

A Bibliographic Index of North American Late Paleozoic Hyolitha, Amphineura Scaphopoda, and Gastropoda

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A Bibliographic Index of North American Late Paleozoic Hyolitha, Amphineura Scaphopoda, and Gastropoda

Edited by ELLIS L. YOCHELSON *and* BURNETT W. SAUNDERS

G E O L O G I C A L S U R V E Y B U L L E T I N 1 2 1 0

*An objective paleontologic compilation
through 1966 extended from and
including references in a similar
index by Stuart Weller, 1898*



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A BIBLIOGRAPHIC INDEX OF NORTH AMERICAN LATE PALEOZOIC HYOLITHA, AMPHINEURA, SCAPHOPODA, AND GASTROPODA

Edited by

ELLIS L. YOCHELSON and BURNETT W. SAUNDERS

ABSTRACT

This work constitutes a bibliographic index of specific names within four classes of Mollusca. The index is limited to those names occurring in the North American paleontologic literature for specimens of Mississippian, Pennsylvanian, and Permian age. Each section has a separate bibliography. The pertinent entries of Stuart Weller's "A bibliographic index of North American Carboniferous invertebrates" are included in this index. So far as is known, the index is comprehensive to December 31, 1966.

INTRODUCTION

Stuart Weller (1898) published "A bibliographic index of North American Carboniferous invertebrates." Even today this compilation is among the first references to examine for the nomenclatural history of many specific names. George H. Girty used Weller's work as the basis of a card catalog for keeping specific names in order as additional paleontological papers were published. Until Girty's death in 1939, indexing to maintain this catalog was one of the prime jobs of his assistants. Subsequently, others worked on this card catalog under the direction of J. Steele Williams until his death in 1957.

Since that time, as a result of the explosive growth of paleontological literature, paralleling that in other scientific fields, emphasis has been shifted from maintaining the entire catalog to maintaining those parts of immediate interest to Survey specialists. This card catalog is unpublished and not generally available. The sort of information contained in it is basic to future paleontologic investigation; therefore, publication of at least part of the catalog seems desirable. This index gives the bibliographic compilation for four classes of Mollusca. Because Weller's original work has long been out of print, pertinent entries of his index have been republished.

This type of index cannot claim any one person as author. We have endeavored to edit in an objective, uniform style the compilation done by others. If this sort of reference should have any acknowledgment, it is to those men and women who worked for more than 60 years to maintain the card catalog.

PROCEDURE

The purpose of this bibliography is to compile specific names used in four classes of mollusks and published in the North American late Paleozoic literature to December 31, 1966. We can only repeat the words of Weller (1898, p. 7) "Like all works of its kind, this list is not perfect. Errors and omissions will doubtless be discovered, and those making these discoveries will confer a favor upon the compiler by reporting them to him."

Geologic and geographic limitations

Late Paleozoic is here interpreted to mean the time interval of the Mississippian, Pennsylvanian, and Permian Periods. A citation is included if an author considered that he was dealing with fossils from rocks of this time interval even though later studies may indicate that the strata in question were either younger or older. Although there is seldom any question whether species occur within this interval, dating the upper and (or) the lower boundaries of rocks containing particular species has proved troublesome.

No attempt has been made to list occurrences of additional species of included genera or the subsequent identification of included species in beds either younger or older than the stated time interval.

Helicospira buttersi (Girty) known only in its type locality in Colorado, may occur in either the Permian or Triassic. More species are involved in the boundary between the Devonian and Mississippian. Recent work, particularly in the Mississippi Valley region, has indicated that the boundary might be stratigraphically higher than was generally accepted prior to 1950. Specific names based on specimens from this stratigraphic interval of possible Devonian age were included by Weller. As a bibliographic convenience, these names and those listed in a few later papers have been included herein as the authors in question considered their faunas to be Carboniferous in age. These names are not annotated, as the position of the systemic boundary is still unresolved. Several generic and specific names used by Walcott and listed by Weller are now known to be based on specimens of Cretaceous age; these names are annotated and included for the sake of completeness.

North America is taken to comprise Canada, Greenland, Mexico, and the United States of America. Reports from other areas of the world which include specific names in this compilation have not been included; therefore, for some species, the synonymy is not complete.

Objectivity

Although there is a fundamental difference between paleozoology and the names of fossils, this difference is not always clear. This work is concerned only with specific names and their assignment to various generic names. As long as the name has entered into zoological nomenclature and falls within the limits prescribed for this work, it is listed. That the types are lost and that the species is zoologically unrecognizable or probably incorrectly assigned as we now view generic concepts are all outside the scope of this work. The latest work to mention specific names is considered the definitive placement. Because there is no zoological rationale, generic names are arranged alphabetically and specific names are alphabetized under each genus. In the few instances where an author has investigated a species thoroughly and urged that a particular name not be used for subsequent identification, this annotation has been added.

Literature examined

We have tried to make a comprehensive examination of North American literature. Descriptions, discussions, comparisons, and figures referring to named species, as well as references to described but unnamed species, are included. However, not all references to a specific name have been included. Specific names mentioned in faunal listings, distribution charts, and stratigraphic sections or in areal reports are excluded.

“Primary” and “secondary” literature

The latest edition of the International Rules of Zoological Nomenclature notes that the names of animals are treated in two different types of publications. Though the difference is not always clear, certainly there is dissimilarity between description and comparison on one hand and compilation on the other.

It may be worthwhile to indicate which of the “secondary” literature has been excluded and which has been included. All appropriate references to specific names in Shimer and Shrock (1944) and Knight, Batten, and Yochelson (1960) have been included because the first work provides additional distribution data and the second provides new illustrations of species. With one general exception, no references to Miller (1889), Weller (1898), Grabau and Shimer (1909), Henderson (1935), and Branson (1948) have been included; citation of these compilations would increase the size of this index without adding any meaningful information. Exception is made when one of these compilers transferred a specific name from one generic name to another. For example, Weller (1898) is responsible for the transfer of several species of *Platyceras* to *Capulus*.

The classic “Handbook” of Karl von Zittel has appeared in various revisions and in several languages. Because it is a compilation, references to its many editions have been omitted. Textbooks and other works for the student and amateur fossil collector also have been excluded.

STYLE

There is no generally accepted format for a paleontological bibliography. As in other works, fashion to an extent dictates the form in which references are cast. The style used in any compendium has its own merits and defects; our aim was to select what appears to be the most useful features of the well-known bibliographies. The style most closely followed is that of Branson's (1948) admirable compilation of Permian invertebrates, though many details have been modified.

Generic names

Generic names are centerheads; such names are capitalized, are set boldface, and are followed by author and date. The type species is listed immediately below. For the Gastropoda section, genera published before 1939 that have type species of Paleozoic age, have data on the type species taken from Knight (1941); type species data for genera published since 1939 are taken directly from the original publications. Except for two generic names currently used with Paleozoic species, type species are not given for genera of post-Paleozoic age. Such action is beyond the limits of this work, and where the literature is not clear, an inadvertent designation of a type species may result. It is to be assumed that the type is by original designation or monotypy, except where subsequent designation (SD) is indicated in the text.

The original reference to the generic name follows the type species. No generic synonymy is listed, though where necessary brief explanatory notes are given. Where names have been transferred to or from subgeneric rank, the pertinent work is cited.

As this is not a worldwide biologic catalog, only the generic names pertinent to this bibliography have been included. There are numerous genera in the literature which eventually may find use in the North American fauna, but because no American species are included, they are not cited. Some generic names, currently used for post-Paleozoic species, at one time were employed under the broad usage of earlier workers; it is unlikely that these are employed in the correct zoologic sense. A brief annotation indicates whether all or most specific names have been transferred from these taxa.

Cross references

Cross references should lead directly to the current assignment of a species in question rather than to intermediate assignments. Some specific names which have been transferred several times may include an intermediate cross reference because of the complicated problem of finding and eliminating the intermediate reference.

Cross references are indented, not centered. In the cross reference, the specific names are set boldface. Where the cross reference is concerned only with generic transfer, the author and date of the specific name are not

repeated. Where one specific name has been placed in the synonymy of another, the author of this second name is given. Finally, where a subsequent reference to a specific name is transferred to a different generic and specific combination, the author of the species is given, but not the date; the author's name is enclosed in parentheses or set off by a comma from a second author if a secondary misidentification is involved.

Synonymy of a specific name

A centered heading in boldface is employed for each specific name cataloged.

Within each synonymy, references are arranged in chronological order. There are various methods of synonymy which can be utilized, but this seems to be the most desirable for this particular work. In some synonymies this arrangement necessitates repetition of a particular name combination, but it is clear and unambiguous. Questionable and (or) tentative identifications are included with appropriate subheadings rather than carried as distinct entities.

Citations are limited to author's name, date in parentheses, page, and plate and figure references. This arrangement has the advantage of being concise. Each reference is given on a separate line. In a synonymy, except for the original reference to a specific name, all authors' names are usually set off from the specific name by a comma or period. We have omitted this and other commas in the citation.

Genera and subgenera

A present trend in classification of mollusks is the increasing use of subgenera. Generic and subgeneric names are considered coordinate by the International Rules of Zoological Nomenclature, but application of this principle is not always clear. One immediate problem is concerned with transfer of a specific name from one subgenus to another or from a taxon of full generic rank to an atypical subgeneric taxon. Were generic and subgeneric names coordinate, the name of the author of the species would be placed in parentheses on the assumption that this is a transfer from one generic taxon to another. Under the present interpretation, parentheses are used around the name of the species author only when the species is involved in a generic transfer rather than an atypical subgeneric reassignment.

A more troublesome problem is presented where recent revision has resulted in the classification of several subgenera from previously distinct genera. Although many specific names are transferred during this reclassification, some which have not been considered by the revisor may remain in each generic taxon. It seems to us that the most appropriate course is to automatically cross reference these species to the typical subgenus. We consider that the zoological grounds for this transfer have been established by the generic revisor. It should be noted that the transfer of unassigned species is apparent, as the last reference given in the synonymy may not be

in accord with the heading used for the specific name. Further this is a bibliographic convenience; rather than leaving some specific names under the generic heading and others scattered under various subgeneric headings, automatic assignment of unassigned species to the typical subgenus allows them to be found more readily.

Locality data

Information on the geologic position and geographic locality of the specimens is given immediately below many of the author citations. In making comparisons and in other discussion, authors commonly do not cite locality data; thus some citations are not accompanied by such data.

This geologic and geographic information is seldom as complete as in the original publication; interested persons are urged to examine the primary literature. The information has some utility for compiling lists of the common species in certain geographic regions or in rocks of broadly the same age. No attempt has been made to check the validity or the precision of the geologic position; these geologic data are from many sources and should be considered as quotations only. Certain stratigraphic names are those used in the sources and do not necessarily follow the current usage of the U.S. Geological Survey; others have been revised to reflect this current usage. In a few citations, usually those of very early workers, it has been considered desirable to annotate the geologic position, and this information is enclosed in brackets.

Unnamed species

Following the style set by Weller, a list of illustrated and (or) described specimens assigned to a genus but not to a species is given at the end of the appropriate genus. Specimens not assigned to a genus are given at the end of the appropriate section.

Abbreviations

Standard abbreviations of States and other land divisions have been followed. The geologic abbreviations of Mbr. for member, Fm. for formation, and Gr. for Group have been employed. Carboniferous has not been employed except in a quotational sense. U.S. Geological Survey practice is to divide the Carboniferous Systems into the Mississippian System and the overlying Pennsylvanian System. The three systems used herein, Mississippian, Pennsylvanian, and Permian are abbreviated to Miss., Penn., and Perm.

References

All authors cited in the main body of the text are included in the lists of references. These references are chiefly concerned with description of species, but a few are more general, and some are included only to document generic names no longer employed. It seems wiser to include these than to risk the omission of a potentially useful work. A separate set of references is given for each of the four sections of this bibliographic index.

UNRESOLVED PROBLEMS

An author seldom makes a complete revision that includes every former citation to every species within a genus. As a result, different problems are created; these are discussed in the following paragraphs.

Restriction in use of a generic name

Many generic names were used widely at first, but gradually became restricted to a taxon from certain areas, or more commonly from certain geologic divisions. Some specific names were transferred by subsequent authors to more restricted genera, but a few may have been left in the earlier combination. Subjective synonymy of some generic names has been indicated by an author. Where such revisions have been made, the compilers of the secondary literature cited considered it necessary to effect a transfer of the species remaining in the older combination.

To retain objectivity, we have annotated the generic reference showing when an author has indicated generic synonymy, even though he has not discussed each specific name. Where the last reference to a specific name does not indicate this transfer, the compilers of this index have assumed this responsibility. In another sense, however, authority for this change is implicit in the latest zoological revision.

Species and subspecies

In keeping with currently accepted nomenclatural procedures, the ambiguous term "variety" as used in the earlier paleontological literature has been interpreted to mean a subspecific name. Where the variety has been assigned a formal name, it is listed as a separate entry. Where a variety was indicated but not formally named, it is listed under the appropriate species.

There are obvious parallels between the genus and subgenus on one hand and the species and subspecies on the other. To institute typical subspecies here, however, merely for the sake of forming a symmetrical structure on the generic and specific levels, goes beyond the limits of objective compilation.

Capitalization and endings of specific names

In earlier work authors frequently capitalized specific names, usually place names or patronyms. We have followed Weller in listing these in the synonym, though not in the centerheadings, and we have added a few from the authors who continued this custom after 1898. Many compilers working on this index were not consistent, and we consider it too trivial a problem to search the literature for consistency.

The specific name in its original form has been given even though the latinized ending may be considered grammatically incorrect. Changes in spelling by subsequent authors are not considered to have separate status and corrections are not listed here. When names have been transferred

among generic taxa, we have attempted to make the latinized endings consistent but may have erred in some instances. In subgenera, the specific name ending has been made consistent with the generic name, but again we may have erred in some instances.

Dates

In transferring from the style used by Weller (1898) to that employed here, several problems have arisen. Many authors published more than once in each year, and letters have been assigned to differentiate the separate publications of each year; these letters are to be treated as a bibliographic convenience only, not as a precise arrangement. Though every attempt has been made to be systematic in this transfer, the possibility of minor errors in citation cannot be dismissed.

Another point of a more serious nature has been noted. Weller, following the custom of his time, apparently dated Proceedings from the time of presentation, rather than from the time of publication. Thus with the Philadelphia Academy of Sciences serial, the dates employed by him are consistently 1 year earlier than those currently in use. This problem has been corrected by the insertion of a bracketed date following the date given by Weller. So far as it is known, this change in date does not affect any matters of priority in the North American literature, though it may be significant with possible primary or secondary homonyms from other parts of the world. Other bracketed dates indicate actual date of publication.

The International Rules of Zoological Nomenclature are explicit that the person who actually performed descriptive work bears responsibility for authorship. Thus there are citations, for example to Hall in Miller (1877), to indicate authorship in a paper published by another. We have attempted to cite all such cases known to us, but a few papers might contain the work of another person.

Many references should be cited as Ulrich in Ulrich and Scofield (1897), but in most instances we have listed this as Ulrich (1897). We recognize the inconsistency, but believe that the reference is clear. The separate references to new species described by Shumard and those described by Swallow in their joint paper of 1858 make for such confusion that we have given only the appropriate author in centerheadings.

CLASS HYOLITHA ¹

ENCHOSTOMA Miller and Gurley 1896

Type species: *Hyolithus lanceolatus* Miller (1892) [1894] p. 63 [not Morris (1845) = *H. milleri* Sinclair (1946) p. 73]

Enchostoma Miller and Gurley (1896) p. 29

[Fisher (1962) p. W139 suggested that *Enchostoma* is "probably a worm." Accordingly, the type species and other referred species are not indexed here.]

HYOLITHES Eichwald 1840

Type species: *Hyolithes acutus* Eichwald (1840) p. 106

Hyolithes Eichwald (1840) p. 97

Hyolithes aculeatus (Hall)

Puginuculus? (*Theca*) *aculeatus* Hall (1859b) [1860] p. 107

Miss., "Goniatile ls.:" Rockford, Ind.

Puginuculus (?) *aculeatus* Winchell (1862) [1863] p. 423

Miss., Marshall Fm.; Adams, Hillsdale County, Mich.

Puginuculus? *aculeatus* Winchell (1865) [1866] p. 131

Miss., Marshall Fm.: Hillsdale, Mich.

