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Fossilium Catalogus

I: Animalia.

Editus a

F. Frech.

Pars 3:

Ch. Schuchert

Stelleroidea palaeozoica.

Einzel-Preis: Mark 5.10

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Fossilium Catalogus

I: Animalia.

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- Pars 1: F. Frech, Ammonoites Devonicae. 1913. (Mark 4).
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" 2: W. Teppner, Lamellibranchiata tertiaria.
" "Anisomyaria". I. 1914. (Mark 6).
Pretium subscriptionis: Mark 4.
-

II: Plantae.

Editus a W. Jongmans.

- Pars 1: W. Jongmans, Lycopodiales I. 1913. (Mark 5).
Pretium subscriptionis: Mark 3,30.
2: W. Jongmans, Equisetales I. 1914. (Mark 5,10).
Pretium subscriptionis: Mark 3,40.
-

Coleopterorum Catalogus.

Editus auspiciis et auxilio

W. Junk a S. Schenkling.

Partes 1—58. 1910—14. (Mark 521,25) Mark 347,70.

Lepidopterorum Catalogus.

Editus a H. Wagner.

Partes 1—17. 1911—13. (Mark 102,10) Mark 68.

Psyllidarum Catalogus.

Auctore G. Aulmann.

1913. 92 pag. Mark 5.

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Introduction.

About one year ago Professor Frech did me the honor to ask for my help in furthering the progress of the Fossilium Catalogus published by W. Junk of Berlin. Since then I have completed a large work entitled, „Revision of Paleozoic Stelleroidea, with special reference to North American Asteroidea“, which will be published during 1914 by the United States National Museum. During the meetings of the Twelfth International Geological Congress held at Toronto during the summer of 1913, I apprised Professor Frech of the completion of this memoir and of my willingness to take out of it all of the bibliographic references for publication in the Fossilium Catalogus.

The following „Catalogue of the Genera and Species of Stelleroidea“ treats of all the species and genera found in the Paleozoic throughout the world. My aim has been to make it as complete as possible, and to this end all the available literature at Yale University has been gone over. References are made to periodicals instead of to titles of papers wherever possible, since it is believed that this method is the easier for the worker to use. The abbreviations are somewhat longer than is usual, because such a catalogue will be used in many lands. Further help with reference to the bibliography can be had from the geographical distribution of the species, which is at once a guide to the source of the literature. All of the synonyms, both generic and specific, have been given as determined by authors and as more fully presented in the forthcoming memoir; and to make this information readily accessible the species are grouped under their proper genera, and all are arranged, including synonyms, in one alphabetic catalogue. Hence the results of any worker along these lines can be quickly found, together with the present status of species and genera.

The catalogue is preceded by a „Classification of Paleozoic Starfishes“ as worked out in the memoir above cited, so that subsequent workers can determine for themselves the relationship of any form they wish to study. To further facilitate the finding of the relationship of any genus, the generic names in the catalogue proper are followed by symbols which indicate to which subclass they belong.

In regard to the genera, the first important question to be answered is: What species is the type of the genus? In all cases these type species are given in the catalogue, for the genera in good standing and for their synonyms as well. On the other hand, for species, it is always of importance to know the geologic horizon and geographic occurrence of the form, and this information is also supplied.

The catalogue has been brought to its present state of completeness, through the search of the literature and its correct citation, by Miss Clara Mae LeVenc, to whom I am under great obligations. My further thanks are due to the firm of W. Junk for their care in the printing.

New Haven, Conn., November 20, 1913.

Charles Schuchert.

Professor of Paleontology in Yale University.

Explanation of terms and symbols used in the catalogue.

- (A) = Asteroidea
- (AL) = Auluroidea
- (O) = Ophiuroidea.

Genotype (*genos*-race, and *typos*-type). Genotype applies to the selected type species on which a genus is based. The selection may come about by any one of four methods:

- (1) **Genoholotype** or „type by designation“. The one species fixed by an author as the type of a genus. In cases where the genus at the time of original definition contained but a single species, this naturally becomes the genotype even if the author fails to state its selection („type by monotypy“).
- (2) On the other hand, when the name of a genus is the same as that of one of its original species, or the same as a synonym of one of its species, that species must be accepted as the genoholotype („type by tautonymy“ of Allen).
- (3) **Genosyntypes**. Two or more species mentioned by the author at the time of original definition, without selection of any one as the type. These genotypes may be monotypical or heterotypical. When one of these forms is selected by a subsequent worker it becomes a
- (4) **Genolectotype** or „type by subsequent designation“ or „type by revision“.

The literature on this subject is as follows: „On type specimens in natural history“, by Charles Schuchert (Bull. 53, U. S. Nat. Mus., Pt. I, 1905, pp. 7—18); and „The determination of genotypes in Zoology“, by J. A. Allen (Proc. Seventh. Inter. Zool. Cong., Boston, 1912, pp. 807—813).

The catalogue recognizes the following Stelleroidea:
Geographic Distribution

	Genera	Species	North American Species	European Species	Southern Hemisphere Species
Asteroidea	45	108	51	51	6
Auluroidea . . .	30	55	17	33	5
Ophiuroidea . . .	1	5	5	0	0
Totals	76	168	73	84	11

Geologic Distribution

	Ordovician (Untersilur)	Silurian (Obersilur)	Devonian	Lower Carboniferous	Upper Carboniferous	Permian
Asteroidea. . . .	45	16	35	6	6	0
Auluroidea . . .	12	16	24	3	0	0
Ophiuroidea . .	0	0	0	5	0	0
Totals	57	32	59	14	6	0

No Stelleroidea are as yet known below the Middle Ordovician, but here we already meet with both phanerozoan and cryptozoan asterids, and with aulurids. The class therefore had its origin certainly in the Lower Ordovician, and probably as far back as the Cambrian.

In the Ordovician („Untersilur“ of the German geologists) occur the following 19 genera and 57 species*):

Alepidaster (AL) 3	Promopalaeaster (A) 10
Anorthaster (A) 1	* Protaster (AL) 2
Ataxaster (A) 1	* Schuchertia (A) 2
Bohemura (AL) 1	Siluraster (A) 1
Eophiura (AL) 1	* Stenaster (A) 2
Hudsonaster (A) 6	Taenaster (AL) 4
* Mesopalaeaster (A) 9	Tetraster (A) 2
Palaeura (AL) 1	Uranaster (A) 1
?* Palasterina (A) 1	* Urasterella (A) 6
* Petraster (A) 3	

In the Silurian („Obersilur“ of the German geologists) lived the following 20 genera and 35 species:

Bdellacoma (AL) 1	* Palasterina (A) 2
Eucladia 2	* Petraster (A) 1
* Eugasterella (AL) 1	* Protaster (AL) 3
Enthemon 1	Rhopalocoma (AL) 1
Gregoriura (AL) 1	* Schuchertia (A) 1
Lawporthura (AL) 1	Squamaster (AL) 1
Lepidaster (A) 1	?* Stenaster (A) 1
Lindströmaster (A) 1	Stürtzaster (AL) 4
* Mesopalaeaster (A) 4	Stürtzura (AL) 3
Palaeaster (A) 1	* Urasterella (A) 4

The Devonian has 41 genera and 59 species, as follows:

Agalmaster (A) 3	Medusaster (A) 1
* Astropecten (A) 1	?* Mesopalaeaster (A) 2
Bundenbachia (AL) 1	Miomaster (A) 1
Cheiropteraster (A) 1	Miospondylus (AL) 1
Devonaster (A) 2	Ophirina (AL) 1
Echinasterella (A) 2	Palaeophiomyxa (AL) 1
Echinasterias (A) 1	Palaeophiura (AL) 1
Echinodiscites (A) 1	Palaeosolaster (A) 2
Echinostella (A) 1	Palaeostella (A) 1
Eifelaster (A) 1	Palasteriscus (A) 1
Eucrinaster (AL) 9	Palastropecten (AL) 1
Eoluidia (AL) 1	Pseudopalasterina (A) 1
Eospondylus (AL) 1	Ptilonaster (AL) 1
? Eucladia 1	Rhenaster (A) 1
* Eugasterella (AL) 1	Spaniaster (A) 1
Furcaster (AL) 2	Sympterura (AL) 1
Hallaster (AL) 1	?* Tremataster (AL) 1
Helianthaster (A) 2	Trimeraster (A) 1
Jaekelaster (A) 1	* Urasterella (A) 1
Lepidasterella (A) 1	Xenaster (A) 4
Loriolaster (A) 1	

The Lower Carbonian has 8 genera and 15 species, as follows:

Aganaster (AL) 1	Necopalaeaster (A) 1
Cholaster (AL) 1	Onychaster (O) 5
Compsaster (A) 1	Schoenaster (A) 4
? Cribellites 1	* Tremataster (AL) 1

In the Upper Carbonian occur only 5 genera and 6 species:

Australaster (A) 2	?* Stenaster (A) 1
Calliasterella (A) 1	* Urasterella (A) 1
Monaster (A) 1	

*) Genera marked with a * occur also in other periods; those marked with a ? are of doubtful occurrence in the period cited. Figures indicate the number of species.

Classification of Paleozoic Starfishes.

Class **Stelleroidea**.

Subclass **Asteroidea**.

Phanerozonia Sladen.

Superfamily **Promopalaeasteracea** Schuchert.

Family **Hudsonasteridae** Schuchert.

Hudsonaster Stürtz (syn. **Protopalaeaster** Hudson). **Siluraster** Jaekel.

Family **Palaeasteridae** Gregory.

Palaeaster Hall. **Australaster** Schuchert.

Family **Promopalaeasteridae** Schuchert.

Subfamily **Mesopalaeasterinae** Schuchert.

Mesopalaeaster Schuchert (? syn. **Argaster** Hall). **Spaniaster** Schöndorf (syn. **Coelaster** Sandberger). **Miomaster** Schöndorf. **Devonaster** Schuchert.

Subfamily **Promopalaeasterinae** Schuchert.

Promopalaeaster Schuchert.

Subfamily **Anorthasterinae** Schuchert.

Anorthaster Schuchert.

Family **Xenasteridae** Schöndorf.

Xenaster Simonovitsch (syn. **Archaeasterias** Müller). **Agalmaster** Schöndorf. **Rhenaster** Schöndorf. **Eifelaster** Schöndorf. **Trimeraster** Schöndorf.

Family **Neopalaeasteridae** Schuchert.

Neopalaeaster Schuchert.

Superfamily **Palasterinacea** Schuchert.

Family **Palasterinidae** Gregory.

Petraster Billings. **Lindströmaster** Gregory (syn. **Hisingeraster** Stürtz).
Palasterina Salter. **Uranaster** Gregory. **Palaeostella** Stürtz
(syn. **Palaenectria** Stürtz). **Pseudopalasterina** Stürtz.

Superfamily **Lepidasteracea** Schuchert.

Family **Lepidasteridae** Gregory.

Lepidaster Forbes. **Helianthaster** Roemer. **Lepidasterella** Schuchert.

Relationship unknown.

Ataxaster Jaekel.

Cryptozonia Sladen.

Superfamily **Stenasteracea** Schuchert.

Family **Stenasteridae** Schuchert.

Stenaster Billings. **Tetraster** Nicholson and Etheridge.

Family **Monasteridae** Schuchert.

Monaster Etheridge (syn. **Etheridgaster** Gregory).

Superfamily **Urasterellacea** Schuchert.

Family **Urasterellidae** Schuchert.

Urasterella McCoy (syn. **Roemeraster**, **Protasteracanthion** and **Salter-**
aster Stürtz).

Family **Calliasterellidae** Schuchert.

Calliasterella Schuchert (syn. **Calliaster** Trautschold).

Family **Compsasteridae** Schuchert.

Jaekelaster Stürtz. **Compsaster** Worthen and Miller.

Superfamily **Schuchertiacea** Schuchert.

Family **Schuchertiidae** Schuchert.

Schuchertia Gregory (syn. **Trentonaster** Stürtz.).

Family **Palasteriscidae** Gregory.

Palasteriscus Stürtz. **Echinasterella** Stürtz. **Loriolaster** Stürtz.
Cheiropteraster Stürtz.

Family **Schoenasteridae** Schuchert.

Schoenaster Meek and Worthen.

Superfamily **Palaeosolasteracea** Schuchert.

Family **Palaeosolasteridae** Schuchert.

Palaeosolaster Stürtz. **Echinasterias** Stürtz. **Echinodiscites** Schuchert
(syn. **Echinodiscus** Stürtz). **Echinostella** Stürtz. **Medusaster**
Stürtz.

Subclass **Auluroidea** Schöndorf.

Order **Lysophiurae** Gregory.

Family **Protasteridae** Miller.

Taeniaster Billings (syn. **Taeniura** Gregory). **Eophiura** Jaekel. **Bohe-**
mura Jaekel. **Palaeura** Jaekel. **Protaster** Forbes. **Alepidaster**
Meek (syn. **Protasterina** Ulrich). **Gregoriura** Chapman. **Bunden-**
bachia Stürtz. **Palaeophiomyxa** Stürtz.

Family **Palaeophiuridae** Gregory.

Palaeophiura Stürtz. **Stürtzura** Gregory. **Eugasterella** Schuchert (syn.
Eugaster Hall). **Ptilonaster** Hall.

Family **Enerinasteridae** Schuchert.

Enerinaster Haeckel (syn. **Aspidosoma** Goldfuss).

Order **Streptophiurae** Bell.

Family **Ophiurinidae** Gregory.

Ophiurina Stürtz. **Tremataster** Worthen and Miller.

Family **Lapworthuridae** Gregory.

Squamaster Ringueberg. **Lapworthura** Gregory. **Stürtzaster** Etheridge
(syn. **Palaeocoma** Salter). **Bdellacoma** Salter. **Rhopalocoma**
Salter. **Hallaster** Stürtz. **Sympterura** Bather. **Furcaster**
Stürtz. **Palastropecten** Stürtz (syn. **Palaespondylus** Stürtz).

Family **Eoluidiidae** Gregory.

Eoluidia Stürtz (syn. **Eophiurites** Stürtz). **Eospondylus** Gregory. **Miospondylus** Gregory.

Family **Aganasteridae** Stürtz.

Aganaster Miller and Gurley (syn. **Ophiopege** Böhm).

Family **Cholasteridae** Worthen and Miller.

Cholaster Worthen and Miller.

Subclass **Ophiuroidea** Gray.

Family **Onychasteridae** Miller.

Onychaster Meek and Worthen.

Incertae Sedis.

Cribellites Tate.

Order **Ophiocistia** Sollas.

Family **Eucladiidae** Gregory.

Eucladia Woodward. **Euthemon** Sollas.

Catalogue of the Genera and Species of Stelleroidea, arranged alphabetically.

Aeroura (*Ophiura*) *schlotheimii* Münster. Unknown to writer. See Woodward, 1874, *Geol. Mag.*, Dec. II, I, p. 7. Siluric.

Agalmaster Schöndorf (A)

1909 *Agalmaster* Schöndorf, *Palaeontogr.*, LVI, p. 58, 107.

1909 *Agalmaster* Schöndorf, *Jahrb. nass. Ver. Naturk.*, LXII, p. 29.

1914 *Agalmaster* Schuchert, *Bull.* 88, U. S. Nat. Mus.

Genoholotype: *A. miellensis* Schöndorf.

grandis Schöndorf

1871 *Xenaster margaritatus* Simonovitsch (partim), *Sitzb. mat.-nat. Classe Akad. Wiss.*, Wien, LXIV, I, pl. 2, f. 3, 3a.

1909 *Agalmaster grandis* Schöndorf, *Palaeontogr.*, LVI, p. 62, 108, pl. 9, f. 5.

1909 *Agalmaster grandis* Schöndorf, *Jahrb. nass. Ver. Naturk.*, LXII, p. 29, pl. 3, f. 1.

1914 *Agalmaster grandis* Schuchert, *Bull.* 88, U. S. Nat. Mus. Lower Devonic (Upper Coblenzian) of Germany. Niederlahnstein.

intermedius Schöndorf

1909 *Agalmaster intermedius* Schöndorf, *Palaeontogr.*, LVI, p. 82, 108, pl. 11, f. 14.

1909 *Agalmaster intermedius* Schöndorf, *Jahrb. nass. Ver. Naturk.*, LXII, p. 30.

1914 *Agalmaster intermedius* Schuchert, *Bull.* 88, U. S. Nat. Mus. Lower Devonic (Upper Coblenzian) of Germany. Miellen-on-the-Lahn.

miellensis Schöndorf

1909 *Agalmaster miellensis* Schöndorf, *Palaeontogr.*, LVI, p. 58, 107, pl. 8, f. 4; pl. 9, f. 4; pl. 11, f. 1, 5; t. f. 3.

1909 *Agalmaster miellensis* Schöndorf, *Jahrb. nass. Ver. Naturk.*, LXII, p. 29, pl. 3, f. 2; pl. 4, f. 1, 2.

1914 *Agalmaster miellensis* Schuchert, *Bull.* 88, U. S. Nat. Mus. Lower Devonic (Upper Coblenzian) of Germany. Miellen-on-the-Lahn.

Aganaster Miller and Gurley (AL)

1891 *Aganaster* Miller and Gurley, 16th Rep. Geol. Surv. Indiana, p. 372; adv. ext., 1890, p. 57.

1893 *Ophiopege* Böhm, *Zeits. d. geol. Ges.*, XLV, p. 159 (Same genoholotype as for *Aganaster*).

1897 *Aganaster* Gregory, *Proc. Zool. Soc. London*, p. 1039.

1914 *Aganaster* Schuchert, *Bull.* 88, U. S. Nat. Mus.

Genoholotype and only species: *Protaster gregarius* Meek and Worthen.

gregarius (Meek and Worthen)

- 1869 *Protaster? gregarius* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., XXI, p. 169.
 1872 *Alepidaster gregarius* Meek, Am. Jour. Sci., 3d ser., IV, p. 275 (gen. ref.).
 1873 *Protaster? gregarius* Meek and Worthen, Geol. Surv. Illinois, V, p. 509, pl. 16, f. 5.
 1891 *Aganaster gregarius* Miller and Gurley, 16th Rep. Geol. Surv. Indiana, p. 372, pl. 9, f. 10, 11; adv. ext., 1890, p. 57, pl. 9, f. 10, 11.
 1892 *Aganaster gregarius* Miller, N. Am. Geol. Pal., 1st App., p. 673, f. 1208.
 1914 *Aganaster gregarius* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Carbonic (Keokuk) of United States. Crawfordsville, Ind.

