Sánchez Roig says it is Upper Oligocene, Brodermann (1949:323) considers it Middle to Upper Eocene.]

Genus *Jacksonaster* Lambert and Thiéry

PLIOCENE

- J. gauthieri* Lambert, 1931d:214-215, pl. 6: figs. 2-4. [Red Sea.]
- J. herklotzi* Jeannet in Jeannet and Martin, 1937: 262-263, figs. 40a-c, 41-42. [Java, Indonesia.]

OLIGOCENE

- J. acunai* Lambert in Sánchez Roig, 1926:59-60, pl. 13: figs. 6-7, 9. [Cuba.]
J. acunai Lambert var. *nuevitasensis* Lambert in Sánchez Roig, 1926:60, pl. 13: fig. 9. [Cuba.]
J. sanchezi Lambert in Sánchez Roig, 1926:61, pl. 13: figs. 4-5, 8. [Cuba.]
J. torrei Lambert in Sánchez Roig, 1926:61-64, pl. 12: figs. 1-3. [Cuba.]

UPPER EOCENE

- J. depressus* Sánchez Roig, 1949:108, pl. 16: figs. 6-7. [Cuba.]
J. remediensis Sánchez Roig, 1949:106-107, pl. 16: fig. 5. [Cuba.]

MIDDLE EOCENE

- J. sandiegensis* Sánchez Roig, 1949:107-108, pl. 16: figs. 3-4. [Cuba.]

Genus *Peronella* Gray

RECENT

- P. japonica* Mortensen, 1948d:277-280, figs. 177c, 178c, 180b, 184a, 187a, pl. 49: figs. 1, 6-12; 1948e:71. [Japan.]
P. keiensis Mortensen, 1948d:291-292, figs. 163e, 182c, 187e, pl. 49: figs. 2-5, pl. 72: figs. 7-8, 14; 1948e:71. [Malaysia.]
P. lesueuri (Valenciennes) var. *gadiana* Mortensen, 1948d:270-272, fig. 177b, pl. 50: figs. 4-5, 9-10; 1948e:70. [Malaysia.]
P. oblonga Mortensen, 1948d:299-300, fig. 188c, pl. 51: figs. 33-34; 1948e:71. [India.]
P. orbicularis (Leske) var. *concaua* Mortensen, 1948d:289-291, fig. 170c, pl. 51: figs. 26-28; 1948e:71. [Malaysia.]

PLIOCENE

- P. kamimura* Cooke, 1954:47-48, pl. 11: figs. 5-6. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)
P. merrilli Israelsky, 1933b:304-305, pl. 2: figs. 17-19. [Philippine Islands.]

- P. motobu* Cooke, 1954:48, pl. 10: figs. 1-2. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)
P. ragayana Israelsky, 1933b:305, pl. 2: figs. 13-16. [Philippine Islands.]

EOCENE

- P. kloosi* Molengraaff, 1929:76-77, pl. 26: figs. 3-4. [Curaçao, Dutch West Indies.]
P. lamberti Mortensen, 1927b:73, pl. 4: figs. 4-7; 1948d:256. [Spain. New name for *Echinodiscus rostratus* Lambert, 1927b.]
P. martini Molengraaff, 1929:73-76, pl. 25: figs. 2-3, pl. 26: figs. 1-2. [Curaçao, Dutch West Indies.]

UPPER EOCENE

- P. caribbeana* Weisbord, 1934:52-53, pl. 5: figs. 7-9. [Cuba.]
P. cubae Weisbord, 1934:53-54, pl. 5: figs. 4-6. [Cuba.]
P. quinquenodulata Weisbord, 1934:50-52, pl. 5: figs. 1-3. [Cuba.]

Genus *Peronellites* Hayasaka and Morishita

MIOCENE

- Peronella* (*Peronellites*) Hayasaka and Morishita, A., 1947:101. Type-species: *Peronella* (*Peronellites*) *ovalis* Hayasaka and Morishita, A., 1947:101-103, pl. 8: figs. 3, 5. [China.]

Genus *Rumphia* Desor

UPPER OLIGOCENE

- R. elegans* Sánchez Roig, 1949:100-101, pl. 16: fig. 1. [Cuba.]

Genus *Sismondia* Desor

MIDDLE MIOCENE

- S. naganoensis* Morishita, 1953:218-219, fig. 2, pl. 1: figs. 1-2. [Japan.] (Lower part of Aoki Fm.)

LOWER MIOCENE

S. javana Gerth *ladronensis* Nisiyama, 1968:59-61, pl. 13: figs. 6, 8-10, 13-16, pl. 14: figs. 3-8. [Sai-pan Island, Mariana Islands, Western Pacific.] (Donny-Tagpochau Fm., Aquitanian.)

OLIGOCENE

S. convexa Nisiyama, 1937:41-45, figs. 1-13. [Bonin Islands, Japan.]

EOCENE

S. crustula Hawkins in Arnold and H. L. Clark, 1927:28, 78-79, pl. 22: figs. 4-5. [Jamaica, West Indies.]

LOWER EOCENE

S. barabirensis Lambert, 1931d:200-201, pl. 5: figs. 34-36. [Egypt.]

Family NEOLAGANIDAE Durham

Neolaganidae Durham, 1954:680. Type-genus: *Neolaganum* Durham. [Gulf of Mexico.]

Genus *Neolaganum* Durham

UPPER EOCENE

Neolaganum Durham, 1954:680-681. Type-species: *Laganum archerensis* Twitchell. [Gulf of Mexico.]

N. durhami Cooke, 1959:52, pl. 21: figs. 5-7. [Florida, U.S.A.] (Inglis and Ocala Ls.)

Genus *Cubanaster* Sánchez Roig

UPPER EOCENE

Cubanaster Sánchez Roig, 1952a:3. Type-species: *Jacksonaster torrei* Lambert in Sánchez Roig, 1926. [Cuba.]

C. acunai Lambert *gigas* Sánchez Roig, 1952a:5, pl. 3: fig. 1. [Cuba.]

C. camagueyensis Sánchez Roig, 1952a:4, pl. 2: figs. 3-4. [Cuba.]

C. herrerae Sánchez Roig, 1952a:6-7, pl. 1: fig. 7, pl. 3: fig. 2. [Cuba.]

C. planipetalum Sánchez Roig, 1952a:7-8, pl. 1: figs. 2, 5. [Cuba.]

C. santanae Sánchez Roig, 1952a:8, pl. 1: figs. 3-4. [Cuba.]

Genus *Durhamella* Kier

MIDDLE EOCENE

Durhamella Kier, 1968b:23-24. Type-species: *Laganum ocalanum* Cooke. [Georgia, U.S.A.]

Genus *Neorumphia* Durham

UPPER OLIGOCENE

Neorumphia Durham, 1954:681-682. Type-species: *Rumphia elegans* Sánchez Roig. [Cuba.]

Genus *Sanchezella* Durham

EOCENE

Sanchezella Durham, 1954:682. Type-species: *Jacksonaster sanchezi* Lambert. [West Indies.]

Genus *Weisbordella* Durham

UPPER EOCENE

Weisbordella Durham, 1954:682. Type-species: *Peronella caribbeana* Weisbord. [Gulf of Mexico.]

Genus *Wythella* Durham

UPPER EOCENE

Wythella Durham, 1954:682-684. Type-species: *Laganum eldridgei* Twitchell. [Gulf of Mexico.]

Suborder SCUTELLINA Haeckel

Family SCUTELLIDAE Gray

Genus *Scutella* Lamarck

MIOCENE

S. almerai Lambert *parva* Szörényi, 1953:19, 67, pl. 1: figs. 6, 6a-b. [Ukraine.]

- S. checchiai* Desio, 1929:305–307, fig. 28, pl. 33: figs. 1a–b, pl. 38: figs. 2a–b. [Oasis of Giarabùb, Libya.]
- S. checchiai* Desio var. *occidentalis* Desio, 1934:193, fig. 8, pl. 17: fig. 1. [Libya.]
- S. eichwaldi* Szörényi, 1953:19–20, 67–68, pl. 1: fig. 5. [Ukraine.]
- S. floridana* Cooke, 1942:19, pl. 4: figs. 9–10. [U.S.A.] (Hawthorn Fm.)
- S. isidis* Fourtau var. *bardiensis* Desio, 1929:304–305, pl. 39: figs. 1a–b. [Oasis of Giarabùb, Libya.] (Vindobonian.)
- S. robecchibricchettii* Desio, 1929:309–311, fig. 30, pl. 38: figs. 1a–b. [Oasis of Giarabùb, Libya.]
- S. stefaninii* Desio, 1929:307–309, fig. 29, pl. 40: figs. 3a–b. [Oasis of Giarabùb, Libya.]
- S. stefaninii* Desio var. *syrtica* Desio, 1934:194–195, fig. 10, pl. 18: figs. 1a–b. [Libya.]
- S. szoerenyiae* Sándor, 1969:255, pl. 1: figs. 1–2, pl. 2: fig. 1. [Hungary.]

MIDDLE MIOCENE

- S. media* Schaffer, 1962:151–153, figs. 1d–e, pl. 17: figs. 2–3. [Austria.] (Upper Helvetian.)
- S. montagnai* Mirigliano, 1957:9–12, fig. 1, pl. 1: figs. 1–2. [Italy.]
- S. multiconcava* Schaffer, 1962:154–156, fig. 10, pl. 17: figs. 4–5, pl. 18: figs. 1–5. [Austria.] (Lower Tortonian.)
- S. styriaca* Schaffer, 1962:153–154, fig. 9, pl. 19: fig. 1. [Austria.] (Middle Tortonian.)
- S. vindobonensis* Laube *planata* Kókay in Somos and Kókay, 1960:341–342, 346, pl. 16: figs. 1–2, pl. 17: fig. 3. [Hungary.]
- S. vindobonensis* Laube *secunda* Schaffer, 1962:157–159, fig. 11, pl. 19: figs. 2, 4. [Austria.] (Middle to upper Tortonian.)

LOWER MIOCENE

- S. hobartha* Kühn, 1936:40–43, figs. 2–3, pl. 1: figs. 1–3. [Austria.] (Burdigalian/Aquitanian.)
- S. pseudosubrotundaeformis* Venzo, 1933:208–209; 1935:223–225, pl. 18: fig. 4. [Italy. New name for *S. subrotundaeformis* Oppenheim, 1903, not Schaueroth, 1865.] (Chattian to Aquitanian.)
- S. scurellensis* Venzo, 1933:209; 1935:226–227, pl. 18: figs. 1–2, pl. 19: fig. 4. [Italy.]

PALEOGENE

- S. niponica* Nagao, 1928:16, pl. 1: figs. 5–6. [Japan.]

OLIGOCENE

- S. chiesai* Airaghi, 1939:268, pl. 12: figs. 3–6. [North Africa.]
- S. habanensis* Sánchez Roig, 1949:113–114, pl. 33: fig. 2. [Cuba. Brodermann (1949:328) says it is Lower to Upper Oligocene.]

UPPER EOCENE

- S. camagueyana* Weisbord, 1934:56–57, pl. 5: figs. 13–14. [Cuba.]
- S. cubae* Weisbord, 1934:55–56, pl. 5: figs. 10–12. [Cuba.]

Genus *Parascutella* Durham

LOWER MIOCENE

- Parascutella* Durham, 1953a:349–350. Type-species: *Scutella leognanensis* Lambert. [France.] (Burdigalian.)

Family PROTOSCUTELLIDAE Durham

- Protoscutellidae Durham, 1955:153. Type-genus: *Protoscutella* Stefanini. [Gulf of Mexico and the Atlantic coast of North America.]

Genus *Protoscutella* Stefanini

MIDDLE EOCENE

- P. pentagonium* Cooke, 1942:18, pl. 2: figs. 4–6. [U.S.A.]

Genus *Periarchus* Conrad

UPPER EOCENE

- P. kewi* Cooke, 1942:16, pl. 1: figs. 12–14. [U.S.A.]
- P. lyelli* Conrad *floridanus* Fischer, 1951:60–64, figs. 4–5, pl. 1: figs. 1–4. [U.S.A.]
- P. rutriformis* Paulson, 1958:362–365, figs. 5–6, 8. [North Carolina, U.S.A.]

Family EOSCUTELLIDAE Durham

Eoscutellidae Durham, 1955:156. Type-genus: *Eoscutella* Grant and Hertlein. [California and Oregon, U.S.A.]

Genus *Eoscutella* Grant and Hertlein

UPPER EOCENE

Eoscutella Grant and Hertlein, 1938b:54. Type-species: *Scutella coosensis* Kew. [North America.]

Family DENDRASTERIDAE Lambert

Genus *Dendraster* L. Agassiz

RECENT

D. excentricus (Eschscholtz) var. *elongatus* H. L. Clark, 1935:122-123. [California, U.S.A. (off the Coronados Islands).]

D. laevis H. L. Clark, 1948:312-313, pl. 50: figs. 34-36. [California, U.S.A., and northwest Mexico.]

D. mexicanus H. L. Clark, 1948:313, 317, pl. 51: figs. 37-39. [Lower California, U.S.A.]

D. rugosus H. L. Clark, 1948:318-319, pl. 52: figs. 40-41. [Lower California Bay, San Sebastian Vizcaino, U.S.A.]

QUATERNARY

D. vizcainoensis Grant and Hertlein, 1938b:90, pl. 8: figs. 1-3. [California, U.S.A.]

UPPER PLEISTOCENE

D. vizcainoensis Grant and Hertlein *similaris* Grant and Hertlein, 1938b: 90-91, pl. 27: figs. 1-2, pl. 28: fig. 8. [California, U.S.A.] (Palos Verdes Fm.)

PLIOCENE

D. gibbsii Rémond var. *mirus* Stewart in Woodring, Stewart, and Richards, 1940: 66, 80, pl. 44: figs. 4-5. [California, U.S.A.] (Siphonalia zone, Etchegoin Fm.)

UPPER PLIOCENE

D. casseli Grant and Hertlein, 1938b: 81-82, pl. 1: figs. 1-3, pl. 30: fig. 3. [California, U.S.A.]

MIDDLE PLIOCENE

D. granti Durham, 1950:41-42, pl. 47: figs. 3-12. [California, U.S.A.]

LOWER PLIOCENE

D. elsmerensis Durham, 1949:50-62, fig. 2f, pl. 1: figs. 2-4, 6. [U.S.A.]

Genus *Orchoporus* Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U481) considers *Orchoporus* a synonym of *Merriamaster* Lambert.

MIDDLE MIOCENE

O. lamberti Grant and Hertlein, 1938b:52, pl. 9: figs. 3, 6. [California, U.S.A.]

Genus *Scaphechinus* A. Agassiz

MIOCENE

Echinarachnius (*Scaphechinus*) *ravitalis* Nisiyama, 1951:3-5, figs. 1-3. [Japan.] (Taya Fm.)

Genus *Anorthoscutum* Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U481) considers *Anorthoscutum* a synonym of *Scutellaster* Cragin.

UPPER PLIOCENE

A. oregonense Clark *quaylei* Grant and Hertlein, 1938b:93, pl. 21: fig. 13, pl. 30: fig. 11. [California, U.S.A. For *Dendraster* (*Calaster*) *oregonensis gibbosus* Kew.] (Upper Wildcat Fm.)

Family ECHINARACHNIIDAE Lambert

Genus *Echinarachnius* Leske

In the *Treatise*, Durham (Durham et al., 1966: U482) considers *Echinarachnius* Leske a subjective synonym of *Arachnoides* Leske.

RECENT

- E. brevis* Ikeda, 1936a:1231-1233, figs. 1a-c. [Japan.]
E. griseus Mortensen, 1927a:195-200, figs. 1a, 2, pl. 1: figs. 1-4. [Japan.]

NEOGENE

- Echinarachnius (Echinarachnius) laganolithinus* Nisiyama, 1940-1941:830-832, fig. 12, pl. 44: fig. 21, pl. 45: figs. 1-9. [Japan.] (Sibikawa Ss. beds.)
E. (E.) microthyroides Nisiyama, 1940-1941:828-829, fig. 11, pl. 44: figs. 17-20. [Japan.] (Suenomayama beds.)

LOWER PLEISTOCENE

- E. parma* (Lamarck) var. *sakhalinensis* Argamakova, 1934:25, 40, pl. 1: fig. 3. [U.S.S.R.]

PLIOCENE

- E. alaskensis* Durham, 1957:628-629, pl. 72: figs. 6, 8. [Alaska, U.S.A.]
E. humilis Nisiyama, 1968:100-101, pl. 16: fig. 8. [Japan.] (Chôkai Fm.)

MIDDLE PLIOCENE

- E. naganoensis* Morishita, 1953:220-222, fig. 3a, pl. 1: fig. 4. [Japan.] (Upper part of Ogawa Fm.)

MIOCENE

- E. gabpii* Rémond *kleinpelli* Grant and Hertlein, 1938b:60. [U.S.A. New name for *Scutella gabpii* var. *tenuis* Kew, 1915.] (Lower San Pablo Grp.)
E. rumoensis Hayasaka and Shibata, 1952:82-85, figs. 1a-c. [Japan.] (Tôgeshita Fm.)
E. subtumidus Nisiyama and Hashimoto, 1950:39-42, figs. 1-3. [Japan.]

UPPER MIOCENE

- E. kewi* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 2: fig. 3 and plate explanation. [California, U.S.A.]

MIDDLE MIOCENE

- E. blancoensis* (Kew) var. *etheringtoni* Weaver, 1942:6, pl. 3: figs. 7-8. [U.S.A.] (Astoria Fm.)
E. minoensis Morishita, 1955:229-231, pl. 11: figs. 5-7. [Japan. New name for *Sismondia naganoensis* Morishita, 1953, invalidated.]

Genus *Allaster* Nisiyama

OLIGOCENE/MIOCENE

- Allaster* Nisiyama, 1968:127-128. Type-species: *A. rotundatus* Nisiyama, 1968:128-129, pl. 17: fig. 5, pl. 18: figs. 1, 4. [Japan.] (Takinoue Fm.)

Genus *Astrodapsis* Conrad

UPPER PLIOCENE

- A. israelskyi* Jordon and Hertlein, 1926:424-425, pl. 27: figs. 4, 6. [Cedros Island, off lower California, U.S.A.]
A. kewi Jordan and Hertlein, 1926:425-426, pl. 27: figs. 2-3. [Cedros Island, off lower California, U.S.A.]

PLIOCENE/MIOCENE

- A. nipponicus* Nisiyama, 1948:602-604, pl. 88: figs. 1-6, 8, 10-13. [Japan.]

UPPER MIOCENE

- A. altus* Kew var. *antiquus* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 15 and plate explanation. [California, U.S.A.] (Mid-middle Cierbo.)
A. armstrongi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 14 and plate explanation. [California, U.S.A.] (Mid-middle Cierbo.)
A. auguri Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 4 and plate explanation. [California, U.S.A.] (Early upper Briones.)

- A. blakei* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 7 and plate explanation. [California, U.S.A.] (Early lower Neroly.)
- A. brewerianus* Rémond var. *bitterensis* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 9 and plate explanation. [California, U.S.A.] (Upper Briones; doubtful lower and early middle Cierbo.)
- A. brewerianus* Rémond var. *emergens* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 11 and plate explanation. [California, U.S.A.] (Early lower Cierbo.)
- A. brewerianus* Rémond var. *junior* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 18 and plate explanation. [California, U.S.A.] (Late middle Cierbo.)
- A. cierboensis* Kew var. *branchensis* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: figs. 12–12a and plate explanation. [California, U.S.A.] (Cierbo; late upper Briones.)
- A. clarki* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 1 and plate explanation. [California, U.S.A.] (Late upper Cierbo.)
- A. cutleri* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 1 and plate explanation. [California, U.S.A.] (Early upper Cierbo.)
- A. davisii* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 3 and plate explanation. [California, U.S.A.] (Late upper Cierbo.)
- A. desaixii* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 5 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. diabloensis* Kew var. *superior* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 16 and plate explanation. [California, U.S.A.] (Late middle Cierbo.)
- A. elevatum* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 12 1/2 and plate explanation. [California, U.S.A.] (Early lower Cierbo.)
- A. englishi* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 7 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. galei* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 8 and plate explanation. [California, U.S.A.] (Upper Briones to lower to middle Cierbo.)
- A. goudkoffi* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 6 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. gregerseni* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 4 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. gregerseni* Grant and Eaton var. *fragilis* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 2 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. gregerseni* Grant and Eaton var. *varians* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 8 and plate explanation. [California, U.S.A.] (Middle and late upper Cierbo.)
- A. hertleini* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 9: fig. 2 and plate explanation. [California, U.S.A.] (Later lower Neroly.)
- A. hootsi* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: figs. 11a–b and plate explanation [California, U.S.A.] (Early lower Cierbo.)
- A. isabellae* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 2 and plate explanation. [California, U.S.A.] (Late upper Cierbo.)
- A. johnsoni* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 3 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. johnsoni* Grant and Eaton *simile* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 3a and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. major* Kew var. *parens* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 6 and plate explanation. [California, U.S.A.] (Early lower Neroly.)
- A. ovalis* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 17 and plate explanation. [California, U.S.A.] (Late middle Cierbo.)
- A. perrini* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 8: fig. 6 and plate explanation. [California, U.S.A.] (Middle to lower Neroly.)
- A. quaylei* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 9 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. reedi* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: figs. 13–13a and plate explanation. [California, U.S.A.] (Mid-middle Cierbo.)
- A. salinasensis* Richards, 1935:61–63, pl. 7: figs. 2a–c. [California U.S.A.]
- A. schencki* Grant and Hertlein, 1938b:76, fig. 8. [California, U.S.A.]
- A. schencki* Grant and Hertlein var. *mirandaensis* Grant and Eaton in Eaton, Grant, and Allen,

1941: pl. 9: figs. 4-4a and plate explanation. [California, U.S.A.] (Early upper Neroly.)

A. schucherti Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 6 and plate explanation. [California, U.S.A.] (Upper Briones.)

A. schucherti Grant and Eaton var. *affinis* Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 10 and plate explanation. [California, U.S.A.] (Late upper Briones.)

A. woodringi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 8: fig. 1 and plate explanation. [California, U.S.A.] (Early lower Neroly.)

Genus *Kewia* Nisiyama

MIOCENE/OLIGOCENE

K. minuta Shibata, 1960:308-310, figs. 3-4, pl. 35: figs. 3-9. [Japan.]

MIDDLE MIOCENE

K. ugoensis Shibata, 1960:307-308, figs. 1-2, pl. 35: figs. 1-2. [Japan.]

OLIGOCENE

Echinarachnius (Kewia) elongatus Nisiyama, 1940-1941:824-826, fig. 9, pl. 44: figs. 13-16. [Japan.] (Japanese Saghalien.)

E. (K.) parvus Nisiyama, 1940-1941:822-823, pl. 44: figs. 7-12. [Japan.] (Japanese Saghalien.)

Genus *Nipponaster* Durham

PLIOCENE/MIOCENE

Nipponaster Durham, 1952:844-846, fig. 1d. Type-species: *Astrodrapsis nipponicus* Nisiyama. [Japan.]

Genus *Pseudoastrodrapsis* Durham

In the *Treatise*, Durham (Durham et al., 1966: U482) considers *Pseudoastrodrapsis* Durham an objective synonym of *Nipponaster* Durham.

PLIOCENE/MIOCENE

Pseudoastrodrapsis Durham, 1953b:756. Type-species: *Astrodrapsis nipponicus* Nisiyama. [Japan.]

New name for *Nipponaster* Durham, 1952, not *Nipponaster* Lambert, 1920.]

LOWER PLIOCENE

P. nitidiusculus Nisiyama, 1968:126-127, pl. 16: figs. 15-17, pl. 17: figs. 2-3, 6. [Japan.]

MIOCENE

P. intermedius Nisiyama, 1968:125-126, pl. 16: figs. 9-12, 14. [Japan.] (Kawabata Fm.)

Genus *Remondella* Durham

LOWER PLIOCENE

Remondella Durham, 1955:168-169, figs. 14e, 36a, 36c. Type-species: *Clypeaster gabbii* Rémond. [California, U.S.A.]

Genus *Tenuirachnius* Durham

UPPER MIOCENE

Tenuirachnius Durham, 1955:169, fig. 36b. Type-species: *Scutella gabbii* Rémond *tenuis* Kew = *Echinarachnius gabbii* (Rémond) *kleinpelli* Grant and Hertlein. Not *E. tenuis* Yoshiwara. [California, U.S.A.]

Genus *Vaquerosella* Durham

LOWER MIOCENE

Vaquerosella Durham, 1955:166-167, figs. 16c, 21e, 21f, 36d, 36e. Type-species: *Scutella andersoni* Twitchell. [Baja California, U.S.A.]

Family MONOPHORASTERIDAE Lahille

Genus *Karlaster* Santos

MIOCENE

Karlaster Marchesini Santos, 1958:16-18, 21-22. Type-species: *Karlaster pirabensis* Marchesini Santos, 1958:18-19, pl. 5: figs. 1-3. [Brazil.]

Family MELLITIDAE Stefanini

Genus *Mellita* L. Agassiz

RECENT

- M. grantii* Mortensen, 1948d:428-429, fig. 244c, pl. 15: fig. 3, pl. 59: figs. 4-5; 1948e:72. [Gulf of California, U.S.A./Mexico.]
- M. lata* H. L. Clark, 1940a:437-439, pl. 60: fig. 1, pl. 61: fig. 1, pl. 62: figs. 1-2. [Eastern Pacific Ocean.]
- M. latiambulacra* H. L. Clark, 1940a:439-442, pl. 62: figs. 3-6. [Caribbean Ocean.]
- M. notabilis* H. L. Clark, 1947:77-78. [West coast of Central America.]
- M. platensis* Bernasconi, 1947:117-118. [Argentina.]
- M. quinquesperforata* (Leske) *tenuis* H. L. Clark, 1940a:442-444, pl. 60: fig. 2, pl. 61: fig. 2. [Florida, U.S.A.]

UPPER PLEISTOCENE

- M. kanakoffi* Durham, 1961b:5-7, fig. 1d, pl. 2: fig. 2. [California, U.S.A.]

UPPER MIOCENE

- M. acclinensis* Kier, 1963:40-45, figs. 36-41, pl. 15: figs. 1-3, tables 3-4. [Florida, U.S.A.] (Tamiami Fm.)

Genus *Encope* L. Agassiz

RECENT

- E. cocosi* H. L. Clark, 1948:330, pl. 56: figs. 48-49. [Cocos Island, Costa Rica.]
- E. ecuadorensis* H. L. Clark, 1948:333-334, pl. 59: figs. 54-55. [Ecuador.]
- E. fragilis* H. L. Clark, 1948:335-336, pl. 60: figs. 56-57. [Mexico, Petatlan Bay to Tenacatita Bay.]
- E. insularis* H. L. Clark, 1948:336-337, pl. 61: figs. 58-59. [Mexico, Socorro and Clarion Islands.] (Revilla Gigedo Gp.)
- E. irregularis* H. L. Clark, 1948:332-333, pl. 58: figs. 52-53. [Colombia to Costa Rica.]
- E. laevis* H. L. Clark, 1948:327-328, pl. 54: fig. 45, pl. 55: fig. 46. [Nicaragua.]

- E. micropora* L. Agassiz var. *borealis* A. H. Clark, 1946:6-7, pl. 4. [Pacific Ocean.]
- E. micropora* L. Agassiz *galapagensis* A. H. Clark, 1946:7. [Pacific Ocean.]
- E. perspectiva* L. Agassiz *jonesi* A. H. Clark, 1946: 7-8. [Pacific Ocean.]
- E. wetmorei* A. H. Clark, 1946:2-5, pls. 1-2 (upper fig.) [Pacific Ocean.]

RECENT/PLEISTOCENE

- E. arcensis* Durham, 1950:44, pl. 37: fig. 8, pl. 40: figs. 5-6. [California, U.S.A.]

PLEISTOCENE

- E. grandis* Agassiz *inezana* Durham, 1950:45-46, pl. 37: fig. 10, pl. 38: fig. 4. [California, U.S.A.]

PLEISTOCENE/LATE MIOCENE

- E. michelini* Agassiz *imperforata* Kier, 1963:33-36, figs. 25-30, pl. 5: fig. 1, pl. 6: figs. 3-4, table 2. [Florida, U.S.A.]

TERTIARY

- E. homala* Arnold and H. L. Clark, 1934:142-143, pl. 2: fig. 1. [Manchester Parish, Jamaica.]

PLIOCENE

- E. macrophora* Ravenel *tamiamiensis* Mansfield, 1932:48, pl. 17: fig. 8. [U.S.A.]
- E. secoensis* Cooke, 1961:18-19, pl. 8: fig. 1, pl. 9: figs. 1-2. [Venezuela.]

UPPER PLIOCENE

- E. carmenensis* Durham, 1950:44-45, pl. 37: fig. 5, pl. 40: fig. 4, pl. 44: fig. 1. [California, U.S.A.]
- E. shepherdii* Durham, 1950:48, pl. 37: fig. 11, pl. 38: fig. 6, pl. 40: fig. 2. [California, U.S.A.]

MIDDLE PLIOCENE

- E. angelensis* Durham, 1950:43-44, pl. 37: fig. 15, pl. 42: figs. 1, 3-4, 10. [California, U.S.A.]

LOWER PLIOCENE

- E. chaneyi* Durham, 1950:45, pl. 37: fig. 7, pl. 43: fig. 6. [California, U.S.A.]
E. loretoensis Durham, 1950:46, pl. 37: fig. 4, pl. 41: figs. 1, 4-5. [California, U.S.A.]
E. scrippsae Durham, 1950:47-48, pl. 37: fig. 14, pl. 41: figs. 2, 3, 6, pl. 42: figs. 2, 5-8. [California, U.S.A.]
E. sverdrupi Durham, 1950:48-49, pl. 37: fig. 6, pl. 39: figs. 4, 6. [California, U.S.A.]

MIOCENE

- E. kugleri* Jeannet, 1928b:220. [Venezuela?]
E. peruviana Brighton, 1926a:61-69, figs. 1-7, pls. 3-5. [Peru.]
E. vonderschmitti Jeannet, 1928b:220. [Locality?]
E. wiedenmayeri Jeannet, 1928b:220. [Venezuela.]

MIDDLE MIOCENE

- E. kugleri* Jeannet, 1928a:23-26, figs. 4-6, pl. 3: figs. 5-6. [Venezuela.] (Serie de Capadare.)
E. vonderschmitti Jeannet, 1928a:26-28, figs. 7-8, pl. 3: figs. 7-8. [Venezuela.] (Serie de Capadare, couches d'Ojo de Agua.)
E. wiedenmayeri Jeannet, 1928a:20-23, fig. 3, pl. 3: figs. 1-4. [Venezuela.] (Couches d'Ojo de Agua, base des Calcaires de Capadare.)

Genus *Mellitella* Duncan

PLIOCENE/MIOCENE

- Encope* (*Melitella* [sic]) *falconensis* Cooke, 1961: 19-20, pl. 8: figs. 2-4. [Venezuela.]

Family ASTRICLYPEIDAE Stefanini

Genus *Astriclypeus* Verrill

MIOCENE

- A. manni* Verrill *minoensis* Morishita, 1952:113, pl. 11: fig. 1. [Japan.] (Shukunohora Ss.)

LOWER MIOCENE

- A. manni* Verrill *ambigenus* Nisiyama, 1935:140-145, figs. 3a-c, pl. 8: figs. 1-3. [Japan.]

Genus *Amphiope* L. Agassiz

MIOCENE

- A. bioculata* Desmoulin var. *bentivegnae* Desio, 1934:191, fig. 7, pl. 16: figs. 1a-b. [Libya.]
A. bioculata Desmoulin var. *pelatensis* Fabre, 1933: 33-36. [France.]

MIDDLE MIOCENE

- A. dallonii* Lambert, 1931c:88-89, pl. 3: fig. 30. [Algiers, North Africa.] (Helvetian.)
A. labriei Lambert, 1928b:113-114; 1928e: pl. 8: fig. 3. [France.] (Helvetian.)
A. nuragica Comaschi Caria, 1956:186, pl. 1. [Sardinia, Mediterranean Sea.] (Helvetian.)

Genus *Echinodiscus* Leske

RECENT

- E. auritus* Leske var. *siamensis* Mortensen, 1948d: 404-406, pl. 56: figs. 1-3, pl. 71: figs. 1, 4-5, 10-11, 13-14, 17, 22; 1948e:72. [Indo-Pacific.]

MIOCENE/OLIGOCENE

- E. transiens* Nisiyama, 1968:133-134, pl. 17: fig. 1. [Japan.] (Yamaga Fm.)

LOWER TERTIARY

- E. ginauensis* Clegg, 1933:10-11, pl. 1: figs. 4a-4b. [Persian Gulf.]

PALEOGENE

- E. chikuzenensis* Nagao, 1928:17, pl. 1: figs. 15-17. [Japan.]

Genus *Tretodiscus* Pomel

In the *Treatise*, Durham (Durham et al., 1966: U489) considers *Tretodiscus* a synonym of *Echinodiscus* Leske.

MIOCENE

- T. fuchsi* (Fourtau) var. *giarabubensis* Desio, 1929: 315-316, fig. 31, pl. 38: figs. 3-4. [Oasis of Giarabùb, Libya.]

Family **ABERTELLIDAE** Durham

Abertellidae Durham, 1955:177. Type-genus: *Abertella* Durham. [Caribbean and Atlantic coast of North America.]

Genus *Abertella* Durham

MIOCENE

Abertella Durham, 1953a:350-351. Type-species: *Scutella aberti* Conrad. [U.S.A.]

MIDDLE MIOCENE

A. kawi Durham, 1957:627-628, fig. 2, pl. 72: figs. 1, 7. [Mexico.]

LOWER MIOCENE

A. palmeri Durham, 1957:626-627, pl. 72: figs. 4, 9-10. [Guatemala.]

Family **SCUTASTERIDAE** Durham

Scutasteridae Durham, 1955:178. Type-genus: *Scutaster* Pack. [California, U.S.A.]

Genus *Scutaster* Pack

LOWER MIOCENE

S. vaquerosensis Loel and Corey, 1932:179-180, pl. 5: figs. 1a-b, 3. [California, U.S.A.] (Vaqueros Fm.)

S. vaquerosensis Loel and Corey var. *kawi* Loel and Corey, 1932:180, pl. 5: fig. 4. [California, U.S.A.] (Vaqueros Fm.)

Suborder **ROTULINA** DurhamFamily **ROTULIDAE** GrayGenus *Rotula* Schumacher

QUATERNARY/PLIOCENE

R. orbiculus (Linné) *angolensis* Gonçalves and Roman, 1963:101-106, pls. 1-5. [Angola, southwest Africa.]

Genus *Rotuloidea* Etheridge

LOWER MIOCENE

R. vieirai Dartevelle, 1953:103-107, figs. 22-23, pl. 6: fig. 4, pl. 7: figs. 1-2, pl. 16: figs. 1-8. [Luanda, northwest Angola, southwest Africa.] (Upper Burdigalian.)

Suborder Uncertain

Family Uncertain

Genus *Runa* L. Agassiz

UPPER PLIOCENE

R. paromaica Argamakova, 1934:29, 41-42, fig. 14, pl. 1: fig. 7. [U.S.S.R.]

Superorder **ATELOSTOMATA** ZittelOrder **CASSIDULOIDA** ClausOrder **GALEROPYGOIDA** Mintz

GALEROPYGOIDA Mintz, 1968:1287-1288.

Family **GALEROPYGIDAE** LambertGenus *Galeropygus* Cotteau

MIDDLE JURASSIC

G. marcoui Desor var. *recincta* Mercier, 1935:29-30. [France.] (Lower Bajocian.)

G. welschi Lambert, 1935a:529-530, pl. 26: figs. 10-11. [France.] (Bathonian.)

Genus *Hyboclypus* L. Agassiz

MIDDLE JURASSIC

H. schlumbergeri Lambert, 1935a:531. [France, Alsace.] (Bathonian.)

Genus *Laticlypus* Szörényi

UPPER JURASSIC

Laticlypus Szörényi, 1966:446–447. Type-species:
L. giganteus Szörényi, 1966:448–449, figs. 1–5.
[Hungary.] (Oxfordian or upper Dogger.)

Genus *Stegopygus* Devriès and Alcaydé

UPPER CRETACEOUS

Stegopygus Devriès and Alcaydé, 1966:21–25. Type-species: *S. langeensis* Devriès, 1966:21–25, pls. 1–2. [France.] (Cenomanian.)

Family CLYPEIDAE Lambert**Genus *Clypeus* Leske**

UPPER JURASSIC

C. rostellus Currie, 1925:64–65, pl. 10: figs. 3a–c.
[Somaliland, East Africa.] (Corallian.)
C. wylliei Currie, 1925:63–64, pl. 10: figs. 1a–c, 2.
[Somaliland, East Africa.] (Bathonian.)

Genus *Crotoclypeus* Pomel

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Crotoclypeus* Pomel a subjective synonym of *Clypeus* Leske.

JURASSIC

C. cottreai Besairie and Lambert in Lambert, 1933a:11. [Madagascar, off East African coast.]

Genus *Dactyloclypeus* Maccagno

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Dactyloclypeus* a subjective synonym of *Clypeus* Leske.

JURASSIC

Clitopygus (*Dactyloclypeus*) Maccagno, 1947b:126–129, pl. 1: figs. 11, 11a–b. Type-species: *Clypeus wylliei* Currie. [North Africa.]

Genus *Bothryopneustes* Fourtau

MIDDLE JURASSIC

B. besairiei Besairie, 1936:128, pl. 8: figs. 10–12. Madagascar, off East Africa coast.] (Upper Bathonian.)
B. galhauseni Lambert, 1933b:58–59, pl. 2: figs. 17–19. [North Africa.] (Bathonian.)

Genus *Clypeobrissus* Currie

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Clypeobrissus* Currie a subjective synonym of *Bothryopneustes* Fourtau.

JURASSIC

Clypeobrissus Currie, 1925:69. (Bathonian.) Type-species: *C. somaliensis* Currie, 1925:69–70, fig. 13, pl. 10: figs. 6a–c, 7. [Somaliland, East Africa.] (Corallian.) [Bathonian according to Currie (1927:411).]

Genus *Pseudopygurus* Lambert

UPPER JURASSIC

P. ambroggii Petitot, 1954:83–86, figs. 1–2, pl. 1: figs. 1–7. [Morocco.] (Oxfordian.)

MIDDLE JURASSIC

P. hathirae Parnes, 1961:217–222, fig. 1, pl. 1: figs. 1–6. [Israel.] (Middle Callovian.)

Genus *Pygurus* L. Agassiz

UPPER CRETACEOUS

P. lampassiformis Tzankov, 1934:204–205, 218–219, pl. 2: fig. 2. [Bulgaria.] (Santonian.)

MIDDLE JURASSIC

P. cottreai Besairie, 1930:196–197, pl. 9: figs. 2–2a. [Madagascar, off East Africa.] (Callovian.)

MIDDLE JURASSIC

- P. depressus* Agassiz var. *somaliensis* Currie, 1925: 65–67, fig. 11, pl. 10: figs. 4a–c. [Somaliland, East Africa.] (Bathonian/Callovian.)
- P. smelliei* Currie, 1925:67–69, fig. 12, pl. 10: figs. 5a–c. [Somaliland, East Africa. According to Currie (1927:411) this species is from the Bathonian.]

Subgenus *Pygurus* (*Pygurus*)

LOWER CRETACEOUS

- Pygurus* (*Pygurus*) *complanatus* Tanaka, 1965: 128–129, pl. 15: figs. 1a–c, 2a–c. [Japan.]

Genus *Echinopygus* d'Orbigny

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Echinopygus* a subjective synonym of *Pygurus* (*Pygurus*).

UPPER CRETACEOUS

- Pygurus* (*Echinopygus*) *tinocoi* Beurlen, 1966: 458–459, fig. 2, pl. 1: fig.2. [Brazil.] (Cenomanian.)

LOWER CRETACEOUS

- Pygurus* (*Echinopygus*) *jagueyanus* Cooke, 1955:98, pl. 23: figs. 5–9. [Colombia.] (Upper Albian.)

JURASSIC

- E. checchiae* Maccagno, 1947b:134–136, fig. 4c, pl. 1: figs. 14, 14a–b. [Somaliland, East Africa.]

Family NUCLEOLITIDAE L. Agassiz and Desor

Genus *Nucleolites* Lamarck

EOCENE

- N. bakalovi* Gočev, 1933:48–49, pl. 7: figs. 8–12. [Bulgaria.]

CRETACEOUS

- N. wilderae* Ikins, 1940:76, pl. 6: figs. 5a–c. [Texas, U.S.A.]

UPPER CRETACEOUS

- N. simpaticus* Sánchez Roig, 1952d:51–52, pl. 17: figs. 7–8. [Cuba.] (Senonian.)
- N. tornacensis* Smiser, 1935b:50, pl. 4: figs. 11a–d. [Belgium.] (Cenomanian.)

Genus *Clitopygus* Pomel

In the *Treatise*, Kier (Durham et al., 1966:U501) considers *Clitopygus* a subjective synonym of *Nucleolites* Lamarck.

UPPER CRETACEOUS

- C. cantrainei* Smiser, 1935b:51, pl. 4: figs. 12a–d. [Belgium.] (Cenomanian.)

MIDDLE JURASSIC

- C. basseae* Lambert, 1936c:22, pl. 4: figs. 14–16. [Madagascar, off East Africa.] (Callovian.)
- C. moutieri* Mercier, 1932:233–234, pl. 10: figs. 7a–b. [France.] (Upper Bathonian.)

Genus *Echinobrissus* Gray

In the *Treatise*, Kier (Durham et al., 1966:U501) considers *Echinobrissus* an objective synonym of *Nucleolites*.

UPPER CRETACEOUS

- E. chirakhanensis* Chiplonker, 1939:237–238, pl. 25: figs. 3a–b. [India.] (Cenomanian.)
- E. cremai* Checchia-Rispoli, 1921:24–25, pl. 8: figs. 10–13. [Tripoli, Libya.] (Senonian.)
- E. cubensis* Weisbord, 1934:27–28, pl. 2: figs. 1–3. [Cuba.]
- E. franchii* Checchia-Rispoli, 1921:25–26, pl. 8: figs. 14–17, pl. 9: fig. 4. [Tripoli, Libya.] (Senonian.)
- E. hierosolymitanus* Blanckenhorn, 1925 [1924]:95, pl. 7: figs. 19–23. [Palestine, Israel.] (Turonian/Santonian.)
- E. malwaensis* Chiplonker, 1939:236–237, pl. 25: figs. 1a–b. [India.] (Cenomanian.)
- E. rajnathi* Chiplonker, 1939:238–240, pl. 25: figs. 2a–b. [India.] (Cenomanian.)

MIDDLE JURASSIC

- E. pilensis* Jesionek-Szymańska, 1963:349–351, 402, 413, text-pl. 5: figs. 1–5, pl. 3: figs. 3a–d. [Poland.] (Upper Bathonian.)

Genus *Catopygus* L. Agassiz

UPPER EOCENE

- C. riveroi* Sánchez Roig, 1952d:50–51, pl. 17: figs. 5–6. [Cuba.]

CRETACEOUS

- C. jeanneti* Lambert, 1931e:303, pl. 17: figs. 19–23. [Cuba.]

UPPER CRETACEOUS

- C. conformis* Desor var. *conoideus* Tzankov, 1934: 203, 218, pl. 1: fig. 12. [Bulgaria.] (Maestrichtian/Upper Campanian.)
- C. inflatus* Regnéll, 1955:22–27, pl. 1: figs. 1a–d. [Sweden.] (Maestrichtian?)
- C. irregularis* Smiser, 1935b:56–57, pl. 5: figs. 7a–i. [Belgium and Holland.] (Maestrichtian?)
- C. mississippiensis* Cooke, 1953:15–16, pl. 5: figs. 3–6. [Mississippi, U.S.A.] (Upper Maestrichtian.)
- C. rodriguezii* Lambert and Roig in Sánchez Roig, 1926:71, pl. 10: figs. 1–3. [Cuba.] (Senonian.)
- C. subcircularis* Smiser, 1935b:56, pl. 5: figs. 6a–d. [Belgium and Holland.] (Maestrichtian?)
- C. zinaï* Airaghi, 1939:259, pl. 11: figs. 3–4. [North Africa.] (Maestrichtian?)

Genus *Clypeopygus* d'Orbigny

UPPER CRETACEOUS

- C. bulgaricus* Tzankov, 1934:200–201, 217–218, pl. 2: figs. 1a–b. [Bulgaria.] (Maestrichtian.)
- C. dallonii* Lambert, 1935c:360–361, pl. 16: figs. 4–6. [Algeria, North Africa.] (Santonian.)
- C. damujiensis* Sánchez Roig, 1952d:49–50, pl. 17: fig. 3. [Cuba.] (Senonian.)
- C. habanensis* Weisbord, 1934:32–34, pl. 3: figs. 1–3. [Cuba.]

Genus *Oolopygus* d'Orbigny

UPPER CRETACEOUS

- O. convexus* Smiser, 1935b:59, pl. 6: figs. 1a–d. [Belgium.] (Maestrichtian.)
- Catopygus* (*Oolopygus*) *gonzalezi* Sánchez Roig, 1953c:145–146, pl. 4: figs. 1–2. [Cuba.]
- O. jandrainensis* Smiser, 1935b:58, pl. 5: figs. 9a–d. [Belgium.] (Maestrichtian.)

Genus *Phyllobrissus* Cotteau

UPPER CRETACEOUS

- P. oblongus* Smiser, 1935b:53, pl. 5: figs. 2a–f. [Belgium.] (Maestrichtian.)

LOWER CRETACEOUS

- P. artesianus* Hawkins, 1926:189–191, fig. 23. [England.] (Aptian.)
- P. zulianus* Cooke, 1961:6–7, pl. 1: figs. 10–12. [Venezuela.] (Aptian.)

Genus *Plagiochasma* Pomel

LOWER CRETACEOUS

- P. coxwellense* Melville, 1952:2–5, fig. 1, pl. 1: figs. 1a–c. [England.] (Upper Aptian.)

Genus *Trematopygus* d'Orbigny

In the *Treatise*, Kier (Durham et al., 1966:U505) considers *Trematopygus* an objective synonym of *Plagiochasma* Pomel.

UPPER CRETACEOUS

- T. novaki* Zázvorka, 1952:1–4, 3 figs., pl. 1. [Bohemia.] (Lower Turonian.)

Genus *Pygorhynchus* L. Agassiz

UPPER OLIGOCENE

- P. riveroi* Sánchez Roig, 1949:125–126, pl. 17: fig. 1. [Cuba.]

UPPER EOCENE

- Cassidulus (Pygorhynchus) berryi* Kellum, 1926:15, pl. 1: figs. 4–7. [North Carolina, U.S.A.]
- C. (P.) carolinensis* Twitchell var. *cravenensis* Kellum, 1926:15, pl. 1: figs. 1–3. [North Carolina, U.S.A.]
- C. (P.) sabistonensis* Kellum, 1931:51. [North Carolina, U.S.A. New name for *C. berryi* Kellum, 1926, not Twitchell, 1915.]

UPPER CRETACEOUS

- P. conicus* Smiser, 1935b:48, pl. 4: figs. 9a–d. [Belgium.] (Maestrichtian.)
- P. ovalis* Smiser, 1935b:47, pl. 4: figs. 7a–d. [Belgium.] (Maestrichtian.)

Genus *Botriopygus* d'Orbigny

In the *Treatise*, Kier (Durham et al., 1966:U506) considers *Botriopygus* an objective synonym of *Pygorhynchus* L. Agassiz.

UPPER CRETACEOUS

- B. jesumariae* Sánchez Roig, 1949:129–130. [Cuba.] (Senonian.)
- B. lamberti* Checchia-Rispoli, 1933b:17–18, pl. 2: figs. 13–16. [North Africa.] (Maestrichtian.)
- B. millosevichi* Checchia-Rispoli, 1933b:14–16, pl. 2: figs. 8–12. [North Africa.] (Maestrichtian.)
- B. vinassai* Serra, 1935:123–124, pl. 5: figs. 1, 1a–c. [Tripoli, North Africa.] (Maestrichtian.)

LOWER CRETACEOUS

- B. royoii* Lambert, 1935f:524, pl. 58: figs. 8–9. [Spain.] (Aptian.)

Family ECHINOLAMPADIDAE Gray

Genus *Echinolampas* Gray

RECENT

- E. alexandri* de Loriol var. *forcipulata* Mortensen, 1948c:286, fig. 272b, pl. 3: figs. 8–9, pl. 4: fig. 10, pl. 14: figs. 10–12. [Indian Ocean.]

- E. alexandri* de Loriol var. *sibogae* Mortensen, 1948c:285–286, fig. 268c, 270b, 272c, pl. 14: figs. 2, 5–6, 13. [Malaysia.]
- E. koreana* H. L. Clark, 1925a:183–184, pl. 10: figs. 4–5. [Korean Strait, eastern channel between South Korea and southwest Japan.]

TERTIARY

- E. madurensis* K. Martin, 1919:54, 111. [Java, Indonesia.] (Neogene.)

LOWER TERTIARY

- E. omanensis* Clegg, 1933:11–12, pl. 1: figs. 5a–c. [Arabia.]
- E. peyroti* Castex, 1930:33–34, pl. 2: figs. 5–7. [France.]

PLIOCENE

- E. woodi* Currie, 1930:176–177, pl. 16: fig. 6. [Mombasa Island, East Africa.]

MIOCENE

- E. atrophus* Lambert *podolicus* Szörényi, 1953:34–35, 85–86, pl. 6: figs. 4, 4a–b. [Ukraine.]
- E. consolationis* Sánchez Roig, 1953c:148–149, pl. 4: figs. 9–11. [Cuba.]
- E. delorenzoi* Mirigliano, 1938:46–50, fig. 1, pl. 1: figs. 1–3. [Italy.]
- E. hemisphericus* Lamarck var. *bardiensis* Desio, 1929:330–331, fig. 37, pl. 36: fig. 2. [Oasis of Giarabùb, Libya.] (Porto Bardia.)
- E. hemisphericus* Lamarck var. *cyrenaicus* Desio, 1929:329–330, fig. 36, pl. 36: figs. 1a–b. [Oasis of Giarabùb, Libya.] (Porto Bardia.)
- E. mestrei* Sánchez Roig, 1926:75–76, pl. 10: fig. 7. [Cuba.]
- E. paraensis* Marchesini Santos, 1958:12–14, 20, pl. 1: figs. 1–2, pl. 2: fig. 5. [Brazil.]
- E. percrassus* Meznerics, 1941:90, pl. 2: fig. 4, pl. 3: fig. 4. [Hungary.]
- E. vadaszi* Roman in Roman and Gonçalves, 1965:309. [Hungary and Czechoslovakia. For *E. (Heteroclypeus) hungaricus* Vadasz, 1915, not *E. hungarica* Dornyai, 1913.]
- E. woodringi* Durham, 1961:481, figs. 1A, 2A, pl. 68: figs. 2–3, 7. [Costa Rica.]

LOWER MIOCENE

- E. concavus* Hayasaka, 1947:103–105, pl. 9: fig. 2; 1948:89–90. [China.]
E. visedoi Lambert, 1935b:367, pl. 41: figs. 1–3. [Spain.] (Aquitanian.)

OLIGOCENE

- E. camagueyensis* Weisbord, 1934:81–83, pl. 8: figs. 9–11. [Cuba.]
E. daguini Castex, 1930:36, pl. 3: figs. 1–3. [France.] (Stampian.)
E. rollandi? Lambert, 1931c:107, pl. 6: fig. 1. [Tunis, North Africa.]
N. santaclarae Sánchez Roig, 1951:55–56, pl. 32: figs. 1–2. [Cuba.]

UPPER OLIGOCENE

- E. cojimarensis* Sánchez Roig, 1949:152–153, pl. 19: figs. 4–5. [Cuba.]
E. hemisphericus Lambert var. *cubensis* Palmer in Sánchez Roig, 1949:149–150. [Cuba. Although Palmer considered this species Lower Miocene, Brodermann (1949:321) says it is Upper Oligocene.]
E. munozii Sánchez Roig, 1949:157–158, pl. 19: figs. 1–3. [Cuba. Brodermann (1949:321) says it is Lower to Upper Oligocene.]
E. umbella Palmer in Sánchez Roig, 1949:151–152. [Cuba. Although Palmer cites this as Oligocene, Brodermann (1949:321) says this species is Upper Oligocene.]

OLIGOCENE OR EOCENE

- E. marcaisi* Lambert, 1937:92–93, pl. 2: fig. 4. [Morocco.] (Lower Lutetian.)

EOCENE

- E. altissima* Arnold and H. L. Clark, 1927:47–48, pl. 9: figs. 1–4. [Jamaica, British West Indies.]
E. anceps Chautard and Lambert var. *inflata* Lambert in Lambert and Jacquet, 1936:355, pl. 22: fig. 9. [Senegal, West Africa.]
E. anceps Chautard and Lambert var. *planipetala* Lambert in Lambert and Jacquet, 1936:355, pl. 22: figs. 7–8. [Senegal, West Africa.]

- E. atascaderensis* Brighton, 1926b:370, figs. 3a–d. pl. 26: fig. i. [Peru.] (Atascadero Ls.)
E. bothriopygoides Lambert, 1937:87, pl. 3: figs. 9–11. [Morocco.]
E. brachytoma Arnold and H. L. Clark, 1927:49–50, pl. 9: figs. 5–6. [Jamaica, British West Indies.]
E. cuvillieri Lambert in Lambert and Jacquet, 1936:356, pl. 22: figs. 12–14. [Senegal, West Africa.]
E. jacqueti Lambert in Lambert and Jacquet, 1936:355–356, pl. 22: figs. 4–6. [Senegal, West Africa.]
E. macrostoma Lambert in Lambert and Jacquet, 1936:356–357, pl. 23: figs. 1–3. [Senegal, West Africa.]
E. marioi Roman in Roman and Gonçalves, 1965: 289–290. [Cuba. New name for *Palaeolampas elongata* Roig, 1953, not *E. elongata* Laube, 1868.]
E. menchikoffi Lambert, 1935c:364–365, pl. 16: figs. 10–11. [Libya, North Africa.]
E. paragoga Arnold and H. L. Clark, 1927:50–51, pl. 9: figs. 9–13. [Jamaica.]
E. rombellipsoidalis Thirring, 1936:57–58, pl. 2: figs. 13–14. [Hungary.]
E. strongyla Arnold and H. L. Clark, 1927:51, pl. 9: figs. 14–17. [Jamaica.]

UPPER EOCENE

- E. chiesai* Airaghi, 1939:273, pl. 11: figs. 8–11. [North Africa.]
E. nuevitasensis Weisbord, 1934:65–67, pl. 7: figs. 4–6. [Cuba.]

MIDDLE EOCENE

- E. africanus* de Loriol var. *tanofrei* Socin, 1946: 163–171, figs. 1a–d. [North Africa.] (Priabonian/Lutetian.)
E. barcensis Tavani, 1946:177–178, figs. 1a–b. [North Africa.] (Lower Lutetian.)
E. bombos Nisiyama, 1968:17–19, pl. 10: figs. 10–11, pl. 11: figs. 1–6, 9. [Bonin Islands, off southeast Japan.] (Lutetian.)
E. caranoi Checchia-Rispoli, 1950a[1945]:29–30, pl. 2: figs. 2, 2a–b. [Somaliland, East Africa.]
E. dubaleni Castex, 1930:32–34, pl. 3: figs. 4–6. [France.] (Upper to Middle Lutetian.)
E. ellipsoidalis d'Archiac var. *chalossensis* Castex, 1930:32. [France.] (Lutetian.)

- E. gignouxii* Lambert, 1933a:35, pl. 2: fig. 25. [Madagascar, off East Africa.] (Lutetian.)
- E. migiurtinus* Checchia-Rispoli, 1950a[1945]:24–26, pl. 1: figs. 2, 2a–b. [Somaliland, East Africa.]
- E. migliorinii* Checchia-Rispoli, 1950a[1945]:28–29, pl. 2: figs. 1, 1a–b. [Somaliland, East Africa.]
- E. newvillei* Castex, 1930:34–35, pl. 2: figs. 8–10. [France.] (Middle Lutetian.)
- E. parvula* Lambert, 1936c:31–32, pl. 3: figs. 13–15. [Madagascar, off East Africa.] (Lower Lutetian.)
- E. venzoi* Roman in Roman and Gonçalves, 1965:303. [Isle of Rhodes, southeast Aegean Sea. New name for *E. rhodiensis* Venzo, 1934, not *E. rhodiensis* Laube, 1868.] (Lutetian.)

LOWER EOCENE

- E. valettei* Lambert, 1933a:34–35, pl. 2: figs. 23–24. [Madagascar, off East Africa.]

PALEOCENE

- E. hanguensis* Davies, 1943:68–69, pl. 11: figs. 2–5. [India.]

Genus *Cylindrolampas* Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Cylindrolampas* a subjective synonym of *Echinolampas* Gray.

MIDDLE EOCENE

- Echinolampas (Cylindrolampas) migliorinii* Venzo, 1934a:127–128, pl. 12: figs. 7a–c. [Isle of Rhodes, southeast Aegean Sea.] (Lutetian.)
- E. (C.) rhodiensis* Venzo, 1934a:128–130, pl. 12: figs. 5a–b, 6a–c. [Isle of Rhodes, southeast Aegean Sea.] (Lutetian.)
- E. (C.) sandiegensis* Sánchez Roig, 1953c:151–152, pl. 5: figs. 3–4. [Cuba.]

Genus *Cypholampas* Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Cypholampas* a subjective synonym of *Echinolampas* Gray.

MIDDLE EOCENE

- Echinolampas (Cypholampas) eocenicus* Sánchez Roig, 1953c:149, pl. 5: figs. 1–2. [Cuba.]
- E. (C.) subnucleus* Venzo, 1934a:125–126, pl. 12: figs. 3a–c. [Isle of Rhodes, southeast Aegean Sea.] (Lutetian.)

Genus *Hypsoclypus* Pomel

In the *Treatise*, Kier (Durham et al., 1966:U506) considers *Hypsoclypus* a subjective synonym of *Echinolampas* Gray.

MIOCENE

- Echinolampas (Hypsoclypus) checchiai* Roman in Roman and Gonçalves, 1965:305. [Sicily, Yugoslavia, and Ukraine. New name for *Hypsoclypus lamberti* Checchia-Rispoli, 1917, not *E. lamberti* Cotteau, 1894.]
- E. (H.) deserticus* Desio, 1929:332–335, pl. 37: figs. 2a–b. [Oasis of Giarabùb, Libya, North Africa.]

MIDDLE MIOCENE

- H. fuentesi* Sánchez Roig, 1953a:55, pl. 5, pl. 6 (pars). [Cuba.]
- H. holguinensis* Sánchez Roig, 1953a:54–55, pls. 3–4 (pars). [Cuba.]

Genus *Isolampas* Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Isolampas* a subjective synonym of *Echinolampas* Gray.

MIOCENE

- Echinolampas (Isolampas) garciai* Sánchez Roig, 1952c:7, pl. 3: fig. 3. [Cuba.]

LOWER MIOCENE

- E. (I.) cavaionensis* Venzo, 1935:229–230, pl. 17: figs. 27–28. [Italy.] (Lower Aquitanian.)

UPPER OLIGOCENE

- E. (I.) globulosus* Sánchez Roig, 1952c:7–8, pl. 1: figs. 7–8. [Cuba.]

Genus *Macrolampas* Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Macrolampas* a subjective synonym of *Echinolampas* Gray.

LOWER MIOCENE

Echinolampas (*Macrolampas*) *gigas* Sánchez Roig, 1953a:55-56, pl. 3. (pars), pls. 7-8. [Cuba.]

Genus *Progonolampas* Bittner

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Progonolampas* a subjective synonym of *Echinolampas* Gray.

UPPER OLIGOCENE

Echinolampas (*Progonolampas*) *moronensis* Sánchez Roig, 1953c:152-153, pl. 6: figs. 1-2. [Cuba.]

E. (P.) tenuipetalum Sánchez Roig, 1952c:6-7, pl. 3: figs. 1-2. [Cuba.]

E. (P.) torrense Sánchez Roig, 1953c:152, pl. 5: figs. 5-6. [Cuba.]

Genus *Psammolampas* Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Psammolampas* a subjective synonym of *Echinolampas* Gray.

OLIGOCENE

Echinolampas (*Psammolampas*) *kugleri* Jeannet, 1959:201-203, pl. 2: figs. 4-6, pl. 9. [Trinidad, West Indies.]

Genus *Heteroclypeus* Cotteau

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Heteroclypeus* a subjective synonym of *Echinolampas* Gray.

MIOCENE

H. wiedenmayeri Jeannet, 1928b:220. [Locality?]

MIDDLE MIOCENE

H. wiedenmayeri Jeannet, 1928a:33-34, pl. 4: figs. 8-13, pl. 6: fig. 8. [Venezuela.] (Calcaire de Capadare.)

Genus *Hypsoheteroclypus* Szörényi

In the *Treatise*, Kier (Durham et al., 1966:U508) considers *Hypsoheteroclypus* a subjective synonym of *Echinolampas* Gray.

MIOCENE

Hypsoheteroclypus Szörényi, 1953:76-78. Type-species: *H. doma* Pomel. [Algiers, North Africa.]

H. plagiosomus Lambert *corsicanus* Szörényi 1953: 28-29, 78-79, pl. 4: figs. 1, 1a-b. [Europe.]

H. vicinoconoideus Szörényi, 1953:33, 83-84, pl. 6: figs. 2, 2a-b, 3. [Europe.]

Genus *Palaeolampas* Bell

In the *Treatise*, Kier (Durham et al., 1966:U506) considers *Palaeolampas* a subjective synonym of *Echinolampas* Gray.

EOCENE

P. alta Arnold and H. L. Clark, 1927:52-53, pl. 10: figs. 1-3. [Jamaica, West Indies.]

P. plateia Arnold and H. L. Clark, 1927:53-54, pl. 10: figs. 4-6. [Jamaica, British West Indies.]

MIDDLE EOCENE

P. elongatus Sánchez Roig, 1953a:56-57, pl. 4 (pars). [Cuba.]

Genus *Planilampas* Mortensen

In the *Treatise*, Kier (Durham et al., 1966:U508) considers *Planilampas* a subjective synonym of *Echinolampas* Gray.

RECENT

Planilampas Mortensen, 1948c:297. Type-species: *Echinolampas sternopetala* Agassiz and Clarke. [Japan.]

UPPER OLIGOCENE

P. circularis Sánchez Roig, 1953a:57, pl. 9. [Cuba.]

Genus *Progonolampas* Bittner

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Progonolampas* a subjective synonym of *Echinolampas* Gray.

MIDDLE MIOCENE

P. candeli Lambert, 1931c:52, pl. 3: fig. 10. [North Africa.] (Sahelian-Tortonian.)

UPPER OLIGOCENE

P. sanchezi Lambert in Sánchez Roig, 1949:159, pl. 19: figs. 6-7. [Cuba.]

Genus *Arnaudaster* Lambert

LOWER CRETACEOUS

A. colombianus Cooke, 1955:96, pl. 22: figs. 1-9. [Colombia.] (Upper Albian.)

Genus *Conolampas* A. Agassiz

RECENT

C. diomedea Mortensen, 1948a:95-96. [Philippine Islands.]

C. malayana Mortensen, 1948c:309-310, fig. 273c, pl. 7: figs. 4-6, pl. 13: figs. 11, 14; 1948e:68. [Kei Islands, Indonesia.]

C. murrayana Mortensen, 1948b:2-3, pl. 1: figs. 1-3. [Maldivé Islands, Indian Ocean off south India.]

Genus *Parapygus* Pomel

UPPER CRETACEOUS

P. mossoroensis Maury, 1925:500-503, pl. 24: fig. 9. [Brazil.]

Genus *Plesiolampas* Duncan and Sladen

PALEOCENE

P. auraduensis Kier, 1957b:857-858, pl. 104: figs. 2-4. [British Somaliland, East Africa.] (Lower Auradu Series.)

P. curriae Kier, 1957b:856-857, fig. 6, pl. 103: figs. 13-14. [British Somaliland, East Africa.] (Lower Auradu Series.)

Family FAUJASIIDAE Lambert**Genus *Faujasia* d'Orbigny**

UPPER CRETACEOUS

F. chelonium Cooke, 1953:14, pl. 4: figs. 11-14. [Texas, U.S.A.] (Upper Maestrichtian.)

F. eccentricipora Lees, 1928:661-662, pl. 46: figs. 2a-b. [Arabia.] (Maestrichtian.)

F. praeacutus Egorov in Dzhaliilov and Egorov, 1969:109-111, figs. 3a-e. [Tadzhik, U.S.S.R. (Central Asia).] (Upper Senonian.)

F.? *transversus* Smiser, 1935b:65, pl. 7: figs. 1a-e. [Holland.] (Maestrichtian.)

LOWER CRETACEOUS

F. araripensis Beurlen, 1966:456-458, fig. 1, pl. 1: figs. 1a-b. [Brazil.] (Albian?)

F. rancheriana Cooke, 1955:97, pl. 23: figs. 10-14. [Colombia.] (Upper Albian.)

Genus *Australanthus* Bittner

UPPER CRETACEOUS

Procassidulus (*Australanthus*) *madrugensis* Sánchez Roig, 1949:140-141, pl. 18: figs. 4-6. [Cuba.]

Genus *Domechinus* Kier

UPPER CRETACEOUS

Domechinus Kier, 1962:141-142. Type-species: *Faujasia chelonium* Cooke. [Texas, U.S.A.] (Maestrichtian.)

D. teixeirai Gonçalves in Roman and Gonçalves, 1965:270-271, figs. 2-3, pl. 2: figs. 10-11, 13. [Mozambique, southeast Africa.]

Genus *Eurypetalum* Kier

UPPER CRETACEOUS

Eurypetalum Kier, 1962:140. Type-species: *Echinolampas faujasia* Desmoulins. [Europe.] (Senonian.)

Genus *Gongrochanus* Kier

UPPER CRETACEOUS

Gongrochanus Kier, 1962:131-132. Type-species: *Cyrtoma herscheliana* M'Clelland. [India.] (Senonian.)

Genus *Hardouinia* Haime in d'Archiac and Haime

UPPER CRETACEOUS

- H. clypeus* Cooke, 1955:98-99, pl. 25: figs. 1-5. [Alabama, U.S.A.] (Santonian.)
H. mcglameryae Cooke, 1953:24, pl. 8: figs. 23-26. [Alabama, U.S.A.] (Upper Maestrichtian?)
H. potosiensis Lambert, 1936e:5-6, pl. 1: figs. 2-4. [Mexico.] (Santonian?)
H? *stetsoni* Stephenson, 1936:371-372, pl. 1: figs. 2-4. [North America.]
H. waagei Holland and Feldmann, 1967:252-255, fig. 1. [North Dakota, U.S.A.] (Maestrichtian.)

Genus *Lefortia* Cossmann

UPPER CRETACEOUS

L. trojana Cooke, 1953:17, pl. 4: figs. 8-10. [Mississippi, U.S.A.] (Middle Maestrichtian.)

Genus *Petalobrissus* Lambert

UPPER CRETACEOUS

- P. burckhardti* Lambert, 1936e:5, pl. 1: figs. 7-8. [Mexico.] (Lower Senonian.)
P. (Echinobrissus) setifensis Coquand var. *punica* Lambert, 1931c:97, pl. 4: fig. 31. [Tunis, North Africa.] (Upper Senonian.)

Genus *Pygurostoma* Cotteau and Gauthier

UPPER CRETACEOUS

P. passionensis Cooke, 1949a:1-3, fig. 1. [Central America.]

Genus *Stigmatopygus* d'Orbigny

UPPER CRETACEOUS

- S. lamberti* Besairie, 1930:228, pl. 23: figs. 1-8. [Madagascar, off East Africa.] (Upper Campanian.)
S. lehmani Gonçalves in Roman and Gonçalves, 1965:269-270, fig. 1, pl. 2: figs. 5-9, 12. [Mozambique, southeast Africa.]

Family ARCHIACIIDAE Cotteau and Triger**Genus *Archiacia* L. Agassiz**

UPPER CRETACEOUS

A. lorioli Checchia-Rispoli, 1921:26-27, pl. 9: figs. 12-13. [Tripoli, Libya, North Africa.] (Cenomanian.)

Genus *Gentilia* Lambert

UPPER CRETACEOUS

- G. chouberti* Lambert, 1937:77-78, fig. 4. [Morocco.] (Upper Cenomanian.)
G. syriensis Kier, 1962:156-157, figs. 129-131, pl. 23: figs. 5-11. [Syria.] (Cenomanian.)

Family CASSIDULIDAE L. Agassiz and Desor**Genus *Cassidulus* Lamarck**

RECENT

- C. delectus* Krau, 1960:157-159, pls. 1-4. [Brazil.]
C. infidus Mortensen, 1948c:215, pl. 2: figs. 6-8; 1948e:67. [Tropical Atlantic.]
C. mitis Krau, 1954:455-475, pls. 1-5, pl. 6: fig. 21. [Brazil.]

TERTIARY

- C. platypetalus* Arnold and H. L. Clark, 1934:144, pl. 1: figs. 3-5. [Jamaica, British West Indies.]
C. sphaeroides Arnold and H. L. Clark, 1934:144-145, pl. 1: figs. 6-8. [Jamaica, British West Indies.]