Hyolithes aculeatus S. Weller (1898) p. 311

Carb.: Indiana; Michigan

Sinclair (1946) p. 73

Carb.: United States

Hyolithes carbonaria Walcott

Hyolithes carbonaria Walcott (1884) p. 264, pl. 23, fig. 3

L. Carb.: Eureka district, Nevada

Sinclair (1946) p. 74

Miss.: Nevada

Hyolithus [sic] *lanceolatus* Miller (1892) [not Morris 1845] see **ENCHOSTOMA**

Hyolithes milleri Sinclair 1946 see **ENCHOSTOMA**

Hyolithes parvulus Girty

Hyolithes parvulus Girty (1926) p. 38, pl. 6, figs. 18a-19d

Miss., ls. of Boone age: San Saba County, Tex.

Hyolithes waverliensis Hyde

Hyolithes waverliensis Hyde (1953) p. 335, pl. 53, figs. 10-15

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

PUGINUCULUS Barrande 1947

Type species: Apparently never designated

Puginuculus Barrande (1847) p. 555

[Fisher (1962) p. W124 considered this name a synonym of *Hyolithes*.]

Puginuculus? (*Theca*) *aculeatus* Hall 1860 see *Hyolithes aculeatus*

Puginuculus (?) *aculeatus* (Hall) see *Hyolithes aculeatus*

¹ For evidence as to the class rank of this taxon and for a discussion of the authorship of the name see Marek and Yochelson (1964).

THECA Morris 1845 see HYOLITHES Eichwald 1840

Type species: *Theca lanceolata* Morris (1845) p. 289

Theca Morris (1845) p. 289

[Authorship of the genus *Theca* is generally credited to Sowerby but Neave cited Morris (1845) as author. Fisher (1962) p. W124 considered this name a synonym of *Hyolithes*.]

Theca aculeatus* (Hall) see *Hyolithes aculeatus

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CLASS AMPHINEURA Ihering 1878

CHITON Linnaeus 1758

Type species: *Chiton tuberculatus* Linnaeus (1758) p. 667

(S.D. Dall (1879) p. 297)

Chiton Linnaeus (1758) p. 667

Chiton carbonarius Stevens 1858 see **Helminthochiton carbonarius**

Chiton parvus Stevens 1858 see **Helminthochiton parvus**

CYMATOCHITON Dall 1882

Type species: *Chiton loftusianus* King (1848) p. 12

Cymatochiton Dall (1882) p. 282

Cymatochiton? texanus Girty

Cymatochiton? texanus Girty (1908) [1909] p. 451, pl. 29, fig. 21

Perm., Delaware Mountain Gr.: Delaware Mts., Tex.

GLAPHUROCHITON Raymond 1910

Type species: *Chiton carbonarius* Stevens (1858) p. 264

Glaphurochiton Raymond (1910) p. 153

[Smith (1960) p. 152 considered this name a subjective synonym of *Helminthochiton*.]

Glaphurochiton carbonarius (Stevens) see **Helminthochiton carbonarius**

Glaphurochiton simplex Raymond 1910 see **Helminthochiton simplex**

GRYPHOCHITON Gray 1847

Type species: *Chiton nervanicus* Ryckholt (1845) p. 46

Gryphochiton Gray (1847b) p. 70

[Smith (1960) p. 152 considered this name a subjective synonym of *Helminthochiton*. Allyn Smith (written commun., 1963) noted that in Gray's original designation of *Gryphochiton* on May 11, 1847, no species were included; later in the same year, on November 9, Gray (1847a, p. 169) listed *Chiton nervanicus* as the only species in *Gryphochiton*. It thereby becomes the type by subsequent monotypy.]

Gryphochiton? anomalus (Rowley) see **Helminthochiton anomalus**

Gryphochiton parvus (Stevens) see **Helminthochiton parvus**

HELMINTHOCHITON Salter in M'Coy 1846

Type species: *Helminthochiton griffithi* Salter in M'Coy (1846) p. 71

Helminthochiton Salter (1846) p. 71

Helminthochiton anomalus (Rowley)

Platyceras? anomalus Rowley (1908) p. 90, pl. 19, figs. 15-17, 18?, 19?

Louisiana Ls.: Buffalo Creek, SE. of Louisiana, Mo.

[This species was originally described as a gastropod, but subsequent investigation indicates it belongs in Class Amphineura.]

Gryphochiton? anomalus Williams (1943) [1944] p. 100, pl. 9, figs. 19, 20

Louisiana Ls.: S. of Louisiana, Mo.

Helminthochiton carbonarius (Stevens)

Chiton carbonarius Stevens (1858) p. 264

Carb., "Coal Measures": Danville, Ill.

Meek and Worthen (1873) p. 608, pl. 29, figs. 15a-h

Carb., "Coal Measures": Danville, Ill.

Glaphurochiton carbonarius Raymond (1910) p. 153, pl. 26, fig. 6; pl. 28, figs. 15, 16

Penn., Pine Creek Ls.: Stoop's Ferry, Pa.

Raymond (1911) p. 98, pl. 5, fig. 4

Penn., Pine Creek Ls.: Stoop's Ferry, Pa.

"*Chiton*" *carbonarius* Shimer and Shrock (1944) p. 527, pl. 216, figs. 27-34

Penn.: Illinois; Missouri

Helminthochiton concinnus Richardson

Helminthochiton concinnus Richardson (1956) p. 62-65, figs. 34-36

M. Penn., Francis Creek Sh.: Near Coal City, Ill.

Smith (1960) p. 148, fig. 33, no. 1a-c

M. Penn., Francis Creek Sh.: Near Coal City, Ill.

Helminthochiton parvus (Stevens)

Chiton parvus Stevens (1858) p. 264

Miss., Archimedes ls.: Bergen Hill, Ind.

Gryphochiton? *parvus* Cumings (1906) p. 1365, pl. 24, figs. 8-8c

Miss., Salem Ls.: Spergen Hill, Harrodsburg, Bloomington, Ellettsville, Stinesville, and Romona, Ind.

Helminthochiton riddlei Frederickson

Helminthochiton riddlei Frederickson (1962) p. 301, figs. 1-3

Penn., Francis Fm.: SW. of Ada, Okla.

Helminthochiton simplex (Raymond)

Glaphurochiton simplex Raymond (1910) p. 153, pl. 24, figs. 11, 12; pl. 28, fig. 14

Penn., Vanport Ls.: New Castle and New Castle Junction, Pa.

Raymond (1911) p. 97, pl. 3, figs. 11, 12

Penn., Vanport Ls.: New Castle, Pa.

Helminthochiton species of authors

Helminthochiton sp. Smith (1960) p. 153, fig. 36, no. 3

Penn.: Pennsylvania; Illinois

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CLASS SCAPHOPODA Bronn 1862

DENTALIUM Linnaeus 1758

Type species: *Dentalium elephantium* Linnaeus (1758) p. 785
(S.D. Montfort (1810) p. 23)

Dentalium Linnaeus (1758) p. 785

[Ludbrook (1960) p. 137 divided this genus into several subgenera. Because the Paleozoic Scaphopoda are little known, the species listed here are not assigned to the typical subgenus. Subgeneric reference is used with *Laevidentalium*. It is recognized that this procedure is nomenclaturally incorrect, but in an index presentation, it seems unavoidable. Emerson (1962) did not recognize *Dentalium* in the Paleozoic, but at this time it is not feasible to reassign the species listed.]

Dentalium acutisulcatum Gurley

Dentalium acutisulcatum Gurley (1883) p. 7

Carb., "L. Coal Measures": Newport, Vermillion County, Ill.

Dentalium annulostriatum Meek and Worthen 1870 see ***Plagiolypta annulostrata***

***Dentalium?* barquense** Winchell

Dentalium? *barquense* Winchell (1862) [1863] p. 425

Miss., Marshall Fm.: Pointe aux Barques, Mich.

[Winchell (1865) [1866] p. 131 questioned the validity of this assignment and stated, "Can these rigid stems then, be corals with very large hollow axes?"]

Dentalium canna White 1874 see ***Plagiolypta canna***

Dentalium* (*Plagiolypta*) *canna White see ***Plagiolypta canna***

Dentalium grandaevum Winchell

Dentalium grandaevum Winchell (1863) [1864] p. 18

Yellow ss.: Burlington, Iowa

S. Weller (1900) p. 117, pl. 7, fig. 6

Chonopectus ss.: Burlington, Iowa

S. Weller (1901) p. 180, pl. 15, fig. 29

Miss., Kinderhook Ser.: Burlington, Iowa

Plagiolypta grandaeva Girty (1903) p. 452

Dentalium grandaevum S. Weller (1905) p. 630

Miss., Kinderhook Ser., "English River Grit": Maples Mill, on English River, near Wellman, Washington County, Iowa

Thomas (1925) pl. 3, fig. 24

Miss., Kinderhook Ser., Wassonville cherts: Iowa

Dentalium granvillensis Herrick 1888 see ***Plagiolypta granvillense***

Dentalium illinoisensis Worthen 1883 see ***Plagiolypta illinoisense***

Dentalium indianum Girty

Dentalium indianum Girty (1912a) p. 135

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Girty (1915a) p. 146, pl. 25, figs. 12, 12a

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Dentalium meekianum Geinitz 1866 see **Plagioglypta meekiana**

Dentalium mexicanum Girty

Dentalium mexicanum Girty (1909b) p. 95, pl. 11, fig. 10

Perm., San Andres Ls.: Caballos Mts. and Fra Cristobal, N. Mex.

Dentalium missouriense Swallow

Dentalium missouriense Swallow (1863) p. 99

Miss., Archimedes ls.: Chester, Ill.; Ste. Marys, Mo.

Keyes (1894) [1895] p. 133

Miss., Kaskaskia Ls. of former usage: Ste. Marys, Mo.

Dentalium obsoletum Hall 1858 see **Dentalium sublaeve** (Hall)

Dentalium primarium Hall 1858 see **Plagioglypta primaria**

Dentalium (Antalis) **raymondi** Miller 1949 see **Prodentalium raymondi**

Dentalium semicostatum Girty 1912 see **Prodentalium semicostatum**

Dentalium sublaeve Hall in Miller

Dentalium obsoletum Hall (1858) p. 724, p. 29, figs. 16–17a

Carb., "Coal Measures": Iowa

Dentalium sublaeve Hall in Miller (1877) p. 244 [for *D. obsoletum* preoccupied]

Keyes (1891) [1892] p. 252

Carb., "L. Coal Measures": Des Moines, Iowa

Girty (1903) p. 451

Penn., Hermosa Fm.: San Juan region, Colorado; Penn. and Perm., Maroon

Fm.: Crested Butte district, Colorado

Dentalium sublaeve Girty (1915a) p. 146, pl. 25, figs. 13, 13a

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Dentalium venustum Meek and Worthen 1861 see **Dentalium** (**Laevidentalium**) **venustum**

Dentalium sp. Girty 1903 see **Prodentalium raymondi** Young

Dentalium species of authors

Dentalium (two sp.), Dawson (1868) p. 309

Carb., ls.: Economy and Pugwash, Nova Scotia

Dentalium sp.? Herrick (1887) p. 146, pl. 14, fig. 12

Carb., "Coal Measures": Flint Ridge, Ohio

Dentalium sp. Woodruff (1906) p. 284

Carb.: Cedar Creek, Nebr.

Walter (1953) p. 700, pl. 72, fig. 4

Perm., Rustler Fm., dol. of 1, mbr.: Culberson County, Tex.

Mudge and Yochelson (1962) [1963] p. 94, pl. 17, fig. 20

U. Penn., Root Sh.: Lyon County, Kans.

DENTALIUM (**LAEVIDENTALIUM**) Cossmann 1888

Type species: *Dentalium incertum* Deshayes (1825) p. 362

Laevidentalium Cossmann (1888) p. 7

[This name was reduced to subgeneric rank under *Dentalium* Linnaeus (1758) by Ludbrook (1960) p. 137. She gave the range of the subgenus as M. Triassic to Recent, but, for convenience, late Paleozoic species are retained in the subgenus].

Dentalium (Laevidentalium) venustum Meek and Worthen

Dentalium venustum Meek and Worthen (1861) [1862] p. 145

Miss., St. Louis Ls.: Waterloo, Monroe County, Ill.

Meek and Worthen (1866) p. 284, pl. 19, fig. 8

Miss., St. Louis Ls.: Waterloo, Monroe County, Ill.

Plagioglypta venusta Girty (1903) p. 453

Laevidentalium venustum Girty (1909a) p. 41, pl. 5, figs. 5, 5a

Miss., Caney Sh.: Antlers and Tishomingo quads., Oklahoma

Girty (1915b) p. 111

Miss., Batesville Ss.: Ramsey Ferry, Round Mtn., Granny Mt., and Marshall, Ark

S. Weller (1916) p. 262, pl. 19, fig. 13

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Laevidentalium sp. cf. *venustum* Elias (1958) p. 30, pl. 3, fig. 1

Miss., Redoak Hollow Fm.: Near Milo, Okla.

Dentalium (Laevidentalium) species of authors

Laevidentalium sp. Easton (1942) pl. 12, fig. 7

Miss., Pitkin Ls.: Arkansas

PLAGIOGLYPTA Pilsbry and Sharp 1897

Type species: *Dentalium undulatum* Münster in Goldfuss (1844) p. 3

Plagioglypta Pilsbry and Sharp (1897) p. 31

Plagioglypta annulostrata (Meek and Worthen)

Dentalium annulostratum Meek and Worthen (1870) [1871] p. 45

Carb., "Coal Measures": Danville, Ill.

Dentalium? *annulostratum* Meek and Worthen (1873) p. 589, pl. 29, fig. 7

Carb., "Coal Measures": Danville, Ill.

Dentalium annulostratum Keyes (1888) [1889] p. 234

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1891) [1892] p. 251

Carb., "L. Coal Measures": Des Moines, Iowa

Plagioglypta annulistrata Girty (1903) p. 452

Girty (1915a) p. 147, pl. 25, figs. 15-16a (pl. 15?)

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma

Morse (1931) p. 320, pl. 53, fig. 1

Penn., Kendrick Sh.: Kentucky

Plagioglypta? cf. *P. annulistrata* Plummer (1950) pl. 8, fig. 17

Miss., Barnett Fm.: From outcrop 1½ miles W. of Chapel, San Saba County, Tex.

Plagioglypta annulistrata Walter (1953) p. 700, pl. 78, figs. 2, 6, 13

Perm., Rustler Fm., gray ls. of l. mbr.: Culberson County, Tex.; Penn., Wewoka Fm.: Oklahoma

Plagioglypta annulostratum [sic] Elias (1958) p. 30, pl. 3, fig. 2

Miss., Redoak Hollow Fm.: Near Milo, Okla.

Plagioglypta canna (White)

Dentalium canna White (1874) p. 23

Carb., "Coal Measures": Near Salt Lake, N. Mex.; near Relief Spring, Ariz.

White (1877) p. 156, figs. 6a, b

Carb.: Near Salt Lake, N. Mex.; near Relief Spring, Ariz.

Plagioglypta canna Girty (1903) p. 452

Plagioglypta canna? Girty (1908) [1909] p. 450, pl. 23, figs. 11-13

Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.

Plagioglypta canna Girty (1909b) p. 95, pl. 11, fig. 11

Perm., Abo Ss.: Sandia Mts. and Engle, N. Mex.: Yeso Fm.: Alamillo and Mesa del Yeso, N. Mex.; San Andres Ls.: Mesa del Yeso and Nogal Creek, N. Mex.

Girty (1910) [1911] p. 44, pl. 6, fig. 14

Perm., phosphate beds of Park City Fm.: Montpelier, Idaho

Girty (1912b) p. 54, pl. 7, fig. 4

Perm., Park City Fm.: Park City district, Utah

E. Branson (1916) p. 657, pl. 3, fig. 13

Perm. and Trias., Embar Fm. of former usage: Wyoming

Shimer (1919) p. 488

Perm., Kaibab Ls.: Arizona

Shimer (1926) p. 79

Perm., Rocky Mountain Qtzite.: Minnewanka region, Alberta; New Mexico; Arizona; Texas

C. Branson (1930), p. 58, pl. 15, fig. 6

Perm., Phosphoria Fm., lower chert and lower phosphate mbrs.: Wind River Mts., Owl Creek Mts., and Cody, Wyo.; phosphate beds: Montpelier, Idaho

Plagioglypta canna? Stainbrook and Madera (1941) p. 382

Perm., rocks of Leonard or Word age: Sid Richardson County, No. 1 well, depth 5,125 ft and Maverick County; School Lands, Hockley County, Tex.

Plagioglypta canna Clifton (1942) p. 694, pl. 101, fig. 19

Perm., Leonard Ser., Blaine Fm., Acme Mbr.: Fiston County, Tex.; Dog Creek Sh., Guthrie Mbr.: Stonewall County, Tex.