Alepidaster Meek (AL)

- 1872 *Alepidaster* Meek, Am. Jour. Sci., 3d ser., IV, p. 275.
 1873 *Alepidaster* Meek, Pal. Ohio, I, p. 68.
 1878 *Protasterina* Ulrich, Jour. Cin. Soc. Nat. Hist., I, p. 95 (Genoholotype: *P. fimbriata* Ulrich).
 1896 *Protasterina* James, Ibid., XVIII, p. 139.
 1914 *Alepidaster* Schuchert, Bull. 88, U. S. Nat. Mus. Genoholotype: *Protaster* (?) *granuliferus* Meek.

flexuosus (Miller and Dyer)

- 1878 *Protaster flexuosus* Miller and Dyer, Jour. Cin. Soc. Nat. Hist., I, p. 31, pl. 2, f. 1, 1a.
 1878 *Protasterina* („*Protaster*“ lapsus) *fimbriata* Ulrich, Ibid., p. 95, pl. 4, f. 9—9c.
 1889 *Protaster flexuosus* Miller, N. Am. Geol. Pal., p. 276, f. 409.
 1896 *Protasterina flexuosa* and *P. fimbriata* James, Jour. Cin. Soc. Nat. Hist., XVIII, p. 139, 140.
 1908 *Protaster flexuosus* Parks, Trans. Can. Inst., VIII, p. 368.
 1914 *Alepidaster flexuosus* Schuchert, Bull. 88, U. S. Nat. Mus. Upper Ordovician (Eden to Maysville) of United States. Cincinnati, Ohio; Covington, Ky.

granuliferus (Meek)

- 1872 *Protaster? granuliferus* (*Alepidaster* at end) Meek, Am. Jour. Sci., 3d ser., IV, p. 274.
 1873 *Protaster? granuliferus* Meek, Pal. Ohio, I, p. 68, pl. 3 bis, f. 8a, b.
 1896 *Protaster? granuliferus* James, Jour. Cin. Soc. Nat. Hist., XVIII, p. 138.
 1908 *Protaster? granuliferus* Parks, Trans. Can. Inst., VIII, p. 368.
 1914 *Alepidaster granuliferus* Schuchert, Bull. 88, U. S. Nat. Mus. Upper Ordovician (Richmondian) of United States. Moores Hill, Ind.

gregarius Meek = *Aganaster gregarius*

miamiensis (Miller)

- 1882 *Protaster miamiensis* Miller, Jour. Cin. Soc. Nat. Hist., V, p. 116, pl. 5, f. 6—6b.
 1896 *Protaster miamiensis* James, Ibid., XVIII, p. 138.
 1908 *Protaster miamiensis* Parks, Trans. Can. Inst., VIII, p. 368.
 1914 *Alepidaster miamiensis* Schuchert, Bull. 88, U. S. Nat. Mus. Upper Ordovician (Richmondian) of United States. Near Waynesville, Ohio.

Anorthaster Schuchert (A)

- 1914 *Anorthaster* Schuchert, Bull. 88, U. S. Nat. Mus. Genoholotype and only species: *Palaeaster miamiensis* Miller.

miamiensis (Miller)

1880 *Palaeaster miamiensis* Miller, Jour. Cin. Soc. Nat. Hist., III, p. 143, pl. 4, f. 3.

1914 *Anorthaster miamiensis* Schuchert, Bull. 88, U. S. Nat. Mus. Upper Ordovician (Richmondian) of United States. Near Waynesville, Ohio.

Archaeasterias Müller = *Xenaster*

Argaster Hall = ?*Mesopalaeaster*

antiqua (Gregory) = *Mesopalaeaster* (?) *antiquus*

Aspidosoma Goldfuss = *Encrinaster*

arnoldi Goldfuss = *Encrinaster arnoldi*

eifelense Schöndorf = *Encrinaster eifelensis*

goldfussi Schöndorf = *Encrinaster goldfussi*

petaloides Simonovitsch = *Encrinaster petaloides*

petaloides goslariensis Halpar = *Encrinaster petaloides goslariensis*

pontis Clarke = *Encrinaster pontis*

roemeri Schöndorf = *Encrinaster roemeri*

schmidtii Schöndorf = *Encrinaster schmidtii*

tischbeinianum Roemer = *Encrinaster tischbeinianum*

Asterias Graham, Anthony and James = *Petraster* (?) *americanus*

Asterias Wall = *Coelaster tenuiradiatus*

Asterias (*Archaeasterias*) Müller = *Xenaster*

acuminatus Simonovitsch = *Mesopalaeaster* (?) *acuminatus*

anthonii Dana = *Petraster* (?) *americanus*

antiqua Hisinger = *Lindströmaster antiquus*

antiqua Troost = *Mesopalaeaster* (?) *antiquus*

antiquata Locke = *Promopalaeaster speciosus*

asperula Roemer = *Urasterella asperula*

asperula Roemer (partim) = *Eoluidia decheni*

constellata Thorent = *Urasterella* (?) *constellata*

matutina Hall = *Hudsonaster matutinus*

montanus Stschurowsky = *Urasterella montana*

primaeva Salter and Sowerby = *Stenaster* (?) *obtus*

primordialis Anon. = *Promopalaeaster*, sp. undet.

(*Archaeasterias*) *rhenana* Müller = *Xenaster* (?) *rhenanus*

spinosissima Roemer. An unsolved starfish from Bundenbach.

See Roemer, 1863, *Palaeontogr.*, IX, p. 147, pl. 29, f. 4; and Schöndorf, 1909, *Jahrb. nass. Ver. Naturk.*, LXII, p. 33.

Asteriscus antiquus (Hisinger) = *Lindströmaster antiquus*

Astropecten Link (A)

(?) *schlüteri* Stürtz

1886 *Astropecten schlüteri* Stürtz, *Palaeontogr.*, XXXII, p. 87, pl. 10, f. 1, 1b, 2, 2a.

1893 *Astropecten schlüteri* Stürtz, *Verh. nat. Ver. preuss. Rheinl.*, L, p. 51, 71.

1914 *Astropecten* (?) *schlüteri* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian of Germany. Bundenbach.

Ataxaster Jaekel (A)

1903 *Ataxaster* Jaekel, *Zeits. d. geol. Ges.*, LV, Prot., p. 106.

1914 *Ataxaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *A. pygmaeus* Jaekel.

pygmaeus Jaekel

References same as for genus.

Ordovician (D₁) of Bohemia. St. Benigna.

Australaster Schuchert (A)

1892 *Palaeaster* (*Monaster*) Etheridge (partim), *Mem. Geol. Surv. N. So. Wales*, Pal. 5, II, p. 74.

1899 *Monaster* Gregory, *Geol. Mag.*, Dec. IV, VI, p. 345 (not of Etheridge).

- 1914 *Australaster* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *Palaeaster (Monaster) giganteus* Etheridge.
giganteus (Etheridge)

References same as for genus.

Permo-Carbonic (Jarley stage) of New South Wales. Farley,
 Northumberland County.

- (?) **stutchburii** (Etheridge)

- 1892 *Palaeaster (Monaster) stutchburii* Etheridge, Mem. Geol.
 Surv. N. So. Wales, Pal. 5, II, p. 73, pl. 13, f. 1.

- 1899 *Monaster stutchburii* Gregory, Geol. Mag., Dec. IV, VI, p. 346.

- 1914 *Australaster (?) stutchburii* Schuchert, Bull. 88, U. S. Nat.
 Mus.

Permo-Carbonic of New South Wales (Jarley stage). Farley,
 Northumberland County.

Bdellacoma Salter (AL)

- 1857 *Palaeocoma (Bdellacoma)* Salter, Ann. Mag., 2d ser., XX,
 p. 324.

- 1862 *Palaeocoma (Bdellacoma)* Wright, Brit. Foss. Eeh., II, I, p. 31.

- 1879 *Palaeocoma (Bdellacoma)* Zittel, Handb., I, p. 453.

- 1886 *Bdellacoma* Stürtz, Palaeontogr., XXXII, p. 96.

- 1893 *Bdellacoma* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 46, 63.

- 1914 *Bdellacoma* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *P. (B.) vermiformis* Salter.

vermiformis Salter

- 1857 *Palaeocoma (Bdellacoma) vermiformis* Salter, Ann. Mag.,
 2d ser., XX, p. 324.

- 1862 *Palaeocoma (Bdellacoma) vermiformis* Wright, Brit. Foss.
 Eeh., II, I, p. 31.

- 1893 *Bdellacoma vermiformis* Stürtz, Verh. nat. Ver. preuss.
 Rheinl., L, p. 46, 63.

- 1914 *Bdellacoma vermiformis* Schuchert, Bull. 88, U. S. Nat. Mus.
 Siluric (Lower Ludlow) of England. Leintwardine, Shropshire.

Bohemura Jaekel (AL)

- 1903 *Bohemura* Jaekel, Zeits. d. geol. Ges., LIV, Prot., p. 13—20,
 f. 6.

- 1914 *Bohemura* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *B. jahni* Jaekel.

jahni Jaekel

References same as for genus.

Ordovicic (D₄) of Bohemia. Zahorzan.

Bundenbachia Stürtz (AL)

- 1886 *Bundenbachia* Stürtz, Palaeontogr., XXXII, p. 83.

- 1890 *Bundenbachia* Stürtz, Ibid., XXXVI, p. 216.

- 1897 *Bundenbachia* Gregory, Proc. Zool. Soc. London, p. 1033, f. 4
 on p. 1034.

- 1908 *Bundenbachia* Parks, Trans. Can. Inst., VIII, p. 367.

- 1910 *Bundenbachia* Schöndorf, Palaeontogr., LVII, p. 57.

- 1914 *Bundenbachia* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *B. benecki* Stürtz.

benecki Stürtz

- 1886 *Bundenbachia benecki* Stürtz, Palaeontogr., XXXII, p. 83,
 pl. 8, f. 7, 7a; pl. 9, f. 1, 1a.

- 1897 *Bundenbachia benecki* Gregory, Proc. Zool. Soc. London,
 p. 1034, f. 4.

- 1914 *Bundenbachia benecki* Schuchert, Bull. 88, U. S. Nat. Mus.
 Lower Devonian of Germany. Bundenbach.

grandis Stürtz = *Palaeophiomys grandis*

Calliaster Trautschold = *Calliasterella*

mirus Trautschold = *Calliasterella mira*

Calliasterella Schuchert (A)

1879 *Calliaster* Trautschold, Kalkbrüche v. Mjatschkowa, p. 108, pl. 13, f. 3a—h, 4.

1909 *Calliaster* Schönendorf, Palaeontogr., LVI, p. 327.

1914 *Calliasterella* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *Calliaster mirus* Trautschold.

mira (Trautschold)

Referenees same as for genus.

Upper Carbonic (Moseovian) of Russia. Mjatschkowa, near Moscow.

Cheiropteraster Stürtz (A)

1890 *Cheiropteraster* Stürtz, Palaeontogr., XXXVI, p. 228, pl. 29, f. 33; pl. 30, f. 32.

1893 *Cheiropteraster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 49, 68.

1914 *Cheiropteraster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *C. giganteus* Stürtz.

giganteus Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Cholaster Worthen and Miller (AL)

1883 *Cholaster* Worthen and Miller, Geol. Surv. Illinois, VII, p. 328.

1897 *Cholaster* Gregory, Proc. Zool. Soc. London, p. 1040.

1914 *Cholaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *C. peculiaris* Worthen and Miller.

peculiaris Worthen and Miller

1883 *Cholaster peculiaris* Worthen and Miller, Geol. Surv. Illinois, VII, p. 329, pl. 31, f. 4a, b.

1914 *Cholaster peculiaris* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Carbonic (Chester) of United States. Okaw Bluffs, between Chester and Kaskaskia, Ill.

Coelaster Sandberger = **Spaniaster**

americanus D'Orbigny = **Petraster** (?) **americanus**

constellata D'Orbigny = **Urasterella** (?) **constellata**

latiseutatus Sandberger = **Spaniaster latiseutatus**

matutina D'Orbigny = **Hudsonaster matutinus**

tenuiradiatus D'Orbigny. See 1850, Prodr. de Pal., I, p. 22 (= *Asterias* ? sp. undet. Hall, 1847, Pal. N. Y., I, p. 18, pl. 4, f. 11a, 11b).

Based on an isolated madreporite from the Middle Ordovician (Chazy) at Chazy, N. Y.

Compsaster Worthen and Miller (A)

1883 *Compsaster* Worthen and Miller, Geol. Surv. Illinois, VII, p. 327, pl. 31, f. 2a, b.

1914 *Compsaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *C. formosus* Worthen and Miller.

formosus Worthen and Miller

Referenees same as for genus.

Lower Carbonic (Chester) of United States. Okaw Bluffs, between Chester and Kaskaskia, Randolph County Ill.

Cribellites Tate**carbonarius** Tate

1864 *Cribellites carbonarius* Tate, Rep. Brit. Assoc., App., p. 88.

1914 *Cribellites carbonarius* Schuchert, Bull. 88, U. S. Nat. Mus.

Carboniferous of England.

Devonaster Schuchert (A)

1868—1914 *Palaeaster* (partim) of authors.

1899 *Xenaster* (?) or new genus Gregory, Geol. Mag., Dec. IV, VI, p. 346.

1914 *Devonaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *Palaeaster eucharis* Hall.

chemungensis Schuchert

- 1914 *Devonaster chemungensis* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Devonian (Chemung) of United States. „Central Pennsylvania“.

eucharis (Hall)

- 1868 *Palaeaster eucharis* Hall, 20th Rep. N.Y. St. Cab., p. 287,
pl. 9, f. 3—3a (? 4); rev. ed., p. 330, pl. 9, f. 3—3a (? 4).
1876 *Palaeaster eucharis* Quenstedt, Petr. Deutschl., 1, IV, p. 71,
pl. 92, f. 29.
1879 *Palaeaster eucharis* Zittel, Handb., I, p. 452, f. 323.
1892 *Palaeaster eucharis* Cole, Bull. Geol. Soc. Amer., III, p. 512,
pl. 15.
1912 *Palaeaster eucharis* Clarke, Bull. 158, N. Y. St. Mus., p. 44—
45, 6 pls.
1914 *Devonaster eucharis* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Devonian (Hamilton) of North America. Hamilton, Saugerties, Summit, and Cooperstown, N. Y.; Bartletts Mills, near Thedford, Ontario.

Echinasterella Stürtz (A)

- 1890 *Echinasterella* Stürtz, Palaeontogr., XXXVI, p. 225, pl. 28,
f. 26, 26a, 27.
1893 *Echinasterella* Stürtz, Verh. nat. Ver. preuss. Rheinl., L,
p. 53, 73.
1914 *Echinasterella* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype: *E. sladeni* Stürtz.

(?) darwini Clarke

- 1913 *Echinasterella ? darwini* Clarke, Monog. I, Serv. Geol. e Min.
Brasil, p. 315, pl. 27, f. 9—12.
1913 *Echinasterella ? darwini* Clarke, Bull. 164, N. Y. St. Mus.,
pl. 34, f. 1—3.
1914 *Echinasterella (?) darwini* Schuchert, Bull. 88, U. S. Nat. Mus.
Devonian of Brazil. Ponta Grossa.

sladeni Stürtz

References same as for genus.
Lower Devonian of Germany. Bundenbach.

Echinasterias Stürtz (A)

- 1899 *Echinasterias* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI,
p. 230, pl. 2, f. 4; pl. 3, f. 5.
1914 *Echinasterias* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *E. spinosus* Stürtz.

spinosus Stürtz

References same as for genus.
Lower Devonian of Germany. Bundenbach.

Echinodiscites Schuchert (A)

- 1899 *Echinodiscus* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI,
p. 231—233, pl. 3, f. 6—10.
1914 *Echinodiscites* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *Echinodiscus multidactylus* Stürtz.

multidactylus (Stürtz)

References same as for genus.
Lower Devonian of Germany. Bundenbach.

Echinodiscus Stürtz = **Echinodiscites****multidactylus** Stürtz = **Echinodiscites multidactylus****Echinostella** Stürtz (A)

- 1899 *Echinostella* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI,
p. 233—235, pl. 3, f. 11; pl. 4, f. 12.
1914 *Echinostella* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *E. traquairi* Stürtz.

traquairi Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Eifelaster Schöndorf (A)1909 *Eifelaster* Schöndorf, Palaeontogr., LVI, p. 70, 108, pl. 10, f. 7, 8.1914 *Eifelaster* Schuchert, Bull. 88, U. S. Nat. Mus.Genoholotype and only species: *E. follmanni* Schöndorf.**follmanni** Schöndorf

References same as for genus.

Lower Devonian (Lower Coblenzian) of Germany. Landscheid, near Wittlich, in the Eifel.

Encrinaster Haeckel (AL)1848 *Aspidosoma* Goldfuss, Verh. nat. Ver. preuss. Rheinl., V, p. 145—146.1866 *Encrinaster* Haeckel, Gen. Morph., II, p. LXVII (Genolectotype: *Aspidosoma arnoldi* Goldfuss).1871 *Aspidosoma* Simonovitsch, Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I, p. 103.1879 *Aspidosoma* Zittel, Handb., I, p. 451, f. 322.1886 *Aspidosoma* Stürtz, Palaeontogr., XXXII, p. 92.1886 *Aspidosoma* Stürtz, N. Jahrb. f. Min., II, p. 151.1893 *Aspidosoma* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 38, 55.1909 *Aspidosoma* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 35.1910 *Aspidosoma* Schöndorf, Palaeontogr., LVII, p. 1—63.1914 *Encrinaster* Schuchert, Bull. 88, U. S. Nat. Mus.Genolectotype: *Aspidosoma arnoldi* Goldfuss.**arnoldi** (Goldfuss)1848 *Aspidosoma arnoldi* Goldfuss, Verh. nat. Ver. preuss. Rheinl., V, p. 145—146, f. 5.1855 *Aspidosoma arnoldi* Müller, Ibid., XII, p. 4, pl. 1, f. 1—3.1866 *Encrinaster arnoldi* Haeckel, Gen. Morph., II, p. LXVII1886 *Aspidosoma arnoldi* Stürtz, Palaeontogr., XXXII, p. 93.1909 *Aspidosoma arnoldi* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 38.1910 *Aspidosoma arnoldi* Schöndorf, Palaeontogr., LVII, p. 4, 62, pl. 1, f. 2; pl. 2, f. 6, 7; pl. 3, f. 7—9.1910 *Aspidosoma arnoldi* Schöndorf, Jahrb. geol. Landesanst., Berlin, XXIX, p. 706.1914 *Encrinaster arnoldi* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Lower Coblenzian) of Germany. Winningen.**eifelensis** (Schöndorf)1910 *Aspidosoma eifelense* Schöndorf, Palaeontogr., LVII, p. 34, 63, pl. 1, f. 5.1914 *Encrinaster eifelensis* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Lower Coblenzian) of Germany. Oberstadtfeld, Eifel.**goldfussi** (Schöndorf)1910 *Aspidosoma goldfussi* Schöndorf, Palaeontogr., LVII, p. 11, 62, pl. 3, f. 1, 6.1914 *Encrinaster goldfussi* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Lower Coblenzian) of Germany. Winningen.**petaloides** (Simonovitsch)1869 *Aspidosoma tischbeinianum* Weiss, Verh. nat. Ver. preuss. Rheinl., XXVI, Sitzb., p. 43.1871 *Aspidosoma petaloides* Simonovitsch, Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I, p. 106, pl. 4, f. 1—3.