UPPER OLIGOCENE

C. rojasi Sánchez Roig, 1953c:146-147, pl. 4: figs. 3-5. [Cuba.]

UPPER EOCENE

C. ericoni Fischer, 1951:65-68, figs. 6-8, pl. 2: figs. 1-2, pl. 3: figs. 1-3. [U.S.A.]
Cassidulus (Cassidulus) trojanus Cooke, 1942:32, pl. 2: figs. 22-25. [U.S.A.]

MIDDLE EOCENE

C. mestieri Kier, 1966b:10, fig. 16, pl. 1: figs. 9-11. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)
C. senni Kier, 1966b:8-9, figs. 14-15, pl. 1: figs. 6-8. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)

PALEOCENE

C. faberi Ravn, 1927:327-329, pl. 2: figs. 4-6, 7a-d. [Denmark.] (Danian.)

UPPER CRETACEOUS

C. cubensis Weisbord, 1934:28-30, pl. 2: figs. 9-11. [Cuba.]
C. emmonsii Stephenson, 1928:7-10, pl. 3: figs. 3-8, pl. 4. [North Carolina, U.S.A.] (Maestrichtian/Upper Senonian.)
C. kellumi Stephenson, 1928:5-7, pls. 1-2, pl. 3: figs. 1-2. [North Carolina, U.S.A.] (Maestrichtian/Upper Senonian.)
C. mercedensis Anderson, 1958:85-86, pl. 6: figs. 2a-b. [California, U.S.A.]
C. taylori Warren, 1926:11, pl. 1: figs. 10-13. [Alberta, Canada.] (Birch Lake Member, Belly River Group.)

Genus *Glossaster* Lambert

In the *Treatise*, Kier (Durham et al., 1966:U514) considers *Glossaster* a subjective synonym of *Cassidulus* Lamarck.

UPPER CRETACEOUS

G. welschi Gauthier in Lambert, 1931c:74-75, pl. 3: figs. 18-19. [Algiers, North Africa.] (Maestrichtian/Upper Senonian.)

Genus *Nucleopygus* L. Agassiz

MIOCENE

N. lebescontei Tournouer var. *ancegavensis* Cottreau, 1933:545-546, pl. 27: figs. 4, 4a-b. [France.]

UPPER EOCENE

N. tamarindensis Sánchez Roig, 1952d:54, pl. 16: figs. 2-3. [Cuba.]

UPPER CRETACEOUS

N. atlanticus Kossmat *brevior* Dartevelle, 1953:51-52, pl. 5: figs. 2, 4-5, 10-11, 13. [Belgian Congo, south Central Africa.] (Turonian/Cenomanian.)
N.? *gallagheri* Richards, 1962:200-201, pl. 92: figs. 3-4. [New Jersey, U.S.A.] (Navesink Fm., Maestrichtian.)
N. geayi Cottreau, 1922a:121-122, pl. 2: figs. 10, 10a-b. [Madagascar, off East Africa.] (Maestrichtian/Danian.)
N. kailensis Gauthier in Lambert, 1931c:30, pl. 1: figs. 29-30. [North Africa.] (Cenomanian.)
N. sanctaluciae Sánchez Roig, 1952d:52-53, pl. 16: figs. 4-5. [Cuba.]

LOWER CRETACEOUS

N. piveteaui Lambert, 1931c:64-65, pl. 7: figs. 5-7. [Algiers, North Africa.] (Neocomian.)

Genus *Rhyncholampas* A. Agassiz

PLEISTOCENE/PLIOCENE

R. ayresi Kier, 1963:45-48, figs. 43-46, pl. 16: figs. 3-6. [Florida, U.S.A.] (Caloosahatchee.)

UPPER OLIGOCENE

R. cervantesi Sánchez Roig, 1949:145, pl. 36: figs. 5-6. [Cuba.]

LOWER OLIGOCENE

R. rodriguezi Lambert and Roig in Sánchez Roig, 1926:72, pl. 10: figs. 4-6. [Cuba.]

MIDDLE EOCENE

R. magnei Castex, 1947:32-33, pl. 2: figs. 5-7. [France.] (Lutetian.)

LOWER EOCENE

R. anceps Lambert, 1933a:33-34, pl. 2: figs. 17-19. [Madagascar, off East Africa.]

R. tuderii Lambert, 1937:85-86, pl. 3: figs. 6-8. [Morocco.]

Genus *Anisopetalus* Arnold and Clark

In the *Treatise*, Kier (Durham et al., 1966:U515) considers *Anisopetalus* a subjective synonym of *Rhyncholampas* A. Agassiz.

EOCENE

Anisopetalus Arnold and H. L. Clark, 1927:44-45.
Type-species: *A. ellipticus* H. L. Clark in Arnold and H. L. Clark, 1927:45-46, pl. 6: figs. 16-20. [Jamaica, British West Indies.]

MIOCENE

A. oliveirai Marchesini Santos, 1958:11-12, 19-20, pl. 2: figs. 1-4. [Brazil.]

UPPER EOCENE

A. brodermanni Sánchez Roig, 1952c:9-10, pl. 4: figs. 1-3. [Cuba.]

A. caobaense Sánchez Roig, 1952c:10-11, pl. 5: figs. 1-3. [Cuba.]

A. cookei Sánchez Roig, 1952c:8-9, pl. 4: fig. 4, pl. 5: figs. 4-5. [Cuba.]

Genus *Galerolampas* Cotteau

In the *Treatise*, Kier (Durham et al., 1966:U515) considers *Galerolampas* a subjective synonym of *Rhyncholampas* A. Agassiz.

MIDDLE EOCENE

G. murardi Gorodiski, 1951:323-325, pl. 1: figs. 8-9c. [Senegal, West Africa.] (Lutetian.)

LOWER TERTIARY

Cassidulus (Galerolampas) fontis Cooke, 1942:35, pl. 2: figs. 26-29. [U.S.A.] (Lower Eocene or Paleocene.)

Genus *Rhynchopygus* d'Orbigny

PLIOCENE

Cassidulus (Rhynchopygus) evergladensis Mansfield, 1932:48, pl. 18: figs. 1-10. [U.S.A. Kier (1962:180) placed this species with *Rhyncholampas*.]

EOCENE

R. matleyi Hawkins in Arnold and H. L. Clark, 1927:54-55, 79-80, pl. 11: figs. 3-4, pl. 22: figs. 6-8. [Jamaica, British West Indies.]

R. peruvianus Brighton, 1926b:366-369, figs. 2a-g, pl. 26: figs. a-d. [Peru.] (Atascadero Ls.)

R. punctatus Arnold and H. L. Clark, 1927:55-56, pl. 11: figs. 5-7. [Jamaica, British West Indies.]

UPPER EOCENE

C. (R.) zanolettii Sánchez Roig, 1952d:55-56, pl. 16: figs. 6-7. [Cuba.]

UPPER CRETACEOUS

R. macari Smiser, 1935b:63, pl. 6: figs. 6a-e. [Holland.] (Maestrichtian.)

Genus *Paralampas* Duncan and Sladen

In the *Treatise*, Kier (Durham et al., 1966:U515) considers *Paralampas* a subjective synonym of *Rhynchopygus* d'Orbigny.

EOCENE

P. besairiei Lambert, 1929:193, figs. 3-4. [Madagascar, off East Africa. Figured in Besairie and Lambert, 1930:114, pl. 10: figs. 5-6.]

P. conceptionis Sánchez Roig, 1953c:153-154, pl. 6: fig. 5. [Cuba.]

UPPER EOCENE

Cassidulus (Paralampas) globosus Fischer, 1951:71-72, figs. 8-10, pl. 4: figs. 1-5. [U.S.A.]

Genus *Procassidulus* Lambert

In the *Treatise*, Kier (Durham et al., 1966:U515) considers *Procassidulus* a subjective synonym of *Rhynchopygus* d'Orbigny.

RECENT

P. malayanus Mortensen, 1948c:223-226, figs. 203-209, pl. 1: figs. 27-30, pl. 11: figs. 1, 3, 6, 10, 14-15, 18-20; 1948e:67. [Kei Islands, Indonesia.]

LOWER MIOCENE

P. jeanneti Sánchez Roig, 1949:137, pl. 17: figs. 2-3. [Cuba.]

OLIGOCENE

P. zinai Airaghi, 1939:274, pl. 11: fig. 12. [North Africa.]

UPPER OLIGOCENE

P. avilensis Palmer in Sánchez Roig, 1949:134-135, pl. 4: figs. 6-8. [Cuba.]

P. brodermanni Sánchez Roig, 1949:135, pl. 17: figs. 6-7. [Cuba. Although Sánchez Roig says it is Eocene, Brodermann (1949:326) places this species in the Upper Oligocene.]

P. circularis Palmer in Sánchez Roig, 1949:139-140, pl. 17: figs. 4-5. [Cuba.]

P. echevarriai Sánchez Roig, 1953c:145, pl. 4: fig. 8. [Cuba.]

P. habanensis Sánchez Roig, 1949:138, pl. 4: fig. 5. [Cuba. Although Sánchez Roig says it is Oligocene, Brodermann (1949:326) says this species is Upper Oligocene.]

EOCENE

P. apianus Besairie and Lambert, 1930:113, pl. 9: figs. 4-6. [Madagascar, off East Africa.]

P. lambayensis Lambert in Lambert and Jacquet, 1936:351-352, pl. 22: figs. 1-3. [Senegal, West Africa.]

UPPER EOCENE

P. mooni Lambert, 1931d:202, pl. 5: figs. 8-11. [Egypt.] (Priabonian.)

PALEOCENE

P. gliberti Smiser, 1935b:60, pl. 6: figs. 3a-d. [Belgium.] (Montian.)

UPPER CRETACEOUS

Lefortia (Procassidulus) barrabei Besairie, 1930:228-229, pl. 24: figs. 4, 4a, 5. [Madagascar, off East Africa.] (Upper Senonian, probably Campanian.)

P. basseae Lambert, 1936c:24-25, pl. 2: figs. 13-15. [Madagascar, off East Africa.] (Upper Campanian.)

P. clericii Checchia-Rispoli, 1933b:18-21, fig. 8, pl. 1: fig. 16. [North Africa.] (Maestrichtian.)

P. luacesi Sánchez Roig, 1949:135-136, pl. 18: figs. 1-3. [Cuba.]

P. minutus Sánchez Roig, 1949:133, pl. 17: figs. 8-11. [Cuba.]

P. neltneri Lambert, 1931c:31-32, pl. 1: figs. 26-28. [North Africa.] (Cenomanian.)

P. simpatae Sánchez Roig, 1949:138-139, pl. 17: figs. 12-13. [Cuba.]

Family CLYPEOLAMPADIDAE Kier

Clypeolampadidae Kier, 1962:187. [Europe and India.]

Genus *Clypeolampas* Pomel

UPPER CRETACEOUS

C. toroensis Sánchez Roig, 1952d:48-49, pl. 16: fig. 1. [Cuba.] (Senonian.)

Family **PLIOLAMPADIDAE** Kier

PLIOLAMPADIDAE Kier, 1962:192.

Genus ***Pliolampas*** Pomel

UPPER MIOCENE

P. dilatatus Callegari, 1930:10–11, figs. 17–17a. [Italy.] (Helvetian.)

EOCENE

P. trevisani Checchia-Rispoli, 1936:306–307, pl. 16: figs. 3, 3a–b, pl. 17: fig. 6. [Sicily, southwest of Italy.]

MIDDLE EOCENE

P. lorioli (Fourtau) var. *excentrica* Gorodiski, 1951: 325–327, pl. 1: figs. 2–4. [Senegal, West Africa.] (Lutetian.)

Genus ***Breynella*** Gregory

In the *Treatise*, Kier (Durham et al., 1966:U517) considers *Breynella* a synonym of *Pliolampas* Pomel.

UPPER CRETACEOUS

B. baixadoleitensis Maury, 1934a:153–154, pl. 15: figs. 2–3. [Brazil, Rio Grande do Norte.] (Probably Turonian.)

Genus ***Eurhodia*** Haime

MIOCENE

E. falconensis Jeannet, 1928b:220. [Venezuela.]

MIDDLE MIOCENE

E. falconensis Jeannet, 1928a:32–33, fig. 10, pl. 4: figs. 2–7, pl. 6: fig. 7. [Venezuela.] (Couches d'Ojo de Agua, serie Capadare.)

EOCENE

E. corralesi Sánchez Roig, 1951:61, pl. 33: figs. 4–5. [Cuba.]

MIDDLE EOCENE

E. freneixae Roman and Gorodiski, 1959:21–22, pl. 2: figs. 5–9. [Senegal.] (Upper Lutetian.)

LOWER EOCENE

E.? *elbana* Cooke, 1942:36–37, pl. 5: figs. 5–8. [U.S.A.]

PALEOCENE

E. morrissi (d'Archiac) var. *salsensis* Davies and Pinfold, 1937:62–63, fig. 4c, pl. 7: figs. 20, 25. [India.] (Upper Khairabad Ls. Ranikot.)

Genus ***Gitolampas*** Gauthier

MIDDLE MIOCENE

G. sendaica Nisiyama, 1968:22–24, fig. 26a, pl. 30: figs. 3, 5–7. [Japan.] (Moniwa Fm.)

UPPER CRETACEOUS

G. lamberti Checchia-Rispoli, 1921:18–20, pl. 7: figs. 5–24, pl. 9: fig. 3. [Tripoli, Libya.] (Senonian.)

G. zuffardii Checchia-Rispoli, 1921:20–21, figs. 1–2, pl. 7: figs. 5–24, pl. 9: fig. 3. [Tripoli, Libya.] (Senonian.)

Genus ***Gitolampopsis*** Checchia-Rispoli

In the *Treatise* Kier (Durham et al., 1966:U518) considers this to be a subjective synonym of *Gitolampas*.

UPPER CRETACEOUS

Gitolampopsis Checchia-Rispoli, 1921:18–20. Type-species: *Gitolampas lamberti* Checchia-Rispoli. [Tripoli, Libya.] (Senonian.)

Genus ***Echanthus*** Cooke

In the *Treatise*, Kier (Durham et al., 1966:U518) considers *Echanthus* a subjective synonym of *Gitolampas* Gauthier.

PALEOCENE

Echanthus Cooke, 1942:37. Type-species: *E. georgiensis* Twitchell. (Clayton Fm.)

Genus *Ilarionia* Dames

EOCENE

I. deflorei Checchia-Rispoli, 1936:305–306, pl. 16: figs. 2–2a, pl. 17: figs. 7–7a. [Sicily, southwest of Italy.]

MIDDLE EOCENE

I. jeanneti Castex, 1947:33, pl. 2: figs. 8–11. [France.] (Lutetian.)

I. sindensis Duncan and Sladen *madagascariensis* Cottreau, 1935:262–264, pl. 1: figs. 5, 5a–c. [Madagascar, off East Africa.] (Lower Lutetian.)

Genus *Neocatopygus* Duncan and Sladen

MIDDLE EOCENE

N. caobaense Sánchez Roig, 1953c:154, pl. 6: figs. 3–4. [Cuba.]

Genus *Santeelampas* Cooke

MIDDLE EOCENE

Santeelampas Cooke, 1959:61. Type-species: *Catopygus oviformis* Conrad. [South Carolina, U.S.A.]

Genus *Studeria* Duncan

UPPER OLIGOCENE

S. rositae Sánchez Roig, 1953c:147, pl. 4: figs. 6–7. [Cuba.]

Genus *Tristomanthus* Bittner

In the *Treatise*, Kier (Durham et al., 1966:U520) considers *Tristomanthus* Bittner a subjective synonym of *Studeria* Duncan.

PLIOCENE

Pliolampas (*Tristomanthus*) *elevatus* Martin in Jeannet and Martin, 1937:268–269, figs. 48a–c. [Dutch East Indies, West Pacific Ocean.]

P. (T.) javanus Jeannet in Jeannet and Martin, 1937:267–268, figs. 46a–d, 47a–c. [Dutch East Indies, West Pacific Ocean.]

MIOCENE

T. podjarkovi Szörényi, 1953:25–26, 74–75, pl. 4: figs. 4, 4a–b. [Ukraine.]

T. podolicus Szörényi, 1953:26, 75–76, pl. 6: figs. 6, 6a–b. [Ukraine.]

Genus *Termieria* Lambert

PALEOCENE

Termieria Lambert, 1931c:30–31. Type-species: *T. henrici* Lambert, 1931c:31, pl. 1: figs. 31–35. [North Africa, Morocco.] (Danian.)

Genus *Zuffardia* Checchia-Rispoli

UPPER CRETACEOUS

Z. cerullii Checchia-Rispoli, 1933a:4–8, pl. 1: figs. 1–4. [North Africa.] (Maestrichtian.)

Family APATOPYGIDAE Kier**Genus *Apatopygus* Hawkins**

RECENT

A. occidentalis H. L. Clark, 1938:425–428, fig. 36, pl. 28: figs. 1–3. [Western Australia.]

Family Uncertain**Genus *Astropygaulus* Checchia-Rispoli**

UPPER CRETACEOUS

Astropygaulus Checchia-Rispoli, 1945[1943]:82–85. Type-species: *A. trigonopygus* Checchia-Rispoli, 1945[1943]:82–85, figs. 1–2, pl. 2: figs. 1–2. [Somaliland, East Africa.] (Cenomanian.)

Genus *Centropygus* Ebray

MIDDLE JURASSIC

C. pictaviensis Lambert, 1935a:530-531, 1 fig., pl. 26: figs. 12-15. [France.] (Callovian.)

Genus *Echinanthus* Leske

EOCENE

E. ? varnensis Gočev, 1933: 52-53, fig. 9, pl. 7: figs. 1-2. [Bulgaria.]

MIDDLE EOCENE

E. neuvillei Castex, 1930:29-30, pl. 1: figs. 9-12. [France.] (Upper Lutetian.)

E. reguanti Roman and Villatte in Reguant, Roman and Villatte, 1970:903-905, figs. 4B, 5, pl. 33: figs. 9-11. [N 4 km from the road to Sau, province of Barcelone, Spain.] (Lower Biarritzian.)

LOWER EOCENE

E. basseae Lambert, 1936c:31, pl. 3: figs. 27-30. [Madagascar, off East Africa.] (Lower Lutetian.)

UPPER CRETACEOUS

E. pumilus Duncan and Sladen var. *abiadensis* Lees, 1928:662, pl. 46: fig. 3. [Arabia.] (Maestrichtian.) These species probably should be referred to *Gitolampas*. See Kier (1962:226) for a discussion of *Echinanthus*.

Genus *Lovenilampas* Maury

UPPER CRETACEOUS

Lovenilampas Maury, 1934b:3-5. Type-species: *Lovenia baixadoleitensis* Maury, 1934b:3-5, fig. 1. [Brazil.]

Order HOLASTEROIDA Durham and Melville**Family COLLYRITIDAE d'Orbigny****Subfamily COLLYRITINAE Beurlen**

COLLYRITINAE Beurlen, 1934:63-64, fig. 8. [Europe.]

Genus *Collyrites* Desmoulins

UPPER JURASSIC

C. segestina Checchia-Rispoli, 1940b:23-25, fig. 1. [Sicily, southwest of Italy.]

MIDDLE JURASSIC

C. tuarkyrensis Poretskaya, 1968b:286-287, figs. 37-38, pl. 67: figs. 1a-e. [Nedr, U.S.S.R.] (Callovian.)

Genus *Cardiopelta* Pomel

UPPER JURASSIC

Collyrites (Cardiopelta) bicordata (Leske) var. *baltica* Beurlen, 1934:91. [Europe.] (Oxfordian.)

C. (C.) capistrata Goldfuss mut. *antecedens* Beurlen, 1934:92, fig. 14c. [Europe.] (Oxfordian.)

MIDDLE JURASSIC

C. (C.) bicordata (Leske) primitiva Jesionek-Szymańska, 1963:375-378, 403, 414, text-pl. 11: figs. 1-9, pl. 6: figs. 2a-c, 3. [Poland.] (Upper Callovian.)

Genus *Orbignyana* Ebray

MIDDLE JURASSIC

O. quenstedti Beurlen, 1934:49-50, fig. 2c. [Europe.] (Bathonian.)

Genus *Pygorhytis* Pomel

MIDDLE JURASSIC

P. ovalis Leske var. *dimota* Vialov, 1930:868. [Asiatic Russia.] (Callovian.)

P. ringens Agassiz *wiekensis* Jesionek-Szymańska, 1963:362-363, 403, 414, text-pl. 7: figs. 1-5, pl. 5: figs. 2a-d. [Poland.] (Upper Callovian.)

Order DISASTEROIDA Mintz

DISASTEROIDA Mintz, 1968:1287-1288.

Family DISASTERIDAE A. Gras

Genus *Disaster* Agassiz

LOWER CRETACEOUS

D. dallonii Lambert, 1931c:62, pl. 3: fig. 1. [Algiers, North Africa.] (Berriasian.)

Genus *Collyropsis* Gauthier

UPPER JURASSIC

Collyropsis (Collyropsis) Beurlen, 1934:130-131.
Type-species: *Collyropsis (Collyropsis) carinata* Leske. [Europe.]

Genus *Procollyropsis* Beurlen

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U527) consider *Procollyropsis* a subjective synonym of *Collyropsis*.

MIDDLE JURASSIC

Collyropsis (Procollyropsis) Beurlen, 1934:129.
Type-species: *Disaster platypygus* Quenstedt. [Europe.]

Family ACROLUSIIDAE Mintz

ACROLUSIIDAE Mintz, 1968:1278. Type-genus: *Acrolusia* Lambert.

Family TITHONIIDAE Mintz

TITHONIDAE Mintz, 1968:1278.

Genus *Corthya* Pomel

UPPER EOCENE

C. ambayraci Lambert, 1924a:5-7, figs. 1-3. [France.] (Bartonian.)

Genus *Oustechinus* Lambert

UPPER JURASSIC

Oustechinus Lambert, 1931c:92-93. Type-species: *O. basscae* Lambert, 1931c:93, fig. 7, pl. 3: figs. 31-32. [Tunis, North Africa.] (Tithonian.)

Genus *Tithonia* Pomel

LOWER CRETACEOUS

T. arctica Jeannet, 1955:553-555, fig. 1, pl. 25: figs. 1-5. [Greenland.] (Valanginian.)

UPPER JURASSIC

T. houdardi Lambert, 1933c:179-180, pl. 7: fig. 18. [France.] (Oxfordian.)
T. solignaci Lambert, 1931c:92, fig. 6, pl. 3: fig. 34. [Tunis, North Africa.] (Tithonian.)

MIDDLE JURASSIC

T. blondeti Démoly and Lambert in Démoly, 1928: 140, pl. 1: figs. 4-8. [France.] (Bathonian.)
Metaporinus (Tithonia) praeconvexa Jesionek-Szymańska, 1963:390-395, 403, 414, text-pl. 1: figs. 2, 9, text-pl. 13: figs. 4-12, text-pl. 14: figs. 1-9, pl. 7: figs. 2a-d, 3a-b. [Poland.] (Upper Callovian.)

Family HOLASTERIDAE Pictet

Genus *Holaster* Agassiz

UPPER CRETACEOUS

H. feralis Cooke, 1953:26-27, pl. 9: figs. 1-5, pl. 10: fig. 7. [Colorado, U.S.A.] (Turonian.)
H. feruglioi Melinossi, 1935:32-39, figs. 1a-b, 2. [South America.]
H. hermitei Vidal, 1921:12-13, pl. 2: fig. 3, pl. 3: fig. 3, pl. 4: fig. 8. [Spain.] (Santonian.)
H. lorioli Blanckenhorn, 1925[1924]:96. [Palestine, Israel.] (Upper Cenomanian.)
H. marinellii Stefanini, 1928:177-178, pl. 20: figs. 10a-f. [Karakorum, Mongolia.] (Cenomanian.)

H. mortenseni Bernasconi, 1954:397-400, pl. 1.
[Tierra del Fuego, Argentina.] (Senonian?)

LOWER CRETACEOUS

- H. clypeatulus* Nisiyama, 1950b:35-36, figs. 1-3, pl. 4: figs. 8-9. [Japan.] (Albian/Aptian.)
H. lerichei Darteville, 1953:131-135, fig. 40, pl. 9: figs. 1-4. [Angola, southwest Africa.] (Upper Albian.)
H. vanhoepeni Besairie and Lambert, 1930:115-116, pl. 10: figs. 1-2. [Zululand, East Africa.] (Albian.)

Genus *Basseaster* Lambert

UPPER CRETACEOUS

Basseaster Lambert, 1936c:25. Type-species: *B. rostratus* Lambert, 1936c:25, pl. 3: figs. 8-12, pl. 4: fig. 10. [Madagascar, off East Africa.] (Maestrichtian.)

Genus *Cardiaster* Forbes

UPPER CRETACEOUS

- C. deciper* Cooke, 1953:27-28, pl. 10: figs. 3-6. [Arkansas, U.S.A.] (Lower Maestrichtian.)
C. hilli Cooke, 1958:50-51, pl. 7: figs. 9-14. [New Jersey, U.S.A.]
C. leonensis Stephenson, 1941:62-63, pl. 5: figs. 4-7, pl. 6: figs. 5-6. [U.S.A.] (Navarro Group. Maestrichtian.)
C. moabiticus Blanckenhorn, 1925[1924]:96, pl. 7: fig. 24. [Palestine, Israel.] (Santonian.)
C. palmeri Sánchez Roig, 1949:172-173, pl. 5: figs. 3-5. [Cuba.]
C. perorientalis Nisiyama, 1968:151-152, pl. 18: figs. 6-7. [Japan.] (Maestrichtian/Senonian.)

LOWER CRETACEOUS

C. kelleri Haughton, 1924:99-100. [Angola, southwest Africa. See Haughton (1925:279-280) for English translation.] (Upper Albian.)

Genus *Echinocorys* Leske

PALEOCENE

- E. legindensis* Wind, 1959:125, pl. 2: figs. 1-6. [Denmark.] (Danian.)
E. obliquus Ravn *assymetrica* Kongiel, 1935:205(37), pl. 7: figs. 1a-b, 2a-c, 3. [Poland.] (Danian.)
E. obliquus Ravn *lata* Kongiel, 1935:204(36), pl. 6: figs. 4a-c. [Poland.] (Danian.)
E. obliquus Ravn var. *recta* Kongiel, 1935:205(37), pl. 7: figs. 4a-d. [Poland.] (Danian.)
E. pentagonalis Kongiel, 1949:32-34, figs. 34-61, pl. 17: figs. 8-11, pl. 18: figs. 1-8. [Poland.] (Danian.)
E. semiglobosus Kongiel, 1949:29-30, figs. 34-61, pl. 15: fig. 12, pl. 16: figs. 1-4. [Poland.] (Danian.)

CRETACEOUS

- E. ovatus* Leske var. *cubensis* Sánchez Roig, 1926:88-89, pl. 11: fig. 6, pl. 12: fig. 4. [Cuba.]
E. sulcatus Goldfuss *hannae* Köster, 1950:440-452, figs. 1a-e, 2a-e, 3a-c, 5-6. [Germany.]

UPPER CRETACEOUS

- E. belgicus* Lambert var. *pruvosti* Smiser, 1935a:30, pl. 2: figs. 2a-d. [Belgium.] (Senonian.)
E. darderi Lambert, 1935b:363-364, pl. 42: figs. 1-2. [Spain.] (Maestrichtian.)
E. edhemi Böhm, 1927:193-194, pl. 12: fig. 1a. [Bithynia, Asia Minor.] (Senonian.)
E. gravesi Desor var. *rossiensis* Kongiel, 1936b: 2-6, pl. 1: figs. 3a-b, pl. 2: figs. 1-4, pl. 3: figs. 1-4. [Poland.]
E. katsharavai Tzaghareli, 1949:179-180, 259-260, fig. 1, pl. 13: figs. 1-3. [Georgia, U.S.S.R.]
E. lamberti Smiser, 1935a:32-33, figs. 14a-b, pl. 2: figs. 3a-d, 4a-d. [Belgium.] (Senonian.)
E. mamontoffi Charles in Lambert and Charles, 1937:386-388, pl. 9: figs. 9-11. [Asia Minor.]
E. ogormani Lambert in Lambert and Charles, 1937:393, fig. 6. [France.]
E. ovatus Leske *cubensis* Sánchez Roig, 1949:175-176, pl. 4: figs. 3-4. [Cuba.]
E. ovatus Leske *villarensis* Sánchez Roig, 1949:176, pl. 21: figs. 1-2. [Cuba.]

- E. pustolosus* (Leske) *daniensis* Wind, 1959:127–128. [Denmark.] (Senonian.)
- E. renngarteni* Moskvín, 1959:260–261, fig. 65, pl. 10: figs. 2a–c. [Caucasus, U.S.S.R.]
- E. sumbaricus* Djabarov, 1968:288–289, fig. 39, pl. 67: figs. 2a–e. [Nedr, U.S.S.R.]
- E. tenuituberculatus* Leymerie var. *madagascariensis* Besairie, 1930:227, pl. 25: figs. 1, 1a–b. [Madagascar, off East Africa.] (Lower Maestrichtian.)
- E. yoloensis* Anderson, 1958:85, pl. 6: figs. 1a–d. [California, U.S.A.] (Lower Senonian.)

Genus *Ananchites* Lamarck

Wagner and Durham (Durham et al., 1966:U528) consider *Ananchites* a subjective synonym of *Echinocorys* Leske.

CRETACEOUS

- A. argentinus* de Saez, 1930:58–60, 2 figs. [Argentine. De Saez refers to the genus as *Ananchytes*.]
- A. austriaca* Traub, 1938:39–40, pl. 1: figs. 8a–c. [Germany.]

Genus *Galeola* Quenstedt

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U528) consider *Galeola* a subjective synonym of *Echinocorys* Leske.

UPPER CRETACEOUS

- G. papillosa* Quenstedt *basiplana* Ernst, 1970:55, fig. 6. [Northwest Germany.] (Upper Campanian.)

Genus *Spatagoides* Bayle

UPPER CRETACEOUS

- S. aichinoi* Checchia-Rispoli, 1931:3–6, fig. 1, pl. 1: figs. 4–6. [Cirenaica, East Libya.] (Maestrichtian.)
- S. martellii* Checchia-Rispoli, 1931:7–11, fig. 2, pl. 1: figs. 1–3. [Cirenaica, East Libya.] (Maestrichtian.)
- S. striatoradiatus* Leske var. *conicus* Smiser, 1935b: 71, pl. 8: fig. 1g. [Holland.] (Maestrichtian.)
- S. striatoradiatus* Leske var. *depressus* Smiser, 1935b: 71–72, pl. 8: fig. 1h. [Holland.] (Maestrichtian.)

- S. striatoradiatus* Leske var. *elevatus* Smiser, 1935b: 71, pl. 8: fig. 1e. [Holland.] (Maestrichtian.)
- S. tripolitanus* Checchia-Rispoli, 1931:11–14, fig. 3, pl. 1: figs. 7–8. [Cirenaica, East Libya.] (Maestrichtian.)

Genus *Galeaster* Seunes

PALEOCENE

- G. carinatus* Ravn, 1927:342–343, pl. 2: figs. 9a–d. [Denmark.] (Danian.)
- G. dagestanensis* Poslavskaia and Moskvín, 1960: 59–60, fig. 9, pl. 2: figs. 6a–e. [Southern U.S.S.R.]

UPPER CRETACEOUS

- G.?* *muntschiensis* Tzaghareli, 1949:183–184, 260–261, fig. 2, pl. 13: figs. 6–8. [Georgia, U.S.S.R.]

Genus *Hagenowia* Duncan

UPPER CRETACEOUS

- H. blackmorei* Wright and Wright, 1949:467–470, figs. 14–16. [England.] (Senonian.)
- H. infulasteroides* Wright and Wright, 1949:470–472, figs. 17–18. [England.] (Senonian.)

Genus *Martinosigra* Nielson

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U530) consider this genus an objective synonym of *Hagenowia* Duncan.

UPPER CRETACEOUS

- Martinosigra* Nielsen, 1942:163. Type-species: *Cardiaster rostratus* Forbes. [Europe.] (Senonian.)
- M. elongata* Nielsen, 1942:163–166, pl. 2: fig. 2. [Denmark.] (Senonian.)

Genus *Hemipneustes* Agassiz

NEOGENE

- H. striatoradiatus* d'Orbigny var. *giganteus* Tzan-kov, 1930:27–29, 71, fig. 1, pl. 1: figs. 1–3. [Bulgaria.] (Aturien.)

UPPER CRETACEOUS

- H. nicklesi* Vidal, 1921:10–11, figs. 1–2, pl. 2: fig. 1, pl. 3: fig. 1. [Spain.] (Campanian.)
H. perrieri Cottreau, 1935:261–262, pl. 1: figs. 4, 4a–b. [Madagascar, off East Africa.] (Maestrichtian.)
H. sardanyolae Vidal, 1921:11–12, figs. 3–4, pl. 2: fig. 2, pl. 3: fig. 2. [Spain.] (Campanian.)
H. zuffardii Checchia-Rispoli, 1921:30–31, pl. 9: figs. 8–11. [Tripoli, Libya.] (Senonian.)

Genus *Ismidaster* Böhm

UPPER CRETACEOUS

- Ismidaster* Böhm, 1927:194–195. Type-species. *I. toulai* Böhm, 1927:194–195, pl. 11: figs. 3a–c. [Bithynia, Asia Minor.] (Senonian.)

Genus *Labrotaxis* Casey

LOWER CRETACEOUS

- Holaster* (*Labrotaxis*) Casey, 1960:260–261. Type-species: *H. (L.) cantianus* Casey, 1960:261–263, fig. 1, pl. 44: figs. 1–4. [Kent, southeast England.] (Lower Albian.)

Genus *Lampadaster* Cotteau

UPPER CRETACEOUS

- L. lamberti* Tzankov, 1934:211–212, 220, pl. 4: figs. 1a–b, 2a–b. [Bulgaria.] (Maestrichtian.)

Genus *Pseudananchys* Pomel

UPPER CRETACEOUS

- P. rydzewski* Kongiel, 1936a:4–5, 9. [Poland.] (Maestrichtian.)
P. stephensoni Cooke, 1953:26, pl. 9: figs. 6–9. [Texas, U.S.A.] (Santonian?)

Genus *Pseudholaster* Pomel

LOWER CRETACEOUS

- P. androaviensis* Lambert, 1933a:17, pl. 2: fig. 26. [Madagascar, off East Coast of Africa.] (Albian.)

Genus *Pseudofaster* Lambert

CRETACEOUS

- P. schmidti* Moskvin, 1959:270, fig. 79, pl. 17: figs. 1a–c. [Caucasus, U.S.S.R.]

UPPER CRETACEOUS

- P. renngarteni* Schmidt, 1938:80–82, pl. 25: figs. 1a–5, pl. 26: figs. 1a–3. [U.S.S.R.] (Maestrichtian.)

Genus *Rispolia* Lambert

UPPER CRETACEOUS

- R. cottreaui* Besairie and Lambert, 1930:107–108, pl. 9: fig. 1. [Madagascar, off East Africa.] (Maestrichtian.)

Genus *Stegaster* Pomel

UPPER CRETACEOUS

- S. novoi* Lambert, 1931a:M6–M7, fig. 1, pl. 1: figs. 1–4. [Spain.] (Aturien.)

UPPER CRETACEOUS

- S. charlesi* Lambert, 1931a:M7, fig. 3, pl. 1: figs. 8–9. [Asia Minor.] (Maestrichtian.)
S. mairei Lambert, 1931a:M8, fig. 2, pl. 1: figs. 12–13. [West Africa.]
S. zonarius Lambert, 1931a:M7–M8, pl. 1: fig. 7. [Daghestan, Asiatic Russia.] (Upper Senonian.)

Genus *Seunaster* Lambert in Blayac

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U533) consider *Seunaster* a subjective synonym of *Stegaster* Pomel.

UPPER CRETACEOUS

- S. georgicus* Rouchadzé, 1940:95–97, 143–144, 164–165, figs. 4a–d, pl. 1: figs. 2a–e. [Georgia, U.S.S.R.] (Maestrichtian/Campanian.)

- S. georgicus* Rouchadzé *lata* Rouchadzé, 1940:97, 143–144, 164–165, fig. 4d, pl. 1: figs. 2a–e. [Georgia, U.S.S.R.] (Maestrichtian/Campanian.)
- S. lamberti* Charles in Lambert and Charles, 1937: 383–384, pl. 8: figs. 6–8. [Asia Minor.] (Maestrichtian.)
- S. lazicus* Rouchadzé, 1940:97–98, 144, 165, figs. 5a–c, pl. 1: figs. 3a–e. [Georgia, U.S.S.R.] (Maestrichtian/Campanian.)

Suborder URECHININA H. L. Clark

RECENT

URECHININA H. L. Clark, 1925a:185. [In the *Treatise* Durham (Durham et al., 1966:U277) states: "The suborder Urechinata was proposed by H. L. Clark (1946) for irregular echinoids with a sternum in which the 'labrum [is] followed by a single plate.' As defined, this suborder includes some but not all of the Holasteroidea as proposed subsequently by Durham and Melville (1957)." This taxon is not used in the *Treatise*.]

Family URECHINIDAE Duncan

Genus *Chelonechinus* Bather

MIOCENE

Chelonechinus Bather, 1934:808, 860–861. Type-species: *C. suvae* Bather, 1934:808–809, 811–832, 861, figs. 1–12, pls. 108–110. [Fiji Islands, South Pacific Ocean.]

UNKNOWN

C. javanensis Bather, 1934:809, 835, 862, fig. 16. [Java, South Pacific, Malay Archipelago.]

Genus *Plexechinus* A. Agassiz

RECENT

P. spectabilis Mortensen, 1948a:110–111. [Philippine Islands.]

Genus *Sternopatagus* de Meijere

RECENT

S. sinensis Bather, 1934:847–848. [China Sea.]

Order POURTALESIOIDA Mintz

POURTALESIOIDA Mintz, 1968:1287–1288.

Family POURTALESIIDAE A. Agassiz

Genus *Pourtalesia* A. Agassiz

RECENT

- P. aurorae* Koehler, 1926:43–48, pl. 105: figs. 1–8, pl. 121: fig. 3. [Antarctic.]
- P. debilis* Koehler, 1926:49–51, pl. 105: fig. 9, pl. 106: figs. 1–10, pl. 122: fig. 1. [Antarctic.]
- P. laguncula* A. Agassiz *beringiana* Baranova, 1955: 340–341, fig. 5. [Bering Sea.]

Family STENONASTERIDAE Lambert

Genus *Stenonaster* Lambert

AGE UNKNOWN

S. douvillei Lambert, 1928d:263–265, figs. 1–2. [France. *Stenonaster* Lambert 1922 replaces *Stenocorys* Lambert and Thiéry, 1917, (not Burmeister, 1835, nor Rambur, 1839) proposed to replace *Stenonia* Desor, 1858, (not Gray, 1853). Found with *Jeronia pyrenaica* and *Echinocorys douvillei* in the "carriere Bourda de la 'Costa Blanche', a l'Est de Mousis, 2 km à l'W de Lasseube."]

Family SOMALIASTERIDAE Wagner and Durham

Genus *Somaliaster* Hawkins

UPPER CRETACEOUS

Somaliaster Hawkins, 1935a:53, 56. Type-species: *S. magniventer* Hawkins, 1935a:53–56, figs. 8–14, pl. 7: figs. 2a–c, 3a–c. [Somaliland, East Africa.] (Upper Senonian.)

S. magniventer Hawkins var. *checcchiai* Maccagno, 1941:93-95, pl. 11: figs. 10-11. [North Africa.] (Senonian.)

Genus *Brightonia* Kier

PALEOCENE

Brightonia Kier, 1957b:871-872. Type-species: *B. macfadyeni* Kier, 1957b:872-873, fig. 13, pl. 104: figs. 12-13. [British Somaliland, East Africa.] (Lower Auradu Series.)

Genus *Leviechinus* Kier

PALEOCENE

Leviechinus Kier, 1957b:873-874. Type-species: *Pericosmus gregoryi* Currie. [British Somaliland, East Africa.] (Lower Auradu Series.)

Family Uncertain

Genus *Coraster* Cotteau

PALEOCENE

C. vilanovae Cotteau var. *alapiensis* Lambert in Flandrin, 1929:344-345, pl. 2: figs. 3a-c, 4a-c. [Asia Minor.] (Danian.)

PALEOCENE/UPPER CRETACEOUS

C. deleau Lambert in Deleau, 1938:186, pl. 5: fig. 2. [Algiers, North Africa.] (Danian-Maestrichtian.)

CRETACEOUS

C. caucasicus Moskvina, 1959:276-277, fig. 87, pl. 18: figs. 3a-c. [Caucasus, U.S.S.R.]

C. cubanicus Moskvina, 1959:277, fig. 88, pl. 18: figs. 4a-c. [Caucasus, U.S.S.R.]

UPPER CRETACEOUS

C. ansaltensis Moskvina, 1959:279, fig. 91, pl. 18: figs. 7a-c. [Dagestan and Turkmenistan, U.S.S.R.]

C. frechi Böhm, 1927:195-196, pl. 12: figs. 5a-b. [Bithynia, Asia Minor.] (Senonian.)

C. manuelitae Sánchez Roig, 1952c:12, pl. 6: figs. 8-9. [Cuba.] (Senonian.)

Genus *Corechinus* Kongiel

PALEOCENE

Corechinus Kongiel, 1936a:3-4, 8-9. Type-species: *C. pulaviensis* Kongiel, 1936a:3-4, 8-9. [Poland. Figured in Kongiel, 1935: pl. 1: fig. 4, pl. 2: figs. 6a-c.] (Middle siwak. Danian.)

Genus *Turanglaster* Solovyev and Melikov

UPPER CRETACEOUS

Turanglaster Solovyev and Melikov, 1963:107. Type-species: *T. nazkii* Solovyev and Melikov, 1963:107-109, fig. 1, pl. 10: figs. 1-2. [Turkmen and Azerbaijan, U.S.S.R.]

Order SPATANGOIDA Claus

Genus *Pictaviechinus* Mintz

MIDDLE JURASSIC

Pictaviechinus Mintz, 1967:2747. Type-species: *Pygomalus* [sic] *pictaviensis* Lambert and Thiéry. [Mintz referred *Pygomalus pictaviensis* Lambert and Thiéry to a new genus, *Pictaviechinus*, but included no description of the genus. *Pictaviechinus* is, therefore, a nomen nudum.] (Bathonian.)

Suborder TOXASTERINA A. G. Fischer

Family TOXASTERIDAE Lambert

Genus *Toxaster* L. Agassiz

UPPER CRETACEOUS

T. millosevichi Checchia-Rispoli, 1936:300-302, pl. 16: figs. 1-1a, pl. 17: fig. 3. [Sicily, southwest of Italy.] (Cenomanian.)

LOWER CRETACEOUS

- T. gabrieli* Denizot, 1935:141-142, pl. 5: fig. 3. [France.] (Upper Hauterivian.)
- T. laffitei* Devriès, 1960:21-22, pl. 5: figs. 10-20, pl. 35: figs. 15-16. [Algeria, North Africa. Mintz (1967:2748) referred *Toxaster laffitei* to a new genus *Devriesia* Mintz but included no description of the genus. *Devriesia* is, therefore, a nomen nudum.] (Berriasian.)
- T. mattaueri* Devriès, 1960:21, pl. 5: figs. 1-9, pl. 35: fig. 2. [Algeria, North Africa.] (Aptian.)
- T. maurus* Lambert, 1931c:40-41, pl. 2: figs. 13-15. [North Africa.] (Hauterivian.)
- T. sanchuensis* Tanaka, 1965:131-133, figs. 3a-c, pl. 15: figs. 5a-b, 6a-b, pl. 16: figs. 1a-c, 2a-c. [Japan.] (Neocomian.)

Genus *Pliotoxaster* Fourtau

Fischer (Durham et al., 1966:U551), in the *Treatise*, considers *Pliotoxaster* a subjective synonym of *Toxaster*.

LOWER CRETACEOUS

- P. inflatus* Smiser, 1936:465, pl. 63: figs. 1, 4, 15, 23-25. [Texas, U.S.A.] (Comanchean.)

Genus *Allotoxaster* Nisiyama

UPPER JURASSIC

- Allotoxaster* Nisiyama, 1968:181-182. Type-species: *Toxaster tosaensis* de Loriol. [Japan.] (Callovian-Tithonian.)

Genus *Aphelaster* Lambert

LOWER CRETACEOUS

- A. serotinus* Tanaka and Shibata, 1961:70-72, figs. 1-2, pl. 10: figs. 1-6. [Japan.] (Barremian/Hauterivian.)

Genus *Dowillaster* Lambert

LOWER CRETACEOUS

- D. hourcqii* Collignon, 1950:11-12, pl. 2: figs. 2-3. [Madagascar, off East Africa.] (Albian.)

Genus *Heteraster* d'Orbigny

LOWER CRETACEOUS

- H. adkinsi* Lambert, 1927a:270. [Texas, U.S.A.] (Comanche Series.)
- H. aguilerai* Buitron, 1970:32-34, pl. 7: figs. 1-5. [Barranca Salitriillo, San Juan Raya, Puebla, Mexico.]
- H. alencasterae* Buitron, 1970:34-35, pl. 6: figs. 1-6. [Barranca Salitriillo, San Juan Raya, Puebla, Mexico.]
- H. cesarensis* Cooke, 1955:101, pl. 24: figs. 1-4. [Colombia.] (Neocomian.)
- H. checchiai* Alberti, 1950:133-135, pl. 1: figs. 1-12. [Italian Somaliland, Africa.]
- H. danubiensis* Chiriac, 1956:87-88, pl. 10: figs. 1a-d, E. [Rumania.] (Aptian.)
- H. mattaueri* Devriès, 1960:62-63, pl. 13: figs. 1-11. [Algeria, North Africa.] (Upper Albian.)
- H. nexilis* Nisiyama, 1950a:42-44, figs. 1-3. [Japan.] (Neocomian.)

UPPER JURASSIC

- H. musandamensis* Lees, 1928:642-643, figs. 9-10, pl. 44: figs. 4a-b. [Arabia.]

Genus *Enallaster* d'Orbigny

In the *Treatise*, Fischer (Durham et al., 1966:U553) considers *Enallaster* a subjective synonym of *Heteraster* d'Orbigny.

LOWER CRETACEOUS

- E. roscheni* Richards, 1947:39-40, pl. 2: figs. 4-6. [Peru.] (Aptian.)
- E. transiens* Devriès, 1956a:254-260, pl. 1-3. [Algeria, North Africa.] (Albian.)
- E. yuasensis* Tanaka and Okubo, 1954:223-224, pl. 7: fig. 6. [Japan.] (Barremian.)

Genus *Epiaster* d'Orbigny

In the *Treatise*, Fischer (Durham et al., 1966:U553) considers *Epiaster* a subjective synonym of *Heteraster* d'Orbigny.

UPPER EOCENE

- E. angolensis* Haughton, 1924:101, pl. 4: fig. 5.
[Angola, southwest Africa.]

UPPER CRETACEOUS

- E. africanus* Checchia-Rispoli, 1947a:17-18, pl. 1: figs. 1-1a. [Somaliland, East Africa.] (Cenomanian.)
E. caranoi Checchia-Rispoli, 1947a:16-17, pl. 2: figs. 4-4a. [Somaliland, East Africa.] (Cenomanian.)
E. carvalhoi Darteville, 1953:142-143, pl. 10: figs. 1-2. [Angola, southwest Africa.] (Senonian?)
E. chiapasensis Lambert, 1935d:370-371, pl. 16: fig. 22. [Mexico.] (Lower Senonian.)
E. migliorinii Checchia-Rispoli, 1947a:19-20, pl. 1: figs. 5-7. [Somaliland, East Africa.] (Cenomanian.)
E. ovalis Checchia-Rispoli, 1947a:14-15, pl. 2: fig. 5. [Somaliland, East Africa.] (Cenomanian.)
E. pulcher Checchia-Rispoli, 1947a:20-21, pl. 1: figs. 4, 4a-b. [Somaliland, East Africa.] (Cenomanian.)
E. somaliensis Checchia-Rispoli, 1947a:11-14, pl. 1: figs. 2-3, pl. 2: figs. 1-3. [Somaliland, East Africa.] (Cenomanian.)
E. somaliensis Checchia-Rispoli var. *rotundata* Checchia-Rispoli, 1947a:13, pl. 1: fig. 2. [Somaliland, East Africa.] (Cenomanian.)
E. trauthi Kühn, 1925:182-183, 186-187, pl. 11: figs. 5-6. [Austria.] (Maestrichtian?)
E. variabilis Kühn, 1925:181-182, 186-187, pl. 11: figs. 2-4. [Austria.] (Maestrichtian?)

LOWER CRETACEOUS

- E. alpinus* Lambert and Jeannet, 1928b:116. [France.] (Albian?)
E. angolensis Haughton, 1925:281, pl. 15: fig. 5. [Angola, southwest Africa.] (Upper Albian?)
E. besairiei Lambert, 1933a:18-19, pl. 3: fig. 4. [Madagascar, off East Africa.] (Middle Albian.)
E. boipebensis Brito, 1964:7-8, pl. 1: fig. 1, pl. 2: fig. 3. [Brazil.] (Albian.)
E. blanckenhorni Blanckenhorn, 1925[1924]:98-99, pl. 8: figs. 26-27. [Palestine, Israel.] (Albian.)
E. dartoni Cooke, 1955:108-109, pl. 28: figs. 1-10. [New Mexico, U.S.A.] (Aptian?)

- E. fourtaui* Lambert, 1931d:190, pl. 6: figs. 5-6. [Egypt.] (Aptian?)
E. jeanneti Collignon, 1950:13-14, pl. 2: figs. 4, 4a-b. [Madagascar, off East Africa.] (Albian.)
E. mortenseni Checchia-Rispoli, 1947a:10-11, pl. 1: figs. 8-9. [Somaliland, East Africa.] (Albian.)
E. renfroae Cooke, 1955:109, pl. 29: figs. 1-4. [Texas, U.S.A.] (Upper Albian?)
E. toxasteroides Lobacheva and Poretskaya, 1967:182-185, figs. 1-2, pl. 1: figs. 1-9. [Turkmen, U.S.S.R.] (Upper Barremian to lower Aptian.)

Genus *Isomicraster* Lambert

CRETACEOUS

- I. brueti* Lambert, 1931c:101-102, pl. 4: figs. 8-9. [Tunis, North Africa.] (Aturien.)

UPPER CRETACEOUS

- I. danei* Cooke, 1953:29, pl. 11: figs. 11-13. [Arkansas, U.S.A.] (Campanian/Santonian?)
I. faasi Rouchadzé, 1940:124-125, 153-154, 173-174, figs. 16-17, pl. 3: figs. 4a-c. [Georgia, U.S.S.R.]
I. gregalis Böhm, 1927:198-199, pl. 12: figs. 2a-b. [Bithynia, Asia Minor.] (Senonian.)
I. mexicanus Lambert, 1935d:371-372, fig. 2. [Mexico.] (Lower Cenomanian.)
I. rossi Cooke, 1953:29, pl. 11: figs. 15-16. [Texas, U.S.A.] (Turonian.)

Genus *Isopatagus* Mortensen

RECENT

- Isopatagus* Mortensen, 1948a:113. Type-species: *I. obovatus* Mortensen, 1948a:113. [Philippine Islands.]

Genus *Macraster* Roemer

CRETACEOUS

- M. triangularis* Sánchez Roig, 1949:217, pl. 34: figs. 1-2. [Cuba.]

UPPER CRETACEOUS

M. meghilensis Lambert, 1931c:100–101, pl. 4: figs. 6–7. [North Africa.] (Cenomanian.)

LOWER CRETACEOUS

Hemiaster (Macraster) cascajalensis Cooke, 1949b: 85–86, pl. 22: figs. 6–11. [Peru.] (Albian/Neocomian?)

M. denisonensis Smiser, 1936:471, pl. 66: figs. 1–4. [Texas, U.S.A.] Comanchean.)

M. ibizaensis Jeannet, 1934c:387; 1935a:183–185, fig. 3, pl. 1: figs. 4–6. [Balearic Islands, western Mediterranean.] (Aptian/Urgonian.)

M. kentensis Adkins, 1930:106–108, pl. 11: figs. 1–3, 5. [Texas, U.S.A.] (Comanche Series—Ft. Worth and Duck Creek Fms.)

M. obesus Adkins, 1930:116–119, pl. 10: figs. 2–4, pl. 11: fig. 6. [Texas, U.S.A.] (Comanche Series, Weno Fm.)

M. obtritus Lambert, 1931c:67, pl. 3: figs. 8–9. [North Africa.] (Aptian.)

M. pseudoelegans Adkins, 1930:108–110, pl. 10: figs. 1, 5, pl. 11: fig. 4. [Texas, U.S.A.]

M. roberti Lambert var. *ovatus* Smiser, 1936:472, pl. 64: figs. 11–14. [Texas, U.S.A.] (Comanchean.)

M. solitariensis Smiser, 1936:472, pl. 65: figs. 13, 15, 16, 18, 19. [Texas, U.S.A.] (Comanchean.)

Genus *Mokotibaster* Lambert

UPPER CRETACEOUS

Mokotibaster Lambert, 1933a:17–18. Type-species: *M. hourcqi* Lambert, 1933a:18, pl. 3: figs. 1–3. [Madagascar, off East Africa.] (Lower Maestrichtian.)

Genus *Palmeraster* Sánchez Roig

UPPER EOCENE

Palmeraster Sánchez Roig, 1949:268–269. Type-species: *P. palmeri* Sánchez Roig, 1949:269, pl. 31: figs. 2–4. [Cuba.]

OLIGOCENE

P. japonicus Morishita, 1956:194–195, pl. 2: figs. 1a–c. [Japan.] (Ashiya Group.)

UPPER EOCENE

P. herrerae Sánchez Roig, 1952b:17–18, pl. 1: figs. 2–3. [Cuba.]

P. zanolettii Sánchez Roig, 1952b:17, pl. 5: figs. 3–4. [Cuba.]

Genus *Paraheteraster* Nisiyama

LOWER CRETACEOUS

Paraheteraster Nisiyama, 1968:188–190. Type-species: *Washitaster? macroholcus* Nisiyama. [Japan.] (Barremian to Albian.)

Genus *Somalechinus* Checchia-Rispoli

UPPER CRETACEOUS

Somalechinus Checchia-Rispoli, 1945[1943]:85–87. Type-species: *S. gibbosus* Checchia-Rispoli, 1945 [1943]:85–87, pl. 1: figs. 1–3. [Somaliland, East Africa.] (Cenomanian.)

Suborder HEMIASTERINA A. G. Fischer**Family HEMIASTERIDAE Clark****Genus *Hemiaster* Agassiz**

EOCENE

H. despujolsi Lambert, 1937:90, pl. 3: figs. 18–19. [Morocco.]

H. digonus d'Archaic var. *kohaticus* Davies, 1943: 70, pl. 11: figs. 6–9. [India.]

UPPER EOCENE

H. globulosus Sánchez Roig, 1949:240–241, pl. 42: figs. 11–13. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949:323) says it is Upper Eocene.]

PALEOCENE

H. hawkinsi Lambert, 1933a:22–23, pl. 4: fig. 19. [Madagascar, off East Africa.] (Danian.)

H. moscovensis Cooke, 1959:68, pl. 28: figs. 5–9. [Alabama, U.S.A.] (Porters Creek Clay.)

H. vistulensis Kongiel, 1936a:5-7, 9. [Poland. Figured by Kongiel, 1935: pl. 5: figs. 2a-c, 3.] (Lower and middle siwak. Danian.)

CRETACEOUS

H. amelianus Cooke, 1953:35, pl. 16: fig. 1. [Guatemala.]

H. sphericus Lambert, 1935d:372-373, pl. 16: figs. 18-19. [Mexico.] (Between San Bartholomeo and La Concordia.)

UPPER CRETACEOUS

H. amurensis Schmidt in Schmidt and Vereshchagin, 1960:229, pl. 1: figs. 6-7. [U.S.S.R.]

H. arcolensis Cooke, 1953:32-33, pl. 12: figs. 12-16. [Alabama, U.S.A.] (Santonian.)

H. balboi Airaghi, 1939:263, pl. 10: fig. 1. [North Africa.] (Turonian.)

H. barthouxi Lambert, 1931d:196, pl. 5: figs. 48-49. [Egypt.] (Turonian.)

H. batalleri Lambert, 1933d:187-188, pl. 1: figs. 14-16. [Spain.] (Maestrichtian.)

H. benhurensis Stephenson, 1941:67, pl. 7: figs. 8-10. [U.S.A.] (Navarro Group. Maestrichtian.)

H. besairiei Lambert, 1933a:22. [Madagascar, off East Africa.] (Campanian.)

H. catandubensis Maury, 1934a:155, pl. 16: figs. 2-3. [Brazil, Rio Grande do Norte.] (Turonian.)

H. cedroensis Maury, 1936:280-283, pl. 2: figs. 3, 7. [Brazil.] (Lower Turonian.)

H. cranium Cooke, 1946:226-227, pl. 32: figs. 1-4. [U.S.A.] (Washita Group. Cenomanian.)

H. fourtaui Chiplonker, 1937:64. [India. New name for *Hemiaster cenomanensis* Duncan, 1887, not Cotteau, 1887; *H. oldhami* Fourtau, 1918; not Noetling, 1897.] (Lower Cenomanian.)

H. gemellaroi Checchia-Rispoli, 1936:302-303, pl. 16: figs. 5-5a, pl. 17: figs. 4-4a. [Sicily, southwest Italy.] (Cenomanian.)

H. gonzalezmunozii Sánchez Roig, 1953c:170-171, pl. 11: figs. 3-4. [Cuba.]

H. heteropneustes Lambert, 1936c:28-29, pl. 4: figs. 20-22. [Madagascar, off East Africa.] (Maestrichtian.)

H. holoambitatus Chiplonker, 1937:64-65, pl. 6: figs. 4a-c. [India.] (Lower Cenomanian.)

H. integer Lambert, 1933a:21-22, pl. 3: figs. 5-6. [Madagascar, off East Africa.] (Upper Turonian.)

H. jacksoni Maury, 1925:518-521. [Brazil.] (Turonian?)

H. jacobi Besairie and Lambert, 1930:109, pl. 9: figs. 2-3. [Madagascar, off East Africa.] (Maestrichtian.)

H. judinkensis Schmidt in Schmidt and Vereshchagin, 1960:228-229, pl. 1: figs. 1-4. [U.S.S.R.]

H. labriei Lambert, 1936d:84-85, fig. 1, pl. 6: figs. 5-7. [France.] (Upper Senonian.)

H. lamberti Sánchez Roig, 1949:238-239, pl. 35: figs. 7-8. [Cuba.]

H. latesulcatus Lambert, 1936a:206, pl. 24: figs. 3-4. [Madagascar, off East Africa.]

H. madagascariensis Cottreau, 1922a:118-120, pl. 2: figs. 1-8. [Madagascar, off East Africa.] (Upper Senonian.)

H. madagascariensis Cottreau *nana* Lambert, 1936a:205, pl. 24: figs. 5-6. [Madagascar, off East Africa.] (Maestrichtian.)

H. madrugensis Weisbord, 1934:35-37, pl. 3: figs. 4-6. [Cuba.]

H. mutabilis Lambert, 1933a:20-21, pl. 3: figs. 7-8. [Madagascar, off East Africa.] (Upper Turonian.)

H. narindensis Lambert, 1933a:24, fig. 2. [Madagascar, off East Africa.] (Upper Maestrichtian.)

H. oliveirai Marchesini Santos and de Souza Cunha, 1959:13-15, pl. 3: figs. 1-4. [Brazil.] (Maestrichtian.)

H. parallelus Lambert, 1936a:206, pl. 24: figs. 1-2. [Madagascar, off East Africa.] (Upper Senonian?)

H. paronai Checchia-Rispoli, 1921:27-29, pl. 8: fig. 24, pl. 9: figs. 14, 18. [Tripoli, Libya.] (Senonian.)

H. pseudoanticus Lambert, 1933a:21, pl. 2: figs. 27-28. [Madagascar, off East Africa.] (Upper Turonian.)

H. rioupanemensis Maury, 1925:502-505, pl. 24: fig. 10. [Brazil.]

H. sabinal Cooke, 1953:34, pl. 13: figs. 7-10. [Texas, U.S.A.] (Santonian/Coniacian?)

H. sanctisebastiani Maury, 1925:508-511, pl. 24: fig. 13. [Brazil.]

H. schoelleri Lambert, 1938a:277-278, pl. 19: figs. 1-3. [Tunis, North Africa.] (Upper Cenomanian.)

H. siboneyensis Weisbord, 1934:37-39, pl. 3: figs. 7-9. [Cuba.]

H. stoliczkai Stefanini, 1928:179-180, pl. 21: figs. 2a-d, 3a-d. [Karakorum, Mongolia.] (Cenomanian.)

- H. teilhardi* Basse, 1928:115–116, figs. 3–4, pl. 7: figs. 1a–b. [South America.] (Cenomanian?)
H. tubillensis Lambert, 1935f:519–520, pl. 57: figs. 10–11. [Spain.] (Upper Campanian.)
H. uwajimensis Morishita, 1962:114–115, pl. 1: figs. 1–7. [Shikoku, Japan.] (Lower part of Yoshida group.)

LOWER CRETACEOUS

- H. hourcqi* Lambert, 1936c:28, pl. 2: figs. 7–8. [Madagascar, off East Africa.] (Lower Albian.)
H. reinecke Haughton, 1924:102–103, pl. 4: fig. 4; 1925:282–283, pl. 15: fig. 4. [Angola, southwest Africa.] (Upper Albian.)
H. stefaninii Lang in Montanaro-Gallitelli and Lang, 1937:204–205, pl. 9: fig. 12. [Zululand, Africa.] (Albian.)
H. zululandensis Besairie and Lambert, 1930:116, pl. 10: figs. 3–4. [Zululand, East Africa.] (Albian.)

Subgenus *Hemiaster* (*Mecaster*) Pomel

UPPER CRETACEOUS

- H. (M.) chirakhanensis* Chiplonker, 1939:240–241, pl. 25: figs. 4a–b. [India.] (Cenomanian.)

Subgenus *Hemiaster* (*Trachyaster*) Pomel

In the *Treatise*, Fischer (Durham et al., 1966:U559) considers *Trachyaster* Pomel a subgenus of *Hemiaster*.

MIDDLE MIOCENE

- T. aichinoi* Checchia-Rispoli, 1927:2–5, figs. 1–3, pl. 1: figs. 1–2. [Cyrenaica, Eastern Libya.]
T. hlinnensis Seneš, 1955:26–27, pl. 1: fig. 3. [Eastern Slovakia.] (Helvetian.)

UPPER CRETACEOUS

- T. minutus* Sánchez Roig, 1949:241–242, pl. 42: figs. 6–8. [Cuba.]
T. simpaticus Sánchez Roig, 1949:242–243, pl. 42: figs. 3–5. [Cuba.] (Maestrichtian.)

Genus *Crucibrissus* Lambert

UPPER EOCENE

- C. cabrerai* Sánchez Roig, 1953a:67, pl. 10(pars), pl. 21. [Cuba.]

MIDDLE EOCENE

- C. abichi* Meffert, 1931:38–39, pl. 6: figs. 10–11. [Armenia.] (Lutetian.)

Genus *Distefanaster* Checchia-Rispoli

UPPER CRETACEOUS

- D. pygmeus* Lambert, 1933a:25, pl. 4: fig. 18. [Madagascar, off East Africa.] (Upper Maestrichtian.)

Genus *Ditremaster* Munier-Chalmas

OLIGOCENE

- Opissaster* (*Ditremaster*) *oligocenicus* Stchépinsky, 1943a:225, 238–239, pl. 1: fig. 6; 1943b:225, pl. 1: fig. 6. [Turkey.]

MIDDLE EOCENE

- D. granosus* Lambert, 1933a:40, pl. 4: fig. 17. [Madagascar, off East Africa.] (Lutetian.)
D. olbrechtsi Darteville, 1953:148–153, figs. 48–50, pl. 11: figs. 1–5. [Congo and Angola, South Africa.] (Lutetian.)

Genus *Hernandezaster* Sánchez Roig

UPPER OLIGOCENE

- Hernandezaster* Sánchez Roig, 1949:211–212. Type-species: *H. hernandez* Sánchez Roig, 1949:212–213, pl. 33: figs. 3–5. [Cuba.]

Genus *Holcopneustes* Cotteau

MIOCENE

- H.?* *pomeyrol* Jeannet, 1952:413–416, pl. 12: figs. 1–5. [New Caledonia, southwest Pacific Ocean east of Queensland, Australia.]

LOWER EOCENE

H. obtritatus Lambert, 1933a:40, pl. 4: fig. 11. [Madagascar, off East Africa.] (Lower Lutetian.)

PALEOCENE

H. narindensis Lambert, 1933a:24-25, pl. 4: figs. 8-10. [Madagascar, off East Africa.] (Danian.)

Genus *Opissaster* Pomel

MIOCENE

O. herrerae Lambert and Roig in Sánchez Roig, 1926:126-127, pl. 40: figs. 1-2, pl. 41: fig. 3. [Cuba.]

MIDDLE MIOCENE

O. rozieri Lambert, 1928b:124-125. [France.] (Helvetian.)

LOWER MIOCENE

O. kugleri Jeannet, 1928a:41-42, pl. 5: figs. 3-5, pl. 6: fig. 12; 1928b:220. [Venezuela.] (Serie superieure de Agua Salada.)

EOCENE

O. somaliensis Currie, 1925:71-74, fig. 14, pl. 10: figs. 8a-c, 9, 10, 11a-b, 12. [Somaliland, East Africa.]

MIDDLE EOCENE

O. derasmoi Checchia-Rispoli, 1950a[1945-1946]: 32-35, pl. 1: figs. 6-7. [Somaliland, East Africa.]
O. derasmoi Checchia-Rispoli var. *angulatus* Kier, 1957b:879-880, pl. 105: figs. 7-9. [British Somaliland, East Africa.] (Karkar Series.)

LOWER EOCENE

O. farquharsoni Currie, 1927:438-441, figs. 4a-c. [Somaliland, East Africa.]

PALEOCENE

O. auraduensis Kier, 1957b:876-877, fig. 15a, pl. 105: figs. 3-5. [British Somaliland, East Africa.] (Lower Auradu Series.)

UPPER CRETACEOUS

O. cantabriae Sánchez Roig, 1953c:171-172, pl. 11: figs. 5-6. [Cuba.]

Genus *Palhemiaster* Lambert

LOWER CRETACEOUS

P. ibericus Jeannet, 1934c:388; 1935a:181-183, figs. 1-2, pl. 1: figs. 1-3. [Balearic Islands, western Mediterranean.] (Aptian/Urgonian.)

Genus *Sarsiaster* Mortensen

RECENT

Sarsiaster Mortensen, 1950b:157-158. Type-species: *S. griegii* Mortensen, 1950b:157-158. [North Atlantic.]

Genus *Tessieria* Collignon

UPPER CRETACEOUS

Tessieria Collignon, 1949:263. Type-species: *T. senegalensis* Collignon, 1949:263-268, figs. 1-2, pl. 9a: figs. 1-5. [Senegal, West Africa.] (Maestrichtian.)

Genus *Washitaster* Lambert

LOWER CRETACEOUS

W. barremicus Tanaka and Okubo, 1954:220, pl. 7: fig. 3. [Japan.] (Barremian.)
W. japonicus Tanaka and Okubo, 1954:220-221, pl. 7: fig. 4. [Japan.] (Albian.)
W.? *macroholcus* Nisiyama, 1950a:44-46, figs. 4-6. [Japan.] (Neocomian.)

Family PALAEOSTOMATIDAE Lovén

Genus *Paleostoma* Lovén

EOCENE

- P. rochi* Lambert, 1937:88–89, pl. 3: figs. 15–17.
[Morocco.]

Genus *Leiostomaster* Lambert

LOWER CRETACEOUS

- L. bosei* Smiser, 1936:476, pl. 64: figs. 4–8. [Texas,
U.S.A.] (Comanchean.)

Genus *Ornithaster* Cotteau

UPPER CRETACEOUS

- O. cordiformis* Böhm, 1927:196–197, pl. 12: figs.
3a–b. [Bithynia, Asia Minor.] (Senonian.)
O. sokolovi Moskvina, 1959:275, fig. 84, pl. 18: figs.
8a–c, 9a–b. [Caucasus, U.S.S.R.]

Family PERICOSMIDAE Lambert

Genus *Pericosmus* L. Agassiz

RECENT

- P. abatoides* H. L. Clark, 1925a:199–200, pl. 11:
figs. 4–6. [East end of Barrier Island, South
Pacific Ocean.]
P. akabanus Mortensen, 1939c:38–42, pl. 3: figs.
1–6, pl. 4: figs. 1–16. [Red Sea.]
P. bidens Mortensen, 1950b:158. [Mauritius, east
of Madagascar in the Indian Ocean.]
P. cordatus Mortensen, 1950b:158. [Golo Islands,
Japan.]
P. keiensis Mortensen, 1950b:159. [Kei Islands,
Indonesia.]
P. mauritanus Mortensen, 1950b:159. [Mauritius,
east of Madagascar in the Indian Ocean.]
P. melanostomus Mortensen, 1948a:119–120. [China
Sea.]
P. oblongus Mortensen, 1950b:159. [Bali Sea, west-
ern Pacific Ocean.]
P. tenuis Mortensen, 1950b:159. [Mauritius, east
of Madagascar in the Indian Ocean.]