Dentalium (Plagioglypta) canna Shimer and Shrock (1944) p. 523, pl. 214, fig. 31

Perm., Delaware Mountain Gr.: Texas; Florella Ls.: Wyoming; Chupadera Fm.: Colorado; New Mexico; Rocky Mountain Qtzite.: Alberta; Phosphoria Fm.: Utah; Kaibab Ls.: Arizona

Plagioglypta canna H. Chronic (1952) p. 153

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Plagioglypta? canna Walter (1953) p. 700, pl. 73, figs. 18, 19

Perm., Rustler Fm., gray ls. of l. mbr.: Culberson County, Tex.

Cooper (1953) p. 79, pl. 24c, figs. 19, 20

Perm., Monos Fm., *Anidanthus* zone, *Dictyoclostus* zone: Near El Antimonio, W. Sonora, Mexico

***Plagioglypta girtyi* Knight**

Plagioglypta girtyi Knight (1940) p. 315, pl. 6, fig. 2

Perm., Rush Springs Fm. Dozier Ss. Mbr.: Texas

Plagioglypta grandaeva* (Winchell) see *Dentalium grandaevum

***Plagioglypta granvillense* (Herrick)**

Dentalium granvillense Herrick (1888) p. 92

Miss., Waverly Gr. of former usage: Licking County, Ohio

Plagioglypta granvillensis Girty (1903) p. 452

***Plagioglypta illinoisense* (Worthen)**

Dentalium illinoisensis Worthen (1883) p. 325

Miss., Chester Ser.: Chester, Ill.

Dentalium illinoisense Worthen (1890) p. 145, pl. 23, fig. 1

Plagioglypta illinoisense Girty (1903) p. 452

Dentalium illinoisense Morse (1911) p. 395, fig. 21

Miss., Maxville Ls.: Mount Perry-Fultonham, Ohio

[Morse, the last one to treat this species, referred to Worthen's publications but not to that of Girty (1903); therefore in this synonymy there has been a departure from objective cataloging.]

Plagioglypta meekiana (Geinitz)

- Dentalium meekianum* Geinitz (1866) p. 13, table 1, fig. 20
 Penn., "Dyas": Nebraska City, Nebr.
 Meek (1872) p. 224, pl. 11, figs. 16a, 16b
 Carb., "U. Coal Measures": Nebraska City, Nebr.
- Dentalium meekianum?* Meek and Worthen (1873) p. 590, pl. 29, fig. 8
 Carb., "Coal Measures": Danville, Ill.
- Dentalium meekianum* Keyes (1888) [1889] p. 234
 Carb., "L. Coal Measures": Des Moines, Iowa
 Keyes (1891) [1892] p. 251
 Carb., "L. Coal Measures": Des Moines, Iowa
 Keyes (1894) [1895] p. 133
 Carb., "U. Coal Measures": Kansas City, Mo.
- Dentalium* cf. *meekianum* Smith (1896) p. 37
 Carb., "U. Coal Measures": Crawford County, Ark.
- Plagioglypta meekiana* Girty (1903) p. 452
- Plagioglypta meekana* Price (1914) p. 532
 Penn., Pine Creek Ls.: Brandonville, W. Va.; Conemaugh Fm., Brush Creek Ls.
 Mbr.: Bruceton Mills and Reedville, W. Va.
- Plagioglypta meekiana* Girty (1915a) p. 148, pl. 25, figs. 14, 14a
 Penn., Wewoka Fm.: Wewoka quad., Oklahoma
- Plagioglypta meekiana?* Price (1916) p. 726
 Penn., Kanawha Fm., Winifrede Ls. Mbr.: Raleigh County, W. Va.
- Plagioglypta meekiana* Price (1918) p. 799
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Barbour and Upshur Counties, W. Va.
- Plummer and Moore (1921) [1922] pl. 14, figs. 11, 12
 Penn., Mineral Wells Fm.: Mineral Wells, Tex.
- Plagioglypta meekana* Morningstar (1922) p. 245
 Penn., Pottsville Fm., l. part Mercer Mbr.: Muskingum and Stark Counties, Ohio

Plagioglypta monolineata C. Branson

- Plagioglypta monolineata* C. Branson (1930) p. 58, pl. 15, fig. 7
 Perm., Phosphoria Fm., Top Ls. mbr.: Wind River Mts. and Owl Creek Mts., Wyo.

Plagioglypta primaria (Hall)

- Dentalium primum* Hall (1858) p. 666, pl. 23, fig. 16
 Miss., Warsaw Ls.: Hancock County, Ill.
 Keyes (1894) p. 133
 Miss., Keokuk Ls.: Warsaw, Ill.
- Plagioglypta primaria* Girty (1903) p. 452

Plagioglypta prosseri Morningstar

- Plagioglypta prosseri* Morningstar (1922) p. 245, pl. 16, figs. 3-4
 Penn., Pottsville Fm., l. part Mercer Mbr.: Perry County, Muskingum County, and Licking County; McArthur Ls.: Jackson and Vinton Counties, Ohio

Plagioglypta subannulata Easton

- Plagioglypta subannulata* Easton (1962) p. 101, pl. 13, figs. 20, 21
 Miss. or Penn., Alaska Bench Ls.: Central Montana

Plagioglypta venusta (Meek and Worthen) see **Dentalium** (**Laevidentalium**) **venustum**

Plagioglypta species of authors

Plagioglypta?? sp. Beede (1907) p. 171, text fig.

Perm., Quartermaster Fm.: Dozier, Tex.

PRODENTALIUM Young 1942

Type species: *Prodentalium raymondi* Young (1942) p. 120

Prodentalium Young (1942) p. 120

[Miller (1949) p. 389 considered this name a subjective synonym of *Dentalium*.

Ludbrook (1960) p. 140 considered *Prodentalium* a valid genus.]

Prodentalium raymondi Young

Dentalium sp. Girty (1903) p. 452

Penn., Hermosa Fm.: San Juan region, Colorado; Cisco division: near Graham, Young County, Tex.

Prodentalium raymondi Young (1942) p. 120, pl. 20, figs. 3-6, 8, 12

Penn., carbonaceous sh. of Magdalena Gr.: Talpa and Taos Canyon, N. Mex.

Dentalium (Antalis) raymondi Miller (1949) p. 389, pl. 76, figs. 1-4

Penn., Strawn Gr., u. part Millsap Lake Fm.: 5½ miles W. of Millsap, Palo Pinto County, Tex.

Toomey (1957) p. 457-461, text figs. 1, 2a, b

Penn., Strawn Gr., Lazy Bend Fm.: SW. Parker County, Tex.

Prodentalium raymondi Ludbrook (1960) p. 140, fig. 39, no. 9

U. Carb.: New Mexico

Emerson (1962) p. 466

Penn., Magdalena Gr.: New Mexico; Texas; ?Colorado

Prodentalium semicostatum (Girty)

Dentalium semicostatum Girty (1912a) p. 135

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Girty (1915a) p. 145, pl. 25, fig. 11

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Prodentalium semicostatum Young (1942) p. 120

Penn., Wewoka Fm.: Oklahoma

SCAPHOPODA GENUS INDETERMINATE

Scaphopoda genus indet. Yochelson and Dutro (1960) p. 144, pl. 14, fig. 4

U. Miss., Lisburne Gr.: Howard quad., N. Alaska

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CLASS GASTROPODA Cuvier 1797

ABYLEA Sturgeon 1964

Type species: *Abylea minuta* Sturgeon (1964a) p. 205

Abylea Sturgeon (1964a) p. 205

Abylea minuta Sturgeon

Abylea minuta Sturgeon (1964a) p. 205, pl. 33, figs. 13-16; pl. 36, figs. 8, 9

Penn., Washingtonville Sh.: Muskingum County, Ohio

ACLIS Loven 1846

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. Formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Aclis minuta Stevens 1858 see **Aclisina minuta**

Aclis robusta Stevens 1858 see **Donaldina robusta**

Aclis? *stevensoni* White 1881 see **Donaldina robusta** (Stevens)

Aclis swallowiana [sic] (Geinitz) see **Donaldina swallowiana**

ACLISINA Koninck 1881

Type species: *Murchisonia striatula* Koninck (1843) p. 415

(S.D. Miller (1889) p. 395)

Aclisina Koninck (1881) p. 86

Aclisina acutula (Dawson)

Loxonema acutula Dawson (1868) [see Dawson, 1855, 2d ed.] p. 309, fig. 122, p. 310

Carb., Ls.: Windsor, Nova Scotia

Aclisina acutula Bell, (1929) p. 180

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Aclisina bellilineata Miller

Aclisina bellilineata Miller (1891) p. 85, pl. 14, fig. 10

Miss., Chouteau Ls.: Sedalia, Mo.

Miller (1892a) p. 695, pl. 14, fig. 10

Miss., Chouteau Ls.: Sedalia, Mo.

Aclisina? *bellilineata* Keyes (1894b) [1895] p. 202

Miss., Kinderhook Ser.: Sedalia, Mo.

Aclisina bellilineata E. Branson (1938a) p. 107

L. Miss.: Missouri

Aclisina? *bisulcata* H. Chronic

Aclisina? *bisulcata* H. Chronic (1952) p. 132, pl. 5, figs. 5a-6

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

***Aclisina breva* Sayre**

Aclisina breva Sayre (1930) [1931] p. 150, pl. 17, fig. 4

Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.

Aclisina* (?) *cancellata* Mark 1912 see *Hemizyga* (*Hemizyga*?) *cancellata

***Aclisina conditi* Mark 1912 see *Donaldina swallowiana* (Geinitz)**

Aclisina* (?) *costata* Mark 1912 see *Hemizyga* (?) (*Plocozyga*?) *costata

***Aclisina formosa* Mark 1912 see *Donaldina stevensana* (Meek and Worthen)**

***Aclisina minuta* (Stevens)**

Aclisina minuta Stevens (1858) p. 259

Carb., "Coal Measures": Danville, Ill.

Murchisonia minima Swallow (in Shumard and Swallow, 1858) p. 203

Carb., "M. Coal Measures": Lexington, Mo.

Aclisina minuta Keyes (1888) [1889] p. 240

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1891) [1892] p. 259

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 202

Carb., "U. Coal Measures": Lexington, Mo.

Knight (1931a) p. 2

[Knight suggested that use of this specific name and *Murchisonia minima* Swallow for additional material be discontinued because the original species description is inadequate by currently accepted standards.]

***Aclisina northviewensis* E. Branson**

Aclisina northviewensis E. Branson (1938b) p. 45, pl. 24, figs. 18, 21

L. Miss.: Missouri

Aclisina* (?) *ornata* Mark 1912 see *Hemizyga* (?) (*Plocozyga*?) *ornata

***Aclisina parallela* Sayre**

Aclisina parallela Sayre (1930) [1931] p. 150, pl. 17, fig. 1

Penn., Drum Ls., oolitic mbr.: Turner, Kans.

***Aclisina pumila* Mark 1912 see *Donaldina robusta* (Stevens)**

Aclisina robutsa* (Stevens) see *Donaldina robusta

Aclisina stevensana* (Meek and Worthen) see *Donaldina stevensana

Aclisina stevensiana* [sic] (Meek and Worthen) see *Donaldina stevensana

Aclisina stevensana* var. *gibbosa* Warthin 1930 see *Donaldina stevensana gibbosa

Aclisina swallowiana* [sic] (Geinitz) see *Donaldina swallowiana

Aclisina tenuilineata* (Shumard) see *Loxonema tenuilineata

***Aclisina* species of authors**

Aclisina sp. Price (1916) p. 729

Penn., Kanawha Fm., Gilbert Sh. Mbr.: Wyoming County, W. Va.

Aclisina sp.? Mather (1915) p. 240 pl. 16, figs. 1, 2

Penn., Morrow Ser.: Fayetteville, Ark.; Wagoner, Okla.

ACMAEA Eschschaltz 1833

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. No formally named North American late Paleozoic species were assigned originally to this taxon.]

Acmaea species of authors

Acmaea? sp. Cumings (1906) p. 1366, pl. 24, figs. 15, 15a
Miss., Salem Ls.: Indiana

ACROCULIA Phillips 1841

[Knight (1941) p. 31 noted that this name is a junior objective synonym of *Platyceras* Conrad (1840).]

Acroculia ovalis Stevens 1858 see **Platyceras (Orthonychia) ovalis**

Acroculia trigonalis Stevens 1858 see **Platyceras (Platyceras) trigonalis**

ACTAEONINA Fischer 1883

[Knight, Batten, and Yochelson (1960) p. 1323 noted that this name is a junior objective synonym of *Acetonina* Orbigny (1850).]

Actaeonina angulifera (White) see **Girtyspira angulifera**

ACTEONINA Orbigny 1850

Type species: *Chemnitzia carbonaria* Koninck (1843) p. 496
(S.D. Meek (1863) p. 91)

Acteonina canaliculata (Hall) see **Girtyspira canaliculata**

Acteonina minuta (Stevens) see **Girtyspira minuta**

AGNESIA Koninck 1883

Type species: *Pleurotomaria acuta* Phillips (1836) p. 228
Agnesia Koninck (1883) p. 99

Agnesia prosseri Hyde

Agnesia prosseri Hyde (1953) p. 324, pl. 46, figs. 11-14
Miss.: Sciotoville, Ohio

AMAUROTOMA Knight 1945

Type species: *Pleurotomaria subsinuata* Meek and Worthen (1860) [1861] p. 460
Amaurotoma Knight (1945a) p. 583

Amaurotoma aspera (Girty) see **Paragoniozona aspera**

Amaurotoma humerosa (Meek and Hayden)

Pleurotomaria humerosa Meek and Hayden (1858a) [1859] p. 264

Carb., "Coal Measures": Grasshopper Creek, Kans.

Meek and Hayden (1865) p. 46, pl. 1, figs. 14a, b

Carb., "Coal Measures": Grasshopper Creek, Kans.

Hypselentoma humerosa J. Weller (1929a) p. 10

Amaurotoma humerosa Knight (1945b) p. 584

Penn.: Texas

Amaurotoma? knighti Elias

Amaurotoma (?) *knighti* Elias (1958) p. 12, pl. 1, figs. 15, 16
Miss., Redoak Hollow Fm.: Oklahoma

Amaurotoma leavenworthana (Hall)

Pleurotomaria leavenworthana Hall (1856) p. 24

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.

Cyclonema leavenworthana Whitfield (1882a) p. 75, pl. 8, figs. 29-31

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton Ill.

Hall (1883) p. 363, pl. 31, figs. 29-31

Miss., St. Louis Ls.: Alton, Ill.; Spergen Hill, Lanesville, and Bloomington, Ind.

- Cyclonema leavenworthana*? Herrick (1888a) p. 86, pl. 1, fig. 20
Miss., Waverly Gr. of former usage: Licking County, Ohio
- Cyclonema leavenworthana* Cumings (1906) p. 1344, pl. 25, figs. 29-31
Miss., Salem Ls.: Spergen Hill, Bloomington, Harrodsburg, Ellettsville, Stinesville, Paynters Hill, and Romona, Ind.; Alton, Ill.
- Yunnanina leavenworthana* Knight (1933a) p. 39
Knight (1944) p. 451, pl. 183, fig. 7
Miss., Salem Ls.: Mississippi Valley
- Amaurotoma leavenworthana* Knight (1945b) p. 584
Miss., Salem Ls.: Indiana

***Amaurotoma subangulatum* (Hall)**

- Pleurotomaria subangulata* Hall (1856) p. 25
Miss., Warsaw Ls.: Spergen Hill, Ind.
- Cyclonema subangulatum* Whitfield (1882a) p. 76, pl. 8, fig. 32
Miss., Warsaw Ls.: Spergen Hill, Ind.
Hall (1883) p. 364, pl. 31, fig. 32
Miss., Spergen Ls. of former usage (= Salem Ls.): Spergen Hill and Lanesville, Ind.
Cumings (1906) p. 1345, pl. 25, fig. 32
Miss., Salem Ls.: Spergen Hill, Harrodsburg, Bloomington, and Stinesville, Ind.
- Cyclonema?* *subangulatum* Bell (1929) p. 176, pl. 31, figs. 3-6
Carb., L. Windsor Ser. Horton-Windsor district, Nova Scotia
- Amaurotoma subangula* Knight (1945b) p. 584
Miss., Salem Ls.: Indiana

***Amaurotoma subsinuata* (Meek and Worthen)**

- Pleurotomaria subsinuata* Meek and Worthen (1860) [1861] p. 460
Carb., "Coal Measures": Hodges Creek, Macoupin County, Ill.
Meek and Worthen (1866a) p. 358, pl. 28, figs. 4a-d
Carb., L. "Coal Measures": Macoupin County, Ill.
Sayre (1930) [1931] p. 132, pl. 14, figs. 3-3b
Penn., Drum Ls., oolitic mbr.: Kansas City, Mo.
- Yunnanina subsinuata* Knight (1933a) p. 49, pl. 10, figs. 2a-f; pl. 13, fig. 9
Penn., Pawnee Ls. and Labette Sh.: St. Louis County, Mo.
Knight (1944) p. 451, pl. 183, fig. 8
Penn., Des Moines Ser.: Mississippi
- Amaurotoma subsinuata* Knight (1945a) p. 583
Knight, Batten, and Yochelson (1960) p. 1225, fig. 139, no. 4
M. Penn.: Illinois

AMPHISCAPHA Knight 1942

[This name was reduced to subgeneric rank under *Straparollus* Montfort (1810) by Knight (1944) p. 465.]