- 1876 *Aspidosoma* cf. *arnoldii* Quenstedt, Petr. Deutschl., 1, IV, p. 77, pl. 92, f. 41.
- 1879 *Aspidosoma petaloides* Zittel, Handb., I, p. 453, f. 322.
- 1886 *Aspidosoma petaloides* Stürtz, Palacontogr., XXXII, p. 92.
- 1887 *Aspidosoma petaloides* Haas, Leitfoss., f. 157.
- 1893 *Aspidosoma petaloides* Halfar, Jahrb. geol. Landesanst., Berlin, p. 187, pl. 10, f. 2, 2a.
- 1893 *Aspidosoma petaloides* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 39.
- 1899 *Aspidosoma petaloides* Stürtz, ibid., LVI, p. 206.
- 1903 *Aspidosoma petaloides* Steinmann, Einführung, p. 162, f. 225 D; 2d ed., 1907, p. 183, f. 260.
- 1903 *Aspidosoma petaloides* Zittel, Grundzüge, 2d ed., I, f. 359.
- 1908 *Aspidosoma petaloides* Walther, Entstehung d. Erde u. d. Lebens, p. 275, f. 144.
- 1909 *Aspidosoma petaloides* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 37, pl. 4, f. 4, 5.
- 1910 *Aspidosoma petaloides* Schöndorf, Palaeontogr., LVII, p. 14, 63, pl. 1, f. 3, 4; pl. 2, f. 4; pl. 3, f. 10—16.
- 1910 *Aspidosoma petaloides* Schöndorf, Jahrb. geol. Landesanst., Berlin, XXIX, p. 707.
- 1914 *Encrinaster petaloides* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Upper Coblenzian) of Germany. Niederrhein.
- petaloides gosleriensis** (Halfar)
- 1893 *Aspidosoma petaloides* var. *gosleriensis* Halfar, Jahrb. preuss. geol. Landesanst. u. Bergak., XIII, p. 186, pl. 10, f. 1, 1a.
- 1910 *Aspidosoma petaloides* var. *gosleriensis* Schöndorf, Palaeontogr., LVII, p. 21, 63, pl. 2, f. 5.
- 1910 *Aspidosoma petaloides* var. *gosleriensis* Schöndorf, Jahrb. geol. Landesanst., Berlin, XXIX, p. 707.
- 1914 *Encrinaster petaloides gosleriensis* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian of Germany. Harz.
- pontis** (Clarke)
- 1913 *Aspidosoma* ? *pontis* Clarke, Monog. I, Serv. Geol. e Min. Brasil, p. 312, pl. 27, f. 1—8.
- 1913 *Aspidosoma* ? *pontis* Clarke, Bull. 164, N. Y. St. Mus., pl. 35, f. 1—4.
- 1914 *Encrinaster pontis* Schuchert, Bull. 88, U. S. Nat. Mus. Devonian of Brazil. Ponta Grossa and Jaguarahyva.
- roemeri** (Schöndorf)
- 1863 *Aspidosoma tischbeinianum* Roemer (partim), Palaeontogr., IX, pl. 25, f. 11.
- 1910 *Aspidosoma roemeri* Schöndorf, Ibid., LVII, p. 28, 62, pl. 2, f. 3; pl. 3, f. 2, 3.
- 1914 *Encrinaster roemeri* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian of Germany. Bundenbach.
- schmidti** (Schöndorf)
- 1910 *Aspidosoma schmidti* Schöndorf, Jahrb. geol. Landesanst., Berlin, XXIX, p. 698, pl. 19.
- 1910 *Aspidosoma schmidti* Schöndorf, Palaeontogr., LVII, p. 31, 63, pl. 1, f. 6; pl. 3, f. 17, 18.
- 1914 *Encrinaster schmidti* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Herdorfer zone of Siegen) of Germany. Oberdielen.
- tischbeinianus** (Roemer)
- 1863 *Aspidosoma tischbeinianum* Roemer, Palacontogr., IX, p. 144, pl. 23, f. 1a, 1b.

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- 1867 *Aspidosoma tischbeinianum* Quenstedt, Handb. d. Pet., p. 712, pl. 70, f. 8; 3d ed., 1885, p. 909, pl. 71, f. 41, t. f. 322.
 1876 *Aspidosoma tischbeinianum* Quenstedt, Petr. Deutsehl. 1, IV, p. 76, pl. 92, f. 39.
 1886 *Aspidosoma tischbeinianum* Stürtz, Palaeontogr., XXXII, p. 92, pl. 12, f. 1, 2.
 1890 *Aspidosoma tischbeinianum* Steinmann and Döderlein, Elemente d. Pal., p. 148, f. 152.
 1897 *Aspidosoma tischbeinianum* Credner, Elemente d. Geol., 8th ed., p. 431, f. 225.
 1903 *Aspidosoma tischbeinii* Steinmann, Einführung, p. 162, f. 225; 2d ed., 1907, p. 183, f. 260.
 1910 *Aspidosoma tischbeinianum* Schöndorf, Jahrb. geol. Landesanst., Berlin, XXIX, p. 707.
 1910 *Aspidosoma tischbeinianum* Schöndorf, Palaeontogr., LVII, p. 23, 62, pl. 1, f. 1; pl. 3, f. 4, 5.
 1914 *Encrinaster tischbeinianus* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Devonian of Germany. Bundenbaeh.

Eoluidia Stürtz (AL)

- 1863 *Asterias asperula* Roemer (partim), Palaeontogr., IX, p. 146, pl. 24, f. 1—5; pl. 26, f. 6; pl. 27.
 1886 *Eoluidia* Stürtz, Ibid., XXXII, p. 89, pl. 11, f. 1, 2.
 1890 *Eoluidia* Stürtz, Ibid., XXXVI, p. 211, pl. 26, f. 10, 11.
 1897 *Eoluidia* Gregory, Proc. Zool. Soc. London, p. 1038.
 1899 *Eophiurites* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI, p. 190.
 1914 *Eoluidia* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *E. decheni* Stürtz.

decheni Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbaeh.

Eophiura Jaekel (AL)

- 1903 *Eophiura* Jaekel, Zeits. d. geol. Ges., LIV, Prot., p. 13—20, f. 1, 4.
 1914 *Eophiura* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *E. bohémica* Schuchert.

bohémica Schuchert

References same as for genus.

Ordovician (D₁) of Bohemia. Osek.

Eophiurites Stürtz = *Eoluidia*

decheni (Stürtz) = *Eoluidia decheni*

Eospondylus Gregory (AL)

- 1897 *Eospondylus* Gregory, Proc. Zool. Soc. London, p. 1039.
 1914 *Eospondylus* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *Ophiurella primigenia* Stürtz.

primigenius (Stürtz)

- 1886 *Ophiurella primigenia* Stürtz, Palaeontogr., XXXII, p. 77, pl. 8, f. 1, 2.
 1890 *Ophiurella primigenia* Stürtz, Ibid., XXXVI, p. 210, pl. 26, f. 6, 7.
 1897 *Eospondylus primigenia* Gregory, Proc. Zool. Soc. London, p. 1039.
 1914 *Eospondylus primigenius* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Devonian of Germany. Bundenbach.

Etheridgaster Gregory = *Monaster*

clarkei (De Koninck) = *Monaster clarkei*

Eucladia Woodward

- 1869 *Eucladia* Woodward, Geol. Mag., VI, p. 241, pl. 8.
 1879 *Eucladia* Zittel, Handb., I, p. 443.

- 1893 *Eucladia* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 30.
 1897 *Eucladia* Gregory, Proc. Zool. Soc. London, p. 1040, f. 6 on p. 1041.
 1899 *Eucladia* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI, p. 183.
 1899 *Eucladia* Sollas, Quart. Jour. Geol. Soc., LV, p. 692.
 1909 *Eucladia* Sehöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 47.
 1910 *Eucladia* Sehöndorf, Ibid., LXIII, p. 240.
 1914 *Eucladia* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *E. johnsoni* Woodward.

(?) **beecheri** Schuchert

- 1914 *Eucladia* (?) *beecheri* Schuchert, Bull. 88, U. S. Nat. Mus.
 Lower Devonian (Helderbergian) of United States. Jerusalem Hill,
 near Litchfield, N. Y.

johnsoni Woodward

- References same as for genus.
 Silurian (Lower Ludlow) of England. Sedgley, near Dudley.

woodwardi Sollas

- 1899 *Eucladia woodwardi* Sollas, Quart. Jour. Geol. Soc., LV, p. 695,
 f. 1 and 2 on p. 694.
 1914 *Eucladia woodwardi* Schuchert, Bull. 88, U. S. Nat. Mus.
 Silurian (Lower Ludlow) of England. Leintwardine, Shropshire.

Eugaster Hall = **Eugasterella**

concinna Ringueberg = **Eugasterella** (??) *concinna*

logani Hall = **Eugasterella** *logani*

Eugasterella Schuchert (AL)

- 1868 *Eugaster* Hall, 20th Rep. N. Y. St. Cab., p. 290; rev. ed., p. 332.
 1879 *Eugaster* Zittel, Handb., I, p. 444.
 1886 *Eugaster* Stürtz, N. Jahrb. f. Min., II, p. 151.
 1889 *Eugaster* Miller, N. Am. Geol. Pal., p. 244.
 1893 *Eugaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 20.
 1897 *Eugaster* Gregory, Proc. Zool. Soc. London, p. 1035.
 1914 *Eugasterella* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *Eugaster logani* Hall.

(??) **concinna** (Ringueberg)

- 1886 *Eugaster concinnus* Ringueberg, Bull. Buffalo Soc. Nat. Sci.,
 V, p. 8, pl. 1, f. 3.
 1914 *Eugasterella* (??) *concinna* Schuchert, Bull. 88, U. S. Nat. Mus.
 Silurian (Rochester) of United States. Lockport, N. Y.

logani (Hall)

- 1868 *Eugaster logani* Hall, 20th Rep. N. Y. St. Cab., p. 290; rev.
 ed., p. 333, pl. 9, f. 7, 8.
 1914 *Eugasterella logani* Schuchert, Bull. 88, U. S. Nat. Mus.
 Middle Devonian (Hamilton) of United States. Near Fenner,
 Madison County, N. Y.

Euryale annulatum DeKay. Apparently a lysophiurid. See Hall, 1861,
 Pal. N. Y., III, p. 134 (nom. nud.).

Euthemon Sollas

- 1899 *Euthemon* Sollas, Quart. Jour. Geol. Soc., LV, p. 696, f. 3
 and 4 on p. 698.
 1914 *Euthemon* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype and only species: *E. igerna* Sollas.

igerna Sollas

- References same as for genus.
 Silurian (Wenlock) of England. Malvern.

Furcaster Stürtz (AL)

- 1886 *Furcaster* Stürtz, Palaeontogr., XXXII, p. 79.
 1886 *Furcaster* Stürtz, N. Jahrb. f. Min., II, p. 148.
 1893 *Furcaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 25.
 1897 *Furcaster* Gregory, Proc. Zool. Soc. London, p. 1038.

1900 *Furcaster* Gregory, in Lankester, Treat. Zool., III, p. 275, f. 31.

1914 *Furcaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *F. palaeozoicus* Stürtz.

(?) **daoulasensis** (Davy)

1887 *Protaster daoulasensis* Davy, Bull. Soc. géol. France, 3e sér., XIV, p. 182—187, f.

1897 *Protaster daoulasensis* Gregory, Proc. Zool. Soc. London, p. 1038, footnote.

1914 *Furcaster* (?) *daoulasensis* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian of France. Runguen, near Brest.

palaeozoicus Stürtz

1886 *Furcaster palaeozoicus* Stürtz, Palaeontogr., XXXII, p. 79, pl. 8, f. 4, 5.

1886 *Furcaster palaeozoicus* Stürtz, N. Jahrb. f. Min., II, p. 148.

1890 *Furcaster palaeozoicus* Stürtz, Palaeontogr., XXXVI, p. 214.

1897 *Furcaster palaeozoicus* Gregory, Proc. Zool. Soc. London, p. 1038.

1914 *Furcaster palaeozoicus* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian of Germany. Bundenbach.

Gregoriura Chapman (AL)

1907 *Gregoriura* Chapman, Proc. Roy. Soc. Victoria, n. s., XIX, p. 24, pl. 6, f. 1; pl. 8, f. 1, 3.

1910 *Gregoriura* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 238.

1914 *Gregoriura* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *G. spryi* Chapman.

spryi Chapman

References same as for genus.

Silurian (Melbournian) of Australia. South Yarra, Victoria.

Hallaster Stürtz (AL)

1861 *Protaster* Hall, Pal. N. Y., III, p. 134.

1868 *Protaster* Hall, 20th Rep. N. Y. St. Cab., p. 293; rev. ed., p. 336.

1886 *Hallaster* Stürtz, N. Jahrb. f. Min., II, p. 150.

1914 *Hallaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *Protaster forbesi* Hall.

forbesi (Hall)

1861 *Protaster forbesi* Hall, Pal. N. Y., III, p. 134, pl. 7A, f. 8—10.

1868 *Protaster forbesi* Hall, 20th Rep. N. Y. St. Cab., p. 293, pl. 9, f. 5, 6; rev. ed., p. 336, pl. 9, f. 5, 6.

1876 *Protaster forbesi* Quenstedt, Petr. Deutschl., 1, IV, p. 134, pl. 95, f. 13.

1886 *Protaster forbesi* Stürtz, Palaeontogr., XXXII, p. 78, 83.

1886 *Hallaster forbesi* Stürtz, N. Jahrb. f. Min., II, p. 150.

1914 *Hallaster forbesi* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Devonian (Helderbergian) of United States. Jerusalem Hill, near Litchfield, N. Y.

Helianthaster Clarke (partim) = *Palaeosolaster*

Helianthaster Roemer (A)

1862 *Helianthaster* Roemer, Palaeontogr., IX, 1863, p. 147, p. 28.

1876 *Helianthaster* Quenstedt, Petr. Deutschl., 1, IV, p. 82, pl. 93, f. 32.

1879 *Helianthaster* Zittel, Handb., I., p. 453.

1886 *Helianthaster* Stürtz, N. Jahrb. f. Min., II, p. 148.

1886 *Helianthaster* Stürtz, Palaeontogr., XXXII, p. 81.

1890 *Helianthaster* Stürtz, Ibid., XXXVI, p. 218, pl. 27.

1893 *Helianthaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 12, 30.

1900 *Helianthaster* Gregory, in Lankester, Treat. Zool., III, p. 258.

1908 *Helianthaster* Clarke, Bull. 121, N. Y. St. Mus., p. 61, pl. 10.

1909 *Helianthaster* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 34.

1914 *Helianthaster* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype (type by monotypy): *H. rhenanus* Roemer.

filiciformis Woodward

1874 *Helianthaster filiciformis* Woodward, Geol. Mag., Dec. II, I, p. 7—10, f. on p. 8.

1914 *Helianthaster filiciformis* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Devonian of England. Great Inglebourne, Harberton, South Devon.

gyalum Clarke = *Palaeosolaster* (?) gyalum

gyalum Clarke (partim) = *Lepidasterella babcocki*

rhenanus Roemer

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Hisingeraster Stürtz = *Lindströmaster*

antiqua (Hisinger) = *Lindströmaster antiquus*

Hudsonaster Stürtz (A)

1868—1899 *Palaeaster* of authors.

1899 *Hudsonaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI, p. 218, 224, 225.

1912 *Protopalaeaster* Hudson, Ottawa Nat., XXVI, p. 25 (Genoholotype: *P. narrawayi* Hudson).

1912 *Protopalaeaster* Raymond, Ibid., p. 105.

1914 *Hudsonaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *Palaeasterina rugosa* Billings.

batheri Schuchert

1880 *Tetraster wyville-thomsoni* Nicholson and Etheridge (partim), Sil. Foss. Girvan Dist., III, p. 324, pl. 21, f. 1, 2.

1914 *Hudsonaster batheri* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Ordovician of Scotland. Thraive, Girvan District.

incomptus (Meek)

1846 "*Goniaster*" Agassiz, Graham, Anthony, and James, Am. Jour. Sci., 2d ser., I, p. 441 (nom. nud.).

1872 *Palaeaster incomptus* Meek, Ibid., 3d ser., IV, p. 275.

1873 *Palaeaster incomptus* Meek, Pal. Ohio, I, p. 64, pl. 4, f. 5a, b.

1878 *Palaeaster simplex* Miller, Jour. Cin. Soc. Nat. Hist., I, p. 29, pl. 1, f. 6.

1878 *Palaeaster clarki* Miller, Ibid., p. 102, pl. 3, f. 5.

1880 *Palaeaster clarkianus* Miller, Ibid., III, p. 236.

1889 *Palaeaster simplex* Miller, N. Am. Geol. Pal., p. 266, f. 380.

1914 *Hudsonaster incomptus* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Ordovician (Richmond, Maysville, Eden) of United States. Waynesville, Cincinnati, and Raysville, Ohio; Covington, Ky.

matutinus (Hall)

1847 *Asterias matutina* Hall, Pal. N. Y., I, p. 91, pl. 29, f. 5a, b.

1850 *Coelaster matutina* D'Orbigny, Prodr. de Pal., I, p. 22 (gen. ref. only).