PLIOCENE

- P. schencki* Israelsky, 1933b:306–307, pl. 3: figs.
1–2, pl. 4: fig. 1. [Philippine Islands, South Pacific
Ocean.]

MIOCENE

- P. artemisae* Sánchez Roig, 1953c:168–169, pl. 11:
fig. 1. [Cuba.]
P. magnificus Nisiyama, 1968:269–272, pl. 28: figs.
1–2. [Japan.] (Aijiri Fm.)
P. valenzuelai Sánchez Roig, 1953c:167–168, pl.
10: fig. 5. [Cuba.]

MIDDLE MIOCENE

- P. israelkyi* Durham, 1961a:481, 483, figs. 1I, 1L,
2E, pl. 67: figs. 5, 8, 11. [Costa Rica.] (Burdig-
alian/Helvetian.)
P. stehlini Jeannot, 1928a:43–44, pl. 4: figs. 21–24;
1928b:220. [Venezuela.] (Damsite series.)

LOWER MIOCENE

- P. stefaninii* Socin, 1942:49–50. [Somaliland, East
Africa.]

UPPER OLIGOCENE

- P. blanquizalensis* Sánchez Roig, 1952c:21, pl. 13:
fig. 2. [Cuba.]
P. camagueyanus Sánchez Roig, 1949:246–247, pl.
38: figs. 1–2. [Cuba.]
P. delgadoi Sánchez Roig, 1953a:65, pl. 16(pars).
[Cuba.]
P. giganteus Sánchez Roig, 1952c:21–22, pl. 13:
fig. 1, pl. 14: fig. 1. [Cuba.]

MIDDLE OLIGOCENE

- P. gardensis* Venzo, 1933:210–211, pl. 12: fig. 2.
[Italy.] (Rupelian.)

EOCENE

- P. rojasi* Sánchez Roig, 1951:60–61, pl. 36: figs.
2–3. [Cuba.]

UPPER EOCENE

- P. cubanus* Palmer in Sánchez Roig, 1949:248. [Cuba.]
P. zanolettii Sánchez Roig, 1953c:169–170, pl. 11: fig. 2. [Cuba.]

MIDDLE EOCENE

- P. clarki* Lambert, 1933a:41, pl. 3: fig. 14. [Madagascar, off East Africa.] (Lutetian.)

LOWER EOCENE

- P. gregoryi* Currie, 1927:430, figs. 7a–b. [Somaliland, East Africa.]

Subgenus *Pericosmus* (*Lambertona*) Sánchez Roig

LOWER EOCENE

- Lambertona* Sánchez Roig, 1953b:257. Type-species: *Victoriaster lamberti* Sánchez Roig. [Cuba.]

Subgenus *Pericosmus* (*Victoriaster*) Lambert

TERTIARY

- V. jamaicensis* Arnold and H. L. Clark, 1934:150, pl. 3: figs. 1–3. [Jamaica, West Indies.]

LOWER MIOCENE

- V. lamberti* Sánchez Roig, 1926:129–130, pl. 42: fig. 1, pl. 43: fig. 1. [Cuba.]

Genus *Mundaster* Soares and Devriès

UPPER CRETACEOUS

- Mundaster* Soares and Devriès, 1967:8. Type-species: *M. tentugalensis* Soares and Devriès, 1967:8–10, fig. 2, pl. 1: figs. 1–9. [Casal Novo do Rio and Carapinha, Portugal.] (Upper Cenomanian to lower Turonian.)

Family SCHIZASTERIDAE Lambert

Genus *Schizaster* L. Agassiz

PLIOCENE

- S. alsiensis* Maccagno, 1947a:116–121, pl. 1: figs. 1–4. [Rome, Italy.]
S. jeanneti Martin in Jeannet and Martin, 1937: 293–295, figs. 63a–c, 64. [Dutch East Indies, western Pacific Ocean.]
S. morlini Grant and Hertlein, 1956:107–109, pl. 29: figs. 1–8. [California, U.S.A.]
S. portisi Serra, 1932:888–893, fig. 1. [Italy.]
S. pratti Israelsky, 1933b:305–306, pl. 4: figs. 2–3, pl. 5: figs. 1–4. [Philippine Islands, South Pacific Ocean.]

MIDDLE PLIOCENE

- S. excavatus* Martin in Jeannet and Martin, 1937: 292–293, figs. 62a–b. [Dutch East Indies, western Pacific Ocean.]

LOWER PLIOCENE

- S. kinsasaensis* Morishita, 1953:224–225, pl. 1: fig. 8. [Japan.] (Middle part of Ogawa Fm.)

MIOCENE

- S. minihagali* Deraniyagala, 1956:4, pl. 3: figs. 3–4. [Ceylon, Indian Ocean.]
S. miyazakiensis Morishita, 1956:197–199, pl. 3: figs. 1a–d, 2a–d, pl. 4: figs. 1a–d. [Japan.] (Miyazaki Group.)

UPPER MIOCENE

- S. costaricensis* Durham, 1961a:483–484, figs. 1C, 1F, 2G, 2H, pl. 68: figs. 8, 10, 11, 13. [Costa Rica.]

LOWER MIOCENE

- S. guirensis* Sánchez Roig, 1949:278–279, pl. 43: figs. 4–5. [Cuba.]
S. salutis Sánchez Roig, 1949:278, pl. 45: figs. 3–4. [Cuba.]

S. sanctamariae Sánchez Roig, 1949:272, pl. 44: figs. 4–5. [Cuba. Although Sánchez Roig cites it as Upper Cretaceous, Brodermann (1949:328) says it is Upper Oligocene to Lower Miocene.]

OLIGOCENE

S. moronensis Sánchez Roig, 1951:58–59, pl. 36: figs. 4–5. [Cuba.]

UPPER OLIGOCENE

- S. cojimarensis* Sánchez Roig, 1949:270, pl. 44: figs. 1, 3. [Cuba.]
S. dumblei Israelsky, 1924:141. [Mexico.]
S. habanensis Sánchez Roig, 1949:270–271, pl. 45: figs. 1–2. [Cuba.]
S. llagunoi Lambert and Roig in Sánchez Roig, 1949:274–275. [Cuba. Although Lambert cites it as Miocene, Brodermann (1949:328) says it is Middle Eocene/Upper Oligocene.]
S. munozii Sánchez Roig, 1949:277, pl. 43: figs. 1–3. [Cuba.]
S. vedadoensis Sánchez Roig, 1949:271–272, pl. 45: fig. 8. [Cuba.]

EOCENE

- S. altissimus* Arnold and H. L. Clark, 1927:58, pl. 11: figs. 11–13. [Jamaica, West Indies.]
S. bathypetalus Arnold and H. L. Clark, 1927:58–59, pl. 12: figs. 1–4. [Jamaica, West Indies.]
S. brachypetalus Arnold and H. L. Clark, 1927:59–60, pl. 11: figs. 14–16. [Jamaica, West Indies.]
S. dyscritus Arnold and H. L. Clark, 1927:61, pl. 12: figs. 7–9. [Jamaica, West Indies.]
S. hexagonalis Arnold and H. L. Clark, 1927:61–62, pl. 12: figs. 10–11, pl. 13: figs. 1–3. [Jamaica, West Indies.]
S. narindensis Lambert, 1933a:43, pl. 4: fig. 23. [Madagascar, off East Africa.]
S. pappi Thirring, 1936:56–57, pl. 2: fig. 17. [Hungary.]

UPPER EOCENE

- S. beckeri* Cooke, 1942:40, pl. 3: figs. 5–8. [U.S.A.]
S. caobaense Sánchez Roig, 1949:273–274, pl. 44: fig. 2. [Cuba.] (Priabonian.)

- S. gerthi* Pijpers, 1933:96–97, fig. 157, pl. 1: fig. 19, pl. 2: figs. 10–12. [Dutch West Indies, Netherland Antilles, off Venezuelan coast.]
S. humei Lambert, 1931d:204, pl. 5: figs. 12–14. [Egypt.] (Priabonian.)
S. santanae Sánchez Roig, 1949:281–282, pl. 45: figs. 5–7. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949:328) says it is Middle to Upper Eocene.]

MIDDLE EOCENE

- S. delorenzoi* Checchia-Rispoli, 1950a[1945–1946]:35–36, pl. 2: figs. 5, 5a–c. [Somaliland, East Africa.]
S. gigas Sánchez Roig, 1953a:66, pl. 20. [Cuba.]
S. marci Castex, 1930:53–54, pl. 4: figs. 9–12. [France.] (Upper to Middle Lutetian.)
S. pentagonalis Sánchez Roig, 1953a:65–66, pl. 19. [Cuba.]

LOWER EOCENE

- S. alcaldei* Sánchez Roig, 1949:273, pl. 32: fig. 4. [Cuba. Brodermann (1949:327) says it is Lower Eocene.]
S. eopneustes Lambert, 1933a:42, pl. 3: fig. 15. [Madagascar, off East Africa.]
S. leprosorium Lambert, 1933a:42, fig. 8. [Madagascar, off East Africa.]
S. persica Clegg, 1933:13–14, pl. 1: figs. 6a–c, 7a–c. [Persia (Iran).]

UPPER PALEOCENE

- S. schlosseri* Traub, 1938:40, pl. 1: figs. 9a–b. [Germany.] (Thanetian.)

Genus *Aplospatangus* Lambert

In the *Treatise*, Fischer (Durham et al., 1966:U569) considers *Aplospatangus* a subjective synonym of *Schizaster* L. Agassiz.

MIOCENE

- Schizaster* (*Aplospatangus*) *rojasi* Sánchez Roig, 1952c:25–26, pl. 15: figs. 1–3. [Cuba.]

LOWER MIOCENE

S. (A.) riveroi Sánchez Roig, 1952c:27, pl. 15: figs. 4–5. [Cuba.]

Subgenus *Schizaster* (*Schizaster*) L. Agassiz

MIOCENE

S. (S.) fernandesi Sánchez Roig, 1952c:25, pl. 9: fig. 3. [Cuba.]

Subgenus *Schizaster* (*Hypselaster*) Clark

RECENT

H. affinis Mortensen, 1948a:121–123. [Philippine Islands.]

H. dolosus H. L. Clark, 1938:430–432, pl. 28: figs. 4–7. [Western Australia.]

EOCENE

H. perplexus Arnold and H. L. Clark, 1927:56–57, pl. 11: figs. 8–10. [Jamaica, West Indies.]

Subgenus *Schizaster* (*Paraster*) Pomel

RECENT

Paraster erythraeus Tortonese, 1932:1–6, figs. 1–7. [Red Sea.]

Schizaster (*Paraster*) *floridiensis* Kier and Grant, 1965:50–54, fig. 15, pl. 13: figs. 4–6, pl. 14: figs. 1–9. [Florida, U.S.A.]

PLEISTOCENE

P. sierrai Sánchez Roig, 1951:63–64, pl. 40: fig. 1. [Cuba.]

PLIOCENE

P. eustatii Engel, 1961:3–5, figs. 1–4. [Lesser Antilles, West Indies.]

P. hyperocus H. L. Clark, 1945:323–324, pl. 42: figs. L–M, pl. 43: fig. A. [Fiji, South Pacific Ocean.]

MIOCENE

P. saipanicus Cooke, 1957:363–364, pl. 119: figs. 18–21. [Mariana Islands, Western Pacific Ocean.]

P. tampicoensis Israelsky, 1924:140. [Mexico.]

OLIGOCENE

P. tschopi Palmer in Sánchez Roig, 1949:290–291, pl. 46: fig. 1. [Cuba. Although Palmer says this is Upper Eocene, Brodermann (1949:325) says it is Lower to Upper Oligocene.]

EOCENE

P. camagueyensis Weisbord, 1934:68–70, pl. 7: figs. 9–11. [Cuba.]

P. delgadoi Sánchez Roig, 1953c:174, pl. 12: figs. 5–6. [Cuba.]

S. (P.) taiwanicus Hayasaka, 1948:98–101, pl. 2: fig. 4, pl. 5: figs. 2–5. [China.] (Slate Fm.)

UPPER EOCENE

P. cubitabellae Weisbord, 1934:72–74, pl. 7: figs. 15–16. [Cuba.]

P. nuevitasensis Weisbord, 1934:67–70, pl. 7: figs. 7–8. [Cuba.]

P. orientalis Sánchez Roig, 1949:289–290, pl. 46: figs. 2–3. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949:325) says it is Middle to Upper Eocene.]

P. pastelilloensis Weisbord, 1934:70–72, pl. 7: figs. 12–14. [Cuba.]

P. pinarensis Sánchez Roig, 1953c:173–174, pl. 12: figs. 3–4. [Cuba.]

MIDDLE EOCENE

S. (P.) karkarensis Kier, 1957b:883–884, pl. 106: figs. 1–3. [British Somaliland, East Africa.] (Karkar Series.)

PALEOCENE

S. (P.) duroensis Kier, 1957b:885–886, pl. 106: figs. 11–14. [British Somaliland, East Africa.] (Lower Auradu Series.)

S. (P.) hunti Kier, 1957b:882-883, pl. 106: figs. 5-7. [British Somaliland, East Africa.] (Lower Auradu Series.)

Genus *Abatus* Troschel

RECENT

- A. curvidens* Mortensen, 1936a:226-228, pl. 3: fig. 9, pl. 9: figs. 17-20. [Antarctic Ocean.]
A. ingens Koehler, 1926:58-65, pl. 111: fig. 9, pl. 113: fig. 7, pl. 117: figs. 3-5, 7-8, pl. 118: figs. 1-7, pl. 123: figs. a-k. [Antarctic.]

Genus *Agassizia* Agassiz and Desor

MIOCENE

- A. algarbiensis* Da Veiga Ferreira, 1962:293-295, pl. 1: figs. 1-6. [Portugal.]
A. cyrenaica Desio, 1929:340-342, pl. 39: figs. 3a-d. [Oasis of Giarabùb, Libya.]
A. cyrenaica Desio var. *pseudoclevevi* Desio, 1929:343-344, pl. 39: figs. 4a-c. [Oasis of Giarabùb, Libya.]
A. cyrenaica Desio var. *pseudoinflata* Desio, 1929:342-343, pl. 40: figs. 2a-c. [Oasis of Giarabùb, Libya.]
A. pinarensis Sánchez Roig, 1952c:22-23, pl. 6: figs. 6-7. [Cuba.]
A. scrobiculata Valenciennes var. *persica* Clegg, 1933:29-30, pl. 3: figs. 6a-d. [Persia (Iran).]

LOWER MIOCENE

- A. regia* Israelsky, 1924:142. [Mexico. Although Israelsky considered the Tuxpam Beds, from where this species was collected, to be Oligocene, these beds are now (Masuda, 1971:215-216) considered to be Early Miocene.]

OLIGOCENE

- A. avilensis* Sánchez Roig, 1949:260, pl. 41: figs. 4-6, 8. [Cuba.]
A. camagueyana Weisbord, 1934:83-84, pl. 9: figs. 5-6. [Cuba.]
A. guanensis Sánchez Roig, 1951:62-63, pl. 39: figs. 4-5. [Cuba.]

UPPER OLIGOCENE

- A. alveari* Sánchez Roig, 1949:258-259, pl. 41: fig. 7. [Cuba.]
A. lamberti Palmer var. *oligocenicus* Palmer in Sánchez Roig, 1949:261-262, pl. 38, fig. 5. [Cuba. Although Palmer says it is Lower Oligocene, Brodermann (1949:316) says it is Upper Oligocene.]

LOWER OLIGOCENE

- A. lamberti* Palmer in Sánchez Roig, 1949:261, pl. 41: fig. 11. [Cuba. Although Palmer says it is Upper Eocene, Brodermann (1949:316) says it is Lower Oligocene.]

UPPER EOCENE

- A. caribbeana* Weisbord, 1934:74-76, pl. 8: figs. 1-6. [Cuba.]
A. flexuosa Sánchez Roig, 1949:257-258, pl. 41: figs. 9-10. [Cuba.]

MIDDLE EOCENE

- A. caobaensis* Sánchez Roig, 1953c:172-173, pl. 12: figs. 1-2. [Cuba.]

Subgenus *Agassizia* (*Anisaster*) Pomel

UPPER OLIGOCENE

- A. (A.) mossomi* Cooke, 1942:46-47, pl. 5: figs. 14-17. [U.S.A.]
A. (A.) wilmingtunica Cooke, 1942:46, pl. 5: figs. 9-13. [U.S.A.]

Genus *Eoagassizia* Grant and Hertlein

In the *Treatise*, Fischer (Durham et al., 1966:U575) considers *Eoagassizia* a subjective synonym of *Agassizia* (*Anisaster*) Pomel.

EOCENE

- Eoagassizia* Grant and Hertlein, 1938b:115-116. Type-species: *E. alta* Alex Clark in Grant and Hertlein, 1938b:116-117, fig. 11, pl. 12: figs. 5-7. [California, U.S.A.] (Probably Sierra Blanca.)

Genus *Amphipneustes* Koehler

RECENT

- A. bifidus* Mortensen, 1950a:304–305, pl. 7: figs. 1–3, pl. 9: figs. 1, 7–9. [Antarctic.]
A. similis Mortensen, 1936a:231–233, pl. 4: figs. 1–7, pl. 9: figs. 21–26. [Antarctic Ocean.]

Genus *Antipneustes* Koehler (nom. van.)

In the *Treatise, Fischer* (Durham et al., 1966:U575) considers *Antipneustes* a synonym of *Amphipneustes* Koehler.

RECENT

- A. brevisternalis* Koehler, 1926:83–87, pl. 112: figs. 2–6, pl. 124: fig. 3. [Antarctic.]
A. marsupialis Koehler, 1926:79–83, pl. 115: figs. 2, 5, 7–9, pl. 124: fig. 2. [Antarctic.]
A. rostratus Koehler, 1926:70–76, pl. 114: figs. 1–6, pl. 115: figs. 1, 3, 4, 6, pl. 116: figs. 1–6, pl. 117: figs. 1, 2, 6, 9, pl. 124: fig. 1. [Antarctic.]
A. tumescens Koehler, 1926:76–79, pl. 113: figs. 1–6. [Antarctic.]

Genus *Brisaster* Gray

RECENT

- B. owstoni* Mortensen, 1950b:160. [Japan. Gulf of Tokio and Sagami Sea.]

RECENT/PLIOCENE

- B. townsendi* A. Agassiz *woynari* Hertlein and Grant, 1960:132–133, pl. 25: fig. 5, pl. 26: figs. 1–3. [Southern California, U.S.A.] (San Diego Fm.)

OLIGOCENE

- B. maximus* H. L. Clark, 1937b:368, pl. 24: fig. 9. [Oregon, U.S.A.] (Refugian Stage.)

Genus *Cagaster* Nisiyama

MIOCENE

- Cagaster* Nisiyama, 1968:248–249. Type-species: *Schizaster recticanalis* Yoshiwara. [Japan.]

Genus *Diploporaster* Mortensen

RECENT

- Diploporaster* Mortensen, 1950b:160. Type-species: *D. barbatus* Mortensen, 1950b:160. [Zanzibar, East Africa, Indian Ocean.]

Genus *Sinaechinus* Hayasaka

In the *Treatise, Fischer* (Durham et al., 1966:U576) considers *Sinaechinus* a subjective synonym of *Faorina* Gray.

RECENT/PLIOCENE

- Sinaechinus* Hayasaka, 1948: 93–94. Type-species: *S. kawaguchii* Hayasaka, 1948:94–96, pl. 3: figs. 1–5, pl. 4: figs. 1a–c. [China.]

Genus *Hemifaorina* Jeannet and Martin

MIOCENE

- Hemifaorina* Jeannet and Martin, 1937:289. Type-species: *Hemiasaster tuber* Herklots. [Java, Indonesia.]

Genus *Linthia* Desor

TERTIARY

- L. obesa* Arnold and H. L. Clark, 1934:148–149, pl. 2: figs. 4–6. [Jamaica, West Indies.]

MIOCENE

- L. taiwanensis* Hayasaka, 1948:90–93, pl. 1: figs. 1a–b, pl. 2: figs. 1a–b. [China.] (Kansirei Fm., upper Kaizan Gp.)

PALEOGENE

- L. desioi* Airaghi, 1934:73-74, pl. 5: figs. 12-14. [Libya, North Africa.]
L. praenipponica Nagao, 1928:18, pl. 1: figs. 1-4. [Japan.]
L. yessoensis Minato, 1950:158-159, figs. 1-2. [Japan.] (Lower Corbicula bed of the Ishikari Series.)

OLIGOCENE

- L. boreasteria* Nisiyama, 1968:240-243, figs. 71a-b, 72a. [Northern Japan.] (Nissikutani Fm.)

EOCENE

- L. atolladosae* Sánchez Roig, 1951:59-60, pl. 34: figs. 1-2. [Cuba.]
L. bulgarica Gočev, 1933:56-58, figs. 12-14, pl. 5: fig. 1, pl. 6: fig. 1. [Bulgaria.]
L. heimei Jeannet, 1936c:56-59, figs. 6-8. [Switzerland.]
L. mortenseni Checchia-Rispoli, 1950b:36-38, pl. 1: figs. 4-4a. [Northeast Somalia, East Africa.]
L. mortenseni Checchia-Rispoli var. *depressa* Checchia-Rispoli, 1950b:38, pl. 1: figs. 5, 5a-b. [Northeast Somalia, East Africa.]
L. pseudoglobalis Thirring, 1936:60-61, pl. 1: figs. 6-8. [Hungary.]
L. suitensis Jeannet, 1936c:65-69, figs. 13-15. [Switzerland.]

UPPER EOCENE

- L. balboi* Airaghi, 1939:275-276, pl. 11: fig. 13. [North Africa.]
L. caraibensis Jeannet, 1928a: 16-17, pl. 1: figs. 22-26, pl. 6: fig. 3; 1928b:220. [Trinité, off the coast of Venezuela.] (Priabonian or Jacksonian.)
L. garciai Sánchez Roig, 1952c:24, pl. 9: fig. 2. [Cuba.]
L. hanoverensis Kellum, 1926:15-16, pl. 1: figs. 8-9. [North Carolina, U.S.A.]
Schizaster (Linthia) ocalanus Cooke, 1942:42-43, pl. 5: figs. 18-22. [U.S.A.]

MIDDLE EOCENE

- L. darderi* Lambert, 1935b:369-370, pl. 41: fig. 7. [Spain.] (Lutetian.)

- L. mortenseni* Checchia-Rispoli, 1950a[1945-1946]: 36-38, pl. 1: figs. 4-5. [Somaliland, East Africa.]
L. mortenseni Checchia-Rispoli var. *depressa* Checchia-Rispoli, 1950a[1945-1946]:37-38, pl. 1: figs. 5, 5a-b. [Migiurtinia(?), Somaliland, East Africa.]
L. rolandi Castex, 1930:46-48, pl. 4: figs. 3-5. [France.] (Lutetian.)
L. trechmanni Hawkins, 1924:319-321, pl. 18: figs. 6-7. [Jamaica, West Indies.]

LOWER EOCENE

- L. arabica* Clegg, 1933:16-17, pl. 2: figs. 1a-c, 2a-c. [Arabia.]
L. gibba Lambert, 1933a:41, fig. 7. [Madagascar, off East Africa.]
L. hargeisensis Currie, 1943:27. [Somaliland, East Africa.] (Auradu Ls.)
L. hollandi Barry in Barry and Le Blanc, 1942: 43-44, pl. 2: figs. 3-4. [Texas, U.S.A.]
L. somaliensis Currie, 1927:432-435. [Somaliland, East Africa.]
L. sudanensis Bather var. *brevipetala* Lambert and Pérébaskine, 1929:476-477, pl. 38: fig. 12. [North Africa.]

PALEOCENE

- L. maverickensis* Gardner, 1933:110-111, pl. 4: figs. 13-14. [Texas, U.S.A.] (Midway Gp.)

CRETACEOUS

- L. aguayoi* Sánchez Roig, 1949:265-266, pl. 48: figs. 1-2, pl. 49: fig. 1. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949: 324) says it is Cretaceous.]

UPPER CRETACEOUS

- L. alta* Sánchez Roig, 1949:266-267, pl. 49: figs. 3-5. [Cuba.]
L. avilensis Sánchez Roig, 1949:264, pl. 32: figs. 2-3. [Cuba.]
L. brodermanni Sánchez Roig, 1949:263-264, pl. 49: figs. 2-4. [Cuba.]
L. cretacica Sánchez Roig, 1949:264-265, pl. 47: figs. 1-3. [Cuba.]
L. dainellii Stefanini, 1928:182-184, pl. 21: figs. 6a-e, 7. [Karakorum, Mongolia.] (Cenomanian.)

- L. gonzalezmunozii* Sánchez Roig, 1952c:23–24, pl. 9: fig. 1. [Cuba.] (Senonian.)
L. mullerriedi Lambert, 1935d:373, pl. 16: figs. 20–21. [Mexico.] (Lower Senonian.)

Subgenus *Linthia* (*Lutetiaster*) Lambert

MIDDLE EOCENE

- L. lamberti* Castex, 1930:48, pl. 4: figs. 6–8. [France.] (Upper Lutetian.)
L. maccagnoii Checchia-Rispoli, 1950a[1945–1946]: 38–39, pl. 1: figs. 3–3a. [Somaliland, East Africa.]

Genus *Moira* A. Agassiz

RECENT

- M. lachesis* Mortensen, 1930:389–393, fig. 1, pl. 2: figs. 1–7, pl. 3: figs. 5–8, pl. 4: figs. 1–14. [Japan.]
M. lethe Mortensen, 1930:392, fig. 2, pl. 3: figs. 1–4. [Queensland, Australia.]

MIOCENE

- M. adamthi* Clegg, 1933:27–29, pl. 3: figs. 4a–c, 5a–c. [Persian Gulf.]

LOWER MIOCENE

- M. obesa* Nisiyama, 1935:164–167, figs. 9a–c, pl. 8: figs. 6–16. [Japan.]

Subgenus *Moira* (*Moiropsis*) A. Agassiz

UPPER MIOCENE

- M. depressa* Hayasaka, 1948:106–109, pl. 1: figs. 4a–c. [China.]

Genus *Periaster* d'Orbigny

PALEOCENE/CRETACEOUS

- P. inconstans* Lambert, 1933a:25–26, pl. 4: fig. 15. [Madagascar, off East Africa.] (Danian/Upper Maestrichtian.)

CRETACEOUS

- P. kuhni* Mitzopoulos, 1960:285, pl. 3: figs. 4–6. [Greece.]

UPPER CRETACEOUS

- P. ciryi* Lambert, 1935f:520, pl. 57: figs. 13–15. [Spain.] (Coniacian.)
P. maugerii Checchia-Rispoli, 1936:304–305, pl. 16: figs. 4–4a, pl. 17: fig. 5. [Sicily, southwest of Italy.] (Cenomanian.)
P. subsexangulatus Airaghi, 1939:264, pl. 10: figs. 2–3. [North Africa.] (Maestrichtian.)
P. zinai Airaghi, 1939:265, pl. 10: fig. 6. [North Africa.] (Maestrichtian.)

Genus *Prenaster* Desor

EOCENE

- P. skorpili* Gočev, 1933:58–59, pl. 2: figs. 1a–b, pl. 4: fig. 6, pl. 7: fig. 19a–d. [Bulgaria.]

UPPER EOCENE

- P. jeanneti* Pijpers, 1933:93–94, fig. 156, pl. 1: figs. 9–12. [Netherlands Antilles, Dutch West Indies.]
P. nuevitasensis Sánchez Roig, 1949:252, pl. 42: figs. 1–2. [Cuba. Although Sánchez Roig says it is Eocene, Brodermann (1949:326) says it is Middle to Upper Eocene.]
P. parvus Palmer in Sánchez Roig, 1949:251–252, pl. 42: fig. 12. [Cuba.]
P. sanchezi Lambert in Sánchez Roig, 1949:251, pl. 46: figs. 4–6. [Cuba. Although Sánchez Roig says it is Eocene, Brodermann (1949:326) says it is Middle to Upper Eocene.]

MIDDLE EOCENE

- P. clarcki* Sánchez Roig, 1949:252–253, pl. 46: figs. 7–8. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:326) says it is Middle Eocene.]

CRETACEOUS

P. elongatus Sánchez Roig, 1949:250, pl. 50: figs. 3-4. [Cuba. Although Sánchez Roig says it is Lower Eocene, Brodermann (1949:326) says it is Cretaceous.]

Subgenus *Prenaster* (*Saviniaster*) Lambert

RECENT

S. enodatus Chesher, 1968a:143-149, pls. 33-35. [Bahama Island, southeast of Florida, U.S.A.]

Genus *Proraster* Lambert

UPPER CRETACEOUS

P. atavus (Arnaud) Lambert var. *mediterraneus* Kühn, 1925:185-187. [France.] (Lower Campanian.)

Genus *Sanfilippaster* Checchia-Rispoli

In the *Treatise*, Fischer (Durham et al., 1966:U578) considers *Sanfilippaster* a subjective synonym of *Proraster* Lambert.

UPPER CRETACEOUS

Sanfilippaster Checchia-Rispoli, 1932b:313-316. Type-species: *Proraster geayi* Cotteau. [Madagascar, off East Africa, and Tripoli, Libya.] (Upper Senonian.)

Genus *Tripylus* Philippi

PALEOCENE

T. pseudoviviparus Lambert, 1933a:27-28, pl. 4: figs. 1-7. [Madagascar, off East Africa.] (Danian.)

UPPER CRETACEOUS

T. antonibensis Lambert, 1933a:28, pl. 4: figs. 12-14. [Madagascar, off East Africa.] (Upper Maestrichtian.)

Suborder MICRASTERINA A. G. Fischer

Family MICRASTERIDAE Lambert

Genus *Micraster* L. Agassiz

PALEOCENE

M. desori Ødum, 1926:162-163, pl. 2: fig. 1. [Denmark.] (Danian.)

CRETACEOUS

M. depressus Kongiel in Kongiel and Matweijewówna, 1937:116-117, 139-140, pl. 5: figs. 6-9. [Poland.]
M. elevatus Sánchez Roig, 1949:218, pl. 47: figs. 4-5. [Cuba.]

UPPER CRETACEOUS

M. burgiensis Lambert, 1935f:518, pl. 57: figs. 5-8. [Spain.] (Coniacian.)
M. coravium Moskvina, 1959:283, fig. 97, pl. 22: figs. 1a-e, 2a-b. [Caucasus, U.S.S.R.]
M. gappi Kühn, 1925:184-187, figs. 2a-c. [Austria.] (Coniacian.)
M. piriformis Böhm, 1927:197-198, pl. 12: figs. 7a-c. [Bithynia, Asia Minor.] (Senonian.)
M. subglobosus Moskvina, 1959:280, fig. 92, pl. 19: figs. 1a-e. [Caucasus, U.S.S.R.]
M. trangahyensis Lambert, 1936c:27, pl. 2: figs. 9-10. [Madagascar, off East Africa.] (Upper Senonian.)
M. uddeni Cooke, 1953:37-38, pl. 15: figs. 6-9. [Texas, U.S.A.] (Santonian.)
M. vistulensis Kongiel, 1950:318-320, 325-326, pl. 2: figs. 5-8. [Poland.] (Upper Maestrichtian.)

Subgenus *Micraster* (*Micraster*) L. Agassiz

UPPER CRETACEOUS

M. (M.) schroederi Stalley *planus* Maczyńska, 1968: 116-118, 168, pl. 5: figs. 2a-c, pl. 6: figs. 1a-2d, pl. 7: figs. 1a-e, text-pl. 5: figs. 1-3, text-pl. 6: figs. 1-3. [Poland.] (Campanian.)
M. (M.) bibicensis Maczyńska, 1968:129-130, 168, pl. 13: figs. 1a-4, text-pl. 10: figs. 1-4. [Poland.] (Upper Campanian.)

Subgenus *Micraster* (*Paramicraster*) Maczyńska

UPPER CRETACEOUS

Micraster (*Paramicraster*) Maczyńska, 1968:154–155.

Type-species: *M. (P.) latior* (Rowe). [Poland.] (Santonian.)

M. (P.) cracoviensis Maczyńska, 1968:155–157, 168, pl. 24: figs. 1a–e, pl. 25: figs. 1a–d, text-pl. 21: figs. 1–4. [Poland.] (Lower Campanian.)

Genus *Brissopeustes* Cotteau

LOWER EOCENE

B. desioi Lambert, 1933a:36, pl. 3: fig. 13. [Madagascar, off East Africa.]

PALEOCENE

B. decaryi Lambert, 1933a:19, pl. 3: figs. 9–10. [Madagascar, off East Africa.] (Danian.)

B. schwetzeri Poslavskaja and Moskvina, 1960:73–74, 81, fig. 24, pl. 6: figs. 2a–d, 3. [U.S.S.R.] (Danian.)

Genus *Isopneustes* Pomel

PALEOCENE

Micraster (*Isopneustes*) *eysdenensis* Smiser, 1935b: 84, pl. 7: figs. 7a–g. [Belgium.] (Montian.)

M. (I.) montensis Smiser, 1935b:84, pl. 7: figs. 8a–d. [Belgium.] (Montian.)

Family BRISSIDAE Gray

Genus *Brissus* Gray

RECENT

B. gigas Fell, 1947:145–150, figs. 1–2, pls. 13–14. [New Zealand.]

PLIOCENE

B. lasti Stockley, 1927:116–117, pl. 21: fig. 6. [Zanzibar Protectorate, East Africa.]

MIOCENE

B. latidunensis Clegg, 1933:30–33, pl. 3: figs. 7a–c. [Persian Gulf.]

UPPER MIOCENE

B. glenni Cooke, 1959:82, pl. 36: figs. 5–6. [South Carolina, U.S.A.]

LOWER MIOCENE

B. kewi Grant and Hertlein, 1938b:128–129, pl. 12: figs. 1–2. [California, U.S.A.] (Vaqueros Fm.)

OLIGOCENE

B. duperieri Castex, 1947:33–34, pl. 2: figs. 21–22. [France.] (Lattorfian = Sannoisian.)

UPPER EOCENE

B. camagueyensis Weisbord, 1934:76–78, pl. 9: figs. 1–2. [Cuba.]

MIDDLE EOCENE

B. caobaense Sánchez Roig, 1953c:163, pl. 7: fig. 5, pl. 8: figs. 1–2. [Cuba.]

Subgenus *Brissus* (*Allobrissus*) Mortensen

Fischer (Durham et al., 1966:U582), in the *Treatise*, considers *Brissus* (*Allobrissus*) Mortensen a subjective synonym of *Brissus* Gray.

RECENT

Brissus (*Allobrissus*) Mortensen, 1950b:162. Type-species: *Brissus agassizii* Döderlein. [Northern Pacific Ocean.]

B. (A.) meridionalis Mortensen, 1950b:162. [Australian region.]

MIDDLE MIOCENE

B. (A.) miocaenicus Schaffer, 1961:149–156, fig. 1, pl. 1: figs. 1–6, pl. 2: figs. 1–9. [Austria.] (Tortonian.)

Genus *Sandiegoaster* Sánchez Roig

In the *Treatise*, Fischer (Durham et al., 1966:U582) considers *Sandiegoaster* a subjective synonym of *Brissus* Gray.

MIDDLE EOCENE

Sandiegoaster Sánchez Roig, 1952b:12. Type-species: *S. durhami* Sánchez Roig, 1952b:12-13, pl. 5: fig. 2, pl. 6: fig. 2, pl. 7: fig. 2. [Cuba.]

Genus *Aguayoaster* Sánchez Roig

MIDDLE EOCENE

Aguayoaster Sánchez Roig, 1952b:10-11. Type-species: *A. aguayoi* Sánchez Roig, 1952b: 11-12, pl. 8: figs. 3, 5-7. [Cuba.]

Genus *Anabrissus* Mortensen

RECENT

Anabrissus Mortensen, 1950b:161. Type-species: *Brissus damesi* A. Agassiz. [Tropical Atlantic.]

Genus *Anametalia* Mortensen

RECENT

Anametalia Mortensen, 1950b:161. Type-species: *Brissus sternaloides* Bolau. [Indonesia.]
A. grandis Mortensen, 1950b:161. [Coast of Indo-China.]

Genus *Arcaechinus* Kier

LOWER EOCENE

Arcaechinus Kier, 1957b:891. Type-species: *A. auralduensis* Kier, 1957b:891-893, fig. 18, pl. 107: figs. 6-8. [British Somaliland, East Africa.] (Upper Auradu Series.)

Genus *Brissopatagus* Cotteau

LOWER MIOCENE/UPPER OLIGOCENE

B. venzoi Checchia-Rispoli, 1947b:518-520, pl. 1: figs. 1-13. [North Africa.] (Aquitanian/Chattian.)

OLIGOCENE

Eupatagus (Brissopatagus) avilensis Sánchez Roig, 1951:45-46, pl. 33: figs. 2-3. [Cuba.]

UPPER EOCENE

E. (B.) alabamensis Cooke, 1942:58-59, pl. 4: figs. 7-8. [U.S.A.]

E. (B.) georgianus Cooke, 1942:58, pl. 7: figs. 8-11. [U.S.A.]

B. rojasi Sánchez Roig, 1953c:164, pl. 9: figs. 5-6. [Cuba.]

MIDDLE EOCENE

B. collignoni Lambert, 1933a:37-38, pl. 4: fig. 21. [Madagascar, off East Africa.] (Lutetian.)

B. lummaui Castex, 1930:41-42, pl. 4: figs. 1-2. [France.] (Lutetian.)

PALEOCENE

E.? (*B.?*) *primus* Cooke, 1942:59, pl. 4: figs. 1-4. [U.S.A.] (Clayton Fm.)

Genus *Brissopsis* L. Agassiz in Agassiz and Desor

RECENT

B. micropetala Mortensen, 1948a:124-125. [Philippine Islands.]

B. obliqua Mortensen, 1948a:125-126. [Philippine Islands.]

B. persica Mortensen, 1940c:107-110, fig. 23, pl. 2: figs. 5-11. [Iranian Gulf.]

B. persica Mortensen var. *elevata* Mortensen, 1940c: 110, pl. 2: fig. 12. [Iranian Gulf.]

B. caparti Cherbonnier, 1959a:51-54, pl. 9: figs. A-O. [Gulf of Guinea, west central coast of Africa, Atlantic Ocean.]

B. evanescens Mortensen, 1950b:162. [Off Walfish Bay, South Africa.]

B. jarlii Mortensen, 1951:302-303, fig. 1, pl. 1: figs. 1-3. [Tropical West Africa.]

B. similis Mortensen, 1948a:123-124. [Philippine Islands.]

PLIOCENE

- B. japonica* Nisiyama, 1968:281–283, pl. 25: fig. 7, pl. 26: figs. 8–9. [Japan.] (Kokumoto Fm.)
B. luzonica (Gray) *cosibensis* Nisiyama, 1968:280–281, pl. 25: figs. 5–6. [Japan.] (Koshiha Fm.)

UPPER MIOCENE

- B. makiyamai* Morishita, 1957:161–163, pl. 1: figs. 1–5. [Japan.]

MEDIAL TERTIARY

- B. blanpiedi* Grant and Hertlein, 1938a:484–486, figs. 5–6, 8–10. [Mississippi, U.S.A. According to Cooke (1959:86) it is Middle Oligocene.]

OLIGOCENE

- B. fermori* Vredenburg, 1922:413, pl. 30: fig. 2. [Burma.]

UPPER OLIGOCENE

- B. aguayoi* Sánchez Roig, 1952c:15–16, pl. 6: figs. 1–2. [Cuba.]

UPPER EOCENE

- B. steinhatchee* Cooke, 1942:49, pl. 5: figs. 29–32. [U.S.A.]

Genus *Brissoma* Pomel

In the *Treatise*, Fischer (Durham et al., 1966:U584) considers *Brissoma* a subjective synonym of *Brissopsis*.

LOWER MIOCENE

- B. vonderschmitti* Jeannet, 1928a:37–38, pl. 4: figs. 16–19, pl. 6: figs. 9–11; 1928b:220. [Venezuela.] (Serie supérieure d'Agua Salada.)

UPPER OLIGOCENE

- B. habanensis* Sánchez Roig, 1949: 224–225, pl. 35: figs. 3–4. [Cuba.]

Genus *Kleinia* Gray

In the *Treatise*, Fischer (Durham et al., 1966:U584) considers *Kleinia* a synonym of *Brissopsis*.

LOWER MIOCENE

- Brissopsis* (*Kleinia*) *crescenticus* Wright var. *syriaca* Vautrin, 1933:104–106, pl. 12: figs. 2–3. [Asia Minor.] (Burdigalian.)

MIDDLE EOCENE

- K. pulcra* Checchia-Rispoli, 1950a[1945–1946]:31–32, pl. 2: figs. 4–4a. [Somaliland, East Africa.]

Genus *Cionobrissus* A. Agassiz

RECENT

- C. regularis* H. L. Clark, 1925a:221–222, pl. 10: figs. 6–7. [*Challenger* Sta. 188, west end of Torres Straits (Arafura Sea) between northern Australia and Indonesia.]

Genus *Cyclaster* Cotteau

RECENT

- C. recens* Mortensen, 1950b:161–162. [Coast of Indo-China.]
C. regalis Baker, 1969:266–270, figs. 1–18, pl. 1: figs. 1–4. [North of East Cape, Northern New Zealand.]

TERTIARY

- C. sterea* Arnold and Clark, 1934:149–150, pl. 3: figs. 4–5. [Jamaica.]

UPPER OLIGOCENE

- C. brodermanni* Sánchez Roig, 1949:221, pl. 35: figs. 1–2. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:319) says it is Upper Oligocene.]

LOWER OLIGOCENE

- C. drewryensis* Cooke, 1942:50, pl. 3: figs. 9–11. [U.S.A.]

EOCENE

- C. sanchezi* Lambert in Sánchez Roig, 1926:113–114, pl. 38: figs. 1–2. [Cuba. Although Lambert considered this species Late Cretaceous, according to Sánchez Roig (1949:219) it is Eocene.]

MIDDLE EOCENE

- C. jeanneti* Lambert, 1933a:36–37, pl. 3: figs. 11–12. [Madagascar, off East Africa.] (Lower Lutetian.)

PALEOCENE

- C. brunnicchi* Ravn, 1927:345–347, pl. 5: figs. 5a–e. [Denmark.] (Danian.)

UPPER CRETACEOUS

- C. pfenderae* Basse and Lambert in Lambert, 1936c: 27–28, pl. 4: figs. 17–19. [Madagascar, off East Africa.] (Upper Campanian.)
C. pygmeus Rouchadze, 1940:129–130, 155, 174–176, fig. 20, pl. 3: fig. 7. [Georgia, U.S.S.R.] (Maestrichtian.)

Subgenus *Diplodetus* (*Protobrissus*) Lambert

PALEOCENE

- P. indolensis* Poslavskaja and Moskvina, 1960:78, 81–82, fig. 29, pl. 8: figs. 2a–e. [Crimea, U.S.S.R.] (Danian.)

UPPER CRETACEOUS

- P. akkajensis* (Weber) in Moskvina, 1959:290, pl. 26: figs. 1a–e. [Crimea and Caucasus, U.S.S.R.]

Genus *Eupatagus* L. Agassiz

Lambert and Thiéry (1924:450) referred species previously considered to belong to *Eupatagus* to a pre-Linnean genus *Brissoides* Klein, 1734. Many

subsequent authors have done this also. Probably all the species listed below that were referred to *Brissoides* should be referred to *Eupatagus*.

RECENT

- E. dyscritus* H. L. Clark, 1938:436–437, pl. 28: figs. 10–11. [Australia.]
E. rubellus Mortensen, 1948a:129–130. [Philippine Islands.]

MIOCENE

- E. cordis* Desio, 1929:345–347, pl. 33: figs. 3a–b. [Oasis of Giarabùb, Libya.] (Porto Bardia.)
E. marianensis Nisiyama, 1968:291–293, pl. 27: figs. 7–8, 10–11. [Mariana Islands (Saipan), western Pacific Ocean.] (Nephrolepidina horizon.)

MIDDLE MIOCENE

- E. nipponicus* Morishita, 1957:163–164, pl. 1: figs. 7–8. [Japan.]

LOWER MIOCENE

- E. hollisi* Stockley, 1927:111–113, pl. 20: fig. 5. [Zanzibar Protectorate, East Africa.]

OLIGOCENE

- E. mexicanus* Jackson, 1937:234–235, pl. 14, pl. 15: fig. 1. [Mexico.]

UPPER OLIGOCENE

- B. camagueyanus* Sánchez Roig, 1949:206–207, pl. 25: fig. 1. [Cuba.]
B. habanensis Sánchez Roig, 1949:204–205, pl. 23: fig. 4. [Cuba.]
B. lajasensis Sánchez Roig, 1949:203–204, pl. 24: fig. 1. [Cuba.]
B. minutus Sánchez Roig, 1949:205. [Cuba.]
B. palmeri Sánchez Roig, 1949:205–206, pl. 25: figs. 4–5. [Cuba.]
B. sanchezi Lambert in Sánchez Roig, 1949:211, pl. 24: figs. 2–3. [Cuba.]
B. santanae Sánchez Roig, 1949:210–211, pl. 25: figs. 2–3. [Cuba.]

B. zanolettii Sánchez Roig, 1952c:12-13, pl. 7: figs. 1-2. [Cuba.]

EOCENE

E. alatus Arnold and H. L. Clark, 1927:63-64, pl. 13: figs. 4-7. [Jamaica, West Indies.]

E. attenuatus Arnold and H. L. Clark, 1927:65, pl. 13: figs. 8-9. [Jamaica, West Indies.]

B. cranium Leske var. *somaliensis* Checchia-Rispoli, 1943a:100-103, pl. 2: figs. 1-2, pl. 3: fig. 5. [Somaliland, East Africa.]

B. dainellii Checchia-Rispoli, 1943a:105-107, pl. 1: figs. 3-6. [Somaliland, East Africa.]

B. daradensis Lambert in Lambert and Jacquet, 1936:357, pl. 23: figs. 4-5. [Senegal, West Africa.]

E. defectus Arnold and H. L. Clark, 1927:65-66, pl. 14: figs. 1-3. [Jamaica, West Indies.]

B. fecundus Checchia-Rispoli, 1943a:109-111, pl. 3: figs. 1-4. [Somaliland, East Africa.]

E. hildae Hawkins in Arnold and H. L. Clark, 1927:66-67, 81, pl. 22: figs. 9-10. [Jamaica, West Indies.]

Brissoides (Eupatagus) lamberti Collignon, 1930: 559-561, pl. 32: figs. 1, 1a-b. [Austria.]

E. longipetalus Arnold and H. L. Clark, 1927:67, pl. 14: figs. 4-6. [Jamaica, West Indies.]

B. migiurtinus Checchia-Rispoli, 1943a:108-109, pl. 2: figs. 3-8. [Somaliland, East Africa.]

B. migliorinii Checchia-Rispoli, 1943a:103-105, pl. 1: figs. 1-2. [Somaliland, East Africa.]

B. skourensis Lambert, 1937:87-88, pl. 3: figs. 12-14. [Morocco.]

UPPER EOCENE

E. calistoides Sánchez Roig, 1953c:160-161, pl. 6: fig. 8. [Cuba.]

B. cuvillieri Lambert, 1935e:42-43, pl. 1: figs. 7-8. [Egypt.] (Bartonian.)

E. ingens Zachos, 1968:161-163, fig. 1. [Florida, U.S.A.] (Jackson Stage, Ocala Ls.)

E. siboneyensis Weisbord, 1934:78-80, pl. 8: figs. 7-8. [Cuba.]

B. stefaninii Lambert and Roig in Sánchez Roig, 1949:207-208, pl. 23: fig. 1. [Cuba.]

E. stevensi Grant and Hertlein, 1938b:134-135, fig. 12. [California, U.S.A.] (Approximately Domenigine.)

E. turibacoensis Sánchez Roig, 1953c:157-158, pl. 8: figs. 3-4. [Cuba.]

MIDDLE EOCENE

E. brodermanni Sánchez Roig, 1953c:159-160, pl. 9: figs. 1, 4. [Cuba.]

E. caobaense Sánchez Roig, 1952c:13-14, pl. 6: fig. 10. [Cuba.]

E. casanovai Sánchez Roig, 1953c: 159, pl. 9: figs. 2-3. [Cuba.]

E. gadilhei Roman and Gorodiski, 1959:60-61, pl. 3: figs. 39-41. [Senegal.] (Upper Lutetian.)

LOWER EOCENE

E. haburiensis Khanna, 1967:214-220, fig. 1, pl. 1: figs. 1-8. [Rajasthan, India.] (Ypresian.)

Genus *Euspatangus* Cotteau

In the *Treatise*, Fischer (Durham et al., 1966:U586) considers *Euspatangus* a subjective synonym of *Eupatagus*.

MIDDLE EOCENE

E. rogeri Pinar, 1951:47-49, fig. 8, pl. 1b: figs. 4-5. [Turkey.]

Genus *Megapatagus* Sánchez Roig

In the *Treatise*, Fischer (Durham et al., 1966:U586) considers *Megapatagus* a subjective synonym of *Eupatagus* L. Agassiz.

UPPER OLIGOCENE

Megapatagus Sánchez Roig, 1953a:58-59. Type-species: *M. franciscanus* Sánchez Roig, 1953a:59-60, pls. 6(pars), 11. [Cuba.]

OLIGOCENE

M. depressus Sánchez Roig, 1953a:60, pl. 12. [Cuba.]

UPPER EOCENE

M. turibacoensis Sánchez Roig, 1953a:61, pl. 13. [Cuba.]

Genus *Zanolettiaster* Sánchez Roig

In the *Treatise*, Fischer (Durham et al., 1966:U586) considers *Zanolettiaster* a subjective synonym of *Eupatagus* L. Agassiz.

UPPER OLIGOCENE

Zanolettiaster Sánchez Roig, 1952c:14. Type-species: *Z. herrerae* Sánchez Roig, 1952c:15, pl. 8: figs. 1-2, pl. 9: fig. 4. [Cuba.]

Subgenus *Eupatagus* (*Gymnopatagus*) Döderlein

OLIGOCENE

- E. (G.) brevipetalum* Sánchez Roig, 1951:44-45, pl. 33: fig. 1, pl. 38: fig. 1. [Cuba.]
E. (G.) rogasi Sánchez Roig, 1951:42, pl. 34: fig. 3. [Cuba.]
E. (G.) venturillae Sánchez Roig, 1951:43, pl. 26: figs. 1-2. [Cuba.]
E. (G.) zanoletti Sánchez Roig, 1951:43-44, pl. 32: fig. 3. [Cuba.]

Genus *Fernandezaster* Sánchez Roig

EOCENE

Fernandezaster Sánchez Roig, 1952c:17. Type-species: *F. mortenseni* Sánchez Roig, 1952c:18, pl. 10: figs. 1-2. [Cuba, Although Sánchez Roig says it is Upper Oligocene, Fischer (Durham et al., 1966:U588) says it is Eocene.]

Genus *Gillechinus* Fell

UPPER EOCENE

Gillechinus Fell, 1963a:213. Type-species: *G. cudmorei* Fell, 1963a:213-215, pls. 1(pt.), 2. [Victoria, Australia.]

Genus *Gaultieria* Agassiz

PALEOGENE

G. desioi Airaghi, 1934:78-79, pl. 5: figs. 9-10. [Libya, North Africa.]

Genus *Herreraster* Sánchez Roig

OLIGOCENE

Herreraster Sánchez Roig, 1951:52. Type-species: *H. herrerae* Sánchez Roig, 1951:53, pls. 30, 31. [Cuba.]

Genus *Idiobryssus* Clark

RECENT

Idiobryssus H. L. Clark, 1939:173. Type-species: *I. coelus* H. L. Clark, 1939:173-175, pl. 17: figs. 1-2. [Galápagos Islands, Eastern Pacific Ocean.]

Genus *Lajanaster* Sánchez Roig

MIOCENE

L. jacksoni Lambert and Roig var. *minor* Sánchez Roig, 1926: pls. 26, 27. [Cuba.]

OLIGOCENE

- L. guevarai* Sánchez Roig, 1951:53-54, pl. 24: figs. 2-4. [Cuba.]
L. venturillae Sánchez Roig, 1951:54-55, pl. 25: figs. 3-4. [Cuba.]

UPPER OLIGOCENE

- L. hernandesi* Sánchez Roig, 1949:195, pl. 23: figs. 2-3. [Cuba.]
L. rojasi Sánchez Roig, 1953a:58, pl. 10(pars). [Cuba.]

Genus *Lissospatangus* Mortensen

RECENT

Lissospatangus Mortensen, 1950b:162. Type-species: *L. hirsutus* Mortensen, 1950b:162. [South of Australia.]

Genus *Macropneustes* L. Agassiz

TERTIARY

M. dyscritus Arnold and H. L. Clark, 1934:151, pl. 4: figs. 1-2. [Jamaica, West Indies.]

M. sinuosus Arnold and H. L. Clark, 1934:152, pl. 4: fig. 3. [Jamaica, West Indies.]

M. stenopetalus Arnold and H. L. Clark, 1934:152-153, pl. 4: figs. 4-5. [Jamaica, West Indies.]

LOWER MIOCENE

M. dubius Israelsky, 1924:143, pl. 3: fig. 1. [Mexico. Although Israelsky considered the Tuxpam Beds, from where this species was collected, to be Oligocene, these beds are now considered (Masuda, 1971:215-216) to be Lower Miocene.]

OLIGOCENE

M. brodermanni Sánchez Roig, 1953a:62-63, pl. 15 (part), pl. 16 (part). [Cuba.]

M. trevisani Socin, 1942:51-52. [Somaliland.]

UPPER OLIGOCENE

M. gomezmazae Sánchez Roig, 1953a:63, pl. 17. [Cuba.]

EOCENE

M. altus Arnold and H. L. Clark, 1927:68, pl. 14: figs. 7-9. [Jamaica, West Indies.]

M. angustus Arnold and H. L. Clark, 1927:68-69, pl. 14: figs. 10-11, pl. 15: fig. 1. [Jamaica, West Indies.]

M. parvus Arnold and H. L. Clark, 1927:69-70, pl. 18: figs. 1-3. [Jamaica, West Indies.]

M. rochi Lambert, 1933b:77-78, pl. 3: fig. 13. [North Africa.]

Subgenus *Macropneustes* (*Deakia*) Pavay

UPPER EOCENE

D. armadilloensis Sánchez Roig, 1953c:165-166, pl. 10: figs. 1-2. [Cuba.]

Genus *Mariania* Airaghi

MIDDLE/LOWER MIOCENE

M. euglypha (Laube) var. *brevistella* Venzo, 1935: 233, pl. 17: figs. 29a-b. [Italy.] (Langhian.)

Genus *Mauritanaster* Lambert

UPPER OLIGOCENE

M. depressus Sánchez Roig, 1949:228-229, pl. 33: fig. 1. [Cuba.]

M. marroquinensis Sánchez Roig, 1953a:61-62, pl. 14. [Cuba.]

Genus *Meoma* Gray

RECENT

M. cadenati Madsen, 1957:474-479, figs. 1-3. [Senegal, West Africa.]

M. frangibilis Cheshier, 1970:750-753, figs. 7a-c, 8. [Panama, Bay of Panama (Pacific side).]

EOCENE

M. antiqua Arnold and H. L. Clark, 1927:70, pl. 15: fig. 2. [Jamaica, West Indies.]

MIDDLE EOCENE

M. caobaensis Sánchez Roig, 1952c:16-17, pl. 11: figs. 2-3. [Cuba.]

Subgenus *Meoma* (*Plethotaenia*) H. L. Clark

RECENT

P. angularis Cheshier, 1968a:111-121, figs. 20(pt.), 22(pt.), 23(pt.), 24, pls. 24-26. [Bahama Island to Barbados, Caribbean Sea.]

Subgenus *Meoma* (*Schizobrissus*) Pomel

PLEISTOCENE

S. jacksoni Lambert and Roig in Sánchez Roig, 1949:230-231, pl. 37: figs. 1-2. [Cuba.]

MIOCENE

S.? *siliceus* Desio, 1929:337-340, pl. 32: fig. 4. [Oasis of Giarabùb, Libya.] (Scegga-Altipiano Marm.)

LOWER MIOCENE

S. kawi Durham, 1961a:484–485, figs. 1B, 1E, 2C, pl. 67: figs. 2, 6, 9. [Costa Rica.]

EOCENE

S. damiani Jeannet, 1934a:388–389; 1934b:334–335. [Switzerland.]

Genus *Metalia* Gray

RECENT

M. latissima H. L. Clark, 1925a:215–216, pl. 11: fig. 7, pl. 12: figs. 1–2. [Tuticorin in south Madras, India.]

TERTIARY

M. dubia Arnold and H. L. Clark, 1934:153–154, pl. 5: figs. 4–6. [Jamaica, West Indies.]
M. jamaicensis Arnold and H. L. Clark, 1934:154–155, pl. 5: figs. 1–3. [Jamaica, West Indies.]

PLIOCENE

M. waylandi Stockley, 1927:116, pl. 21: figs. 4a–b. [Zanzibar Protectorate, East Africa.]

LOWER MIOCENE/OLIGOCENE

M. pelagica Nisiyama, 1968:299–300, pl. 27: figs. 1–5, pl. 29: fig. 4. [Saipan, Mariana Islands, western Pacific Ocean.] (Donny Fm. Aquitanian.)

OLIGOCENE

M. cartagensis Sánchez Roig, 1949:232–233. [Cuba.]

UPPER OLIGOCENE

M. palmeri Sánchez Roig, 1953c:166–167, pl. 10: fig. 3. [Cuba.]

Genus *Prometalia* Pomel

In the *Treatise*, Fischer (Durham et al., 1966:U597) considers *Prometalia* a subjective synonym of *Metalia*.

MIDDLE EOCENE

P. besairiei Lambert, 1933a:39–40, fig. 6. [Madagascar, off East Africa.] (Lutetian.)

Genus *Migliorinia* Checchia-Rispoli

EOCENE

Migliorinia Checchia-Rispoli, 1942:305–309. Type-species: *M. migiurtina* Checchia-Rispoli, 1942:305–309, figs. 1–3, pl. 1: figs. 1–10. [Somaliland, East Africa.]

Genus *Pharaonaster* Lambert

EOCENE

P. migliorinii Checchia-Rispoli, 1941:388–391, figs. 1–2. [North Africa.]

Genus *Thebaster* Checchia-Rispoli

In the *Treatise*, Fischer (Durham et al., 1966:U601) considers this genus a subgenus of *Pharaonaster*.

EOCENE

Thebaster Checchia-Rispoli, 1941:393. Type-species: *Macropneustes fischeri* de Loriol. [Egypt.]

Genus *Plagiobrissus* Pomel

RECENT

P. pacificus H. L. Clark, 1940b:351, pl. 2: figs. 3–4. [Panama, Pacific Ocean side.]

MIOCENE

P. abeli Reidl, 1941:24–29, figs. 1–2. [Austria.]
P. costaricensis Durham, 1961a:485–487, figs. 1G, 1J, 2F, pl. 68: figs. 6, 9, 12. [Costa Rica.]
P. malavassii Durham, 1961a:487, figs. 1H, 1K, 2D, pl. 67: figs. 1, 3, 10, pl. 68: fig. 1. [Costa Rica.]

MIDDLE MIOCENE

P. lamberti Jeannet, 1928a:38–41, fig. 12, pl. 5: figs. 1–2, pl. 6: figs. 13–14; 1928b:220. [Venezuela.] (Serie de Capadare, couches d'Ojo de Agua.)

OLIGOCENE

- Eupatagus (Plagiobrissus) herrerae* Sánchez Roig, 1951:46-47, pl. 25: figs. 1-2. [Cuba.]
E. (P.) santanae Sánchez Roig, 1951:47-48, pl. 37: fig. 2. [Cuba.]

EOCENE

- P. abruptus* Arnold and H. L. Clark, 1927:71, pl. 18: figs. 4-5. [Jamaica, West Indies.]
P. elevatus Arnold and H. L. Clark, 1927:71-72, pl. 19: figs. 2-4. [Jamaica, West Indies.]
P. latus Arnold and H. L. Clark, 1927:72-73, pl. 18: figs. 6-7, pl. 19: fig. 1. [Jamaica, West Indies.]
P. perplexus Arnold and H. L. Clark, 1927:74-75, pl. 20: fig. 6, pl. 21: figs. 1-2. [Jamaica, West Indies.]
P. robustus Arnold and H. L. Clark, 1927:75, pl. 20: fig. 7, pl. 21: figs. 3-4. [Jamaica, West Indies.]

UPPER EOCENE

- Eupatagus (Plagiobrissus) curvus* Cooke, 1942:56-57, pl. 7: figs. 5-7. [U.S.A.]
E. (P.) dixie Cooke, 1942:55-56, pl. 6: figs. 1-3. [U.S.A.]
E. (P.) gardnerae Cooke, 1942:56, pl. 7: figs. 1-4. [U.S.A.]
E. (P.) ocalanus Cooke, 1942:57, pl. 6: figs. 4-8. [U.S.A.]

Subgenus *Plagiobrissus (Rhabdobrissus)* Cotteau

UPPER EOCENE

- Brissoides (Rhabdobrissus) aloysii* Pijpers, 1933:89-91, figs. 154-155, pl. 1: fig. 18, pl. 2: figs. 7-9. [Netherland Antilles, Dutch West Indies.]

Genus *Mortensenaster* Lambert

EOCENE

- M. barthouxi* Lambert, 1931d:203, pl. 8: fig. 4. [Isthmus of Suez, Red Sea area.]

Genus *Plesiaster* Pomel

UPPER CRETACEOUS

- Micraster (Plesiaster) americanus* Stephenson, 1941:69-70, pl. 7: figs. 1-4. [U.S.A.] (Navarro Group, Maestrichtian.)

Genus *Plesiopatagus* Pomel

MIDDLE EOCENE

- P. hourcqi* Lambert, 1933a:38, pl. 4: fig. 22. [Madagascar, off East Africa.] (Lower Lutetian.)

Genus *Rhynobrissus* A. Agassiz

RECENT

- R. macropetalus* H. L. Clark, 1938:434-435, pl. 28: figs. 8-9. [Western Australia.]

UPPER MIOCENE

- R. rostratus* Cooke, 1961:29, pl. 14: figs. 1-4. [Venezuela.]

Genus *Rojasia* Sánchez Roig

EOCENE

- Rojasia* Sánchez Roig, 1951:57. Type-species: *R. rojasi* Sánchez Roig, 1951:58, pl. 35, pl. 36: fig. 1. [Cuba.]

Genus *Spatagobrissus* H. L. Clark

RECENT

- Spatagobrissus* H. L. Clark, 1923:402-404. Type-species: *S. mirabilis* H. L. Clark, 1923:402, pl. 23: figs. 1-2. [South Africa.]

Genus *Spatangomorpha* Böhm

MIDDLE EOCENE

- Eupatagus (Spatangomorpha) pinarensis* Sánchez Roig, 1953c:157, pl. 7: figs. 3-4. [Cuba.]

Genus *Taimanawa* Henderson and Fell

TERTIARY

T. mortenseni Henderson and Fell, 1969:12–14, fig. 2b, pl. 5: fig. 1. [New Zealand.]

LOWER MIOCENE

Taimanawa Henderson and Fell, 1969:3–6. Type-species: *T. pulchella* Henderson and Fell, 1969: 6–9, figs. 1, 2a, 2c, pl. 2: fig. 2, pls. 3–4. [New Zealand.]

Family UNIFASCIIDAE Cooke

UNIFASCIIDAE Cooke, 1959:79. Type-genus: *Unifascia* Cooke. [Fischer (Durham et al., 1966:U582) in the *Treatise* considers this family a synonym of Brissidae Gray.]

Genus *Unifascia* Cooke

MIDDLE EOCENE

Unifascia Cooke, 1959:79–80. Type-species: *Macropneustes carolinensis* Clark. [North Carolina, U.S.A.] (Castle Hayne Ls.)

Family SPATANGIDAE Gray

Genus *Spatangus* Leske

RECENT

- S. beryl* Fell, 1963b:5–6, pl. 1: fig. 1, pl. 4: figs. 8–9, pl. 5: figs. 10–11, 13. [New Zealand.]
S. diomedae Fell, 1963b:5–7. [Philippine Islands.]
S. multispinus Mortensen, 1925:413–415, figs. 68–69. [Pacific Ocean.]
S. thor Fell, 1963b:3–5, fig. 1, pl. 1: fig. 2, pl. 3: figs. 6–7, pl. 5: fig. 12. [New Zealand.]

UPPER MIOCENE

S. glenni Cooke, 1959:80, pl. 35: figs. 1–5. [South Carolina, U.S.A.]

UPPER EOCENE

S. tapinus Schenck, 1928:198–199, pl. 24: figs. 1–4. [California, U.S.A.] (Tejon Fm.)

UPPER CRETACEOUS

S. baixadoleitensis Maury, 1934a:156–157, pl. 16: fig. 1. [Rio Grande do Norte, Brazil.] (Probably Turonian.)

Genus *Prospatangus* Lambert

In the *Treatise*, Fischer (Durham et al., 1966:U605) considers *Prospatangus* a synonym of *Spatangus* Gray.

MIOCENE

- P. acuminatus* Szörényi, 1953:39, 91, pl. 7: figs. 5–5a. [Ukraine.]
P. fothiensis Strauz, 1925:368–369, fig. 24. [Hungary. Another pagination given could be 214–215, fig. 24.]
P. hungaricus Vadász var. *bukkensis* Kutassy, 1928: 257–258. [Hungary.]

MIDDLE MIOCENE

- P. cotteaudi* Lambert, 1928b:121–124. [France.] (Helvetian.)
P. venzoi Laureri, 1962:100–101, pl. 2: figs. 2–2a, pl. 4: fig. 2. [Italy.] (Helvetian.)

Genus *Atelospatangus* Koch

MIDDLE EOCENE

A. magnus Szörényi, 1963:192–193, pl. 15: figs. 5–7. [Hungary.]

Genus *Hemimaretia* Mortensen

RECENT

Hemimaretia Mortensen, 1950b:160. Type-species: *Marietia elevata* Döderlein. [East Africa.]

Genus *Maretia* Gray

RECENT

- M. parvituberculata* H. L. Clark, 1925c:13–15, pl. 4. [Off Natal Coast, South Africa.]
M. cordata Mortensen, 1948a:132–133. [Philippine Islands.]

MIOCENE

- M. estenozii* Sánchez Roig, 1926:111–112, pl. 37: figs. 1–2. [Havana, Cuba.]

Genus *Hemipatagus* Desor

In the *Treatise*, Fischer (Durham et al., 1966:U609) considers *Hemipatagus* a subjective synonym of *Maretia* Gray.

PLIOCENE

- H. bandaensis* Martin in Martin and Jeannet, 1937:276, figs. 53a–c. [Dutch East Indies, western Pacific Ocean.]

UPPER OLIGOCENE

- H. cartagensis* Sánchez Roig, 1949:216–217. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:323) says it is Upper Oligocene.]

Genus *Nacospatangus* A. Agassiz**Subgenus *Pseudomaretia* Koehler**

RECENT

- P. oblonga* Mortensen, 1950b:163. [Galápagos Islands, southeast Pacific Ocean.]

Genus *Paramaretia* Mortensen

RECENT

- Paramaretia* Mortensen, 1950b:160. Type-species: *P. multituberculata* Mortensen, 1950b:160. [New South Wales, Australia.]

Subgenus *Atelospatangus* (*Semipetalion*) Szörényi

UPPER EOCENE

- Atelospatangus* (*Semipetalion*) Szörényi, 1963:193–194. Type-species: *A. (S.) anomon* Szörényi, 1963:195–196, pl. 15: figs. 1–4. [Hungary.]

Family LOVENIIDAE Lambert**Genus *Lovenia* Desor**

RECENT

- L. doederleini* Mortensen, 1950b:158. [Kei Islands, Malay Archipelago.]
L. doederleini Mortensen var. *acuminata* Mortensen, 1948a:138. [Philippine Islands.]
L. hawaiiensis Mortensen, 1950b:158. [Hawaiian Islands, Pacific Ocean.]

MIOCENE

- L. gigantea* H. L. Clark, 1945:325–326, pl. 43: fig. F. [Fiji, South Pacific Ocean.]
L. minihagali Deraniyagala, 1961:154, pl. 5: fig. 9. (Ceylon, Indian Ocean.)
L. similis H. L. Clark, 1945:327–328, pl. 43: fig. G. [Fiji, South Pacific Ocean.]

MIDDLE MIOCENE

- L. mortenseni* Čtyroký, 1965:108–118, figs. 1–6, pls. 1–6. [Czechoslovakia.] (Carpathian Fm.)

OLIGOCENE

- L. mexicana* Jackson, 1937:236–237, pl. 15: figs. 2–3. [Mexico.]

UPPER OLIGOCENE

- L. alabamensis* Cooke, 1959:77, pl. 32: figs. 14–17. [Alabama, U.S.A.] (Chickasawhay Ls.)

UPPER EOCENE

- L. macrotuberculata* Schaffer, 1960:431–434, figs. e–g. [Austria.]

UPPER CRETACEOUS

- L. baixodoleitensis* Maury, 1934a:156, pl. 15: fig. 1. [Brazil, Rio Grande do Norte. Maury (1934b:3) made this species the type-species of a new genus *Lovenilampas*, which Kier (Durham et al., 1968: U523) put in incertae sedis.] (Probably Turoanian.)