Amphiscapha catilloides* (Conrad) see *Straparollus* (*Amphiscapha*) *catilloides
***Amphiscapha* species of authors see *Straparollus* (*Amphiscapha*) species of authors**

AMPHISCAPHA (AMPHISCAPHA) Knight 1942

[This name was reduced to subgeneric rank under *Straparollus* Montfort (1810) by Knight (1944) p. 465.]

Amphiscapha* (*Amphiscapha*) *dextrata* Yochelson 1956 see *Straparollus* (*Amphiscapha*) *dextratus

Amphiscapha* (*Amphiscapha*) *elleri* Burke 1962 see *Straparollus* (*Amphiscapha*) *elleri

- Amphiscapha (Amphiscapha) giganteus** Yochelson 1956 see **Straparollus (Amphiscapha) giganteus**
Amphiscapha (Amphiscapha) hollingsworthi (Knight) see **Straparollus (Amphiscapha) hollingsworthi**
Amphiscapha (Amphiscapha) muricata (Knight) see **Straparollus (Amphiscapha) muricatus**
Amphiscapha (Amphiscapha) proxima Yochelson 1956 see **Straparollus (Amphiscapha) proximus**
Amphiscapha (Amphiscapha) reedsi (Knight) see **Straparollus (Amphiscapha) reedsi**

AMPHISCAPHA (CYLICIOSCAPHA) Yochelson 1956

[This subgeneric name was elevated to generic rank by Knight, Batten, and Yochelson (1960) p. 1195.]

- Amphiscapha (Cylcioscapha) grada** Yochelson and Dutro 1960 see **Cylcioscapha grada**
Amphiscapha (Cylcioscapha) texana Yochelson 1956 see **Cylcioscapha texana**
Amphiscapha (Cylcioscapha) williamsi Yochelson 1956 see **Cylcioscapha williamsi**

AMPULLARIA Lamarck 1801

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic.]

Ampullaria? powelli Walcott

Ampullaria? Powellii Walcott (1883) p. 808, figs. 3, 3a

Base of Carb.: Eureka district, Nevada

Walcott (1884) p. 261, figs. 4, 5

L. Carb.: Eureka district, Nevada

MacNeil (1939) p. 358, pl. 37, figs. 10, 11, 21, 22

Cretaceous: Eureka district, Nevada

[This species was originally considered to be Carboniferous, but subsequent mapping demonstrated that it comes from beds of Cretaceous age.]

ANANIAS Knight 1945

[This name was reduced to subgeneric rank under *Glabrocingulum* Thomas (1940) by Sloan (1955) p. 275.]

- Ananias franciscanus** H. Chronic 1952 see **Apachella franciscanus**
Ananias gibber H. Chronic 1952 see **Glabrocingulum (Glabrocingulum) gibber**
Ananias manzanicum (Girty) see **Glabrocingulum (Ananias) manzanicum**
Ananias marcouiana (Geinitz) see **Glabrocingulum (Ananias) marcouianum**
Ananias welleri (Newell) see **Glabrocingulum (Ananias) welleri**
Ananias whitei Knight 1945 see **Glabrocingulum (Ananias) whitei**

ANEMATINA (Knight) 1933

Type species: *Holopea proutana* Hall (1858) p. 30

Strophostylus (Anematina) Knight (1933a) p. 36

Elasmonema (Anematina) Knight (1936) p. 526

Anematina Knight (1941) p. 36

Anematina marshalli Knight 1944 see **Hemizyga (Hemizyga) marshalli**

Anematina micula (Girty)

- Macrocheilus? micula* Girty (1909b) p. 43, pl. 5, fig. 2
 Miss., Caney Sh.: Tishomingo quad., Oklahoma
Holopea micula Girty (1915a) p. 189
Strophostylus (Anematina) micula Knight (1933a) p. 37

Anematina minutissima (Knight)

- Strophostylus (Anematina) minutissimus* Knight (1933a) p. 47, pl. 8, figs. 1a-h; pl. 12, fig. 7
 Penn., Labette Sh.: St. Louis County, Mo.
Elasmonema (Anematina) minutissimus Knight (1936) p. 526
Anematina minutissima Knight (1944) p. 471, pl. 192, figs. 20, 21
 Penn., Des Moines Ser.: Mississippi Valley

Anematina proutana (Hall)

- Holopea proutana* Hall (1856) p. 30
 Miss., St. Louis Ls.: Alton, Ill.; Spergen Hill, Ind.
Holopea (Callonema?) proutana Whitfield (1882a) p. 72, pl. 8, figs. 33, 34
 Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.
Holopea proutana Hall (1883) p. 368, pl. 31, figs. 33, 34
 Miss., St. Louis Ls.: Alton, Ill.; Spergen Hill, Lanesville, and Bloomington, Ind.
 Cumings (1906) p. 1342, pl. 25, figs. 33, 34
 Miss., Salem Ls.: Spergen Hill, Bloomington, Paynters Hill, Harrodsburg, Ellettsville, Stinesville, and Romona, Ind.; Alton, Ill.
 Roundy (1914) p. 448, pl. 3, figs. 8-13
 Miss., Spergen Ls. of former usage (= Salem Ls.): Indiana
 Girty (1915a) p. 190
 Bell (1929) p. 177, pl. 31, figs. 7, 7a, 8
 Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia
Strophostylus (Anematina) proutanus Knight (1933a) p. 36, pl. 8, figs. 1a-1h
Elasmonema (Anematina) proutanum Knight (1936) p. 526, 533
Anematina proutana Knight (1941) p. 36 pl. 52, figs. 4a, b
 L. Carb., Spergen Ls.: of former usage (= Salem Ls.): Spergen Hill, Harristown, and SE. of Salem, Ind.
 Knight (1944) p. 471, pl. 192, figs. 18, 19
 Miss., Salem Ls.: Mississippi Valley
 Knight, Batten, and Yochelson (1960) 1243, fig. 155, no. 2
 M. Miss.: Indiana

Anematina rockymontanum (Shimer)

- Loxonema rockymontanum* Shimer (1926) p. 81, pl. 4, figs. 9a, b, 10
 Miss.: Minnewanka region, Alberta
Anematina rockymontanum Yochelson and Dutro (1960) p. 141, pl. 14, figs. 10-16
 L. Miss., Wachsmuth Ls.: Chandler Lake quad., N. Alaska

Anematina species of authors

- Anematina(?)* sp. Sage (1954) p. 105, pl. 21, fig. 3
 Carb., L. Windsor Ser.: Dingwall, Cape Breton Island

ANCILLA Lamarck 1799

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. Formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Ancella [sic] **crassicollis**? Owen 1852 see **Platyceras** (**Orthonychia**) **equilaterum** Hall

ANGYOMPHALUS Cossmann 1916

[This name was reduced to subgeneric rank under *Trepostira* Ulrich and Scofield (1897) by Knight, Batten, and Yochelson (1960) p. 1201.]

Angyomphalus? **excavatus** Easton 1962 see **Trepostira** (**Angyomphalus**) **excavata**

Angyomphalus minutus (Sayre) see **Colpites minuta**

Angyomphalus moniliferus (White) see **Colpites monilifera**

ANOMPHALUS Meek and Worthen 1867

Type species: *Anomphalus rotulus* Meek and Worthen (1866c), [1867] p. 268

Anomphalus Meek and Worthen (1866c) p. 268

Anomphalus? **discus** Girty

Anomphalus? **discus** Girty (1910a) p. 231

Miss., basal part Fayetteville Sh.: Fayetteville quad., Arkansas

Anomphalus meeki Bradley 1872 see **Dawsonella meeki**

Anomphalus rotuliformis Cumings

Anomphalus rotuliformis Cumings (1906) p. 1364, pl. 24, figs. 12, 12a

Miss., Salem Ls.: Spergen Hill, Ind.

Anomphalus rotulus Meek and Worthen

Anomphalus rotulus Meek and Worthen (1866c) [1867] p. 268

Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.

Meek and Worthen (1873) p. 597, pl. 29, fig. 10

Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

Meek (1874b) p. 583

Keyes (1888) [1889] p. 241.

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 154

Carb., "L. Coal Measures": Clinton, Mo.

Knight (1933a) p. 42

Knight (1941) p. 37, pl. 63, figs. 3a, b

Penn., Carbondale Fm., St. David's Ls.: Hodge's Creek, Macoupin County, Ill.

Knight (1944) p. 473, pl. 193, figs. 25, 26

Penn.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. 1244, fig. 156, no. 4

M. Penn.: Illinois

Anomphalus studiosus Yochelson 1956

Anomphalus studiosus Yochelson (1956b) p. 254, pl. 22, figs. 25-28, table 32

Perm., Leonard Ser. and Word Fm.: Hess Canyon quad., Texas

Anomphalus umbilicatus Knight

- Anomphalus umbilicatus* Knight (1933a) p. 53, pl. 11, figs. 6a-j; pl. 12, fig. 1
 Penn., Fort Scott and Pawnee Lss.: St. Louis County, Mo.
 Knight (1944) p. 473, pl. 193, figs. 27-29
 Penn.: Mississippi Valley
 Hoare (1961) p. 181, pl. 22, figs. 4-8
 M. Penn., Seville Ls.: Vernon County, Mo.

Anomphalus vanesceus Yochelson

- Anomphalus vanesceus* Yochelson (1956b) p. 253, pl. 22, figs. 19-22, table 31
 Perm., Hueco Ls.: Orogrande quad., New Mexico

Anomphalus verruculiferus (White)

- Rotella verruculifera* White (1881) pl. 4, figs. 7a-d
 Carb.: Near Taos, N. Mex.
Anomphalus verruculiferus Yochelson (1956b) p. 252, pl. 22, figs. 13-18, table 30
 Carb., M. Penn(?): Near Taos, N. Mex.

Anomphalus species of authors

- Anomphalus* sp. Yochelson (1956b) p. 254, pl. 22, figs. 23, 24
 Perm, Wolfcamp Ser.: Hess Canyon quad., Texas
 Yochelson and Dutro (1960) p. 142, pl. 14, figs. 7-9
 U. Miss., Alapah Ls.: Chandler Lake quad., N. Alaska
Anomphalus? sp. Winters (1963) p. 41, pl. 6, figs. 1a, b
 Perm., Supai Fm.: E. Arizona

ANTHRACOPUPA Whitfield 1881

Type species: *Anthracopupa ohioensis* Whitfield (1881) p. 126

Anthracopupa Whitfield (1881) p. 126

Anthracopupa? *bigsbii* (Dawson)

- Pupa bigsbii* Dawson (1880) p. 410, figs. 5, 6
 Carb., "Coal Measures": South Joggins, Nova Scotia
Pupa bigsbyi White (1883) p. 456, pl. 2, figs. 9, 10
Dendropupa? *bigsbii* Henderson (1935) p. 149
 ?*Anthracopupa bigsbii* Yen (1949) p. 236

Anthracopupa ohioensis Whitfield

- Anthracopupa ohioensis*: Whitfield (1881) p. 126, figs. 1-4
 Carb., "Coal Measures": Near Marietta, Ohio
 White (1883) p. 456, pl. 3, figs. 5-8
 Whitfield (1891) p. 607, pl. 16, figs. 15-17
 Carb., "Coal Measures": Marietta, Ohio
 Whitfield (1895) p. 491, pl. 12, figs. 15-17
 Carb., "Coal Measures": Near Marietta, Ohio
 Knight (1941) p. 38, pl. 96, figs. 3a, b
 U. Carb.: Near Marietta, Ohio
 Yen (1949) p. 236
 Carb., "Coal Measures": Marietta, Ohio
 Knight, Batten and Yochelson (1960) p. 1318, fig. 211, no. 2
 L. Perm.: Ohio

Anthracopupa (?) dunkardana Stauffer and Schroyer

Anthracopupa (?) *dunkardana* Stauffer and Schroyer (1920) p. 144, pl. 18, figs. 12-16

Perm., ls. of Washington Fm.: Pleasant Grove, Ohio

Yen (1949) p. 236

Uncertain age: Pleasant Grove, Belmont County, Ohio

APACHELLA Winters 1956

Type species: *Apachella translirata* Winters (1956) p. 44

Apachella Winters (1956) p. 44

Apachella? arizonensis Winters

Apachella? arizonensis Winters (1963) p. 33, pl. 4, figs. 3a-4b

Perm., Supai Fm.: E. Arizona

Apachella franciscanus (H. Chronic)

Ananias franciscanus H. Chronic (1952) p. 114, pl. 2, figs. 5a-6

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Glabrocingulum (*Ananias*) *franciscanus* Sloan (1955) p. 277

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Apachella franciscanus Winters (1963) p. 32, pl. 3, figs. 4a-5c

Perm., Supai Fm.: Arizona

Apachella prodontia Winters

Apachella prodontia Winters (1963) p. 34, pl. 4, figs. 1a-2

Perm. Supai Fm.: Arizona

Apachella translirata Winters

Apachella translirata Winters (1956) p. 44

Perm., Supai Fm., Fort Apache Mbr.: Fort Apache Indian Reservation, Ariz.

Knight, Batten, and Yochelson (1960) p. I207, fig. 120, no. 3

M. Perm.: Arizona

Winters (1963) p. 30, pl. 3, figs. 1a-2; text fig. 5

Perm., Supai Fm.: Arizona

Apachella turbiniiformis Winters

Apachella turbiniiformis Winters (1963) p. 33, pl. 3, figs. 6a-8c

Perm., Supai Fm.: E. Arizona

ARAEONEMA Knight 1933

Type species: *Araeonema virgatum* Knight (1933a) p. 52

Araeonema Knight (1933a) p. 40

Araeonema virgatum Knight

Araeonema virgatum Knight (1933a) p. 52, pl. 9, figs. 3a-f; pl. 12, fig. 8

Penn., Labette Sh.: Stratmann, St. Louis County, Mo.

Knight (1941) p. 42, pl. 54, figs. 3a-c

Penn., top of Labette Sh.; Henrietta Fm. of former usage (=Marmaton Gr.):

Feefee Creek near Lackland Sta., St. Louis County, Mo.

Knight (1944) p. 471, pl. 192, figs. 32, 33

Penn., Des Moines Ser.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. I239, fig. 152, no. 8

M. Penn.: Missouri

Araconema species of authors

Araconema? sp. Knight (1933a) p. 52, pl. 9, fig. 4

Penn., Labette Sh.: Stratmann, St. Louis County, Mo.

Araconema sp. Mudge and Yochelson (1962) [1963] p. 94, pl. 17, fig. 7

Penn., Zeandale Ls., Tarkio Ls. Mbr.: Pottawatomie County, Kans.

AURIPTYGMA Perner 1903

Type species: *Auriptygma fortior* Perner (1903) expl. of pl. 61

(S.D. Cossmann (1909b) p. 106)

Auriptygma Perner (1903) expl. of pl. 61

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic, late Paleozoic species originally assigned to this taxon were reassigned to *Leptoptygma* by Knight (1936) p. 523.]