1858 *Petraster rigidus* Billings (partim), Can. Org. Rem., III, pl. 10, f. 3b.

1868 *Palaeaster matutinus* Hall, 20th Rep. N. Y. St. Cab., p. 283, pl. 9, f. 2; rev. ed., p. 325, pl. 9, f. 2.

1868 *Petraster rigidus* Hall (partim), Ibid., p. 294; rev. ed., p. 337.

1914 *Hudsonaster matutinus* Schuchert, Bull. 88, U. S. Nat. Mus.

Middle Ordovician (Trenton) of North America. Trenton Falls, Newport, and Deerfield, N. Y.; Lachine, Quebec; Government House Bay, near Ottawa, Ontario.

milleri Schuchert

- 1914 *Hudsonaster milleri* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Ordovician (Trenton) of United States. Fayette County, Ky.

narrawayi

- 1912 *Protopalaeaster narrawayi* Hudson, Ottawa Nat., XXVI,
p. 25, pls. 1—3.
1912 *Protopalaeaster narrawayi* Raymond, Ibid., p. 105—107.
1913 *Protopalaeaster narrawayi* Hudson, Bull. 164, N. Y. St.
Mus., pl. 5.
1914 *Hudsonaster narrawayi* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Ordovician (Black River, Stones River) of North America.
St. Paul, Minn.; Shelbyville, Tenn.; Curdsville, Ky.; City
View near Ottawa, and Kirkfield, Ontario.

rugosus (Billings)

- 1857 *Palaeasterina rugosa* Billings, Rep. Prog., Geol. Surv. Canada,
p. 291.
1858 *Palaeasterina rugosa* Billings, Can. Org. Rem., III, p. 77,
pl. 9, f. 2a—c.
1862 *Palasterina rugosa* Wright, Brit. Foss. Ech., II, I, p. 27.
1899 *Hudsonaster rugosa* Stüertz, Verh. nat. Ver. preuss. Rheinl.,
LVI, p. 218, 224, 225.
1914 *Hudsonaster rugosus* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Ordovician (Richmondian) of Canada. Charleton Point,
Anti costis Island.

Jaekelaster Stüertz (A)

- 1899 *Jaekelaster* Stüertz, Verh. nat. Ver. preuss. Rheinl., LVI,
p. 235—236, pl. 4, f. 13—16.
1914 *Jaekelaster* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *J. petaliformis* Stüertz.

petaliformis Stüertz

References same as for genus.
Lower Devonian of Germany. Bundenbach.

Lapworthura Gregory (AL)

- 1897 *Lapworthura* Gregory, Proc. Zool. Soc. London, p. 1037, f. 5.
1910 *Lapworthura* Schöndorf, Palaeontogr., LVII, p. 58.
1910 *Lapworthura* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII,
p. 208.
1914 *Lapworthura* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *Protaster miltoni* Salter.

cylindrica (Billings) = *Taeniaster cylindricus*

miltoni (Salter)

- 1857 *Protaster miltoni* Salter, Ann. Mag., 2d ser., XX, p. 330,
pl. 9, f. 4.
1862 *Protaster miltoni* Wright, Brit. Foss. Ech., II, I, p. 32, f. 18.
1876 *Protaster miltoni* Quenstedt, Petr. Deutschl., 1, IV, p. 75,
pl. 92, f. 36.
1886 *Protaster miltoni* Stüertz, N. Jahrb. f. Min., II, p. 148.
1886 *Protaster miltoni* Stüertz, Palaeontogr., p. 79, 94, pl. 8, f. 6.
1897 *Lapworthura miltoni* Gregory, Proc. Zool. Soc. London,
p. 1037, f. 5.
1910 *Lapworthura miltoni* Schöndorf, Palaeontogr., LVII, p. 58.
1910 *Lapworthura miltoni* Schöndorf, Jahrb. nass. Ver. Naturk.,
LXIII, p. 208.
1914 *Lapworthura miltoni* Schuchert, Bull. 88, U. S. Nat. Mus.
Silurian (Lower Ludlow) of England. Leintwardine, Shropshire.

Lepidaster Forbes (A)

- 1850 *Lepidaster* Forbes, Brit. Org. Rem., III, p. 1, pl. 1, f. 1—3.
1862 *Lepidaster* Wright, Brit. Foss. Ech., II, I, p. 35.
1874 *Lepidaster* Woodward, Geol. Mag., Dec. II, I, p. 9.

1879 *Lepidaster* Zittel, Handb., I, p. 454.

1890 *Lepidaster* Stürtz, Palaeontogr., XXXVI, p. 222, pl. 28, f. 19—20.

1893 *Lepidaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 52, 72.

1914 *Lepidaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *L. grayi* Forbes.

grayi Forbes

References same as for genus.

Siluric (Wenlock) of England. Castle Hill, near Dudley.

Lepidasterella Schuchert (A)

1914 *Lepidasterella* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *L. babcocki* Schuchert.

babcocki Schuchert

1906 *Helianthaster* sp. nov. Clarke, 59th Rep. N. Y. St. Mus., p. 37, pl.

1908 *Helianthaster gyalum* Clarke (partim), Bull. 121, N. Y. St. Mus., p. 61 (not pls. 12, 13 = *Palaeosolaster* (?) *gyalum*).

1914 *Lepidasterella babcocki* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Devonian of United States. Ithaca, and Interlaken, N. Y.

Lindströmster Gregory (A)

1899 *Lindstromaster* Gregory, Geol. Mag., Dec. IV, VI, p. 344, 346.

1899 *Hisingeraster* Stürtz, Verh. nat. Ver. preuss. Rheinl., p. 224, 225 (Same genoholotype as for *Lindströmster*).

1914 *Lindströmster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *Asterias antiqua* Hisinger.

antiquus (Hisinger)

1837 *Asterias antiqua* Hisinger, Lethaea Suecia, p. 89, pl. 26, f. 6.

1840 *Asterias antiqua* Hisinger, Anteckningar, VII, p. 64.

1848 *Asterias antiqua* Bronn, Ind. Pal., Nomencl., p. 120.

1848 *Palmipes antiqua* Forbes, Mem. Geol. Surv. Gt. Brit., II, Pt. 2, p. 481.

1857 *Palaeasterina antiqua* Salter, Ann. Mag., 2d ser., XX, p. 327.

1857 *Asteriscus antiquus* Pictet, Traité, IV, p. 267, pl. 98, f. 4.

1867 *Palmipes antiqua* Lindström, Nom. Foss. Sil. Gotl., p. 26.

1869 *Palaeasterina antiqua* Woodward, Geol. Mag., Dec. I, VI, p. 244.

1885 *Palaeasterina antiqua* Lindström, List. Foss. Gotl., p. 14.

1888 *Palaeasterina antiqua* Lindström, List. Foss. Faunas Swed., Pt. II, p. 16.

1888 *Palaeasterina antiqua* Lindström, N. Jahrb. f. Min., I, p. 157.

1893 *Palaeasterina antiqua* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 44.

1899 *Lindstromaster antiqua* Gregory, Geol. Mag., Dec. IV, VI, p. 343, 347, pl. 16, f. 1a, b.

1910 *Lindstromaster antiqua* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 225.

1914 *Lindströmster antiquus* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric of Gotland. Mount Hoburg.

Loriolaster Stürtz (A)

1886 *Loriolaster* Stürtz, Palaeontogr., XXXII, p. 94, pl. 12, f. 3, 3a, 4; pl. 13, f. 1, 1a, 2, 2a.

1890 *Loriolaster* Stürtz, Ibid., XXXVI, p. 208, pl. 26, f. 3b, 4a.

1893 *Loriolaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 47, 63.

1914 *Loriolaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *L. mirabilis* Stürtz.

mirabilis Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Medusaster Stürtz (A)

1890 *Medusaster* Stürtz, Palaeontogr., XXXVI, p. 229, pl. 31, f. 34, 35.

1893 *Medusaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 54, 73.

1914 *Medusaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *M. rhenanus* Stürtz.

rhenanus Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Mesopalaeaster Schuchert (A)

1860—1914 *Palaeaster* (partim) of authors.

1868 ? *Argaster* Hall, 20th Rep. N. Y. St. Cab., p. 287; rev. ed., p. 329 (nom. nud.).

1914 *Mesopalaeaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *Palaeaster shaefferi* Hall.

(?) acuminatus (Simonovitsch)

1871 *Asterias acuminatus* Simonovitsch, Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I, p. 100, pl. 3, f. 2—2d.

1886 *Roemeraster* (?) *acuminatus* Stürtz, N. Jahrb. f. Min., II, p. 154.

1909 *Asterias acuminata* Schöndorf, Palaeontogr., LVI, p. 72, 109, pl. 11, f. 7, 8.

1909 *Asterias acuminata* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 32, pl. 5, f. 4, 5.

1914 *Mesopalaeaster* (?) *acuminatus* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Devonian (? Upper Coblenzian) of Germany. Near Braubach.

(?) antiquus (Troost)

1835 *Asterias antiqua* Troost, Trans. Geol. Soc. Penn., I, p. 232, pl. 10, f. 9.

1850 *Asterias antiqua* Troost, Proc. Amer. Assoc., II, p. 59 (cat. name).

1866 *Petraster* (?) *antiqua* Shumard, Trans. Acad. Sci. St. Louis, II, p. 386 (cat. name).

1868 *Palaeaster* (*Argaster*) *antiqua* Hall, 20th Rep. N. Y. St. Cab., p. 287; rev. ed., p. 329.

1889 *Palaeaster antiquus* Miller, N. Am. Geol. Pal., p. 265 (cat. name).

1899 *Argaster antiqua* Gregory, Geol. Mag., Dec. IV, VI, p. 345.

1909 *Palaeaster antiqua* Wood, Bull. 64, U. S. Nat. Mus., p. 105, pl. 8, f. 1.

1914 *Mesopalaeaster* (?) *antiquus* Schuchert, Bull. 88, U. S. Nat. Mus.

Middle Ordovician (Trenton) of United States. Harpeth River,

Davidson County, Tenn.

bellulus (Billings)

1865 *Petraster bellulus* Billings, Pal. Foss., I, p. 393, f. 368.

1889 *Petraster bellulus* Miller, N. Am. Geol. Pal., p. 269, f. 389.

1914 *Mesopalaeaster bellulus* Schuchert, Bull. 88, U. S. Nat. Mus.

Silurian (Rochester) of Canada. Grimsby, Ontario.

caractaci (Gregory)

1865 *Palaeaster caractaci* Salter, Cat. Foss. Mus. Pract. Geol., p. 30 (nom. nud.).

1880 *Palaeaster caractaci* Nicholson and Etheridge, Sil. Foss. Girvan Dist., III, p. 321 (no desc.).

1899 *Palaeaster caractaci* Gregory, Geol. Mag., Dec. IV, VI, p. 344.

1910 *Palaeaster caractaci* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 227.

1914 *Mesopalaeaster caractaci* Schuchert, Bull. 88, U. S. Nat. Mus.

Ordovician (Caradoc) of England. Church Stretton and Marshbrook.

(?) cataractensis Schuchert

1914 *Mesopalaeaster (?) cataractensis* Schuchert, Bull. 88, U. S. Nat. Mus.

Siluric (Cataract) of Canada. Hamilton, Ontario.

(?) clarki (Clarke and Swartz)

1913 *Palaeaster clarki* Clarke and Swartz, Maryland Geol. Surv., Up. Dev., p. 543, pl. 46, f. 3, 4.

1914 *Mesopalaeaster (?) clarki* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Devonian (Chemung) of United States. Near Oakland, Garrett County, Md.

(?) dubius (Miller and Dyer)

1878 *Palaeaster dubius* Miller and Dyer, Cont. Pal., No. 2, p. 5, pl. 4, f. 8.

1914 *Mesopalaeaster (?) dubius* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Ordovician (Trenton) of United States. Ludlow, Ky.

finei (Ulrich)

1879 *Palaeaster finei* Ulrich, Jour. Cin. Soc. Nat. Hist., II, p. 19, pl. 7, f. 15—15b.

1914 *Mesopalaeaster finei* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Ordovician (Eden) of United States. Cincinnati, Ohio.

granti (Spencer)

1884 *Palaeaster granti* Spencer, Bull. Mus. Univ. Missouri, I, p. 53, pl. 7, f. 1.

1914 *Mesopalaeaster granti* Schuchert, Bull. 88, U. S. Nat. Mus.
Siluric (Cataract) of Canada. Hamilton, Ontario.

intermedius Schuchert

1914 *Mesopalaeaster intermedius* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Ordovician (Maysville) of United States. Cincinnati, Ohio.

(?) lanceolatus Schuchert

1914 *Mesopalaeaster (?) lanceolatus* Schuchert, Bull. 88, U. S. Nat. Mus.

Middle Ordovician (Utica) of United States. Rome, N. Y.

(?) parviusculus (Billings)

1860 *Palaeaster parviusculus* Billings, Can. Nat. Geol., V, p. 69, f.

1868 *Palaeaster parviusculus* Dawson, Acad. Geol., 2d ed., p. 594, f. 197.

1913 *Palaeaster parviusculus* Hudson, Bull. 164, N. Y. St. Mus., pls. 1—4.

1914 *Mesopalaeaster (?) parviusculus* Schuchert, Bull. 88, U. S. Nat. Mus.

Siluric (Clinton) of Canada. Arisaig, Nova Scotia.

proavitus Schuchert

1914 *Mesopalaeaster proavitus* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Ordovician (Eden) of United States. Covington, Ky.

shaefferi (Hall)

1868 *Palaeaster shaefferi* Hall, 20th Rep. N. Y. St. Cab., p. 284; rev. ed., p. 326, pl. 9, f. 1.

1873 *Palaeaster shaefferi* Meek, Pal. Ohio, I, p. 66, pl. 4, f. 1.

1914 *Mesopalaeaster shaefferi* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Ordovician (Maysville, Richmond) of United States. Cincinnati, and Waynesville, Ohio; ? Rome, N. Y.

(?) wilberanus (Meek and Worthen)

1862 *Petraster wilberanus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., XIII, p. 142.

1868 *Palaeaster wilberanus* Hall, 20th Rep. N. Y. St. Cab., p. 285; rev. ed., p. 328.

- 1914 *Mesopalaeaster* (?) *wilberanus* Schuchert, Bull. 88, U. S. Nat. Mus.

? Upper Ordovician (? Richmondian) of United States. Oswego, Kendall County, Ill.

Miomaster Schöndorf (A)

- 1909 *Miomaster* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 38, pl. 3, f. 4; pl. 4, f. 3.

- 1914 *Miomaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *M. drevermanni* Schöndorf.

drevermanni Schöndorf

References same as for genus.

Lower Devonian (Upper Coblenzian) of Germany. Miellen-on-the-Lahn.

Miospondylus Gregory (AL)

- 1897 *Miospondylus* Gregory, Proc. Zool. Soc. London, p. 1039.

- 1914 *Miospondylus* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *Ophiura rhenana* Stürtz.

rhenanus (Stürtz)

- 1893 *Ophiura rhenana* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 29, pl. 1, f. 1—3.

- 1897 *Miospondylus rhenanus* Gregory, Proc. Zool. Soc. London, p. 1039.

- 1914 *Miospondylus rhenanus* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Devonian of Germany. Bundenbach.

Monaster Gregory = Australaster

Monaster Etheridge (A)

- 1892 *Palaeaster* (*Monaster*) Etheridge (partim), Mem. Geol. Surv. N. So. Wales, Pal. 5, II, p. 70, 71.

- 1899 *Etheridgaster* Gregory, Geol. Mag., Dec. IV, VI, p. 353 (Genoholotype: *Palaeaster clarkei* De Koninck).

- 1914 *Monaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *Palaeaster clarkei* De Koninck.

clarkei (De Koninck)

- 1877 *Palaeaster clarkei* De Koninck, Mém. Soc. Roy. Sci. Liège, 2e sér., II, p. 166, pl. 7, f. 6, 6a.

- 1892 *Palaeaster* (*Monaster*) *clarkei* Etheridge, Mem. Geol. Surv. N. So. Wales, Pal. 5, II, p. 71, pl. 14, f. 1, 2; pl. 15, f. 4.

- 1898 *Palaeaster clarkei* De Koninck, Ibid., Pal. 6, p. 127, pl. 7, f. 6a, b.

- 1899 *Etheridgaster clarkei* Gregory, Geol. Mag., Dec. IV, VI, p. 353.

- 1914 *Monaster clarkei* Schuchert, Bull. 88, U. S. Nat. Mus.

Permo-Carbonic of New South Wales. (Jarley and Branxton stages.) Northumberland County.

giganteus Etheridge = Australaster *giganteus*

stutchburii Etheridge = Australaster *stutchburii*

Neopalaeaster Schuchert (A)

- 1914 *Neopalaeaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *Palaeaster crawfordsvillensis* Miller.

crawfordsvillensis (Miller)

- 1880 *Palaeaster crawfordsvillensis* Miller, Jour. Cin. Soc. Nat. Hist., II, p. 256, pl. 15, f. 3.

- 1889 *Palaeaster crawfordsvillensis* Miller, N. Am. Geol. Pal., p. 265, f. 379.

- 1914 *Neopalaeaster crawfordsvillensis* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Carbonic (Keokuk) of United States. Crawfordsville, Ind.

Onychaster Meek and Worthen (O)

- 1868 *Onychaster* Meek and Worthen, Geol. Surv. Illinois, III, p. 526.

- 1869 *Onychaster* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., XXI, p. 82.

- 1873 *Onychaster* Meek and Worthen, Geol. Surv. Illinois, V, p. 474.
 1879 *Onychaster* Zittel, Handb., I, p. 443.
 1889 *Onychaster* Miller, N. Am. Geol. Pal., p. 264.
 1893 *Onychaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 30.
 1897 *Onychaster* Gregory, Proe. Zool. Soc. London, p. 1040.
 1899 *Onychaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI, p. 183.
 1909 *Onychaster* Sehöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 47—61.
 1910 *Onychaster* Sehöndorf, Ibid., LXIII, p. 240.
 1910 *Onychaster* Sehöndorf, Palaeontogr., LVII, p. 59.
 1914 *Onychaster* Sehuehert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *O. flexilis* Meek and Worthen.

asper Miller

- 1892 *Onychaster asper* Miller, 17th Rep. Geol. Surv. Indiana, p. 684, pl. 12, f. 3—5; adv. ext., 1891, p. 74, pl. 12, f. 3—5.
 1892 *Onychaster asper* Miller, N. Am. Geol. Pal., 1st App., p. 680, f. 1240; 2d App., 1897, p. 749, f. 1366.
 1894 *Onychaster asper* Keyes, Missouri Geol. Surv., IV, p. 131.
 1914 *Onychaster asper* Sehuehert, Bull. 88, U. S. Nat. Mus.