Genus *Breynia* Desor

PLIOCENE

- B. australasiae* Leach var. *aroensis* Currie, 1924: 64–66, pl. 4: fig. 6. [Aru Islands, off southwest coast of New Guinea.]
- B. cordata* Hayasaka and A. Morishita, 1947: 122–124, pl. 10: fig. 1, pl. 11: fig. 1. [China.]
- B. testudinaria* Hayasaka and A. Morishita, 1947: 125–126, pl. 11: fig. 2. [China.]
- B. birmanica* Vredenburg, 1922:413, pl. 30: fig. 1. [Burma.]

UPPER EOCENE

- B. sirtica* Airaghi, 1939:281–282, pl. 12: figs. 17–18. [North Africa.]

Genus *Echinocardium* Gray

RECENT

- E. connectens* Mortensen, 1933:469–470, fig. 28. [St. Helena (Island), South Atlantic Ocean.]
- E. fenauxi* Péquignat, 1963:3–8, figs. 1–3; 1964: 5–14, figs. 1–4, 5a, pls. 1–2. [South of France to Ligurian Sea.]
- E. keiense* Mortensen, 1950b:163. [Kei Islands, Malay Archipelago.]

Genus *Homolampas* A. Agassiz

RECENT

- H. lovenioides* Mortensen, 1948a:117–118. [Philippine Islands.]

Suborder ASTEROSTOMATINA A. G. Fischer

Family ASTEROSTOMATIDAE Pictet

Genus *Asterostoma* Agassiz

MIDDLE EOCENE

- A. dickersoni* Sánchez Roig, 1949:180–181, pl. 31: fig. 1, pl. 32: fig. 1. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949: 317) says it is Middle Eocene.]
- A. irregularis* Sánchez Roig, 1952b:7–8, pls. 2–3. [Cuba.]
- A. subcircularis* Sánchez Roig, 1952c:19–20, pl. 2: figs. 1–2, pl. 11: fig. 1. [Cuba.]

Genus *Antillaster* Lambert

MIOCENE

- A. lamberti* Jeannet, 1928b:220. [Venezuela.]

MIDDLE MIOCENE

- A. lamberti* Jeannet, 1928a:36–37, pl. 4: figs. 14–15. [Venezuela.] (Serie Capadare, couches d'Ojo de Agua.)

LOWER MIOCENE

- A. jaumei* Sánchez Roig, 1953a:64–65, pl. 15(pars). [Cuba.]

OLIGOCENE

- A. depressus* Sánchez Roig, 1951:51, pl. 29: fig. 1. [Cuba.]
- A. giganteus* Sánchez Roig, 1951:48–49. [Cuba.]
- A. herrerae* Sánchez Roig, 1951:49–50, pl. 27: fig. 1, pl. 28: fig. 1. [Cuba.]
- A. mortenseni* Sánchez Roig, 1952c:20–21, pl. 14: figs. 2–3. [Cuba.]
- A. rojasi* Sánchez Roig, 1951:50–51, pl. 37: fig. 1, pl. 38: fig. 2. [Cuba.]

UPPER OLIGOCENE

- A. brachypetalus* Sánchez Roig, 1952b:8–9, pl. 7: fig. 1. [Cuba.]

- A. cartagensis* Sánchez Roig, 1949:188–189, pl. 22: fig. 2. [Cuba.]
A. estenozii Sánchez Roig, 1949:189–190, pl. 22: fig. 1. [Cuba.]
A. expansus Sánchez Roig, 1953a:63–64, pl. 18. [Cuba.]
A. guevarai Sánchez Roig, 1952b:9–10, pl. 4: figs. 1–2. [Cuba.]

EOCENE

- A. arnoldi* H. L. Clark in Arnold and Clark, 1927: 62–63, pl. 15: fig. 3, pl. 16: figs. 16–17. [Jamaica, West Indies.]

UPPER EOCENE

- A. bonairensis* Pijpers, 1933:88, pl. 2: figs. 1–3. [Dutch West Indies, Netherland Antilles.]

Genus *Brissolampas* Pomel

UPPER OLIGOCENE

- B. santanae* Sánchez Roig, 1949:190–191, pl. 22: figs. 3–4. [Cuba.]

Genus *Heterobrissus* Manzoni and Mazzetti

MIOCENE

- H. cypriotes* Currie, 1935b:32–33, pl. 3: figs. 1–1b. [Cyprus, eastern Mediterranean Sea.] (Facies I of Idalian Series.)

Genus *Archaeopneustes* Gregory

In the *Treatise*, Fischer (Durham et al., 1966:U622) considers *Archaeopneustes* a subjective synonym of *Heterobrissus* Manzoni and Mazzetti.

LOWER PLIOCENE

- A. moorefieldi* Hall, 1966:1124–1125, pl. 145: figs. 1–3. [California, U.S.A.]

Genus *Linopneustes* A. Agassiz

RECENT

- L. brachypetalus* Mortensen, 1950b:157. [New South Wales, Australia.]

Genus *Megapetalus* H. L. Clark

UPPER MIOCENE

- Megapetalus* H. L. Clark, 1929:259–260. Type-species: *M. lovenioides* H. L. Clark, 1929: 260–261, pl. 31: figs. 1–6. [California, U.S.A.]

Genus *Moronaster* Sánchez Roig

EOCENE

- Moronaster* Sánchez Roig, 1952b:13–14. Type-species: *M. moronensis* Sánchez Roig, 1952b: 14–15, pl. 9: figs. 1–2. [Cuba.]

Genus *Paleopneustes* A. Agassiz

RECENT

- P. tholoformis* Chesher, 1968a:125–134, fig. 25, pl. 27, pl. 28: figs. e, f, pl. 29: figs. a, f. [Florida Strait to Barbados, Caribbean Sea.]

PLIOCENE

- P. periturus* Nisiyama, 1968:165–167, figs. 61a–c. [Japan.] (Kiwada Fm.)
P. psoidoperiodus Nisiyama, 1968:162–164, figs. 60a–c. [Japan.] (Nakamura Fm.)

LOWER PLIOCENE

- P. holmani* Grant and Hertlein, 1938b:112–113, pl. 25: figs. 1–2. [California, U.S.A.] (Repetto Fm.)

MIOCENE

- P. lepidus* Nisiyama, 1968:167–168, pl. 20: figs. 1, 4, pl. 21: fig. 1. [Japan.] (Nanao Fm.)

UPPER OLIGOCENE

P. elevatus Israelsky, 1924:144, pl. 4: figs. 1a-b. [Mexico.]

Subgenus *Paleopneustes* (*Oopneustes*) Nisiyama

MIDDLE MIOCENE

Paleopneustes (*Oopneustes*) Nisiyama, 1968:159. Type-species: *P. (O.) priscus* Nisiyama, 1968: 159-162, figs. 57-59, pl. 19: figs. 1-2, pl. 21: fig. 4. [Japan.] (Tsunaki Fm.)

Genus *Platybrissus* Grube

PLEISTOCENE

P. parvus H. L. Clark, 1945:322-323, pl. 42: figs. J-K. [Fiji, South Pacific Ocean.]

Subgenus *Platybrissus* (*Eurypatagus*) Mortensen

RECENT

Eurypatagus Mortensen, 1948a:133-134. Type-species: *E. ovalis* Mortensen, 1948a:134. [Philippine Islands.]

E. grandiporus Mortensen, 1948b:12, pl. 1: figs. 4-5. [Indian Ocean.]

Genus *Plesiozonus* de Meijere

RECENT

P. diomedae Mortensen, 1948a:118-119. [Philippine Islands.]

Genus *Pseudoasterostoma* Sánchez Roig
not *Pseudoasterostoma* Duncan, 1889

Presumably Sánchez Roig did not know that *Pseudoasterostoma* was preoccupied when he described his new genus. If his type-species is generically distinct, then a new generic name should be erected for it. In the *Treatise*, Fischer (Durham et al., 1966:U624) considers *Pseudoasterostoma* Duncan an objective synonym of *Prosostoma* Pomel.

OLIGOCENE

Pseudoasterostoma Sánchez Roig, 1952b:5-6, pl. 1: fig. 1. Type-species: *Asterostoma cubensis* Cotteau. [Cuba.]

UPPER OLIGOCENE

P. fernandesi Sánchez Roig, 1952b:6, pl. 6: fig. 1. [Cuba.]

P. habanensis Sánchez Roig, 1952b:6-7, pl. 5: fig. 1. [Cuba.]

Genus *Scrippsechinus* Allison, Durham and Mintz

RECENT

Scrippsechinus Allison, Durham and Mintz, 1967:16. Type-species: *S. fisheri* Allison, Durham and Mintz, 1967:16-22, figs. 13-14, 21-32. [West from Chile.]

Suborder Uncertain

Family Uncertain

Genus *Barnumia* Cooke

UPPER CRETACEOUS

Barnumia Cooke, 1953:29-30. Type-species: *B. browni* Cooke, 1953:30, pl. 16: figs. 2-5. [Guatemala.] (Campanian?)

Subgenus *Cottreaucorys* (*Cordastrum*) Nisiyama

UPPER CRETACEOUS

Cottreaucorys (*Cordastrum*) Nisiyama, 1968:175. Type-species: *C. (C.) sulcatus* Nisiyama, 1968: 175-177, figs. 65a-c, pl. 18: figs. 10-11, pl. 20: fig. 2. [Japan.] (Miyakura Fm. Maestrichtian-Senonian.)

Genus *Gonzalezaster* Sánchez Roig

EOCENE

Gonzalezaster Sánchez Roig, 1952b:15-16. Type-species: *Nudobrissus lamberti* Sánchez Roig.

(Roig, *Torreia*, Cuba No. 17:16, pl. 8: figs. 1, 4). [Cuba.]

Genus *Homoeopetalus* Arnold and H. L. Clark

TERTIARY

Homoeopetalus Arnold and H. L. Clark, 1934:146.
Type-species: *H. axiologus* Arnold and H. L. Clark, 1934:147-148, pl. 2: figs. 2-3. [Jamaica, West Indies.]

Genus *Nudobrissus* Lambert

UPPER/MIDDLE EOCENE

N. lamberti Sánchez Roig, 1949:222-223, pl. 36: figs. 1-3. [Cuba. Brodermann (1949:324) says it is Middle to Upper Eocene.]

Order NEOLAMPADOIDA Philip

Suborder NEOLAMPADINA Philip

Neolampadina Philip, 1963a:725. Type-genus: *Neolampas* A. Agassiz.

Family NEOLAMPADIDAE Lambert

Genus *Nannolampas* Mortensen

RECENT

Nannolampas Mortensen, 1948c:339. Type-species: *Neolampas tenera* de Meijere. [Timor Sea, part of Indian Ocean.]

Genus *Notolampas* Philip

LOWER MIOCENE

Notolampas Philip, 1963a:719-720. Type-species: *N. flosculus* Philip, 1963a:720-722, fig. 2, pl. 107: figs. 1-10. [South Australia.]

Genus *Pisolampas* Philip

UPPER EOCENE

Pisolampas Philip, 1963a:718. Type-species: *P. concinna* Philip, 1963a:719, fig. 1, pl. 106, pl. 107: fig. 11. [South Australia.]

**Superclass GNATHOSTOMATA
or ATELOSTOMATA**

Order Uncertain

Genus *Menopygus* Pomel

LOWER JURASSIC

M. hebbriensis Lambert, 1933b:57-58, pl. 1: figs. 8-9. [North Africa.] (Lower Domerian.)

Doubtful Nominal Genera of Echinoids

Genus *Neopatagus* Sánchez Roig

OLIOGOCENE

Neopatagus Sánchez Roig, 1953b:258-259. Type-species: *Breynia cubensis* Cotteau. [Cuba.]

Genus *Oligopodia* Duncan

PLIOCENE

O. okinawa Cooke, 1954:49, pl. 12: figs. 7-10. [Okinawa, Japan.] (Naha Ls. is lower part of Ryukyu Ls.)

MIOCENE

O. tapeina H. L. Clark, 1945:321-322, pl. 42: figs. G-I. [Fiji, South Pacific Ocean.]

UPPER EOCENE

O. mortenseni Castex, 1947:32, pl. 2: figs. 1-4. [France.] (Base du Calcaire de St.-Éstephe.)

Literature Cited

- Adkins, W. S.
 1928. Handbook of Texas Cretaceous Fossils. *The University of Texas Bulletin* (Austin), 2838:1-385, figure 1, plates 1-37.
 1930. Texas Comanchean Echinoids of the Genus *Macraster*. *The University of Texas Bulletin*, 3001:101-120, plates 10-11.
- Airaghi, C.
 1934. Echinidi paleogenici della Sirtica e del Fezzan orientale. *Missione Scientifica della Reale Accademia d'Italia a Cufra* (1931-IX), *Viaggi di Studio ed Esplorazioni*, 3:63-81, plate 5.
 1939. Echinidi Cretacici e Tertiari della regione di Orfella e della Sirtica. *Annali del Museo Libico di Storia Naturale* (Tripoli), 1:253-286, plates 10-11.
- Alberti, A.
 1950. Su una nuova specie di *Heteraster*. *Bollettino dell'Ufficio Geologico d'Italia*, 70(6):133-136, plate 1.
- Allison, E. C., J. W. Durham, and L. W. Mintz
 1967. New Southeast Pacific Echinoids. *Occasional Papers of the California Academy of Sciences*, 62:1-23, figures 1-32.
- Anderson, F. M.
 1958. Upper Cretaceous of the Pacific Coast. *The Geological Society of America, Memoir*, 71:1-378, figures 1-3, plates 1-75.
- Argamakova, V.
 1934. Some Echinoidea of the Neogene of Sakhalin. *Transactions of the Oil Geological Institute*, (A)41:1-44, figures 1-16, plates 1-2.
- Arnold, B. W., and H. L. Clark
 1927. Jamaican Fossil Echini: With Descriptions of New Species of Cainozoic Echinoidea by H. L. Hawkins. *Memoirs of the Museum of Comparative Zoology* (Harvard), 50(1):1-84, figures 1-3, plates 1-22.
 1934. Some Additional Fossil Echini from Jamaica. *Memoirs of the Museum of Comparative Zoology* (Harvard), 54(2):139-156, plates 1-5.
- Assmann, P.
 1925. Die Fauna der Wirbellosen und die Diploporen der oberschlesischen Trias mit Ausnahme der Brachiopoden, Lamellibranchiaten, Gastropoden und Korallen. *Jahrbuch der Preussischen Geologischen Landesanstalt zu Berlin*, 46:504-527, plates 8-9.
 1937. Revision der Fauna der Wirbellosen der oberschlesischen Trias. *Abhandlungen der Preussischen Geologischen Landesanstalt*, 170:1-134, plates 1-21.
- Baker, A. N.
 1967. Two New Echinoids from Northern New Zealand, Including a New Species of *Diadema*. *Transactions of the Royal Society of New Zealand, Zoology*, 8(23):239-245, 1 figure, plates 1-3.
1968. A New Cidarid Echinoid from Northern New Zealand. *Transactions of the Royal Society of New Zealand, Zoology*, 10(21):199-203, figure 1, plate 1.
 1969. Two New Heart-Urchins, Including a New Species of *Cyclaster*, from New Zealand Waters (Echinoidea) Spatangoida). *Records of the Dominion Museum*, 6(16):265-273, figures 1-22, plates 1-2.
- Bantz, H.-U.
 1969. Echinoidea aus Plattenkalken der Altmühlalb und ihre Biostratonomie. *Erlanger Geologische Abhandlungen*, 78:1-35, figure 1, plates 1-7.
- Baranova, Z. I.
 1955. New Species and Subspecies of Echinoderms from the Bering Sea. *Travaux de l'Institut Zoologique, Academie des Sciences de l'URSS*, 18:334-342, figures 1-6.
 1957. Echinoderms of the Bering Sea. *Investigations of Far-East Seas*, 4:149-266, figures 1-19.
- Barbu, V., and V. Dragoş
 1957. Noi forme de *Scutellina* din Eocenul de Nord-Vest al Transilvaniei. *Buletin Stiintific, Sectia de Geologie și Geografie*, 2(3-4):643-655, plates 1-3.
- Barry, J. O'Keefe, and R. J. LeBlanc
 1942. Lower Eocene Faunal Units of Louisiana. *State of Louisiana Department of Conservation Geological Bulletin*, 23:1-156, figures 1-5, plates 2-19.
- Basse, E.
 1928. Quelques invertébrés crétaqués de la Cordillère Andine. *Bulletin de la Société Géologique de France*, (4)28(3-5):113-147, figures 1-20, plates 7-8.
- Bather, F. A.
 1929. XXX.-Abh: Triassic Echinoderms of Timor. *Paläontologie von Timor nebst kleineren beiträgen zur Paläontologie einiger anderen inseln des ostindischen archipels* (Stuttgart), 16:215-272, plates 257-258.
 1934. *Chelonechinus* n. g., a Neogene Urechinid. *Bulletin of the Geological Society of America*, 45(5):799-874, figures 1-18, plates 108-110.
- Bather, F. A., and W. K. Spencer
 1934. A New Ordovician Echinoid from Girvan, Ayrshire. *The Annals and Magazine of Natural History*, (10) 13(77):557-558.
- Belanski, C. H.
 1928. The Shellrock Stage of the Devonian of Iowa. *The American Midland Naturalist*, 11(5):165-170.
- Bernasconi, I.
 1947. Una nueva especie de "Mellita" en la Republica Argentina. *Physis*, 20:117-118.

1954. Notas sobre una nueva especie de equinoideo fósil de Tierra del Fuego. *Physis* (Buenos Aires), 20(59): 397-400, plate 1.
1955. Una nueva especie de *Diademmatidae* tropical. *Neotropica*, 1(6):92.
1956. Dos nuevos Equinodermos de la costa del Brasil. *Neotropica*, 2(8):33-36, figures 1-2.
- Besairie, H.
1930. Recherches géologiques à Madagascar: Contribution à l'étude des ressources minérales. *Bulletin de la Société d'Histoire Naturelle de Toulouse*, 60(2):1-272, figures 1-17, plates 1-27.
1936. Recherches géologiques à Madagascar, I: La Géologie du Nord-Ouest. *Mémoires de l'Académie Malgache*, 21:9-259, figures 1-16, plates 1-24.
- Besairie, H., and J. Lambert
1930. Notes sur quelques échinides de Madagascar et du Zululand. *Bulletin de la Société géologique de France*, (4)30:107-117, plates 9-10.
- Beurlen, K.
1934. Monographie der Echinoiden-Familie Collyritidae d'Orb. *Palaeontographica*, 80A(3-4):41-194, figures 1-46.
1966. Novos Equinóides no Cretáceo do Nordeste do Brasil. *Anais da Academia Brasileira de Ciências*, 38(3/4):455-464, figures 1-4, plate 1.
- Bindemann, W.
1938. Ein Echinid mit Laterne aus dem Kulm von Herborn, *Meekechinus? herbornensis* n. sp. *Senckenbergiana*, 20(3/4):203-220, figures 1-2, plates 1-4.
- Blanckenhorn, M.
- 1925 [1924]. Die Seeigelfauna der Kreide Palästinas. *Palaeontographica* (Stuttgart), 67(4-5):83-113, plates 7-8.
- Böhm, J.
1927. Beitrag zur Kenntnis der Senonfauna der bithynischen Halbinsel. *Palaeontographica* (Stuttgart), 69: 187-222, figures 1-3, plates 11-18.
- Boni, A.
1939. Fauna anisica pigmea scoperta nelle prealpi bresciane. *Bollettino della Società Geologica Italiana*, 58(2,3):321-428, plates 17-22.
- Boos, M. F.
1929. Stratigraphy and Fauna of the Luta Limestone (Permian) of Oklahoma and Kansas. *Journal of Paleontology*, 3(3):241-253, figures 1-3, plate 27.
- Brighton, A. G.
1925. On Some Cretaceous Echinoids from Nigeria. *Geological Survey of Nigeria, Occasional Paper*, 3:1-21, figures 1-5.
- 1926a. A New Miocene Echinoid from N. W. Peru. *Geological Magazine*, 63(740):61-69, figures 1-7, plates 3-5.
- 1926b. Eocene Echinoids from N. W. Peru. *Geological Magazine*, 63(746):359-371, figures 1-3, plate 26.
- Brito, I. M.
1959. Sobre una nova *Clypeaster* do Brasil (Echinoidea Clypeasteroidea). *Centro de Estudos Zoológicos Universidade de Brasil*, 1:1-4, figure 1, plates 1-2.
1964. Equinoides cretácicos do Estado da Bahia. *Publicação Avulsa, Universidade da Bahia, Escola de Geologia*, 1:1-10, plates 1-2.
- Brodermann, J.
1949. Significación Estratigráfica de los Equinodermos Fósiles Cubanos. In Sánchez Roig, M., "Los equinodermos fósiles de Cuba." *Paleontologia Cubana*, 1:305-330.
- Brotzen, F.
1959. On *Tylocidaris* Species (Echinoidea) and the Stratigraphy of the Danian of Sweden, with a Bibliography of the Danian and the Paleocene. *Sveriges Geologiska Undersökning*, (C)54(2):1-81, figures 1-19, plates 1-3.
- Brown, I. A.
1967. A Devonian Echinoid from Taemas, South of Yass, N. S. W. *Proceedings of the Linnean Society of New South Wales*, 92(2), 414:157-161, figures 1-2, plate 4.
- Brunnschweiler, R. O.
1962. On Echinoids in the Tertiary of Western Australia with a Description of two New Eocene Fibulariidae. *Journal of the Geological Society of Australia*, 8:159-169, figures 1-3.
- Buitrón, B. E.
1970. Equinoides del Cretácico inferior de la región de San Juan Raya-Zapotitlán, Estado de Puebla. *Universidad Nacional Autónoma de México, Instituto de Geología, Paleontologia Mexicana*, 30:1-64, figure 1, plates 1-9.
- Callegari, P.
1930. Su alcuni echinidi miocenici di S. Severino Marche. *Memorie dell'Istituto Geologico della R. Università di Padova*, 9:1-24, plate 1.
- Carter, C. S.
1928. The White Chalk of Lincolnshire. *Lincolnshire Naturalists' Union, Transaction*, 1928, 7:45-69.
- Casey, R.
1960. A New Echinoid from the lower Cretaceous (Albian) of Kent. *Palaeontology*, (3)3:260-264, figure 1, plate 44.
- Castex, L.
1930. Révision des Échinides du Nummulitique du département des Landes. *Actes de la Société Linnéenne de Bordeaux*, 82:5-72, plates 1-4.
1947. Notes sur quelques échinides fossiles du sud-ouest de la France. *Actes de la Société Linnéenne de Bordeaux*, 93:25-42, plates 1-2.
- Chao, K.
1942. On the Occurrence of *Melonechinus* in Kuangsi, China. *Bulletin of the Geological Society of China*, 22(3-4):201-204, figure 1.
- Chapman, F., and F. A. Cudmore
1934. The Cainozoic Cidaridae of Australia. *Memoirs of the National Museum Melbourne*, 8:126-149, plates 12-15.
- Checchia-Rispoli, G.
1921. Fauna del Neocretacico della Tripolitania: Echinidi. *Memorie per servire alla Descrizione della Carta Geologica d'Italia*, 8(2):1-31, figures 1-2, plates 7-9.
1923. Sopra due Clypeastri del Miocene Medio della Sar-

- degna. *Bollettino del Royal Ufficio geologico d'Italia*, 49(4):1-8, 5 figures, 1 plate.
1925. Illustrazione dei clipeastri miocenici della Calabria seguita da uno studio sulla morfologia interna e sulla classificazione dei clipeastri. *Memorie per servire alla descrizione della Carta Geologica d'Italia*, 9(3):1-75, figures 1-21, plates 1-24.
1927. Illustrazione degli echinidi cenozoici della Cirenaica raccolti dall'Ing. C. Crema, III: Generi "Schizaster" e "Trachyaster." *Bollettino del Royal Ufficio geologico d'Italia*, 52(3):1-6, figures 1-3, plate 1.
1928. Sopra alcuni "Stolonoclypus" del miocene medio della Sardegna. *Bollettino del Royal Ufficio geologico d'Italia*, 53(3):1-20, figures 1-4, plates 1-3.
- 1929a. Illustrazione degli Echinidi cenozoici della Cirenaica raccolti dall'Ing. C. Crema. *Bollettino del Royal Ufficio geologico d'Italia*, 54(3):1-8, plate 1.
- 1929b. Nuove osservazioni sulla struttura interna dei Clypeastri. *Palaeontographia Italica*, 29-30:25-29, figure 1, plate 2.
- 1930a. Su di un echinide tetramero del Cretaceo della Tripolitania. *Bollettino della Società Geologica Italiana*, 49:79-82, plate 8.
- 1930b. Sul genere "Noetlingaster" Vredenburg. *Bollettino del Royal Ufficio geologico d'Italia*, 55(10):1-24, 14 figures, plates 1-4.
1931. Sopra alcuni spatagoidi del Maestrictiano della Tripolitania. *Bollettino del Royal Ufficio geologico d'Italia*, 56(5):1-14, figures 1-3, plate 1.
- 1932a. Echinidi regolari del Maestrictiano della Tripolitania. *Bollettino del Royal Ufficio geologico d'Italia*, 57(3):1-16, 6 figures, plates 1-2.
- 1932b. "Sanfilippaster," nuovo genere di Echinide del Cretaceo superiore. *Atti della Reale Accademia Nazionale dei Lincei*, (6)15(4):313-316.
- 1932c. Su alcuni Echinidi Cretacei della Tripolitania. *Memorie della Reale Accademia d'Italia*, 3(4):373-391, plates 1-3.
- 1933a. Echinidi cretacei della Tripolitania. *Bollettino del Royal Ufficio geologico d'Italia*, 58(9):1-14, plates 1-2.
- 1933b. Illustrazione di alcuni Echinidi del Maestrictiano della Tripolitania raccolti da Ignazia Sanfilippo. *Memorie della Società Geologica Italiana*, 1:1-24, figures 1-8, plates 1-2.
1936. Su alcuni Echinidi della Sicilia. *Bollettino della Società Geologica Italiana*, 55:295-310, plates 16-17.
1938. Di alcuni *Clypeastri* del Miocene del Monte Gargano. *Bollettino della Società Geologica Italiana*, 57(1):45-48, plate 2.
- 1940a. Su alcuni *Clypeastri* Miocenici della Calabria. *Atti Accademia della Scienze Fisiche e Matematiche Napoli*, (3)1(7):1-15, figures 1-7, plates 1-3.
- 1940b. Su alcuni Echinidi del Malm della Sicilia. *Bollettino della Società di Scienze Naturali ed Economiche di Palermo*, (new series)22:23-25, figure 1.
1941. Osservazioni su alcuni generi di Antillasterinae. *Rendiconti dell'Accademia Nazionale dei Lincei*, (7)2:388-393, figures 1-2, plate 1.
1942. "Migliorinia," nuovo genere di Echinide dell'Eocene della Migiurtina. *Rendiconti della Reale Accademia d'Italia*, (7)3:305-309, figures 1-3, 1 plate.
- 1943a. Brissoidi eocenici della Migiurtina. *Memorie della Reale Accademia d'Italia*, 14(8):99-111, plates 1-3.
- 1943b. Osservazioni su alcuni Pseudodiadema. *Reale Accademia d'Italia*, (7)4:317-321, 1 figure.
- 1945 [1943]. Di due nuovi generi di Echinidi del Cretaceo della Somalia. *Bollettino dell'Ufficio geologico d'Italia*, 68(8):81-90, figures 1-2, plates 1-2.
- 1947a. Monografia degli "Epiaster" della Somalia Italiana. *Atti della Accademia Nazionale dei Lincei (Memorie)*, (8)1/2:1-23, plates 1-2.
- 1947b. Sul genere "Brissopatagus" Cotteau. *Rendiconti della Accademia Nazionale dei Lincei*, (8)2(5):516-520, plate 1.
1948. "Salenia Hawkinsi," nuovo echinide del Cenomaniaco della Somalia. *Rendiconti dell'Accademia Nazionale dei Lincei*, (8)4:169-172, 2 figures, 1 plate.
- 1950a [1945-1946]. Su alcuni echinidi eocenici della Migiurtina. *Bollettino dell'Ufficio geologico d'Italia*, 70:21-39, plates 1-2.
- 1950b. Su alcuni echinidi eocenici della Migiurtina. *Bollettino dell'Ufficio geologico d'Italia*, 70(2):21-43, plates 1-2.
- Cherbonnier, G.
- 1959a. Échinides: Expédition Océanographique Belge dans les Eaux Côtières Africaines de l'Atlantique Sud (1948-1949). *Institut Royal des Sciences Naturelles de Belgique, Résultats Scientifiques*, 3(6):35-59, figure 1, plates 1-10.
- 1959b. Échinodermes de la Guyane française (Crinoïdes, Astérides, Ophiurides, Échinides, Holothurides). (Note 4.) *Bulletin du Muséum National d'Histoire Naturelle*, (2)31:367-372, figures 8-9.
- Chesher, R. H.
- 1968a. The Systematics of Sympatric Species in West Indian Spatangoids: A Revision of the Genera *Brissopsis*, *Plethotaenia*, *Paleopneustes*, and *Saviniaster*. *Studies in Tropical Oceanography (Institute of Marine Sciences, University of Miami)*, 7:1-168, figures 1-25, plates 1-35.
- 1968b. *Lytechinus williamsi*, a New Sea Urchin from Panama. *Breviora*, 305:1-13, figures 1-5.
1970. Evolution in the Genus *Meoma* (Echinoidea: Spatangoida) and a Description of a New Species from Panama. *Bulletin of Marine Science*, 20(3):731-761, figures 1-9. (Biological Results of the University of Miami Deep-sea Expeditions, 68.)
- Chiplonker, G. W.
1937. Echinoids from the Bagh Beds. *Proceedings of the Indian Academy of Sciences*, B6(1):60-71, plate 6.
1939. Echinoids from the Bagh Beds, Part II. *Proceedings of the Indian Academy of Sciences*, B9(5):236-240, plate 25.
- Chiriach, M.
1956. Contribution à l'étude de la faune des échinides crétaciques de la Dobrogea du Sud. *Bulletin Stiintific, Academia Republicii Populare Romine*, 1(1):69-105, plates 1-13.

1957. Contributions à l'étude de la faune des Échinides Crétacés de la Dobrogea du Sud. *Revue de Géologie et de Géographie, Académie de la République Populaire Roumaine*, 1:61-95, plates 1-13.
- Clark, A. H.
1932. Echinoderms from the Islands of Niuafoou and Nukualofa, Tonga Archipelago, with the Description of a New Genus and Two New Species. *Proceedings of the United States National Museum*, 2905, 80(5): 1-12, plates 1-8.
1934. A New Sea-Urchin from Florida. *Journal of the Washington Academy of Sciences*, 24(1):52-53.
1939. Echinoderms (other than Holothurians) Collected on the Presidential Cruise of 1938. *Smithsonian Miscellaneous Collections*, 98(11):1-18, plates 4-5.
1946. Echinoderms from the Pearl Islands, Bay of Panama, with a revision of the Pacific Species of the Genus *Encope*. *Smithsonian Miscellaneous Collections*, 106(5):1-11, plates 1-4.
- Clark, A. M.
1955. Echinodermata of the Gold Coast. *Journal of the West African Science Association*, 1(2):16-56, figures 1-23, plate 2.
- Clark, H. L.
1923. The Echinoderm Fauna of South Africa. *Annals of the South African Museum*, 13:221-435, 4 figures, plates 8-23.
- 1925a. *A Catalogue of the Recent Sea-Urchins (Echinoidea) in the Collection of the British Museum (Natural History)*. 250 pages, 12 plates. London: Trustees of the British Museum.
- 1925b. A New *Clypeaster* from Angola. *Annals of the South African Museum*, 20(5):317-318, plate 33.
- 1925c. Echinoderms from the South African Fisheries and Marine Biological Survey, Part I: Sea-Urchins (Echinoidea). *Fisheries and Marine Biological Survey Report*, 4:1-16, plates 1-4.
- 1925d. Echinoderms of Tropical Pacific. Echinoderms Other than Sea-Stars. *Bernice P. Bishop Bulletin*, 27:89-112, plates 9-11.
1926. Notes on a Collection of Echinoderms from the Australian Museum. *Records of the Australian Museum*, 15(2):183-192, figure 1.
1928. The Sea-Lilies, Sea-Stars, Brittle-Stars, and Sea-Urchins of the South Australian Museum. *Records of the South Australian Museum*, 3(4):361-482, figures 108-142.
1929. A New Miocene Echinoid from California. *Transactions of the San Diego Society of Natural History*, 5(17):257-262, plate 31.
1932. Echinoderma (Other than Asteroidea). *Great Barrier Reef Expedition, 1928-29, Scientific Reports*, 4(7): 197-239, figures 1-9, plate 1.
1935. Some New Echinoderms from California. *The Annals and Magazine of Natural History*, (10)15(85):120-129.
- 1937a. A New Eocene Sea-Urchin from Alabama. *Journal of Paleontology*, 11(3):248-249, figures 1-3.
- 1937b. A New Sea-Urchin from the "Oligocene" of Oregon. *Transactions of the San Diego Society of Natural History*, 8(28):367-374, plate 24.
1938. Echinoderms from Australia: An Account of Collections Made in 1929 and 1932. *Memoirs Museum of Comparative Zoology at Harvard College*, 55:1-596, figures 1-64, plates 1-28.
1939. A Remarkable New Genus of Sea Urchin (Spatangiidae). *Allan Hancock Pacific Expeditions*, 2(11):173-176, plate 17.
- 1940a. A Revision of the Keyhole Urchins (*Mellita*). *Proceedings of the United States National Museum*, 3099, 89:435-444, plates 60-62.
- 1940b. East Pacific Expeditions of the New York Zoological Society, XXI: Notes on Echinoderms from the West Coast of Central America. *Zoologica*, 25(3):331-352, figures 1-4, plates 1-4. (Scientific Contributions of the New York Zoological Society, 22.)
1941. Reports on the Scientific Results of the Atlantis Expeditions to the West Indies under the Joint Auspices of the University of Havana and Harvard University: The Echinoderms (Other Than Holothurians). *Memorias de la Sociedad Cubana de Historia Natural*, 15(1):1-154, plates 1-10.
1945. Echinoidea. Pages 312-328 in *Geology of Lau, Fiji*, by Harry S. Ladd and J. Edward Hoffmeister. *Bernice P. Bishop Museum Bulletin*, 181, plates 41-43.
1947. A New and Remarkable Keyhole Urchin, *Mellita notabilis* n. sp. *Bulletin of the Southern California Academy of Science*, 46(2):77-78.
1948. A Report on the Echini of the Warmer Eastern Pacific, Based on the Collections of the Velero III. *Allan Hancock Pacific Expeditions*, 8(5):225-352, figures 1-3, plates 35-71.
- Clegg, E. L. G.
1933. Echinoidea from the Persian Gulf. *Palaeontologia Indica*, new series, 22(1):1-35, figures 1-2, plates 1-3. (Memoirs of the Geological Survey of India.)
- Collignon, M.
1930. Beitrag zur Kenntnis der coezänen Echiniden-fauna des Krappfeldes (Kärnten). *Jahrbuch der Geologischen Bundesanstalt*, 80(3-4):541-570, plates 31-33.
1949. *Tessieria*, nouveau genre d'Échinides du Maëstrichtien du Sénégal (*Tessieria senegalensis*, sp. nov.). *Bulletin de la Société Géologique de France*, (5)19 (1-3):263-268, figures 1-2, plate 9a.
1950. Recherches sur les faunes albiennes de Madagascar, II: Les Échinides d'Ambarimaninga. *Annales géologiques du Service des Mines*, 17:6-16, figure 1, plates 1-2.
- Comaschi Caria, I.
1955. Il Sottogenere *Amphiope* in Sardegna. *Bollettino della Società Geologica Italiana*, 74(1):183-194, plates 1-15.
- Cooke, C. W.
- 1941a. Cenozoic Regular Echinoids of Eastern United States. *Journal of Paleontology*, 15(1):1-20, plates 1-4.
- 1941b. *Oligopygus nancei*, a New Echinoid from Venezuela. *Journal of Paleontology*, 15(3):305-306, figures 1-3.
1942. Cenozoic Irregular Echinoids of Eastern United States. *Journal of Paleontology*, 16(1):1-62, plates 1-8.

1946. Comanche Echinoids. *Journal of Paleontology*, 20 (3):193-237, plates 31-34.
1947. A New Jurassic *Stomechinus* from the Big Horn Basin, Wyoming. *Journal of Paleontology*, 21(5):473-475, figure 1-6.
1948. *Arbia* and *Dixieus*, Two New Genera of Echinoids. *Journal of Paleontology*, 22(5):606-607.
- 1949a. *Pygurostoma passionensis*, a Cretaceous Echinoid from Guatemala. *American Museum Novitates*, 1422:1-3, figure 1.
- 1949b. Two Cretaceous Echinoids from Peru. *Journal of Paleontology*, 23(1):84-86, plate 22.
1953. American Upper Cretaceous Echinoidea. *United States Geological Survey Professional Paper*, 254-A: 1-44, plates 1-16.
1954. Pliocene Echinoids from Okinawa. *United States Geological Survey Professional Paper*, 264-C:45-53, plates 9-12.
1955. Some Cretaceous Echinoids from the Americas. *United States Geological Survey Professional Paper*, 264-E:87-112, figure 4, plates 18-29.
1957. Geology of Saipan, Mariana Islands, Part 3: Paleontology, Chapter J., Echinoids. *United States Geological Survey Professional Paper*, 280-J:361-364, plate 119.
1958. Cretaceous Echinoidea of New Jersey and Adjacent Regions. In *The Cretaceous Fossils of New Jersey. Bulletin of the New Jersey Geological Survey, Division of Geology*, 61(1):45-54, plates 6-8, 46.
1959. Cenozoic Echinoids of Eastern United States. *United States Geological Survey Professional Paper*, 321:1-106, plates 1-43.
1961. Cenozoic and Cretaceous Echinoids from Trinidad and Venezuela. *Smithsonian Miscellaneous Collections*, 142(4):1-35, plates 1-14.
- Cooper, G. A.
1931a. *Lepidochinoides* Olsson, a Genus of Devonian Echinoids. *Journal of Paleontology*, 5(2):127-142, figures 1-2, plates 18-19.
1931b. A New Species of the Genus *Lepidesthes*. *American Journal of Science*, (5)22(132):531-538, figures 1-2.
- Corroy, C.
1925. Le néocomien de la bordure orientale du bassin de Paris. *Bulletin de la Société des Sciences de Nancy*, (4)2(4):171-504, figures 1-33, plates 1-11.
- Cotton, B. C., and F. K. Godfrey
1942. Echinodermata of the Flindersian Region Southern Australia. *Records of the South Australian Museum*, 7(2):193-234, plate 12.
- Cottreau, J.
1922. Paléontologie de Madagascar, X: Fossiles crétacés de la côte orientale. *Annales de Paléontologie*, 11(3/4): 109-192, plates 1-11.
1933. Échinides du Miocène en Anjou. *Bulletin de la Société Géologique de France*, (5)3(7-8):541-553, plates 26-27.
1935. Quelques échinides fossiles de Madagascar. *Archives du Muséum*, (6)12:259-264, plate 1.
- Crespin, I.
1944. The Occurrence of the Genus *Conoclypus* in the North-West Division, Western Australia. *Journal of the Royal Society of Western Australia*, 28:75-77, plate 1.
- Čtyroký, P.
1965. *Lovenia mortenseni* n. sp., a New Species of Spatangoid Echinoid from the Miocene of the Vienna Basin. *Sborník Geologických Věd*, 5:107-121, figures 1-6, plates 1-6.
- Currie, E. D.
1924. On Fossil Echinoidea from the Aru Islands. *Geological Magazine*, 61:63-72, plate 4.
1925. Jurassic and Eocene Echinoidea. (Somaliland.) *Monographs of the Geological Department of the Hunterian Museum, Glasgow University*, 1:46-78, figures 1-14, plates 8-10.
1927. Jurassic and Eocene Echinoidea from Somaliland. *Transactions of the Royal Society of Edinburgh*, 55(2):411-441, figures 1-7b, 1 plate.
1930. The Echinoidea in the McKinnon Wood Collection. *Monographs of the Geological Department of the Hunterian Museum, Glasgow University*, 4(9):169-179, plate 16.
1935a. IV, Jurassic Echinoidea. Pages 40-46 in *The Mesozoic Paleontology of British Somaliland, Part 2 of Geology and Palaeontology of British Somaliland*. Figure 1, plate 6. Glasgow University.
1935b. Report on Miocene Echinoids from Cyprus Collected by Dr. F. R. C. Reed. *The Annals and Magazine of Natural History*, (10)15(85):31-37, plates 3-4.
1938. Neogene Echinoidea in the Second McKinnon Wood Collection. *Monographs of the Geological Department of the Hunterian Museum, Glasgow University*, 5(5):82-89, plates 8-9.
1939. Note on Echinoidea from Burma. *Records of the Geological Survey of India*, 74(2):216-228, figures 1-5, plate 14.
1943. Palaeontology of Harrar Province, Ethiopia, Part 2: Echinoidea. *Bulletin of the American Museum of Natural History*, 82(2):14-29, figures 1-11, plates 3-4.
- Dacqué, E.
1939. Die Fauna der Regensburg-Kelheimer Oberkreide. *Abhandlungen der Bayerischen Akademie der Wissenschaften* (new series), 45:1-218, plates 117.
- Dartevelle, E.
1953. Échinides fossiles du Congo et de l'Angola, 2e partie: Description systématique des Échinides fossiles du Congo et de l'Angola. *Annales du Musée Royal du Congo Belge*, (8)13:1-240, figures 1-56, plates A-C, 1-19.
- Das Gupta, H. C.
1929. A Short Note on the Cretaceous Fauna of the Khasi Hills, Assam. *The Quarterly Journal of the Geological, Mining, and Metallurgical Society of India*, (2)1:25-34, plates 1-2.
- Da Viega Ferreira, O.
1962. Nota sobre a presença do género "Agassizia" no Miocénico do Algarve. *Comunicações dos Serviços Geológicos de Portugal*, 46:293-295, plate 1.
- Davies, L. M.
1926. Remarks on the Known Indian Species of *Conocly-*

- peus*, with Descriptions of Two New Species from the Eocene of North-West India. *Records of the Geological Survey of India*, 59(3):358-368, plates 25-26.
1943. Tertiary Echinoidea of the Kohat-Potwar Basin. *Quarterly Journal of the Geological Society of London*, 99:63-79, 1 figure, plates 11-13.
- Davies, L. M., and E. S. Pinfold
 1937. The Eocene Beds of the Punjab Salt Range. *Palaeontologica Indica* (new series), 24(1):1-79, figures 1-4, plates 1-7.
- De Gregorio, A.
 1930a. Sul Permiano di Sicilia. *Annales de Géologie et de Paléontologie*, 52:1-70, plates 1-21.
 1930b. Fossili triassici delle Cave di Billiemi presso Palermo. *Annales de Géologie et de Paléontologie*, 54:1-40, plates 1-7.
- Dehée, R.
 1927. La faune marine du terrain houiller inférieur de Merville. *Annales de la Société Géologique du Nord*, 52:286-295, plate 7.
- Dehm, R.
 1953. *Rhenechinus hopstätteri* nov. gen. nov. sp., ein Seeigel aus dem rheinischen Unter-Devon. *Notizblatt des Hessischen Landesamtes für Bodenforschung zu Wiesbaden*, 81(4):88-95, figures 1-2, plate 5.
 1961. Ein zweiter Seeigel, *Porechinus porosus* nov. gen. nov. spec., aus dem rheinischen Unter-Devon. *Mitteilungen der Bayerische Staatssammlung für Paläontologie und historische Geologie*, 1:1-8, figures 1-3, plate 1.
- Deleau, P.
 1938. Étude géologique des régions de Jemmapes, Hammam Meskoutine et du Col des Oliviers. *Bulletin du Service de la Carte Géologique de l'Algérie*, (2) 14:1-383, plates 1-6.
- Demanet, F.
 1931. *Lovenechinus jacksoni*, nov. sp., Palechinide nouveau du Dinantien Inférieur. *Bulletin du Musée Royal d'Histoire Naturelle de Belgique*, 7(8):1-9, figures 1-7.
- Démoly, M.
 1928. Note de M. Jules Lambert sur des échinides de la Savoie et de l'Isère. *Bulletin de la Société d'Histoire Naturelle de Savoie*, (2)21:139-153, plate 1.
- Denizot, G.
 1935. Monographies géologiques des environs de Marseille: Description des massifs de Marseilleveyre et de Puget. *Annales du Musée d'Histoire Naturelle de Marseille*, 26(5):5-236, figures 1-43, plates 1-5.
- Deraniyagala, P.E.P.
 1956. Some Fossils from the Miocene Amphitheatre at Minihagalkanda, Ceylon. *Spolia Zeylanica, Bulletin of the National Museums of Ceylon*, 28(1):1-5, plates 1-3.
 1961. The Amphitheatres of Minihagel Kanda, Their Possible Origin and Some of the Fossils and Stone Artefacts Collected from Them. *Spolia Zeylanica, Bulletin of the National Museums of Ceylon*, 29(2): 149-161, figures 1-4, plates 1-8.
- De Saez, M. D.
 1930. Un nuevo equinodermo fósil argentino. *Revista del Museo de la Plata, Universidad Nacional de la Plata* (Buenos Aires), 32:57-60, 2 figures.
- Desio, A.
 1929. Risultati scientifici della missione alla Oasi di Giarabùb. (1926-1927). *Reale Società Geografica Italiana*, 4(3):293-350, figures 27-44, plates 32-40.
 1934. Faune neogeniche della Sirtica (Cirenaica). *Reale Accademia d'Italia*, 3:185-228, figures 7-11, plates 15-22.
- Devanesen, D. W.
 1930. Note on a New Sea-Urchin of the Genus *Chaetodiadema* (Abstract). *Proceedings of the Seventeenth Indian Science Congress, Section 4, Zoology*:249.
- Devriès, A.
 1956a. Sur une nouvelle espèce d'échinide en Algérie: *Enallaster transiens* Pomel (in coll.). *Publications du Service de la Carte Géologique de l'Algérie* (new series), 8:251-267, figure 1, plates 1-3.
 1956b. Note sur une faune échinitique fossile recueillie dans le Sud-Oranais. *Publications du Service de la Carte Géologique de l'Algérie* (new series), 8:267-290, plates 1-2.
 1960. Contribution à l'étude de quelques groupes d'Échinides fossiles d'Algérie. *Publications du Service de la Carte Géologique de l'Algérie, Paléontologie* (new series), 3:1-279, tables 1-31, plates 1-39.
 1967. Études sur des échinides fossiles de Turquie. *Travaux de l'Institut de Géologie et d'Anthropologie Préhistorique de la Faculté des Sciences de Poitiers*, 8:163-200, figures 1-3, plates 1-6.
- Devriès, A., and G. Alcaydé
 1966. Note sur une nouvelle espèce de la famille des Galéropygidés, suivie de quelques considérations stratigraphiques sur le gisement qui l'a fournie. *Travaux de l'Institut de Géologie et d'Anthropologie Préhistorique de la Faculté des Sciences de Poitiers*, 7:19-30, plates 1-2.
- Djabarov, G. N.
 1968. A New Upper Cretaceous *Echinocorys* from Central Asia. In B. P. Markovskiy, editor, *New Species of Prehistoric Plants and Invertebrates of the U.S.S.R. Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut, ministerstvo geologii i okhrany nedr SSR*, 2(2):288-289, plate 67, figure 39.
- Djakonov, A. M.
 1938. The Echinodermata of Siakhu Bay (Japan Sea). *Reports of the Japan Sea Hydrobiological Expedition of the Zoological Institute, Academy of Sciences of the U.S.S.R. in 1934*, 1:425-498, figures 1-10.
- Dollfus, R. P.
 1946. Sur un *Pseudechinus* récolté par Charles Vélain à l'île Saint-Paul: Observations morphologiques et biogéographiques. *Mémoires du Muséum National d'Histoire Naturelle* (new series), 22(4):159-178, figures 1-16, plates 3-4.
- Douglas, J. A.
 1928. Contributions to Persian Palaeontology. *Contributions to Persian Palaeontology*, 3:1-19, plates 8-15.

- Durham, J. W.
 1949. *Dendroaster elsmerensis* Durham, n. sp. *American Journal of Science*, 247:49-62, figures 1-2, plates 1-2.
 1950. 1940 E. W. Scripps Cruise to the Gulf of California, Part 2: Megascopic Paleontology and Marine Stratigraphy. *The Geological Society of America Memoir*, 43:1-216, plates 1-48.
 1952. Not *Astrodapsis* in Japan. *Journal of Paleontology*, 26(5):844-846, figure 1.
 1953a. Type-Species of *Scutella*. *Journal of Paleontology*, 27(3):347-352, figure 1, plate 47.
 1953b. New Name for *Nipponaster* Durham, 1952. *Journal of Paleontology*, 27(5):756.
 1954. A New Family of Clypeastroid Echinoids. *Journal of Paleontology*, 28(5):677-684, figures 1-3.
 1955. Classification of Clypeastroid Echinoids. *University of California Publications in Geological Sciences*, 31(4):73-198, figures 1-38, plates 3-4.
 1957. Notes on Echinoids. *Journal of Paleontology*, 31(3):625-631, figures 1-2, plate 72.
 1961a. Miocene Echinoids from the Valle Central, Costa Rica. *Journal of Paleontology*, 35(3):480-488, figures 1-2, plates 67-68.
 1961b. The Echinoid *Mellita* in the Pacific Coast Cenozoic. *Contributions in Science, Los Angeles County Museum*, 48:1-12, figure 1, plates 1-2.
 1966. Evolution among the Echinoidea. *Biological Reviews of the Cambridge Philosophical Society*, 41(3):368-391, figures 1-6.
- Durham, J. W., and R. V. Melville
 1957. A Classification of Echinoids. *Journal of Paleontology*, 31(1):242-272, figures 1-9.
- Durham, J. W., H. B. Fell, A. G. Fischer, P. M. Kier, and C. D. Wagner and J. W. Durham, et al.
 1966. *Treatise on Invertebrate Paleontology, Part U: Echinodermata 3*. Volumes 1 and 2, 695 pages, 534 figures. Geological Society of America, Inc. and the University of Kansas Press.
- Dzhalilov, M. P., and E. V. Egorov
 1969. Late-Senonian Sea Urchins and Some New Data on Stratigraphy of the Upper Senonian in the South-Western Spurs of the Gissar Ridge. *Izvestiia Akademii Nauk Tadzhikskoi SSR Dushanbe*, 4(34):105-114, figures 1a-e, 2a-c, 3a-e.
- Eaton, J. E., U. S. Grant, and H. B. Allen
 1941. Miocene of Caliente Range and Environs, California. *Bulletin of the American Association of Petroleum Geologists*, 25(2):193-262, figures 1-14, plates 1-9.
- El-Din Mahmoud, I. G.
 1955. Études paléontologiques sur la faune Crétacique du Massif du Moghara (Sinaï-Egypte). *Publications de l'Institut du Desert d'Égypte*, 8:1-195, figures 4-81, plates 1-19.
- Elouard, P., and J. Roman
 1966. Présence du genre *Gagara* (Échinide régulier Temnopleuridé) dans l'Éocène moyen de la vallée du Sénégal. *Bulletin de la Société Géologique de France*, (7)8(6):839-844, figures 1-2, plate 19.
- Endean, R.
 1964. A New Species of Venomous Echinoid from Queensland Waters. *Memoirs of the Queensland Museum*, 14(4):95-100, figure 1, plate 12.
- Engel, H.
 1961. Some Fossil Clypeastrids (Echinoidea) from Brimstone Hill (St. Kitts) and Sugar Loaf (St. Eustatius), Lesser Antilles. *Beaufortia*, 9(94):1-6, figures 1-4.
 1964a. On Two New Species of *Holcetypus* Desor from the Senonian of South-Limburg near Maastricht, Netherlands. *Zoologische Mededelingen*, 39:235-239, figures 1-2, plate 14.
 1964b. On *Winkleria maastrichtensis* nov. gen. et nov. spec. (Echinoidea, Regularia, Stirodonta, Phymosomina ?Phymosomatidae) from the Upper-Cretaceous (Md) of Maastricht (Limburg, Netherlands). *Beaufortia*, 10(126):207-211, figures 1-4, plate 1.
- Ernst, G.
 1970. Faziesbundenheit und Ökomorphologie bei irregulären Echiniden der nordwestdeutschen Oberkreide. *Paläontologische Zeitschrift*, 44(1/2):41-62, figures 1-8, plate 5.
- Faas, A. V.
 1941. Atlas of the Leading Forms of the Fossil Fauna of the U.S.S.R., Lower Carboniferous (Echinoidea). Pages 72-75 in volume 4 in L. Librovitch, *The Atlas of the Guide Forms of the Fossil Faunas of the U.S.S.R.* Figures 6-9, plate 10. Leningrad.
- Fabre, A.
 1933. Note sur les Amphiopees de l'Helvétien du Gers. *Extraits des Procès-Verbaux des Séances de la Société Linnéenne de Bordeaux*, 85:33-36.
- Fell, H. B.
 1947. A Giant Heart-Urchin, *Brissus gigas*, n. sp., from New Zealand. *Records of the Auckland Institute and Museum*, 3(3):145-150, figures 1-2, plates 13-14.
 1949. An Echinoid from the Tertiary (Janjukian) of South Australia, *Brochopleurus australiae* sp. nov. *Memoirs of the National Museum of Victoria*, 16:17-19, plate 1.
 1950. A Triassic Echinoid from New Zealand. *Transactions of the Royal Society of New Zealand*, 78(1):83-85, figure 3, plate 12.
 1954. Tertiary and Recent Echinoidea of New Zealand: Cidaridae. *New Zealand Geological Survey Paleontological Bulletin*, 23:1-62, figures 1-15, plates 1-15.
 1958. Deep-Sea Echinoderms of New Zealand. *Zoology Publications from Victoria University of Wellington*, 24:1-40, plates 1-5.
 1962. A New Cretaceous Echinoid from the Franciscan Formation of California. *Transactions of the Royal Society of New Zealand (Zoology)*, 2(2):27-30, plate 1.
 1963a. New Genera of Tertiary Echinoids from Victoria, Australia. *Memoirs of the National Museum of Victoria*, 26:211-217, plates 1-2.
 1963b. The Spatangid Echinoids of New Zealand. *Zoology Publications from Victoria University of Wellington*, 32:1-8, figure 1, plates 1-6.
- Fischer, A. G.
 1951. The Echinoid Fauna of the Inglis Member, Moodys Branch Formation. *Florida Geological Survey, Geological Bulletin*, 34(2):49-101, figures 1-18, plates 1-7.

- Flandrin, J.
1929. Contribution à l'étude des terrains crétacés de l'Anatolie du Nord (Asie Mineure), III: Paléontologie. *Annales de l'Université de Grenoble, Section Science-Médecine* (new series), 6(3):342-375.
- Frenguelli, J.
1944. *Stomechinus pulchellus* n. sp. nuevo equinodermo del Titoniense del Neuquén. *Notas del Museo de la Plata, Paleontologia*, 9(61):1-11, plate 1.
- Gardner, J.
1933. The Midway Group of Texas. *The University of Texas Bulletin*, 3301:1-403, figures 1-4, plates 1-28.
- Gill, W. D.
1953. Facies and Fauna in the Bhadrar Beds of the Punjab Salt Range, Pakistan. *Journal of Paleontology*, 27(6):824-844, figures 1-3, plates 88-91.
- Gočev, P.
1928. Revision und Ergänzung der alttertiären Fauna von Haskovo, I: Echinoidea. *Zeitschrift der Bulgarischen Geologischen Gesellschaft*, 1(2):37-50, figures 1-4, plate 1.
1933. Paleontologische und stratigraphische Untersuchungen über das Eocän von Varna. *Zeitschrift der Bulgarischen Geologischen Gesellschaft*, 5:1-82, figures 1-14, plates 1-7.
- Gonçalves, F., and J. Roman
1963. Une sous-espèce nouvelle de *Rotula orbiculus* Linné dans les formations Plio-Quaternaires de l'Angola. *Boletim do Museu e Laboratório Mineralógico e Geológico da Faculdade de Ciências* (University of Lisbon) 9(2):99-106, plates 1-5.
- Gordon, W. A.
1963. Middle Tertiary Echinoids of Puerto Rico. *Journal of Paleontology*, 37(3):628-642, figures 1-4, plates 79-81.
- Gorodiski, A.
1951. Au sujet de quelques Cassiduloida (oursins irréguliers) de l'Éocène Moyen du Sénégal. *Bulletin du Muséum National d'Histoire Naturelle*, (2)23(3):322-330, figures 1-2, plate 1.
- Grant, U. S., and L. G. Hertlein
1938a. *Brissopsis blanchi*, a New Species of Echinoid from the Medial Tertiary of Mississippi. *The American Midland Naturalist*, 19(2):482-486, figures 1-10.
1938b. The West American Cenozoic Echinoidea. *Publications of the University of California at Los Angeles in Mathematical and Physical Sciences*, 2:1-225, figures 1-17, plates 1-30.
1956. *Schizaster morlini*, a New Species of Echinoid from the Pliocene of Imperial County, California. *Bulletin of the Southern California Academy of Sciences*, 55(2):107-109, plate 29.
- Gregorio, A. de — See De Gregorio, A.
- Gupta, H. C. das — See Das Gupta, H. C.
- Hall, Jr., C. A.
1966. *Archaeopneustes moorefieldi*, a New Pliocene Spatangoid Echinoid from the San Luis Obispo Area, California. *Journal of Paleontology*, 40(5):1123-1126, plate 145.
- Hassan, M. Y.
1969. Contributions to the Echinoid Fauna of the Maestrichtian-Paleocene Strata of South Western Egypt. *Proceedings of the Egyptian Academy of Science*, 22:15-19, 1 plate, 3 tables.
- Haughton, S. H.
1924. Notes sur quelques fossiles crétacés de l'Angola (Céphalopodes et Échinides). *Comunicações dos Serviços Geológicos de Portugal*, 15:79-106, plates 1-4.
1925. Notes on Some Cretaceous Fossils from Angola (Cephalopoda and Echinoidea). *Annales of the South African Museum*, 22:263-288, plates 12-15.
- Hawkins, H. L.
1924. Notes on a New Collection of Fossil Echinoidea from Jamaica. *Geological Magazine*, 61(721):312-324, plate 18.
1926. On a New Species of *Phyllobrissus* from a Deep Boring at Virginia Water, Surrey. *Summary of Progress of the Geological Survey of Great Britain and the Museum of Practical Geology for the Year 1925*, Appendix 7:189-191, figure 23.
1935a. V. Cretaceous Echinoidea. Pages 47-56 in the Mesozoic Palaeontology of British Somaliland, part 2 of *Geology and Paleontology of British Somaliland*. Figures 1-14, plates 6-7.
1935b. Two Genera of Carboniferous Echinoidea (*Lepidocidaris* and *Hyattechinus*) New to Britain. *Quarterly Journal of the Geological Society of London*, 91:239-250, 3 figures, plates 14-15.
1946. *Cravenechinus*, a New Type of Echinoid from the Carboniferous Limestone. *Geological Magazine*, 83(4):192-197, 1 figure, plate 13.
- Hayasaka, I.
1948. Notes on Some Fossil Echinoids of Taiwan, IV. *Acta Geologica Taiwanica*, 2(2):85-124, plates 1-5.
- Hayasaka, I., and A. Morishita
1947. Notes on Some Fossil Echinoids of Taiwan, II and III. *Acta Geologica Taiwanica*, 1(2):93-113, plates 8-9; 111-128, plates 10-16.
- Hayasaka, I., and P. Morishita
1947. Fossil Species of *Clypeaster* from Taiwan (with Appendix: A Fossil Clypeaster from Tokuno-shima, Kagoshima Prefecture, Japan). *Acta Geologica Taiwanica*, 1(1):39-52, plates 1-5.
- Hayasaka, I., and M. Shibata
1952. A New Tertiary Species of *Echinarachnius* from Hokkaido. *Journal Faculty of the Science, Hokkaido University*, (4)8(2):82-85, figure 1.
- Henderson, R. A., and H. B. Fell
1969. *Taimanawa*, a New Genus of Brissid Echinoids from the Tertiary and Recent Indo-West-Pacific with a Review of the Related Genera *Brissopatagus* and *Gillechinus*. *Breviora*, 320:1-29, figures 1-3, plates 1-5.
- Hertlein, L. G., and U. S. Grant
1960. The Geology and Paleontology of the Marine Pliocene of San Diego, California. *Memoirs of the San Diego Society of Natural History*, 2(2a):71-133, plates 19-26.

- Holland, Jr., F. D., and R. M. Feldmann
 1967. A New Species of Cassiduloid Echinoid from the Fox Hills Formation (Upper Cretaceous) of North Dakota. *Journal of Paleontology*, 41(1):252-255, figure 1.
- Ikeda, H.
 1935a. A New *Clypeaster* from Japan. *Annotationes Zoologicae Japonenses*, 15(1):103-104, plate 7.
 1935b. Preliminary Report on a New Cidarid Sea-Urchin from the Western Pacific. *Proceedings of the Imperial Academy*, 11(9):386-388, figure 1.
 1936a. Note on a New *Echinarachnius* from Japan. *Botany and Zoology Theoretical and Applied*, 4(7):1231-1233, figures 1-2.
 1936b. Preliminary Note on a New Family of the Cidaroida. *Annotationes Zoologicae Japonenses*, 15(4):486-489, plates 33-34.
 1939a. A New Genus and New Species of the Cidaridae from the Bonin Islands (Cidaroida). *Records of Oceanographic Works in Japan*, 10(2):160-164, plates 7-10.
 1939b. A New Species of *Diadema* from Japan. *Records of Oceanographic Works in Japan*, 10(2):165-167, plate 11.
 1940. *Coptopleura sema*, a New Genus and New Species of the Temnopleurid from the Ogasawara Islands (Echinoidea). *Annotationes Zoologicae Japonenses*, 19(2):92-96, plate 6.
 1941. Preliminary Report on *Chorocidaris micca* gen. et sp. nov., from the Ryūkyū Islands (Echinoidea, Cidaridae). *Annotationes Zoologicae Japonenses*, 20(2):85-87, plate 6.
- Ikins, W. C.
 1940. Some Echinoids from the Cretaceous of Texas. *Bulletins of American Paleontology*, 25(90):53-79, plates 4-6.
- Imbesi Smedile, M.
 1958. Clipeastri Aquitaniani, Elveziani e Tortoniani della Calabria. *Palaeontographia Italica*, 53:1-47, figures 1-2, plates 1-22.
- Innocenti, G.
 1924. Due nuovi echinidi dell'Eocene Istriano. *Rivista Italiana di Paleontologia*, 30:41-44, plate 2.
- Israelsky, M. C.
 1924. Notes on Some Echinoids from the San Rafael and Tuxpam Beds of the Tampico Region, Mexico. *Proceedings of the California Academy of Sciences*, (4)13(8):137-145, plates 2-4.
 1933a. A New Species of Echinoid from Tamaulipas, Mexico. *Transactions of the San Diego Society of Natural History*, 7(22):275-276, plate 18.
 1933b. Echinoids from the Malumbang Formation, Philippine Islands. *The Philippine Journal of Science*, 50(3):301-307, plates 1-5.
- Jackson, R. T.
 1926. *Lepidesthes howsei* sp. nov. a Carboniferous Echinoid from Northumberland. *Geological Magazine*, 63(750):529-533, plate 30.
1929. Palaeozoic Echini of Belgium. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique*, 38:1-96, figures 1-10, plates 1-10.
1937. Mexican Fossil Echini. *Proceedings of the United States National Museum*, 84(3015):227-237, plates 12-15.
- Jeannot, A.
 1927. Un *Paracidaris* nouveau du Jura argovien. *Eclogae Geologicae Helvetiae*, 20(3):393-396, plate 12.
 1928a. Contribution à l'Étude des Échinides tertiaires de la Trinité et du Venezuela. *Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft*, 48(1):1-49, figures 1-12, plates 1-6.
 1928b. Sur les échinides tertiaires du Venezuela et de la Trinité conservés au Musée d'Histoire Naturelle de Bâle. *Verhandlungen Schweizerische Naturforschende Gesellschaft*, 109:220-221.
 1928c. Sur quelques échinides jurassiques de la collection Renz. *Verhandlungen Schweizerische Naturforschende Gesellschaft*, 109:221.
 1928d. Sur quelques échinides jurassiques de la Collection Renz. *Eclogae Geologicae Helvetiae*, 21(2):460-465, plate 36.
 1929. Revision des *Rhabdocidaris* du Jurassique supérieur Suisse. *Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft*, 48(3):1-45, figures 1-17, plates 1-5.
 1931. (Neuchâtel): Sur quelques *Leiocidaris* jurassiques. (Note préliminaire). *Eclogae Geologicae Helvetiae*, 24(2): 1 page.
 1933a. Note sur un *Miocidaris* nouveau. *Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft*, 53: 1-7, figures 1-2, plate 30.
 1933b. Sur quelques Échinides néocomiens du Vorarlberg. *Verhandlungen der Schweizerische Naturforschende Gesellschaft*, 114:370-371.
 1933c. Sur quelques Échinides néocomiens du Vorarlberg. *Eclogae Geologicae Helvetiae*, 26(2):233-234.
 1933d. Sur quelques *Leiocidaris* jurassiques suisses. *Mémoires de la Société Paléontologique Suisse*, 53: 1-7, 3 figures, plate 1.
 1934a. Présence du genre *Schizobrissus* dans le Nummulitique d'Iberg (*S. damiani* n. sp.). *Eclogae Geologicae Helvetiae*, 27(2):388-389.
 1934b. Présence du genre *Schizobrissus* dans le Nummulitique d'Iberg (*S. damiani* sp. n.). *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft*, 115: 334-335.
 1934c. Sur quelques Échinides crétacés d'Ibiza (Baléares). *Eclogae Geologicae Helvetiae*, 27(2):387-388.
 1934d. Sur quelques Échinides néocomiens du Vorarlberg. *Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft*, 64(4):1-7, plate 1. [This is *Zoological Record* pagination but reference on reprint is *Mémoires de la Société Paléontologique Suisse*, 54:1-7, 2 figures, 1 plate. Weisbord gives still another reference; he gives another paper of same title for 1933.]

- 1935a. Sur deux Échinides irréguliers du Crétacé inférieur d'Ibiza (Baléares). *Proceedings of the Section of Sciences, Koninklijke Akademie van Wetenschappen te Amsterdam*, 38(1-5):181-185, figures 1-3, 1 plate.
- 1935b. Observations sur des Échinides sculptés de la Gironde. *Eclogae Geologicae Helvetiae*, 28:559-560. [Species described as new in Jeannet's "Description de quelques Échinides sculptés du Lutétien supérieur, etc." in 1936. Not listed in *Zoological Record* in 1936 as a new species.]
- 1936a. Description de quelques Échinides sculptés du Lutétien supérieur des environs de Bordeaux. *Mémoires de la Société Paléontologique Suisse*, 57: 1-13, figures 1-16, plates 1-2.
- 1936b. Sur un *Diplocidaris* marocain: *Diplocidaris mauritanicus* nov. sp. *Eclogae Geologicae Helvetiae*, 29(2):607-611, figures 1-2, plate 37.
- 1936c. Sur quelques grands Échinides irréguliers du Nummulitique des environs d'Iberg (Schwyz). *Berichte Schweizerische Naturforschende Gesellschaft*, 1:52-70, figures 1-15, plate 3.
1952. Sur deux Échinides tertiaires de la Nouvelle-Calédonie. *Bulletin de la Société Géologique de France*, (6)1(7):413-418, plate 12.
1953. *Hessotiara zuberi* sp. nov. Échinide nouveau du Jura soleurois. *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 98(3):176-177, plate 1.
1955. Sur quelques Échinides fossiles étrangers. *Bulletin de la Société Géologique de France*, (6)5(7-9):553-561, figure 1, plates 25-26.
1959. Sur quelques Échinides tertiaires de la Trinité. *Verhandlungen der Schweizerische Naturforschende Gesellschaft*, 70(2):193-204, plates 1-9.
- Jeannet, A., and R. Martin
1937. Ueber Neozoische Echinoidea aus dem Niederländisch-Indischen Archipel. *Leidsche Geologische Mededeelingen*, (6)8(2):215-308, figures 1-67.
- Jekelius, E.
1932. Der weisse Triaskalk von Braşov und seine Fauna. *Anuarul Institutului Geologic al României*, 17:1-107, plates 1-9.
- Jesionek-Szymańska, W.
1963. Échinides irréguliers du Dogger de Pologne. *Acta Palaeontologica Polonica*, 8(3):293-414, text-plates 1-14, plates 1-7.
1970. On a New Pygasterid (Echinoidea) from the Jurassic (Middle Lias) of Nevada, U.S.A. *Acta Palaeontologica Polonica*, 15(4):411-419, figure 1, plates 1-2.
- Jones, S. T.
1938. Geology of Sierra de la Peña and Paleontology of the Indidura Formation, Coahuila, Mexico. *Bulletin of the Geological Society of America*, 49(1):69-150, figures 1-4, plates 1-13.
- Jordan, E. K., and L. G. Hertlein
1926. Expedition to the Revillagigedo Islands, Mexico, in 1925, VII: Contribution to the Geology and Paleontology of the Tertiary of Cedros Island and Adjacent Parts of Lower California. *Proceedings of the California Academy of Sciences*, (4)15(14):409-464, plates 27-34.
- Keller, A., and H. Vautrin
1937. Nouvelle contribution à l'étude des échinides de la Syrie et du Liban. *Notes et Mémoires, Haut-Commissariat de la République Française en Syrie et au Liban*, 2(2):137-164, figures 44-49, plates 5-7.
- Kellum, L. B.
1926. Paleontology and Stratigraphy of the Castle Hayne and Trent Marls in North Carolina. *United States Geological Survey Professional Paper*, 143:1-56, figure 1, plates 1-11.
1931. Revision of the Names of Three Fossils from the Castle Hayne and Trent Marls in North Carolina. *Journal of the Washington Academy of Sciences*, 21(4):51-52.
- Khanna, S. N.
1967. A New Species of Genus *Eupatagus* from Eocenes of Jaisalmer, Rajasthan (India). *Proceedings of the National Academy of Sciences, India*, 37B(2):214-220, figure 1, plate 1.
- Kier, P. M.
1953. A New Lower Carboniferous Echinoid from North America. *Geological Magazine*, 90(1):65-69, figures 1-4.
1954. A New *Palaeochinus* from Alberta. *Geological Magazine*, 91(3):252-254, figures 1-2.
1956. A New Genus of Echinoid from the Palaeozoic of Ireland. *Geological Magazine*, 93(1):15-17, figures 1-2, plate 1.
- 1957a. A New Upper Carboniferous Echinoid from Texas. *Geological Magazine*, 94(4):326-328, figure 1.
- 1957b. Tertiary Echinoidea from British Somaliland. *Journal of Paleontology*, 31(5):839-902, figures 1-20, plates 103-107.
- 1958a. New American Paleozoic Echinoids. *Smithsonian Miscellaneous Collections*, 135(9):1-26, figures 1-22, plates 1-8.
- 1958b. Permian Echinoids from West Texas. *Journal of Paleontology*, 32(5):889-892, figures 1-3, plate 114.
1962. Revision of the Cassiduloid Echinoids. *Smithsonian Miscellaneous Collections*, 144(3):1-262, figures 1-184, plates 1-44.
1963. Tertiary Echinoids from the Caloosahatchee and Tamiami Formations of Florida. *Smithsonian Miscellaneous Collections*, 145(5):1-63, figures 1-58, plates 1-18.
- 1964a. *Clypeaster romani*, New Name for *C. crassus*, Kier, 1963, not L. Agassiz, 1840. *Journal of Paleontology*, 38(3):610.
- 1964b. Fossil Echinoids from the Marshall Islands. *United States Geological Survey Professional Paper*, 260-GG:1121-1126, figures 328-331, plate 302.
1965. Evolutionary Trends in Paleozoic Echinoids. *Journal of Paleontology*, 39(3):436-465, figures 1-26, plates 55-60.
- 1966a. A New Echinoid from the Cretaceous Pierre Shale of Eastern Wyoming. *United States Geological Survey Professional Paper*, 393-A:A62-A65, figure 17.
- 1966b. Four New Eocene Echinoids from Barbados. *Smithsonian Miscellaneous Collections*, 151(9):1-28, figures 1-16, plate 1.