Auriptygma primitia Elias 1958 see **Leptoptygma primitia**

Auriptygma simplex Knight 1931 see **Leptoptygma simplex**

Auriptygma subtilistriatum Knight 1931 see **Leptoptygma subtilistriatum**

Auriptygma virgatum Knight 1931 see **Leptoptygma virgatum**

Auriptygma species of authors see **Leptoptygma** species of authors

BABYLONITES Yochelson 1956

Type species: *Babylonites carinatus* Yochelson (1956b) p. 238

Babylonites Yochelson (1956b) p. 202

Babylonites acutus Yochelson

Babylonites acutus Yochelson (1956b) p. 239, pl. 19, figs. 10-17, table 20

Perm., Word Fm.: Hess Canyon quad., Texas; Monos Fm.: Las Delicias, Coahuila, Mexico

Babylonites carinatus Yochelson

Babylonites carinatus Yochelson (1956b) p. 238, pl. 19, figs. 1-9, table 19

Perm., Word Fm.: Hess Canyon quad., Texas; Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

Knight, Batten, and Yochelson (1960) p. 1196, fig. 111, no. 5

M. Perm.: Texas

Babylonites conicus Yochelson

Babylonites conicus Yochelson (1956b) p. 240, pl. 19, figs. 18-23, table 21

Perm., Word Fm.: Hess Canyon quad., Texas; Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

Babylonites conoideus (Girty)

Omphalotrochus conoideus Girty (1908b) p. 299

Perm., phosphate beds: Montpelier, Idaho

Girty (1910c) [1911] p. 50, pl. 5, figs. 1-3

Perm., phosphate beds of Park City Fm.: Montpelier and Preuss Range, Idaho

Girty (1927) pl. 28, figs. 42-45

Perm., Phosphoria Fm.: Montpelier, Idaho

Omphalotrochus ferrieri Knight (1944) p. 467, pl. 191, figs. 5-7

Perm., Phosphoria Fm.: NW. United States

Babylonites conoideus Yochelson (1956b) p. 202

Perm., Phosphoria Fm.: NW. United States

Babylonites ferrieri (Girty)

- Omphalotrochus ferrieri* Girty (1908b) p. 297
 Perm., phosphate beds: Montpelier, Idaho
 Girty (1910c) [1911] p. 48, pl. 5, figs. 4-9; pl. 6, fig. 1
 Perm., phosphate beds of Park City Fm.: Montpelier, Idaho
Omphalotrochus ferrieri var. Girty (1910c) [1911] p. 49
 Perm., phosphate beds of Park City Fm.: Montpelier, Idaho
Omphalotrochus ferrieri Girty (1927) pl. 28, figs. 46-49
 Perm., Phosphoria Fm.: Montpelier, Idaho
Omphalotrochus ferrieri var. Girty (1927) pl. 28, fig. 50
 Perm., Phosphoria Fm.: Montpelier, Idaho
Babylonites ferrieri Yochelson (1956b) p. 203
 Perm., Phosphoria Fm.: NW. United States

Babylonites turritus Yochelson

- Babylonites turritus* Yochelson (1956b) p. 237, pl. 18, figs. 1-10, table 18
 Perm., Bone Spring Ls.: Apache Canyon, Van Horn quad., Texas; Leonard Ser.
 and Word Fm.: Hess Canyon quad., Texas

Babylonites? species of authors

- Omphalotrochus* (?) sp. A. Knight (1953) p. 88, pl. 24F, fig. 26, 27
 Perm., Monos Fm.: El Antimonio, W. Sonora, Mexico
 [Assigned here by Yochelson (1956b) p. 202]

BAYLEA Koninck 1883

- Type species: *Trochus yvannii* Leveillé (1835) p. 39
Baylea Koninck (1883) p. 68
Yvannia Fischer (1885) p. 851
Baylea Knight (1944) p. 453
Baylea [*Trepospira*] Elias (1958) p. 5
Baylea Knight, Batten, and Yochelson (1960) p. 1202

Baylea adamsi (Worthen)

- Pleurotomaria adamsi* Worthen (1884) p. 5
 Carb., "Coal Measures": Peoria County, Ill.
 Worthen (1890) p. 137, pl. 23, figs. 5, 5a
 Carb., "Coal Measures": Peoria County, Ill.
Yvania adamsi J. Weller (1929a) p. 31, pl. 2, figs. 1-3b; pl. 3, fig. 4
 Penn., Lonsdale Ls.: Peoria County and other places, Illinois

Baylea? alamillana (Girty)

- Worthenia alamillana* Girty (1909c) p. 98, pl. 11, fig. 5
 Perm., Yeso Fm.: Alamillo, N. Mex.
Yvania? alamillana J. Weller (1929a) p. 12
 U. Penn.: New Mexico

Baylea? arenaria (Girty)

- Pleurotomaria? arenaria* Girty (1908a) [1909] p. 473, pl. 23, fig. 26
 Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.

- Pleurotomaria arenaria* Morgan (1924) pl. 49, fig. 17
 Penn., Vanoss Fm.: Stonewall quad., Oklahoma
Yvania? arenaria J. Weller (1929a) p. 12
 Perm.: Texas; Oklahoma

Baylea? arenaria monilifera Girty

- Pleurotomaria? arenaria* var. *monilifera* Girty (1908a) [1909] p. 474
 Perm., basal black Ls.: Guadalupe Mts., Tex.

Baylea capertoni (Beede)

- Pleurotomaria capertoni* Beede (1907) p. 163, pl. 8, figs. 9-9c
 Perm., Quartermaster Fm.: Dozier, Tex.; Whitehorse Ss.: Whitehorse Spring, Okla.
Pleurotomaria agnostica Beede (1907) p. 164, pl. 8, figs. 13a, b
 Perm., Whitehorse Ss.: Whitehorse Spring, Okla.
Yvania? agnostica J. Weller (1929a) p. 12
 Perm.: Oklahoma
Baylea capertoni Knight (1940) p. 302-305, pl. 4, figs. 3a-i
 Perm., Whitehorse Ss.: NW. Texas; W. Oklahoma
 Knight (1944) p. 453, pl. 184, figs. 10-12
 Perm., Guadalupe Ser.: SW. United States

Baylea coheni Yochelson

- Baylea* aff. *B. yvanii* Knight (1958) p. 74, pl. 8, b, figs. 3-6
 Miss.: Sonora, Mexico
Baylea coheni Yochelson (1962) p. 78, pl. 17, figs. 6, 7
 Miss., Redwall Ls.: Jerome Hill section, Arizona

Baylea? delawarensis (Girty)

- Pleurotomaria? delawarensis* Girty (1908a) [1909] p. 475, pl. 23, figs. 28-30
 Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.
Yvania? delawarensis J. Weller (1929a) p. 12
 Perm.: Texas

Baylea giffordi (Worthen)

- Pleurotomaria giffordi* Worthen (1884) p. 5
 Carb., "Coal Measures": Peoria County, Ill.
 Worthen (1890) p. 135, pl. 23, figs. 8, 8a
 Carb., "Coal Measures": Peoria County, Ill.
Yvania giffordi J. Weller (1929a) p. 36, pl. 2, figs. 6-8b; pl. 3, figs. 5, 11
 Penn., Lonsdale Ls.: Peoria County, Ill.
Baylea cf. *B. giffordi* Sturgeon (1964a) p. 204, pl. 33, figs. 11, 12
 Penn., Allegheny Fm., Vanport Ls. Mbr.: Mahoning County, Ohio

Baylea gurleyi (Meek)

- Pleurotomaria gurleyi* Meek (1871d) [1872] p. 177
 Carb., "Coal Measures": Danville, Ill.
 Meek and Worthen (1873) pl. 30, figs. 6a, b
 Carb., "Coal Measures": No locality cited
 Meek (1874b) p. 584
Yvania gurleyi J. Weller (1929a) p. 20, pl. 3, figs. 1a-d, 7
 Penn., black sh. overlying Danville coal: Near Danville, Ill.

Baylea inclinata (J. Weller)

Yvania inclinata J. Weller (1929a) p. 15, pl. 1, fig. 1; pl. 2, fig. 9; pl. 3, figs. 2-3b, 6
Penn., ls. underlying Colchester (No. 2) coal: W. Illinois

Baylea [Trepospira] inflata Elias 1958 (pl. 1, figs. 8, 9) see **Glabrocingulum**
(**Glabrocingulum**) **inflatum**

Baylea knighti (J. Weller)

Yvania knighti J. Weller (1929a) p. 25, pl. 1, figs. 5-8; pl. 3, fig. 9
Penn., Piasa Ls.: St. Louis County, Mo.

Baylea knighti Knight (1944) p. 453, pl. 184, figs. 6, 7
Penn., u. part Des Moines Ser.: Mississippi Valley

Baylea perhumerosa (Meek) see **Hypselenotoma perhumerosa**

Baylea pusilla (J. Weller)

Yvania pusilla J. Weller (1929a) p. 17, pl. 1, figs. 4a-c
Penn., dark ls.: Warren County, Ind.

Baylea salinensis (J. Weller)

Yvania salinensis J. Weller (1929a) p. 27, pl. 1, figs. 9-10c
Penn., ls. caprock of Herrin (No. 6) coal: Ledford, Ill.

Baylea [Trepospira] stellaeformis (Hyde) see **Glabrocingulum** (**Glabrocingulum**)
stellaeformis

Baylea subconstricta (Meek and Worthen)

Pleurotomaria subconstricta Meek and Worthen (1860) [1861] p. 458

Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

Meek and Worthen (1866a) p. 351, pl. 28, figs. 6a-c

Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.

Yvania subconstricta J. Weller (1929a) p. 32, pl. 2, figs. 4a-5c; pl. 3, fig. 10

Penn., ls. underlying Bellville (No. 6) coal: Macoupin and Greene Counties, Ill.;

Penn., ls. cap rock of Herrin (No. 6) coal: Saline and Gallatin Counties, Ill.;

Piasa Ls.: St. Louis County, Mo.; Lonsdale Ls.: Peoria County, Ill.; Drum Ls.:

Kansas City, Mo.

Pleurotomaria subconstricta Sayre (1930) [1931] p. 31, pl. 14, figs. 4, 4a

Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.

Baylea subconstricta Knight (1944) p. 453, pl. 184, figs. 1-5

Penn., u. part Des Moines Ser.: Mississippi Valley

Baylea supercrenata (J. Weller)

Yvania supercrenata J. Weller (1929a) p. 22, pl. 1, figs. 2a-3; pl. 3, fig. 8

Penn., ls. bed closely underlying Colchester (No. 2) coal: W. Illinois

Baylea texana (Girty)

Pleurotomaria texana Girty (1908a) [1909] p. 471, pl. 29, fig. 17

Perm., Delaware Mountain Gr.: Delaware Mts., Tex.

Baylea texana C. Branson (1948) p. 733

Perm., Delaware Mountain Gr.: Tex.

Baylea aff. B. yvanii (Leveillé) Knight 1958 see **Baylea coheni** Yochelson

Baylea species of authors

Baylea sp. Knight (1958) p. 74, pl. 8, C, figs. 15, 16

Miss.: Sonora, Mexico

BAYLEA [TREPOSPIRA] Ulrich and Scofield

[The name in brackets was used by Elias (1958) p. 7 to indicate transition between the two genera. Knight, Batten, and Yochelson (1960) p. 1201, 1202, reinstated each as a full genus.]

Baylea [Trepospira] inflata Elias 1958 see **Glabrocingulum (Glabrocingulum) inflatum**

Baylea [Trepospira] stellaeformis (Hyde) see **Glabrocingulum (Glabrocingulum) stellaeformis**

BELLEROPHON Montfort 1808

Type species: *Bellerophon vasulites* Montfort (1808) p. 51

Bellerophon Montfort (1808) p. 50

[Yochelson (1960) p. 238 divided this taxon into three subgenera, two of which range into the late Paleozoic.]

Bellerophon alternodosus Whitfield 1882 see **Bellerophon (Bellerophon) alternodosus**

Bellerophon barquensis Winchell 1862 see **Bellerophon (Bellerophon) barquensis**

Bellerophon bellus Keyes 1894 see **Knightites (Retispira) textiliformis** (Gurley)

Bellerophon bilabiatus White and Whitfield 1862 see **Bellerophon (Bellerophon) bilabiatus**

Bellerophon blairi Miller and Gurley 1896 see **Bellerophon (Bellerophon) blairi**

Bellerophon blaneyanus McChesney 1859 see **Euphemites blaneyanus**

Bellerophon branneri S. Weller 1897 see **Patellostium branneri**

Bellerophon cancellatus Hall 1856 [not Hall 1847] see **Knightites (Retispira) textilis** (Hall)

Bellerophon carbonarius Cox 1857 see **Euphemites carbonarius**

Bellerophon carbonarius Cox, Meek 1872 see **Euphemites vittatus** (McChesney)

Bellerophon (Euphemus) carbonarius (Cox) see **Euphemites carbonarius**

Bellerophon carbonarius var. **subpapillosus** White 1876 see **Euphemitopsis subpapillosus**

Bellerophon chesterensis Weller 1920 see **Bellerophon (Bellerophon) chesterensis**

Bellerophon crassus Meek and Worthen 1860 see **Bellerophon (Bellerophon) crassus**

Bellerophon crassus Meek and Worthen, White 1891 see **Bellerophon (Bellerophon) species of authors**

Bellerophon crassus Meek and Worthen, Girty 1909 see **Bellerophon (Bellerophon) deflectus** H. Chronic

Bellerophon crassus var. **nicomptus** Gurley 1884 see **Bellerophon (Bellerophon) crassus inicomptus**

Bellerophon crassus var. **wewokanus** Girty 1911 see **Bellerophon (Bellerophon) crassus wewokanus**

Bellerophon cyrtolites Hall 1859 see **Tropidodiscus cyrtolites**

Bellerophon discussatus Herrick 1887 [not Fleming 1828] see **Knightites (Retispira) nodocostata** (Gurley)

Bellerophon deflectus H. Chronic 1952 see **Bellerophon (Bellerophon) deflectus**

Bellerophon depauperatus C. Branson 1930 see **Bellerophon (Bellerophon) depauperatus**

Bellerophon ellipticus McChesney 1859 see **Patellilabia ellipticus**

Bellerophon galericulatus Winchell 1862 see **Euphemites galericulatus**

Bellerophon gibsoni White 1882 see **Bellerophon (Bellerophon) gibsoni**

Bellerophon giganteus Worthen 1884 see **Bellerophon (Bellerophon) giganteus**

Bellerophon globosus Stevens 1858 see **Bellerophon (Bellerophon) globosus**

- Bellerophon graphicus** Moore 1941 see **Bellerophon (Bellerophon) graphicus**
Bellerophon harrodi Gurley 1883 see **Bellerophon (Pharkidonotus) percarinatus** (Conrad)
Bellerophon helena Hall 1879 see **Bellerophon (Bellerophon) helena**
Bellerophon hiuleus Owen 1852 see **Bellerophon (Bellerophon) hiuleus**
Bellerophon incomptus Gurley 1884 see **Bellerophon (Bellerophon) crassus incomptus**
Bellerophon inspeciosus White 1881 see **Euphemites inspeciosus**
Bellerophon interlineatus Geinitz 1866 see **Knightites (Cymatospira) montfortianus** (Norwood and Pratten)
Bellerophon jeffersonensis S. Weller 1906 see **Bellerophon (Bellerophon) jeffersonensis**
Bellerophon kansasensis Shumard 1858 see **Knightites (Retispira) kansasensis**
Bellerophon lineolatus Hall 1859 see **Bellerophon (Bellerophon) lineolatus**
Bellerophon majusculus Walcott 1884 see **Bellerophon (Bellerophon) majusculus**
Bellerophon majusculus Walcott, Girty 1909 see **Bellerophon (Bellerophon) species of authors**
Bellerophon mansfieldianus Girty 1927 see **Bellerophon (Bellerophon) mansfieldianus**
Bellerophon marcouianus Geinitz 1866 see **Knightites (Retispira) marcouianus**
Bellerophon marcouianus Geinitz, Keyes 1894 see **Patellilabia tentoriolum** Knight
Bellerophon meekianus Swallow 1858 see **Knightites (Retispira) meekianus**
Bellerophon (Bucanopsis) Meekianus (Swallow) see **Knightites (Retispira) meekianus**
Bellerophon michiganensis Winchell 1862 see **Bellerophon (Bellerophon) michiganensis**
Bellerophon missouriensis Swallow 1863 see **Bellerophon (Bellerophon) missouriensis**
Bellerophon monroensis S. Weller 1916 see **Bellerophon (Bellerophon) monroensis**
Bellerophon montfortianus Norwood and Pratten 1855 see **Knightites (Cymatospira) montfortianus**
Bellerophon nautiloides Winchell 1862 see **Euphemites nautiloides**
Bellerophon newberryi Herrick 1889 see **Bellerophon (Bellerophon) helena** (Hall)
Bellerophon nodocarinatus Hall 1858 see **Euphemites nodocarinatus**
Bellerophon nodocostatus Gurley 1884 see **Knightites (Retispira) nodocostatus**
Bellerophon Ourayensis Gurley 1884 see **Patellostium ourayensis**
Bellerophon panneus White 1862 see **Bellerophon (Bellerophon) panneus**
Bellerophon percarinatus Conrad 1842 see **Bellerophon (Pharkidonotus) percarinatus**
Bellerophon percarinatus Conrad, Norwood and Pratten 1855 see **Bellerophon (Pharkidonotus) tricarinatus** Shumard
Bellerophon percarinatus Conrad, Meek 1872 see **Bellerophon (Pharkidonotus) tricarinatus** Shumard
Bellerophon perelegans White and Whitfield 1862 see **Bucanopsis perelegans**
Bellerophon perlatus Conrad 1842 see **Knightites (Retispira) perlatus**
Bellerophon pitkinensis Snider 1915 see **Bellerophon (Bellerophon) pitkinensis**
Bellerophon rugopleurus Gurley 1884 see **Knightites (Retispira) nodocostatus** (Gurley)
Bellerophon rugosiusculus Winchell 1862 see **Bellerophon (Bellerophon) rugosiusculus**