Lower Carbonie (Keokuk) of United States. Boonville, Mo.

barrisi (Hall)

- 1861 *Protaster* ? *barrisi* Hall, Dese. N. Sp. Crin., p. 18.
 1869 *Onychaster* ? *barrisi* Meek and Worthen, Proe. Acad. Nat. Sei. Phila., XXI, p. 83.
 1873 *Onychaster* ? *barrisi* Meek and Worthen, Geol. Surv. Illinois, V, p. 476, pl. 10, f. 1a—d.
 1914 *Onychaster barrisi* Sehuehert, Bull. 88, U. S. Nat. Mus.

Lower Carbonie (Burlington) of United States. Burlington, Iowa.

confragosus Miller

- 1892 *Onychaster confragosus* Miller, 17th Rep. Geol. Surv. Indiana, p. 684, pl. 12, f. 6, 7; adv. ext., 1891, p. 74, pl. 12, f. 6, 7.
 1914 *Onychaster confragosus* Sehuehert, Bull. 88, U. S. Nat. Mus.

Lower Carbonie (Keokuk) of United States. Boonville, Mo.

demissus Miller

- 1892 *Onychaster demissus* Miller, 17th Rep. Geol. Surv. Indiana, p. 685, pl. 12, f. 8—10; adv. ext., 1891, p. 75, pl. 12, f. 8—10.
 1892 *Onychaster demissus* Miller, N. Am. Geol. Pal., 1st App., p. 680, f. 1241.
 1914 *Onychaster demissus* Sehuehert, Bull. 88, U. S. Nat. Mus.

Lower Carbonie (Keokuk) of United States. Boonville, Mo.; Crawfordsville, Ind.

flexilis Meek and Worthen

- 1868 *Onychaster flexilis* Meek and Worthen, Geol. Surv. Illinois, III, p. 526, f. A—D.
 1869 *Onychaster flexilis* Meek and Worthen, Proe. Acad. Nat. Sei. Phila., XXI, p. 83.
 1873 *Onychaster flexilis* Meek and Worthen, Geol. Surv. Illinois, V, p. 510, pl. 16, f. 3a—l.
 1879 *Onychaster flexilis* Zittel, Handb., I, p. 444, f. 314.
 1889 *Onychaster flexilis* Miller, N. Am. Geol. Pal., p. 264, f. 374.
 1909 *Onychaster flexilis* Sehöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 47—61.
 1910 *Onychaster flexilis* Sehöndorf, Ibid., LXIII, p. 240.
 1914 *Onychaster flexilis* Sehuehert, Bull. 88, U. S. Nat. Mus.

Lower Carbonie (Keokuk) of United States. Crawfordsville, Ind.

Ophiopege Böhm = *Aganaster*

Ophiura obtusa Eichwald = *Protaster* (*Ophiura*) *obtusa*

Ophiura (?) *ramosa* Fahrenkohl. Unknown to writer. See 1844, Bull. Soc. Imp. Nat. Moscow, n. s., XVII, p. 208, pl. 3, f. 1—3; and Woodward, 1874, Geol. Mag., Dec. II, I, p. 7. Coal Measures.

Ophiura rhenana Stürtz = *Miospondylus rhenanus*

Ophiura salteri Sowerby = *Protaster* (?) *salteri*

Ophiura schlotheimii Münster = *Acroure* (*Ophiura*) *schlotheimii*

Ophiurella primigenia Stürtz = *Eospondylus primigenius*

Ophiurina Stürtz (AL)

1890 *Ophiurina* Stürtz, Palaeontogr., XXXVI, p. 232.

1897 *Ophiurina* Gregory, Proc. Zool. Soc. London, p. 1037.

1914 *Ophiurina* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *O. lymani* Stürtz.

lymani Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Palaeaster of authors = *Hudsonaster*, *Mesopalaeaster*, *Devonaster*, *Promopalaeaster*, *Anorthaster*, *Neopalaeaster*, *Petraster*, *Palaeasterina*, *Monaster*, *Urasterella*

Palaeaster (*Monaster*) Etheridge = *Monaster*

Palaeaster (*Monaster*) Etheridge (partim) = *Australaster*

Palaeaster Hall (A)

1852 *Palaeaster* Hall, Pal. N. Y., II, p. 247.

1868 *Palaeaster* Hall, 20th Rep. N. Y. St. Cab., p. 282; rev. ed., p. 324.

1879 *Palaeaster* Zittel, Handb., I, p. 452.

1880 *Palaeaster* Nicholson and Etheridge (partim), Sil. Foss. Girvan Dist., III, p. 319.

1914 *Palaeaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype (type by monotypy) and only species: *P. niagarensis* Hall.

(*Argaster*) *antiqua* Hall = *Mesopalaeaster* (?) *antiquus*

antiquatus Hall = *Promopalaeaster speciosus*

antiquus Miller = *Mesopalaeaster* (?) *antiquus*

asperrima Salter = *Urasterella* (?) *asperrima*

caractaci Salter = *Mesopalaeaster caractaci*

clarkanus Miller = *Hudsonaster incomptus*

clarkei De Koninck = *Monaster clarkei*

clarki Clarke and Swartz = *Mesopalaeaster* (?) *clarki*

clarki Miller = *Hudsonaster incomptus*

coronella Salter = *Stenaster* (?) *coronella*

crawfordsvillensis Miller = *Neopalaeaster crawfordsvillensis*

dubius Miller and Dyer = *Mesopalaeaster* (?) *dubius*

dyeri Meek = *Promopalaeaster dyeri*

eucharis Hall = *Devonaster eucharis*

exculptus Miller = *Promopalaeaster exculptus*

finei Ulrich = *Mesopalaeaster finei*

(*Monaster*) *giganteus* Etheridge = *Australaster giganteus*

granti Spencer = *Mesopalaeaster granti*

granulosus Hall = *Promopalaeaster granulosus*

granulosus Meek = *Promopalaeaster speciosus*

harrisi Miller = *Urasterella grandis*

hirudo Salter = *Urasterella hirudo*

imbricatus Salter = *Tetraster* (?) *imbricatus*

incomptus Meek = *Hudsonaster incomptus*

jamesi Hall = *Petraster* (?) *americanus*

longibrachiatus Miller = *Promopalaeaster spinulosus*

magnificus Miller = *Promopalaeaster magnificus*

matutinus Hall = *Hudsonaster matutinus*

miamiensis Miller = *Anorthaster miamiensis*

montanus (Stschurowsky) = *Urasterella montana*

niagarensis Hall

1852 *Palaeaster niagarensis* Hall, Pal. N. Y., II, p. 247, pl. 51, f. 21—23.

1858 *Palaeaster niagarensis* Billings, Can. Org. Rem., III, p. 78, f. 1.

1868 *Palaeaster niagarensis* Hall, 20th Rep. N. Y. St. Cab., p. 282; rev. ed., p. 324.

1876 *Palaeaster niagarensis* Quenstedt, Petr. Deutschl., 1, IV, p. 73, pl. 92, f. 32, 33.

1913 *Palaeaster niagarensis* Hudson, Bull. 164, N. Y. St. Mus., pls. 9, 10, 12, 13.

1914 *Palaeaster niagarensis* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (Rochester) of North America. Lockport, N. Y.; Grimsby, Ontario.

obtusus Salter = *Stenaster* (?) *obtusus*

parviusculus Billings = *Mesopalaeaster* (?) *parviusculus*

pulchellus Billings = *Urasterella pulchella*

pygmaea Eichwald. Unknown to writer. Middle Ordovician, Pulkowa, Russia.

ruthveni Salter = *Urasterella ruthveni*

shaefferi Hall = *Mesopalaeaster shaefferi*

simplex Miller = *Hudsonaster incomptus*

speciosus Meek = *Promopalaeaster speciosus*

spinulosus Miller and Dyer = *Promopalaeaster spinulosus*

squamatus Salter. Unknown to writer. See Cat. Woodw. Mus., p. 47; and Woodward, 1874, Geol. Mag., Dec. II, I, p. 7. Bala of England.

(*Monaster*) *stutchburii* Etheridge = *Australaster* (?) *stutchburii*

wilberanus Hall = *Mesopalaeaster* (?) *wilberanus*

wilsoni Raymond = *Promopalaeaster wilsoni*

wykoffi Miller and Gurley = *Promopalaeaster wykoffi*

Palaeasterina of authors = *Petraster*

Palaeasterina Gregory = *Palasterina*

antiqua Salter = *Lindströmaster antiquus*

approximata Miller and Dyer = *Petraster speciosus*

fimbriata Meek and Worthen = *Schoenaster fimbriatus*

rugosa Billings = *Hudsonaster rugosus*

speciosa Miller and Dyer = *Petraster speciosus*

Palaeonectria Stürtz = *Palacostella*

devonica Stürtz = *Palacostella solida*

Palaeocomma Miller (partim) = *Ptilonaster*

Palaeocomma Salter = *Stürtzaster*

Palaeocomma (*Bdellacoma*) Salter = *Bdellacoma*

Palaeocomma (*Rhopalocoma*) Salter = *Rhopalocoma*

colvini Salter = *Stürtzaster colvini*

cygnipes Salter = *Stürtzaster cygnipes*

cylindrica Billings = *Taeniasaster cylindricus*

marstoni Salter = *Stürtzaster marstoni*

princeps Miller = *Ptilonaster princeps*

spinosa Billings = *Taeniasaster spinosus*

vermiformis Salter = *Bdellacoma vermiformis*

Palaeodiscus ferox Salter = an echinid. See Jackson, 1912, Mem. Boston Soc. Nat. Hist., VII, p. 250.

Palaeophiomyxa Stürtz (AL)

1899 *Palaeophiomyxa* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI, p. 202.

1899 *Palaeophiomyxidae* Stürtz, Ibid., p. 202.

1910 *Palaeophiomyxidae* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 235.

1914 *Palaeophiomyxa* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *P. grandis* (Stürtz).

grandis (Stürtz)

1886 *Bundenbachia grandis* Stürtz, Palaeontogr., XXXII, p. 84,
pl. 9, f. 2, 2a, 3, 3a.

1899 *Palaeophiomyxa grandis* Stürtz, Verh. nat. Ver. preuss.
Rheinl., LVI, p. 196, 202.

1914 *Palaeophiomyxa grandis* Schuchert, Bull. 88, U. S. Nat. Mus.
Lower Devonian of Germany. Bundenbach.

Palaeophiura Stürtz (AL)

1890 *Palaeophiura* Stürtz, Palaeontogr., XXXVI, p. 233.

1897 *Palaeophiura* Gregory, Proc. Zool. Soc. London p. 1034.

1914 *Palaeophiura* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *P. simplex* Stürtz.

simplex Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Palaeosolaster Stürtz (A)

1899 *Palaeosolaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI,
p. 226—229, pl. 2, f. 1—3.

1908 *Helianthaster* Clarke (partim), Bull. 121, N.Y. St. Mus., p. 64,
pl. 11.

1914 *Palaeosolaster* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype: *P. gregoryi* Stürtz.

gregoryi Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

(?) **gyalum** (Clarke)

1908 *Helianthaster gyalum* Clarke, Bull. 121, N. Y. St. Mus., p. 63,
pls. 12, 13.

1914 *Palaeosolaster* (?) *gyalum* Schuchert, Bull. 88, U. S. Nat.
Mus.

Upper Devonian (Portage) of United States. Ithaca, N. Y.

Palaeospondylus Stürtz = *Palastropecten*

zitteli Stürtz = *Palastropecten zitteli*

Palaeostella Stürtz (A)

1890 *Palaeostella* Stürtz, Palaeontogr., XXXVI, p. 230, pl. 31,
f. 42, 43.

1893 *Palaeostella* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 42,
58, pl. 1, f. 5—8.

1893 *Palaeostella* Stürtz, Ibid., p. 12 (Genoholotype: the second
specimen of *Palaeostella solida*).

1914 *Palaeostella* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *P. solida* Stürtz.

solida Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Palaeospondylus Stürtz = *Palastropecten*

Palaeura Jaekel (AL)

1903 *Palaeura* Jaekel, Zeits. d. geol. Ges., LIV, Prot., p. 13—20, f. 5.

1914 *Palaeura* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *P. neglecta* Schuchert.

neglecta Schuchert

References same as for genus.

Ordovician (D₁) of Bohemia. ? Osek.

Palasterina Billings (partim) = *Schuchertia*

Palasterina Salter (A)

1848 *Uraster* Forbes (partim), Mem. Geol. Surv. Gt. Brit., II, Pt. II,
p. 463.

- 1849 *Uraster* Forbes (partim), Brit. Org. Rem., I, pl. 1.
 1855 *Palasterina* McCoy, Brit. Pal. Foss., p. 59 (nom. nud.).
 1857 *Palasterina* Salter, Ann. Mag., 2d ser., XX, p. 324, 327.
 1858 *Palasterina* Billings (partim), Can. Org. Rem., III, p. 76.
 1859 *Palasterina* Salter (partim), in Murchison, Siluria, 3d ed., p. 248.
 1879 *Palasterina* Zittel, Handb., I, p. 453.
 1884 *Palasterina* De la Touche (partim), Handb. Geol. Shropshire, p. 34.
 1890 *Palasterina* Stürtz (partim), Palaeontogr., XXXVI, p. 226.
 1893 *Palasterina* Stürtz (partim), Verh. nat. Ver. preuss. Rheinl., L, p. 43, 60.
 1899 *Palaeasterina* Gregory, Geol. Mag., Dec. IV, VI, p. 349.
 1910 *Palasterina* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 220.
 1914 *Palasterina* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *Uraster primaevus* Forbes.
antiqua (Hisinger) = *Lindströmaster antiquus*
bonneyi Gregory
 1899 *Palaeasterina bonneyi* Gregory, Geol. Mag., Dec. IV, VI, p. 349, 350, pl. 16, f. 2a, b; t. f. 1—3.
 1910 *Palaeasterina bonneyi* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 223.
 1914 *Palasterina bonneyi* Schuchert, Bull. 88, U. S. Nat. Mus.
 Siluric (Ludlow) of England. Leintwardine, Shropshire.
follmanni Stürtz = *Pseudopalasterina follmanni*
jamesi Dana and Meek = *Petraster* (?) *americanus*
kinahani Baily = *Uranaster kinahani*
primaeva (Forbes)
 1848 *Uraster primaevus* Forbes, Mem. Geol. Surv. Gt. Brit., II, Pt. II, p. 463.
 1849 *Uraster primaevus* Forbes, Brit. Org. Rem., I, p. 2, pl. 1, f. 2a, b.
 1854 *Uraster primaevus* Murchison, Siluria, p. 221, f. 39.
 1855 *Uraster primaevus* Forbes, in McCoy, Brit. Pal. Foss., p. 60.
 1855 *Palasterina primaevus* McCoy, Ibid., p. 59 (nom. nud.).
 1857 *Palasterina primaevus* Salter, Ann. Mag., 2d ser., XX, p. 327, pl. 9, f. 2a—c.
 1862 *Palasterina primaevus* Wright, Brit. Foss. Ech., II, I, p. 26, f. 16a.
 1876 *Palasterina primaevus* Quenstedt, Petr. Deutschl., 1, IV, p. 74, pl. 92, f. 35.
 1893 *Palasterina primaeva* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 44.
 1899 *Palasterina primaeva* Stürtz, Ibid., LVI, p. 214, 224.
 1899 *Palasterina primaeva* Gregory, Geol. Mag., Dec. IV, VI, p. 349.
 1910 *Palasterina primaevus* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 220.
 1914 *Palasterina primaeva* Schuchert, Bull. 88, U. S. Nat. Mus.
 Siluric (Ludlow) of England. Underbarrow, Westmoreland, and Leintwardine, Shropshire.
 (?) *ramseyensis* Hicks
 1873 *Palasterina ramseyensis* Hicks, Quart. Jour. Geol. Soc., XXIX, p. 51, pl. 4, f. 21—23.
 1874 *Palasterina ramseyensis* Woodward, Geol. Mag., Dec. II, I, p. 96.
 1914 *Palasterina* (?) *ramseyensis* Schuchert, Bull. 88, U. S. Nat. Mus.

? Upper Ordovician (? Tremadoc) of Wales. Ramsey Island and St. Davids.

rigidus Billings = *Petraster rigidus*

rugosa Wright = *Hudsonaster rugosus*

stellata Billings = *Schuchertia stellata*

Palasteriscus Stürtz (A)

1886 *Palasteriscus* Stürtz, *Palaeontogr.*, XXXII, p. 95, pl. 14, f. 1.

1890 *Palasteriscus* Stürtz, *Ibid.*, XXXVI, p. 223, pl. 28, f. 23—23b; pl. 29, f. 24.

1893 *Palasteriscus* Stürtz, *Verh. nat. Ver. preuss. Rheinl.*, L, p. 44, 61.

1914 *Palasteriscus* Schuchert, *Bull.* 88, U. S. Nat. Mus.
Genoholotype and only species: *P. devonicus* Stürtz.

devonicus Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Palastropecten Stürtz (AL)

1886 *Palastropecten* Stürtz, *Palaeontogr.*, XXXII, p. 88, pl. 10, f. 3, 4.

1890 *Palastropecten* Stürtz, *Ibid.*, XXXVI, p. 213, pl. 26, f. 12, 13.

1897 *Palastropecten* Gregory, *Proc. Zool. Soc. London*, p. 1038.

1899 *Palaeospondylus* Stürtz, *Verh. nat. Ver. preuss. Rheinl.*, LVI, p. 190.

1899 *Palaeospondylus* Stürtz, *Ibid.*, p. 202.

1914 *Palastropecten* Schuchert, *Bull.* 88, U. S. Nat. Mus.
Genoholotype and only species: *P. zitteli* Stürtz.

zitteli Stürtz

References same as for genus.

Lower Devonian of Germany. Bundenbach.

Palmipes antiqua Forbes = *Lindströmastrea antiquus*

Petraster Billings (A)

1858 *Petraster* Billings, *Can. Org. Rem.*, III, p. 79.

1868 *Petraster* Hall, 20th Rep. N. Y. St. Cab., p. 283, 294; rev. ed., p. 325, 337.