1967. Sexual Dimorphism in an Eocene Echinoid. *Journal of Paleontology*, 41(4):990-993, figures 1-3, plates 129-130.
- 1968a. The Triassic Echinoids of North America. *Journal of Paleontology*, 42(4):1000-1006, figure 1, plates 121-123.
- 1968b. Echinoids from the Middle Eocene Lake City Formation of Georgia. *Smithsonian Miscellaneous Collections*, 153(2):1-45, figures 1-44, plates 1-10.
- Kier, P. M., and R. E. Grant
1965. Echinoid Distribution and Habits, Key Largo Coral Reef Preserve, Florida. *Smithsonian Miscellaneous Collections*, 149(6):1-68, figures 1-15, plates 1-16.
- Koehlin, E.
1947. Demonstration eines neuen *Glypticus* aus dem Berner Jura. *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft*, 127:83.
1948. *Glypticus buxtorfi* n. sp. aus dem Sequan vom Mont Chaibeux bei Delsberg. *Eclogae Geologicae Helveticae*, 40(2):334-336, figures 1-2.
- Koehler, R.
1926. Echinodermata Echinoidea. Pages 1-134 in volume 8, part 3, in Launelot Harrison, editor, Scientific Reports, Series C, Zoology and Botany, in *Australasian Antarctic Expedition, 1911-1914, under the Leadership of Sir Douglas Mawson, D.Sc., B.E., F.R.S.* Plates 91-124. Sydney: Alfred J. Kent, Government Printer.
1927. Échinides du Musée Indien à Calcutta, III: Échinides réguliers. *Echinoderma of the Indian Museum*, 10:1-158, plates 1-27.
- Kongiel, R.
1935. Contribution à l'étude du "Siwak" dans les environs de Pulawy (Plateau de Lublin). *Travaux de la Société des Sciences et des Lettres de Wilno*, 9(19):1-57, 3 figures, 8 plates.
- 1936a. Sur quelques Échinides nouveaux du Crétacé supérieur des environs de Pulawy, Pologne. *Travaux de la Société des Sciences et des Lettres de Wilno*, 10(22):1-10.
- 1936b. Sur quelques Échinides de la Craie supérieure de Krasne Siolo près Wolkowysk. *Travaux de la Société des Sciences et des Lettres de Wilno*, 10(23):1-12, plates 1-3.
1939. Notes pour servir à l'étude des Échinides Crétacés de Pologne, I: Échinides réguliers. *Travaux de la Société des Sciences et des Lettres de Wilno, Classe des Sciences mathématiques et naturelles. Travaux de l'Institut de Géologie de l'Université de Wilno* (new series), 13(8):1-54, plates 1-3.
1949. Les *Echinocorys* du Danien de Danemark, de Suède et de Pologne. *Travaux du Service Géologique de Pologne*, 5:1-89, figures 1-61, plates 1-18.
1950. O kilku nowych jeżowcach z górnego mastrychtu okolic Pulaw. *Acta Geologica Polonica*, 1(3):311-326, plates 1-2.
1957. Remarques sur les échinides suprajurassiques de Czarnoglow et de Swietoszewo en poméranie occidentale. *Bulletin de la Service Géologique de Pologne*, 105(1):5-74, plates 1-7.
1958. Sur les radioles des Échinides des couches à *Crania tuberculata* Nilss. à Boryszew près de Sochaczew. *Prace Muzeum Ziemi* (Instytut Geologiczny Muzeum Ziemi), 2:3-30, figures 1-7, plate 1.
- Kongiel, R., and L. Matweijewówna
1937. Matériaux fauniques de la Craie supérieure des environs de Pulawy. *Travaux de la Société des Sciences et des Lettres de Wilno*, 11:115-148, plates 5-7.
- Körner, K.
1937. Marine (Cassianer-Raibler) Trias am Nevado de Acrotambo (Nord-Peru). *Palaeontographica*, 86A:145-240, figures 1-6, plates 10-14.
- Köster, E.
1950. Formveränderungen von *Echinocorys sulcatus* (Goldfuss, 1826-33). *Geologiska Föreningens I Stockholm Förhandlingar*, 72(4):437-453, figures 1-6.
- Krau, L.
1952. Sobre uma nova espécie de echinoidea *Clypeaster oliveirai* (ordem Clypeastroida). *Memórias do Instituto Oswaldo Cruz*, 50:703-712, figure 1, plates 1-7.
1954. Nova espécie de Ouriço do Mar: *Cassidulus mitis*, Ordem Cassiduloidea, Echinoidea, capturado no Bala de Sepetibá. *Memórias do Instituto Oswaldo Cruz*, 52(2):455-475, plates 1-6.
1960. Nova espécie de ouriço do mar capturado na baía de Sepetibá (Cassiduloidea, Echinoidea). *Memórias do Instituto Oswaldo Cruz*, 58(2):157-159, plates 1-4.
- Krenkel, H.
1928. Die regulären Echiniden der pommerschen Kreide. *Abhandlungen aus dem geologisch-palaeontologischen Institut der Universität Greifswald*, 7:1-32, figures 1-6, plates 1-3.
- Kristan-Tollmann, E., A. Tollmann, and J. Geysant
1969. Zur Schichtfolge und Fossilführung des Zentralalpinen (unterostalpinen) Rhät der Tarntaler Berge in Tirol. *Jahrbuch der Geologischen Bundesanstalt*, 112(1):1-29, figure 1, plates 1-6.
- Kühn, O.
1925. Die Echinodermen der Gosauformation. *Annalen des Naturhistorischen Museums in Wien*, 39:177-189, figures 1-2, plate 11.
1936. Eine neue Burdiglausbildung bei Horn. *Sitzungsberichte, Akademie der Wissenschaften in Wien*, 145(1):35-45, figures 1-3, plate 1.
- Kutassy, E.
1928. A borsodmegyei Királd barnaszén-medencéje. *Földtani Szemle*, 1(5):253-272, figures 23-25.
- Lambert, J.
1924a. Note sur les Échinides de la collection Ambayrac. *Riviera Scientifique* (Nice), 2(1):3-8, figures 1-4.
- 1924b. Sur un échinide nouveau du Bassin de Paris. *Bulletin de la Société Géologique de France*, (4)24(11):98, figure 1.
- 1924c. Sur un échinide nouveau du Rhétien des Préalpes bernoises. *Eclogae Geologicae Helveticae*, 18(3):448-450, figures 1-2.
- 1926a. Note sur un *Acrocidaris*, recueilli par le Ct. Caziot au Mont-Boron près Nice. *Riviera Scientifique* (Nice), 13:72-74, figures 1-2.

- 1926b. Note sur un Échinide nouveau du Bajocien de Liestal. *Naturforschende Gesellschaft Baselland Tätigkeitsbericht*, 7:118-122, plate 10.
- 1927a. Considérations sur les Échinides de la Commanche Série du Texas. *Bulletin de la Société Géologique de France*, (14)26(3-5):263-272.
- 1927b. Révision des Échinides fossiles de la Catalogne. *Memorias del Museo de Ciencias Naturales de Barcelona* (Serie Geologica), 1(1):1-102, figures 1-10, plates 1-4.
- 1927c. Sur quelques échinides du Tithonique et de l'Éocrétacé des environs de Chambéry. *Bulletin de la Société Géologique de France*, (4)27(3-5):361-377, figures 1-6.
- 1928a. Notes sur quelques échinides du Crétacé d'Espagne communiqués par M. le Prof. Royo y Gomez. *Boletin de la Real Sociedad Española de Historia Natural*, 28(3):147-157, figure 1, plate 3.
- 1928b. Révision des échinides fossiles du Bordelais, III: Échinides du Miocène. *Actes de la Société Linnéenne de Bordeaux*, 79(2):71-132, figures 1-8.
- 1928c. Sur deux Échinides fossiles de Cuba. *Bulletin de la Société Géologique de France*, (4)28(1-2): 19-21, figures 1-2.
- 1928d. Sur un Échinide nouveau des couches à Stegarter de Gan. *Compte Rendu Sommaire des Séances de la Société Géologique de France*, 1928(16):263-265, figures 1-2.
- 1928e. Révision des Échinides Fossiles de la Catalogne. *Memorias del Museo de Ciencias Naturales de Barcelona* (Serie Geologica), 1(2):1-62, plates 5-8.
1929. Sur les Échinides éocènes de Madagascar. *Comptes Rendus des Séances de l'Académie des Sciences*, 189(4):192-194, figures 1-4.
- 1931a. Échinides crétacés de la région d'Héraclée. *Annales de la Société Géologique de Belgique, Mémoires*, 54:M2-M12, figures 1-3, plate 1.
- 1931b. Échinides du Lias du Moyen Atlas Marocain. *Protectorat de la République Française au Maroc, Service des Mines et de la Carte Géologique, Notes et Mémoires*, 17:1-25, figures 1-3, plates 1-2.
- 1931c. Étude sur les échinides fossiles du Nord de l'Afrique. *Mémoires de la Société Géologique de France*, Mémoire 16, (new series) 7(2):1-108, plates 1-4.
- 1931d. Étude sur les échinides fossiles du Nord de l'Afrique. *Mémoires de la Société Géologique de France*, Mémoire 16, (new series) 7(4):109-228, plates 5-8.
- 1931e. Note sur le groupe des *Oligopygus*, la nouvelle famille des *Haimeidae* et sur quelques Échinides fossiles de Cuba. *Bulletin de la Société Géologique de France*, (5)1:289-304, figures 1-3, plate 17.
1932. Sur quelques échinides du Tithonique et de l'Éocrétacé des environs de Chambéry. *Bulletin de Société d'Histoire Naturelle de Savoie*, 22:250-263.
- 1933a. Échinides de Madagascar communiqués par M. H. Besairie. *Annales Géologiques du Service des Mines, Madagascar*, 3:1-49, figures 1-8, plates 1-4.
- 1933b. Échinides Fossiles du Maroc. *Protectorat de la République Française au Maroc, Service des Mines et de la Carte Géologique, Notes et Mémoires*, 27:27-79, figures 1-3, plates 1-3.
- 1933c. Note sur quelques Échinides de la région de Chatillon-sur-Seine. *Bulletin de la Société Géologique de France, Notes et Mémoires*, (5)3:173-180, figure 1, plate 7.
- 1933d. Supplément à la révision des échinides fossiles de la Catalogne. *Butlletí de la Institució Catalana d'Història Natural*, 33(4-5):183-195, figures 1-2, plate 4.
1934. Appendice sur un clypeaster de l'Angola. *Boletim do Museu e Laboratório Mineralógico e Geológico da Universidade de Lisboa*, (1)3:247-248, plate 5.
- 1935a. Note sur les Échinides jurassiques et les oscillations du détroit poitevin. *Bulletin de la Société Géologique de France*, (5)4(6-7):523-536, plates 26-27.
- 1935b. Sur quelques échinides fossiles de Valence et d'Ali-cante communiqués par M. le Prof. Darder Pericás. *Boletin de la Sociedad Española de Historia Natural*, 35(7):359-371, plates 41-42.
- 1935c. Notes sur quelques Échinides fossiles, I: Échinides du Djebel Outaïa; II: Sur un *Echinolampus* du Désert Libyque; III: Échinides du Mexique recueillis par M. F. Mullerried. *Bulletin de la Société Géologique de France*, (5)5(4-5):359-368, figure 1, plate 16.
- 1935d. Notes sur quelques Échinides fossiles, III: Échinides du Mexique recueillis par M. F. Mullerried. *Bulletin de la Société Géologique de France*, (5)5(6-7):369-374, figure 2, plate 16.
- 1935e. Sur quelques nouveaux échinides fossiles d'Égypte. *Bulletin de l'Institut d'Égypte*, 18(1):39-43, plate 1.
- 1935f. Échinides crétacés d'Espagne, I: Sur quelques Échinides crétacés des provinces de Burgos, Palencia et Leon, communiqués par M. Raymond Ciry; II: Sur quelques Échinides crétacés d'Espagne, communiqués par M. le Prof. Royo y Gómez. *Boletin de la Sociedad Española de Historia Natural*, 35(10): 513-526, plates 57-58.
- 1936a. Échinides du Sénomien supérieur et de l'Éocène. In Besairie, H., La Géologie du Nord-Ouest, I: Recherches géologiques à Madagascar. *Mémoires de l'Académie Malgache*, 21:205-207, plate 24.
- 1936b. Les Échinides du Bajocien du Plateau de l'Ankara. In Besairie, H., La géologie du Nord-Ouest, I: Recherches géologiques à Madagascar. *Mémoires de l'Académie Malgache*, 21:116-120, plate 6.
- 1936c. Nouveaux Échinides fossiles de Madagascar. *Annales Géologiques du Service des Mines Madagascar*, 6:1-32, plates 1-4.
- 1936d. Observations critiques sur quelques *Hemiasster* du Sud-Ouest de la France. *Bulletin de la Société d'Histoire Naturelle de Toulouse*, 69(1):77-94, figure 1, plate 6.
- 1936e. Quelques nouveaux Échinides fossiles du Crétacé du Mexique. *Bulletin de la Société Géologique de France*, (5)6(1-3):3-6, plate 1.
1937. Échinides fossiles du Maroc. *Protectorat de la République Française au Maroc, Direction Générale des Travaux Publics, Service des Mines et de la*

- Carte Géologique, Notes et Mémoires*, 39:1-109, figures 1-4, plates 1-4.
- 1938a. Note sur quelques Échinides fossiles communiqués par MM. Dalloni et Schoeller. *Bulletin de la Société Géologique de France*, (5)8(3-4):273-286, figure 1, plate 19.
- 1938b. Une nouvelle variété de l'*Heterodiadema libycum* Desor, du Cenomanien supérieur de Tamaïa (Niger). *Bulletin de la Société Géologique de France*, (5)8(1-2):87-89, plate 6.
- Lambert, J., and F. Charles
1937. Échinides crétacés de la région de Djidde (Anatolie). *Bulletin de la Société Belge de Géologie de Paléontologie et Hydrologie*, 47(2):377-401, figures 1-6, plates 8-9.
- Lambert, J., in Lambert, J., and F. Jacquet
1936. Les échinides fossiles du Sénégal. *Bulletin de la Société Géologique de France*, (5)6(6-8):339-361, plates 21-23.
- Lambert, J., and A. Jeannet
- 1928a. Contribution à la connaissance des échinidés tertiaires des Iles de la Sonde (Java, Bornéo, Soembawa et Timor). *Verhandlungen Schweizerische Naturforschende Gesellschaft*, 109:219.
- 1928b. Nouveau catalogue des moules d'échinides fossiles du musée d'histoire naturelle de Neuchâtel. *Mémoires de la Société Helvétique des Sciences Naturelles*, 64(2):79-233, plates 1-2.
1935. Contribution à l'étude des Échinides tertiaires des îles de la Sonde. *Mémoires de la Société Paléontologique Suisse*, 56:1-62, figures 1-75, plates 1-4.
- Lambert, J., and V. Pérébasquine
1929. Note sur quelques échinides du Soudan. *Bulletin de la Société Géologique de France*, (4)29(6-7):471-477, plate 38.
- Lambert, J., and M. Sánchez Roig
1934. Nueva especie fósil del género "Clypeaster." *Revista de Agricultura, Comercio y Trabajo*, 14(51):22-24, 2 figures.
- Lambert, J., and P. Thiéry
- 1909-1925. Essai de Nomenclature Raisonnée des Échinides. 607 pages, 15 plates. Chaumont: Librairie L. Ferrière.
- Lambert, J., and A. Valette
1934. Études sur quelques échinodermes crétacés de Bugarach (Aude). *Bulletin de la Société Géologique de France*, (5)4:43-60, plate 6.
- Laureri, S.
1962. Nuovi echinidi elveziani della media Val d'Enza (Reggio Emilia). *Bollettino della Società Geologica Italiana*, 81(1):93-122, plates 1-4.
- Lees, G. M.
1928. The Geology and Tectonics of Oman and of Parts of South-Eastern Arabia. *Quarterly Journal of the Geological Society*, 84(4)(336):585-670, figures 1-12, plates 41-51.
- Leonardi, P., and M. Lovo
1950. Nuove forme di echinodermi della fauna cassiana di Cortina d'Ampezzo. *Studi Trentini di Scienze Naturali*, 27(1-3):3-10, plates 1-2.
- Linck, O.
1955. Ein bemerkenswerter Seeigel-Rest (*Miocidaris pakistanensis* n. sp.) aus der Unter-Trias der Salt Range (Pakistan). *Neues Jahrbuch für Geologie und Paläontologie*, 10:489-495, figures 1-4.
- Lobacheva, S. V., and E. S. Poretskaya
1967. A New *Epiaster* from Turkmenia—The Oldest Representative of the Genus. *Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut*, (new series), 129(3):182-187, figures 1-2, plate 1, table 1.
- Loel, W., and W. H. Corey
1932. The Vaqueros Formation, Lower Miocene of California, I: Paleontology. *University of California Publications, Bulletin of the Department of Geological Sciences*, 22(3):31-410, plates 4-65.
- Lörcher, E.
1930. Neue Seeigelfunde aus dem Jura Württembergs. *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie*, 64(B):255-270, figures 1-2, plates 18-19.
- MacBride, E. W., and W. K. Spencer
1938. Two New Echinoidea, *Aulechinus* and *Ectinechinus*, and an Adult Plated Holothurian, *Eothuria*, from the Upper Ordovician of Girvan, Scotland. *Philosophical Transactions of the Royal Society of London*, (B)229(558):91-136, figures 1-15, plates 10-17.
- Maccagno, A. M.
1941. Osservazioni sul genere *Somaliaster* Haw. *Bollettino della Società Geologica Italiana*, 60(1):89-98, figures 1-3, plate 11.
- 1947a. Nuova specie di *Schizaster* nel macco di Palo (Lazio). *Bollettino della Società Geologica Italiana*, 65(1):115-121, plate 1.
- 1947b. Illustrazione degli echinidi giurassici della Somalia. *Atti della Accademia Nazionale dei Lincei (Memorie)*, (8)1:99-136, figures 1-4, plate 1.
- 1947c. Echinidi giurassici dell'Harar. *Bollettino dell'Ufficio geologico d'Italia*, 70 (part 1: Geologia, 4):79-101, plates 1-2.
- Maczyńska, S. S.
1958. Cenomanian and Turonian Echinoids of Genus *Discoidea* from the Vicinity of Kraków, Miechów and Wolbrom. *Prace Muzeum Ziemi (Instytut Geologiczny Muzeum Ziemi)*, 2:81-115, figures 1-36, plates 1-9.
1962. On Echinoids of the Genus *Pyrina* from the Cenomanian in the Vicinity of Kraków, Miechów, and Wolbrom. *Prace Muzeum Ziemi (Polska Akademia Nauk Muzeum Ziemi)*, 5:149-186, figures 1-29, plates 1-6.
1968. Echinoids of the Genus *Micraster* L. Agassiz from the Upper Cretaceous of the Craców-Miechów area. *Prace Muzeum Ziemi (Polska Akademia Nauk Muzeum Ziemi)*, 12:87-168, figures 1-22, plates 1-28.
- Madsen, F. J.
1957. On a New Species of *Meoma*, and on a Few Other Echinoids from Tropical West Africa. *Bulletin de l'Institut Français d'Afrique Noire*, (A)19(2):474-481, figures 1-3.

- Maillieux, E.
 1935. Contribution à l'étude des Échinoides du Frasnien de la Belgique. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique*, 65:1-14, plates 1-2.
 1940. Les Échinodermes du Frasnien de la Belgique. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique*, 92:1-46, plates 1-3.
- Malaroda, R.
 1951. Il latorfiano del Monteccio di Costozza (Colli Berici). Parte Prima: I macrofossili. *Memorie del Museo Civico di Storia Naturale di Verona*, 2:147-210, figures 1-11, plates 1-7.
- Maldonado-Koerdell, M.
 1953. Los equinoides regulares del Mesozoico de México. *Anales de la Escuela Nacional de Ciencias Biológicas*, 7(1-4):15-43, plates 1-2.
- Männil, R.
 1962. The Taxonomy and Morphology of *Bothriocidaris* (Echinoidea). *Esti NSV Teaduste Akadeemia Geoloogia Instituudi Uurimused*, 9:143-190, figures 1-22, plates 1-5.
- Mansfield, W. C.
 1932. Pliocene Fossils from Limestone in Southern Florida. *United States Geological Survey Professional Paper*, 170-D:7 pages, 5 plates.
- Marchesini Santos, M.E.C.
 1958. Equinóides Miocênios da formação Pirabas. *Divisão de Geologia e Mineralogia Boletim*, 179:1-24, plates 1-5.
 1960. Equinóides Cretácicos do Rio Grande do Norte. *Divisão de Geologia e Mineralogia Boletim*, 189:1-26, figures 1-8, plates 1-5.
- Marchesini Santos, M. E. C., and F. L. de Souza Cunha
 1959. Sobre *Hemiasperteron jacksoni* Maury e outros equinóides do cretácico brasileiro. *Divisão de Geologia e Mineralogia Boletim* (Rio de Janeiro), 186:1-19, plates 1-3.
- Martin, K.
 1919. *Unsere palaeozoologische Kenntnis von Java mit einleitenden Bemerkungen über die Geologie der Insel*. E. J. Brill, editor. 156 pages, 4 plates. Leiden.
- Masuda, K.
 1971. Amusiopecten from North America and Northern South America. *Transactions and Proceedings of the Palaeontological Society of Japan*, 84:205-224.
- Mathieu, G.
 1949. Géologie régionale des environs de Matmata Medenine et Fom-Tatahouine. In Contribution à l'étude des Monts Troglodytes dans l'extrême Sud-Tunisien. *Annales des Mines et de la Géologie*, (1)4:1-82, figures 1-11, plates 1-3.
- Maury, C. J.
 1925. Fosséis terciários do Brasil com descrição de novas formas cretáceas. *Monographias do Serviço Geológico e Mineralógico do Brazil*, 4:1-705, plates 1-24.
 1930. O cretáceo da Parahyba do Norte. *Monographie do Serviço Geológico e Mineralógico do Brazil*, 8:1-305, plates 1-35.
- 1934a. Fossil Invertebrata from Northeastern Brazil. *Bulletin of the American Museum of Natural History*, 67(4):123-179, plates 9-19.
 1934b. *Lovenilampas*, a New Echinoidean Genus from the Cretaceous of Brazil. *American Museum Novitates*, 744:1-5, figure 1.
 1936. O Cretáceo de Sergipe. *Monographias do Serviço Geológico e Mineralógico*, 11:1-283, plates 1-28.
- Meffert, B.
 1931. La faune éocène du Daralaghez en Arménie. *Transactions of the Geological and Prospecting Service of U.S.S.R.*, 99:1-64, figures 1-6, plates 1-8.
- Melikov, O. G., and L. G. Endel'man
 1963. A New Echinoid from the Lower Maestrichtian of the Caucasus. *Paleontologicheskii Zhurnal*, 4:135-138, figures 1-2.
- Melinossi, R.
 1935. Su di un echinide della Patagonia. *Atti della Società Toscana di Scienze Naturali, Processi Verbali*, 44(2): 32-39, figures 1a-b, 2.
- Melville, R. V.
 1952. On a New Species of Irregular Echinoid (*Plagioclasma coxwellense* sp. nov.) from the Lower Greensand of Faringdon, Berks. *Bulletin of the Geological Survey of Great Britain*, 4:1-7, figure 1, plate 1.
 1955. *Echinotiara arabica* sp. nov., a Regular Echinoid from the Toarcian of Central Arabia. *Geological Magazine*, 92(5):393-401, figures 1-7, plate 19.
- Mercier, J.
 1931. Notes échinologiques, VIII: *Rhabdocidaridaris bigoti* (Cidaridae, Stereocidaridae, Rhabdocidarinae), espèce nouvelle du Bathonien supérieur de la Sarthe. *Bulletin de la Société Linnéenne de Normandie*, (8)3:94-97, figures 1-4.
 1932. Études sur les échinides du Bathonien de la bordure occidentale du Bassin de Paris. *Mémoires de la Société Linnéenne de Normandie*, (new series, geology section) 2:1-273, figures 1-34, plates 1-11.
 1935. Note sur quelques échinides jurassiques. *Bulletin de la Société Linnéenne de Normandie*, (8)7:27-30.
 1937a. Deux genres nouveaux d'échinides du Lias. *Bulletin de la Société Géologique de France*, (5)6(6-8):419-442, figures 1-2.
 1937b. Les échinides de la couche à Leptaena du Toarcien de May-sur-Orne (Calvados). *Bulletin de la Société Linnéenne de Normandie*, (8)9:95-97.
 1937c. Les échinides du Lias de la bordure du Massif Armoricaïn. *Bulletin de la Société Géologique de Normandie et des Amis du Museum du Havre*, 39:12-42, plate 1.
- Meyer, H. von
 1847. Mittheilungen an Professor Bronn gerichtet. *Neues Jahrbuch für Mineralogie, Geognosie, Geologie, und Petrefakten-Kunde* (Stuttgart), 1847:572-580.
- Meznerics, L.
 1941. Neue Stachelhäuter (Echindermen) aus dem Miocän Ungarns. *Annales Historico-Naturales Musei Nationalis Hungarici*, 34:83-96, plates 1-3.

- Miller, A. K.
 1928. A New Echinoid from the Sundance of West-Central Wyoming. *American Journal of Science*, (5)16(92): 143-146, figures 1-4.
 1929. *Ancylocidaris*, a New Echinoid Genus from the Sundance of West-Central Wyoming. *American Journal of Science*, (5)18(106):334-336, figures 1-3.
- Minato, M.
 1950. On Some Palaeogene Fossils in Hokkaido. *The Journal of the Geological Society of Japan*, 56(654): 157-159, figures 1-3.
- Mintz, L. W.
 1967. The Origins, Phylogeny, Descendants of the Echinoid Family Disasteridae A. Gras, 1848. (Abstract.) *Dissertation Abstracts*, 27B:2747-2748.
 1968. Echinoids of the Mesozoic Families Collyritidae d'Orbigny, 1853 and Disasteridae Gras, 1848. *Journal of Paleontology*, 42(5):1272-1288, figures 1-6.
- Mirigliano, G.
 1938. *Echinolampas delorenzoi*. *Revista Italiana di Paleontologia*, 44(1-2):46-50, figure 1, plate 1.
 1957. *Scutella montagnai* n. sp. (Echinoidea, Clypeastroidea). *Bollettino di Zoologia*, 24:9-15, figure 1, plate 1.
- Mitzopoulos, M. K.
 1960. Die Echiniden de Attischen Kreide am Skironischen Engpass. *Praktika, Akademia Athens*, 35(2):280-289, plates 1-3.
- Molengraaff, G. J. H.
 1929. Beschrijving van de Echiniden uit het Boven-Eoceen van Curaçao, Pages 72-83 in *Geologie en Geohydrologie van het Eiland Curaçao*. Plates 25-28.
- Montanaro-Gallitelli, E., and Z. Lang
 1937. Celenterati, Echinodermi e Brachiopodi del Cretaceo mediosuperiore dello Zululand. *Palaeontographia Italica*, 37:193-210, plate 9.
- Morishita, A.
 1952. Fossil *Astricypeus* from Japan. *Memoirs of the College of Science, University of Kyoto*, (B)20(2): 107-114, figures 1-2, plate 11.
 1953. On Some Neogene Echinoids from Nagano Prefecture, Japan. *Memoirs of the College of Science, University of Kyoto*, (B)20(4):217-226, figures 1-4, plate 1.
 1955. Notes on *Echinarachnius* in Japan. *Memoirs of the College of Science, University of Kyoto*, (B)22(2):223-236, figures 1-2, plates 8-11.
 1956. On Some Fossil Echinoids from Kyusyu, Japan. *Memoirs of the College of Science, University of Kyoto*, (B)23(2):193-202, plates 1-4.
 1957. On Some Fossil Echinoids of Japan, I: *Brissopsis* and *Eupatagus*. *Memoirs of the College of Science, University of Kyoto*, (B)24(2):161-164, plate 1.
 1962. Cretaceous Echinoid *Hemiaster* from Shikoku, Japan. Number II in On Some Fossil Echinoids of Japan. *The Journal of Earth Sciences, Nagoya University*, 10(2):113-116, plate 1.
 1965. New Species of *Salenia* from the Miocene of Japan. Number IV in On Fossil Echinoids of Japan. *Transactions and Proceedings of the Palaeontological Society of Japan*, (new series) 58:64-66, figures 1-5.
- Mortensen, T.
 1925. Papers from Dr. Th. Mortensen's Pacific Expedition 1914-16, XXIX: Echinoderms of New Zealand and the Auckland-Campbell Islands, III-V: Asteroidea, Holothurioidea and Crinoidea. *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 79:261-420, figures 1-70, plates 12-14.
 1926. A New West Indian Cidarid. *University of Iowa Studies in Natural History*, 11(7):5-8, plates 1-4.
 1927a. A New Species of the Genus *Echinarachnius* from Japan. *Annotationes Zoologicae Japonenses*, 11(3): 195-200, figures 1-2, plate 1.
 1927b. Report on the Echinoidea Collected by the United States Fisheries Steamer "Albatross" during the Philippine Expedition, 1907-1910, Part 1: The Cidaridae. *United States National Museum Bulletin* 100, 6(4):241-312, figures 1-22, plates 48-80.
 1927c. Sur les échinides recueillis par l'expédition du "Travailleur" et du "Talisman." *Archives du Muséum d'Histoire Naturelle*, (6)2:21-34, figures 1-12, plates 1-2.
 1928. Papers from Dr. Th. Mortensen's Pacific Expedition 1914-16, xlv: New Cidaridae. (Preliminary Notice.) *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 85:65-74.
 1930. Some New Japanese Echinoids. *Annotationes Zoologicae Japonenses*, 12(2):387-404, 2 figures, plates 1-4.
 1932a. On the Salenidae of the Upper Cretaceous Deposits of Scania, Southern Sweden. *Geologiska Föreningens I Stockholm Förhandlingar*, 54(4):471-497, 24 figures, plates 4-5.
 1932b. New Contributions to the Knowledge of the Cidarids, I: Notes on Some Recent Cidarids. *Det Kongelige Danske Videnskabernes Selskabs Skrifter, Naturvidenskabelig og matematisk Afdeling*, (9)4(4):145-174, figures 1-13, plates 1-13.
 1933. Papers from Dr. Th. Mortensen's Pacific Expedition 1914-16, lxvi: The Echinoderms of St. Helena (Other Than Crinoids). *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 93:401-473, figures 1-29, plates 20-22.
 1934a. New Echinoidea. (Preliminary Notice.) *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 98:161-167.
 1934b. Notes on Some Fossil Echinoids. *Geological Magazine*, 71(9):393-407, 7 figures, plates 21-22.
 1936a. Echinoidea and Ophiuroidea. *Discovery Reports*, 12: 199-348, figures 1-53, plates 1-9.
 1936b. *Phyllacanthus forcipulatus*, sp. nov., a New Cidarid from the Indian Ocean. *Records of the Indian Museum (Calcutta)*, 38(3):307-309, 1 figure, plates 10-12.
 1937. Some Echinoderm Remains from the Jurassic of Württemberg. *Biologische Meddelelser*, 13(10):1-28, figure 1, plates 1-4.
 1939a. New Echinoidea (Aludonta). (Preliminary Notice.) *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 103:547-550.

- 1939b. Report on the Echinoidea of the Murray Expedition, Part I. *The John Murray Expedition 1933-34 Scientific Reports*, 6(1):1-28, figures 1-10, plates 1-6.
- 1939c. Two New Deepsea Echinoderms from the Red Sea. *Publications of the Marine Biological Station Ghardaqa (Red Sea)* (Cairo), 1:37-46, figures 1-5, plates 3-4.
- 1940a. Contributions to the Biology of the Philippine Archipelago and Adjacent Regions. Part 2 in Report on the Echinoidea Collected by the United States Fisheries Steamer "Albatross" during the Philippine Expedition, 1907-1910. *United States National Museum Bulletin* 100, 14(1):1-52, figures 1-3, plate 1.
- 1940b. Aulodonta. Number 1 of volume 3 in Mortensen, *A Monograph of the Echinoidea*. 370 pages, 197 figures, 77 plates. Copenhagen: C. A. Reitzel.
- 1940c. Echinoderms from the Iranian Gulf: Asteroidea, Ophiuroidea, and Echinoidea. *Danish Scientific Investigations in Iran*, 2:55-112, figures 1-24, plates 1-2.
1942. New Echinoidea (Camarodonta). (Preliminary Notice.) *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 106:225-232.
- 1943a. Camarodonta. Number 2 of volume 3 in Mortensen, *A Monograph of the Echinoidea*. 553 pages, 321 figures, 56 plates. Copenhagen: C. A. Reitzel.
- 1943b. Camarodonta. Number 3 of volume 3 in Mortensen, *A Monograph of the Echinoidea*. 445 pages, 215 figures, 66 plates. Copenhagen: C. A. Reitzel.
- 1948a. Report on the Echinoidea Collected by the United States Fisheries Steamer "Albatross" during the Philippine Expedition, 1907-1910, Part 3: The Echinoneidae, Echinolampadidae, Clypeastridae, Arachnoididae, Laganidae, Fibularidae, Urechinidae, Echinocorythidae, Palaeostomatidae, Micrasteridae, Palaeopneustidae, Hemiassteridae, Spatangidae. *United States National Museum Bulletin* 100, 14(3):89-140.
- 1948b. Report on the Echinoidea of the Murray Expedition, Part 2. *The John Murray Expedition 1933-34 Scientific Reports*, 9(1):1-15, plate 1.
- 1948c. Holectypoida, Cassiduloidea. Number 1 of volume 4 in Mortensen, *A Monograph of the Echinoidea*. 371 pages, 326 figures, 14 plates. Copenhagen: C. A. Reitzel.
- 1948d. Clypeastroidea, Clypeastridae, Arachnoididae, Fibularidae, Laganidae and Scutellidae. Number 2 of volume 4 in Mortensen, *A Monograph of the Echinoidea*. 471 pages, 258 figures, 72 plates. Copenhagen: C. A. Reitzel. [Zoological Record says: "Some spp. and vars. in Mortensen's 'A Monograph of the Echinoidea, 4(1) and 4(2), are recorded in the Systematic Index as nov., although they are not stated to be so by Mortensen. The Preliminary Notice by Mortensen in which these names were intended to be proposed did not appear until 1949."]
- 1948e. New Echinoidea (Cassiduloidea, Clypeastroidea). (Preliminary Notice.) *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 111: 67-72.
- 1950a. Echinoidea. *B.A.N.Z. Antarctic Research Expedition 1929-1931 Reports—Series B (Zoology and Botany)*, 4(10):287-310, figures 1-6, plates 4-9.
- 1950b. New Echinoidea (Spatangoidea). (Preliminary Notice.) *Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København*, 112:157-163.
1951. Report on the Echinoidea Collected by the "Atlantide" Expedition. *Atlantide Report*, 2:293-303, figure 1, plates 1-2.
- Mortensen, T., and J. Mercier
1939. Remarques sur le genre *Jacquiertia*. *Bulletin de la Société Linnéenne de Normandie*, (9)1:58-61, figures 1-2.
- Moskvin, M. M.
1959. Atlas of the Upper Cretaceous Fauna of the Northern Caucasus and Crimea. *Gas Industry of the U.S.S.R.* (Moscow), 1-500, figures 1-109, 91 plates.
- Mullerried, F.K.G.
1951. Algunos fosiles marinos del Terciario inferior y medio de Palenque, Chiapas. *Revista de la Sociedad Mexicana de Historia Natural*, 12(1-4):209-227, figures 1-7.
- Nagao, T.
1928. Palaeogene Fossils of the Islands of Kyūshū, Japan, Part 2. *Science Reports of the Tōhoku Imperial University* (Sendai, Japan), (Second Series, Geology), 12(1):11-140, plates 1-23.
- Nestler, H.
1965. Echiniden aus dem Inter-Maastricht der Insel Rügen, I: Die Saleniiden. *Geologie*, 14(8):982-1003, figures 1-9, plates 1-5.
- Nielsen, K. B.
1926. Kalken paa Saltholm. *Danmarks geologiske Undersøgelse*, (4)1(20):1-23, figures 1-8.
1942. *Martinosigra elongata* n. g. et n. sp., a New Echinoid from the White Chalk of Denmark. *Meddelelser fra Dansk Geologisk Forening*, 10(2):159-166, plates 1-2.
- Nisiyama, S.
1935. On Some Fossil Echinoids from Northeastern Japan. *Saito Ho-on Kai Museum Research Bulletin*, 5:131-172, figures 1-13, plate 8.
1937. A New Species of *Sismondia* from the Oligocene of Titi-zima. *Proceedings of the Imperial Academy*, 13(2):41-45, figures 1-15.
1940- On the Japanese Species of *Echinarachnius*. *Jubilee Publication in the Commemoration of Professor H. Yabe*, 2:803-862, figures 1-65, 43-45.
1948. *Astrodapsis* in Japan. *Journal of Paleontology*, 22(5): 601-605, plate 88.
1950a. Two New Species of the Toxasteridae from Japan. *Short Papers of the Institute of Geology and Paleontology, Tōhoku University* (Sendai), 1:42-47, figures 1-6.
1950b. Fossil Echinoidea from the Miyako Cretaceous. *Short Papers of the Institute of Geology and Paleontology, Tōhoku University* (Sendai), 2:29-38, figures 1-3, plate 4.

1951. A New *Scaphechinus* from North-East Japan. *Saito Ho-on Kai Museum Research Bulletin*, 21:3-5, figures 1-3.
1966. The Echinoid Fauna from Japan and Adjacent Regions, Part 1. *Palaeontological Society of Japan Special Papers*, 11:1-277, figures 1-25, plates 1-18.
1968. The Echinoid Fauna from Japan and Adjacent Regions, Part 2. *Palaeontological Society of Japan Special Papers*, 13:1-491, figures 26-77, plates 19-30.
- Nisiyama, S., and W. Hashimoto
1950. A New *Echinarachnius* from the Tertiary of Hokkaido. *Short Papers of the Institute of Geology and Paleontology, Tôhoku University* (Sendai), 2:39-42, figures 1-3.
- Ødum, H.
1926. Studier over Daniet i Jylland og paa Fyn. (Studies on the Cretaceous Formation Daninium in Jutland and Funen.) *Danmarks geologiske Undersøgelse*, 2(45):1-306, figures 1-29, plates 1-3.
- Otuka, Y.
1938. Neogene Fossils of the Ihara District, Sizuoka Prefecture, Japan. *Journal of the Faculty of Science, Imperial University of Tokyo*, Section II Geology, 5(1):1-19, figures 1, a-e, plates 1-2.
- Ozaki, K.
1939. On a New Species of Lower Carboniferous Echinoidea from Central Hunan, South China. *Jubilee Publication in the Commemoration of Professor H. Yabe, M.I.A. Sixtieth Birthday*, 1:563-567, plate 30.
- Parnes, A.
1961. On the Occurrence of *Pseudopygurus* Lambert in Southern Israel. *The Bulletin of the Research Council of Israel*, 10G(1-2):216-222, figure 1, plate 1.
- Paul, C.R.C.
1967. New Ordovician Bothriocidaridae from Girvan and a Reinterpretation of *Bothriocidaris* Eichwald. *Palaeontology*, 10(4):525-541, figures 1-6, plates 84-85.
- Paulson, Jr., O. L.
1958. A New Species of the Eocene Echinoid *Periarchus*. *Journal of Paleontology*, 32(2):362-365, figures 1-8.
- Pawson, D. L.
1964. A New Cidaroid from New Zealand Waters. *Transactions of the Royal Society of New Zealand*, 5(6):67-70, figures 1-4, plate 1.
- Péquignat, E.
1963. Sur un nouvel *Echinocardium* le Ligurie et de Provence: *Echinocardium fenauxi* n. sp. *Doriana*, 3(138):1-9, figures 1-3.
1964. Description d'une espèce nouvelle de grande taille, reperée dans trois localités entre Marseille et Gênes: *Echinocardium fenauxi* Péquignat. In *Sur les Echinocardium d'Europe. Bulletin de l'Institut Océanographique*, 62(1291):1-22, figures 1-5, plates 1-2.
- Petitot, M.-L.
1954. Sur une nouvelle espèce d'échinide irrégulier du Maroc: *Pseudopygurus ambroggii* nov. sp. *Notes du Service Géologique du Maroc*, 9(121):83-87, figures 1-2, plate 1.
- 1961 [1959]. Contribution à l'étude des échinides fossiles du Maroc (Jurassique et Crétacé). *Notes et Mémoires du Service Géologique, (Maroc)*, 146:1-183, figures 1-6; atlas, 1-72, plates 1-17, tables 1-20, charts 1-7.
- Philip, G. M.
- 1963a. Two Australian Tertiary Neolampadids and the Classification of Cassiduloid Echinoids. *Palaeontology*, 6(4):718-726, figures 1-2, plates 106-107.
- 1963b. A New Genus of Regular Echinoid from the Lower Eocene of British Somaliland. *Journal of Paleontology*, 37(5):1104-1109, figures 1-3.
- 1963c. A New Regular Echinoid from the Jurassic of Wyoming, U.S.A. *Journal of Paleontology*, 37(5):1110-1115, figures 1-5.
- 1963d. The Tertiary Echinoids of Southeastern Australia, I: Introduction and Cidaridae (1). *Proceedings of the Royal Society of Victoria*, 76(2):181-226, figures 1-5, plates 21-26.
1964. The Tertiary Echinoids of Southeastern Australia, II: Cidaridae (2). *Proceedings of the Royal Society of Victoria*, 77(2):433-477, figures 1-6, plates 58-67.
1965. The Tertiary Echinoids of Southeastern Australia, III: Stirodonta, Aulodonta, and Camarodonta (1). *Proceedings of the Royal Society of Victoria*, 78(2):181-196, figures 1-4, plates 26-29.
1969. The Tertiary Echinoids of South-Eastern Australia, IV: Camarodonta (2). *Proceedings of the Royal Society of Victoria, (new series)* 82(2):233-275, figures 1-8, plates 3-16.
- Pijpers, P. J.
1933. Geology and Palaeontology of Bonaire (D.W.I.). *Geographische en Geologische Mededeelingen, (Utrecht)*, 8:1-103, plates 1-2.
- Pinar, N.
1951. Sur les oursins de l'Éocène moyen de Çatalca-karaköy (Trakya, Turquie). *Bulletin de la Société Géologique de France*, (6)1(1-3):35-54, figures 1-9, plate 1b.
- Popiel-Barczyk, E.
1958. The Echinoid Genus *Conulus* from the Turonian from the Vicinity of Kraków, Miechów and Wolbrom. *Prace Muzeum Ziemi*, 2:41-79, figures 1-36, plates 1-5.
- Poretskaya, E. S.
- 1968a. *Polyplacidia artemica*—a New Genus and Species of Sea Urchin from South-Western Armenia. *Ezhegodnik Vsesouznoe Paleontologicheskoe Obschestvo*, 18:286-297, figures 1-6, plates 1-2. [Note: error in original, new species is *armenica* not *artemica*.]
- 1968b. A New Callovian *Collyrites* from Central Asia. In Markovsky, B. P. editor, *New Species of Prehistoric Plants and Invertebrates of the U.S.S.R. Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut, ministerstvo geologii i okhrany nedr SSR*, 2(2):286-287, figures 37-38, plate 67.
- Poslavskaja, N. A., and M. M. Moskvina
1960. Echinoids of the Order Spatangoida in Danian and Adjacent Deposits of Crimea, Caucasus, and the Transcaspien Region. *Internationale Geological Con-*

- gress 21st Session, *Reports of Soviet Geologists*, 5:47-82, figures 1-29, plates 1-8.
- Ravn, J.P.J.
 1927. De irregulære echinider i Danmarks kridtfaejringer. *Mémoires de l'Académie Royale des Sciences et des Lettres de Danemark, Copenhague, Section des Sciences*, (8)11(4):309-354, figures 1-5, plates 1-5.
 1928. De regulaere Echinider i Danmark's Kridtfaejringer. *Museum de Minéralogie et de Géologie de l'Université de Copenhague, Communications Paléontologiques*, 29:1-62, figures 1-12, plates 1-6.
- Regnéll, G.
 1955. *Catopygus* (Echinoidea) als Geschiebe im Quartär Schonens. *Skrifter Fran Mineralogisk-och Paleontologisk-Geologiska Institutionerna Lund N:R 24. Geologiska Föreningens I Stockholm Förhandlingar*, 77(1):17-32, plate 1.
 1956. Silurian Echinoids from Gotland. *Arkiv för Mineralogi och Geologi*, 2(7):155-178, figures 1-4, plates 1-4.
- Reguant, S., J. Roman, and J. Villatte
 1970. Échinides de l'Éocène moyen de la région de Vic (Barcelone). *Bulletin de la Société Géologique de France*, (7)12(5):894-912, figures 1-5, plates 33-34.
- Reidl, G.
 1941- Über eine neue Spatangidenart *Plagiobrissus abeli*
 1942. nov. spec. aus dem Torton von Müllendorf (ehem. Burgenland). *Berichte der Reichsstelle für Bodenforschung*, 1941:24-29, figures 1-2.
- Renngarten, V.
 1926. La faune des dépôts crétacés de la région d'Assa-Kambiléevka, Caucase du Nord. *Mémoires du Comité Géologique*, (new series) 147:1-132, plates 1-9.
- Rey, J.
 1966. Sur un Échinide nouveau de l'Hauteriviens portugais, *Holectypus almeidae*. *Bulletin de la Société d'Histoire Naturelle de Toulouse*, 102(1):295-300, figures 1-2, plate 1.
- Richards, E. F.
 1947. Mesozoic Fossils of the Peruvian Andes, II: Echinoidea, Pelecypoda, and Gastropoda. *The Johns Hopkins University Studies in Geology*, 15:29-80, plates 1-12.
- Richards, G. L.
 1935. Revision of Some California Species of *Astrodapsis*. *Transactions of the San Diego Society of Natural History*, 8(9):59-66, plate 7.
- Richards, H. G.
 1962. New Cretaceous Invertebrate Fossils from Test Borings in New Jersey. In *The Cretaceous Fossils of New Jersey. New Jersey Bureau of Geology and Topography Paleontological Series, Bulletin 61(2)*, Appendix C:199-207, plates 92-94. [Revision of report on "Cretaceous Paleontology of New Jersey" by Stuart Weller in Volume 4, *Paleontology Series of Geological Survey of New Jersey*, 1907.]
- Roché, P.
 1939. Aalénien et Bajocien du Maconnais et de quelques régions voisines. *Travaux du Laboratoire de Géologie de la Faculté des Sciences de Lyon*, 35(29):1-355, figures 1-12, plates 13.
- Roman, J.
 1952. Sur les structures internes de Clypeâstres. *Bulletin de la Société Géologique de France*, (6)2:403-416, figure 1.
 1965. Morphologie et évolution des *Echinolampas* (Échinides Cassiduloïdes). *Mémoires du Museum National d'Histoire Naturelle*, 15C:1-341, figures 1-136, plates 1-10.
 1968a. *Duperieria* nov. gen. (Échinide Holectyppoïde Echinonéidé) dans le Lutétien de Biarritz (Basses-Pyrénées). (Abstract.) *Compte Rendu Sommaire des Séances de la Société Géologique de France*, 3:103.
 1968b. *Duperieria* nov. gen. (Échinide Holectyppoïde Echinonéidé) dans le Lutétien de Biarritz (Basses-Pyrénées). *Bulletin de la Société Géologique de France*, (7)10:120-125, plate 5.
- Roman, J., and P. Debant
 1962a. *Baueria tessieri* nov. sp. (Arbaciidae) Échinide Nouveau du Danien de Popenguine (Sénégal). *Compte Rendu Sommaire des Séances de la Société Géologique de France*, 8:245.
 1962b. *Baueria tessieri* nov. sp. (Arbaciidae) Échinide nouveau du Danien de Popenguine (Sénégal). *Bulletin de la Société Géologique de France*, (7)4:590-593, figure 1, plate 22b.
- Roman, J., and F. Gonçalves
 1965. Échinides du Crétacé et du Miocène de Moçambique. *Garcia de Orta*, 13(2):267-278, figures 1-4, plates 1-2.
- Roman, J., and A. Gorodiski
 1959. Échinides Éocènes du Sénégal. *Notes du Service de Géologie et de Prospection Minière (Dakar)*, 3:1-91, plates 1-3, tables, maps.
- Rouchadzé, J.
 1940. Les Échinides supracrétacés de la Georgie. *Bulletin de Musée de Georgie*, 10A:81-138, 139-159, 160-182, figures 1-22, plates 1-3.
- Saez, M. D. de — See De Saez, M. D.
- Sahni, M. R.
 1955. Recent Researches in the Palaeontologic Division, Geological Survey of India. *Current Science*, 24(6):187-188.
- Sahni, M. R., and N. C. Bhatnagar
 1958. New Fossils from the Jurassic Rocks of Jaisalmer, Rajasthan. *Records of the Geological Survey of India*, 87(2):418-437, plates 3-4.
- Sánchez Roig, M.
 1926. Contribucion a la Paleontologia Cubana: Los Equinodermos Fosiles de Cuba. *Boletin de Minas*, 10:1-179, plates 1-43.
 1949. Los equinodermos fosiles de Cuba. *Paleontologia Cubana*, 1:1-330, plates 1-50.
 1951. Faunula de Equinodermos fosiles del Terciario, del termino municipal de Moron, Provincia de Camagüey. *Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey"*, 20(2):37-64, plates 23-40.
 1952a. El genero *Cubanaster* (Equinidos fosiles irregulares). *Torreia*, 16:3-8, plates 1-3.
 1952b. Nuevos generos y especies de Equinoideos fosiles Cubanos. *Torreia*, 17:1-18, plates 1-9.

- 1952c. Nuevos generos y especies de equinodermos fosiles Cubanos. *Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey,"* 21(1):1-30, plates 1-15.
- 1952d. Paleontología Cubana: Revision de los Equinodermos Fosiles del Grupo Cassiduloida. *Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey,"* 21(1):47-57, plates 16-17.
- 1952e. Revision de los Clypeasteridos Cubanos. *Revista de Agricultura:*118-155, plates 1-16.
- 1953a. Algunos Equinoideos fosiles Cubanos. *Revista de Agricultura:*53-67, plates 1-21.
- 1953b. Dos nuevos géneros de Equinoideos cubanos: *Lambertona* y *Neopatagus*. *Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey,"* 21(3):257-262, plates 27-29.
- 1953c. Nuevos equinoideos fosiles de Cuba. *Anales de la Academia de Ciencias Medicas, Fisicas y Naturales de la Habana,* 91(2):135-176, plates 1-12.
- Sándor, M.
1969. Tortonai echinodéak a Kerepesi úti csatornázás Feltárásábol. *Földtani Közöny (Bulletin of the Hungarian Geological Society),* 99(3):253-257, figures 1-2, plates 1-2.
- Sapundzhieva, V.
1964. Paléogène-Echinoidea. *Fosilite Na Bulgaria (Les Fossiles de Bulgarie),* 6B:1-64, plates 1-24.
- Schaffer, H.
1960. Interessante obereozäne Echinidenarten, aus Bruderdorf (N.-O.) und Oberitalien. *Sitzungsberichte Österreichische Akademie der Wissenschaften,* (Abstract I)169(9/10):423-435, figures a-g.
1961. *Brissus (Allobrissus) miocaenicus*, eine neue Echinidenart aus dem Torton von Mühlendorf (Burgenland). *Sitzungsberichte Österreichische Akademie der Wissenschaften,* (Abstract I)170(3/4):149-157, figures 1a-d, plates 1-2.
1962. Die Scutelliden des Miozäns von Österreich und Ungarn. *Paläontologische Zeitschrift,* 36(3/4):135-170, figures 1-11, plates 15-19.
- Schauroth, K. von
1859. Kritisches Verzeichniss der Versteinerungen der Trias im Vicentinischen. *Sitzungsberichte Kaiserlichen Akademie der Wissenschaften Wien, Mathematisch-Naturwissenschaftliche Classe,* 34(1):283-356, plates 1-3.
- Schenck, H. G.
1928. A New Echinoid from the California Eocene. *Transactions of the San Diego Society of Natural History,* 5(12):195-202, plate 24.
- Schmidt, O.
1938. Upper Cretaceous Marine Echinoids of Caucasus: Genus *Pseudofaster* Lambert. *Annals of the Central Geological and Prospecting Scientific Research Museum,* 1:75-83, plates 24-26.
- Schmidt, O. I., and V. N. Vereshchaghin
1960. Stratigraphy and Sea Urchin Fauna of the Upper Cretaceous Deposits of Northern Sikhote Alin. *Trudy Vsesouizniyi neftianoi naucho-issbdovatel'skii geolo-razvedochnyi institut,* 154:226-230, figure 1, plate 1.
- Schmitz, E.
1970. Ein interessanter Cidarisstachel im Feuersteingeschiebe. *Meyniana,* 20:37-38, plate 1.
- Scott, G.
1926. *Études stratigraphiques et paléontologiques sur les terrains créacés du Texas.* 218 pages, 3 plates. Thesis, University of Grenoble.
- Seneš, J.
1955. Stratigraphische und biofazielle untersuchung einiger neogener sedimente der Ostslowakei auf grund der Makrofauna. *Geologické Práce, Slovenská Akadémia Vied,* 40:1-171, plates 1-10.
- Serafy, D. K.
1970. A New Species of *Clypeaster* from the Gulf and Caribbean and a Key to the Species in the Tropical Northwestern Atlantic (Echinodermata: Echinoidea). *Bulletin of Marine Science,* 20:662-677, 7 figures, 2 tables.
- Serra, G.
1932. Su di una nuova species di "Schizaster." *Atti della Reale Accademia Nazionale dei Lincei, Rendiconti,* (6)15(11):888-893, figure 1.
1935. Descrizione di alcuni echinidi dei giacimenti fosfatici della Tripolitania. *Bollettino della Società Geologica Italiana,* 54(1):121-126, plate 5.
- Shalem, N.
1933. Sopra un giacimento cenomaniano a Brachiopodi in Palestina. *Rivista Italiana di Paleontologia,* 39:17-28, plate 2.
- Shibata, M.
1960. Two New Species of *Kewia* from Japan. *Transactions and Proceedings of the Palaeontological Society of Japan,* 39:307-310, figures 1-4, plate 35.
- Smiser, J. S.
- 1935a. A Revision of the Echinoid Genus *Echinocorys* in the Senonian of Belguim. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique,* 67:1-52, figures 1a-25c, plates 1-2.
- 1935b. A Monograph of the Belgian Cretaceous Echinoids. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique,* Mémoire 68:1-98, plates 1-9.
1936. Cretaceous Echinoids from Trans-Pecos Texas. *Journal of Paleontology,* 10(6):449-480, 1 figure, plates 63-67.
- Soares, A. F., and A. Devriès
1967. Un genre nouveau de la famille des Pericosmidae dans le Crétacé du Portugal. *Memórias e Notícias,* 63:1-11, figures 1-2, plate 1.
- Socin, C.
1942. Nota preliminare sulla fauna echinologica dell'Oligo-Miocene somalo. *Atti della Reale Accademia delle Scienze di Torino,* 77(1):47-56.
1946. Fossile eocenico con iscrizione geroglifica rinvenuto in Eliopoli. *Atti della Società Toscana di Scienze Naturali, Memorie* 53:163-171, figure 1.
- Solovjev, A. N., and O.G. Melikov
1963. *Turanglaster*, a New Echinoid Genus from the Upper Cretaceous of Turkmenia and Azerbaijan. *Paleontologicheskii Zhurnal,* 1-2:105-110, figure 1, plate 10.

- Somos, L., and J. Kókay
1960. Geologische Beobachtungen im Lias und Miozän des Mecsekgebirges. *Földtani Közlöny*, 90(3):331-347, figures 1-10, plates 16-17.
- Spreng, A. C., and W. B. Howe
1963. Echinoid Jaws from the Mississippian and Pennsylvanian of Missouri. *Journal of Paleontology*, 37(4):931-938, figures 1-6.
- Stainbrook, M. A.
1937. New Echinoderms from the Devonian Cedar Valley Formation of Iowa. *The American Midland Naturalist*, 18(5):899-904, plate 1.
- Stchépinsky, V.
1943a. Gaziantep deniz oligoseni (cenup Türkiye)—L'oligocène marin de Gaziantep (Turquie méridionale). *Maden Tetkik ve Arama Enstitüsü Mecumasi* (Ankara), 2/30(7-8):223-235, plates 1-4.
1943b. Gaziantep Deniz Oligoseni (Cenup Türkiye). *Maden Tetkik ve Arama*, (8)30:223-235, plates 1-4.
- Stearn, C. W.
1956. A New Echinoid from the Upper Devonian of Alberta. *Journal of Paleontology*, 30(3):741-746, figures 1-2, plate 81.
- Stefanini, G.
1923. Il retico nei dintorni di Selvena (Siena) e i suoi fossili. *Bolletino della Società Geologica Italiana*, 42:48-57, plate 5.
1928. Echinidi mesozoici del Caracorùm. *Spedizione Italiana de Filippi*, (2)6:151-186, plates 19-21.
1932. Echinodermi, Vermi, Briozoi e Brachiopodi del Giurassico della Somalia (in Palaeontologia della Somalia). *Palaeontographia Italica*, (new series) 32(2):1-141, figures 1-10, plates 4-8.
- Stephenson, D. G.
1968. Some Miocene Cidaridae (Echinoidea) from Kenya. *Journal of Natural History*, 2(4):553-568, figures 1-2.
- Stephenson, L. W.
1928[1927]. Additions to the Upper Cretaceous Invertebrate Faunas of the Carolinas. *Proceedings of the United States National Museum*, 2706, 72 (10), article 10:1-25, plates 1-9.
1936. Geology and Paleontology of the Georges Bank Canyons, Part II: Upper Cretaceous Fossils from Georges Bank (Including Species from Banquereau, Nova Scotia). *Bulletin of the Geological Society of America*, 47:367-410, plates 1-5.
1941. The Larger Invertebrate Fossils of the Navarro Group of Texas, *The University of Texas Publication*, 4101:1-641, figures 1-13, plates 1-95.
- Stockley, G. M.
1927. Neogene Echinoidea from the Zanzibar Protectorate, Based Mainly on the Collection Made by G. M. Stockley, A.R.C.S., D.I.C., F.G.S., Government Geologist, 1925-26. Pages 103-117 In *Report on the Palaeontology of the Zanzibar Protectorate*. Government of Zanzibar.
- Strausz, L.
1925. Újabb adatok Fót alsómediterrán faunájákoz: Neuere daten zur untermediterranen fauna von Fót. *Földtani Közlöny*, 55(1-12):212-217, 367-369, figure 24.
- Szörényi, E.
1953. Moizäne Echinoiden aus den westlichen teilen der Ukraine. *Geologica Hungarica*, (Series Palaeontologica), 23:1-104, plates 1-8.
1963. Einiges über Mitglieder der familie Spatangidae (Echinoidea). *Paläontologische Zeitschrift*, 37:185-197, plates 14-15.
1966. *Laticlypus giganteus* n. gen. n. sp. (Echinoidea) des assises Jurassiques de la Montagne Bakony. *Acta Geologica, Academiae Scientiarum Hungaricae*, 10(3/4):445-452, figures 1-5.
- Tanaka, K.
1965. Cretaceous Echinoids from the Sanchu Graben, Central Japan. *Transactions of the Proceedings of the Paleontological Society of Japan* (new series), 59:126-142, figures 1-7, plates 15-16.
- Tanaka, K., and M. Okubo
1954. On Some Echinoids from the Paleo-Cretaceous of the Yuasa District in the Kii Peninsula and of the Yatsushiro District in Kyushu. *The Journal of the Geological Society of Japan*, 60(705):215-227, figures 1-7, plate 7.
- Tanaka, K., and M. Shibata
1961. A New Species of *Aphelaster* from the Lower Cretaceous of Japan. *Translation of the Proceedings of the Paleontological Society of Japan* (new series), 42:68-72, figures 1-2, plate 10.
- Tauber, A. F.
1951. *Tripneustes ventricosus austriacus* nov. ssp., ein tropischer Seeigel aus dem Torton des Wiener Beckens. *Sitzungsberichte, Österreichische Akademie der Wissenschaften*, (Abstract I)160(3/4):303-320, figures 1-4, plate 1.
- Tavani, G.
1946. Fossili eocenici della Cirenaica. *Memorie, Atti della Società Toscana di Scienze Naturali*, 53:172-187, figures 1-2b.
- Termier, G., and H. Termier
1950. Paléontologie Marocaine II. Invertébrés de l'Ère Primaire, 4: Annélides, Arthropodes, Echinodermes, Conularides, et Graptolithes. *Notes et Mémoires, Protectorat de la République Française au Maroc, Direction de la Production Industrielle et des Mines, Division des Mines et de la Géologie, Service Géologique*, 79(4):1-264, plates 184-239.
- Thiéry, P.
1928. Consideration phylogéniques sur les Cidaridae. *Archives de Zoologie Expérimentale et Générale*, 67(4):179-181.
- Thiéry, P., J. Lambert, and M. Collignon
1928. Note sur quelques échinides de la région de la Voulte. *Travaux du Laboratoire de Géologie de la Faculté des Sciences de Lyon*, 13(11):81-103, figure 11, plate 21.
- Thirring, J. T.
1936. Paläontologische Neuigkeiten aus dem Bakony-Gebirge. *Földtani Közlöny*, 66(1-3):51-68, figure 15, plates 1-2.
- Thomas, A. O.
1924. Echinoderms of the Iowa Devonian. *Iowa Geological*

- Survey, *Annual Reports 1919-1920*, 29:385-552, 21 figures, plates 35-54.
- Tommasi, L. R.
1958. El genero *Astropyga* Gray, nuevo para America del Sud. *Neotropica*, 4(15):85-87, figures 1-4.
- Tortonesc, E.
1932. Nuova specie di Echinoide del Mar Rosso (*Paraster erythraeus* n. sp.). *Bollettino dei Musei di Zoologia e di Anatomia comparata della R. Università di Torino*, (3)42(19):1-6, figures 1-9.
- Traub, F.
1938. Geologische und paläontologische Bearbeitung der Kreide und des Tertiärs im Östlichen Rupertwinkel, nördlich von Salzburg. *Palaeontographica, Beiträge zur Naturgeschichte der Vorzeit*, 88A:1-114, 2 figures, plates 1-8.
- Twenhofel, W. H.
1924. The Geology and Invertebrate Paleontology of the Comanchean and "Dakota" Formations of Kansas. *State Geological Survey of Kansas, Bulletin* 9:135 pages, 23 plates.
- Tzaghareli, A.
1949. The Upper Cretaceous Fauna of Georgia. *Académie des Sciences de la RSS Géorgienne, (Serie Géologique)*, 5(10):173-274, figures 1-4, plates 13-16.
- Tzankov, V.
1930. Géologie du plateau de Šumen et ses environs immédiats. *Zeitschrift der Bulgarischen geologischen Gesellschaft*, 2(1):1-77, figures 1-4.
1934. Échinides fossiles de la Craie supérieure de Bulgarie de Nord. *Annuaire de l'Université de Sofia*, 30(3):189-233, plates 1-5.
- Vautrin, H.
1933. Les Échinides Burdigaliens de la zone désertique syrienne. *Haut-Commissariat de la République Française en Syrie et au Liban, Notes et Mémoires*, 1:101-115, plates 11-12.
- Venzo, S.
1933. Di alcuni fossili Oligocenici del Trentino e del Veronese. *Bollettino della Società Geologica Italiana*, 52:207-216, plate 12.
1934a. Di alcuni Echinodermi dell'Eocene dell'isola di Rodi. *Bollettino della Società Geologica Italiana*, 53(1):121-132, plate 12.
1934b. Il Ladinico superiore dell'Isola di Rodi (Egeo), II: La fauna. *Palaeontographia Italica*, 34:137-170, figures 1-2, plate 13, Pisa.
1935. I: Fossili del Neogene Trentino, Veronese e Bresciano, II: Cefalopodi, Gasteropodi, Scafopodi, Echinidi e Celenterati—Conclusioni. *Palaeontographia Italica*, 35:201-255, plates 17-19.
- Via, L., and J. Padreny
1970. Dos nuevas especies de *Clypeaster* del Eoceno de Cataluña. *Instituto de Investigaciones Geológicas de la Diputación Provincial, Universidad de Barcelona*, 24:89-97, figures 1-3.
- Vialov, O.
1930. Sur les échinides réguliers des dépôts mésozoïques du Grand Balkhan (Turkmenia). *Bulletin of the Geological and Prospecting Service of U.S.S.R.*, 49:867-904, plates 1-2.
- Vialov, O., and O. Manouilenko
1939. Les oursins paléogènes du Fergana. *Problems of Paleontology, Publications of the Laboratory of Paleontology (Moscow University)*, 5:147-176, plates 1-3.
- Vidal, D.L.M.
1921. Contribución a la paleontología del cretácico de Cataluña. *Memorias de la Real Academia de Ciencias y Artes de Barcelona*, 17(2):1-21, figures 1-4, plates 1-8.
- Villatte, J.
1966a. *Porpitella paleocaenica* nov. sp., échinide nouveau de l'Éocène inférieur de l'Ariège. *Bulletin de la Société d'Histoire Naturelle de Toulouse*, 102:517-520, plate 1.
1966b. Recherches sur quelques *Conoclypus* de l'Éocène d'Espagne. *Bulletin de la Société Géologique de France*, (7)7(6):866-870, figures 1-3, plates 34-35.
- Vogl, V.
1921. Nouvelles notices sur les échinides éocènes de la Hongrie. *Földtani Közöny (Geologische Mitteilungen)*, 50:128.
- Vredenburg, E.
1922. Oligocene Echinoidea Collected by Rao Bahadur S. Sethu Rama Rau in Burma. *Records of the Geological Survey of India*, 54:412-415, plate 30.
- Wagner, C. D., and J. W. Durham
1964. *Dixonia*, a New Genus of Echinoids. *Journal of Paleontology*, 38(1):170.
- Wanner, J.
1941. Neue Beiträge zur Kenntnis der permischen Echinodermen von Timor, XV: Echinoidea. *Palaeontographica*, 4:297-314, 3 figures, plates 25-26.
- Wanner, J., H. C. G. Knipscheer, and E. Schenk
1952. Zur Kenntnis der Trias der Insel Seran (Indonesien). *Eclogae Geologicae Helvetiae*, 45(1):54-84, figures 1-3, plates 3-4.
- Warren, P. S.
1926. A Marine Fauna in the Birch Lake Sandstone, Alberta. *Transactions of the Royal Society of Canada*, (3)20(4):9-14, plate 1.
- Weaver, C. E.
1931. Paleontology of the Jurassic and Cretaceous of West Central Argentina. *Memoirs of the University of Washington*, 1:1-469, plates 1-62.
1942. Paleontology of Marine Tertiary Formations of Oregon and Washington, Part I. *University of Washington Publications in Geology*, 5(1):1-268, plates 3-4.
- Weber, G.
1934. Échinoidea du Jurassique et du Crétacé de Crimée —I. *Transactions of the United Geological and Prospecting Service of U.S.S.R.*, 312:1-99, figures 1-10, plates 1-12.
- Weisbord, N. E.
1934. Some Cretaceous and Tertiary Echinoids from Cuba. *Bulletins of American Paleontology*, 20(70C):1-270, plates 1-9.