- Bellerophon rugosiusculus** var. **taeniatus** Winchell 1862 see **Bellerophon** (**Bellerophon**) **rugosiusculus taeniatus**
- Bellerophon scissile** Conrad 1844 see **Bellerophon** (**Bellerophon**) **scissile**
- Bellerophon scotti** E. Branson 1938 see **Bellerophon** (**Bellerophon**) **scotti**
- Bellerophon scriptiferus** White 1862 see **Patellostium scriptiferum**
- Bellerophon sedaliensis** Miller and Gurley 1896 see **Bellerophon** (**Bellerophon**) **sedaliensis**
- Bellerophon singularis** Moore 1941 see **Bellerophon** (**Bellerophon**) **singularis**
- Bellerophon stamineus** Conrad 1842 see **Bellerophon** (**Bellerophon**) **stamineus**
- Bellerophon stevensianus** McChesney 1859 see **Bellerophon** (**Bellerophon**) **stevensianus**
- Bellerophon stevensianus** McChesney, Girty 1899 see **Knightites** (**Retispira**) **nodocostata** (Gurley)
- Bellerophon subcordiformis** Herrick 1887 see **Knightites** (**Retispira**) **subcordiformis**
- Bellerophon sublaevis** Hall 1856 see **Bellerophon** (**Bellerophon**) **sublaevis**
- Bellerophon sublaevis** Hall, Clappole 1886 see **Bellerophon** (**Bellerophon**) **crassus** Meek and Worthen
- Bellerophon subpapillosus** White 1879 see **Euphemitopsis subpapillosus**
- Bellerophon tenuilineata** Gurley 1884 see **Knightites** (**Retispira**) **tenuilineata**
- Bellerophon textiliformis** Gurley 1883 see **Knightites** (**Retispira**) **textiliformis**
- Bellerophon textilis** Hall 1877 see **Knightites** (**Retispira**) **textilis**
- Bellerophon tricarinatus** Shumard 1858 see **Bellerophon** (**Pharkidonotus**) **tricarinatus**
- Bellerophon ulrichi** S. Weller 1906 see **Bellerophon** (**Bellerophon**) **ulrichi**
- Bellerophon urii** Norwood and Pratten 1855 see **Euphemites vittatus** (McChesney)
- Bellerophon vinculatus** White and Whitfield 1862 see **Bellerophon** (**Bellerophon**) **vinculatus**
- Bellerophon vittatus** McChesney 1859 see **Euphemites vittatus**
- Bellerophon wabaunseensis** Tasch 1953 see **Bellerophon** (**Bellerophon**) **wabaunseensis**
- Bellerophon whittleseyi** Winchell 1865 see **Bellerophon** (**Bellerophon**) **whittleseyi**
- Bellerophon** species of authors see **Bellerophon** (**Bellerophon**) species of authors
- Bucanopsis** or **Bellerophon** E. Branson and Greger 1918 see **Euphemites sacajawensis** C. Branson

BELLEROPHON (BELLEROPHON) Montfort 1808

Type species: *Bellerophon vasulites* Montfort (1808) p. 51

Bellerophon Montfort (1808) p. 50

Bellerophon (*Bellerophon*) Yochelson (1960) p. 238

Bellerophon (Bellerophon) alternodosus Whitfield

Bellerophon alternodosus Whitfield (1882b) p. 225

Miss., Maxville Ls.: Newtonville, Ohio

Whitfield (1891) p. 593, pl. 14, figs. 17-19

Miss., Maxville Ls.: Newtonville, Ohio

Whitfield (1895) p. 479, pl. 10, figs. 17-19

Miss., Maxville Ls.: Newtonville, Ohio

Morse (1911) p. 403, figs. 28a-c

Miss., Maxville Ls.: White Cottage, Ohio

Bellerophon (Bellerophon) barquensis Winchell*Bellerophon barquensis* Winchell (1862) [1863] p. 427

Miss., Marshall Fm.: Point aux Barques, Mich.

Lane and Copper (1900) p. 276

Miss., Point aux Barques zone: Point aux Barques, Mich.

Bellerophon (Bellerophon) bilabiatius White and Whitfield*Bellerophon bilabiatius* White and Whitfield (1862) p. 304

"Chemung Gr.": Burlington, Iowa

Keyes (1889e) [1890] p. 297

Miss., Kinderhook Ser.: Burlington, Iowa

Keyes (1894b) [1895] p. 147, pl. 50, fig. 3

Miss., Kinderhook Ser.: Chouteau Springs, Mo.; Burlington Ls.: Louisiana, Mo.

S. Weller (1900) p. 112, pl. 6, figs. 9, 10

Chonopectus ss.: Burlington, Iowa

S. Weller (1905) p. 629

Miss., Kinderhook Ser., "English River Grit": Maples Mill, on English River, near Wellman, Washington County, Iowa

Bellerophon (Bellerophon) blairi Miller and Gurley*Bellerophon blairi* Miller and Gurley (1896b) p. 21, pl. 3, figs. 7, 8

Miss., Chouteau Ls.: Sedalia, Mo.

E. Branson (1938a) p. 103, pl. 14, figs. 2-4

L. Miss.: Missouri

Bellerophon (Bellerophon) chesterensis S. Weller*Bellerophon chesterensis* S. Weller (1920) p. 365, pl. 9, figs. 1-6

Miss., basal part Okaw Fm.: Camp Creek, Randolph County, Ill.; basal part Golconda Fm., 3½ miles SE. of Vienna, Johnson County, Ill.

J. Weller (1931) pl. 42, figs. 3a, b

Miss., Paint Creek and Golconda Fms.: Kentucky

Bellerophon (Bellerophon) complanatus Yochelson*Bellerophon (Bellerophon) complanatus* Yochelson (1960) p. 263, pl. 50, figs. 13-16

Perm., Admiral Fm., Wildcat Creek Sh. Mbr.: Coleman County, Tex.

Bellerophon (Bellerophon) crassus Meek and Worthen*Bellerophon crassus* Meek and Worthen (1860) [1861] p. 458

Carb., "L. Coal Measures": Pittsburg, St. Clair County, Ill.

Meek and Worthen (1866a) p. 385, pl. 31, figs. 16a, b

Carb., "L. Coal Measures": Pittsburg, St. Clair County, Ill.

White (1877) p. 157, pl. 12, fig. 1a

Carb.: Camp Cottonwood, near Spring Mtn., Nev.

White (1884b) p. 157, pl. 33, figs. 1, 2

Carb., "U. Coal Measures": Sullivan and Posey Counties, Ind.

Bellerophon crassus (var.)? Heilprin (1886) p. 457

Penn., Mill Creek Ls.: Wilkes-Barre, Pa.

Heilprin (1886) p. 277

Penn., Mill Creek Ls.: Wilkes-Barre, Pa.

Bellerophon sublaevis Claypole (1886) p. 246

Carb., "L. Coal Measures": Wilkes-Barre, Pa.

- Bellerophon* (cf. *crassus*) Herrick (1887a) p. 20, pl. 5, fig. 6
 Carb., "Coal Measures": Flint Ridge, Ohio
- Bellerophon crassus* White (1891) p. 26
 Perm.: Military Crossing, Baylor County, Tex.
 Keyes (1894b) [1895] p. 151, pl. 50, figs. 1a, b
 Carb., "U. Coal Measures": Kansas City and Lexington, Mo.
 Smith (1896) p. 39
 Carb., "L. Coal Measures": Conway County, Ark.
 Ulrich (1897) p. 853
 Carb., "Coal Measures": No locality cited
 Girty (1899a) p. 592
 Girty (1903) p. 468
 Penn., Hermosa and Rico Fms.: San Juan region, Colorado; Weber Ss.; Robinson
 Ls. Mbr. of Minturn Fm.: Leadville district, Colorado; Penn. and Perm.,
 Maroon Fm.: Crested Butte district, Colorado
 Price (1921) p. 785
 Penn., Kanawha Fm., Kanawha black flint: McCholas County, W. Va.
 Plummer and Moore (1921) [1922] pl. 19, fig. 27
 Penn., Graford Fm., Brownwood Sh. Mbr.: S. of Brooksmith, Tex.
 Morningstar (1922) p. 247
 Penn., Harrison "ore": Jackson County; Sharon "ore": Scioto County; Pottsville
 Fm., l. part Mercer Mbr.: Several counties; McArthur Ls.: Jackson and Vinton
 Counties, Ohio
 Morgan (1924) pl. 49, fig. 2
 Penn., McAlester Fm.: Stonewall quad., Oklahoma
 Morse (1931) p. 322, pl. 53, figs. 4-10
 Penn., Kendrick Sh., Magoffin Beds: Kentucky
 Knight (1944) p. 443, pl. 178, figs. 21, 22
 Penn.: Widespread in North America
 Hoare (1961) p. 138, pl. 19, figs. 1, 2
 M. Penn., Tiawah Ls.: Henry County, Mo.

***Bellerophon* (*Bellerophon*) *crassus incomptus* Gurley**

- Bellerophon incomptus* Gurley (1884) p. 9
 Carb., "Coal Measures": Danville, Ill.
 Girty (1899b) p. 592
Bellerophon crassus var. *incomptus* J. Weller (1929b) p. 317, pl. 1, figs. 9a, b

***Bellerophon* (*Bellerophon*) *crassus wewokanus* Girty**

- Bellerophon crassus* var. *wewokanus* Girty (1912a) p. 138
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
 Price (1914b) p. 532
 Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge and Fellowsville, W. Va.;
 Brush Creek Ls. Mbr.: Hatton, Md.
 Price (1915) p. 611
 Penn., Eagle Ls.: Mingo County, W. Va.
 Girty (1915a) p. 164, pl. 19, figs. 1-3b
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
 Price (1916) p. 727
 Penn., Kanawha Fm., Seth ls. unit: Boone County, W. Va.

- Bellerophon crassus* var. *wewokanus* Mather (1915) p. 232, pl. 16, figs. 3, 3a
 Penn., Morrow Ser.: Fayetteville, Ark.
 Morgan (1924) pl. 49, fig. 3
 Penn., Holdenville Sh.: Stonewall quad., Oklahoma

***Bellerophon* (*Bellerophon*) *deflectus* H. Chronic**

- Bellerophon crassus* Girty (1908a) [1909] p. 479, pl. 29, fig. 16
 Perm., Delaware Mountain Gr.: Delaware Mts., Tex.
Bellerophon deflectus H. Chronic (1952) p. 111, pl. 1, figs. 2a-5b
 Perm., Kaibab Ls.: Walnut Canyon, Ariz.
Bellerophon (*Bellerophon*) *deflectus* Yochelson (1960) p. 263, pl. 51, figs. 10, 14-17, 19-25
 Perm., Bone Spring Ls.: Sierra Diablo area, Texas; Word Fm.; Hess Canyon quad., Texas

***Bellerophon* (*Bellerophon*) *depauperatus* C. Branson**

- Bellerophon depauperatus* C. Branson (1930) p. 53, pl. 15, figs. 1, 2
 Perm., Phosphoria Fm., Pustula mbr.: Wind River Mts., Wyo.
Bellerophon (*Bellerophon*) *depauperatus* Yochelson (1960) p. 239

***Bellerophon* (*Bellerophon*) *gibsoni* White**

- Bellerophon gibsoni* White (1882) p. 360, pl. 41, figs. 4-6
 Miss., St. Louis Ls.: Greencastle, Ind.
 Ulrich (1897) p. 853
 Cumings (1906) p. 1361, pl. 24, figs. 5-6b
 Miss., Salem Ls.: Ellettsville, Bedford, and Bloomington, Ind.
 Knight (1947) p. 266, pl. 42, figs. 3a-c
 Miss., St. Louis Ls.: Greencastle Junction, Ind.

***Bellerophon* (*Bellerophon*) *giganteus* Worthen**

- Bellerophon giganteus* Worthen (1884) p. 8
 Carb., "L. Coal Measures": Monroe County, Ill.
 Worthen (1890) p. 143, pl. 25, figs. 5, 5a
 Carb., "L. Coal Measures": Monroe County, Ill.
 Ulrich (1897) p. 853
 Girty (1899a) p. 592
Bellerophon giganteus? Girty (1903) p. 469
 Penn., Hermosa Fm.: San Juan region, Colorado
Bellerophon giganteus Woodruff (1960) p. 282
 Carb.: Weeping Water, Nebr.

***Bellerophon* (*Bellerophon*) *globosus* Stevens**

- Bellerophon globosa* Stevens (1858) p. 258
 Carb., "Coal Measures": Lasalle, Ill.
 Girty (1899a) p. 592

***Bellerophon* (*Bellerophon*) *graphicus* Moore**

- Bellerophon graphicus* Moore (1941) p. 127-128, pl. 1, figs. 2a-c, 3a-c, 4a-c; text fig. 6a
 Penn., Deer Creek Ls., Ozawkie Ls. Mbr.: W. of Lawrence, Kans.
Bellerophon cf. *B. graphicus* Mudge and Yochelson (1962) [1963] p. 92, pl. 16, fig. 21
 Penn., Zeandale Ls., Wamego Sh. Mbr.: Greenwood County, Kans.

Bellerophon (Bellerophon) helena Hall

Bellerophon helena Hall (1879) p. 114, pl. 24, fig. 11

Dev., Hamilton Gr.: Cayuga and Canandaigua Lakes, N.Y.

Bellerophon helena? Herrick (1888c) pl. 9, fig. 11

Bedord Sh.: Central College, Ohio

Bellerophon newberryi Herrick (1889) pl. 4, fig. 11

Bedford Sh.: Ohio

Bellerophon helena Herrick (1893) [1895] pl. 20, fig. 11

Bellerophon (Bellerophon) hilli Yochelson

Bellerophon (Bellerophon) hilli Yochelson (1960) p. 267, pl. 53, figs. 1-9, table 18

Perm., Bone Spring Ls.: Baylor Hills, W. of Hwy 54, Tex.; Leonard Ser.: NE. of Marathon, Hess Canyon quad., Texas; Word Fm.: Hess Canyon quad., Texas; Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

Bellerophon (Bellerophon) hiuleus Owen

Bellerophon hiuleus Owen (1852) table 5, fig. 8

L. Carb., ls.: Keokuk rapids, Mississippi River

Bellerophon (Bellerophon) huecoensis Yochelson

Bellerophon (Bellerophon) huecoensis Yochelson (1960) p. 259, pl. 52, figs. 9-19, 21, table 12

Perm., Colina Ls.: Cochise County, Ariz.; Wolfcamp Ser.: Glass Mts., Tex.; Hueco Ls.: Otero County, N. Mex.

Bellerophon (Bellerophon) jeffersonensis S. Weller

Bellerophon jeffersonensis S. Weller (1906) p. 457, pl. 7, fig. 24

Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.

Hyde (1953) p. 321

Miss., Logan Fm., Allensville Mbr.: Colfax and Fairfield Counties, Ohio

Bellerophon (Bellerophon) kingorum Yochelson

Bellerophon (Bellerophon) kingorum Yochelson (1960) p. 266, pl. 50, figs 1-9, 11, 12, table 17

Perm., Word Fm.: Hess Canyon quad., Texas

Bellerophon (Bellerophon) lineatus Yochelson

Bellerophon (Bellerophon) lineatus Yochelson (1960) p. 260, pl. 52, figs. 20, 22-26, table 13

Perm., Belle Plains and Clyde Fms.: N. central Texas; Lueders Ls.: N. Texas

Bellerophon (Bellerophon) lineolatus Hall

Bellerophon lineolatus Hall (1859b) [1860] p. 107

Miss., Goniatile ls.: Rockford, Ind.

Bellerophon (Bellerophon) majusculus Walcott

Bellerophon majusculus Walcott (1884) p. 256, pl. 23, figs. 1, 1a; pl. 24, fig. 6

L. Carb.: Eureka district, Nevada

Clifton (1942) p. 694, pl. 10, fig. 35

Perm., Leonard Ser., Blaine Fm., Acme Mbr.: Fisher County, Tex.; Dog Creek Sh., Guthrie Mbr.: Stonewall County, Tex.