1879 *Palaeaster* Zittel (partim), *Handb.*, I, p. 452.

1914 *Petraster* Schuchert, *Bull.* 88, U. S. Nat. Mus.
Palaeasterina of some authors.

Genoholotype (type by monotypy): *P. rigidus* Billings.

antiqua Shumard = *Mesopalaeaster* (?) *antiquus*

bellulus Billings = *Mesopalaeaster bellulus*

(?) *americanus* (D'Orbigny)

1846 *Asterias* Graham, Anthony and James, *Am. Jour. Sci.*, 2d ser., I, p. 441 (fig. but no desc.).

1850 *Coelaster americanus* D'Orbigny, *Prodr. de Pal.*, I, p. 22 (name only).

1863 *Asterias anthonii* Dana, *Man. Geol.*, p. 221 (fig. but no desc.).

1863 *Palasterina* (?) *jamesi* Dana, *Am. Jour. Sci.*, 2d ser., XXXV, p. 295.

1864 *Palasterina* (?) *jamesi* Dana, *Man. Geol.*, 2d ed., p. 221 (fig. but no desc.).

1868 *Palaeaster jamesi* Hall, 20th Rep. N. Y. St. Cab., p. 286; rev. ed., p. 329.

1873 *Palaeaster jamesi* Meek, *Pal. Ohio*, I, p. 62, pl. 4, f. 4.

1914 *Petraster* (?) *americanus* Schuchert, *Bull.* 88, U. S. Nat. Mus.
Upper Ordovician (Maysville) of United States. Cincinnati, Ohio.

rigidus (Billings)

1857 *Palasterina rigidus* Billings, *Rep. Prog., Geol. Surv. Canada*, p. 291.

1858 *Petraster rigidus* Billings, *Can. Org. Rem.*, III, p. 80, pl. 10, f. 3a.

- 1862 *Petraster rigidus* Wright, Brit. Foss. Ech., II, I, p. 29.
 1868 *Petraster rigidus* Hall, 20th Rep. N. Y. St. Cab., p. 294; rev. ed., p. 337.
 1914 *Petraster rigidus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Middle Ordovician (Trenton) of Canada. Ottawa, Ontario.
rigidus (Billings) (partim) = *Hudsonaster matutinus*
smeythi McCoy
 1874 *Petraster smeythi* McCoy, Prodr. Pal. Victoria, I, p. 41, pl. 10, f. 1—1b.
 1914 *Petraster smeythi* Schuchert, Bull. 88, U. S. Nat. Mus.
 Silurian of Australia. Moonee Ponds, Flemington, near Melbourne.
speciosus (Miller and Dyer)
 1878 *Palaeasterina speciosa* Miller and Dyer, Jour. Cin. Soc. Nat. Hist., I, p. 30, pl. 1, f. 7.
 1878 *Palaeasterina approximata* Miller and Dyer, Ibid., p. 30, pl. 1, f. 8.
 1889 *Palaeasterina speciosa* Miller, N. Am. Geol. Pal., p. 266, f. 381.
 1914 *Petraster speciosus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Upper Ordovician (Richmond, Maysville) of United States. Twin Creek, near Winchester, Waynesville, and Hamilton, Ohio.
wilberanensis Meek and Worthen = *Mesopalaeaster* (?) *wilberanensis*
Promopalaeaster Schuchert (A)
 1868—1914 *Palaeaster* (partim) of authors.
 1914 *Promopalaeaster* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *Palaeaster granulosus* Meek.
bellulus Schuchert
 1914 *Promopalaeaster bellulus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Upper Ordovician (Richmondian) of United States. Waynesville, Ohio; Versailles, Ind.
dyeri (Meek)
 1872 *Palaeaster dyeri* Meek, Am. Jour. Sci., 3d ser., III, p. 257.
 1873 *Palaeaster dyeri* Meek, Pal. Ohio, I, p. 58, pl. 4, f. 2a—f.
 1914 *Promopalaeaster dyeri* Schuchert, Bull. 88, U. S. Nat. Mus.
 Upper Ordovician (Maysville) of United States. Cincinnati, Ohio.
exculptus (Miller)
 1881 *Palaeaster exculptus* Miller, Jour. Cin. Soc. Nat. Hist., IV, p. 69, pl. 1, f. 1.
 1914 *Promopalaeaster exculptus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Upper Ordovician (Richmondian) of United States. Near Waynesville, Ohio.
granulosus (Hall)
 1868 *Palaeaster granulosa* Hall, 20th Rep. N. Y. St. Cab., p. 285; rev. ed., p. 327.
 1914 *Promopalaeaster granulosus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Upper Ordovician (Richmondian) of United States. Near Lebanon, Ohio.
magnificus (Miller)
 1884 *Palaeaster magnificus* Miller, Jour. Cin. Soc. Nat. Hist., VII, p. 16, pl. 4, f. 3, 3a.
 1914 *Promopalaeaster magnificus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Upper Ordovician (Richmond, Maysville) of United States. Near Waynesville, and Cincinnati, Ohio; Covington, Ky.; Jefferson County, Ind.

prenuntius Schuchert

- 1914 *Promopalaeaster prenuntius* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Ordovician (Lower Trenton) of United States. Near Frankfort, Ky.

speciosus (Meek)

- 1848 *Asterias antiquata* Locke, Proc. Acad. Nat. Sci. Phila., III, p. 32, f. on p. 33.
1868 *Palaeaster antiquata* Hall, 20th Rep. N. Y. St. Cab., p. 286; rev. ed., p. 328.
1872 *Palaeaster granulosus* Meek, Am. Jour. Sci., 3d ser., IV, p. 276.
1872 *Palaeaster speciosus* Meek, Ibid., p. 277.
1873 *Palaeaster granulosus* Meek, Pal. Ohio, I, p. 60, pl. 4, f. 3 a—c.
1873 *Palaeaster speciosus* Meek, Ibid., p. 61.
1914 *Promopalaeaster speciosus* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Ordovician (Maysville) of United States. Cincinnati, Ohio.

spinulosus (Miller and Dyer)

- 1878 *Palaeaster spinulosus* Miller and Dyer, Jour. Cin. Soc. Nat. Hist., I, p. 32, pl. 2, f. 12—12b.
1878 *Palaeaster longibrachiatus* Miller, Ibid., p. 102, pl. 3, f. 4.
1914 *Promopalaeaster spinulosus* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Ordovician (Richmondian) of United States. ?Cincinnati, and Clarksville, Ohio.

wilsoni (Raymond)

- 1912 *Palaeaster? wilsoni* Raymond, Ottawa Nat., XXVI, p. 77, pl. 5, f. 1—4.
1914 *Promopalaeaster wilsoni* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Ordovician (Lowville) of Canada. City View, near Ottawa, Ontario.

wykoffi (Miller and Gurley)

- 1897 *Palaeaster wykoffi* Miller and Gurley, Bull. 12, Illinois St. Mus., p. 46, pl. 3, f. 27.
1914 *Promopalaeaster wykoffi* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Ordovician (Richmondian) of United States. Near Madison, Ind.

Protaster Hall = Hallaster

Protaster Forbes (AL)

- 1849 *Protaster* Forbes, Brit. Org. Rem., I, pl. 4, p. 1—2.
1854 *Protaster* Murchison, Siluria, p. 221, f. 39—4.
1855 *Protaster* Forbes, in McCoy, Brit. Pal. Foss., p. 60.
1857 *Protaster* Salter, Rep. 26th Meet. Brit. Assoc., App., p. 76.
1857 *Protaster* Salter, Ann. Mag., 2d ser., XX, p. 325, 330.
1859 *Protaster* Hall, Pal. N. Y., III, p. 134.
1861 *Protaster* Salter, Ann. Mag., 3d ser., VIII, p. 484.
1862 *Protaster* Wright, Brit. Foss. Ech., II, I, p. 23, 31.
1866 *Encrinaster* (partim) Haeckel, Gen. Morph., II, p. LXVII (no definition).
1868 *Protaster* Hall, 20th Rep. N. Y. St. Cab., p. 293; rev. ed., p. 335.
1876 *Protaster* Quenstedt, Petr. Deutschl., I., IV, p. 133, pl. 95, f. 11.
1886 *Protaster* Stürtz, N. Jahrb. f. Min., II, p. 148, 150.
1889 *Protaster* Gregory, Geol. Mag., Dec. III, VI, p. 26.
1893 *Protaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 18.
1896 *Protaster* James, Jour. Cin. Soc. Nat. Hist., XVIII, p. 137.
1897 *Protaster* Gregory, Proc. Zool. Soc. London, p. 1031, f. 1.
1898 *Protaster* Whidborne, Pal. Soc. England, p. 206.
1908 *Protaster* Parks, Trans. Can. Inst., VIII, p. 363, 366.

- 1910 *Protaster* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 238.
 1914 *Protaster* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *P. sedgwickii* Forbes.
barrisi = *Onychaster barrisi*
biforis Gregory
 1897 *Protaster biforis* Gregory, Proc. Zool. Soc. London, p. 1032, f. 2, 3 on p. 1033.
 1910 *Protaster biforis* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 238.
 1914 *Protaster biforis* Schuchert, Bull. 88, U. S. Nat. Mus.
 Siluric (Wenlock) of Wales. Castell Dinas, Bran, near Llangollen.
brisingoides Gregory = *Stürtzura brisingoides*
daoulasensis Davy = *Furcaster* (?) *daoulasensis*
decheni Dewalque = *Tremataster* (?) *decheni*
elegans (Miller) = *Taeniaster elegans*
flexuosus Miller and Dyer = *Alepidaster flexuosus*
forbesi Hall = *Hallaster forbesi*
granuliferus Meek = *Alepidaster granuliferus*
gregarius Meek and Worthen = *Aganaster gregarius*
leptosoma Salter = *Stürtzura leptosoma*
miamiensis Miller = *Alepidaster miamiensis*
miltoni Salter = *Lapworthura miltoni*
(Ophiura) obtusa Eichwald. Unknown to writer. See *Lethaea Rossica*, p. 193; and Woodward, 1874, Geol. Mag., Dec. II, I, p. 7. Siluric of Russia.
petri Salter. Unknown to writer, See Cat. Mus. Pract. Geol., p. 30; and Woodward, l. c., p. 7. ? Ordovician (Bala) of England. Church Stretton.
 (?) *salteri* (Salter and Sowerby)
 1845 *Protaster salteri* Salter and Sowerby, Quart. Jour. Geol. Soc., I, p. 9, 20 (nom. nud.).
 1862 *Protaster salteri* Wright, Brit. Foss. Ech., II, I, p. 33 (nom. nud.).
 1866 *Protaster salteri* Salter, Mem. Geol. Surv. Gt. Brit., III, p. 289, pl. 23, f. 3.
 1908 *Protaster salteri* Parks, Trans. Can. Inst., VIII, p. 364, 367.
 1914 *Protaster* (?) *salteri* Schuchert, Bull. 88, U. S. Nat. Mus.
 Ordovician of Wales. Near Cerrig-y-Druidion on the Holyhead Road.
sedgwickii Forbes
 1849 *Protaster sedgwickii* Forbes, Brit. Org. Rem., I, pl. 4, p. 1—2.
 1854 *Protaster sedgwickii* Murchison, Siluria, p. 221, f. 39—4.
 1855 *Protaster sedgwickii* Forbes, in McCoy, Brit. Pal. Foss., p. 60.
 1857 *Protaster sedgwickii* Salter, Rept. 26th Meet. Brit. Assoc., App., p. 76.
 1857 *Protaster sedgwickii* Salter, Ann. Mag., 2d ser., XX, p. 332.
 1862 *Protaster sedgwickii* Wright, Brit. Foss. Ech., II, I, p. 33.
 1866 *Encrinaster sedgwickii* Haeckel, Gen. Morph., II, p. LXVII (nom. nud.).
 1876 *Protaster sedgwickii* Quenstedt, Petr. Deutschl., I., IV., p. 133, pl. 95, f. 11.
 1886 *Protaster sedgwickii* Stürtz, N. Jahrb. f. Min., II, p. 150.
 1893 *Protaster sedgwickii* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 18.
 1897 *Protaster sedgwickii* Gregory, Proc. Zool. Soc. London, p. 1031, f. 1.
 1908 *Protaster sedgwickii* Parks, Trans. Can. Inst., VIII, p. 363, 367.
 1910 *Protaster sedgwickii* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 238.

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- 1914 *Protaster sedgwickii* Schuchert, Bull. 88, U. S. Nat. Mus.
Siluric (Ludlow) of England. Near Kendal, Westmoreland.
- (?) **stellifer** Ringueberg
1886 *Protaster stellifer* Ringueberg, Bull. Buffalo Soc. Nat. Sci.,
V, p. 7, pl. 1, f. 2.
1914 *Protaster* (?) *stellifer* Schuchert, Bull. 88, U. S. Nat. Mus.
Siluric (Rochester) of North America. Lockport, N. Y.; Grimsby,
Ontario.
- (?) **whiteavesianus** Parks
1908 *Protaster whiteavesianus* Parks, Trans. Can. Inst., VIII,
p. 368, f. 1—6.
1914 *Protaster* (?) *whiteavesianus* Schuchert, Bull. 88, U. S.
Nat. Mus.
Middle Ordovician (Black River) of Canada. Kirkfield, Ontario.
- Protasteracanthion* Stürtz = *Urasterella*
primus Stürtz = *Urasterella asperula*
Protasterina Ulrich = *Alepidaster*
fimbriata Ulrich = *Alepidaster flexuosus*
flexuosa James = *Alepidaster flexuosus*
Protopalaeaster Hudson = *Hudsonaster*
narrawayi Hudson = *Hudsonaster narrawayi*
- Pseudopalasterina** Stürtz (A)
1899 *Pseudopalasterina* Stürtz, Verh. nat. Ver. preuss. Rheinl.,
LVI, p. 219, 224.
1914 *Pseudopalasterina* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *Palasterina follmanni*
Stürtz.
- follmanni** (Stürtz)
1890 *Palasterina follmanni* Stürtz, Palaeontogr., XXXVI, p. 226,
pl. 29, f. 29—31 a.
1899 *Pseudopalasterina follmanni* Stürtz, Verh. nat. Ver. preuss.
Rheinl., LVI, p. 219, 224.
1914 *Pseudopalasterina follmanni* Schuchert, Bull. 88, U. S.
Nat. Mus.
Lower Devonian of Germany. Bundenbach.
- Ptilonaster** Hall (AL)
1868 *Ptilonaster* Hall, 20th Rep. N. Y. St. Cab., p. 291—292;
rev. ed., p. 334.
1869 *Ptilonaster* Lütken, Dansk. Vid. Selsk. Skrift., 5th ser., VIII,
Pt. 3, p. 82.
1886 *Ptilonaster* Stürtz, Palaeontogr., XXXII, p. 83.
1886 *Ptilonaster* Stürtz, N. Jahrb. f. Min., II., p. 152.
1889 *Palaeocoma* Miller (partim), N. Am. Geol. Pal., p. 266.
1897 *Ptilonaster* Gregory, Proc. Zool. Soc. London, p. 1036.
1899 *Ptilonaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI, p. 188.
1914 *Ptilonaster* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *P. princeps* Hall.
- princeps** Hall
1868 *Ptilonaster princeps* Hall, 20th Rep. N. Y. St. Cab., p. 292;
rev. ed., p. 334, pl. 9, f. 9.
1889 *Palaeocoma princeps* Miller, N. Am. Geol. Pal., p. 267.
1914 *Ptilonaster princeps* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Devonian (Chemung) of United States. Cortlandville, N. Y.
- Rhenaster** Schöndorf (A)
1909 *Rhenaster* Schöndorf, Palaeontogr., LVI, p. 65, 108, pl. 8,
f. 3; pl. 10, f. 1, 4.
1914 *Rhenaster* Schuchert, Bull. 88, U. S. Nat. Mus.
Genoholotype and only species: *R. schwerdi* Schöndorf.

schwerdi Schöndorf

References same as for genus.

Lower Devonian (Upper Coblenzian) of Germany. Dörrbachtal, near Coblenz.

Rhopalocoma Salter (AL)1857 *Palaeocoma* (*Rhopalocoma*) Salter, Ann. Mag., 2d ser., XX, p. 324.1862 *Palaeocoma* (*Rhopalocoma*) Wright, Brit. Foss. Ech., II, I, p. 31.1879 *Palaeocoma* (*Rhopalocoma*) Zittel, Handb., I, p. 453.1886 *Rhopalocoma* Stürtz, Palaeontogr., XXXII, p. 96.1893 *Rhopalocoma* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 46, 63.1914 *Rhopalocoma* Schuchert, Bull. 88, U. S. Nat. Mus. p.Genoholotype and only species: *P. (R.) pyrotechnica* Salter.**pyrotechnica** Salter1857 *Palaeocoma* (*Rhopalocoma*) *pyrotechnica* Salter, Ann. Mag., 2d ser., XX, p. 324.1862 *Palaeocoma* (*Rhopalocoma*) *pyrotechnica* Wright, Brit. Foss. Ech., II, I, p. 31.1893 *Rhopalocoma pyrotechnica* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 46, 63.1914 *Rhopalocoma pyrotechnica* Schuchert, Bull. 88, U. S. Nat. Mus.

Siluric (Lower Ludlow) of England. Leintwardine, Shropshire.

Roemeraster Stürtz = Urasterella

acuminatus Stürtz = Mesopalaeaster (?) acuminatus

asperula Stürtz = Urasterella asperula

Salteraster Stürtz = Urasterella

asperrimus Stürtz = Urasterella (?) asperrima

Schoenaster Meek and Worthen (A)1860 *Schoenaster* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., XII, p. 449.1866 *Schoenaster* Meek and Worthen, Geol. Surv. Illinois, II, p. 277.1879 *Schoenaster* Zittel, Handb., I, p. 453.1914 *Schoenaster* Schuchert, Bull. 88, U. S. Nat. Mus.Genoholotype: *S. fimbriatus* Meek and Worthen.**fimbriatus** Meek and Worthen1860 *Palaeasterina* (*Schoenaster*) *fimbriata* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., XII, p. 449.1866 *Schoenaster fimbriatus* Meek and Worthen, Geol. Surv. Illinois, II, p. 278, pl. 19, f. 7a—d.1914 *Schoenaster fimbriatus* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Carbonic (St. Louis) of United States. St. Clair County, Ill.**(?) legrandensis** Miller and Gurley1890 *Schoenaster legrandensis* Miller and Gurley, Desc. N. Gen. and Sp. Ech., p. 56, pl. 9, f. 7—9.1891 *Schoenaster legrandensis* Miller, 16th Rep. Geol. Surv. Ind., p. 371, pl. 9, f. 7—9.1892 *Schoenaster legrandensis* Miller, N. Am. Geol. Pal., 1st App., p. 682, f. 1246.1914 *Schoenaster* (?) *legrandensis* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Carbonic (Kinderhook) of United States. Le Grand, Iowa.