- Witney, M. I., and L. B. Kellum
 1966. Echinoids of the Glen Rose Limestone of Texas. *Papers of the Michigan Academy of Science, Arts and Letters*, 51:241-263, figure 1, plates 1-2.
- Wind, J.
 1954. *Tylocidaris Piggene* som Ledeforsteninger i vort øvra Senon og Danien. *Meddelelser fra Dansk Geologisk Forening*, 12:481-486, plates 12-13.
 1959. *Echinocorys* formerne og deres stratigrafiske Udbredelse i det overste Kridt i Danmark. *Meddelelser fra Dansk Geologisk Forening*, 14(2):122-131, plates 1-4.
- Wolburg, J.
 1933. Das Devon im Gebiet der oberen Lenne. *Abhandlungen der PreuBischen Geologischen Landesanstalt*, 151:1-70, figures 1-10, plates 1-3.
- Woodring, W. P., S. Stewart, and R. W. Richards
 1940. Geology of the Kettleman Hills Oil Field, California. *United States Geological Survey Professional Paper*, 195:1-170, figures 1-15, plates 1-57.
- Wright, C. W.
 1967. Notes on Cretaceous Saleniidae. *Proceedings of the Geological Association of Canada*, 78(1):9-25, figures 1-2, plates 1-2.
- Wright, C. W., and E. V. Wright
 1949. The Cretaceous Echinoid Genera *Infulaster* Desor and *Hagenowia* Duncan. *The Annals and Magazine of Natural History*, (12)2(18):454-474, figures 1-18.
- Yakovlev, N.
 1939. Echinodermata in Gorsky, I. 5: The Middle and Upper Carboniferous. *The Atlas of the Leading Forms of the Fossil Faunas of U.S.S.R., The Central Geological and Prospecting Institute*, 5:64-70, plates 11-13.
- Zachos, L. G.
 1968. A New Echinoid from the Ocala Limestone. *Quarterly Journal of the Florida Academy of Sciences*, 31(3):161-164, figure 1.
- Zammit-Maempel, G.
 1969. A New Species of *Coelopleurus* (Echinoidea) from the Miocene of Malta. *Palaeontology*, 12(1):42-47, figure 1, plate 6.
- Zázvorka, V.
 1952. *Trematopygus novdki* sp. n. (Echinoidea) from the Upper Cretaceous of Bohemia. *Mémoires de la Société Royal des Lettres et des Sciences de Bohême*, 11:1-5, 4 figures, 1 plate.
- Zoeke, M.-E.
 1952. *Heterosalenia alloiteaui* nov. sp. du Jurassique moyen du Liban Nord et un cas de croissance excessive de plaques arrêtant le développement des zones ambulacraires. *Bulletin de la Société Géologique de France*, (6)2:249-252, figures 1-2, plate 11b.
- Zullo, V. A., R. F. Kaar, J. W. Durham, and E. C. Allison
 1964. The Echinoid Genus *Salenia* in the Eastern Pacific. *Palaeontology*, 7(2):331-349, figures 1-6, plate 56.

Index

(Page numbers in *italic* indicate principle entry)

- abatoides*, *Pericosmus*, 102
Abatus, 106
 curvidens, 106
 ingens, 106
abeli, *Plagiobrissus*, 118
aberrans, *Diplopodia balkhanensis* var., 29
Abertella, 74
 kewi, 74
 palmeri, 74
Abertellidae, 74
aberti, *Scutella*, 74
abidensis, *Echinanthus pumilus*, var., 89
abichi, *Crucibrissus*, 100
abnormalis, *Gymnechinus*, 43
abrardi, *Fibularia*, 61
abreusense, *Hemipedina*, 23
abruptus, *Clypeaster*, 56
abruptus, *Echinoneus*, 50
abruptus, *Plagiobrissus*, 119
aciculatus, *Clypeaster*, 56
aclinensis, *Mellita*, 72
Acrocidaris, 28
 arginensis, 28
 borissiakii, 29
 cazioti, 29
 crenulata, 29
Acrolusia, 90
Acrolusiidae, 90
Acrosalenia, 24
 basseae, 24
 gananensis, 24
 mathildae, 24
 microstoma, 24
 smelliei, 24
 somaliensis, 24
 termieri, 24
 wyllieii, 24
 zararensis, 24
Acrosalenia (Metacrosalenia), 24
 quadrimiliaris, 25
Acrosaleniidae, 24
Actinocidaris, 12
aculeata, *Cidaris*, 14, 15
acuminata, *Lovenia doederleini*, var., 121
acuminata, *Salenocidaris hastigera*, var., 26
acuminatus, *Prospatagus*, 120
acunai, *Jacksonaster*, 65
acuta, *Fibularia*, 63
acutispina, *Histocidaris*, 7
adametzi, *Radiolus*, 48
adamthi, *Moiria*, 109
Adelcidaris, 9
adkinsi, *Heteraster*, 96
adkinsi, *Holectypus*, 49
affinis, *Astrorhaphis schucherti*, var., 71
affinis, *Hypseleraster*, 105
africana, *Fibularia*, 61
africana, *Phormosoma placenta*, var., 20
africanum, *Aspidodiadema*, 22
africanum, *Chaetodiadema*, 21
africanum, *Laganum judsiyama*, var., 64
africanus, *Epiaster*, 97
Agassizia, 106
 algarbiensis, 106
 alveari, 106
 avillensis, 106
 camagueyana, 106
 caobaensis, 106
 caribbeana, 106
 cyrenaica, 106
 cyrenaica var. *pseudoclevei*, 106
 cyrenaica var. *pseudoinflata*, 106
 flexuosa, 106
 guanensis, 106
 lamberti, 106
 lamberti var. *oligocenicus*, 106
 pinarensis, 106
 regia, 106
 scrobiculata var. *persica*, 106
Agassizia (Anisaster), 106
 mossomi, 106
 wilmingtonica, 106
agassizii, *Brissus*, 111
Aguayoaster, 112
 aguayoi, 112
aguayoi, *Aguayoaster*, 112
aguayoi, *Brissopsis*, 113
aguayoi, *Bunactis*, 58
aguayoi, *Linthia*, 108
aguilerai, *Orthopsis*, 47
aguilerai, *Heteraster*, 96
agulhensis, *Paracentrotus*, 45
aichinoi, *Clypeaster*, 56
aichinoi, *Spatagoides*, 92
aichinoi, *Trachyaster*, 100
akabanus, *Pericosmus*, 102
akhajensis, *Protobissus*, 114
alabamensis, *Eupatagus (Brissopatagus)*, 112
alabamensis, *Fibularia*, 61
alabamensis, *Lovenia*, 121
alaplensis, *Coraster vilanovae*, var., 95
alaskensis, *Echinarachnius*, 69
alatus, *Cidaris*, 10
alatus, *Eupatagus*, 115
alba, *Goniocidaris*, 8
Albertechnus, 3
 montanus, 3
albida, *Mespilia globulus*, var., 40
albidens, *Stylocidaris bracteata*, var., 17
album, *Asthenosoma varium*, 20
albus, *Opechinus*, 40
alcaldei, *Salenia*, 25
alcaldei, *Schizaster*, 104
aldrichi, *Coelopleurus*, 35
alencasterae, *Heteraster*, 96
algarbiensis, *Agassizia*, 106
alienum, *Laganum depressum*, var., 64
aliquantula, *Archaeocidaris*, 5
Allaster, 69
 rotundatus, 69
Allobrissus, subgenus, 111
Allocentrotus, 47
 japonicus, 47
alloiteaui, *Heterosalenia*, 24
alloiteaui, *Togocymus*, 64
Allotoxaster, 96
almeidae, *Holectypus*, 49
aloyisii, *Brissoides (Rhhabdobrissus)*, 119
aloyisioi, *Clypeaster (Orthanthus)*, 59
alpinus, *Epiaster*, 97
alsiensis, *Schizaster*, 103
alta, *Clypeaster japonicus*, 55
alta, *Eoagassizia*, 106
alta, *Hemicidaris crenularis*, var., 27
alta, *Lepidesthes*, 2
alta, *Linthia*, 108
alta, *Palaeolampas*, 81
alta, *Salenia*, 25
alternans, *Phormosoma*, 20
alternatum, *Araeosoma*, 19
altissima, *Echinolampas*, 79
altissimus, *Schizaster*, 104
altus, *Bunactis sanchezi*, 58
altus, *Macropneustes*, 117
altus, *Pauropygus*, 54
alutensis, *Radiolus*, 48
alvarezi, *Oligopygus*, 53
alveari, *Agassizia*, 106
ambayraci, *Corthya*, 90
ambigenus, *Astriclypeus manni*, 73
Ambipleurus, 37
 rotundatus, 37

- Amblypneustes*, 38
corrali, 39
pallidus var. *subglobosus*, 38
Amblypygus, 55
chechchiae, 55
depressus, 55
douvillei, 55
amboinae, *Stylocidaris*, 18
ambonensis, *Fibularia* (*Fibulariella*) *oblonga*, var., 63
ambonensis, *Nudechinus*, 44
ambroggi, *Pseudopygurus*, 75
amelianus, *Hemiaster*, 99
amellagense, *Pseudodiadema*, 28
ameri, *Goniopygus*, 36
americanus, *Micraster* (*Plesiaster*), 119
Ammotrophinae, 60
Ammotrophus, 60
cyclus, 60
platyterus, 60
Amphiope, 73
bioculata var. *bentivegnae*, 73
bioculata var. *pelatensis*, 73
dallonii, 73
labriei, 73
nuragica, 73
Amphipneustes, 107
bifidus, 107
similis, 107
amurensis, *Hemiaster*, 99
Anabrissus, 112
Anametalia, 112
grandis, 112
Ananchites, 92
austriaca, 92
Ananchytes, 55, 92
argentinus, 92
cruciferus, 55
anatoliensis, *Pronechinus*, 2
Anaulocidaris, 6
tuberculata, 6
vinassai, 6
ancegavensis, *Nucleopygus lebescontei*, var., 84
anceps, *Rhyncholampas*, 85
Ancylocidaris, 22
spenceri, 22
andersoni, *Scutella*, 71
andrewi, *Leptarbacia*, 30
andrewi, *Jacksonechinus*, 2
androaviensis, *Pseudholaster*, 93
anelatus, *Cidaris*, 15
angelensis, *Encope*, 72
anglica, *Lepidocidaris squamosa*, var., 6
angolensis, *Epiaster*, 97
angolensis, *Rotula orbiculus*, 74
angularis, *Plethotaenia*, 117
angulatus, *Opissaster derasmoi*, var., 101
angulipora, *Fibularia* (*Fibulariella*), 63
angustus, *Macropneustes*, 117
Anisaster, subgenus, 106
Anisopetalus, 85
brodermanni, 85
caobaense, 85
cookei, 85
ellipticus, 85
oliveirai, 85
ankarensis, *Besairiecidaris*, 48
annulata, *Caenopedina*, 22
annulatum, *Aspidodiadema*, 22
annulosa, *Stylocidaris*, 18
Anomalanthus, 58
elevatus, 58
gigas, 58
gregoryi, 56
guadalupense, 58
oligocenicus, 58
rojasi, 58
zanolletti, 58
anomon, *Atelospatangus* (*Semipetalion*), 121
Anorthopygidae, 49
Anorthopygus, 49
paradoxus, 49
riveroi, 49
texanus, 49
Anorthoscutum, 68
oregonense quaylei, 68
ansaltensis, *Coraster*, 95
antecedens, *Collyrites* (*Cardiopelta*) *capistrata*, mut., 89
Antillaster, 122
arnoldi, 123
bonairensis, 123
brachypetalus, 122
cartagensis, 123
depressus, 122
estenozi, 123
expansus, 123
giganteus, 122
guevarai, 123
herreriae, 122
jaumei, 122
lamberti, 122
mortenseni, 122
rojasi, 122
antillense, *Sperosoma*, 20
antipai, *Radiolus*, 48
Antipneustes, 107
brevisternalis, 107
marsupialis, 107
rostratus, 107
tumescens, 107
antiqua, *Meoma*, 117
antiquus, *Astroddapsis altus*, var., 69
antiquus, *Stomopneustes*, 35
antiquus, *Strongylocentrotus*, 47
antonibensis, *Tripylus*, 110
antsingyensis, *Tetragramma*, 30
Apatopygidae, 88
Apatopygus, 88
occidentalis, 88
Aphelaster, 96
serotinus, 96
apianus, *Procassidulus*, 86
apicatus, *Echinocyamus*, 61
apicimagis, *Strongylocentrotus polyacanthus*, 46
Aplospatangus, 104
aponensis, *Holectypus* (*Coenholectypus*) *planatus*, 49
arabica, *Echinotiara*, 33
arabica, *Linthia*, 108
arabica, *Pyrina*, 51
Arachniopleurus, 37
istrianus, 37
Arachnoides, 60, 69
tenuis, 60
zelandiae, 60
arachnoides, *Hesperaster*, 59
Arachnoididae, 60
Arachnoidinae, 60
Araeosoma, 19
alternatum, 19
brunnichi, 20
coriaceum var. *indicum*, 19
mortenseni, 20
owstoni var. *nudum*, 19
parviungulatum, 19
paucispinum, 19
splendens, 19
tessellatum var. *carinatum*, 19
araripensis, *Faujasia*, 82
Arbacia, 35
crenulata, 35
rivuli, 35
waccamaw, 35
Arbaciidae, 35
Arbacina, 39
blancheti, 39
Arbacioida, 35
Arbia, 35
Arcaechinus, 112
auraduensis, 112
arcensis, *Encope*, 72
Archaeocidaridae, 5
Archaeocidaris, 5
aliquantula, 5
barroisi, 5
cowleyi, 5
fraxinensis, 5
immanis, 5
manhattanensis, 5
meurevillensis, 5
mosquensis, 5
propinqua, 5
setosa, 5
subwortheni, 5
Archaeopneustes, *Tetragramma*, 123
moorefieldi, 123

- archerensis*, *Laganum*, 66
Archiacia, 83
 lorioli, 83
Archiaciidae, 83
arcitum, *Aspidodiadema*, 22
arcolensis, *Hemiaster*, 99
arctica, *Tithonia*, 90
arctina, *Glyptocidaris* (*Eoglyptocidaris*), 31
ardesica, *Plegiocidaris*, 17
argentinus, *Ananchytes*, 92
arginensis, *Acrocidaris*, 28
arginensis, *Rhabdocidaris*, 11
armadilloensis, *Clypeaster* (*Rhaphidoclypus*), 59
armadilloensis, *Deakia*, 117
armatum, *Sperosoma*, 20
armenica, *Polyplacidia*, 32
armstrongi, *Astrodapsis*, 69
Arnaudaster, 82
 colombianus, 82
arnei, *Psammechinus*, 45
arnoldi, *Antillaster*, 123
aroensis, *Breynia australasiae*, var., 122
artemisiae, *Pericosmus*, 102
artesianus, *Phyllobrissus*, 77
artilesi, *Clypeaster* (*Coronanthus*), 58
Asaphechinus, 39
 murrayensis, 39
 princeps, 39
 singletoni, 39
 tasmanensis, 39
asiatica, *Heterodiadema libyca*, var., 27
Aspidocidaris, subgenus, 9
Aspidodiadema, 22
 africanum, 22
 annulatum, 22
 arcitum, 22
 hawaiiense, 22
 meijerei var. *keiense*, 22
Aspidodiadematidae, 22
assulaeformis, *Cidaris*, 14
assymetrica, *Echinocorys obliquus*, 91
Asterechinus, 39
 elegans, 39
asteriscus, *Hesperocidaris*, 17
Asterocidaris, 27
 besairiei, 27
 ragoti, 27
Asterostoma, 122
 cubensis, 124
 dickersoni, 122
 irregularis, 122
 subcircularis, 122
Asterostomatidae, 122
Asterostomatina, 122
Asthenosoma, 20
 dilatatum, 20
 intermedium, 20
 periculosum, 20
 striatissimum, 20
 varium album, 20
Astriclypeidae, 73
Astrichlypeus, 73
 manni ambigenus, 73
 manni minoensis, 73
Astrodapsis, 69
 altus var. *antiquus*, 69
 armstrongi, 69
 auguri, 69
 blakei, 70
 brewerianus var. *bitterensis*, 70
 brewerianus var. *emergens*, 70
 brewerianus var. *junior*, 70
 cierbonensis var. *branchensis*, 70
 clarki, 70
 cutleri, 70
 davisi, 70
 desaixi, 70
 diabloensis var. *superior*, 70
 elevatum, 70
 englishi, 70
 galei, 70
 goudkoffi, 70
 gregersenii, 70
 gregersenii var. *fragilis*, 70
 gregersenii var. *varians*, 70
 hertleini, 70
 hootsi, 70
 isabellae, 70
 israelskyi, 69
 johnsoni, 70
 johnsoni var. *simile*, 70
 kewi, 69
 major var. *parens*, 70
 nipponicus, 69, 71
 ovalis, 70
 perrini, 70
 quaylei, 70
 reedi, 70
 salinasensis, 70
 schencki, 70
 schencki var. *mirandaensis*, 70
 schucherti, 71
 schucherti var. *affinis*, 71
 woodringi, 71
Astropyga, 21
 magnifica, 21
 nuptialis, 21
Astropygaulus, 88
 trigonopygus, 88
atascaderensis, *Echinolampas*, 79
atavus, *Goniopygus*, 37
Atelospatangus, 120
 magnus, 120
Atelospatangus (*Semipetalion*), 121
 anomon, 121
Atelostomata, 74, 125
atlantis, *Pseudopedina*, 23
Atlasaster, 22
 jeanneti, 22
 termieri, 22
atolladosae, *Linthia*, 108
Atopechinus, 35
 cellensis, 35
attenuata, *Eucidaris tribuloides africana* f., 16
attenuatus, *Eupatagus*, 115
auguri, *Astrodapsis*, 69
Aulechinus, 3
 grayae, 3
auraduensis, *Arcaechinus*, 112
auraduensis, *Opissaster*, 101
auraduensis, *Plesiolampas*, 82
aurorae, *Pourtalesia*, 94
Australanthus, 82
australe, *Echinosoma*, 20
australiae, *Brochopleurus*, 39
australiae, *Eucidaris*, 16
australiae, *Goniocidaris*, 8
australiae, *Histocidaris*, 7
australiensis, *Nudechinus scotiopremnus*, var., 44
australis, *Temnopleurus*, 38
austriaca, *Ananchites*, 92
austriacus, *Tripeustes ventricosus*, 44
Austrocidaris, 8
 gigantea, 8
 operta, 8
 platyacantha, 8
avilensis, *Agassizia*, 106
avilensis, *Echinocyamus*, 62
avilensis, *Eupatagus* (*Brissopatagus*), 112
avilensis, *Linthia*, 108
avilensis, *Procassidulus*, 86
avilensis, *Pyrina*, 51
axiologus, *Homoeopetalus*, 125
axiologus, *Scoliechinus*, 44
ayresi, *Rhyncholampas*, 84

badia, *Prionocidaris*, 13
bahiaensis, *Orthopsis*, 47
baileyi, *Stereocidaris*, 10
baixadoleitensis, *Breynella*, 87
baixadoleitensis, *Lovenia*, 89, 122
baixadoleitensis, *Spatangus*, 120
bajocensis, *Stomechinus*, 33
bakalovi, *Nucleolites*, 76
Balanocidaris, 16
 besairiei, 16
 darderi, 16
 japonica, 16
 migliorinii, 16
 subdorsata, 16
 tingitana, 16
balboi, *Hemiaster*, 99
balboi, *Linthia*, 108
balcanica, *Scutellina*, 63
baldryi, *Oligopygus ovumserpentis*, var., 53

- balinensis*, *Goniocidaris*, 8
balkhanensis, *Diplopodia*, 29
baltica, *Collyrites (Cardiopelta) bicor-*
data, var., 89
balticus, *Gotlandechinus*, 5
bandaensis, *Hemipatagus*, 121
barabirensis, *Sismondia*, 66
barbadosensis, *Fibularia*, 61
barbatus, *Diploporaster*, 107
barcensis, *Echinolampas*, 79
bardiensis, *Echinolampas hemisphericus*,
 78
bardiensis, *Scutella isidis*, var., 67
Barnumia, 124
browni, 124
barrabei, *Lefortia (Procassidulus)*, 86
barremicus, *Washitaster*, 101
barroisi, *Archaeocidaris*, 5
barthouxi, *Hemiasaster*, 99
barthouxi, *Mortensenaster*, 119
barthouxi, *Pyrina*, 51
barraviae, *Miocidaris*, 6
basiplana, *Galeola papillosa*, 92
basseae, *Acrosalenia*, 24
basseae, *Clitopygus*, 76
basseae, *Dorocidaris*, 15
basseae, *Echinanthus*, 89
basseae, *Echinocyamus*, 62
basseae, *Oustechinus*, 90
basseae, *Procassidulus*, 86
Basseaster, 91
rostratus, 91
batalleri, *Hemiasaster*, 99
batalleri, *Porosoma*, 32
bathonica, *Loriolia inaequalis*, var., 29
bathypetalus, *Schizaster*, 104
Baueria, 35
tessieri, 35
baumbergeri, *Typocidaris*, 11
beckeri, *Schizaster*, 104
beggi, *Eothuria*, 3
behtensis, *Diademopsis*, 23
belgicus, *Lepidechinus*, 4
belli, *Eupholidocidaris*, 2
bencontestus, *Cidaris (Protocidaris)*, 48
benhurensis, *Hemiasaster*, 99
bentivegnae, *Amphiope bioculata*, var.,
 73
bergouniouxii, *Pachycidaris*, 7
beringiana, *Pourtalesia laguncula*, 94
berryi, *Cassidulus*, 78
berryi, *Cassidulus (Pygorhynchus)*, 78
beryl, *Spatangus*, 120
Besairiecidaris, 48
ankarensis, 48
besairiei, *Asterocidaris*, 27
besairiei, *Balanocidaris*, 16
besairiei, *Bothryopneustes*, 75
besairiei, *Conoclypeus*, 52
besairiei, *Diplocidaris*, 19
besairiei, *Dorocidaris*, 16
besairiei, *Epiaster*, 97
besairiei, *Hemiasaster*, 99
besairiei, *Paralampas*, 85
besairiei, *Prometalia*, 118
besairiei, *Tetragramma*, 30
besairiei, *Tiarechinopsis*, 35
besnardi, *Centrostephanus*, 21
biassalensis, *Plegiocidaris*, 17
bibicensis, *Micraster (Micraster)*, 110
bicarinata, *Diplocidaris*, 19
bidens, *Pericosmus*, 102
bifidus, *Amphipneustes*, 107
bifrons, *Plegiocidaris*, 18
bigoti, *Rhabdocidaris*, 11
bihinensis, *Hemicidaris*, 27
birmanica, *Breynia*, 122
bisexus, *Echinocyamus*, 62
bitakensis, *Dorocidaris*, 16
bitauniensis, *Cidaris*, 15
bitterensis, *Astrodapsis brewerianus*, var.,
 70
bittneri, *Ortholophus*, 41
blackmorei, *Hagenowia*, 92
blakei, *Astrodapsis*, 70
blancheti, *Arbacina*, 39
blanckenhorni, *Epiaster*, 97
blanpiedi, *Brissoopsis*, 113
blanquialensis, *Pericosmus*, 102
blondeti, *Tithonia*, 90
blumenthali, *Clypeaster*, 55
bochotnicensis, *Echinogalerus*, 55
boehmi, *Rhabdocidaris*, 11
boipebensis, *Epiaster*, 97
bolaensis, *Goniopygus*, 37
Boletechinus, 35
mcglameryae, 35
boletus, *Radiolus*, 48
bolli, *Stereocidaris*, 10
bombos, *Echinolampas*, 79
Bonaireaster, 54
rutteni, 54
bonairensis, *Antillaster*, 123
boncevi, *Conoclypeus*, 52
boncevi, *Triplacidia fraasi*, var., 43
boninense, *Laganum*, 64
boninensis, *Parasalenia gratiosa*, var., 47
borealis, *Encope micropora*, var., 72
boreasteria, *Linthia*, 108
borgesi, *Clypeaster*, 56
borissiakii, *Acrocidaris*, 29
boschi, *Laganum*, 64
boschmai, *Holectypus*, 49
bosei, *Leostomaster*, 102
bosei, *Tetragramma*, 30
Bothriocidaridae, 1
Bothriocidaris, 1
eichwaldi, 1
parvus, 2
Bothriocidaroida, 1
bothriopygoides, *Echinolampas*, 79
Bothryopneustes, 75
besairiei, 75
galhauseni, 75
besairiei, *Tetragramma*, 30
jesusmariae, 78
lamberti, 78
millosevichi, 78
royoi, 78
vinassai, 78
brachygnatha, *Salenocidaris*, 26
brachypetalus, *Antillaster*, 122
brachypetalus, *Linopneustes*, 123
brachypetalus, *Schizaster*, 104
brachytona, *Echinolampas*, 79
Bramus, 48
branchensis, *Astrodapsis cierbonensis*,
 var., 70
brasiliensis, *Rhabdocidaris*, 11
brevior, *Nucleopygus atlanticus*, 84
brevipetala, *Linthia sudanensis*, var., 108
brevipetalum, *Eupatagus (Gymnopata-*
gus), 116
brevipetalus, *Clypeaster*, 55
brevis, *Echinarachnius*, 69
brevispina, *Chondrocidaris*, 12
brevistella, *Mariania euglypha*, var., 117
brevisternalis, *Antipneustes*, 107
Breynella, 87
baixadoleitensis, 87
Breynia, 122
australasiae var. *aroensis*, 122
birmanica, 122
cordata, 122
cubensis, 125
sirtica, 122
testudinaria, 122
brightoni, *Eupholidocidaris*, 2
brightoni, *Parastomechinus*, 34
Brightonia, 95
macfadyeni, 95
Brisaster, 107
maximus, 107
owstoni, 107
townsendi woynari, 107
Brissidae, 111, 120
Brissoides, 114, 115
camagueyanus, 114
cranium var. *somaliensis*, 115
cuvillieri, 115
dainellii, 115
daradensis, 115
fecundus, 115
habanensis, 114
lajasesis, 114
migiurtinus, 115
migliorinii, 115
minutus, 114
palmeri, 114

- sanchezi*, 114
santanae, 114
skourensis, 115
stefaninii, 115
zanollettii, 115
Brissoides (Eupatagus), 115
lamberti, 115
Brissoides (Rhabdобрissus), 119
aloyisii, 119
Brissolampas, 123
santanae, 123
Brissoma, 113
habanensis, 113
vonderschmitti, 113
Brissopatagus, 112
collignoni, 112
lummaui, 112
rojasi, 112
venzoi, 112
Brissopneustes, 111
decaryi, 111
desioi, 111
schwetzovi, 111
Brissopsis, 112, 113
aguayoi, 113
blanpiedi, 113
caparti, 112
evanescens, 112
fermori, 113
japonica, 113
jarlii, 112
luzonica cosibensis, 113
makiyamai, 113
micropetala, 112
obliqua, 112
persica, 112
persica var. *elevata*, 112
similis, 112
steinhatchee, 113
Brissopsis (Kleinia), 113
crescenticus var. *syriaca*, 113
Brissus, 111, 112
agassizii, 111
camagueyensis, 111
caobaense, 111
damesi, 112
duperieri, 111
gigas, 111
glenni, 111
kewi, 111
lasti, 111
latidunensis, 111
sternaloides, 112
Brissus (Allobrissus), 111
meridionalis, 111
miocaenicus, 111
Brochopleurus, 39
australiae, 39
pulcherrimus, 39
brodermanni, Anisopetalus, 85
brodermanni, Clypeaster, 57
brodermanni, Cyclaster, 113
brodermanni, Eupatagus, 115
brodermanni, Linthia, 108
brodermanni, Macropneustes, 117
brodermanni, Proccasidulus, 86
browni, Barnumia, 124
brueti, Isomicraster, 97
brunnichi, Araeosoma, 20
brunnichi, Cyclaster, 114
bucaillei, Camerogalerus, 50
bukkensis, Prospatangus hungaricus, var., 120
bulgarica, Linthia, 108
bulgaricus, Clypeopygus, 77
bullardi, Holoctypus, 49
Bunactis, 58
aguayoi, 58
sanchezi altus, 58
sanchezi gigantea, 58
santanae, 58
Bunactus, 58
buraganensis, Rhabdocidaris, 11
burckhardti, Petalobrissus, 83
burdigalensis, Spherechinus, 44
burgeri, Echinoneus, 50
burgiensis, Micraster, 110
buxtorfi, Glypticus, 36
bybeei, Phymosoma, 31

cabrerai, Crucibrissus, 100
cadenati, Meoma, 117
cadenati, Phymosoma, 31
Caenoholoctypus, 49
Caenocidaris, 18
Caenopedina, 22
annulata, 22
diomedea, 22
caeliculus, Plegiocidaris, 18
Cagaster, 107
cahni, Xenocidaris, 6
calistoides, Eupatagus, 115
calvachei, Hebertia, 38
Calveria, 20
hystrix, 20
Calveriosoma, 20
calzadai, Clypeaster, 58
camagueyana, Agassizia, 106
camagueyana, Haimea, 54
camagueyana, Scutella, 67
camagueyanus, Brissoides, 114
camagueyanus, Paraster, 105
camagueyanus, Pericosmus, 102
camagueyanus, Rojasaster, 59
camagueyensis, Brissus, 111
camagueyensis, Cubanaster, 66
camagueyensis, Echinolampas, 79
camagueyensis, Oligopygus, 53
camagueyensis, Paraster, 105
Camerogalerus, 50

bucaillei, 50
campaniformis, Conulus, 51
campanulata, Clypeaster reidii, var., 57
canadensis, Palaeechinus, 4
candeli, Progonolampas, 82
candeli, Schizechinus, 44
canimarensis, Clypeaster, 55
cantabriae, Opissaster, 101
cantianus, Holaster (Labrotaxis), 93
cantrainei, Clitopygus, 76
caobaense, Anisopetalus, 85
caobaense, Brissus, 111
caobaense, Eupatagus, 115
caobaense, Necatopygus, 88
caobaense, Schizaster, 104
caobaensis, Agassizia, 106
caobaensis, Meoma, 117
caparti, Brissopsis, 112
capensis, Coenopedina, 22
capitata, Cidaris raibliana, var., 15
carabensis, Linthia, 108
caranoi, Echinolampas, 79
caranoi, Epiaster, 97
Cardiaster, 91
deciper, 91
hilli, 91
kelleri, 91
leonensis, 91
moabiticus, 91
palmeri, 91
perorientalis, 91
rostratus, 92
Cardiopelta, 89
caribbeana, Agassizia, 106
caribbeana, Peronella, 65, 66
caribbeanensis, Echinocyamus, 62
carinata, Collyropsis (Collyropsis), 90
carinata, Histocidaris, 7
carinatum, Araeosoma tessellatum, var., 19
carinatus, Galeaster, 92
carmenensis, Encope, 72
carolinensis, Coelopleurus, 36
carolinensis, Macropneustes, 120
cartagensis, Antillaster, 123
cartagensis, Hemipatagus, 121
cartagensis, Metalia, 118
carvalhoi, Epiaster, 97
casanovai, Eupatagus, 115
casanovi, Orthopsis, 47
casajalensis, Hemiaster (Macraster), 98
caselli, Dendraster, 68
Cassidulidae, 83
Cassiduloida, 74
Cassidulus, 83, 84
berryi, 78
cubensis, 84
delectus, 83
emmonsii, 84
ericsoni, 84

- faberi*, 84
infidus, 83
kellumi, 84
mercedensis, 84
mestieri, 84
mitis, 83
platypetalus, 83
rojasi, 84
senni, 84
sphaeroides, 83
taylori, 84
Cassidulus (Cassidulus), 84
trojanus, 84
Cassidulus (Galerolampas), 85
fontis, 85
Cassidulus (Paralampas), 86
globosus, 86
Cassidulus (Pygorhynchus), 78
berryi, 78
carolinensis var. *cravenensis*, 78
sabistonensis, 78
Cassidulus (Rhynchopygus), 85
evergladensis, 85
zanolletii, 85
castexi, *Medocechinus*, 37
castillionensis, *Hemicidaris*, 27
castrai, *Coelopleurus*, 36
catandubensis, *Hemiaster*, 99
Catopygus, 77, 88
conformis var. *conoideus*, 77
inflatus, 77
irregularis, 77
jeanneti, 77
mississippiensis, 77
oviformis, 88
riveroi, 77
rodriguezii, 77
subcircularis, 77
zinai, 77
Catopygus (Oolopygus), 77
gonzalezii, 77
caucasicus, *Coraster*, 95
cavaionensis, *Echinolampas (Isolampas)*, 80
Cavanechinus, 3
warreni, 3
caviventer, *Clypeaster* *annandalei*, 56
cazioti, *Acrocidaris*, 29
cedroensis, *Hemiaster*, 99
cellensis, *Atopechinus*, 35
cenomanensis, *Hemiaster*, 99
centrale, *Laganum*, 64
Centropygus, 89
pictaviensis, 89
Centrostephanus, 21
asteriscus var. *malayanus*, 21
besnardi, 21
nitidus, 21
sacyi, 21
cermeratii, *Clypeaster*, 56
cerullii, *Clypeaster*, 56
cerullii, *Zuffardia*, 88
cervantesi, *Rhyncholampas*, 84
cesarensis, *Heteraster*, 96
ceylanicus, *Microcyphus*, 40
chaubaudi, *Salenidia*, 26
Chaetodiadema, 21
africanum, 21
keiense, 21
sundararaji, 21
chalossensis, *Echinolampas ellipsoidalis*, var., 79
chaneyi, *Encope*, 73
chapmani, *Stylocidaris*, 18
chardoni, *Thylechinus*, 33
charlesi, *Stegaster*, 93
checcchiai, *Scutella*, 67
checcchiai, *Amblypygus*, 55
checcchiai, *Echinolampas (Hypsoclypus)*, 80
checcchiai, *Echinopygus*, 76
checcchiai, *Heteraster*, 96
checcchiai, *Narindechinus*, 32
checcchiai, *Pseudocidaris*, 28
checcchiai, *Somaliaster magniventer*, var., 95
Chelonechinus, 94
javanensis, 94
suvae, 94
chelonium, *Faujasia*, 82
cheribonensis, *Opechinus*, 41
chesheri, *Clypeaster*, 55
chiapasensis, *Clypeaster*, 55
chiapasensis, *Conulus*, 51
chiapasensis, *Epibaster*, 97
chickasawhay, *Thylechinus (Gagara)*, 44
chiesai, *Conulus*, 51
chiesai, *Echinolampas*, 79
chiesai, *Scutella*, 67
chikuzenensis, *Echinodiscus*, 73
chipolanus, *Echinocyamus*, 62
chirakhanensis, *Echinobrissus*, 76
chirakhanensis, *Hemiaster (Mecaster)*, 100
chondra, *Leiosoma*, 35
Chondrocidaris, 12
brevispina, 12
clarkii, 12
marianica, 12
problepteryx, 12
Chorocidaris, 11
micca, 11
chouberti, *Gentilia*, 83
chouberti, *Rhabdocidaris*, 12
christi, *Oligopygus*, 53
chusenii, *Melonechinus*, 4
Cidaridae, 7
Cidarinae, 14
Cidaris, 10, 14, 15, 18, 19
aculeata, 14, 15
alatus, 10
anellatus, 15
assulaeformis, 14
bitauniensis, 15
cidaris var. *meridionalis*, 14
cojimarensis, 14
crenulata, f. 15
cucumifera, 18
dorsata var. *coronata*, 15
dorsata var. *jugulata*, 15
dubaleni, 14
duncani, 14
ecki, 15
enissalensis, 14
gilletae, 15
gymnozona, 14
hemispinosa, 14
honorinae, 19
isnardi, 14
jonkeri, 15
longispina, 15
mabahissae, 14
magna, 15
mahafalensis, 14
majungensis, 14
meslei, 14
mirandus, 15
mullerriedi, 14
pelettensis, 14
percostatus, 15
pusilla, f. 15
pyramidalis, 15
raibliana var. *capitata*, 15
remifera, 15
scrobiculata var. *rumerlensis*, 15
sigillum, 14
spinosa, 10
staulinensis, 15
theodosiae, 15
transversa, 15
trigona var. *cuspidata*, 15
tuberculinus, 15
vepres, 14
zardinii, 15
Cidaris (Balanocidaris), 16
deserti, 16
Cidaris (Bramus), 48
pirillus, 48
simplex, 48
Cidaris (Crinocidaris), 48
Cidaris (Discocidaris), 9
hirsutispinus, 9
Cidaris (Protocidaris), 48
bencontestus, 48
Cidaris (Vernius), 48
elaboratus, 48
Cidaroida, 5
cienagensis, *Leiopedina*, 23
cimex, *Fibularia*, 61
cingulata, *Stylocidaris*, 17

- Cionobrissus*, 113
 regularis, 113
cipollae, *Clypeaster*, 56
Circopeltis, 33
 senessei, 33
circularis, *Oligopygus*, 53
circularis, *Planilampas*, 82
circularis, *Proccassidulus*, 86
ciryi, *Dorocidaris*, 16
ciryi, *Periaster*, 109
cladothrix, *Stylocidaris reini*, var., 18
clarcki, *Prenaster*, 109
clarki, *Astrodapsis*, 70
clarki, *Diadema*, 21
clarki, *Loriolia*, 29
clarki, *Pauropygus*, 54
clarki, *Pericosmus*, 103
clarkii, *Chondrocidaris*, 12
clavata, *Eucidaris*, 16
clavata, *Silurocidaris*, 6
clericii, *Proccassidulus*, 86
Clitopygus, 76
 basseae, 76
 cantrainei, 76
 moutieri, 76
Clitopygus (*Dactyloclypeus*), 75
Cluniaster, 52
 rhenanus, 52
Clypeaster, 55–60, 71
 abruptus, 56
 aciculatus, 56
 aegyptiacus var. *syrticus*, 56
 aichinoi, 56
 annandalei caviventer, 56
 blumenthali, 55
 borgesi, 56
 brevipetalus, 55
 brodermanni, 57
 calzadai, 58
 canimarensis, 55
 cermenatii, 56
 cerullii, 56
 chesheri, 55
 chiapasensis, 55
 cipollae, 56
 concaus puertoricanus, 56
 cortesei, 56
 crassus, 56
 cremai, 56
 cyclopius, 55
 dalpiazii, 57
 defiorei, 56
 densus, 57
 egregius var. *dallonii*, 56
 elevatus, 57
 elongatus, 55
 epianthus, 56
 euclastus, 55
 eurychorius, 55
 eurychorus, 55
 eurypetalus, 55
 franchii, 56
 gabbii, 71
 garganicus, 57
 gregoryi, 56
 guadalupense, 57
 guillermi, 57
 henjamensis, 56
 hernandezi, 57, 59
 herrerae, 57
 insignis var. *distincta*, 57
 insignis var. *robusta*, 57
 japonicus alta, 55
 japonicus plana, 55
 julii, 56
 kemencensis, 56
 kugleri, 56, 57
 lamegoi, 56
 latirostris var. *prolata*, 57
 libycus, 56
 lopezriosi, 58
 malumbangensis, 56
 maribonensis, 57
 marinanus, 57
 marquerensis, 56
 maulwarensis, 56
 micropetalus, 55
 millosevichi, 57
 miniaceus, 55
 minihagali, 56
 moianensis, 58
 mombasanus, 56
 moronensis, 57
 mutellensis var. *italica*, 56
 novaresei, 57
 okinawa, 56
 oliveirai, 55
 oshimensis, 55
 ovatus, 57
 palmeri, 57
 patae, 57
 paulinoi, 56
 pileus, 57
 pinarensis, 57
 planus, 57
 polygonalis, 57
 portentosus var. *turriculata*, 56
 profundus, 57, 58
 pulchellus, 56
 reidii var. *campanulata*, 57
 reidii var. *notha*, 57
 revellei, 56
 romani, 56
 saipanicus, 56
 sanchezi, 57
 sandovali, 58
 sanrafaelensis, 58
 subdepressus lobatus, 55
 tariccoi, 57
 tavanii, 57
 tenuicorona, 58
 topilanus, 57
 trevisani, 57
 tumescens, 57
 tyrrenicus, 56
 vasatensis, 57
 zamboninii, 56
Clypeaster (*Coronanthus*), 58
 artilesi, 58
 pateriformis, 58
Clypeaster (*Orthanthus*), 59
 aloysoi, 59
 durandi, 59
Clypeaster (*Platyclypeina*), 59
 subcrustulum, 59
Clypeaster (*Raphidoclypus*), 59
 armadilloensis, 59
 fervens var. *hiradicus*, 59
 reticulatus var. *sundaicus*, 59
Clypeaster (*Stolonoclypus*), 59, 60
 lutheni, 59
 nummus, 60
Clypeasteridae, 55
Clypeasterina, 55
Clypeasteroida, 55
clypeata, *Goniocidaris*, 9
clypeatulus, *Holaster*, 91
Clypeidae, 75
Clypeobrissus, 75
 somaliensis, 75
Clypeolampadidae, 86
Clypeolampas, 86
 toroensis, 86
Clypeopygus, 77
 bulgaricus, 77
 dallonii, 77
 damujiensis, 77
 habanensis, 77
Clypeus, 75
 rostellus, 75
 wylliei, 75
clypeus, *Hardouinia*, 83
cocosi, *Encope*, 72
Codiopsis, 35
 doma var. *conicus*, 35
 douvillei, 36
 fontei, 36
 pierrensis, 36
 sellardsi, 36
 senessei, 36
 stephensoni, 36
Coelopleurus, 36
 aldrichi, 35
 carolinensis, 36
 castroi, 36
 granulatus, 36
 melitensis, 36
 paucituberculatus, 36
 singularis, 36
 undulatus, 36

- undulatus* var. *polymorphus*, 36
undulatus var. *ruber*, 36
vittatus, 36
coelus, *Idiobryssus*, 116
Coenoholcotypus, 49
Coenopedina, 22, 23
capensis, 22
depressa, 22
superba, 23
cojimarensis, *Cidaris*, 14
cojimarensis, *Echinolampas*, 79
cojimarensis, *Leiocidaris*, 13
cojimarensis, *Schizaster*, 104
collignoni, *Brissopatagus*, 112
collignoni, *Gomphechinus*, 34
collignoni, *Oligopygus*, 53
collignoni, *Opechinus*, 41
collignoni, *Pseudocidaris*, 28
Collyrites, 89
segestina, 89
tuarkyrensis, 89
Collyrites (*Cardiopelta*), 89
bicordata var. *baltica*, 89
bicordata primitiva, 89
capistrata mut. *antecedens*, 89
Collyritidae, 89
Collyritinae, 89
Collyropsis, 90
Collyropsis (*Collyropsis*), 90
carinata, 90
Collyropsis (*Procollyropsis*), 90
colombianus, *Arnaudaster*, 82
colsoni, *Oligopygus*, 53
comalensis, *Orthopsis*, 47
complanatus, *Pygurus* (*Pygurus*), 76
Compsocidaris, 11
pyrsacantha, 11
compta, *Lenicyamidia*, 63
compta, *Menocidaris*, 18
concava, *Peronella orbicularis*, var. 65
concavus, *Echinolampas*, 79
conceptionis, *Coronanthus*, 58
conceptionis, *Paralampas*, 86
conceptionis, *Phymosoma*, 30
concinna, *Pisolampas*, 125
conica, *Scutellina*, 63
conicus, *Codiopsis doma*, var. 35
conicus, *Pygorhynchus*, 78
conicus, *Spatagoides striatoradiatus*, var., 92
connectens, *Echinocardium*, 122
connorsi, *Miocidaris*, 6
Conoclypeus, 52, 53
besairiei, 52
boncevi, 52
pilgrimi, 53
pinfoldi, 53
sanctispiritensis, 53
warthi, 53
Conoclypidae, 52
Conoclypina, 52
Conoclypus, 52, 53
dallonii, 52
gotshevi, 53
lamberti, 53
westraliensis, 52
conoidea, *Conulus subrotundus*, var., 51
conoidea, *Catopygus conformis*, var., 77
Conolampas, 82
diomedea, 82
malayana, 82
murrayana, 82
consolationis, *Echinolampas*, 78
contracta, *Notocidaris platyacantha*, var., 8
Conulidae, 51
Conulus, 51
campaniformis, 51
castaneus var. *plana*, 51
castaneus var. *rhotomagensis*, 51
chiapasensis, 51
chiesai, 51
cubensis, 51
ellipticus var. *rostrata*, 51
grauensis, 51
matesovi, 51
mullerriedi, 51
parravanoi, 51
praenuntius, 51
rhotomagensis var. *elevatus*, 51
sanfilippoi, 51
stephensoni, 51
subrotundus var. *conoidea*, 51
subrotundus var. *subglobosa*, 51
tradis, 51
zinai, 51
convergens, *Echinocyamus*, 61
convexa, *Sismondia*, 66
convexus, *Oolopygus*, 77
convexus, *Pauropygus*, 54
cookei, *Anisopetalus*, 85
cooperi, *Lepidechinus*, 4
coosensis, *Scutella*, 68
Coptechinus lineatus, 41
Coptopleura, 38
sema, 38
coralloides, *Eucidaris*, 16
Coraster, 95
ansaltensis, 95
caucasicus, 95
cubanicus, 95
deleai, 95
frechi, 95
manuelitae, 95
vilanovae var. *alaplensis*, 95
coravium, *Micraster*, 110
Cordastrum, subgenus, 124
cordata, *Breynia*, 122
cordata, *Maretia*, 121
cordatus, *Pericosmus*, 102
cordiformis, *Ornithaster*, 102
cordis, *Eupatagus*, 114
Corechinus, 95
pulaviensis, 95
coreyi, *Lytechinus*, 44
cornuelli, *Tetragramma*, 30
corona, *Goniocidaris*, 8
Coronanthus, 58
conceptionis, 58
coronata, *Cidaris dorsata*, var., 15
coronensis, *Triadocidaris*, 7
corralesi, *Eurhodia*, 87
corrali, *Amblypneustes*, 39
corsicanus, *Hyposheteroclypus plagiosomus*, 81
cortesei, *Clypeaster*, 56
Corthya, 90
ambayraci, 90
cosibensis, *Brissopsis luzonica*, 113
costaricensis, *Plagiobrissus*, 118
costaricensis, *Schizaster*, 103
costulatus, *Rhaphidoclypus*, 59
costuliformis, *Oligopygus*, 53
cottaldi, *Polysalenia*, 25
Cottaldia, 22
rotula, 22
Cotteaudia, 36
royoi, 36
cotteaui, *Prospatagus*, 120
cotteaui, *Rhabdocidaris*, 11
Cottreaucorys, 124
Cottreaucorys (*Cordastrum*), 124
sulcatus, 124
cottreaui, *Crotoclypeus*, 75
cottreaui, *Leiocidaris*, 13
cottreaui, *Magnosia*, 37
cottreaui, *Megacidaris*, 12
cottreaui, *Pygurus*, 75
cottreaui, *Rachiosoma*, 32
cottreaui, *Rispolia*, 93
cottreaui, *Salenia*, 26
couffoni, *Stirechinus minor*, var., 46
coutini, *Goniopygus*, 36
cowleyi, *Archaeocidaris*, 5
coxwellense, *Plagioclasma*, 77
cracoviensis, *Micraster* (*Paramicraster*), 111
cranioilaris, *Fibularia*, 61
cranium, *Hemiasaster*, 99
crassa, *Goniocidaris*, 8
crassispinata, *Histocidaris*, 7
crassispinum, *Sperosoma*, 20
crassus, *Clypeaster*, 56
crassus, *Hesperaster*, 59
crassus, *Lytechnius*, 44
Cravenechinidae, 5
Cravenechinus, 5
uniserialis, 5
cravenensis, *Cassidulus* (*Pygorhynchus*) *carolinensis*, var., 78

- cremai*, *Clypeaster*, 56
cremai, *Echinobrissus*, 76
crenulata, *Acrocidaris*, 29
crenulata, *Arbacia*, 35
crenulata, *Cidaris*, 15
crenulatus, *Echinocyamus*, 61
cretacica, *Diplopodia*, 29
cretacica, *Linthia*, 108
Crinocidaris, 48
unicus, 48
Crotoclypeus, 75
cottreai, 75
Crucibrissus, 100
abichi, 100
cabrerai, 100
cruciferus, *Ananchytes*, 55
crustula, *Sismondia*, 66
Cryptechinus, 39
Ctenocidarinae, 7
Ctenocidaris, 7
polyplax, 7
cubae, *Peronella*, 65
cubae, *Scutella*, 67
Cubanaster, 66
acunai gigas, 66
camagueyensis, 66
herrerai, 66
planipetalum, 66
santanae, 66
cubanicus, *Coraster*, 95
cubanum, *Laganum*, 64
cubanus, *Goniopygus*, 36
cubanus, *Pericosmus*, 103
cubensis, *Asterostoma*, 124
cubensis, *Breynia*, 125
cubensis, *Cassidulus*, 84
cubensis, *Conulus*, 51
cubensis, *Echinobrissus*, 76
cubensis, *Echinocorys ovatus*, var., 91
cubensis, *Echinolampas hemisphericus*, var., 79
cubensis, *Echinopedina*, 23
cubensis, *Oligopygus*, 53
cubitabellae, *Paraster*, 105
cucumifera, *Cidaris*, 18
cuimorei, *Gillechinus*, 116
cuimorei, *Stereocidaris*, 10
culter, *Radiolus*, 48
curasavica, *Oligopygus*, 53
curator, *Pentidium*, 60
curmaturi, *Miocidaris*, 6
currae, *Plesiolampas*, 82
curvidens, *Abatus*, 106
curvus, *Eupatagus (Plagiobrissus)*, 119
cuspidata, *Cidaris trigona*, var., 15
cutleri, *Astrodapsis*, 70
cuvillieri, *Brissoides*, 115
cuvillieri, *Echinolampas*, 79
cuvillieri, *Egyptechinus*, 33
Cyamidia, 61
paucipora, 61
Cyathocidaris, 16
septemtrionalis, 16
Cyclaster, 113, 114
brodermanni, 113
brunnichi, 114
dreuryensis, 114
jeanneti, 114
pfenderae, 114
pygmeus, 114
recens, 113
regalis, 113
sanchezi, 114
sterea, 113
cyclus, *Ammotrophus*, 60
cyclopilus, *Clypeaster*, 55
cylindrica, *Haimea*, 54
cylindricus, *Pauropygus*, 54
Cylindrolampas, 80
Cypholampas, 80
Cyphosoma, 31
palaestinense, 31
riograndensis var. *parahybensis*, 31
sanctaeluciae, 31
cyphostomus, *Echinocyamus*, 62
cypristes, *Heterobrissus*, 123
cyrenaica, *Agassizia*, 106
cyrenaica, *Fibularia*, 61
cyrenaicus, *Echinolampas hemisphericus*, var., 78
Cyrtechinus, 43
Cytracidaris, subgenus, 9
tenuispina var. *major*, 9
tenuispina var. *tuberculata*, 9
Cyrtoma, 83
herscheliana, 83
Dactyloclypeus, 75
dagestanensis, *Galeaster*, 92
daguini, *Echinolampas*, 79
daguini, *Medoecchinus*, 37
daguini, *Pygaster*, 24
daguini, *Stomechinus*, 33
dainellii, *Brissoides*, 115
dainellii, *Globator*, 52
dainellii, *Linthia*, 108
dainellii, *Psammechinus*, 45
dallonii, *Amphiope*, 73
dallonii, *Clypeaster egregius*, var., 56
dallonii, *Clypeopygus*, 77
dallonii, *Conoclypus*, 52
dallonii, *Disaster*, 90
dalpiazzi, *Clypeaster*, 57
damesi, *Brissus*, 112
damiani, *Schizobrissus*, 118
damujiensis, *Clypeopygus*, 77
danei, *Isomicraster*, 97
danica, *Salenidia*, 26
danica, *Typocidaris*, 11
daniensis, *Echinocorys pustulosus*, 92
danubiensis, *Heteraster*, 96
daradensis, *Brissoides*, 115
darderi, *Balanocidaris*, 16
darderi, *Echinocorys*, 91
darderi, *Linthia*, 108
darderi, *Pseudopyrina*, 52
dartoni, *Epiaster*, 97
davisi, *Astrodapsis*, 70
Deakia, subgenus, 117
armadilloensis, 117
debilis, *Eremopyga*, 21
debilis, *Pourtalesia*, 94
decaryi, *Brissopneustes*, 111
deciper, *Cardiaster*, 91
decoratus, *Holectypus*, 49
delectus, *Eupatagus*, 115
deflippii, *Pseudocidaris*, 28
defiorei, *Clypeaster*, 56
defiorei, *Ilarionia*, 88
deleaii, *Coraster*, 95
delectus, *Cassidulus*, 83
delgadoi, *Pericosmus*, 102
delgadoi, *Paraster*, 105
Delocidaris, 9
delorenzoi, *Echinolampas*, 78
delorenzoi, *Schizaster*, 104
demolyi, *Psammechinus*, 45
demujiensis, *Dorocidaris*, 16
Dendraster, 68
caselli, 68
elsmerensis, 68
excentricus var. *elongatus*, 68
gibbsii var. *mirus*, 68
granti, 68
laevis, 68
mexicanus, 68
rugosus, 68
vizcainoensis, 68
vizcainoensis similis, 68
Dendraster (Calaster), 68
oregonensis gibbosus, 68
Dendrasteridae, 68
dendroides, *Discoidea*, 50
Deneechinus, 3
tenuispinus, 3
deneensis, *Fournierechinus*, 2
denisonensis, *Macraster*, 98
densus, *Clypeaster*, 57
denticulata, *Dicycloidaris*, 6, 7
denticulata, *Histocidaris*, 7
dentifer, *Stereochinus*, 46
depressa, *Coenopedina*, 22
depressa, *Linthia mortenseni*, var. 108
depressa, *Moiropsis*, 109
depressus, *Amblypygus*, 55
depressus, *Antillaster*, 122
depressus, *Jacksonaster*, 65
depressus, *Mauritanaster*, 117
depressus, *Megapatagus*, 115

- depressus*, *Micraster*, 110
depressus, *Spatagoides striatoradiatus*, var., 92
depsangensis, *Globator*, 52
derasmoi, *Opissaster*, 101
Dermechinus, 45
desaixi, *Astrodapsis*, 70
deserti, *Cidaris (Balanocidaris)*, 16
deserticus, *Echinolampas (Hypsoclypus)*, 80
desioi, *Brissopneustes*, 111
desioi, *Dicoptella*, 43
desioi, *Gaultieria*, 116
desioi, *Linthia*, 108
desioi, *Psammechinus*, 45
Desmechinus, 39
desori, *Micraster*, 110
desori, *Rhabdocidaris*, 11
despujolsi, *Dubarechinus*, 48
despujolsi, *Hemiaster*, 98
destefanii, *Stereocidaris*, 10
Devonocidaris, 4
dumoni, 4
hacquaerti, 4
jacksoni, 4
primaevus, 4
thomasi, 4
Deuriesia, 96
Diadema, 21
clarki, 21
palmeri, 21
principeana, 21
vetus, 21
Diadematacea, 19, 47
Diadematiidae, 21
Diadematoidea, 21
Diademopsis, 23
behtensis, 23
dickersoni, *Asterostoma*, 122
dickersoni, *Laganum*, 64
Dicoptella, 42, 43
agassizi var. *elevata*, 42
agassizi var. *tenuis*, 42
desioi, 43
javana, 42
leupoldi, 42
promensis, 43
tobleri, 43
Dicoptella (Paradicoptella), 43
rutteni, 43
Dicoptella (Pseudodicoptella), 42
reicheli, 42
Dictyopleurus, 37
dowillei, 37
duncani, 37
Dicycloclidaris, 6
denticulata, 6
dilatatum, *Asthenosoma*, 20
dilatatus, *Pliolampas*, 87
dimota, *Pygorhytis ovalis*, var., 89
diomedea, *Caenopedina*, 22
diomedea, *Conolampas*, 82
diomedea, *Plesiozonus*, 124
diomedea, *Spatangus*, 120
Diplechinus, 33
hebbriensis, 33
Diplocidaridae, 19
Diplocidaris, 19
besairiei, 19
bicarinata, 19
dubari, 19
mauritanicus, 19
menchikoffi, 19
romani, 19
Diplodetus (Protobrissus), 114
Diplopodia, 29
balkhanensis, 29
balkhanensis var. *aberans*, 29
cretacica, 29
elegans, 29
gentili, 29
gigantea, 29
gileadensis, 29
inexpectata, 29
kultchitskyi, 29
langei, 29
renngarteni, 29
vasilievskiyi, 29
Diploporaster, 107
barbatus, 107
Diplosalenia, 47
Disaster, 90
dallonii, 90
platypygyus, 90
Disasteridae, 90
Disasteroidea, 89
Discocidaris, subgenus, 9
hirsutispinus, 9
peltata, 9
Discoidea, 50
dendroides, 50
dixoni, 50
karakaschi, 50
minima var. *inferior*, 50
Discoides, 50
dubertreti, 50
menchikoffi, 50
neglectus, 50
philocrania, 50
rahbergensis, 50
Discoididae, 50
Distefanaster, 100
pygmeus, 100
distincta, *Clypeaster insignis*, var., 57
Ditremaster, 100
granosus, 100
olbrechtsi, 100
dixie, *Eupatagus (Plagiobrissus)*, 119
dixie, *Phymosoma*, 30, 31
Dixieus, 31
dixoni, *Discoidea*, 50
dixoni, *Hyattechinus*, 3
Dixonia, 50
djakonovi, *Strongylocentrotus*, 46
djiddensis, *Echinoconus*, 52
doederleini, *Lovenia*, 121
doederleini, *Pleurechinus*, 41
dolosus, *Hypselastr*, 105
doma, *Hypsoheteroclypus*, 81
Domechinus, 82
teixeirai, 82
Donbassechinus, 4, 5
kumpani, 5
Dorocidaris, 15–17
basseae, 15
besairiei, 16
bitakensis, 16
ciryi, 16
demujiensis, 16
exilis, 15
eybrunnensis, 16
garciai, 16
henjamensis, 15
lorioli, 15
madrugensis, 16
molineti, 15
panamensis, 17
taouzensis, 16
urcustensis, 16
Douvillaster, 96
hourcq, 96
douvillei, *Amblypygus*, 55
douvillei, *Codiopsis*, 35
douvillei, *Dictyopleurus*, 37
douvillei, *Echinocorys*, 94
douvillei, *Stenonaster*, 94
drewryensis, *Cyclaster*, 114
dubaleni, *Cidaris*, 14
dubaleni, *Echinolampas*, 79
Dubarechinus, 48
despujolsi, 48
termieri, 48
dubarensis, *Fibularia*, 61
dubari, *Diplocidaris*, 19
dubari, *Hypodiadema*, 29
dubari, *Miocidaris*, 6
dubari, *Pseudocidaris*, 28
dubari, *Thylechinus*, 33
dubertreti, *Discoides*, 50
dubia, *Metalia*, 118
dubius, *Macropneustes*, 117
dumblei, *Schizaster*, 104
dumoni, *Devonocidaris*, 4
duncani, *Cidaris*, 14
duncani, *Dictyopleurus*, 37
duncani, *Phyllacanthus*, 12
Duperieria, 50
duperieri, *Brissus*, 111
durandi, *Clypeaster (Orthanthus)*, 59

- Durhamella*, 66
durhami, *Neolaganum*, 66
durhami, *Sandiegoaster*, 112
duroensis, *Schizaster (Paraster)*, 105
dussumieri, *Salmacis*, 42
duvergieri, *Prionechinus*, 41
dux, *Salenia*, 26
dyeri, *Polytaxicidaris*, 6
dyscritum, *Laganum*, 64
dyscritus, *Eupatagus*, 114
dyscritus, *Macropneustes*, 116
dyscritus, *Schizaster*, 104
- eccentripora*, *Faujasia*, 82
Echanthus, 87, 88
 georgiensis, 88
echevarriai, *Procassidulus*, 86
Echinacea, 24, 47
Echinanthus, 89
 basseae, 89
 newillei, 89
 pumilus var. *abiadensis*, 89
 reguanti, 89
 varnensis, 89
Echinarachniidae, 69
Echinarachnius, 69, 71
 alaskensis, 69
 blancoensis var. *etheringtoni*, 69
 brevis, 69
 gabpii kleinpelli, 69, 71
 griseus, 69
 humilis, 69
 kewi, 69
 minoensis, 69
 naganoensis, 69
 parma var. *sakhalinensis*, 69
 rumoensis, 69
 subtumidus, 69
 tenuis, 71
Echinarachnius (Echinarachnius), 69
 laganolithinus, 69
 microthyroides, 69
Echinarachnius (Kewia), 71
 elongatus, 71
 parvus, 71
Echinarachnius (Scaphechinus), 68
 raritalis, 68
Echinidae, 45
Echinobrissus, 76
 chirakhanensis, 76
 cremai, 76
 cubensis, 76
 franchii, 76
 hierosolymitanus, 76
 malwaensis, 76
 pilensis, 77
 rajnathi, 76
Echinocardium, 122
 connectens, 122
 fenauxi, 122
 keiense, 122
Echinoconus, 52
 djiddensis, 52
Echinocorys, 91, 92, 94
 belgicus var. *pruvostii*, 91
 darderi, 91
 douvillei, 94
 edhemi, 91
 gravesi var. *rossiensis*, 91
 katsharavai, 91
 lamberti, 91
 legindensis, 91
 mamontoffi, 91
 obliquus assymetrica, 91
 obliquus lata, 91
 obliquus var. *recta*, 91
 ogormani, 91
 ovatus var. *cubensis*, 91
 ovatus villarensis, 91
 pentagonalis, 91
 pustulosus daniensis, 92
 renngarteni, 92
 semiglobosus, 91
 sulcatus hannaee, 91
 sumbaricus, 92
 tenuituberculatus var. *madagascariensis*, 92
 yoloensis, 92
Echinocrinus, 5
 jacksoni, 5
 remotus, 5
Echinocyamus, 60, 61, 62
 apicatus, 61
 avilensis, 62
 basseae, 62
 bisexus, 62
 caribbeanensis, 62
 chipolanus, 62
 convergens, 61
 crenulatus, 61
 cyphostomus, 62
 cyphostomus var. *sulcata*, 62
 grandis, 62
 jacqueti, 62
 jeanneti, 62
 kamrupensis, 62
 lipparinii, 62
 macneili, 62
 maropiensis, 62
 parviporus, 62
 petalus, 62
 planissimus, 62
 planus, 62
 prostratus, 62
 rostratus, 62
 scaber var. *subconicus*, 62
 schoelleri, 62
 subpiriformis, 62
 terminalis, 62
 woodi, 62
Echinocyphus (Zeugopleurus) glanoviensis, 43
Echinocystitidae, 2
Echinocystitoida, 2
Echinodiscus, 65, 73
 auritus var. *siamensis*, 73
 chikuzenensis, 73
 ginauensis, 73
 rostratus, 65
 transiens, 73
Echinogalerus, 55
 bochotnicensis, 55
Echinoida, 45
Echinoidea, 1
Echinolampadidae, 78
Echinolampas, 54, 78–82
 africanus var. *tanofrei*, 79
 alexandri var. *forcipulata*, 78
 alexandri var. *sibogae*, 78
 altissima, 79
 anceps var. *inflata*, 79
 anceps var. *planipetala*, 79
 atascaderensis, 79
 atrophus podolicus, 78
 barcensis, 79
 bombos, 79
 bothriopygoides, 79
 brachytona, 79
 camagueyensis, 79
 caranoi, 79
 chiesai, 79
 cojimarensis, 79
 concavus, 79
 consolationis, 78
 cuwillieri, 79
 daguini, 79
 delorenzoi, 78
 dubaleni, 79
 ellipsoidalis var. *chalossensis*, 79
 elongata, 79
 faujasia, 82
 gignouxii, 80
 hanguensis, 80
 hemisphericus var. *bardiensis*, 78
 hemisphericus var. *cubensis*, 79
 hemisphericus var. *cyrenaicus*, 78
 hungarica, 78
 jacqueti, 79
 koreana, 78
 lamberti, 80
 macrostoma, 79
 madurensis, 78
 marcaisi, 79
 marioi, 79
 menchikoffi, 79
 mestrei, 78
 migiurtinus, 80
 migliorinii, 80

- munozii*, 79
neuwillei, 80
nuevitasensis, 79
omanensis, 78
ovumserpentis, 54
paraensis, 78
paragoga, 79
parvula, 80
percrassus, 78
peyroti, 78
rhodiensis, 80
rollandi, 79
rombellipsoidalis, 79
santaclarae, 79
sternopetala, 81
strongyla, 79
umbella, 79
vadaszi, 78
valettei, 80
venzoi, 80
visedoi, 79
woodi, 78
woodringi, 78
Echinolampas (Cylindrolampas), 80
migliorinii, 80
rhodiensis, 80
sandiegensis, 80
Echinolampas (Cypholampas), 80
eocenicus, 80
subnucleus, 80
Echinolampas (Heteroclypeus), 78
hungaricus, 78
Echinolampas (Hypsoclypus), 80
checcchiae, 80
deserticus, 80
Echinolampas (Isolampas), 80
cavaionensis, 80
garciai, 80
globulosus, 80
Echinolampas (Macrolampas), 81
gigas, 81
Echinolampas (Progonolampas), 81
moronensis, 81
tenuipetalum, 81
torrense, 81
Echinolampas (Psammolampas), 81
kugleri, 81
Echinometra, 46
hondoana, 46
Echinometridae, 46
Echinoneidae, 50
Echinoneina, 50
Echinoneus, 50
abruptus, 50
burgeri, 50
robustus, 50
rojasi, 50
sanchezi, 50
tenuipetalum, 50
Echinopodina cubensis, 23
Echinopsis, 37
friryi, 37
jacqueti, 37
Echinopygus, 76
checcchiai, 76
Echinopygus (Zeuglopleurus), 43
glanoviensis, 43
Echinosome, 20
australe, 20
Echinostrephus, 46
formosus, 46
saipanicum, 46
Echinothuriidae, 19
Echinothuriinae, 19
Echinothurioida, 19
Echinotiara, 33
arabica, 33
perebaskinei, 33
somaliensis, 33
echinulata, *Psilocidaris*, 9
Echinus, 45
atlanticus var. *helenae*, 45
gracilis, 45
horridus, 45
multidentatus, 45
stenoporus, 45
ecki, *Cidaris*, 15
Ectinechinus, 3
lamonti, 3
ecuadorensis, *Encope*, 72
edhemi, *Echinocorys*, 91
effluens, *Stylocidaris*, 17
Egyptechinus, 33
cuvillieri, 33
eichwaldi, *Bothriocidaris*, 1
eichwaldi, *Scutella*, 67
elaboratus, *Cidaris (Vernius)*, 48
elbana, *Eurhodia*, 87
eldridgei, *Laganum*, 66
elegans, *Asterechinus*, 39
elegans, *Diplopodia*, 29
elegans, *Hyatechinus*, 3
elegans, *Rumphia*, 65, 66
elevata, *Brissoopsis persica*, var., 112
elevata, *Dicoptella agassizi*, var., 42
elevata, *Maretia*, 120
elevatum, *Astrodapsis*, 70
elevatus, *Anomalanthus*, 58
elevatus, *Clypeaster*, 57
elevatus, *Conulus rhotomagensis*, var., 51
elevatus, *Micraster*, 110
elevatus, *Paleopneustes*, 124
elevatus, *Pauropygus*, 54
elevatus, *Plagiobrissus*, 119
elevatus, *Pliolampas (Tristomanthus)*, 88
elevatus, *Pseudodiadema*, 28
elevatus, *Spatagoides striatoradiatus*, var., 92
Ellipsechinus, 46
palmeri, 46
ellipticus, *Anisopetalus*, 85
ellipticus, *Tarphypygus*, 63
elongata, *Echinolampas*, 79
elongata, *Martinosigra*, 92
elongata, *Palaeolampas*, 79
elongata, *Scutellina (Eoscutum) orientalis*, var., 62
elongatus, *Clypeaster*, 55
elongatus, *Dendraster excentricus*, var., 68
elongatus, *Echinarachnius (Kewia)*, 71
elongatus, *Oligopygus*, 53
elongatus, *Palaeolampas*, 81
elongatus, *Prenaster*, 110
elsmerensis, *Dendraster*, 68
emergens, *Astrodapsis brewerianus*, var., 70
emmonsii, *Cassidulus*, 84
Enallaster, 96
roscheni, 96
transiens, 96
yuasensis, 96
Encope, 72, 73
angelensis, 72
arcensis, 72
carmenensis, 72
chaneyi, 73
cocosi, 72
ecuadorensis, 72
fragilis, 72
grandis inezana, 72
homala, 72
insularis, 72
irregularis, 72
kugleri, 73
laevis, 72
loretoensis, 73
macrophora tamiamiensis, 72
micropora var. *borealis*, 72
micropora galapagensis, 72
micHELINI imperforata, 72
perspectiva jonesi, 72
peruviana, 73
scrippsae, 73
secoensis, 72
shepherdii, 72
sverdrupi, 73
vonderschmitti, 73
wetmorei, 72
wiedenmayeri, 73
Encope (Melitella), 73
falconensis, 73
engerrandi, *Holectypus*, 49
engerrandi, *Pedinopsis*, 29
englishi, *Astrodapsis*, 70
enissalensis, *Cidaris*, 14
enodatus, *Saviniaaster*, 110
Eoagassizia, 106
alta, 106
eocenic, *Pedina*, 22