Bellerophon majusculus Yochelson (1960) p. 239

Bellerophon (Bellerophon) mansfieldianus Girty

Bellerophon mansfieldianus Girty (1927) p. 413, pl. 22, figs. 40, 41
Miss., Madison Ls.: Slug Creek quad., Idaho

Bellerophon (Bellerophon) michiganensis Winchell

Bellerophon michiganensis Winchell (1862) [1863] p. 427
Miss., Marshall Fm.: Battle Creek and near Grandville, Mich.

Bellerophon (Bellerophon) missouriensis Swallow

Bellerophon missouriensis Swallow (1863) p. 100
Miss., Archimedes ls.: Chester, Ill.

Bellerophon (Bellerophon) monroensis S. Weller

Bellerophon monroensis S. Weller (1916) p. 257, pl. 19, figs. 7, 8
Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Bellerophon (Bellerophon) oteroensis Yochelson

Bellerophon (Bellerophon) oteroensis Yochelson (1960) p. 260, pl. 53, figs. 10-12
Perm., Hueco Ls.: Otero County, N. Mex.

Bellerophon (Bellerophon) panneus White

Bellerophon panneus White (1862) p. 21
"Chemung Gr.": Burlington, Iowa
Keyes (1889c) [1890] p. 297
Miss., Kinderhook Ser.: Burlington, Iowa
Keyes (1894b) [1895] p. 147, pl. 50, fig. 6
Miss., Kinderhook Ser.: Burlington, Iowa
Bellerophon panneus? S. Weller (1900) p. 113, pl. 6, figs. 7, 8
Chonopectus ss.: Burlington, Iowa
Bellerophon panneus S. Weller (1901) p. 203, pl. 20, figs. 17, 18
Miss., Kinderhook Ser., bed 7: Burlington, Iowa

Bellerophon (Bellerophon) parvicristus Yochelson

Bellerophon (Bellerophon) parvicristus Yochelson (1960) p. 261, pl. 51, figs. 1-9, 11-13, 18, table 14
Perm., Admiral Fm., Wildcat Creek Sh. Mbr.: Coleman County, Tex.; Clyde Fm., Talpa Ls. Mbr.: Runnels County, Tex.; Wolfcamp Ser., Hess Canyon quad., Texas; Hueco Ls.: W. of Van Horn quad., Texas; Colina (?) Ls.: Benson quad., Arizona

Bellerophon (Bellerophon) pitkinensis Snider

Bellerophon pitkinensis Snider (1915) p. 115, pl. 7, figs. 6, 7
Miss., Pitkin Ls.: Oklahoma
Easton (1942) pl. 10, fig. 15
Miss., Pitkin Ls.: Arkansas

Bellerophon (Bellerophon) planodorsatum Hoare

Bellerophon (Bellerophon) planodorsatum Hoare (1961), p. 139, pl. 19, figs. 3-5
M. Penn., Tiawah Ls.: Henry County, Mo.

Bellerophon (Bellerophon) plummeri Yochelson

Bellerophon (Bellerophon) plummeri Yochelson (1960) p. 265, pl. 52, figs. 1-8, table 16
Perm., Word Fm.: Hess Canyon quad., Texas

Bellerophon (Bellerophon) rugosiusculus Winchell

Bellerophon rugosiusculus Winchell (1862) [1863] p. 425
Miss., Marshall Fm.: Marshall, Mich.

Bellerophon (Bellerophon) rugosiusculus taeniatus Winchell

Bellerophon rugosiusculus var. *taeniatus* Winchell (1862) [1863] p. 425
Miss., Marshall Fm.: Moscow, Mich.

Bellerophon (Bellerophon) scissile Conrad

Bellerophon scissile Conrad (1844) p. 175
Miss., Ste. Genevieve Ls.: No locality cited

Bellerophon (Bellerophon) scotti E. Branson

Bellerophon scotti E. Branson (1938a) p. 41, pl. 24, figs. 12, 13
L. Miss.: Missouri

Bellerophon (Bellerophon) sedaliensis Miller and Gurley

Bellerophon sedaliensis Miller and Gurley (1896b) p. 21, pl. 3, figs. 9, 10
Miss., Chouteau Ls.: Near Sedalia, Mo.
E. Branson (1938a) p. 103, pl. 14, fig. 13
L. Miss.: Missouri
E. Branson (1938) p. 41, pl. 24, figs. 16
L. Miss.: Missouri

Bellerophon (Bellerophon) singularis Moore

Bellerophon singularis Moore (1941) p. 128-129, pl. 1, figs. 1a-c
Penn., Deer Creek Fm., Ozawkie Ls. Mbr.: W. of Lawrence, Kans.
Mudge and Yochelson (1962) [1963] p. 91, pl. 16, figs. 20, 22
Penn., Zeandale Ls.: Greenwood County, Kans.

Bellerophon (Bellerophon) stamineus Conrad

Bellerophon stamineus Conrad (1842) p. 269
Miss., Marshall Fm.: No locality cited

Bellerophon (Bellerophon) stevensianus McChesney

Bellerophon stevensianus McChesney (1859) p. 61
Carb., "Coal Measures": Springfield, Ill.
McChesney (1865) pl. 2, figs. 18a-c
McChesney (1868) p. 46, pl. 2, figs. 18a-c
Carb., "Coal Measures": Springfield, Ill.
Keyes (1894b) [1895] p. 152
Carb., "U. Coal Measures": Kansas City, Mo.
Girty (1899a) p. 592
Sayre (1930) [1931] p. 128, pl. 13, figs. 7, 7a
Penn., Drum Ls., oolitic mbr.: Turner, Muncie, and Cherryvale, Kans.

Bellerophon (Bellerophon) sublaevis Hall

Bellerophon sublaevis Hall (1856) p. 32

Miss., Warsaw Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.

Hall (1858) p. 666, pl. 23, figs. 15a-c

Miss., Warsaw Ls.: Above Alton, Ill.; Spergen Hill and Bloomington, Ind.

White (1882) p. 359, pl. 40, figs. 5-7

Miss., "St. Louis Gr."=(Meramec Ser.), Warsaw division: Ellettsville, Monroe County, Ind.

Whitfield (1882a) p. 89, pl. 8, figs. 6, 7

Miss., Warsaw Ls.: Spergen Hill, Bloomington, Paynters Hill, and Ellettsville, Ind.; Alton, Ill.

Hall (1883) p. 371, pl. 31, figs. 6, 7

Miss., St. Louis Ls.: Alton, Ill.; Spergen Hill, Lanesville, and Bloomington, Ind.

Bellerophon sublaevis? Whitfield (1891) p. 592, pl. 14, figs. 20, 21

Miss., Maxville Ls.: Newtonville and Maxville, Ohio

Bellerophon sublaevis Keyes (1894b) [1895] p. 148

Miss., St. Louis Ls.: St. Louis, Mo.

Bellerophon sublaevis? Whitfield (1895) p. 479, pl. 10, figs. 20, 21

Miss., Maxville Ls.: Newtonville and Maxville, Ohio

Bellerophon sublaevis S. Weller (1897) p. 269, pl. 21, fig. 10

Miss., Batesville Ss.: Batesville, Ark.

Ulrich (1897) p. 853

Sardeson (1902) p. 304

Carb.: Humboldt, Iowa

Cumings (1906) p. 1360, pl. 25, figs. 6, 7

Miss., Salem Ls.: Spergen Hill, Bloomington, Paynters Hill, Ellettsville, Harrodsburg, and Stinesville, Ind.; Alton, Ill.

Grabau and Shimer (1909) p. 620, fig. 832

Miss., St. Louis Ls. and Chester Ser.: Indiana; Illinois; Ohio; Missouri; Arkansas;

Carb., "L. Coal Measures": Pennsylvania

Morse (1911) p. 404, figs. 29a, b

Miss., Maxville Ls.: Fultonham, White Cottage, Logan, Mount Perry-Fultonham, and Maxville, Ohio

S. Weller (1916) p. 257, pl. 19, figs. 11, 12

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Bellerophon sublaevis? Girty (1915b) p. 116

Miss., Batesville Ss.: Round Mtn., Granny Mtn., Batesville, and Marshall, Ark.

Bellerophon cf. *sublaevis* Mather (1915) p. 232, pl. 16, figs. 4, 4a

Penn., Morrow Ser.: Fayetteville, Ark.; Wagoner and Chouteau, Okla.

Bellerophon sublaevis Butts (1940) [1941] p. 235, pl. 128, figs. 10-13

Miss., St. Louis Ls.: NW. of Bandy's Chapel, Baptist Valley, Tazewell County, Va.

Knight (1944) p. 443, pl. 178, figs. 18-20

Miss., St. Louis Ls. and Chester Ser.: Mississippi Valley

Bellerophon (Bellerophon) ulrichi S. Weller

Bellerophon ulrichi S. Weller (1906) p. 456, pl. 7, figs. 20-23

Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.

Bellerophon (Bellerophon) vinculatus White and Whitfield

Bellerophon vinculatus White and Whitfield (1862) p. 304.

"Chemung Gr.": Burlington, Iowa

Weller (1900) p. 113, pl. 6, figs. 11, 12

Chonopectus ss.: Burlington, Iowa

Weller (1905) p. 630

Miss., Kinderhook Ser., "English River Grit": Maples Mill, on English River, near Wellman, Washington County, Iowa

Bellerophon (Bellerophon) wabaunseensis Tasch

Bellerophon wabaunseensis Tash (1953) p. 398, pl. 49, figs. 27-29

Penn., Stotler Ls., Dry Sh. Mbr.: Emporia, Kans.

Bellerophon (Bellerophon) whittleseyi Winchell

Bellerophon whittleseyi Winchell (1865) [1866] p. 130

Miss., Marshall Fm.: E. of Orange Center, Cuyahoga County, Ohio

Bellerophon (Bellerophon) species of authors

Bellerophon sp. (?) Shumard (1859) p. 339

Perm. Dark ls.: Guadalupe Mts. Tex.

Bellerophon Newberry (1861) p. 118

Carb.: Agua Azul, near base of Mount Taylor, Ariz.

Dawson (1868) p. 308

Carb.: Kennetcook, Nova Scotia

Bellerophon (sp. undet.). Meek and Worthen (1873) pl. 23, fig. 2

Miss., St. Louis Ls.: No locality cited

Bellerophon—(?)— White (1876a) p. 91

Penn. and Perm., l. part Aubrey Gr.: Confluence of Grand and Green Rivers, Utah

Bellerophon sp.? Herrick (1888) p. 90, pl. 12, fig. 36; pl. 2, fig. 30; pl. 8, fig. 22

Miss., Waverly Gr. of former usage: Licking County, Ohio

Bellerophon _____? White (1891) p. 26

Perm.: Military Crossing, Baylor County, Tex.

Bellerophon crassus Meek and Worthen, White (1891) p. 26

Perm.: Military Crossing, Baylor County, Tex.

Bellerophon sp. Smith (1896) p. 39

Miss., "L. Coal Measures": White County, Ark.

S. Weller (1899) p. 41

Miss., Vermicular ss.: Northview, Webster County, Mo.

Herrick (1900) pl. 2, fig. 2

Perm.: Tularosa, N. Mex.

S. Weller (1901) p. 179, pl. 15, fig. 28

Miss., Kinderhook Ser., bed 5: Burlington, Iowa

S. Weller (1901) p. 143

Miss., Northview Sh.: Northview, Mo.

Girty (1903) p. 315

Miss., Leadville Ls. (originally in unrestricted Ouray Ls.): San Juan region, Colorado

- Bellerophon* sp. undet. S. Weller (1905) p. 623, 630
 Miss., Kinderhook Ser.: Kinderhook, Ill.; Kinderhook Ser., "English River Grit": Maples Mill, on English River, near Wellman, Washington County, Iowa
- Bellerophon* sp.? Cumings (1906) p. 1361
 Miss., Salem Ls.: Spergen Hill, Ind.
- Bellerophon majusculus* Girty (1909b) p. 101, pl. 11, fig. 2
 Perm., San Andres Ls.: Engle, Elephant Butte, San Andres, Fra Cristobal, Nogal Creek, Mesa del Yeso, N. Mex.; Abo Ss.: Mesa del Yeso and Sandia Mts., N. Mex.
- [Assigned here by Yochelson (1960) p. 239.]
- Bellerophon* sp. Girty (1911) p. 93
 Miss., Moorefield Fm.: Batesville quad., Arkansas
 Prosser (1912) p. 43
 Bedford Fm.: Euclid Creek at falls
 Girty (1915b) p. 117, pl. 11, figs. 5-5b
 Miss., Batesville Ss.: Batesville quad., Arkansas
 Snider (1915) p. 115
 Miss., Mayes, Fayetteville and Pitkin Fms.: NE. Oklahoma
 Plummer and Moore (1921) [1922] pl. 7, fig. 13
 Penn., Smithwick Sh.: Junction of Bend-San Saba and Bend-Chappel Roads, Texas
- Bellerophon* sp. A Frebold (1932b) p. 36, pl. 2, figs. 1-3.
 Perm., Red series: Wollaston Foreland, Greenland
- Bellerophon* sp. B Frebold (1932b) p. 37, pl. 2, fig. 4
 Perm., Red series: Wollaston Foreland, Greenland
- Bellerophon* sp. Knight (1940) p. 303, pl. 4, fig. 2
 Perm., Rush Springs Fm., Dozier Ss. Mbr.: Hall County, Tex.
 Williams (1943) [1944] p. 101, pl. 9, figs. 25, 26
 Ls. beds of Louisiana Ls.: Warren, Marion County, Mo.
 Knight (1947) pl. 42, fig. 2
 Penn., "Coal Measures": Kansas City, Mo.
 Knight (1958) p. 73, pl. 8A, figs. 1, 2
 Miss.: Sonora, Mexico
- Bellerophon* (*Bellerophon*) sp. Yochelson (1960) p. 239
- Bellerophon* sp. Yochelson and Dutro (1960) p. 131, pl. 12, figs. 5-9
 L. Miss.: Chandler Lake quad.; U. Miss., Alapah Ls.: W. end of Turner Mtn.;
 U. Miss.: Chandler Lake quad., Alaska
 Easton (1962) p. 98, pl. 13, fig. 7
 U. Miss., Heath Fm.: Central Montana
 Winters (1963) p. 27, pl. 2, figs. 3a-c
 Perm., Supai Fm.: E. Arizona

BELLEROPHON (PHARKIDONOTUS) Girty

Type species: *Bellerophon percarinatus* Conrad (1842) p. 268

Pharkidonotus Girty (1912a) p. 138

Bellerophon (*Pharkidonotus*) Yochelson (1960) p. 240

Bellerophon (Pharkidonotus) percarinatus Conrad

Bellerophon percarinatus Conrad (1842) p. 268, pl. 16, fig. 5

Carb.: Inclined plane of the Allegheny Mts., in black shale overlying the stratum of coal 7

- Bellerophon harrodi* Gurley (1883) p. 5
 Carb., "U. Coal Measures": Near Oakwood, Vermilion County, Ill.
- Bellerophon percarinatus* White (1884b) p. 158, pl. 33,
 Carb., "Coal Measures": Indiana
 Clappole (1886) p. 246
 Carb., "L. Coal Measures": Wilkes-Barre, Pa.
 Heilprin (1886a) p. 451
 Carb., "U. Coal Measures," Mill Creek Ls.: Wilkes-Barre, Pa.
 Herrick (1887a) p. 17, pl. 2, fig. 14
 Carb., "Coal Measures": Flint Ridge, Ohio
 Keyes (1888) [1889] p. 234
 Carb., "L. Coal Measures": Des Moines, Iowa
 Keyes (1894b) [1895] p. 153, pl. 50, figs. 2a, c, e
 Carb., "U. Coal Measures": Kansas City, Mo.
 Ulrich and Scofield (1897) p. 853
- Bellerophon harrodi* Girty (1899a) p. 592
- Bellerophon percarinatus* Girty (1899a) p. 592
- Bellerophon* (s.s.) *percarinatus* Girty (1903) p. 470
 Penn., Hermosa Fm.: San Juan region and Sinbads Valley, Colo.; Weber(?) Fm.:
 Leadville district, Colorado
- Bellerophon percarinatus* Crook (1912) p. 14, fig. 7
 Penn.: Vicinity of Springfield, Ill.
- Pharkidonotus percarinatus* Price (1914b) p. 535
 Penn., Conemaugh Fm., Ames Ls. Mbr.: Fellowsville, W. Va.; Brush Creek Ls.
 Mbr.: Bruceton Mills and Reedsville, W. Va.
 Girty (1915a) p. 165, pl. 19, figs. 4-9c
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
 Plummer and Moore (1921) [1922] pl. 14, fig. 1; pl. 22, figs. 8, 9
 Penn., Mineral Wells Fm.: Mineral Wells, Tex.; Graham Fm., Wayland Sh. Mbr.:
 S. of Gunsight, Tex.
- Morningstar (1922) p. 248, pl. 15, fig. 6
 Penn., Pottsville Fm., 1. part Mercer Mbr.; McArthur Mbr.: Ohio, generally
- Morgan (1924) pl. 49, figs. 15, 15a
 Penn., Holdenville Sh.: Stonewall quad., Oklahoma
- J. Weller (1929b) p. 313, pl. 1, figs. 6a, b
 Carb., "U. Coal Measures": Near Oakwood, Vermilion County, Ill.
- Knight (1941) p. 241, pl. 12, figs. 4a-f
 U. Carb.: "Inclined plane of the Alleghany Mts., Pa."
- Knight (1944) p. 445, pl. 179, figs. 24-26
 Penn.: Widespread in North America
- Pharkidonotus* cf. *P. percarinatus* Plummer (1950) pl. 17, fig. 20
 Carb., Smithwick Sh.: Bend-Chappel Road, SW. of Bend, San Saba County, Tex.
- Pharkidonotus percarinatus* Chow (1951) p. 33, pl. 4, figs. 5, 6
 Penn., Mill Creek Ls.: Wilkes-Barre, Pa.
- Bellerophon* (*Pharkidonotus*) *percarinatus* Knight, Batten, and Yochelson (1960) p. 1182,
 fig. 102, no. 5
 M. Penn.: Missouri
- Hoare (1961) p. 140, pl. 19, figs. 16, 17
 M. Penn., Seville Ls.: Barton County, Mo.
- Sturgeon (1964a) p. 198, pl. 31, figs. 4, 5
 Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Hocking County; Vanport Ls.
 Mbr.: Columbiana County; Columbiana Ls. Mbr.: Columbiana County, Ohio