(?) montanus Raymond1912 *Schoenaster* (?) *montanus* Raymond, Ottawa Nat., XXVI, p. 80, f. 3 on p. 81.1914 *Schoenaster* (?) *montanus* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Carbonic (Madison) of United States. Spring Canyon, Ruby Mts., near Alder, Mont.

(?) wachsmuthi Meek and Worthen

1866 *Schoenaster wachsmuthi* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., XVIII, p. 259.

1868 *Schoenaster wachsmuthi* Meek and Worthen, Geol. Surv. Illinois, III, p. 499, pl. 17, f. 4.

1914 *Schoenaster (?) wachsmuthi* Schuchert, Bull. 88, U. S. Nat. Mus.

Lower Carbonic (Burlington) of United States. Burlington, Iowa.

Schuchertia Gregory (A)

1858 *Palasterina* Billings (partim), Can. Org. Rem., III, p. 76.

1899 *Schuchertia* Gregory, Geol. Mag., Dec. IV, VI, p. 351.

1899 *Trentonaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., LVI, p. 217, 224, 225 (Based on same genoholotype as *Schuchertia*).

1914 *Schuchertia* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *Palasterina stellata* Billings.

laxata Schuchert

1914 *Schuchertia laxata* Schuchert, Bull. 88, U. S. Nat. Mus.

Upper Ordovician (Richmondian) of United States. Waynesville, Hamilton, and Oxford, Ohio.

ordinaria Schuchert

1914 *Schuchertia ordinaria* Schuchert, Bull. 88, U. S. Nat. Mus.

Siluric (Girardeau) of United States. Alexander County, Ill.

stellata (Billings)

1857 *Palasterina stellata* Billings, Rep. Prog., Geol. Surv. Canada, p. 290.

1858 *Palasterina stellata* Billings, Can. Org. Rem., III, p. 76, pl. 9, f. 1a, b.

1862 *Palasterina stellata* Wright, Brit. Foss. Ech., II, I, p. 27, f. 1b on p. 26.

1876 *Palasterina stellata* Quenstedt, Petr. Deutschl., 1, IV, p. 74, pl. 92, f. 34.

1899 *Trentonaster stellata* Stürtz, Verh. nat. Ver. preuss. Rheinl., p. 217, 224, 225.

1914 *Schuchertia stellata* Schuchert, Bull. 88, U. S. Nat. Mus.

Middle Ordovician of Canada. Ottawa, and Governor General Bay, near New Edinburgh, Ontario.

Siluraster Jaekel (A)

1903 *Siluraster* Jaekel, Zeits. d. geol. Ges., LV, Prot., p. 106, f. 2, 3 on p. 108.

1914 *Siluraster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *S. perfectus* Jaekel.

perfectus Jaekel

References same as for genus.

Ordovician (D₄) of Bohemia. Zahorzan.

Spaniaster Schöndorf (A)

1855 *Coelaster* Sandberger, Verst. rhein. Schicht. Nassau, p. 381.

1907 *Spaniaster* Schöndorf, Jahrb. nass. Ver. Naturk., LX, p. 176.

1909 *Spaniaster* Schöndorf, Ibid., LXII, p. 30.

1909 *Spaniaster* Schöndorf, Palaeontogr., LVI, p. 73, 109.

1914 *Spaniaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype and only species: *Coelaster latiscutatus* Sandberger.

latiscutatus (Sandberger)

1855 *Coelaster latiscutatus* Sandberger, Verst. rhein. Schicht. Nassau, p. 381, pl. 35, f. 1, 1a.

1869 *Coelaster latiscutatus* Weiss, Verh. nat. Ver. preuss. Rheinl., XXVI, Sitzb., p. 43.

1871 *Coelaster latiscutatus* Simonovitsch, Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I., p. 81.

- 1871 *Xenaster simplex* Simonovitsch, Ibid., p. 97, pl. 3, f. 1, 1a.
 1876 *Xenaster simplex* Quenstedt, Petr. Deutschl., 1., IV., p. 73.
 1879 *Xenaster (Coelaster) latiscutatus* Zittel, Handb., I, p. 454.
 1880 *Coelaster latiscutatus* Nicholson and Etheridge, Sil. Foss. Girvan Dist., III, p. 322.
 1890 *Coelaster latiscutatus* Stürtz, Palaeontogr., XXXVI, p. 247.
 1907 *Spaniaster latiscutatus* Schöndorf, Jahrb. nass. Ver. Naturk., LX, p. 176.
 1909 *Spaniaster latiscutatus* Schöndorf, Ibid., LXII, p. 31, pl. 5, f. 1—3; t. f. 2.
 1909 *Spaniaster latiscutatus* Schöndorf, Palaeontogr., LVI, p. 73—82, 109, pl. 8, f. 2; pl. 10, f. 2, 9, 10; pl. 11, f. 9.
 1914 *Spaniaster latiscutatus* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Upper and Lower Coblenzian) of Germany. Unkel, near Bonn; Biehorntale, near Coblenz; Oberstadtfeld in the Eifel; Niederlahnstein.

Squamaster Ringueberg (AL)

- 1886 *Squamaster* Ringueberg, Bull. Buffalo Soc. Nat. Sci., V, p. 5, 6, pl. 1, f. 1.
 1914 *Squamaster* Schuchert, Bull. 88, U. S. Nat. Mus. Genoholotype and only species: *S. echinatus* Ringueberg.

echinatus Ringueberg

References same as for genus.
 Siluric (Rochester) of North America. Lockport, N. Y.; Grimsby, Ontario.

Stenaster Billings (partim) = *Urasterella*

Stenaster Billings (A)

- 1858 *Stenaster* Billings, Can. Org. Rem., III, p. 77.
 1890 *Stenaster* Stürtz, Palaeontogr., XXXVI, p. 220.
 1893 *Urasterella* Stürtz (not McCoy), Verh. nat. Ver. preuss. Rheinl., L, p. 40, 41, 56.
 1899 *Stenaster* Gregory, Geol. Mag., Dec. IV, VI, p. 352.
 1914 *Stenaster* Schuchert, Bull. 88, U. S. Nat. Mus. Genoholotype (the first species and the one selected by subsequent workers): *S. salteri* Billings.

(??) confluens Trautschold

- 1879 *Stenaster confluens* Trautschold, Kalkbrüche v. Mjatschkowa, p. 11, pl. 2, f. 5.
 1909 *Stenaster confluens* Schöndorf, Palaeontogr., LVI, p. 337.
 1914 *Stenaster (??) confluens* Schuchert, Bull. 88, U. S. Nat. Mus. Upper Carbonic (Moscovian) of Russia. Moscow.

?) coronella (Salter)

- 1857 *Palaeaster coronella* Salter, Ann. Mag., 2d ser., XX, p. 326.
 1862 *Palaeaster coronella* Wright, Brit. Foss. Ech., II, I, p. 25.
 1886 *Stenaster (?) coronella* Stürtz, N. Jahrb. f. Min., II, p. 153.
 1914 *Stenaster (?) coronella* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (May Hill) of England. Gunwick Mill, Malvern.

grandis Meek = *Urasterella grandis*

huxleyi Billings = *Urasterella huxleyi*

(?) obtusus (Forbes)

- 1845 *Asterias primaeva* Salter and Sowerby, Quart. Jour. Geol. Soc., I, p. 8, 20 (nom. nud.).
 1848 *Uraster obtusus* Forbes, Mem. Geol. Surv. Gt. Brit., II, Pt. II, p. 463.
 1849 *Uraster obtusus* Forbes, Brit. Org. Rem., I, p. 2, pl. 1, f. 3.
 1854 *Uraster obtusus* Murchison, Siluria, p. 182, f. 17.
 1857 *Palaeaster obtusus* Salter, Ann. Mag., 2d ser., XX, p. 326.
 1862 *Palaeaster obtusus* Wright, Brit. Foss. Ech., II, I, p. 24.

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- 1866 *Palaeaster obtusus* Salter, Mem. Geol. Surv. Gt. Brit., III, p. 289, pl. 23, f. 1.
- 1886 *Stenaster* (?) *obtusus* Stürtz, N. Jahrb. f. Min., II, p. 153.
- 1893 *Stenaster* (?) *obtusus* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 41, 56.
- 1914 *Stenaster* (?) *obtusus* Schuchert, Bull. 88, U. S. Nat. Mus. Ordovicic (Caradoc) of Ireland and Wales. Drumeannon, Waterford; and near Bala Lake (Moel-y-Garnedd).
- pulchellus* Billings = *Urasterella pulchella*
- salteri** Billings
- 1858 *Stenaster salteri* Billings, Can. Org. Rem., III, p. 78, pl. 10, f. 1 a, b.
- 1862 *Stenaster salteri* Wright, Brit. Foss. Ech., II, I, p. 28, f. 15 (2) on p. 24.
- 1914 *Stenaster salteri* Schuchert, Bull. 88, U. S. Nat. Mus. Middle Ordovicic (Trenton, Black River) of North America. Belleville, Kirkfield, and Government House Bay, Ottawa, Ontario; Curdsville, Ky.; Panton, Vt. *
- Stürtzaster** Etheridge (AL)
- 1857 *Palaeocoma* Salter, Ann. Mag., 2d ser., XX, p. 324, 327.
- 1862 *Palaeocoma* Wright, Brit. Foss. Ech., II, I, p. 23, 29.
- 1876 *Palaeocoma* Quenstedt, Petr. Deutschl., I, IV, p. 81, pl. 92, f. 43.
- 1879 *Palaeocoma* Zittel, Handb., I, p. 453.
- 1886 *Palaeocoma* Stürtz, N. Jahrb. f. Min., II, p. 152.
- 1893 *Palaeocoma* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 45, 62.
- 1899 *Sturtzaster* Etheridge, Rec. Aust. Mus., III, p. 129.
- 1910 *Sturtzaster* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 217.
- 1914 *Stürtzaster* Schuchert, Bull. 88, U. S. Nat. Mus. Genoholotype: *Palaeocoma marstoni* Salter.
- colvini** (Salter)
- 1857 *Palaeocoma colvini* Salter, Ann. Mag., 2d ser., XX, p. 328.
- 1862 *Palaeocoma colvini* Wright, Brit. Foss. Ech., II, I, p. 30.
- 1910 *Sturtzaster colvini* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 219.
- 1914 *Stürtzaster colvini* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (Lower Ludlow) of England. Leintwardine, Shropshire.
- cygnipes** (Salter)
- 1857 *Palaeocoma cygnipes* Salter, Ann. Mag., 2d ser., XX, p. 329.
- 1862 *Palaeocoma cygnipes* Wright, Brit. Foss. Ech., II, I, p. 30.
- 1910 *Sturtzaster cygniceps* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 219.
- 1914 *Stürtzaster cygnipes* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (Lower Ludlow) of England. Leintwardine, Shropshire.
- marstoni** (Salter)
- 1857 *Palaeocoma marstoni* Salter, Ann. Mag., 2d ser., XX, p. 328, pl. 9, f. 3a—c.
- 1862 *Palaeocomamarstoni* Wright, Brit. Foss. Ech., II, I, p. 30, f. 17.
- 1876 *Palaeocoma marstoni* Quenstedt, Petr. Deutschl., I, IV, p. 81, pl. 92, f. 43.
- 1910 *Sturtzaster marstoni* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 217.
- 1914 *Stürtzaster marstoni* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (Lower Ludlow) of England. Leintwardine, Shropshire.
- (?) **mittelli** Etheridge
- 1899 *Sturtzaster* (?) *mittelli* Etheridge, Rec. Aust. Mus., III, p. 128.
- 1914 *Stürtzaster* (?) *mittelli* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (Wenlock) of New South Wales. Bowning.

Stürtzura Gregory (AL)

- 1897 *Sturtzura* Gregory, Proc. Zool. Soc. London, p. 1034.
 1910 *Sturtzura* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 215, 237.
 1914 *Stürtzura* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *Protaster brisingoides* Gregory.

brisingoides (Gregory)

- 1889 *Protaster brisingoides* Gregory, Geol. Mag., Dec. III, VI, p. 24—27, f. 1.
 1897 *Sturtzura brisingoides* Gregory, Proc. Zool. Soc. London, p. 1034.
 1907 *Protaster brisingoides* Chapman, Proc. Roy. Soc. Victoria, n. s., XIX, p. 22, pl. 6, f. 2; pl. 8, f. 2.
 1907 *Taeniaster australis* McCoy, Vide Chapman, p. 23 (nom. nud.).
 1914 *Stürtzura brisingoides* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric of Australia. Moonee Ponds Creek, Flemington, near Melbourne, and parish of Yering, Upper Yarra district, Victoria.

leptosoma (Salter)

- 1857 *Protaster leptosoma* Salter, Ann. Mag., 2d ser., XX, p. 331, pl. 9, f. 5.
 1862 *Protaster leptosoma* Wright, Brit. Foss. Ech., II, I, p. 33.
 1876 *Protaster leptosoma* Quenstedt, Petr. Deutschl., 1, IV, p. 133, pl. 95, f. 12.
 1886 *Protaster leptosoma* Stürtz, Palacontogr., XXXII, p. 79.
 1886 *Protaster leptosoma* Stürtz, N. Jahrb. f. Min., II, p. 148.
 1897 *Sturtzura leptosoma* Gregory, Proc. Zool. Soc. London, p. 1035.
 1907 *Sturtzura leptosoma* Chapman, Proc. Roy. Soc. Victoria, n. s., XIX, p. 26, pl. 8, f. 5.
 1910 *Sturtzura leptosoma* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 215.
 1914 *Stürtzura leptosoma* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (Ludlow) of England. Leintwardine, Shropshire.

leptosomoides Chapman

- 1907 *Sturtzura leptosomoides* Chapman, Proc. Roy. Soc. Victoria, n. s., XIX, p. 26, pl. 7, f. 1, 2; pl. 8, f. 4.
 1914 *Stürtzura leptosomoides* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric (Melbournian) of Australia. Moonee Ponds Creek, Flemington, near Melbourne, Victoria.

Sympterura Bather (AL)

- 1905 *Sympterura* Bather, Geol. Mag., Dec. V, II, p. 161—169, pl. 6, f. 1—3, 6.
 1910 *Sympterura* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 216.
 1914 *Sympterura* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype and only species: *S. minveri* Bather.

minveri Bather

References same as for genus.
 Devonian of England. Epphavan, near Padstow, North Cornwall.

Taeniaster Billings (AL)

- 1858 *Taeniaster* Billings, Can. Org. Rem., III, p. 80.
 1861 *Taeniaster* Chapman, Can. Jour., n. s., VI, p. 517.
 1862 *Taeniaster* Wright, Brit. Foss. Ech., II, I, p. 24, 34.
 1868 *Taeniaster* Hall, 20th Rep. N. Y. St. Cab., p. 300; rev. ed., p. 338.
 1879 *Taeniaster* Zittel, Handb., I, p. 445.
 1886 *Taeniaster* Stürtz, N. Jahrb. f. Min., II, p. 150.
 1886 *Taeniaster* Stürtz, Palacontogr., XXXII, p. 78, 83.
 1889 *Taeniaster* Miller, N. Am. Geol. Pal., p. 285.
 1889 *Taeniaster* Gregory, Geol. Mag., Dec. III, VI, p. 26.

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- 1893 *Taeniaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 20.
 1896 *Taeniaster* James, Jour. Cin. Soc. Nat. Hist., XVIII, p. 138.
 1897 *Taeniaster* Gregory, Proc. Zool. Soc. London, p. 1035.
 1897 *Taeniura* Gregory, Ibid., p. 1035.
 1900 *Taeniaster* Gregory, in Lankester, Treat. Zool., III, p. 250.
 1914 *Taeniaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genolectotype: *Palaeocoma spinosa* Billings.

australis McCoy = *Stürtzura brisingoides*

cylindricus (Billings)

- 1857 *Palaeocoma cylindrica* Billings, Rep. Prog., Geol. Surv. Canada, p. 292.
 1858 *Taeniaster cylindricus* Billings, Can. Org. Rem., III, p. 81, pl. 10, f. 4a—c.
 1862 *Taeniaster cylindricus* Wright, Brit. Foss. Ech., II, I, p. 34.
 1897 *Taeniura cylindrica* Gregory, Proc. Zool. Soc. London, p. 1035.
 1908 *Taeniaster cylindricus* Parks, Trans. Can. Inst., VIII, p. 371.
 1908 *Lapworthura cylindrica* Parks, Ibid., p. 371.
 1914 *Taeniaster cylindricus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Middle Ordovician (Trenton) of Canada. Ottawa, Ontario.

elegans Miller

- 1882 *Taeniaster elegans* Miller, Jour. Cin. Soc. Nat. Hist., V, p. 41, pl. 1, f. 6—6c.
 1896 *Taeniaster elegans* James, Ibid., XVIII, p. 139.
 1908 *Taeniaster elegans* Parks, Trans. Can. Inst., VIII, p. 365, 371.
 1908 *Protaster elegans* Parks, Ibid., p. 368.
 1914 *Taeniaster elegans* Schuchert, Bull. 88, U. S. Nat. Mus.
 Upper Ordovician (Richmondian) of United States. Waynesville, Ohio.

schohariae Ruedemann

- 1912 *Taeniaster schohariae* Ruedemann, Bull. 162, N. Y. St. Mus., p. 88, pl. 3, f. 1.
 1914 *Taeniaster schohariae* Schuchert, Bull. 88, U. S. Nat. Mus.
 Middle Ordovician (Trenton) of United States. Near Schoharie Junction, N. Y.

spinosus (Billings)

- 1857 *Palaeocoma spinosa* Billings, Rep. Prog., Geol. Surv. Canada, p. 292.
 1858 *Taeniaster spinosus* Billings, Can. Org. Rem., III, p. 81, pl. 10, f. 3a—d.
 1889 *Taeniaster spinosus* Miller, N. Am. Geol. Pal., p. 285, f. 439.
 1914 *Taeniaster spinosus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Middle Ordovician (Trenton) of Canada. Falls of Montmorency, near Quebec.