- eocenicus*, *Echinolampas* (*Cypholampas*), 80
- Eodiadema*, 21, 32
- lacostei*, 21
- thorali*, 21
- Eoglyptocidaris*, 31
- eopneustes*, *Schizaster*, 104
- Eoscutella*, 68
- Eoscutellidae*, 68
- Eoscutum*, 62
- Eothuria*, 3
- beggi*, 3
- Eothuriidae*, 3
- epianthus*, *Clypeaster*, 56
- Epiastrer*, 96, 97
- africanus*, 97
- alpinus*, 97
- angolensis*, 97
- besairiei*, 97
- blanckenhorni*, 97
- boipebensis*, 97
- caranoi*, 97
- carvalhoi*, 97
- chiapasensis*, 97
- dartoni*, 97
- fourtaui*, 97
- jeanneti*, 97
- migliorinii*, 97
- mortenseni*, 97
- ovalis*, 97
- pulcher*, 97
- renfroae*, 97
- somaliensis*, 97
- somaliensis* var. *rotundata*, 97
- toxasteroides*, 97
- trauthi*, 97
- variabilis*, 97
- equaepetala*, *Laganum*, 64
- Erbechinus*, 39
- erbi*, 39
- gratus*, 39
- erbi*, *Erbechinus*, 39
- erbi*, *Javanechinus*, 39
- Eremopyga*, 21
- debilis*, 21
- ericsoni*, *Cassidulus*, 84
- erythraeus*, *Paraster*, 105
- estenozi*, *Antillaster*, 123
- estenozi*, *Marettia*, 121
- etheringtoni*, *Echinarachnius blancoensis*, var., 69
- Euclidaris*, 16
- australiae*, 16
- clavata*, 16
- coralloides*, 16
- strobilata*, 16
- strombilata felli*, 16
- tribuloides africana* f. *attenuata*, 16
- euclastus*, *Clypeaster*, 55
- Euechinoidea*, 19
- Eupatagus*, 114, 115
- alatus*, 115
- attenuatus*, 115
- brodermanni*, 115
- calistoides*, 115
- caobaense*, 115
- casanovai*, 115
- cordis*, 114
- defectus*, 115
- dyscritus*, 114
- gadilhei*, 115
- haburiensis*, 115
- hildae*, 115
- hollisi*, 114
- ingens*, 115
- longipetalus*, 115
- marianensis*, 114
- mexicanus*, 114
- nipponicus*, 114
- rubellus*, 114
- siboneyensis*, 115
- stevensi*, 115
- turibacoensis*, 115
- Eupatagus* (*Brissopatagus*), 112
- alabamensis*, 112
- avilensis*, 112
- georgianus*, 112
- primus*, 112
- Eupatagus* (*Gymnopatagus*), 116
- brevipetalum*, 116
- rogasi*, 116
- venturillae*, 116
- zanolettii*, 116
- Eupatagus* (*Plagiobrissus*), 119
- curvus*, 119
- dixie*, 119
- gardnerae*, 119
- herreriae*, 119
- ocalanus*, 119
- santanae*, 119
- Eupatagus* (*Spatangomorpha*), 119
- pinarensis*, 119
- Eupholidocidaris*, 2
- belli*, 2
- brightoni*, 2
- Eurhodia*, 87
- corralesi*, 87
- albana*, 87
- falconensis*, 87
- freneixae*, 87
- morrissi* var. *salsensis*, 87
- Eurocidaris*, 8
- nutrix* var. *longispina*, 8
- rugosa*, 8
- eurychorius*, *Clypeaster*, 55
- eurychorus*, *Clypeaster*, 55
- Eurypatagus*, subgenus, 124
- grandiporus*, 124
- ovalis*, 124
- Eurypetalum*, 82
- eurypetalus*, *Clypeaster*, 55
- Eurysalenia*, 24
- minima*, 24
- Euspatangus*, 115
- rogeri*, 115
- eustatii*, *Paraster*, 105
- evanescens*, *Brissopsis*, 112
- Evechinus*, 46
- palatus*, 46
- evergladensis*, *Cassidulus* (*Rhynchopygus*), 85
- excavata*, *Fibularia*, 61
- excavata*, *Stereocidaris*, 10
- excavatus*, *Schizaster*, 103
- excentrica*, *Pliolampas lorioli*, var., 87
- excentricus*, *Microcyphus*, 40
- exilis*, *Dorocidaris*, 15
- expansus*, *Antillaster*, 123
- eybrunnensis*, *Dorocidaris*, 16
- eysdenensis*, *Micraster* (*Isopneustes*), 111
- faasi*, *Isomicraster*, 97
- faberi*, *Cassidulus*, 84
- faberi*, *Medoecchinus*, 37
- falconensis*, *Encope* (*Melitella*), 73
- falconensis*, *Eurhodia*, 87
- falgarsensis*, *Typocidaris*, 11
- family uncertain, 4, 19, 22, 23, 35, 44, 52, 55, 74, 95, 124
- Faorina*, 107
- farafrensis*, *Porocidaris*, 13
- farallonensis*, *Fibularia*, 61
- farquharsoni*, *Opissaster*, 101
- Farquharsonia*, 23
- somaliensis*, 23
- fasciata*, *Schizocidaris*, 9
- Faujasia*, 82
- araripensis*, 82
- chelonium*, 82
- eccentripora*, 82
- praeacutus*, 82
- rancheriana*, 82
- transversus*, 82
- faujasia*, *Echinolampas*, 82
- Faujasiidae*, 82
- fecundus*, *Brissoides*, 115
- Fellaster*, 60
- felli*, *Euclidaris strombilata*, 16
- fenauxi*, *Echinocardium*, 122
- feralis*, *Holaster*, 90
- fermori*, *Brissopsis*, 113
- Fernandezaster*, 116
- mortenseni*, 116
- fernandezi*, *Pseudoasterostoma*, 124
- fernandezi*, *Schizaster* (*Schizaster*), 105
- feruglioi*, *Holaster*, 90
- festuca*, *Radolus*, 48
- Fibularia*, 60, 61, 63
- abrardi*, 61
- acuta*, 63

- africana*, 61
alabamensis, 61
barbadosensis, 61
cimex, 61
craniolaris, 61
cyrenaica, 61
dubarensis, 61
excavata, 61
farallonensis, 61
jacksoni, 61
junior, 61
minuta, 61
plateia, 61
rhedeni, 61
sadeki, 61
sandalina, 61
scrobiculata, 61
sulcata, 61
Fibularia (*Fibulariella*), 63
angulipora, 63
oblonga var. *ambonensis*, 63
Fibulariella, 63
Fibulariidae, 60
Firmacidaridaris, 48
neumayri, 48
fischeri, *Macropneustes*, 118
fisheri, *Scrippsechinus*, 124
flemingi, *Pseudechinus*, 42
flexuosa, *Agassizia*, 106
floralanus, *Psammechinus*, 45
floridana, *Scutella*, 67
floridanus, *Periarachus lyelli*, 67
flordiensis, *Schizaster* (*Paraster*), 105
flosculus, *Notolampas*, 125
fontei, *Codiopsis*, 35
fontis, *Cassidulus* (*Galerolampas*), 85
forcipulata, *Echinolampas alexandri*, var., 78
forcipulatus, *Phyllacanthus*, 12
formosa, *Histocidaridaris*, 7
formosa, *Lepidesthes*, 2
formosum, *Laganum joubini*, var., 64
formosus, *Echinostrephus*, 46
fosteri, *Stereocidaridaris*, 10
fothiensis, *Prospatangus*, 120
Fournierechinus, 2
deneensis, 2
fourtaui, *Epiaster*, 97
fourtaui, *Hemiaster*, 99
foutatoroensis, *Gagaria*, 44
fragilis, *Astrodapsis gregeri*, var., 70
fragilis, *Encope*, 72
fragilis, *Strongylocentrotus*, 47
fraiponti, *Perischodomus*, 4
franchii, *Clypeaster*, 56
franchii, *Echinobrissus*, 76
franciscanus, *Megapatagus*, 115
frangibilis, *Meoma*, 117
fraxinensis, *Archaocidaridaris*, 5
frechi, *Coraster*, 95
freneixae, *Eurhodia*, 87
friryi, *Echinopsis*, 37
fuentesii, *Hyposcylpus*, 80
funginus, *Radiolus*, 48
fusana, *Stereocidaridaris grandis*, 10
fusca, *Lissocidaridaris*, 17
fusispina, *Stylocidaridaris*, 18
fusus, *Radiolus*, 48

gabbii, *Clypeaster*, 71
gabrielii, *Toxaster*, 96
gadiana, *Peronella lesueurii*, var., 65
gadilhei, *Eupatagus*, 115
Gagaria, 44
foutatoroensis, 44
galapagensis, *Encope micropora*, 72
Galeaster, 92
carinatus, 92
dagestanensis, 92
munshiensis, 92
galei, *Astrodapsis*, 70
Galeola, 92
papillosa basi plana, 92
Galeraster, 51
terkosensis, 51
Galerites, 52
Galeritidae, 52
Galerolampas, 85
murardi, 85
Galeropygidae, 74
Galeropygoida, 74
Galeropygus, 74
marcoui var. *recincta*, 74
welschi, 74
galhauseni, *Bothryopneustes*, 75
gallagheri, *Nucleopygus*, 84
gambierensis, *Phyllacanthus duncani*, 12
gananensis, *Acrosalenia*, 24
gappi, *Micraster*, 110
garciai, *Dorocidaridaris*, 16
garciai, *Echinolampas* (*Isolampas*), 80
garciai, *Linthia*, 108
gardensis, *Pericosmus*, 102
gardnerae, *Eupatagus* (*Plagiobrissus*), 119
garganicus, *Clypeaster*, 57
garumensis, *Salenia*, 26
Gaultieria, 116
desioi, 116
gauthieri, *Jacksonaster*, 64
gauthieri, *Palaeodiadema*, 22
Gauthieria, 31
parva, 31
sadeki, 31
geayi, *Nucleopygus*, 84
geayi, *Proraster*, 110
gemellaroi, *Hemiaster*, 99
gemmiferum, *Hapalosoma*, 20
genefensis, *Histocidaridaris*, 7
Genocidaridaris, 40
incerta, 40

splendens, 40
gentili, *Diplopodia*, 29
Gentilia, 83
chouberti, 83
syriensis, 83
georgianus, *Eupatagus* (*Brissopatagus*), 112
georgicus, *Seunaster*, 93
georgiensis, *Echanthus*, 88
gerthi, *Pygaster*, 23
gerthi, *Schizaster*, 104
giarabubensis, *Tretodiscus fuchsi*, var., 73
gibba, *Linthia*, 108
gibbosus, *Dendraster* (*Calaster*) *oregonensis*, 68
gibbosus, *Somalechinus*, 98
gigantae, *Lovenia*, 121
gigantea, *Austrocidaridaris*, 8
gigantea, *Bunactis sanchezi*, 58
gigantea, *Diplopodia*, 29
gigantea, *Haimea*, 54
gigantea, *Phymosoma*, 30
gigantea, *Zanolettia*, 60
giganteum, *Tetragramma*, 30
giganteus, *Antillaster*, 122
giganteus, *Hemipneustes striatoradiatus*, var., 92
giganteus, *Laticlypus*, 75
giganteus, *Pericosmus*, 102
gigas, *Anomalanthus*, 58
gigas, *Brisus*, 111
gigas, *Cubanaster acunai*, 66
gigas, *Echinolampas* (*Macrolampas*), 81
gigas, *Schizaster*, 104
gignouxii, *Echinolampas*, 80
gignouxii, *Spherotiaris*, 28
gileadensis, *Diplopodia*, 29
Gillechinus, 116
culmorei, 116
gilletae, *Cidaridaris*, 15
ginauensis, *Echinodiscus*, 73
Gitolampopsis, 87
Gitolampas, 87, 89
lamberti, 87
sendaica, 87
zuffardii, 87
glanoviensis, *Echinocyphus* (*Zeugopleurus*), 43
glenni, *Brisus*, 111
glenni, *Spatangus*, 120
gliberti, *Proccassidulus*, 86
Globator, 51, 52
dainellii, 52
depsangensis, 52
rauni, 52
vaughani, 52
globosus, *Cassidulus* (*Paralampas*), 86
globosus, *Psephochinus*, 34
globulosa, *Haimea*, 54
globulosus, *Echinolampas* (*Isolampas*), 80

- globulosus*, *Hemiaster*, 98
globulus, *Noettingaster*, 34
globulus, *Palaeochinus*, 4
Glossaster, 84
 welschi, 84
 Glyphocyphidae, 37
Glypticus, 36
 buxtorfi, 36
Glyptocidaris, 31
 crenularis stenozona, 31
Glyptocidaris (Eoglyptocidaris), 31
 arctina, 31
 Gnathostomata, 49, 125
godeffroyi, *Microcyphus maculatus*, var., 40
gomezmazae, *Macropneustes*, 117
Gomphechinus, 34
 collignoni, 34
gongilensis, *Micropedina olisiponensis*, var., 23
Gongrochanus, 83
 Goniocidarinae, 8
Goniocidaris, 8
 alba, 8, 9
 australiae, 8
 balinensis, 8
 clypeata, 9
 corona, 8
 crassa, 8
 habanensis, 9
 hebe, 8
 holguinensis, 8
 impressa, 8
 indica, 8
 magi, 8
 mortenseni, 8
 murrayensis, 8
 praecipua, 8
 prunispinosa, 9
 pusilla, 9
 sibogae, 8
 spinosa, 8
 tubaria, 9
 tubaria hallettensis, 8
Goniocidaris (Aspidocidaris), 9
Goniocidaris (Cyrtoctidaris), 9
 tenuispina, 9
 tenuispina major, 9
 tenuispina tuberculata, 9
Goniocidaris (Discocidaris), 9
 peltata, 9
Goniodiadema, 21
 mauritiense, 21
Goniophorus, 26
 scotti, 26
 whitneyi, 26
Goniopygus, 36
 ameri, 36
 atavus, 37
 bolaensis, 37
 coutini, 36
 cubanus, 36
 jeanneti, 36
 lamberti, 36
 lemoinei, 36
 madrugensis, 36
 royoi, 37
 sanchezi, 36
 stocktonensis, 37
 supremus, 37
 zitteli telostocensis, 37
Goniopygus (Tetragoniopygus), 37
Gonzalezaster, 124
gonzalezi, *Catopygus (Oolopygus)*, 77
gonzalezmunozii, *Hemiaster*, 99
gonzalezmunozii, *Linthia*, 109
gordoni, *Lovenechinus*, 4
gortanii, *Gymnocidaris*, 27
gortanii, *Pseudocidaris*, 28
gosseleti, *Parasalenia*, 47
Gollandechinus, 5
 balticus, 5
gotshevi, *Conoclypus*, 53
goudkoffi, *Astrodapsis*, 70
Gracilechinus, 45
gracilis, *Echinus*, 45
Grammechinus, 40
 meridionalis, 40
grandior, *Stereocidaris jaekeli*, var., 10
grandiporus, *Eurypatagus*, 124
grandis, *Anametalia*, 112
grandis, *Echinocyamus*, 62
grandis, *Lepidesthes*, 2
grandis, *Paracentrotus*, 45
grangeri, *Pseudodiadema*, 28
granosus, *Ditremaster*, 100
granti, *Dendraster*, 68
grantii, *Mellita*, 72
granularis, *Graphepleurus*, 40
granularis, *Stereocidaris*, 10
granulatus, *Coelopleurus*, 36
granulosa, *Plegiocidaris babeau*, var., 18
 Graphepleurus, 40
 granularis, 40
gratus, *Erbechinus*, 39
grauensis, *Conulus*, 51
grayae, *Aulechinus*, 3
regalis, *Isomicraster*, 97
gregersenii, *Astrodapsis*, 70
gregoryi, *Anomalanthus*, 56
gregoryi, *Clypeaster*, 56
gregoryi, *Hemicidaris (Hypodiadema)*, 29
gregoryi, *Pericosmus*, 95, 103
griegii, *Sarsiaster*, 101
griseus, *Echinarachnius*, 69
guadalupense, *Anomalanthus*, 58
guadalupense, *Clypeaster*, 57
guadalupense, *Leiosoma*, 35
guanensis, *Agassizia*, 106
guevarai, *Antillaster*, 123
guevarai, *Lajanaster*, 116
guillermi, *Clypeaster*, 57
guirensis, *Schizaster*, 103
Gymmechinus, 43
 abnormalis, 43
 pallidus, 43
Gymnocidaris, 27
 gortanii, 27
 lamberti, 27
 madagascariensis, 27
 pustulosa var. *nuda*, 27
Gymnopatagus, subgenus, 116
gymnozona, *Cidaris*, 14

haasti, *Prionocidaris*, 14
habanensis, *Brissoides*, 114
habanensis, *Brissoma*, 113
habanensis, *Clypeopygus*, 77
habanensis, *Goniocidaris*, 9
habanensis, *Procassidulus*, 86
habanensis, *Pseudoasterostoma*, 124
habanensis, *Schizaster*, 103
habanensis, *Scutella*, 67
haburiensis, *Eupatagus*, 115
hacquaerti, *Devonocidaris*, 4
hagenowi, *Salenia*, 25
Hagenowia, 92
 blackmorei, 92
 infulasteroides, 92
Haimea, 54
 camagueyana, 54
 cylindrica, 54
 gigantea, 54
 globulosa, 54
 hernandezii, 54
 pentagona, 54
 pusilla, 54
 subcylindrica, 54
 truncata, 54
hallettensis, *Goniocidaris tubaria*, 8
hancockensis, *Pyrina*, 51
hanguensis, *Echinolampas*, 80
hannae, *Echinocorys sulcatus*, 91
hannai, *Paleoechinoneus*, 50
hanoverensis, *Linthia*, 108
Hapalosoma, 20
 gemmiferum, 20
Hardouinia, 83
 clypeus, 83
 mcglameryae, 83
 potosiensis, 83
 stetsoni, 83
 waagei, 83
hargeisensis, *Linthia*, 108
hathirae, *Pseudopygurus*, 75
hawaiiense, *Aspidodiadema*, 22
hawaiiensis, *Lamprochinus sculptus*, var., 40
hawaiiensis, *Lovenia*, 121
hawaiiensis, *Stereocidaris*, 10

- hawkinsi*, *Hemiaster*, 98
hawkinsi, *Plesiechinus*, 24
hawkinsi, *Salenia*, 25
hebbriensis, *Diplechinus*, 33
hebbriensis, *Menopygus*, 125
hebe, *Goniocidaris*, 8
Hebertia, 37, 38
calvachei, 38
jacksoni, 38
pentagona, 38
simplex, 38
heckeri, *Melonechinus*, 4
heimi, *Linthia*, 108
helenae, *Echinus atlanticus*, var., 45
Heliocidaris, 46
erythrogramma var. *parvispina*, 46
ludbrookae, 46
Helodiadema, 22
helviorum, *Plegiocidaris*, 17
Hemiaster, 98–100, 107
amelianus, 99
amurensis, 99
arcolensis, 99
balboi, 99
barthouxi, 99
batalleri, 99
benhurensis, 99
besairiei, 99
catandubensis, 99
cedroensis, 99
cenomanensis, 99
cranium, 99
despujolsi, 98
digonus var. *kohaticus*, 98
fourtaui, 99
gemellaroi, 99
globulosus, 98
gonzalezmunozii, 99
hawkinsi, 98
heteropneustes, 99
holombitatus, 99
hourcqi, 100
integer, 99
jacksoni, 99
jacobi, 99
judinkensis, 99
labriei, 99
lamberti, 99
latesulcatus, 99
madagascariensis, 99
madagascariensis var. *nana*, 99
madrugensis, 99
moscovensis, 98
mutabilis, 99
narindensis, 99
oldhami, 99
oliveirai, 99
parallelus, 99
paronai, 99
pseudoanticus, 99
reineckeii, 100
rioupanemensis, 99
sabinal, 99
sanctisebastiani, 99
schoelleri, 99
siboneyensis, 99
sphericus, 99
stefaninii, 100
stoliczkai, 99
teilhardi, 100
tuber, 107
tubillensis, 100
uwajimensis, 100
vistulensis, 99
zululandensis, 100
Hemiaster (*Macraster*), 98
cascajalensis, 98
Hemiaster (*Mecaster*), 100
chirakhanensis, 100
Hemiaster (*Trachyaster*), 100
Hemiasteriadae, 98
Hemiasterina, 98
Hemicentrotus, 47
Hemicidaridae, 27
Hemicidaris, 27
bihimensis, 27
castillionensis, 27
crenularis var. *alta*, 27
crenularis var. *major*, 27
jaisalmerensis, 27
luciensis var. *hourcqi*, 27
luciensis oolithicus, 27
palmirensis, 27
pilleti, 27
sundancensis, 27
termieri, 27
tithonica, 27
villadai, 27
Hemicidaris (*Hypodiadema*), 29
gregoryi, 29
macfadyeni, 29
Hemicidaroida, 27
Hemidiadema, 38
mortenseni, 38
Hemifaorina, 107
Hemimaretia, 120
Hemipatagus, 121
bandaensis, 121
cartagensis, 121
Hemipedina, 23, 31, 32
abreusense, 23
parvula, 31, 32
taurica, 23
Hemipedina (*Phalacropedina*), 23
somaliensis, 23
Hemiphormosoma, 20
paucispinum, 20
Hemipneustes, 92, 93
nicklesi, 93
perrieri, 93
sardanyolae, 93
striatoradiatus var. *giganteus*, 92
zuffardii, 92
hemisphaericus, *Noellingaster*, 34
henispinosa, *Cidaris*, 14
henjamensis, *Clypeaster*, 56
henjamensis, *Dorocidaris*, 15
henrici, *Termieria*, 88
hentyi, *Irenechinus*, 40
herbichi, *Radiolus*, 48
herbornensis, *Meekechinus*, 3
herklotzi, *Jacksonaster*, 64
hermitei, *Holaster*, 90
Hernandezaster, 100
hernandezi, 100
hernandezi, *Clypeaster*, 57, 59
hernandezi, *Haimea*, 54
hernandezi, *Hernandezaster*, 100
hernandezi, *Lajanaster*, 116
herrerae, *Antillaster*, 122
herrerae, *Clypeaster*, 57
herrerae, *Eupatagus* (*Plagiobrissus*), 119
herrerae, *Herreraaster*, 116
herrerae, *Opissaster*, 101
herrerae, *Tholeopelta*, 60
herrerae, *Zanolettia*, 116
herrerae, *Cubanaster*, 66
herrerae, *Oligopygus*, 53
herrerae, *Palmeraster*, 98
Herrerasia, 58
Herreraaster, 116
herrerae, 116
herricki, *Leniechinus*, 63
herscheliana, *Cyrtoma*, 83
hertleini, *Astrodapsis*, 70
herupensis, *Tylocidaris pomifer*, 19
hescheleri, *Miocidaris* (*Serpianotiaris*), 24
Hesperaster, 59
arachnoides, 59
crassus, 59
Hesperocidaris, 17
asteriscus, 17
houstoniana, 17
hesperus, *Pseudechinus*, 41
Hessotiaras, 27
zuberi, 27
Heteraster, 96
adkinsi, 96
aguilerai, 96
alencasterae, 96
cesarensis, 96
checciai, 96
danubiensis, 96
mattaueri, 96
musandamensis, 96
nexilis, 96
Heterobrissus, 123
cyprites, 123
Heteroclypeus, 81
wiedenmayeri, 81

- Heterodiadema*, 27, 29
libyca var. *asiatica*, 27
libycum var. *nigeriense*, 27
ornatum, 29
heteropneustes, *Hemiaster*, 99
Heterosalenia, 24
alloseaui, 24
suatensis, 24
hexagonalis, *Schizaster*, 104
hians, *Holectypus*, 49
hierosolymitanus, *Echinobrissus*, 76
hildae, *Eupatagus*, 115
hilli, *Cardiaster*, 91
hiradicus, *Clypeaster* (*Raphidoclypus*) *ferrens*, var., 59
hirsutispinus, *Cidaris* (*Discocidaris*), 9
hirsutus, *Lissospatangus*, 116
hispidus, *Stereocidaris*, 10
Histocidarinae, 7
Histocidaris, 7
acutispina, 7
australiae, 7
carinata, 7
crassispina, 7
denticulata, 7
formosa, 7
geneffensis, 7
magnifica, 7
mckayi, 7
nuttingi, 7
oranensis, 7
recurvata, 7
hlinnensis, *Trachyaster*, 100
hobarthi, *Scutella*, 67
Holaster, 90, 91
clypeatulus, 91
feralis, 90
feruglioi, 90
hermitei, 90
lerichei, 91
lorioli, 90
marinellii, 90
mortenseni, 91
vanhoepeni, 91
Holaster (*Labrotaxis*), 93
cantianus, 93
Holasteridae, 90
Holasteroidea, 89, 94
Holcopneustes, 100, 101
narindensis, 101
obtritrus, 101
pomeyrolii, 100
Holectypidae, 49
Holectypina, 49
Holectypoida, 49
Holectypus, 49
adkinsi, 49
almeidae, 49
boschmai, 49
bullardi, 49
decoratus, 49
engerrandi, 49
hians, 49
hondoensis, 49
khamirensis, 49
larteti var. *major*, 49
leuthardtii, 49
montalvensis, 49
ovatus, 49
parvus, 49
subpentagonalis, 49
Holectypus (*Caenholectypus*), 49
macrostomus, 49
nanus, 49
Holectypus (*Coenholectypus*), 49
peridoneus, 49
planatus aponensis, 49
holguinensis, *Goniocidaris*, 8
holguinensis, *Hypsoclypus*, 80
hollandi, *Linthia*, 108
hollisi, *Eupatagus*, 114
holmani, *Paleopneustes*, 123
holoambitatus, *Hemiaster*, 99
homala, *Encope*, 72
Homalocidaris, 8
Homoeopetalus, 125
axiologus, 125
Homolampas, 122
lovenioides, 122
hondoana, *Echinometra*, 46
hondoensis, *Holectypus*, 49
hondoensis, *Rachiosoma*, 32
hondoensis, *Salenia*, 25
honorinae, *Cidaris*, 19
hootsi, *Astrodapsis*, 70
hopstatteri, *Rhenechinus*, 2
horridus, *Echinus*, 45
houdardi, *Tithonia*, 90
hourcqi, *Douwillaster*, 96
hourcqi, *Hemiaster*, 100
hourcqi, *Hemicidaris luciensis*, 27
hourcqi, *Mokotibaster*, 98
hourcqi, *Plesiopatagus*, 119
hourcqi, *Polycyphus*, 34
hourcqi, *Pseudopyrina*, 52
hourcqi, *Tetragramma*, 30
houstoniana, *Hesperocidaris*, 17
howsei, *Lepidesthes*, 2
hudspethensis, *Stereocidaris*, 10
huguenini, *Plegiocidaris*, 17
humei, *Schizaster*, 104
humei, *Thylechinus*, 33
humilior, *Psammechinus*, 39
humilis, *Echinarachnius*, 69
hunanensis, *Lovenechinus*, 4
hungarica, *Echinolampas*, 78
hungarica, *Triplacidia*, 43
hungaricus, *Echinolampas* (*Heteroclypeus*), 78
hungaricus, *Radiocyphus*, 38
hunii, *Lepidechinoides*, 3
hunti, *Schizaster* (*Paraster*), 106
hutchinsoni, *Stereocidaris*, 10
hyatorina, *Stereocidaris grandis*, var., 10
Hyattechinus, 3
dixoni, 3
elegans, 3
laudoni, 3
toreumaticus, 3
Hyboclypus, 74
schlumbergeri, 74
hyperocus, *Paraster*, 105
Hypodiadema, 29
dubari, 29
Hyposalenia, 26
Hypselaster, 105
affinis, 105
dolosus, 105
perplexus, 105
hypselus, *Oligopygus*, 53
Hypsoclypus, 80
fuentesii, 80
holguinensis, 80
lamberti, 80
Hypsoheteroclypeus, 81
Hypsoheteroclypus, 81
doma, 81
plagiosomus corsicanus, 81
vicinoconoideus, 81
hystrix, *Calveria*, 20

ibericus, *Palhemiaster*, 101
ibizaensis, *Macraster*, 98
ichnusae, *Stolonoclypus*, 60
Idiobryssus, 116
coelus, 116
Ilarionia, 88
defioei, 88
jeanneti, 88
sindensis madagascariensis, 88
immanis, *Archaocidaris*, 5
impensus, *Phyllacanthus clarkii*, 12
imporata, *Encope michelini*, 72
impresa, *Goniocidaris*, 8
impresa, *Stereocidaris tubifera*, var., 10
impessus, *Printechinus*, 41
impessus, *Temnopleurus hardwickii*, var., 38
incerta, *Genocidaris*, 40
incertus, *Stolonoclypus*, 60
inconstans, *Periaster*, 109
incrassata, *Salenocidaris*, 26
indica, *Goniocidaris*, 8
indica, *Salenocidaris miliaris*, var., 26
indica, *Trigonocidaris*, 43
indicum, *Araeosoma coriaceum*, var., 19
indicum, *Laganum fudsiyama*, var., 64
indolensis, *Protobrissus*, 114
inermis, *Stereocidaris*, 10

- inexpectata*, *Diplopodia*, 29
inezana, *Encope grandis*, 72
inferior, *Discoidea minima*, var., 50
infidus, *Cassidulus*, 83
inflata, *Echinolampas anceps*, var., 79
inflata, *Pauropygus meunieri*, var., 54
inflatus, *Catopygus*, 77
inflatus, *Pliotoxaster*, 96
infulasteroides, *Hagenowia*, 92
ingens, *Abatus*, 106
ingens, *Eupatagus*, 115
inornata, *Microcyphus javanus*, var., 40
insularis, *Encope*, 72
integer, *Hemiaster*, 99
intermedia, *Salenia*, 25
intermedium, *Asthenosoma*, 20
intermedius, *Pseudoastrodapsis*, 71
intricata, *Stereocidaris*, 10
iranicus, *Temnopleurus*, 38
Irenechinus, 40
hentyi, 40
irregularis, *Asterostoma*, 122
irregularis, *Catopygus*, 77
irregularis, *Encope*, 72
irregularis, *Phyllacanthus*, 12
isabellae, *Astrodapsis*, 70
Ismidaster, 93
toulai, 93
isnardi, *Cidaris*, 14
Isolampas, 80
Isomicraster, 97
brueti, 97
danei, 97
jaasi, 97
gregalis, 97
mexicanus, 97
rossi, 97
Isopatagus, 97
obovatus, 97
Isopneustes, 111
israelskyi, *Astrodapsis*, 69
israelskyi, *Lenita*, 63
israelskyi, *Pericosmus*, 102
istrianus, *Arachniopleurus*, 37
italica, *Clypeaster mutellensis*, var., 56

Jacksonaster, 64–66
acunai, 65
acunai var. *nuevitasensis*, 65
depressus, 65
gauthieri, 64
herklotzi, 64
remediensis, 65
sanchezi, 65, 66
sandiegensis, 65
torrei, 65, 66
Jacksonechinus, 2
andrewi, 2
jacksoni, *Devonocidaris*, 4
jacksoni, *Echinocrinus*, 5

jacksoni, *Fibularia*, 61
jacksoni, *Hebertia*, 38
jacksoni, *Hemiaster*, 99
jacksoni, *Lovenechinus*, 4
jacksoni, *Schizobrissus*, 117
jacobi, *Hemiaster*, 99
jacobi, *Magnosia*, 37
jacobi, *Plegiocidaris*, 18
jacqueti, *Echinocyamus*, 62
jacqueti, *Echinolampas*, 79
jacqueti, *Echinopsis*, 37
Jacquiertia, 31, 32
minuta, 32
jaekeli, *Stereocidaris*, 10
jagueyanus, *Pygurus (Echinopygus)*, 76
jaisalmerensis, *Hemicidaris*, 27
jamaicensis, *Metalia*, 118
jamaicensis, *Oligopygus*, 53
jamaicensis, *Victoriaster*, 103
jandrainensis, *Oolopygus*, 77
japonica, *Balanocidaris*, 16
japonica, *Brissopsis*, 113
japonica, *Peronella*, 65
japonicus, *Alloccentrotus*, 47
japonicus, *Palmeraster*, 98
japonicus, *Washitaster*, 101
jarlii, *Brissopsis*, 112
jaumei, *Antillaster*, 122
javana, *Dicoptella*, 42
Javanechinus, 39
erbi, 39
rembangensis, 39
javanensis, *Chelonechinus*, 94
javanus, *Microcyphus*, 40
javanus, *Pliolampas (Tristomanthus)*, 88
javanus, *Printechinus*, 41
jeanneti, *Atlasaster*, 22
jeanneti, *Catopygus*, 77
jeanneti, *Cyclaster*, 114
jeanneti, *Echinocyamus*, 62
jeanneti, *Epiaster*, 97
jeanneti, *Goniopygus*, 36
jeanneti, *Ilarionia*, 88
jeanneti, *Pachycidaris*, 7
jeanneti, *Paracidaris*, 17
jeanneti, *Prenaster*, 109
jeanneti, *Procassidulus*, 86
jeanneti, *Schizaster*, 103
Jeannetia, 34
mortenseni, 34
Jeronia pyrenaica, 94
jesusmariae, *Botriopygus*, 78
joaquinensis, *Polydiadema*, 30
johnsoni, *Astrodapsis*, 70
joleaudi, *Pygaster*, 24
jonesi, *Encope perspectiva*, 72
jonkeri, *Cidaris*, 15
judinkensis, *Hemiaster*, 99
jugulata, *Cidaris dorsata*, var., 15
julii, *Clypeaster*, 56

junior, *Astrodapsis brewerianus*, var., 70
junior, *Fibularia*, 61

kahleri, *Porosoma*, 32
kailensis, *Nucleopygus*, 84
kalizkyi, *Scutellina (Eoscutum) orientalis*, var., 62
kamimura, *Peronella*, 65
kanrupensis, *Echinocyamus*, 62
kanakoffi, *Mellita*, 72
kansasense, *Salenia*, 26
karakachi, *Leiocidaris*, 13
karakachi, *Polydiadema*, 30
karakachi, *Salenidia*, 26
karahakensis, *Schizaster (Paraster)*, 105
karakaschi, *Discoidea*, 50
Karlaster, 71
pirabensis, 71
katsharavai, *Echinocorys*, 91
kawaguchii, *Sinaechinus*, 107
keiense, *Aspidodiadema meijerei*, var., 22
keiense, *Chaetodiadema*, 21
keiense, *Echinocardium*, 122
keiense, *Laganum dickersoni*, var., 64
keiensis, *Microcyphus*, 40
keiensis, *Pericosmus*, 102
keiensis, *Peronella*, 65
helleri, *Cardiaster*, 91
kellersi, *Zenocentrotus*, 46
kellumi, *Cassidulus*, 84
kemencensis, *Clypeaster*, 56
kentensis, *Macraster*, 98
kewi, *Abertella*, 74
kewi, *Astrodapsis*, 69
kewi, *Brissus*, 111
kewi, *Echinarachnius*, 69
kewi, *Periarctus*, 67
kewi, *Schizobrissus*, 118
kewi, *Scutaster vaquerosensis*, var., 74
Kewia, 71
minuta, 71
ugoensis, 71
khamirensis, *Holcetypus*, 49
Kierechinus, 21
kimberi, *Phyllacanthus irregularis*, 12
kinasaensis, *Schizaster*, 103
Kionocidaris, 17
striata, 17
striata var. *teretispina*, 17
kisombyensis, *Rhabdocidaris*, 11
Kleinia, 113
pulchra, 113
kleinpelli, *Echinarachnius gabbii*, 69, 71
kloosi, *Peronella*, 65
kohaticus, *Hemiaster digonus*, var., 98
koreana, *Echinolampas*, 78
krinica, *Rachiosoma*, 32
kselensis, *Pseudodiadema*, 28
kuchkaensis, *Plegiocidaris*, 17
kugleri, *Clypeaster*, 56, 57

- kugleri*, *Echinolampas* (*Psammolampas*), 81
kugleri, *Encope*, 73
kugleri, *Oligopygus*, 53
kugleri, *Opissaster*, 101
kuhni, *Periaster*, 109
kultchitskyi, *Diplopodia*, 29
kumpani, *Donbassechinus*, 5
- labriei*, *Amphiope*, 73
labriei, *Hemiaster*, 99
Labrotaxis, 93
lachesis, *Moirra*, 109
lacostei, *Eodiadema*, 21
ladronensis, *Sismondia javana*, 66
laevis, *Dendraster*, 68
laevis, *Encope*, 72
laevis, *Oligopygus floridanus*, var., 53
laevis, *Prionocidaris bispinosa*, var., 13
laevispina, *Stylocidaris*, 18
laffitei, *Toxaster*, 96
Laganidae, 64
Laganina, 60
laganolithinus, *Echinarachnius* (*Echinarachnius*), 69
Laganum, 64, 66
archerensis, 66
boninense, 64
boschi, 64
centrale, 64
cubanum, 64
depressum var. *alienum*, 64
depressum var. *tenuis*, 64
dickersoni, 64
dickersoni var. *keiense*, 64
dyscritum, 64
eldridgei, 66
equaepectala, 64
fudsiyama var. *africanum*, 64
fudsiyama var. *indicum*, 64
fudsiyama takunagai, 64
fudsiyama untenensis, 64
joubini var. *formosum*, 64
lamberti, 64
leptum, 64
mirabile, 64
ocalanum, 64, 66
pachycraspedum, 64
santanae, 64
lagorgettei, *Paracidaris*, 17
Lajanaster, 116
guevarai, 116
hernandezii, 116
jacksoni var. *minor*, 116
rojasi, 116
venturillae, 116
lajasensis, *Brissoides*, 114
lambayensis, *Procassidulus*, 86
lamberti, *Agassizia*, 106
lamberti, *Antillaster*, 122
lamberti, *Botriopygus*, 78
lamberti, *Brissoides* (*Eupatagus*), 115
lamberti, *Conoclypus*, 53
lamberti, *Echinocorys*, 91
lamberti, *Echinolampas*, 80
lamberti, *Gitolampas*, 87
lamberti, *Goniopygus*, 36
lamberti, *Gymnocidaris*, 27
lamberti, *Hemiaster*, 99
lamberti, *Hypoclypus*, 80
lamberti, *Laganum*, 64
lamberti, *Lampadaster*, 93
lamberti, *Lutetiaster*, 109
lamberti, *Noetlingaster*, 34
lamberti, *Nudobrissus*, 124, 125
lamberti, *Opechinus* (*Pseudopechinus*), 41
lamberti, *Orchoporus*, 68
lamberti, *Paratinanthus*, 59
lamberti, *Peronella*, 65
lamberti, *Plagiobrissus*, 118
lamberti, *Plegiocidaris*, 17
lamberti, *Porosoma*, 32
lamberti, *Salenia*, 25
lamberti, *Seunaster*, 94
lamberti, *Stigmatopygus*, 83
lamberti, *Victoriaster*, 103
Lambertona, subgenus, 103
lamegoi, *Clypeaster*, 56
lamellata, *Stereocidaris scepriferoides*, var., 10
lamonti, *Ectinechinus*, 3
Lampadaster, 93
lamberti, 93
lampassiformis, *Pygurus*, 75
Lamprechinus, 40
sculptus var. *hawaiiensis*, 40
lanceolata, *Stereocidaris scepriferoides*, var., 10
langeensis, *Stegopygus*, 75
langei, *Diplopodia*, 29
Lanieria, 50
uvaldana, 50
Lanternarius, 19
latens, 19
lasti, *Brissus*, 111
lastroensis, *Salenia similis*, 26
lata, *Echinocorys obliquus*, 91
lata, *Mellita*, 72
lata, *Seunaster georgicus*, var., 94
latens, *Lanternarius*, 19
latesulcatus, *Hemiaster*, 99
latiambulacra, *Mellita*, 72
Laticlypus, 75
giganteus, 75
latidunensis, *Temnopleurus*, 38
latidunensis, *Brissus*, 111
laticlypus, *Micraster* (*Paramicraster*), 111
laticlypus, *Stereocidaris jaekeli*, var., 10
latipetala, *Pauropygus meunieri*, var., 54
latissima, *Metalia*, 118
latus, *Pauropygus*, 54
latus, *Plagiobrissus*, 119
laudoni, *Hyattechinus*, 3
lazicus, *Seunaster*, 94
leanderensis, *Salenia*, 26
leckwycki, *Pseudocidaris*, 28
Lefortia, 83
trojana, 83
Lefortia (*Procassidulus*), 86
barrabei, 86
legindensis, *Echinocorys*, 91
lehmani, *Stigmatopygus*, 83
Leiocidaris, 13
cojimarensis, 13
cottreai, 13
karakachi, 13
leoni, 13
madrugensis, 13
mortenseni, 13
rollieri, 13
sanfilippoi, 13
spinidentatus, 13
stefaninii, 13
thiebaudi, 13
tobleri, 13
tripolitana, 13
Leiopodina, 23
cienagensis, 23
Leiosoma, 35
chondra, 35
guadalupense, 35
Leiostomaster, 102
bosei, 102
lemoinei, *Goniopygus*, 36
lemoinei, *Plegiocidaris*, 17
lemoinei, *Stomechinus*, 33
Lenicyamidia, 63
compta, 63
leniechinus, 63
herricki, 63
Lenita, 63
israelskyi, 63
lenneanus, *Lepidocentrus*, 3
Lenticidaris, 7
utahensis, 7
leognanensis, *Scutella*, 67
leonensis, *Cardiaster*, 91
leoni, *Leiocidaris*, 13
Lepidechinoides, 3, 4
hunti, 3
whitnalli, 4
Lepidechinus, 4
belgicus, 4
cooperi, 4
Lepidesthes, 2
alta, 2
formosa, 2
grandis, 2
howsei, 2

- martini*, 2
warrenensis, 2
 Lepidesthidae, 2
 Lepidocentridae, 3
Lepidocentrus, 3
lenneanus, 3
mammillatus, 3
thomasi, 3
Lepidocidaris, 6
squamosa var. *anglica*, 6
lepidus, *Paleopneustes*, 123
leptosorum, *Schizaster*, 104
Leptarbacia, 30
andreui, 30
leptum, *Laganum*, 64
lerichei, *Holaster*, 91
lethe, *Moir*, 109
leupoldi, *Dicoptella*, 42
leuthardti, *Holectypus*, 49
Leviechinus, 95
levis, *Pseudocidaris*, 28
libycus, *Clypeaster*, 56
lineata, *Prionocidaris baculosa*, var., 13
lineatus, *Coptechinus*, 41
lineatus, *Ortholophus*, 41
Linopneustes, 123
brachypetalus, 123
Linthia, 107–109
aguayoi, 108
alta, 108
arabica, 108
atolladosae, 108
avilensis, 108
balboi, 108
boreasteria, 108
brodermanni, 108
bulgarica, 108
caraiibensis, 108
cretacica, 108
dainellii, 108
darderi, 108
desioi, 108
garciai, 108
gibba, 108
gonzalezmunoz, 109
hanoverensis, 108
hargeisensis, 108
heimei, 108
hollandi, 108
maverickensis, 108
mortenseni, 108
mortenseni var. *depressa*, 108
mullerriedi, 109
obesa, 107
praenipponica, 108
pseudoglobalis, 108
rolandi, 108
somaliensis, 108
sudanensis var. *brevipetala*, 108
suitensis, 108
taiwanensis, 107
trechmanni, 108
yessoensis, 108
Linthia (*Lutetiaster*), 109
lipparinii, *Echinocyamus*, 62
lirata, *Polytaxicidaris*, 6
Lissocidaris, 17
fusca, 17
Lissospatangus, 116
hirsutus, 116
llagunoi, *Schizaster*, 104
lobatus, *Clypeaster subdepressus*, 55
lobosa, *Salenia*, 25
longicollis, *Stylocidaris*, 18
longipetalus, *Eupatagus*, 115
longispina, *Cidaris*, 15
longispina, *Eurocidaris nutrix*, var., 8
longispina, *Strongylocentrotus intermedium*, f., 46
lopezi, *Porocidaris*, 13
lopezrosi, *Clypeaster*, 58
loppei, *Paracidaris*, 17
loretoensis, *Encope*, 73
lorioli, *Archiacia*, 83
lorioli, *Dorocidaris*, 15
lorioli, *Holaster*, 90
lorioli, *Opechinus* (*Pseudopechinus*), 41
Loriolia, 28, 29
clarki, 29
inaequalis var. *bathonica*, 29
rosana, 29
lourdinensis, *Pygaster*, 24
Lovenechinus, 4
gordoni, 4
hunanensis, 4
jacksoni, 4
Lovenia, 89, 121, 122
alabamensis, 121
baixadoleitensis, 89, 122
doederleini, 121
doederleini var. *acuminata*, 121
gigantae, 121
hawaiiensis, 121
macrotuberculata, 121
mexicana, 121
minihagali, 121
mortenseni, 121
similis, 121
Loveniidae, 121
Lovenilampas, 89, 122
lovenioides, *Homolampas*, 122
lovenioides, *Megapetalus*, 123
luacesi, *Procassidulus*, 86
ludbrookae, *Heliocidaris*, 46
lummaui, *Brissoptagus*, 112
lungauensis, *Triadocidaris*, 7
Lutetiaster, 109
lamberti, 109
maccagnoi, 109
lutkeni, *Clypeaster* (*Stolonoclypus*), 59
Lytechinus, 43, 44
coreyi, 44
crassus, 44
milleri, 44
okinawa, 44
thieryi, 43
variegatus var. *pallida*, 43
variegatus plurituberculatus, 43
williamsi, 43
maastrichtensis, *Winkleria*, 33
mabahissae, *Cidaris*, 14
macari, *Rhynchopygus*, 85
maccagnoi, *Lutetiaster*, 109
macfadyeni, *Brightonia*, 95
macfadyeni, *Hemicidaris* (*Hypodiadema*), 29
macneili, *Echinocyamus*, 62
macneili, *Tylocidaris*, 19
Macraster, 97, 98
denisonensis, 98
ibizaensis, 98
kentensis, 98
meghilensis, 98
obesus, 98
obtritrus, 98
pseudoelegans, 98
roberti var. *ovatus*, 98
solitariensis, 98
triangularis, 97
macroholcus, *Washitaster*, 98
Macrolampas, 81
macropetalus, *Rhynobrissus*, 119
Macropneustes, 116–120
altus, 117
angustus, 117
brodermanni, 117
carolinensis, 120
dubius, 117
dyscritus, 116
fischeri, 118
gomezmazae, 117
parvus, 117
rochi, 117
sinuosus, 117
stenopetalus, 117
trevisani, 117
Macropneustes (*Deakia*), 117
macrostoma, *Echinolampas*, 79
macrostomus, *Holectypus* (*Caenholectypus*), 49
macrotuberculata, *Lovenia*, 121
maculosa, *Stylocidaris*, 18
madagascariensis, *Echinocorys tenuituberculatus*, var., 92
madagascariensis, *Gymnocidaris*, 27
madagascariensis, *Hemiaster*, 99
madagascariensis, *Ilarionia sindensis*, 88
madagascariensis, *Pedina*, 22
madrugensis, *Dorocidaris*, 16

- madrugensis*, *Goniopygus*, 36
madrugensis, *Hemiaster*, 99
madrugensis, *Leiocidaris*, 13
madrugensis, *Proccassidulus* (*Australan-*
thus), 82
madurae, *Opechinus*, 41
inadurensis, *Echinolampas*, 78
nagi, *Goniocidaris*, 8
magistrus, *Strongylocentrotus*, 47
magna, *Cidaris*, 15
magnei, *Rhyncholampas*, 85
magnificornicolus, *Stomechinus*, 33
magnifica, *Astropyga*, 21
magnifica, *Histocidaris*, 7
magnificus, *Pericosmus*, 102
magnificus, *Tripneustes*, 44
magniventer, *Somaliaster*, 94
Magnosia, 37
cottreaui, 37
jacobi, 37
mortenseni, 37
ternieri, 37
magnus, *Atelospatangus*, 120
mahafalensis, *Cidaris*, 14
mairei, *Stegaster*, 93
major, *Cyrtocidaris tenuispina*, var., 9
major, *Hemicidaris crenularis*, var., 27
major, *Holectypus larteti*, var., 49
major, *Xenocidaris mariaeburgensis*,
praemut., 6
majungensis, *Cidaris*, 14
makiyamai, *Brissopsis*, 113
malavassii, *Plagiobrissus*, 118
malayana, *Conolampas*, 82
malayanus, *Centrostephanus asteriscus*,
var., 21
malayanus, *Proccassidulus*, 86
malindiensis, *Prionocidaris*, 14
malumbangensis, *Clypeaster*, 56
malwaensis, *Echinobrissus*, 76
mammillatus, *Lepidocentrus*, 3
mamontoffi, *Echinocorys*, 91
manhattanensis, *Archaeocidaris*, 5
mansfieldi, *Phymotaxis*, 34
manuelitae, *Coraster*, 95
marcaisi, *Echinolampas*, 79
marci, *Schizaster*, 104
Maretia, 120–121
cordata, 121
elevata, 120
estenozi, 121
parvituberculata, 121
mariaeburgensis, *Xenocidaris*, 6
marianae, *Parasalenia*, 47
marianensis, *Eupatagus*, 114
Mariana, 117
euglypha var. *brevistella*, 117
marianica, *Chondrocidaris*, 12
maribonensis, *Clypeaster*, 57
marinanus, *Clypeaster*, 57
marinellii, *Holaster*, 90
marioi, *Echinolampas*, 79
marionis, *Notechinus*, 42
marizensis, *Plegiocidaris*, 18
maropiensis, *Echinocyamus*, 62
marquassuzaai, *Valsalenia*, 26
marquerensis, *Clypeaster*, 56
marroquinensis, *Mauritanaster*, 117
marshalli, *Prionocidaris*, 14
marsupialis, *Antipneustes*, 107
martellii, *Spatagoides*, 92
Martinechinus, 40
molengraaffi, 40
martini, *Lepidesthes*, 2
martini, *Peronella*, 65
Martinosisgra, 92
elongata, 92
masovtensis, *Tylocidaris pomifer*, var., 19
matesovi, *Conulus*, 51
mathildae, *Acrosalenia*, 24
mathuri, *Salenia*, 25
matleyi, *Rhynchopygus*, 85
mattaueri, *Heteraster*, 96
mattaueri, *Toxaster*, 96
maugerii, *Periaster*, 109
maulwarensis, *Clypeaster*, 56
Mauritanaster, 117
depressus, 117
marroquinensis, 117
mauritanicus, *Diplocidaris*, 19
mauritiana, *Stylocidaris bracteata*, var.,
17
mauritanus, *Pericosmus*, 102
mauritiense, *Goniodiademata*, 21
maurus, *Toxaster*, 96
maverickensis, *Linthia*, 108
maximus, *Brisaster*, 107
mayri, *Rhabdocidaris*, 11
mazetieri, *Psephochinus*, 34
mcglameryae, *Boletechinus*, 35
mcglameryae, *Hardouinia*, 83
mckayi, *Histocidaris*, 7
media, *Scutella*, 67
mediterraneus, *Proraster atavus*, var., 110
Medochechinus, 37
castexi, 37
daguini, 37
faberi, 37
Meekechinus, 3
herbornensis, 3
Megacidaris, 12
cottreaui, 12
megaloplax, *Temnotrema siamense*, var.,
42
Megalopoda, 3
Megalopodacea, 1, 3
Megapatagus, 115
depressus, 115
franciscanus, 115
turibacoensis, 115
Megapetalus, 123
lovenioides, 123
meghilensis, *Macraster*, 98
melanostomus, *Pericosmus*, 102
melitensis, *Coelopleurus*, 36
Mellita, 72
aclinensis, 72
grantii, 72
kanakoffi, 72
lata, 72
latiambulacra, 72
notabilis, 72
platensis, 72
quinqüesperforata var. *tenuis*, 72
Mellitella, 73
Mellitidae, 72
melo, *Microcyphus*, 40
melo, *Pedinopsis*, 21, 29
Melonechinus, 4
chuseni, 4
heckeri, 4
menchikoffi, *Diplocidaris*, 19
menchikoffi, *Discoidea*, 50
menchikoffi, *Echinolampas*, 79
Menocidaris, 18
compta, 18
Menopygus, 125
hebbriensis, 125
Meoma, 117
antiqua, 117
cadenati, 117
caobaensis, 117
frangibilis, 117
Meoma (Plethotaenia), 117
Meoma (Schizobrissus), 117
mercedensis, *Cassidulus*, 84
mercieri, *Plegiocidaris*, 18
meridionalis, *Brissus (Allobrissus)*, 111
meridionalis, *Cidaris cidaris*, var., 14
meridionalis, *Grammechinus*, 40
Merocidaris, 19
Merriamaster, 68
merriami, *Palaechinus*, 4
merrilli, *Peronella*, 65
meslei, *Cidaris*, 14
Mespilia, 40
globulus var. *albida*, 40
mestieri, *Cassidulus*, 84
mestrei, *Echinolampas*, 78
Metacrosalenia, subgenus, 24
pseudocidaroides, 24
Metalia, 118
cartagensis, 118
dubia, 118
jamaicensis, 118
latissima, 118
palmeri, 118
pelagica, 118
waylandi, 118
Metaporinus (Tithonia), 90

- praeconvexa*, 90
meurevillensis, *Archaeocidaris*, 5
mexicana, *Lovenia*, 121
mexicana, *Pyrina*, 51
mexicanus, *Dendraster*, 68
mexicanus, *Eupatagus*, 114
mexicanus, *Isomicraster*, 97
micca, *Chorocidaris*, 11
micra, *Porpitella*, 63
Micraster, 110
burgiensis, 110
coravium, 110
depressus, 110
desori, 110
elevatus, 110
gappi, 110
piriformis, 110
subglobosus, 110
trangahyensis, 110
uddeni, 110
vistulensis, 110
Micraster (Isopneustes), 111
eysdenensis, 111
montensis, 111
Micraster (Micraster), 110
bibicensis, 110
schroederi planus, 110
Micraster (Paramicraster), 111
craoviensis, 111
latior, 111
Micraster (Plesiaster), 119
americanus, 119
Micrasteridae, 110
Micrasterina, 110
Microcyphus, 40
ceylanicus, 40
excentricus, 40
javanus, 40
javanus var. *inornata*, 40
keiensis, 40
maculatus var. *godeffroyi*, 40
melo, 40
pulchellus, 40
rousseaui var. *purpuratus*, 40
Micropedina, 23
olisiponensis var. *gongilensis*, 23
micropetala, *Brissopsis*, 112
micropetalus, *Clypeaster*, 55
micropora, *Trigonocidaris*, 43
Micropyga, 22
nigra, 22
Micropygidae, 22
microstoma, *Acrosalenia*, 24
Microstoma, *Pygaster*, 24
microthyroides, *Echinarachnius (Echinarachnius)*, 69
migiurtina, *Migliorinia*, 118
migiurtina, *Recrosalenia*, 25
migiurtinus, *Brissoides*, 115
migiurtinus, *Echinolampas*, 80
Migliorinia, 118
migiurtina, 118
migliorinii, *Balanocidaris*, 16
migliorinii, *Brissoides*, 115
migliorinii, *Echinolampas (Cylindrolampas)*, 80
migliorinii, *Echinolampas*, 80
migliorinii, *Epiaster*, 97
migliorinii, *Pharaonaster*, 118
migliorinii, *Pseudocidaris*, 28
milleri, *Lytechinus*, 44
millosevichi, *Botriopygus*, 78
millosevichi, *Clypeaster*, 57
millosevichi, *Noetlingaster*, 34
millosevichi, *Toxaster*, 95
miniaceus, *Clypeaster*, 55
Minicidaris, 7
minihagali, 7
minihagali, *Clypeaster*, 56
minihagali, *Lovenia*, 121
minihagali, *Minicidaris*, 7
minihagali, *Schizaster*, 103
minihagali, *Strongylocentrotus*, 47
minima, *Eurysalenia*, 24
minoensis, *Astriclypeus manni*, 73
minoensis, *Echinarachnius*, 69
minor, *Lajanaster jacksoni*, var., 116
minor, *Neobothriocidaris*, 2
minuta, *Fibularia*, 61
minuta, *Jacquiertia*, 32
minuta, *Kewia*, 71
minuta, *Pseudopyrina*, 52
minutus, *Brissoides*, 114
minutus, *ProcaSSIDulus*, 86
minutus, *Trachyaster*, 100
miocaenicus, *Brissus (Allobrissus)*, 111
Miocidaridae, 6
Miocidaris, 6
barzaviae, 6
connorsi, 6
curmaturi, 6
dubari, 6
pakistanensis, 6
permica, 6
platyacantha, 6
spinulifera, 6
tenuispina, 6
timorensis, 6
turneri, 6
Miocidaris (Serpianotiaris), 24
hescheleri, 24
mirabile, *Laganum*, 64
mirabilis, *Mirechinus*, 44
mirabilis, *Spatagobrissus*, 119
mirandaensis, *Astrodapsis schencki*, 70
mirandus, *Cidaris*, 15
Mirechinus, 44
mirabilis, 44
mirus, *Dendraster gibbsii*, var., 68
mississippiensis, *Catopygus*, 77
Mistechinus, subgenus, 33
mitis, *Cassidulus*, 83
miyazakiensis, *Schizaster*, 103
moabiticus, *Cardiaster*, 91
moianensis, *Clypeaster*, 58
Moira, 109
adamthi, 109
lachesis, 109
lethe, 109
obesa, 109
Moira (Moiropsis), 109
Moiropsis, subgenus, 109
depressa, 109
Mokotibaster, 98
hourcq, 98
molengraaffi, *Martinechinus*, 40
molineti, *Dorocidaris*, 15
mombasanus, *Clypeaster*, 56
Monophorasteridae, 71
montagnai, *Scutella*, 67
montalvensis, *Holcotypus*, 49
montanus, *Albertychinus*, 3
montensis, *Micraster (Isopneustes)*, 111
moonii, *ProcaSSIDulus*, 86
moorefieldi, *Archaeopneustes*, 123
morganensis, *Ortholophus*, 41
morlini, *Schizaster*, 103
Moronaster, 123
moronensis, 123
moronensis, *Clypeaster*, 57
moronensis, *Echinolampas (Progonolampas)*, 81
moronensis, *Moronaster*, 123
moronensis, *Schizaster*, 104
Mortensenaster, 119
barthouxi, 119
mortenseni, *Antillaster*, 122
mortenseni, *Araeosoma*, 20
mortenseni, *Epiaster*, 97
mortenseni, *Fernandezaster*, 116
mortenseni, *Goniocidaris*, 8
mortenseni, *Hemidiadema*, 38
mortenseni, *Holaster*, 91
mortenseni, *Jeannetia*, 34
mortenseni, *Leiocidaris*, 13
mortenseni, *Linthia*, 108
mortenseni, *Lovenia*, 121
mortenseni, *Magnosia*, 37
mortenseni, *Oligopodia*, 125
mortenseni, *Phymosoma*, 31
mortenseni, *Pyrina*, 51
mortenseni, *Taimanawa*, 120
moscovensis, *Hemiaster*, 98
mosquensis, *Archaeocidaris*, 5
mossoni, *Agassizia (Anisaster)*, 106
mossomi, *Thylechinus (Gagara)*, 44
mossoroensis, *Parapygus*, 82
motobu, *Peronella*, 65
moutieri, *Clitopygus*, 76
mullerriedi, *Cidaris*, 14
mullerriedi, *Conulus*, 51

- mullerriedi*, *Linthia*, 109
mullerriedi, *Oligopygus*, 53
multiconcava, *Scutella*, 67
multidentatus, *Echinus*, 45
multiforme, *Palaeodiadema*, 21
multiplora, *Phalacrocidaris japonica*, 11
multiplorus, *Triadechinus*, 35
multispinus, *Spatangus*, 120
multituberculata, *Paramaretia*, 121
Mundaster, 103
tentugalensis, 103
munozii, *Echinolampas*, 79
munozii, *Schizaster*, 104
munshiensis, *Galeaster*, 92
murardi, *Galerolampas*, 85
Murraechinus, 36
murrayana, *Conolampas*, 82
murrayensis, *Asaphechinus*, 39
murrayensis, *Goniocidaris*, 8
musandamensis, *Heteraster*, 96
mutabilis, *Hemiaster*, 99
- Nacospatangus*, 121
naganoensis, *Echinarachnius*, 69
naganoensis, *Sismondia*, 65, 69
nalivikini, *Scutellina (Eoscutum) orientalis*, var., 63
nana, *Hemiaster madagascariensis*, var., 99
nancei, *Oligopygus*, 53
Nannolampas, 125
nanus, *Holoeleptus (Caenholeleptus)*, 49
nanus, *Stomechinus polyporus*, 33
Narindechinus, 32
checcchiai, 32
narindensis, *Hemiaster*, 99
narindensis, *Holcopneustes*, 101
narindensis, *Schizaster*, 104
nascaensis, *Stereocidaris*, 10
nazkii, *Turangaster*, 95
neglectus, *Discoidea*, 50
neltneri, *Proccassidulus*, 86
Neobothriocidaris, 2
minor, 2
peculiaris, 2
Neocatopygus, 88
caobaense, 88
Neolaganidae, 66
Neolaganum, 66
durhami, 66
Neolampadidae, 125
Neolampadina, 125
Neolampadoida, 125
Neolampas, 125
tenera, 125
Neopatagus, 88, 125
Neorumphia, 66
nervosa, *Spherotiaris meandrina*, var., 28
neumayri, *Firmacidaris*, 48
neuvillei, *Echinanthus*, 89
- neuvillei*, *Echinolampas*, 80
neuvillei, *Psammechinus*, 45
newtoni, *Psephochinus*, 34
nexilis, *Heteraster*, 96
nicklesi, *Hemipneustes*, 93
nigeriense, *Heterodiadema libycum*, var., 27
nigra, *Micropyga*, 22
nigroalba, *Stereochinus neumayeri*, var., 46
nigrobrunnea, *Prionocidaris bispinosa*, var., 14
Niponaster, 71
niponica, *Scutella*, 67
Nipponaster, 71
nipponica, *Salenia*, 25
nipponicus, *Astrodapsis*, 69, 71
nipponicus, *Eupatagus*, 114
nitidiusculus, *Pseudoastrodapsis*, 71
nitidus, *Centrostephanus*, 21
nodosa, *Plegiocidaris morierei*, var., 18
Noetlingaster, 34
globulus, 34
hemisphaericus, 34
lamberti, 34
millosevichi, 34
sanfilippoi, 34
notabilis, *Mellita*, 72
notabilis, *Polysalenia*, 25
notabilis, *Tarphypygus*, 63
Notechinus, 42
marionis, 42
notha, *Clypeaster reidii*, var., 57
notium, *Temnotrema*, 42
Notocidaris, 8
platyacantha var. *contracta*, 8
remigera, 8
spinosa, 8
vellai, 8
Notolampas, 125
flosculus, 125
novaki, *Trematopygus*, 77
novaresei, *Clypeaster*, 57
novemprovincialis, *Salenia*, 25
novoi, *Stegaster*, 93
Nucleolites, 76
bakalovi, 76
simpaticus, 76
tornacensis, 76
wilderdae, 76
Nucleolitidae, 76
Nucleopygus, 84
atlanticus brevior, 84
gallagheri, 84
geayi, 84
kailensis, 84
lebescontei var. *ancegavensis*, 84
piveteaui, 84
sanctaluciaae, 84
tamarindensis, 84
- nuda*, *Gymnocidaris pustulosa*, var., 27
nuda, *Salmacis*, 42
Nudechinus, 44
ambonensis, 44
ambonensis var. *purpurascens*, 44
rubripunctatus, 44
scotiopremnus var. *australiensis*, 44
Nudobrissus, 124, 125
lamberti, 124, 125
nudum, *Araeosoma owstoni*, 19
nudus, *Tatechinus*, 42
nuevitasensis, *Echinolampas*, 79
nuevitasensis, *Jacksonaster acunai*, var., 65
nuevitasensis, *Prenaster*, 109
nuevitasensis, *Paraster*, 105
nummus, *Clypeaster (Stolonoclypeus)*, 60
nunlisti, *Paracidaris*, 17
nunlisti, *Rhabdocidaris*, 11
nuptialis, *Astropyga*, 21
nuragica, *Amphiope*, 73
nuttingi, *Histocidaris*, 7
- obesa*, *Linthia*, 107
obesa, *Moiria*, 109
obesus, *Macraster*, 98
obliqua, *Brissopsis*, 112
oblonga, *Peronella*, 65
oblonga, *Pseudomaretia*, 121
oblonga, *Scutellina transylvanica*, var., 63
oblongus, *Pericosmus*, 102
oblongus, *Phyllobrissus*, 77
obovatus, *Isopatagus*, 97
obtritus, *Holcopneustes*, 101
obtritus, *Macraster*, 98
ocalanum, *Laganum*, 64, 66
ocalanus, *Eupatagus (Plagiobrissus)*, 119
ocalanus, *Psammechinus*, 45
ocalanus, *Schizaster (Linthia)*, 108
occidentalis, *Apatopygus*, 88
occidentalis, *Scutella checcchiai*, var., 67
occlusa, *Salenocidaris profundi*, var., 26
octoporus, *Strongylocentrotus*, 47
ogormani, *Echinocorys*, 91
ohshimai, *Psychocidaris*, 18
okinawa, *Clypeaster*, 56
okinawa, *Lytechinus*, 44
okinawa, *Oligopodia*, 125
olbrechtsi, *Ditremaster*, 100
oldhami, *Hemiaster*, 99
oligocenicus, *Agassizia lamberti*, var., 106
oligocenicus, *Anomalanthus*, 58
oligocenicus, *Opissaster (Ditremaster)*, 100
Oligopodia, 125
mortenseni, 125
okinawa, 125
tapeina, 125
oligoporus, *Opechinus (Pseudopechinus)*
percultus, var., 41
Oligopygidae, 53

- Oligopygus*, 53
alvarezi, 53
camagueyensis, 53
christi, 53
circularis, 53
collignoni, 53
colsoni, 53
costuliformis, 53
cubensis, 53
curasavica, 53
elongatus, 53
floridanus var. *laevis*, 53
herrerai, 53
hypselus, 53
jamaicensis, 53
kugleri, 53
mullerriedi, 53
nancei, 53
ovumserpentis var. *baldryi*, 53
pinguis, 53
putnami, 53
rotundus, 53
sanchezi, 53
sanjosephi, 53
tuberculatus, 53
zyndeli, 53
olisiponensis var. *gongilensis*, *Micrope-*
dina, 23
oliveirai, *Anisopetalus*, 85
oliveirai, *Clypeaster*, 55
oliveirai, *Hemiaster*, 99
omanensis, *Echinolampas*, 78
oolithicus, *Hemicidaris luciensis*, 27
Oolopygus, 77
convexus, 77
jandrainsensis, 77
Oopneustes, subgenus, 124
Opechinus, 40, 41
albus, 40
albus var. *virescens*, 40
cheribonensis, 41
collignoni, 41
madurae, 41
Opechinus (*Pseudopechinus*), 41
lamberti, 41
lorioli, 41
percultus var. *oligoporus*, 41
operta, *Austrocidaris*, 8
Opissaster, 100, 101
auraduensis, 101
cantabriae, 101
derasmoi, 101
derasmoi var. *angulatus*, 101
farquharsoni, 101
herreriae, 101
kugleri, 101
rozieri, 101
somaliensis, 101
Opissaster (*Ditremaster*), 100
oligocenicus, 100
oranensis, *Histocidaris*, 7
orbiculata, *Scutellina transsylvania*, var.,
 63
Orbignyana, 89
quenstedti, 89
orbignyiformis, *Rhabdocidaris*, 11
Orchoporus, 68
lamberti, 68
orchoterenai, *Pseudopyrina*, 52
order uncertain, 19, 125
orientalis, *Paraster*, 105
orientalis, *Plegiocidaris*, 17
orientalis, *Scutellina (Eoscutum)*, 62
ornatum, *Heterodiadema*, 29
Ornithaster, 102
cordiformis, 102
sokolovi, 102
Orthanthus, 59
Ortholophus, 41
bittneri, 41
lineatus, 41
morganensis, 41
venustus, 41
Orthopsida, 47
Orthopsidae, 47
Orthopsis, 47
aguilerai, 47
bahiaensis, 47
casanovi, 47
comalensis, 47
pomeraniae, 47
royoi, 47
sanfilippoi, 47
titicacana, 47
oshimensis, *Clypeaster*, 55
Oustechinus, 90
basseae, 90
ovalis, *Astrodapsis*, 70
ovalis, *Epiaster*, 97
ovalis, *Eurypatagus*, 124
ovalis, *Peronella (Peronellites)*, 65
ovalis, *Pygorhynchus*, 78
ovatus, *Clypeaster*, 57
ovatus, *Holectypus*, 49
ovatus, *Macraster roberti*, var., 98
oviformis, *Catopygus*, 88
ovumserpentis, *Echinolampas*, 54
owstoni, *Brisaster*, 107
Pachycidaris, 7
bergouniouxii, 7
jeanneti, 7
piveteaui, 7
thieryi, 7
pachycraspedum, *Laganum*, 64
pacificus, *Plagiobrissus*, 118
pakistanensis, *Miocidaris*, 6
Palaechnidae, 4
Palaechinoidea, 4
Palaechinus, 4
merriami, 4
tetrastichus, 4
Palaeechinus, 4
canadensis, 4
globulus, 4
sprengi, 4
visetensis, 4
Palaeodiadema, 21, 22
gauthieri, 22
multiforme, 21
Palaeolampas, 79, 81
alta, 81
elongata, 79
elongatus, 81
plateia, 81
Palaeostomatidae, 102
palaestinense, *Cyphosoma*, 31
palatus, *Evechinus*, 46
paleocaenica, *Porpitella*, 63
Paleoechinoneus, 50
hanmai, 50
Paleopneustes, 123, 124
elevatus, 124
holmani, 123
lepidus, 123
periturus, 123
psoidoperiodus, 123
tholiformis, 123
Paleopneustes (Oopneustes), 124
priscus, 124
Paleostoma, 102
rochi, 102
Palhemiaster, 101
ibericus, 101
pallescens, *Temnotrema*, 42
pallida, *Lytechinus variegatus*, var., 43
pallidus, *Gymnechinus*, 43
Palmeraster, 98
herrerai, 98
japonicus, 98
palmeri, 98
zanolletii, 98
palmeri, *Abertella*, 74
palmeri, *Brissoides*, 114
palmeri, *Cardiaster*, 91
palmeri, *Clypeaster*, 57
palmeri, *Diadema*, 21
palmeri, *Ellipsechinus*, 46
palmeri, *Metalia*, 118
palmeri, *Palmeraster*, 98
palmeri, *Tarphygygus*, 63
palmirensis, *Hemicidaris*, 27
panamensis, *Dorocidaris*, 17
pappi, *Schizaster*, 104
Paracentrotus, 45
agulhensis, 45
grandis, 45
Paracidaris, 17
jeanneti, 17
lagorgettei, 17