Taeniura Gregory = *Taeniaster*

cylindrica (Billings) = *Taeniaster cylindricus*

Tetraster Nicholson and Etheridge (A)

- 1880 *Tetraster* Nicholson and Etheridge, Sil. Foss. Girvan Dist., III, p. 324, pl. 21, f. 3—8 (not f. 1—2 = *Hudsonaster batheri*, and 9—10 = *Urasterella girvanensis*).
 1914 *Tetraster* Schuchert, Bull. 88, U. S. Nat. Mus.
 Genoholotype: *T. wyville-thomsoni* Nicholson and Etheridge emend. Schuchert.

asperrimus Nicholson and Etheridge = *Urastella* (?) *asperrima*

(?) imbricatus (Salter)

- 1866 *Palaeaster imbricatus* Salter, Mem. Geol. Surv. Gt. Brit., III, p. 289, pl. 23, f. 8.
 1914 *Tetraster* (?) *imbricatus* Schuchert, Bull. 88, U. S. Nat. Mus.
 Ordovician (Caradoc) of Wales. Llanfyllin, Montgomeryshire.

wyville-thomsoni Nicholson and Etheridge

References same as for genus.

Upper Ordovician of Scotland. Thraive, Girvan District.

wyville-thomsoni Nicholson and Etheridge (partim) = *Hudsonaster batheri***Tremataster** Worthen and Miller (AL)1883 *Tremataster* Worthen and Miller, Geol. Surv. Illinois, VII, p. 330.1889 *Tremataster* Miller, N. Am. Geol. Pal., p. 286.1897 *Tremataster* Gregory, Proc. Zool. Soc. London, p. 1037.1914 *Tremataster* Schuchert, Bull. 88, U. S. Nat. Mus.Genoholotype: *T. difficilis* Worthen and Miller.(?) **decheni** (Dewalque)1880 *Protaster decheni* Delwaque, Ann. Soc. géol. Belg., VIII, p. 52—54, pl. 3, f. 1, 2.1897 *Tremataster* (?) *decheni* Gregory, Proc. Zool. Soc. London, p. 1037, footnote.1914 *Tremataster* (?) *decheni* Schuchert, Bull. 88, U. S. Nat. Mus. Upper Devonian of Belgium. Walcourt and Tohogne.**difficilis** Worthen and Miller1883 *Tremataster difficilis* Worthen and Miller, Geol. Surv. Illinois, VII, p. 330, pl. 31, f. 3a, 3b.1914 *Tremataster difficilis* Schuchert, Bull. 88, U. S. Nat. Mus. Mississippian (Chester) of United States. Prairie du Long Creek, Monroe County, Ill.**Trentonaster** Stüritz = *Schuchertia**stellata* (Billings) = *Schuchertia stellata**Trichotaster plumiformis* Wright. Insufficiently defined. See 1873, Quart. Jour. Geol. Soc., XXIX, p. 421; and Woodward, 1874, Geol. Mag., Dec. II, I, p. 7. Silurian of England.**Trimeraster** Schöndorf (A)1891 *Xenaster* Follmann (partim), Verh. nat. Ver. preuss. Rheinl., XLVIII, p. 150.1909 *Trimeraster* Schöndorf, Palaeontogr., LVI, p. 68, 108.1914 *Trimeraster* Schuchert, Bull. 88, U. S. Nat. Mus.Genoholotype and only species: *T. parvulus* Schöndorf.**parvulus** Schöndorf1891 *Xenaster simplex* Follmann, Verh. nat. Ver. preuss. Rheinl., XLVIII, p. 150.1909 *Trimeraster parvulus* Schöndorf, Palaeontogr., LVI, p. 68, 108, pl. 7, f. 2; pl. 10, f. 5, 6.1914 *Trimeraster parvulus* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Coblenzian) of Germany. Königstuhl, near Rhens.**Trochitaster plumiformis** Wright = *Trichotaster plumiformis***Uranaster** Gregory (A)1899 *Uranaster* Gregory, Geol. Mag., Dec. IV, VI, p. 347.1910 *Uranaster* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 225.1914 *Uranaster* Schuchert, Bull. 88, U. S. Nat. Mus.Genoholotype: *Palasterina kinahani* Baily.**kinahani** (Baily)1879 *Palasterina kinahani* Baily, Mem. Geol. Surv. Irel., Expl. Sheets 169, 170, 180, 181, p. 58, 59, f. 6.1899 *Uranaster kinahani* Gregory, Geol. Mag., Dec. IV, VI, p. 348.1910 *Uranaster kinahani* Schöndorf, Jahrb. nass. Ver. Naturk., LXIII, p. 225.1914 *Uranaster kinahani* Schuchert, Bull. 88, U. S. Nat. Mus. Upper Ordovician (Caradoc) of Ireland. Near Ballymadder Point, and Bannow, Wexford.

Uraster hirudo Forbes = *Urasterella hirudo*

Uraster obtusus Forbes = *Stenaster* (?) *obtus*

Uraster primaevus Forbes = *Palasterina primaeva*

Uraster ruthveni Forbes = *Urasterella ruthveni*

***Urasterella* McCoy (A)**

1855 *Urasterella* McCoy, Brit. Pal. Foss., p. 59 (not defined).

1858 *Stenaster* Billings (partim), Can. Org. Rem., III, p. 77.

1868 *Urasterella* Hall, 20th Rep. N. Y. St. Cab., p. 289; rev. ed., p. 332.

1874 *Urasterella* McCoy, Prodr. Pal. Victoria, I, p. 42.

1879 *Urasterella* Zittel, Handb., I, p. 453.

1886 *Urasterella* Stürtz, N. Jahrb. f. Min., II, p. 152.

1886 *Roemeraster* Stürtz, Palaeontogr., XXXII, p. 85 (Genoholotype: *Asterias asperula* Roemer).

1886 *Protasteracanthion* Stürtz, Ibid., p. 90 (Genoholotype: *P. primus* Stürtz = *Asterias asperula* Roemer).

1890 *Urasterella* Stürtz, Ibid., XXXVI, p. 219.

1890 *Roemeraster* Stürtz, Ibid., p. 220.

1893 *Stenaster* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 40, 56.

1893 *Roemeraster* Stürtz, Ibid., p. 52, 73.

1893 *Protasteracanthion* Stürtz, Ibid., p. 54, 75.

1893 *Salteraster* Stürtz, Ibid., p. 42, 60 (Genoholotype: *Palaeaster asperrima* Salter).

1899 *Urasterella* Gregory, Geol. Mag., Dec. IV, VI, p. 352.

1914 *Urasterella* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype: *Uraster ruthveni* Forbes.

Urasterella Stürtz = *Stenaster*

(?) *asperrima* (Salter)

1857 *Palaeaster asperrima* Salter, Ann. Mag., 2d ser., XX, p. 325, pl. 9, f. 1.

1862 *Palaeaster asperrima* Wright, Brit. Foss. Ech., II, I, p. 24, f. 15 (1).

1866 *Palaeaster asperrimus* Salter, Mem. Geol. Surv. Gt. Brit., III, p. 289, pl. 23, f. 2.

1880 *Tetraster asperrimus* Nicholson and Etheridge, Sil. Foss. Girvan Dist., III, p. 320, 321, 324.

1886 *Palaeaster* (?) *asperrimus* Stürtz, Palaeontogr., XXXII, p. 91.

1893 *Salteraster asperrimus* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 43, 60.

1914 *Urasterella* (?) *asperrima* Schuchert, Bull. 88, U. S. Nat. Mus. Ordovicic (Caradoc) of Wales. Welchpool.

***asperula* (Roemer)**

1863 *Asterias asperula* Roemer, Palaeontogr., IX, p. 146, pl. 24; pl. 26, f. 6; pl. 27.

1886 *Roemeraster asperula* Stürtz, Ibid., XXXII, p. 85, pl. 9, f. 4, 5.

1886 *Protasteracanthion primus* Stürtz, Ibid., p. 90, pl. 11, f. 3, 3a.

1914 *Urasterella asperula* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian of Germany. Bundenbach.

(?) *constellata* (Thorent)

1838 *Asterias constellata* Thorent, Mém. Soc. géol. France, III, p. 259, pl. 22, f. 7.

1850 *Caelaster constellata* D'Orbigny, Prodr. de Pal., I, p. 154.

1914 *Urasterella* (?) *constellata* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric of France. Mondrepuis (L'Aisne).

***girvanensis* Schuchert**

1880 *Tetraster* sp. ind. Nicholson and Etheridge, Sil. Foss. Girvan Dist., III, p. 325, pl. 21, f. 9, 10.

- 1914 *Urasterella girvanensis* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Ordovician of Scotland. Thraive Glen, Girvan.
- grandis** (Meek)
1872 *Stenaster grandis* Meek, Am. Jour. Sci., 3d ser., III, p. 258.
1873 *Stenaster grandis* Meek, Pal. Ohio, I, p. 66, pl. 3 bis, f. 7a—c.
1873 *Urasterella grandis* Meek, Ibid., p. 67.
1879 *Palaeaster harrisi* Miller, Jour. Cin. Soc. Nat. Hist., II, p. 117,
pl. 10, f. 2, 2a.
1889 *Stenaster grandis* Miller, N. Am. Geol. Pal., p. 283, f. 432.
1914 *Urasterella grandis* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Ordovician (Richmondian) of United States. Richmond,
Ind.; Waynesville, Dayton, and near Ridgeville, Ohio.
- hirudo** (Forbes)
1848 *Uraster hirudo* Forbes, Mem. Geol. Surv. Gt. Brit., II, Pt. II,
p. 464.
1849 *Uraster hirudo* Forbes, Brit. Org. Rem., I, p. 3, pl. 1, f. 4.
1854 *Uraster hirudo* Murchison, Siluria, p. 221, f. 39—2.
1855 *Uraster hirudo* Forbes, in McCoy, Brit. Pal. Foss., p. 59.
1855 *Urasterella hirudo* Forbes, Ibid., p. 59.
1857 *Palaeaster hirudo* Salter, Ann. Mag., 2d ser., XX, p. 326.
1862 *Palaeaster hirudo* Wright, Brit. Foss. Ech., II, I, p. 25.
1914 *Urasterella hirudo* Schuchert, Bull. 88, U. S. Nat. Mus.
Siluric (Upper Ludlow) of England. Kendal, Westmoreland.
- huxleyi** (Billings)
1865 *Stenaster huxleyi* Billings, Pal. Foss., I, p. 213, f. 197.
1914 *Urasterella huxleyi* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Ordovician (Chazy) of Canada. Point Rich, Newfoundland.
- montana** (Stschurowsky)
1874 *Asterias montanus* Stschurowsky, Nachr. Mosk. Ges.
1879 *Palaeaster montanus* Trautschold, Kalkbrüche v. Mjatschkowa,
p. 9, pl. 2, f. 2a, b.
1909 *Palaeaster montanus* Schöndorf, Palaeontogr., LVI, p. 324,
pl. 23, f. 1; pl. 24, f. 20—22.
1914 *Urasterella montana* Schuchert, Bull. 88, U. S. Nat. Mus.
Upper Carbonic (Moscovian) of Russia. Mjatschkowa, near
Moscow.
- pulchella** (Billings)
1857 *Palaeaster pulchellus* Billings, Rep. Prog., Geol. Surv.
Canada, p. 292.
1858 *Stenaster pulchellus* Billings, Can. Org. Rem., III, p. 79,
pl. 10, f. 2.
1862 *Stenaster pulchellus* Wright, Brit. Foss. Ech., II, I, p. 28.
1868 *Urasterella (Stenaster) pulchellus* Hall, 20th Rep. N. Y.
St. Cab., p. 289; rev. ed., p. 332.
1914 *Urasterella pulchella* Schuchert, Bull. 88, U. S. Nat. Mus.
Middle Ordovician (Trenton) of North America. Trenton Falls,
Canajoharie, and Middleville, N. Y.; Hull, Quebec; Ottawa,
Ontario.
- ruthveni** (Forbes)
1848 *Uraster ruthveni* Forbes, Mem. Geol. Surv. Gt. Brit., II, Pt. II,
p. 436.
1849 *Uraster ruthveni* Forbes, Brit. Org. Rem., I, p. 1, pl. 1, f. 1.
1854 *Uraster ruthveni* Murchison, Siluria, p. 221, f. 39—3.
1855 *Uraster ruthveni* Forbes, in McCoy, Brit. Pal. Foss., p. 59.
1855 *Urasterella ruthveni* McCoy, Ibid., p. 59.
1857 *Palaeaster ruthveni* Salter, Ann. Mag., 2d ser., XX, p. 326.
1862 *Palaeaster ruthveni* Wright, Brit. Foss. Ech., II, I, p. 25.
1914 *Urasterella ruthveni* Schuchert, Bull. 88, U. S. Nat. Mus.
Siluric (Upper Ludlow) of England. Near Kendal, Westmoreland.

selwyni McCoy

1874 *Urasterella selwyni* McCoy, Prodr. Pal. Victoria, I, p. 42, pl. 10, f. 2, 2a, 3, 3a.

1914 *Urasterella selwyni* Schuchert, Bull. 88, U. S. Nat. Mus. Siluric of Australia. Kilmore, Victoria.

ulrichi Schuchert

1914 *Urasterella ulrichi* Schuchert, Bull. 88, U. S. Nat. Mus. Middle Ordovician (Black River, Stones River) of United States. Minneapolis, Minn.

Xenaster Simonovitsch (A)

1855 *Asterias* (*Archaeasterias*) Müller, Verh. nat. Ver. preuss. Rheinl., p. 6, 8 (*Archaeasterias* founded in error. Also nom. nud.).

1871 *Xenaster* Simonovitsch, Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I, p. 88.

1879 *Xenaster* (partim) Zittel, Handb., I, p. 454.

1879 *Archasterias* (? *Palaeaster*) Zittel, Ibid., p. 452.

1886 *Xenaster* Stürtz, Palaeontogr., XXXII, p. 86.

1890 *Xenaster* Stürtz, Ibid., XXXVI, p. 223.

1899 *Xenaster* Gregory, Geol. Mag., Dec. IV, VI, p. 346.

1907 *Xenaster* (*Archaeasterias*) Schöndorf, Centralbl. f. Min., p. 747.

1909 *Xenaster* Schöndorf, Palaeontogr., LVI, p. 42, 105.

1909 *Xenaster* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 26.

1914 *Xenaster* Schuchert, Bull. 88, U. S. Nat. Mus.

Genoholotype (type by monotypy): *X. margaritatus* Simonovitsch.

dispar Schöndorf

1871 *Xenaster margaritatus* Simonovitsch (partim), Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I, pl. 2, f. 2—2b.

1909 *Xenaster dispar* Schöndorf, Palaeontogr., LVI, p. 50, 84, 106, pl. 9, f. 1; pl. 11, f. 13.

1909 *Xenaster dispar* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 28, pl. 3, f. 3.

1914 *Xenaster dispar* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Upper Coblenzian) of Germany. Niederrhein and Miell.

elegans Schöndorf.

1891 *Xenaster margaritatus* Follmann, Verh. nat. Ver. preuss. Rheinl., XLVIII, p. 150.

1909 *Xenaster elegans* Schöndorf, Palaeontogr., LVI, p. 53, 107, pl. 9, f. 2, 3; pl. 11, f. 4, 12.

1909 *Xenaster elegans* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 40, pl. 4, f. 6, 7.

1914 *Xenaster elegans* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Coblenzian) of Germany. Königstuhl, near Rhens.

margaritatus Simonovitsch

1871 *Xenaster margaritatus* (partim) Simonovitsch, Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I, p. 88, pls. 1, 2.

1879 *Xenaster margaritatus* Zittel, Handb., I, p. 454.

1886 *Xenaster margaritatus* Stürtz, Palaeontogr., XXXII, p. 86, 87.

1886 *Xenaster margaritatus* Stürtz, N. Jahrb. f. Min., II, p. 153.

1890 *Xenaster margaritatus* Stürtz, Palaeontogr., XXXVI, p. 223, 238, 247.

1899 *Xenaster margaritatus* Gregory, Geol. Mag., Dec. IV, VI, p. 346.

1909 *Xenaster margaritatus* Schöndorf, Palaeontogr., LVI, p. 43, 106, pl. 7, f. 1, 3, 4; pl. 8, f. 1; pl. 11, f. 2, 3, 10, 11.

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- 1909 *Xenaster margaritatus* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 26, pl. 2, f. 1, 2.
- 1914 *Xenaster margaritatus* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian (Upper Coblenzian) of Germany. Niederlahnstein. *margaritatus* Simonovitsch (partim) = *X. dispar*
- (?) *rhenanus* (Müller)
- 1855 *Asterias* (*Archaeasterias*) *rhenana* Müller, Verh. nat. Ver. preuss. Rheinl., XII, p. 6, pl. 1, f. 4—6.
- 1871 *Archasterias* (?) *Xenaster*) *rhenana* Simonovitsch, Sitzb. mat.-nat. Classe Akad. Wiss., Wien, LXIV, I, p. 96.
- 1876 *Asterias rhenana* Quenstedt, Petr. Deutschl., 1, IV, p. 72, pl. 92, f. 31.
- 1879 *Archasterias* (?) *Palaeaster*) *rhenana* Zittel, Handb., I, p. 452.
- 1879 *Asterias* (*Xenaster*) *rhenana* Zittel, Ibid., p. 454.
- 1893 *Archasterias* (*Asterias*) *rhenana* Stürtz, Verh. nat. Ver. preuss. Rheinl., L, p. 42, 58.
- 1899 *Archasterias rhenana* (?) *Palaeaster*) Stürtz, Ibid., LVI, p. 206.
- 1907 *Archaeasterias rhenana* = *Xenaster* Schöndorf, Centralbl. f. Min., p. 741, f. 1—6.
- 1909 *Xenaster* (?) *rhenana* Schöndorf, Palacontogr., LVI, p. 55, 107, f. 2.
- 1909 *Xenaster* (?) *rhenana* Schöndorf, Jahrb. nass. Ver. Naturk., LXII, p. 28.
- 1914 *Xenaster* (?) *rhenanus* Schuchert, Bull. 88, U. S. Nat. Mus. Lower Devonian of Germany. Winnigen and Kemmenau.
- simplex* Simonovitsch = *Spaniaster latiscutatus*

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