- loppei*, 17
nunlisti, 17
Paradicoptella, 43
Paradoxechinus, 41
paradoxus, *Anorthopygus*, 49
paradoxus, *Zenocentrotus*, 46
paraensis, *Echinolampas*, 78
paragoga, *Echinolampas*, 79
Paraheteraster, 98
parahybensis, *Cyphosoma riograndensis*, var., 31
parahybensis, *Pyrina*, 51
Paralampas, 85, 86
besairiei, 85
conceptionis, 86
parallelus, *Hemister*, 99
Paramaretia, 121
multituberculata, 121
Paramicraster, subgenus, 111
Paraphormosoma, 20
Parapygus, 82
mossoroensis, 82
Parasalenia, 47
gosseleti, 47
gratiosa var. *boninensis*, 47
marianae, 47
Parasalenidae, 47
Parascutella, 67
Paraster, 105
camagueyanus, 105
cubitabellae, 105
delgadoi, 105
erythraeus, 105
eustatii, 105
hyperocus, 105
nuevitasensis, 105
orientalis, 105
pastelilloensis, 105
pinarensis, 105
saipanicus, 105
sierrai, 105
tampicoensis, 105
tschopi, 105
Parastomechinus, 34
brightoni, 34
Paratınanthus, 59
lamberti, 59
Paratrema, 41
parens, *Astrodapsis major*, var., 70
Parhabdocidaris, 12
paromaica, *Runa*, 74
paronai, *Hemister*, 99
paronai, *Phymosoma*, 31
parravanoi, *Conulus*, 51
parva, *Gauthieria*, 31
parva, *Scutella almerai*, 66
parvipetalus, *Pauropygus*, 54
parviporus, *Echinocyamus*, 62
parvispina, *Heliocidaris erythrogramma*, var., 46
parvituberculata, *Maretia*, 121
parviungulatum, *Araeosoma*, 19
parvula, *Echinolampas*, 80
parvula, *Hemipedita*, 31
parvus, *Bothriocidaris*, 2
parvus, *Echinarachnius (Kewia)*, 71
parvus, *Holectypus*, 49
parvus, *Macropneustes*, 117
parvus, *Platybrissus*, 124
parvus, *Prenaster*, 109
parvus, *Xenechinus*, 5
pasionensis, *Pygurostoma*, 83
pastelilloensis, *Paraster*, 105
patae, *Clypeaster*, 57
patella, *Scutellina*, 63
pateriformis, *Clypeaster (Coronanthus)*, 58
paucipora, *Cyamidia*, 61
paucispinum, *Araeosoma*, 19
paucispinum, *Hemiphormosoma*, 20
paucituberculatus, *Coelopleurus*, 36
paulinoi, *Clypeaster*, 56
Pauropygus, 54
altus, 54
clarki, 54
convexus, 54
cylindricus, 54
elevatus, 54
latus, 54
meunieri var. *inflata*, 54
meunieri var. *latipetala*, 54
meunieri var. *sulcata*, 54
parvipetalus, 54
platypetalus, 54
pyramidoides, 54
rotundus, 54
rugosus, 54
stefanii, 54
stenopetalus, 54
peculiaris, *Neobothriocidaris*, 2
Pedina, 22
eocenica, 22
madagascariensis, 22
Pedinidae, 22
Pedinoida, 22
Pedinopsis, 21, 29, 30
engerrandi, 29
melo, 21, 29
texana, 29
yarboroughi, 30
pelagica, *Metalia*, 118
pelatensis, *Amphiope bioculata*, var., 73
pelettensis, *Cidaris*, 14
peloria, *Phymosoma*, 30
Peltastes, 26
ultimus, 26
peltata, *Goniocidaris (Discocidaris)*, 9
pentagona, *Scutellina (Eoscutum) orientalis*, var., 63
pentagona, *Haimea*, 54
pentagona, *Hebertia*, 38
pentagonalis, *Echinocorys*, 91
pentagonalis, *Schizaster*, 104
pentagonium, *Protoscutella*, 67
Pentidium, 60
curator, 60
percostatus, *Cidaris*, 15
percrassus, *Echinolampas*, 78
perebaskinei, *Echinotiara*, 33
peregrinus, *Zenocentrotus*, 46
Periarachus, 67
kewi, 67
lyelli floridanus, 67
rutriformis, 67
Periaster, 109
ciryi, 109
inconstans, 109
kuhni, 109
maugeri, 109
subsexangulatus, 109
zinai, 109
Pericosmidae, 102
Pericosmus, 95, 102, 103
abatoides, 102
akabanus, 102
artemisiae, 102
bidens, 102
blanquitalensis, 102
camagueyanus, 102
clarki, 103
cordatus, 102
cubanus, 103
delgadoi, 102
gardensis, 102
giganteus, 102
gregoryi, 95, 103
israelskyi, 102
keiensis, 102
magnificus, 102
mauritanus, 102
melanostomus, 102
oblongus, 102
rojasi, 102
schencki, 102
stefaninii, 102
stehlini, 102
tenuis, 102
valenzuelai, 102
zanolletii, 103
Pericosmus (Lambertona), 103
Pericosmus (Victoriaster), 103
periculosum, *Asthenosoma*, 20
peridoneus, *Holectypus (Coenholectypus)*, 49
Perischodomus, 4
fraiponti, 4
Perischochinoidea, 1
periturus, *Paleopneustes*, 123
permica, *Miocidaris*, 6
Permocidaris, 5

- timorensis*, 5
Peronella, 65, 66
caribbeana, 65, 66
cubae, 65
japonica, 65
kamimura, 65
keiensis, 65
kloosi, 65
lamberti, 65
lesueuri var. *gadiana*, 65
martini, 65
merrilli, 65
motobu, 65
oblonga, 65
orbicularis var. *concava*, 65
quinquenodulata, 65
ragayana, 65
Peronella (*Peronellites*), 65
ovalis, 65
Peronellites, 65
perorientalis, *Cardiaster*, 91
perplexus, *Hypselaster*, 105
perplexus, *Plagiobrissus*, 119
perplexus, *Stenechinus*, 23
perrieri, *Hemipneustes*, 93
perrini, *Astrodapsis*, 70
persica, *Agassizia scrobiculata*, var., 106
persica, *Brissoopsis*, 112
persica, *Salenia*, 25
persica, *Schizaster*, 104
persica, *Temnopleurus*, 38
peruviana, *Encope*, 73
peruvianus, *Rhynchopygus*, 85
Petalobrissus, 83
burchhardti, 83
Petalobrissus (*Echinobrissus*), 83
setifensis var. *punica*, 83
petalus, *Echinocyamus*, 62
peyroti, *Echinolampas*, 78
pfenderae, *Cyclaster*, 114
Phalacrocidaris, 11
japonica multipora, 11
Phalacropedina, 23
Pharaonaster, 118
migliorinii, 118
philippinensis, *Stereocidaris indica*, var., 10
phillipsae, *Salenia*, 26
philocrania, *Discoides*, 50
phoenissa, *Temnotrema*, 42
Pholidocidaris, 2
tornacensis, 2
Phormosoma, 20
alternans, 20
placenta var. *africana*, 20
Phormosomatinae, 20
Phyllacanthus, 12, 13
clarkii impensus, 12
dubius var. *sundaica*, 12
duncani, 12
duncani gambierensis, 12
forcipulatus, 12
irregularis, 12
irregularis kimberi, 12
serratus, 12
texanus, 13
thomasi, 12
titan, 12
tylotus, 12
tysoni, 13
wellmanae, 12
Phyllobrissus, 77
artesianus, 77
oblongus, 77
zulianus, 77
Phymosoma, 30, 31
bybeeii, 31
cadenati, 31
conceptionis, 30
dixie, 30
gigantea, 30
mortenseni, 31
paronai, 31
peloria, 30
raguini, 31
riograndensis, 31
solignaci, 31
subconicum, 31
tinocoi, 31
trinitensis, 31
unicarinatum, 31
Phymosomatidae, 30
Phymosomatoida, 30
Phymotaxis, 34
mansfieldi, 34
Pictaviechinus, 95
pictaviensis, *Centropygus*, 89
pictaviensis, *Pygomalus*, 95
pierrensis, *Codiopsis*, 36
pilensis, *Echinobrissus*, 77
pileus, *Clypeaster*, 57
pilgrimi, *Conoclypeus*, 53
pilleti, *Hemicidaris*, 27
pinarensis, *Agassizia*, 106
pinarensis, *Clypeaster*, 57
pinarensis, *Eupatagus* (*Spatangomorpha*), 119
pinarensis, *Paraster*, 105
pinfoldi, *Conoclypeus*, 53
pinguis, *Oligopygus*, 53
pirabensis, *Karaster*, 71
piriformis, *Micraster*, 110
pirillus, *Cidaris* (*Bramus*), 48
Pisolampas, 125
concinna, 125
piveteaui, *Nucleopygus*, 84
piveteaui, *Pachycidaris*, 7
Plagiobrissus, 118, 119
abeli, 118
abruptus, 119
costaricensis, 118
elevatus, 119
lamberti, 118
latus, 119
malavassii, 118
pacificus, 118
perplexus, 118
robustus, 119
Plagiobrissus (*Rhabdobrissus*), 119
Plagiochasma, 77
coxwellense, 77
plana, *Clypeaster japonicus*, 55
plana, *Conulus castaneus*, var., 51
plana, *Pyrina ovalis*, 51
planata, *Scutella vindobonensis*, 67
Planilampas, 81, 82
circularis, 82
planipetala, *Echinolampas anceps*, var., 79
planipetalum, *Cubanaster*, 66
planissimus, *Echinocyamus*, 62
planus, *Clypeaster*, 57
planus, *Echinocyamus*, 62
planus, *Micraster* (*Micraster*) *schroederi*, 110
plateia, *Fibularia*, 61
plateia, *Palaeolampas*, 81
platensis, *Mellita*, 72
platyacantha, *Austrocidaris*, 8
platyacantha, *Miocidaris*, 6
Platybrissus, 124
parvus, 124
Platybrissus (*Eurypatagus*), 124
Platyclypeina, 59
platypetalus, *Cassidulus*, 83
platypetalus, *Pauropygus*, 54
platypygus, *Disaster*, 90
platyterus, *Ammotrophus*, 60
Plegiocidaris, 17, 18
ardesica, 17
babeau var. *granulosa*, 18
biassalensis, 17
bifrons, 18
caeliculus, 18
helviorum, 17
huguenini, 17
jacobi, 18
kuchkaensis, 17
lamberti, 17
lemoinei, 17
marizensis, 18
mercieri, 18
morierei var. *nodosa*, 18
orientalis, 17
pseudohorrida, 18
raiblana var. *rhodiensis*, 18
telrhemtensis, 18
termieri, 18
tingitana, 18

- vogdti*, 17
welschi, 18
Plesiaster, 119
Plesiechinus, 24
hawkinsi, 24
Plesiolampas, 82
auraduensis, 82
currae, 82
Plesiopatagus, 119
hourcqi, 119
Plesiozonus, 124
diomedea, 124
Plethotaenia, subgenus, 117
angularis, 117
Pleurechinus doederleini, 41
Plexechinus, 94
spectabilis, 94
Pliolampadidae, 87
Pliolampas, 87
dilatatus, 87
lorioli var. *excentrica*, 87
trevisani, 87
Pliolampas (Tristomanthus), 88
elevatus, 88
javanus, 88
Pliotoxaster, 96
inflatus, 96
plurituberculatus, *Lytechinus variegatus*, 43
podjarkovi, *Tristomanthus*, 88
podolicus, *Echinolampas atrophus*, 78
podolicus, *Tristomanthus*, 88
Polycyphus, 34
hourcqi, 34
rimuensis, 34
Polydiadema, 30
joaquinensis, 30
karakachi, 30
Polyechinus, 45
polygonalis, *Clypeaster*, 57
polymorphus, *Coelopleurus undulatus*, 36
Polypedina, 30
tounatensis, 30
Polyplacidia, 32
armenica, 32
polyplax, *Ctenocidaris*, 7
Polysalenia, 25
cottaldi, 25
notabilis, 25
Polytaxicidaris, 6
dyeri, 6
lirata, 6
pomeraniae, *Orthopsis*, 47
pomeraniae, *Tetragramma*, 30
pomeyrol, *Holcopneustes*, 100
Porechinus, 4
porosus, 4
Porocidaris, 13
jarafrensis, 13
lopezi, 13
sibogae, 13
Porosoma, 32
batalleri, 32
kahleri, 32
lamberti, 32
reesidei, 32
porosus, *Porechinus*, 4
Porpitella, 63
micra, 63
paleocaenica, 63
portisi, *Schizaster*, 103
potosiensis, *Hardouinia*, 83
Pourtalesia, 94
aurorae, 94
debilis, 94
laguncula beringiana, 94
Pourtalesioida, 94
Pourtalesiidae, 94
praeacutus, *Faujasia*, 82
praecipua, *Goniocidaris*, 8
praekonvexa, *Metaporinus (Tithonia)*, 90
praenipponica, *Linthia*, 108
praenuntius, *Conulus*, 51
praeventicillata, *Prionocidaris*, 14
pratti, *Schizaster*, 103
precincta, *Spherotiaris*, 28, 48
Prenaster, 109, 110
clarcki, 109
elongatus, 110
jeanneti, 109
neuvitasensis, 109
parvus, 109
sanchezi, 109
skorpili, 109
Prenaster (Saviniaster), 110
prymaeus, *Devonocidaris*, 4
primitiva, *Cardiopelta bicordata*, 89
primus, *Eupatagus (Brissopatagus)*, 112
princeps, *Asaphechinus*, 39
principeana, *Diadema*, 21
Printechinus, 41
impressus, 41
javanus, 41
viridis, 41
Prionechinus, 41
duvergieri, 41
salomacensis, 41
Prionocidaris, 13, 14
baculosa var. *lineata*, 13
badia, 13
bispinosa var. *laevis*, 13
bispinosa var. *nigrobrunnea*, 14
haasti, 14
malindiensis, 14
marshalli, 14
praeventicillata, 14
scoparia, 14
priscus, *Paleopneustes (Oopneustes)*, 124
pristinus, *Stomopneustes*, 34
problepteryx, *Chondrocidaris*, 12
Proccsidulus, 86
apianus, 86
avilensis, 86
basseae, 86
brodermanni, 86
circularis, 86
clericii, 86
echevarriai, 86
gliberti, 86
habanensis, 86
jeanneti, 86
lambayensis, 86
luacesi, 86
malayanus, 86
minutus, 86
moonii, 86
nelneri, 86
simpatiae, 86
zinai, 86
Proccsidulus (Australanthus), 82
madrugensis, 82
Procollyropsis, 90
proctalis, *Prymnechinus*, 38
profundus, *Clypeaster*, 57, 58
Progonolampas, 81, 82
candeli, 82
sanchezi, 82
prolata, *Clypeaster latirostris*, 57
promensis, *Dicoptella*, 43
Prometalia, 118
besairiei, 118
Pronechinus, 2
anatoliensis, 2
propinqua, *Archaeocidaris*, 5
Proraster, 110
atavus var. *mediterraneus*, 110
geayi, 110
Prosostoma, 124
Prospatangus, 120
acuminatus, 120
cotteaui, 120
fothiensis, 120
hungaricus var. *bukkensis*, 120
venzoi, 120
prostratus, *Echinocyamus*, 62
Proterocidaris, 2
Protobrissus, 114
akkajensis, 114
indolensis, 114
Protocidaris, 48
Protoscutella, 67
pentagonium, 67
Protoscutellidae, 67
prunispinosa, *Goniocidaris*, 8
pruvosti, *Echinocorys belgicus*, var., 91
Prymnechinus, 38
proctalis, 38
Psammechinus, 39, 43, 45
arnei, 45

- dainellii*, 45
demolyi, 45
desioi, 45
floralarus, 45
humilior, 39
newillei, 45
ocalanus, 45
punicus, 45
santee, 45
simplex, 45
verruculatus, 43
Psammolampas, 81
Psephochinus, 34
globosus, 34
mazetieri, 34
newtoni, 34
renzi, 34
Pseudananchys, 93
rydzewski, 93
stephensoni, 93
Pseudechinus, 41, 42
flemingi, 42
hesperus, 41
Pseudechinus (Notechinus), 42
sanctipauli, 42
Pseudholaster, 93
androaviensis, 93
pseudoantonicus, Hemiaster, 99
Pseudoasterostoma, 124
fernandesi, 124
habanensis, 124
Pseudoastrodapsis, 71
intermedius, 71
nitidiusculus, 71
Pseudocentrotus, 44
stenoporus, 44
Pseudocidaridaris, 27, 28
checcchiai, 28
collignoni, 28
defilippii, 28
dubari, 28
gortanii, 28
leckwycki, 28
levis, 28
migliorinii, 28
simulans, 27
tetragranulatus, 28
truncata, 28
vogdti, 28
pseudocidaroides, Metacrosalenia, 24
pseudoclevei, Agassizia cyrenaica, var., 106
Pseudodiadema, 28
amellagense, 28
elevatus, 28
grangeri, 28
kseleensis, 28
renzi, 28
silbinense, 28
whitneyi, 28
Pseudodiademata, 28
Pseudodicoptella, 42
pseudoelegans, Macraster, 98
Pseudoffaster, 93
renngarteni, 93
schmidti, 93
pseudoglobalis, Linthia, 108
pseudohorrida, Plegiocidaridaris, 18
pseudoinflata, Agassizia cyrenaica, var., 106
Pseudomaretia, 121
oblonga, 121
Pseudopechinus, 41
Pseudopedina, 23
atlantis, 23
Pseudopygurus, 75
ambroggi, 75
hathirae, 75
Pseudopyrina, 52
darderi, 52
hourcqi, 52
minuta, 52
orchoterenai, 52
subcircularis, 52
subovalis, 52
Pseudorthopsis, 23
rojasi, 23
pseudosubrotundaeformis, Scutella, 67
pseudoviviparus, Tripylus, 110
pseudowhitneyi, Salenia, 25
Psilocidaridaris, 9
echinulata, 9
psoidoperiodus, Paleopneustes, 123
Psychocidaridaris, 18
Psychocidaridaris, 18
ohshimai, 18
puertoricanus, Clypeaster concavus, 56
pulaviensis, Corechinus, 95
pulaviense, Rachiosoma, 32
pulchella, Taimanawa, 120
pulchellus, Clypeaster, 56
pulchellus, Microcyphus, 40
pulchellus, Stomechinus, 33
pulcher, Epiaster, 97
pulcherrimus, Brochopleurus, 39
pulcherrimus, Sphaerechinus, 47
pulchra, Kleinia, 113
punctatus, Rhynchopygus, 85
punica, Petalobrissus (Echinobrissus) setifensis, var., 83
punicus, Psammechinus, 45
purpurascens, Nudechinus ambonensis, var., 44
purpurascens, Stereocidaridaris, 10
purpuratus, Microcyphus rousseaui, var., 40
pusilla, Cidaridaris, 15
pusilla, Goniocidaridaris, 9
pusilla, Haimea, 54
pusilla, Pygopyrina, 52
pusillus, Stolonoclypeus, 60
putnami, Oligopygus, 53
Pygaster, 23, 24
daguini, 24
gerthi, 23
joleaudi, 24
langanoides ranvillensis, 24
lourdinensis, 24
microstoma, 24
Pygasteridae, 23
Pygasteroidea, 23
pygmeus, Cyclaster, 114
pygmeus, Distefanaster, 100
Pygomalus pictaviensis, 95
Pygopyrina, 52
pusilla, 52
Pygorhynchus, 77, 78
conicus, 78
ovalis, 78
riueroi, 77
Pygorhytis, 89
ovalis var. dimota, 89
ringens wiekensis, 89
Pygurostoma, 83
pasionensis, 83
Pygurus, 75, 76
cottreui, 75
depressus var. somaliensis, 76
lampassigormis, 75
smelliei, 76
Pygurus (Echinopygus), 76
jagueyanus, 76
tinocoi, 76
Pygurus (Pygurus), 76
complanatus, 76
pyramidalis, Cidaridaris, 15
pyramidoides, Pauropygus, 54
pyrenaica, Jeronia, 94
Pyrina, 51
arabica, 51
avilensis, 51
barthouxi, 51
hancockensis, 51
mexicana, 51
mortenseni, 51
ovalis plana, 51
parahybensis, 51
whitneyae, 51
pyrsacantha, Compsocidaridaris, 11
quadrimiliaris, Acrosalenia (Metacrosalenia), 25
quaylei, Anorthoscutum oregonense, 68
quaylei, Astrodapsis, 70
quenstedti, Orbignyana, 89
quinquenodulata, Peronella, 65
racadaui, Radiolus, 48
Rachiosoma, 32
cottreui, 32

- hondoensis*, 32
krimica, 32
pulaviense, 32
stagnorum, 32
Rachiosoma (*Rosadosoma*), 32
radiata, *Trigonocidarid*, 43
Radiocyphus, 38
hungaricus, 38
Radiolus, 48
adametzi, 48
alutensis, 48
antipai, 48
boletus, 48
culter, 48
festuca, 48
funginus, 48
fuscus, 48
herbichi, 48
racadaui, 48
rostratus, 48
segmentatus, 48
ragayana, *Peronella*, 65
ragoti, *Asterocidarid*, 27
raguini, *Phymosoma*, 31
rahbergensis, *Discoidea*, 50
rajnathi, *Echinobrissus*, 76
rancheriana, *Faujasia*, 82
ranvillensis, *Pygaster langanoides*, 24
raritalis, *Echinarachnius* (*Scaphechinus*), 68
rauraca, *Rhabdocidarid*, 11
ravni, *Globator*, 52
ravni, *Tylocidarid*, 19
recens, *Cyclaster*, 113
recincta, *Galeropygus marcoui*, var., 74
Recrosalenia, 25
migiurtina, 25
somaliensis, 25
recta, *Echinocorys obliquus*, 91
recticanalis, *Schizaster*, 107
recurvata, *Histocidarid*, 7
reducta, *Stereocidarid*, 10
reedi, *Astrodapsis*, 70
reesidei, *Porosoma*, 33
regalis, *Cyclaster*, 113
regia, *Agassizia*, 106
reguanti, *Echinanthus*, 89
regularis, *Cionobrissus*, 113
regularis, *Stenechinus*, 23
reicheli, *Dicoptella* (*Pseudodicoptella*), 42
reinecke, *Hemias*, 100
reimbangensis, *Javanechinus*, 39
remediensis, *Jacksonaster*, 65
remifera, *Cidarid*, 15
remigera, *Notocidarid*, 8
Remondella, 71
remotus, *Echinocrinus*, 5
renfroae, *Epiaster*, 97
renngarteni, *Diplopodia*, 29
renngarteni, *Echinocorys*, 92
renngarteni, *Pseudofaster*, 93
renzi, *Psephochinus*, 34
renzi, *Pseudodiadema*, 28
revelle, *Clypeaster*, 56
Rhabdobrissus, subgenus, 119
Rhabdocidarinae, 11
Rhabdocidarid, 11, 12
arginensis, 11
bigoti, 11
boehmi, 11
brasiliensis, 11
buraganensis, 11
chouberti, 12
cotteaui, 11
desori, 11
kisomyensis, 11
mayri, 11
nunlisti, 11
orbignyiformis, 11
rauraca, 11
stingelini, 11
turbeti, 11
varusensis, 12
yailensis, 11
Rhaphidoclypus, 59
costulatus, 59
rojasi, 59
rhedeni, *Fibularia*, 61
rhenanus, *Cluniaster*, 52
Rhenechinus, 2
hopstatteri, 2
rhodiensis, *Echinolampas*, 80
rhodiensis, *Echinolampas* (*Cylindrolampas*), 80
rhodiensis, *Plegiocidarid* *raibiana*, var., 18
Rhopalocidarid, 9
hirsutispinus var. *viridis*, 9
rosea, 9
rosea tenuis, 9
Rhopostoma, 55
rhotomagensis, *Conulus castaneus*, var., 51
Rhyncholampas, 84, 85
anceps, 85
ayresi, 84
cervantesi, 84
magnei, 85
rodriguez, 85
tuderi, 85
Rhynchopygus, 85
macari, 85
matleyi, 85
peruvianus, 85
punctatus, 85
Rhynobrissus, 119
macropetalus, 119
rostratus, 119
rimuensis, *Polycyphus*, 34
riograndensis, *Phymosoma*, 31, 32
rioupanemensis, *Hemias*, 99
Rispolia, 93
cottreaui, 93
riveroi, *Anorthopygus*, 49
riveroi, *Catopygus*, 77
riveroi, *Pygorhynchus*, 77
riveroi, *Schizaster* (*Aplospatangus*), 105
rivuli, *Arbacia*, 35
robecchibricchetti, *Scutella*, 67
robusta, *Clypeaster insignis*, var., 57
robustus, *Echinoneus*, 50
robustus, *Plagiobrissus*, 119
rochi, *Macropneustes*, 117
rochi, *Paleostoma*, 102
rodriguez, *Catopygus*, 77
rodriguez, *Rhyncholampas*, 85
rogasi, *Eupatagus* (*Gymnopatagus*), 116
rogeri, *Euspatangus*, 115
Rojasaster, 59
camagueyanus, 59
rojasi, *Antillaster*, 122
rojasi, *Anomalanthus*, 58
rojasi, *Brissoapatagus*, 112
rojasi, *Cassidulus*, 84
rojasi, *Echinoneus*, 50
rojasi, *Lajanaster*, 116
rojasi, *Pericosmus*, 102
rojasi, *Pseudorthopsis*, 23
rojasi, *Rhaphidoclypus*, 59
rojasi, *Rojasia*, 119
rojasi, *Schizaster* (*Aplospatangus*), 104
Rojasia, 119
rojasi, 119
rolandi, *Linthia*, 108
rollandi, *Echinolampas*, 79
rollieri, *Leiocidarid*, 13
romani, *Clypeaster*, 56
romani, *Diplocidarid*, 19
rombellipsoidalis, *Echinolampas*, 79
Rosadosoma, subgenus, 32
rosana, *Loriolia*, 29
roscheni, *Enallaster*, 96
rosea, *Rhopalocidarid*, 9
rosenkrantzi, *Tylocidarid*, 19
rosenkrantzi, *Typocidarid*, 11
roseoviridis, *Salmacis*, 42
rositae, *Studeria*, 88
rossi, *Isomicraster*, 97
rossiensis, *Echinocorys gravesi*, var., 91
rostellus, *Chlypeus*, 75
rostrata, *Conulus ellipticus*, var., 51
rostratus, *Antipneustes*, 107
rostratus, *Basseaster*, 91
rostratus, *Cardiaster*, 92
rostratus, *Echinocyamus*, 62
rostratus, *Echinodiscus*, 65
rostratus, *Radiolus*, 48
rostratus, *Rhynobrissus*, 119
Rotula, 74
orbiculus angolensis, 74

- rotula*, *Cottaldia*, 22
rotula, *Scutellina* (*Eoscutum*) *orientalis*, var., 63
 Rotulidae, 74
 Rotulina, 74
 Rotuloidea, 74
 vieirai, 74
rotundata, *Epiaster somaliensis*, var., 97
rotundatus, *Allaster*, 69
rotundatus, *Ambipleurus*, 37
rotundus, *Oligopygus*, 53
rotundus, *Pauropygus*, 54
royoi, *Botriopygus*, 78
royoi, *Cotteaudia*, 36
royoi, *Goniopygus*, 37
royoi, *Orthopsis*, 47
rozieri, *Opissaster*, 101
rubellus, *Eupatagus*, 114
ruber, *Coelopleurus undulatus*, 36
rubicundum, *Temnotrema siamense*, var., 42
rubida, *Stylocidaris reini*, var., 18
rubra, *Stereocidaris grandis*, var., 10
rubricincta, *Salmacis*, 42
rubripunctatus, *Nudechinus*, 44
rufa, *Stylocidaris*, 18
rugensis, *Stereocidaris*, 10
rugosa, *Eurocidaris*, 8
rugosus, *Dendraster*, 68
rugosus, *Pauropygus*, 54
rumerlensis, *Cidaris scrobiculata*, var., 15
rumoensis, *Echinarachnius*, 69
Rumphia, 65
 elegans, 65
Runa, 74
 paromaica, 74
russoi, *Trochotiarra*, 30
rutriiformis, *Periarctus*, 67
rutteni, *Bonaireaster*, 54
rutteni, *Dicopitella* (*Paradicoptella*), 43
rydzewski, *Pseudananchys*, 93

sabinal, *Hemiaster*, 99
sabistonensis, *Cassidulus* (*Pygorhynchus*), 78
sacyi, *Centrostephanus*, 21
sadeki, *Fibularia*, 61
sadeki, *Gauthieria*, 31
saipanicum, *Echinostrephus*, 46
saipanicus, *Clypeaster*, 56
saipanicus, *Paraster*, 105
sakhalinensis, *Echinarachnius parma*, 69
Salenia, 25, 26
 alcaldei, 25
 alta, 25
 cottreui, 26
 dux, 26
 garumnensis, 26
 hagenowi, 25
 hawkinsi, 25
 hondoensis, 25
 intermedia, 25
 kansasense, 26
 lamberti, 25
 leanderensis, 26
 lobosa, 25
 mathuri, 25
 nipponica, 25
 novemprovincialis, 25
 persica, 25
 philippae, 26
 pseudowhitneyi, 25
 schencki, 25
 scotti, 25
 scrippsae, 25
 sculpta, 25
 similis lastroensis, 26
 somaliensis, 25
 stenzeli, 26
 taurica, 26
 trigonopyga, 26
 unicolor, 25
 whitneyi, 25
Salenidia, 26
 chabaudi, 26
 danica, 26
 karakachi, 26
 scabra, 26
 selandica, 26
Saleniidae, 25
Saleniinae, 25
Salenioida, 24
Salenocidaris, 26
 brachygnatha, 26
 hastigera var. *acuminata*, 26
 incrassata, 26
 miliaris var. *indica*, 26
 profundi var. *occlusa*, 26
 salina, *Tylocidaris*, 19
 salinasensis, *Astrodapsis*, 70
 salis, *Thylechinus* (*Gagaria*), 45
Salmaciella, 42
Salmacis, 42
 belli var. *unicolor*, 42
 dussumieri, 42
 nuda, 42
 roseoviridis, 42
 rubricincta, 42
 sphaeroides var. *variegata*, 42
salomacensis, *Prionechinus*, 41
salsensis, *Eurhodia morrissi*, var., 87
salutis, *Schizaster*, 103
Sanchezella, 66
sanchezi, *Brissoides*, 114
sanchezi, *Clypeaster*, 57
sanchezi, *Cyclaster*, 114
sanchezi, *Echinoneus*, 50
sanchezi, *Goniopygus*, 36
sanchezi, *Jacksonaster*, 65, 66
sanchezi, *Oligopygus*, 53
sanchezi, *Prenaster*, 109
sanchezi, *Progonolampas*, 82
sanchuensis, *Toxaster*, 96
sanctaeluciae, *Cyphosoma*, 31
sanctaluciae, *Nucleopygus*, 84
sanctamariae, *Schizaster*, 104
sanctipauli, *Pseudechinus* (*Notechinus*), 42
sanctisebastiani, *Hemiaster*, 99
sanctispiritensis, *Conoclypeus*, 53
sandalina, *Fibularia*, 61
sandiegensis, *Echinolampas* (*Cylindrolampas*), 80
sandiegensis, *Jacksonaster*, 65
Sandiegoaster, 112
 durhami, 112
sandovali, *Clypeaster*, 58
Sanfilippaster, 110
sanfilippoi, *Conulus*, 51
sanfilippoi, *Leiocidaris*, 13
sanfilippoi, *Noettingaster*, 34
sanfilippoi, *Orthopsis*, 47
sanjosephi, *Oligopygus*, 53
sanrafaelensis, *Clypeaster*, 58
santaclarae, *Echinolampas*, 79
santanae, *Brissoides*, 114
santanae, *Brissolampas*, 123
santanae, *Bunactis*, 58
santanae, *Cubanaster*, 66
santanae, *Eupatagus* (*Plagiobrissus*), 119
santanae, *Laganum*, 64
santanae, *Schizaster*, 104
santee, *Psammecchinus*, 45
Santeelampas, 88
sardanyolae, *Hemipneustes*, 93
Sarsiaster, 101
 griegii, 101
Saviniaster, 110
 enodatus, 110
 scabra, *Salenidia*, 26
Scaphechinus, 68
schencki, *Astrodapsis*, 70
schencki, *Pericosmus*, 102
schencki, *Salenia*, 25
Schizaster, 103, 104, 107
 alcaldei, 104
 alsiensis, 103
 altissimus, 104
 bathypetalus, 104
 beckeri, 104
 brachypetalus, 104
 caobaense, 104
 cojimarensis, 104
 costaricensis, 103
 delorenzoi, 104
 dumblei, 104
 dyscritus, 104
 eopneustes, 104
 excavatus, 103
 gerthi, 104

- gigas*, 104
guirensis, 103
habanensis, 104
hexagonalis, 104
humei, 104
jeanneti, 103
kinasaensis, 103
leprosorum, 104
llagunoi, 104
marci, 104
minihagali, 103
miyazakiensis, 103
morlini, 103
moronensis, 104
munozii, 104
narindensis, 104
pappi, 104
pentagonalis, 104
persica, 104
portisi, 103
pratti, 103
recticanalis, 107
salutis, 103
sanctamariae, 104
santanae, 104
schlosseri, 104
vedadoensis, 104
Schizaster (Aplospatangus), 104, 105
riveroi, 105
rojasi, 104
Schizaster (Hypselaster), 105
Schizaster (Linthia), 108
ocalanus, 108
Schizaster (Paraster), 105, 106
duroensis, 105
floridensis, 105
hunti, 106
karakarensis, 105
taiwanicus, 105
Schizaster (Schizaster), 105
fernandezii, 105
Schizasteridae, 103
Schizechinus, 44
candeli, 44
Schizobrissus, 117, 118
damiani, 118
jacksoni, 117
kewi, 118
siliceus, 117
Schizocidaris, 9
fasciata, 9
schlosseri, *Schizaster*, 104
schlumbergeri, *Hyboclypus*, 74
schmidti, *Pseudofaster*, 93
schoelleri, *Echinocyamus*, 62
schoelleri, *Hemiaster*, 99
schucherti, *Astrodapsis*, 71
schwetzovi, *Brissopneustes*, 111
Scoliechinus, 44
axiologus, 44
scoparia, *Prionocidaris*, 14
scotti, *Goniophorus*, 26
scotti, *Salenia*, 25
scrippsae, *Encope*, 73
scrippsae, *Salenia*, 25
Scrippssechinus, 124
fisheri, 124
scrobiculata, *Fibularia*, 61
sculpta, *Salenia*, 25
sculptus, *Lamprechinus*, 40
scurellensis, *Scutella*, 67
Scutaster, 74
vaquerosensis, 74
vaquerosensis var. *kewi*, 74
Scutasteridae, 74
Scutella, 66, 67, 69, 71
aberti, 74
almerai parva, 66
andersoni, 71
camagueyana, 67
checcchia, 67
checcchia var. *occidentalis*, 67
chiesai, 67
coosensis, 68
cubae, 67
eichwaldi, 67
floridana, 67
gabbi tenuis, 69
gabbii tenuis, 71
habanensis, 67
hobarthi, 67
isidis var. *bardiensis*, 67
leognanensis, 67
media, 67
montagnai, 67
multiconcava, 67
niponica, 67
pseudosubrotundaeformis, 67
robecchibricchetti, 67
scurellensis, 67
stefaninii, 67
stefaninii var. *syrtica*, 67
styriaca, 67
subrotundaeformis, 67
szoerenyiae, 67
vindobonensis planata, 67
vindobonensis secunda, 67
Scutellaster, 68
Scutellidae, 66
Scutellina, 60, 63, 66
balcanica, 63
conica, 63
patella, 60
transsylvanica, 63
transsylvanica var. *oblonga*, 63
transsylvanica var. *orbiculata*, 63
Scutellina (Eoscutum), 62, 63
orientalis, 62
orientalis var. *elongata*, 62
orientalis var. *kalizkyi*, 62
orientalis var. *naliukini*, 63
orientalis var. *pentagona*, 63
orientalis var. *rotula*, 63
Scutellinoides, 60
secoensis, *Encope*, 72
secunda, *Scutella vindobonensis*, 67
segestina, *Collyrites*, 89
segmentatus, *Radiolus*, 48
selandica, *Salenidia*, 26
sellardsi, *Codiopsis*, 36
sema, *Coptopleura*, 38
semiglobosus, *Echinocorys*, 91
Semipetalion, subgenus, 121
sendaica, *Gitolampas*, 87
senegalensis, *Tessieria*, 101
senessei, *Circopeltis*, 33
senessei, *Codiopsis*, 36
senni, *Cassidulus*, 84
septemtrionalis, *Cyathocidaris*, 16
serotinus, *Aphelaster*, 96
Serpianotiaris, 24
serratus, *Phyllacanthus*, 12
sethuramae, *Thylechinus*, 33
setosa, *Archaeocidaris*, 5
Seunaster, 93, 94
georgicus, 93
georgicus var. *lata*, 94
lamberti, 94
lazicus, 94
shepherdi, *Encope*, 72
siamensis, *Echinodiscus auritus*, var., 73
sibogae, *Echinolampas alexandri*, var., 78
sibogae, *Goniocidaris*, 8
sibogae, *Porocidaris*, 13
siboneyensis, *Eupatagus*, 115
siboneyensis, *Hemiaster*, 99
sierrai, *Paraster*, 105
sigillum, *Cidaris*, 14
silbinense, *Pseudodiadema*, 28
siliceus, *Schizobrissus*, 117
Silurocidaris, 6
clavata, 6
similaris, *Dendraster vizcainoensis*, 68
simile, *Astrodapsis johnsoni*, var., 70
similis, *Amphipneustes*, 107
similis, *Brissopsis*, 112
similis, *Lovenia*, 121
simpatiae, *Proccassidulus*, 86
simpaticus, *Nucleolites*, 76
simpaticus, *Trachyaster*, 100
simplex, *Cidaris (Bramus)*, 48
simplex, *Hebertia*, 38
simplex, *Psammechinus*, 45
simulans, *Pseudocidaris*, 27
Sinaechinus, 107
kawaguchii, 107
sinensis, *Sternopatagus*, 94
singletoni, *Asaphechinus*, 39
singularis, *Coelopleurus*, 36
sinuosus, *Macropneustes*, 117

- sirtica*, *Breynia*, 122
Sismondia, 65, 66
barabirensis, 66
convexa, 66
crustula, 66
javana ladronensis, 66
naganoensis, 65
skorpili, *Prenaster*, 109
skourensis, *Brissoides*, 115
smelliei, *Acrosalenia*, 24
smelliei, *Pygurus*, 76
sokolovi, *Ornithaster*, 102
solignaci, *Phymosoma*, 31
solignaci, *Tithonia*, 90
solitariensis, *Macraster*, 98
Somalechinus, 98
gibbosus, 98
Somaliaster, 94, 95
magniventer, 94
magniventer var. *checcchiai*, 95
Somaliasteridae, 94
somaliensis, *Acrosalenia*, 24
somaliensis, *Brissoides cranium*, var., 115
somaliensis, *Clypeobrissus*, 75
somaliensis, *Echinotiara*, 33
somaliensis, *Epiastr*, 97
somaliensis, *Farquharsonia*, 23
somaliensis, *Hemipedina* (*Phalacrope-*
dina), 23
somaliensis, *Linthia*, 108
somaliensis, *Opissaster*, 101
somaliensis, *Pygurus depressus*, var., 76
somaliensis, *Recrosalenia*, 25
somaliensis, *Salenia*, 25
Spatagobrissus, 119
mirabilis, 119
Spatagoides, 92
aichinoi, 92
martellii, 92
striatoradiatus var. *conicus*, 92
striatoradiatus var. *depressus*, 92
striatoradiatus var. *elevatus*, 92
tripolitanus, 92
Spatangidae, 120
Spatangoida, 95
Spatangomorpha, 119
Spatangus, 120
baixadoleitensis, 120
beryl, 120
diomedea, 120
glenni, 120
multispinus, 120
tapinus, 120
thor, 120
spectabilis, *Plexechinus*, 94
spenceri, *Ancylocidaris*, 22
Sperosoma, 20
antillense, 20
armatum, 20
crassispinum, 20
tristichum, 20
Sphaerechinus, 44, 47
pulcherrimus, 47
sphaeroides, *Cassidulus*, 83
Spherechinus, 44
burdigalensis, 44
sphericus, *Hemiaster*, 99
Spherotiaria, 28, 48
gignouxii, 28
meandrina var. *nervosa*, 28
meandrina var. *termieri*, 28
precincta, 28, 48
vivaldii, 28
spinidentatus, *Leiocidaris*, 13
spinosa, *Cidaris*, 10
spinosa, *Goniocidaris*, 8
spinosa, *Notocidaris*, 8
spinulifera, *Miocidaris*, 6
splendens, *Araeosoma*, 19
splendens, *Genocidaris*, 40
sprengi, *Palaeochinus*, 4
squamosa, *Stereocidaris*, 10
stagnorum, *Rachiosoma*, 32
staulinensis, *Cidaris*, 15
stefaninii, *Brissoides*, 115
stefaninii, *Hemiaster*, 100
stefaninii, *Leiocidaris*, 13
stefaninii, *Pauropygus*, 54
stefaninii, *Pericosmus*, 102
stefaninii, *Scutella*, 67
Stegaster, 93
charlesi, 93
mairei, 93
novoi, 93
zonarius, 93
Stegopygus, 75
langeensis, 75
stehlini, *Pericosmus*, 102
steinhatchee, *Brissopsis*, 113
Stenechinus, 23
perplexus, 23
regularis, 23
Stenonasteridae, 94
Stenonaster, 94
douvillei, 94
Stenonia, 94
stenopetalus, *Macropneustes*, 117
stenopetalus, *Pauropygus*, 54
stenoporus, *Echinus*, 45
stenoporus, *Pseudocentrotus*, 44
stenozona, *Glyptocidaris crenularis*, 31
stenzeli, *Salenia*, 26
stephensoni, *Codiopsis*, 36
stephensoni, *Conulus*, 51
stephensoni, *Pseudananchys*, 93
sterea, *Cyclaster*, 113
Sterechinus, 46
dentifer, 46
neumayeri var. *nigroalba*, 46
Stereocidarinae, 10
Stereocidaris, 10
baileyi, 10
bolli, 10
cudmorei, 10
destefanii, 10
excavata, 10
fosteri, 10
grandis fusana, 10
grandis var. *hyatorina*, 10
grandis var. *rubra*, 10
granularis, 10
hawaiiensis, 10
hispida, 10
hudspeithensis, 10
hutchinsoni, 10
indica var. *philippinensis*, 10
inermis, 10
intricata, 10
jaekeli, 10
jaekeli var. *grandior*, 10
jaekeli var. *laticor*, 10
jaekeli var. *undulifera*, 10
nascaensis, 10
purpurascens, 10
reducta, 10
rugensis, 10
sceptriferoides var. *lamellata*, 10
sceptriferoides var. *lanceolata*, 10
squamosa, 10
stylifera, 10
sulcatispinis, 10
tubifera, 10
tubifera var. *impressa*, 10
Stereocidaris (*Phalacrocidaris*), 11
japonica multipora, 11
sternaloides, *Brissus*, 112
Sternopatagus, 94
sinensis, 94
sternopetala, *Echinolampas*, 81
stetsoni, *Hardouinia*, 83
stevensi, *Eupatagus*, 115
Stigmatopygus, 83
lamberti, 83
lehmani, 83
stingelini, *Rhabdocidaris*, 11
Stirechinus, 46
minor var. *couffoni*, 46
stocktonensis, *Goniopygus*, 37
stoliczkai, *Hemiaster*, 99
Stolonoclypus, 59, 60
ichnusae, 60
incertus, 60
pusillus, 60
Stomechinidae, 33
Stomechinus, 33
bajocensis, 33
daguini, 33
lemoinei, 33

- magnicornicolus*, 33
polyporus nanus, 33
pulchellus, 33
Stomopneustes, 34, 35
antiquus, 35
pristinus, 34
Stonocorys, 94
striata, *Kionocidaris*, 17
striatissimum, *Asthenosoma*, 20
strobilata, *Eucidaris*, 16
strongyla, *Echinolampas*, 79
Strongylocentrotidae, 46
Strongylocentrotus, 46, 47
antiquus, 47
djakonovi, 46
fragilis, 47
intermedius f. *longispina*, 46
magistrus, 47
minihagali, 47
octoporus, 47
polyacanthus apicimaxis, 46
Studeria, 88
rositae, 88
stylifera, *Stereocidaris*, 10
Stylocidaris, 17, 18
amboinae, 18
annulosa, 18
bracteata var. *albidens*, 17
bracteata var. *mauritiana*, 17
chapmani, 18
cingulata, 17
effluens, 17
fusispina, 18
laevispina, 18
longicollis, 18
maculosa, 18
reini var. *cladothrix*, 18
reini var. *rubida*, 18
rufa, 18
styriaca, *Scutella*, 67
suatensis, *Heterosalenia*, 24
subcircularis, *Asterostoma*, 122
subcircularis, *Catopygus*, 77
subcircularis, *Pseudopyrina*, 52
subconicum, *Phymosoma*, 31
subconicus, *Echinocyamus scaber*, var., 62
subcrustulum, *Clypeaster (Platyclypeina)*, 59
subcylindrica, *Haimea*, 54
subdorsata, *Balanocidaris*, 16
subglobosa, *Conulus subrotundus*, var. 51
subglobosus, *Amblypneustes pallidus*, var., 38
subglobosus, *Micraster*, 110
subnucleus, *Echinolampas (Cypholampas)*, 80
suborder uncertain, 55, 74, 124
subovalis, *Pseudopyrina*, 52
subpentagonalis, *Holectypus*, 49
subpiriformis, *Echinocyamus*, 62
subrotundaeformis, *Scutella*, 67
subsexangulatus, *Periaster*, 109
subtumidus, *Echinarachnius*, 69
subwortheni, *Archaeocidaris*, 5
suitensis, *Linthia*, 108
sulcata, *Echinocyamus cyphostomus*, var., 62
sulcata, *Fibularia*, 61
sulcata, *Pauropygus meunieri*, var. 54
sulcatispinis, *Streocidaris*, 10
sulcatus, *Cottreaucorys (Cordastrum)*, 124
sulcatus, *Tarphygygus*, 63
sumbaricus, *Echinocorys*, 92
sundaica, *Phyllacanthus dubius*, var. 12
sundaicus, *Clypeaster (Rhaphidoclypus) reticulatus*, var., 59
sundaicus, *Temnopleurus*, 38
sundancensis, *Hemicidaris*, 27
sundararaji, *Chaetodiadema*, 21
superba, *Coenopedina*, 23
superorder uncertain, 47
superior, *Astrodapsis diabloensis*, var., 70
supremus, *Goniopygus*, 37
suvae, *Chelonechinus*, 94
suverdrupi, *Encope*, 73
syriaca, *Kleinia crescenticus*, var., 113
syriensis, *Gentilia*, 83
syrtica, *Scutella stefaninii*, var., 67
syrticus, *Clypeaster aegyptiacus*, var., 56
szoerenyiae, *Scutella*, 67
tafermense, *Tetragramma*, 30
Taimanawa, 120
mortenseni, 120
pulchella, 120
taiwanensis, *Linthia*, 107
taiwanicus, *Schizaster (Paraster)*, 105
takunagai, *Laganum fudsiyama*, 64
tamarindensis, *Nucleopygus*, 84
tamiamiensis, *Encope macrophora*, 72
tampicoensis, *Paraster*, 105
tanofrei, *Echinolampas africanus*, var., 79
taouzensis, *Dorocidaris*, 16
tapeina, *Oligopodia*, 125
tapinus, *Spatangus*, 120
tariccoi, *Clypeaster*, 57
Tarphygygus, 63
ellipticus, 63
notabilis, 63
palmeri, 63
sulcatus, 63
tasmanensis, *Asaphechinus*, 39
Tatechinus, 42
nudus, 42
taurica, *Hemipedina*, 23
taurica, *Salenia*, 26
tavanii, *Clypeaster*, 57
taylori, *Cassidulus*, 84
teihardi, *Hemiaster*, 100
teixeirai, *Domechinus*, 82
telostocensis, *Goniopygus zitteli*, 37
telrhemtensis, *Plegiocidaris*, 18
Temnopleuridae, 38
Temnopleuroidea, 37
Temnopleurus, 38
australis, 38
hardwickii var. *impressus*, 38
iranicus, 38
latidunensis, 38
michaelseni var. *viridis*, 38
persica, 38
sundaicus, 38
Temnopleurus (Toreumatica), 38
Temnotrema, 42, 43
notium, 42
pallescens, 42
phoenissa, 42
siamense var. *megaloplax*, 42
siamense var. *rubicundum*, 42
tenera, *Neolampas*, 125
tentugalensis, *Mundaster*, 103
tenuis, *Laganum depressum*, var., 64
tenuicoronae, *Clypeaster*, 58
tenuipetalum, *Echinolampas (Progonolampas)*, 81
tenuipetalum, *Echinoneus*, 50
Tenuirachnius, 71
tenuis, *Arachnoides*, 60
tenuis, *Dicoptella agassizi*, var., 42
tenuis, *Echinarachnius*, 69
tenuis, *Mellita quinquesperforata*, var., 72
tenuis, *Pericosmus*, 102
tenuis, *Rhopalocidaris rosea*, 9
tenuis, *Scutella gabbi*, 69
tenuis, *Scutella gabbii*, 71
tenuispina, *Goniocidaris (Cyrtocidaris)*, 9
tenuispina, *Miocidaris*, 6
tenuispinus, *Deneechinus*, 3
teretispina, *Kionocidaris striata*, var., 17
terkosensis, *Galeraster*, 51
termieri, *Acrosalenia*, 24
termieri, *Atlasaster*, 22
termieri, *Dubarechinus*, 48
termieri, *Hemicidaris*, 27
termieri, *Magnosia*, 37
termieri, *Plegiocidaris*, 18
termieri, *Spherotiaris meandrina*, var., 28
Termieria, 88
henrici, 88
terminalis, *Echinocyamus*, 62
tessieri, *Baueria*, 35
Tessieria, 101
senegalensis, 101
testudinaria, *Bryonia*, 122
Tetragoniopygus, subgenus, 37
Tetragramma, 30
antsingyensis, 30
besairiei, 30

- bosei*, 30
cornuelai, 30
giganteum, 30
hourcqi, 30
pomeraniae, 30
tafermense, 30
tetragranulatus, *Pseudocidaris*, 28
tetraslichus, *Palaechinus*, 4
texana, *Pedinopsis*, 29
texanus, *Anorthopygus*, 49
texanus, *Phyllacanthus*, 13
thalebensis, *Typocidaris*, 11
Thebaster, 118
theodosiae, *Cidaris*, 15
thiebaudi, *Leiocidaris*, 13
thieryi, *Lytechinus*, 43
thieryi, *Pachycidaris*, 7
Tholeopelta, 60
herrerae, 60
tholiformis, *Paleopneustes*, 123
thomasi, *Devonocidaris*, 4
thomasi, *Lepidocentrus*, 3
thomasi, *Phyllacanthus*, 12
thor, *Spatangus*, 120
thorali, *Eodiadema*, 21
Thylechinus, 33
chardoni, 33
dubari, 33
humei, 33
sethuramae, 33
Thylechinus (*Egyptechnius*), 33
Thylechinus (*Gagara*), 44, 45
chickasawhay, 44
mossomi, 44
salis, 45
Thylechinus (*Mistechinus*), 33
Tiarechinopsis, 35
besairiei, 35
timorensis, *Miocidaris*, 6
timorensis, *Permocidaris*, 5
tingitana, *Balanocidaris*, 16
tingitana, *Plegiocidaris*, 18
tinocoi, *Phymosoma*, 31
tinocoi, *Pygurus* (*Echinopygus*), 76
titan, *Phyllacanthus*, 12
Tithonia, 90
arctica, 90
blondeti, 90
houdardi, 90
solignaci, 90
tithonica, *Hemicidaris*, 27
Tithoniidae, 90
titicacana, *Orthopsis*, 47
tobleri, *Dicoptella*, 43
tobleri, *Leiocidaris*, 13
tobleri, *Tripneustes*, 44
Togocyamus, 64
alloiteaui, 64
topilanus, *Clypeaster*, 57
Toreumatica, subgenus, 38
toreumaticus, *Hyattechinus*, 3
tornacensis, *Nucleolites*, 76
tornacensis, *Pholidocidaris*, 2
toroensis, *Clypeolampas*, 86
torrei, *Jacksonaster*, 65, 66
torrense, *Echinolampas* (*Progonolampas*), 81
tosaensis, *Toxaster*, 96
toulai, *Ismidaster*, 93
tounatensis, *Polypedina*, 30
Toxaster, 95, 96
gabrieli, 96
laffitei, 96
mattaueri, 96
maurus, 96
millosevichi, 95
sanchuensis, 96
tosaensis, 96
Toxasteridae, 95
Toxasterina, 95
toxasteroides, *Epiaster*, 97
Toxopneustidae, 43
Trachyaster, subgenus, 100
aichinoi, 100
hlinnensis, 100
minutus, 100
simpaticus, 100
tradis, *Conulus*, 51
trakyensis, *Triplacidia*, 43
trangahyensis, *Micraster*, 110
transiens, *Echinodiscus*, 73
transiens, *Enallaster*, 96
transsylvanica, *Scutellina*, 63
transvera, *Cidaris*, 15 (see *C. gilletteae*)
transversus, *Faujasia*, 82
trauthi, *Epiaster*, 97
trechmanni, *Linthia*, 108
Trematopygus, 77
novaki, 77
Tretodiscus, 73
fuchsi var. *giarabubensis*, 73
trevisani, *Clypeaster*, 57
trevisani, *Macro-pneustes*, 117
trevisani, *Pliolampas*, 87
Triadechinus, 35
multiporus, 35
Triadocidaris, 7
coronensis, 7
lungauensis, 7
triangularis, *Macraster*, 97
Trigonocidaris, 43
indica, 43
micro-pora, 43
radiata, 43
versicolor, 43
trigonopyga, *Salenia*, 26
trigonopygus, *Astro-pygaulus*, 88
trinitensis, *Phymosoma*, 31
Triplacidia, 43
fraasi var. *boncevi*, 43
hungarica, 43
trakyensis, 43
Tripneustes, 44
magnificus, 44
tobleri, 44
ventricosus austriacus, 44
tripolitana, *Leiocidaris*, 13
tripolitanus, *Spatagoides*, 92
Tripylus, 110
antonibensis, 110
pseudoviviparus, 110
tristichum, *Sperosoma*, 20
Tristomanthus, 88
podjarkovi, 88
podolicus, 88
Trochalosoma, 35
Trochotiara, 30
russoi, 30
trojana, *Lefortia*, 83
trojanus, *Cassidulus* (*Cassidulus*), 84
Tromikosoma, 20
truncata, *Haimea*, 54
truncata, *Pseudocidaris*, 28
tschopi, *Paraster*, 105
tuarkyrensis, *Collyrites*, 89
tubaria, *Goniocidaris*, 9
tuber, *Hemiaster*, 107
tuberculata, *Anaulocidaris*, 6
tuberculata, *Cyrtocidaris tenuispina*, var., 9
tuberculatus, *Oligopygus*, 53
tuberculinus, *Cidaris*, 15
tubifera, *Stereocidaris*, 10
tubillensis, *Hemiaster*, 100
tuderi, *Rhyncholampas*, 85
tumescens, *Antipneustes*, 107
tumescens, *Clypeaster*, 57
Turanglaster, 95
nazkii, 95
turbeti, *Rhabdocidaris*, 11
turibacoensis, *Eupatagus*, 115
turibacoensis, *Megapatagus*, 115
turneri, *Miocidaris*, 6
turriculata, *Clypeaster portentosus*, var., 56
Tylucidaris, 19
macneili, 19
pomifer herupensis, 19
pomifer var. *masoviensis*, 19
ravni, 19
rosenkrantzi, 19
salina, 19
windi, 19
tylotus, *Phyllacanthus*, 12
Typocidaris, 11
baumbergeri, 11
danica, 11
falgarsensis, 11
rosenkrantzi, 11
thalebensis, 11

- tyrrenicus*, *Clypeaster*, 56
tysoni, *Phylacanthus*, 13
- uddeni*, *Micraster*, 110
ugoensis, *Kewia*, 71
ultima, *Peltastes*, 26
umbella, *Echinolampas*, 79
 uncertain
 family, 4, 19, 22, 23, 35, 44, 52, 55, 74, 95, 124
 order, 19, 125
 suborder, 55, 74, 124
 superorder, 47
undulatus, *Coelopleurus*, 36
undulifera, *Stereocidaris* *jaekeli*, var., 10
unicarinatum, *Phymosoma*, 31
unicolor, *Salenia*, 25
unicolor, *Salmacis belli*, var., 42
unicus, *Crinocidaris*, 48
Unifascia, 120
 Unifasciidae, 120
uniserialis, *Crauenechinus*, 5
untensis, *Laganum fudsiyama*, 64
urcuzensis, *Dorocidaris*, 16
 Urechinidae, 94
 Urechinina, 94
utahensis, *Lenticidaris*, 7
uvaldana, *Lanieria*, 50
uwajimensis, *Hemiaster*, 100
- vadaszi*, *Echinolampas*, 78
valenzuelai, *Pericosmus*, 102
valettei, *Echinolampas*, 80
Valsalenia, 26
 marquassuzaai, 26
vanhoepeii, *Holaster*, 91
Vaquerosella, 71
vaquerosensis, *Scutaster*, 74
variabilis, *Epiaster*, 97
varians, *Astrodapsis gregersenii*, var., 70
variegata, *Salmacis sphaeroides*, var., 42
varnensis, *Echinanthus*, 89
varusensis, *Rhabdocidaris*, 12
vasatensis, *Clypeaster*, 57
vassilievskiyi, *Diplopodia*, 29
vaughani, *Globator*, 52
vedadoensis, *Schizaster*, 104
vellai, *Notocidaris*, 8
venturillae, *Eupatagus* (*Gymnopatagus*), 116
venturillae, *Lajanaster*, 116
venustus, *Ortholophus*, 41
venzoi, *Brissopatagus*, 112
venzoi, *Echinolampas*, 80
venzoi, *Prospatagus*, 120
vepres, *Cidaris*, 14
Vernius, 48
verruculatus, *Psammechinus*, 48
- versicolor*, *Trigonocidaris*, 43
vetus, *Diadema*, 21
vicinoconoideus, *Hyposheteroclypus*, 81
Victoriaster, 103
 jamaicensis, 103
 lamberti, 103
vieirai, *Rotuloidea*, 74
villadai, *Hemicidaris*, 27
villarensis, *Echinocorys ovatus*, 91
vinassai, *Anaulocidaris*, 6
vinassi, *Botriopygus*, 78
virescens, *Opechinus albus*, var., 40
viridis, *Printechinus*, 41
viridis, *Rhopalocidaris hirsutispinus*, var., 9
viridis, *Temnopleurus michaelsoni*, var., 38
visedoi, *Echinolampas*, 79
visetensis, *Palaeochinus*, 4
vistulensis, *Hemiaster*, 99
vistulensis, *Micraster*, 110
vittatus, *Coelopleurus*, 36
vivaldii, *Spherotiaris*, 28
vizcainoensis, *Dendraster*, 68
vogdti, *Plegiocidaris*, 17
vogdti, *Pseudocidaris*, 28
vonderschmitti, *Brissoma*, 113
vonderschmitti, *Encope*, 73
- waagei*, *Hardouinia*, 83
waccamaw, *Arbacia*, 35
warrenensis, *Lepidesthes*, 2
warreni, *Cavanechinus*, 3
warthi, *Conoclypeus*, 53
Washitaster, 98, 101
 barremicus, 101
 japonicus, 101
 macroholcus, 98, 101
waylandi, *Metalia*, 118
Weisbordella, 66
wellmanae, *Phylacanthus*, 12
welschi, *Galeropygus*, 74
welschi, *Glossaster*, 84
welschi, *Plegiocidaris*, 18
westraliensis, *Conoclypus*, 52
wetmorei, *Encope*, 72
whitnalli, *Lepidechinoides*, 4
whitneyae, *Pyrina*, 51
whitneyi, *Goniophorus*, 26
whitneyi, *Pseudodiadema*, 28
whitneyi, *Salenia*, 25
wiedenmayeri, *Encope*, 73
wiedenmayeri, *Heteroclypeus*, 81
wiekensis, *Pygorhytis ringens*, 89
wilderae, *Nucleolites*, 76
williamsi, *Lytechinus*, 43
wilmingtonica, *Agassizia* (*Anisaster*), 106
windi, *Tylocidaris*, 19
- Winkleria*, 32
 maastrichtensis, 33
woodi, *Echinocyamus*, 62
woodi, *Echinolampas*, 78
woodringi, *Astrodapsis*, 71
woodringi, *Echinolampas*, 78
woynari, *Brisaster townsendi*, 107
wyllieii, *Acrosalenia*, 24
wyllieii, *Clypeus*, 75
Wythella, 66
- Xenechinus*, 5
 parvus, 5
Xenocidaris, 6
 caheni, 6
 mariaeurgensis, 6
 mariaeurgensis praemut. major, 6
- yailensis*, *Rhabdocidaris*, 11
yarboroughi, *Pedinopsis*, 30
yessoensis, *Linthia*, 108
yoloensis, *Echinocorys*, 92
yuasensis, *Enallaster*, 96
- zamboninii*, *Clypeaster*, 56
zanoletti, *Anomalanthus*, 58
zanoletti, *Eupatagus* (*Gymnopatagus*), 116
Zanolettia, 60
 gigantea, 60
 zanolettii, 60
Zanolettia, 116
 herreriae, 116
zanoletti, *Brissoides*, 115
zanolettii, *Cassidulus* (*Rhynchopygus*), 85
zanolettii, *Palmeraster*, 98
zanoletti, *Pericosmus*, 103
zanolettii, *Zanolettia*, 60
zararensis, *Acrosalenia*, 24
zardini, *Cidaris*, 15
zelandiae, *Arachnoides*, 60
Zenocentrotus, 46
 kellersi, 46
 paradoxus, 46
 peregrinus, 46
Zeuglopleurus, 43
zinai, *Catopygus*, 77
zinai, *Conulus*, 51
zinai, *Periaster*, 109
zinai, *Proccassidulus*, 86
zonarius, *Stegaster*, 93
zuberi, *Hessotiaris*, 27
Zuffardia, 88
 cerullii, 88
zuffardii, *Gitolampas*, 87
zuffardii, *Hemipneustes*, 93
zulianus, *Phyllobrissus*, 77
zululandensis, *Hemiaster*, 100
zyndeli, *Oligopygus*, 53

REQUIREMENTS FOR SMITHSONIAN SERIES PUBLICATION

Manuscripts intended for series publication receive substantive review within their originating Smithsonian museums or offices and are submitted to the Smithsonian Institution Press with approval of the appropriate museum authority on Form SI-36. Requests for special treatment—use of color, foldouts, casebound covers, etc.—require, on the same form, the added approval of designated committees or museum directors.

Review of manuscripts and art by the Press for requirements of series format and style, completeness and clarity of copy, and arrangement of all material, as outlined below, will govern, within the judgment of the Press, acceptance or rejection of the manuscripts and art.

Copy must be typewritten, double-spaced, on one side of standard white bond paper, with 1¼" margins, submitted as ribbon copy (not carbon or xerox), in loose sheets (not stapled or bound), and accompanied by original art. Minimum acceptable length is 30 pages.

Front matter (preceding the text) should include: title page with only title and author and no other information, **abstract page** with author/title/series/etc., following the established format, **table of contents** with indents reflecting the heads and structure of the paper.

First page of text should carry the title and author at the top of the page and an unnumbered footnote at the bottom consisting of author's name and professional mailing address.

Center heads of whatever level should be typed with initial caps of major words, with extra space above and below the head, but with no other preparation (such as all caps or underline). Run-in paragraph heads should use period/dashes or colons as necessary.

Tabulations within text (lists of data, often in parallel columns) can be typed on the text page where they occur, but they should not contain rules or formal, numbered table heads.

Formal tables (numbered, with table heads, boxheads, stubs, rules) should be submitted as camera copy, but the author must contact the series section of the Press for editorial attention and preparation assistance before final typing of this matter.

Taxonomic keys in natural history papers should use the alined-couplet form in the zoology and paleobiology series and the multi-level indent form in the botany series. If cross-referencing is required between key and text, do not include page references within the key, but number the keyed-out taxa with their corresponding heads in the text.

Synonymy in the zoology and paleobiology series must use the short form (taxon, author, year:page), with a full reference at the end of the paper under "Literature Cited." For the botany series, the long form (taxon, author, abbreviated journal or book title, volume, page, year, with no reference in the "Literature Cited") is optional.

Footnotes, when few in number, whether annotative or bibliographic, should be typed at the bottom of the text page on which the reference occurs. Extensive notes must appear at the end of the text in a notes section. If bibliographic footnotes are required, use the short form (author/brief title/page) with the full reference in the bibliography.

Text-reference system (author/year/page within the text, with the full reference in a "Literature Cited" at the end of the text) must be used in place of bibliographic footnotes in all scientific series and is strongly recommended in the history and technology series: "(Jones, 1910:122)" or ". . . Jones (1910:122)."

Bibliography, depending upon use, is termed "References," "Selected References," or "Literature Cited." Spell out book, journal, and article titles, using initial caps in all major words. For capitalization of titles in foreign languages, follow the national practice of each language. Underline (for italics) book and journal titles. Use the colon-parentheses system for volume/number/page citations: "10(2):5-9." For alinement and arrangement of elements, follow the format of the series for which the manuscript is intended.

Legends for illustrations must not be attached to the art nor included within the text but must be submitted at the end of the manuscript—with as many legends typed, double-spaced, to a page as convenient.

Illustrations must not be included within the manuscript but must be submitted separately as original art (not copies). All illustrations (photographs, line drawings, maps, etc.) can be intermixed throughout the printed text. They should be termed **Figures** and should be numbered consecutively. If several "figures" are treated as components of a single larger figure, they should be designated by lowercase italic letters (underlined in copy) on the illustration, in the legend, and in text references: "Figure 9_b." If illustrations are intended to be printed separately on coated stock following the text, they should be termed **Plates** and any components should be lettered as in figures: "Plate 9_b." Keys to any symbols within an illustration should appear on the art and not in the legend.

A few points of style: (1) Do not use periods after such abbreviations as "mm, ft, yds, USNM, NNE, AM, BC." (2) Use hyphens in spelled-out fractions: "two-thirds." (3) Spell out numbers "one" through "nine" in expository text, but use numerals in all other cases if possible. (4) Use the metric system of measurement, where possible, instead of the English system. (5) Use the decimal system, where possible, in place of fractions. (6) Use day/month/year sequence for dates: "9 April 1976." (7) For months in tabular listings or data sections, use three-letter abbreviations with no periods: "Jan, Mar, Jun," etc.

Arrange and paginate sequentially EVERY sheet of manuscript—including ALL front matter and ALL legends, etc., at the back of the text—in the following order: (1) title page, (2) abstract, (3) table of contents, (4) foreword and/or preface, (5) text, (6) appendixes, (7) notes, (8) glossary, (9) bibliography, (10) index, (11) legends.