Bellerophon (Pharkidonotus) tricarinatus Shumard

- Bellerophon percarinatus* Conrad, Norwood and Pratten (1855) p. 74, pl. 9, figs. 4a-c
Carb., "Coal Measures": Grayville, Ill.; Posey County, Ind., 5 miles below New Harmony
- Bellerophon tricarinatus* Shumard (in Shumard and Swallow, 1858) p. 204
Carb., "U. Coal Measures": Kansas
- Bellerophon percarinatus* Meek (1872a) p. 227, pl. 11, fig. 14
Carb., "U. Coal Measures": Nebraska City and Brownville, Nebr.; Grayville, Illinois; Iowa; Missouri; "L. Coal Measures": West Virginia
- White (1884b) p. 158, pl. 33, figs. 9-11
Carb., "Coal Measures": Indiana
- Keyes (1894b) [1895] p. 153, pl. 50, figs. 2b, d, f
Carb., "U. Coal Measures": Kansas City, Mo.
- Bellerophon tricarinatus* Ulrich (1897) p. 853
Girty (1899a) p. 592
- Pharkidonotus percarinatus* var. *tricarinatus* Price (1914b) p. 535
Penn., Conemaugh Fm., Ames Ls. Mbr.: Preston County, W. Va.; Brush Creek Ls. Mbr.: Bruceton Mills, W. Va.; Corinth Basin, Garrett County, Md.
- Morningstar (1922) p. 248
Penn., Pottsville Fm., l. part Mercer Mbr.; McArthur Mbr.: Vinton County, Ohio
- ? *Bellerophon tricarinatus* J. Weller (1929b) p. 315
Carb., "Coal Measures": No locality cited
- Pharkidonotus tricarinatus* Knight (1944) p. 445, pl. 179, figs. 21-23
Penn.: Widespread in North America
- Chow (1951) p. 33, 34
Penn., Mill Creek Ls.: Wilkes-Barre, Pa.
- Bellerophon (Pharkidonotus) tricarinatus* Yochelson (1960) p. 240

Bellerophon (Pharkidonotus) westi Yochelson

- Bellerophon (Pharkidonotus) westi* Yochelson (1960) p. 268, pl. 50, figs. 17-20
Perm., Bone Spring Ls.: Between branches of Black John Canyon, Van Horn quad., Texas

Bellerophon (Pharkidonotus) species of authors

- Bellerophon (Pharkidonotus?)* sp. Yochelson (1960) p. 269, pl. 50, figs. 21-24
Perm., Word Fm.: Hess Canyon quad., Texas
- Bellerophon (Pharkidonotus)* sp. Yochelson (1960) p. 269, pl. 49, figs. 27-29; pl. 50, fig. 10
Perm., Admiral Fm., Hords Creek Ls. Mbr.: Coleman County, Tex.

BEMBEXIA Oehlert 1888

- Type species: *Pleurotomaria larteti* Munier-Chalmas (1876) p. 104
Bembexia Oehlert (1888) p. 88

Bembexia elegantula (Hall)

- Murchisonia elegantula* Hall (1856) p. 27
Miss., St. Louis Ls.: Bloomington, Ind.
- Pleurotomaria shumardi* Meek and Worthen (1860) [1861] p. 462
Miss., base of "geode bed": Warsaw and Keokuk, Ill.
- Meek and Worthen (1866b) p. 260, pl. 18, figs. 6a, b
Miss., Keokuk Ls.: Warsaw, Ill.

Pleurotomaria elegantula Whitfield (1882a) p. 84, pl. 9, fig. 19

Miss., St. Louis Ls.: Bloomington, Ind.; Warsaw, Ill.

Hall (1883) p. 358, pl. 32, fig. 19

Miss., St. Louis Ls.: Bloomington, Spergen Hill, and Lanesville, Ind.

Bembexia shumardi Ulrich (1897) p. 955-956

Bembexia elegantula Ulrich (1897) p. 955

Cumings (1906) p. 1355, pl. 26, fig. 19

Miss., Salem Ls.: Bloomington and Stinesville, Ind.; Warsaw, Ill.

***Bembexia ellenae* Conkin**

Bembexia ellenae Conkin (1957) p. 141, pl. 15, figs. 1-14; text fig. 2A

Miss., New Providence Sh.: Jefferson County, Ky.

***Bembexia? inumbilicata* Yochelson and Dutro**

Bembexia? inumbilicata Yochelson and Dutro (1960) p. 138, pl. 13, figs. 30, 31

U. Miss., Alapah Ls.: Chandler Lake quad., N. Alaska

***Bembexia lativittata* Girty**

Bembexia lativittata Girty (1910a) p. 231

Miss., basal part Fayetteville Sh.: Fayetteville quad., Arkansas

Bembexia aff. *B. lativittata* Girty (1926) p. 37

Miss., ls. of Boone age: San Saba, Tex.

***Bembexia magna* Girty**

Bembexia magna Girty (1929a) p. 94

Miss., m. part Boone Fm.: Batesville, Ark.

***Bembexia minima* (Rowley)**

Pleurotomaria minima Rowley (1895) p. 222, fig. 19

Louisiana Ls.: Louisiana, Mo.

Rowley (1908) p. 91, pl. 19, fig. 8

Louisiana Ls.: Louisiana, Mo.

Bembexia minima Williams (1943) [1944] p. 101-102, pl. 9, fig. 24

Yellow-brown mudstone, clay partings, and ls. beds of Louisiana Ls.: Louisiana, Mo.

***Bembexia nodomarginata* (McChesney)**

Pleurotomaria nodomarginata McChesney (1859) p. 70

"Hamilton Gr.": Near Batesville, Ark.

McChesney (1865) pl. 7, figs. 1a-c

McChesney (1868) [1867-1869] p. 47, pl. 7, figs. 1a-c

"Hamilton Gr.": Near Batesville, Ark.

Walcott (1884) p. 259, pl. 18, fig. 15

L. Carb.: Eureka district, Nevada

Girty (1911) p. 91, pl. 7, figs. 1-5

Miss., Moorefield Fm.: Batesville quad., Arkansas

Bembexia nodimarginata Snider (1915) p. 116

Miss., Mayes Fm.: Oklahoma

Girty (1915c) p. 36, pl. 2, fig. 7

Miss., Boone Fm.: Batesville, Ark.

Plummer and Moore (1921) [1922] pl. 7, figs. 8, 8a

Penn., Smithwick Sh.: Junction Bend-San Saba and Bend-Chappel Roads, Texas

Croneis (1930) p. 54, pl. 13, fig. 17

Miss., Moorefield Fm.: Arkansas

Bembexia shepardi E. Branson

Bembexia shepardi E. Branson (1938b) p. 42, pl. 24, figs. 22-24

L. Miss.: Missouri

Bembexia shumardi (Meek and Worthen) see **Bembexia elegantula** (Hall)

Bembexia sulcomarginata (Hall)

Pleurotomaria sulcomarginata Hall (1879) p. 69, pl. 19, figs. 8-17

Dev., Hamilton Gr.: New York

Pleurotomaria sulcomarginata? Herrick (1888c) pl. 9, fig. 14

Bedford Sh.: Central College, Ohio

Pleurotomaria sp. Herrick (1889) pl. 4, fig. 14

Pleurotomaria sulcomarginata Herrick (1893) [1895] pl. 20, fig. 14

Sh. above Berea Ss.: Ohio

Bembexia sulcomarginata Ulrich (1897) p. 949, 956, 1001

Bembexia waterlooensis S. Weller

Bembexia waterlooensis S. Weller (1916) p. 252, pl. 18, figs. 38, 39

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Bembexia species of authors

Bembexia? sp. Girty (1915b) p. 115, pl. 11, figs. 9, 9a

Miss., Batesville Ss.: Ramsey Ferry and Batesville, Ark.

Bembexia sp. Girty (1915c) p. 37

Miss., "Boone" chert: Batesville, Ark.

BORESTUS Thomas 1940

Type species: *Borestus wrightii* Thomas (1940) p. 54

Borestus Thomas (1940) p. 53

[*Borestes* Knight (1944) p. 455 is a typographical error for *BORESTUS*.]

Borestus chesterensis (Meek and Worthen)

Pleurotomaria chesterensis Meek and Worthen (1860) [1861] p. 460

Miss., Chester Ser.: Chester, Ill.

Pleurotomaria chesterensis Meek and Worthen (1866a) p. 303, pl. 24, figs. 1a-c

Miss., Chester Ser.: Chester, Ill.

Borestus chesterensis Saunders and Yochelson (1964) p. 1113

Borestus pagoda (Newell)

Orestes pagoda Newell (1935) p. 346, pl. 36, figs. 4, 4a

Penn., Lansing Gr.: Wann, Okla.

Borestes [sic] *pagoda* Knight (1944) p. 455, pl. 183, fig. 34

Penn., Missouri Ser.: Mississippi Valley

Borestus species of authors

Borestus sp. Knight (1958) p. 74, pl. 8, figs. 7, 8

Miss.: Sonora, Mexico

BRADYOSPIRA Batten 1964

Type species: *Bradyospira johnsensis* Batten (1964) p. 6

Bradyospira Batten (1964) p. 6

Bradyospira johnsensis Batten

Bradyospira johnsensis Batten (1964) p. 6, figs. 7-10

Perm.: Hog Wash; Faught Ridge, E. Arizona

BRITTSOCERAS Miller, Downs, and Youngquist 1949

Type species: *Brittsoceras ornatissimum* Miller, Downs, and Youngquist (1949) p. 604

Brittsoceras Miller, Downs, and Youngquist (1949) p. 604

[Miller (1950) p. 506 considered this name a subjective synonym of *Porcellia* Leveillé (1835).]

Brittsoceras ornatissimum Miller, Downs, and Youngquist 1949 see **Porcellia ornatissima**

BROCHIDIUM Koken 1889

Type species: *Ceratites? cingulatus* Münster (1839) p. 15

(S.D. Cossman (1915) [1916] p. 137)

Brochidium Koken (1889) p. 434

[Although this genus has a post-Paleozoic type species, there is no reason to question the assignment of late Paleozoic species to this taxon.]

Brochidium morrisi Yochelson

Brochidium morrisi Yochelson (1956b) p. 255, pl. 23, figs. 1-4, table 33

Perm., Leonard Ser. and Word Fm.: Hess Canyon quad., Texas Cherry Canyon Fm.: Guadalupe Mts., Tex.

BUCANELLA Meek 1871

Type species: *Bucanella nana* Meek (1871) p. 426

Bucanella Meek (1870) [1871] p. 426

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. Formally named species originally assigned to this taxon were reassigned.]

Bucanella cordiformis Newell 1935 see **Sinuitina cordiformis**

Bucanella species of authors

Bucanella? sp. Easton (1942) pl. 11, fig. 7

Miss., Pitkin Ls.: Arkansas

BUCANIA Hall 1847

Type species: *Bellerophon sulcatus* Emmons (1842) p. 312

Bucania Hall (1847) pl. 32

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic.]

Bucania species of authors

Bucania? sp. S. Weller (1899) p. 40, pl. 5, fig. 12

Miss., Vermicular ss.: Northview, Webster County, Mo.

BUCANOPSIS Ulrich and Scofield 1897

Type species: *Bucanopsis carinifera* Ulrich and Scofield (1897) p. 925

Bucanopsis Ulrich and Scofield (1897) p. 853

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. All but six formally named species originally assigned to this taxon were reassigned.]

Bucanopsis deflectus S. Weller

- Bucanopsis deflectus* S. Weller (1900) p. 114, pl. 6, fig. 5
 Chonopectus ss.: Burlington, Iowa

Bucanopsis beedia Bell

- Bucanopsis beedia* Bell (1929) p. 172, pl. 30, fig. 9
 Carb., U. Windsor Ser.: Horton-Windsor district, Nova Scotia
Bucanopsis cancellata? see **Knightites (Retispira) textilis** (Hall in Miller)
Bucanopsis elliptica (McChesney) see **Patellilabia ellipticus**
Bucanopsis marcouiana (Geinitz) see **Knightites (Retispira) marcouianus**
Bucanopsis meekiana Swallow see **?Knightites (Retispira) meekianus**
Bucanopsis modesta Girty 1909 see **Knightites (Retispira) modesta**

Bucanopsis ornatus S. Weller

- Bucanopsis ornatus* S. Weller (1920) p. 366, pl. 9, figs. 15-20
 Miss., basal part Okaw Fm.: Camp Creek, Randolph County, Ill.; basal part
 Golconda Fm., SE. of Vienna, Johnson County, Ill.
Bucanopsis ornatus J. Weller (1931) pl. 42, fig. 4
 Miss., Golconda Fm.: Kentucky

Bucanopsis perelegans (White and Whitfield)

- Bellerophon perelegans* White and Whitefield (1862) p. 304
 "Chemung Gr.": Burlington, Iowa
Bellerophon perelegans? Herrick (1888a) p. 90, pl. 9, fig. 30
 Miss., Waverly Gr. of former usage: Licking County, Ohio
Bucanopsis perelegans S. Weller (1901) p. 178, pl. 15, figs. 23, 24
 Miss., Kinderhook Ser.: Burlington, Iowa

Bucanopsis perelegans minima Beede

- Bucanopsis perelegans* var. *minima* Beede (1911) p. 183, text figs.
 Carbonic fauna: Oyster basin, Coffin Island, Quebec
Bucanopsis perlata (Conrad) Girty 1899 see **?Knightites (Retispira) tenuilineata** (Gurley)
Bucanopsis (Retispira) reticulata Elias 1958 see **Knightites (Retispira) reticulata**
Bucanopsis rugopleurus (Gurley) J. Weller 1929 see **Knightites (Retispira) nodocostata** (Gurley)
Bucanopsis tenuilineata (Gurley) see **?Knightites (Retispira) tenuilineata**
Bucanopsis textiliformis J. Weller 1929 see **Knightites (Retispira) textiliformis**
Bucanopsis textilis (Hall) see **Knightites (Retispira) textilis**

Bucanopsis waverliensis Hyde

- Bucanopsis waverliensis* Hyde (1953) p. 321, pl. 46, figs. 29-31
 Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

Bucanopsis species of authors

- Bucanopsis* sp. Girty (1908a) [1909] p. 481, pl. 23, fig. 14-14b.
 Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.
Bucanopsis? sp. Price (1914b) p. 535
 Penn., Conemaugh Fm., Ames Ls. Mbr.: Fellowsville, W. Va.; Brush Creek Ls.
 Mbr.: Reedsville, W. Va.

Bucanopsis sp.? Butts (1940) [1941] p. 223, pl. 125, fig. 11

Miss., Price Fm.: Price Mtn., east of Cassard, Scott County, Va.

Bucanopsis or Bellerophon E. Branson and Greger (1918) see **Euphemites sacajawensis** C. Branson

BUCANOPSIS (RETISPIRA?) Knight 1945

[Elias (1958) p. 3 questionably reduced *Retispira* Knight (1945) to subgeneric rank. Yochelson (1960) p. 226, considered *Retispira* Knight a subgenus of *Knightities* Moore (1941).]

Bucanopsis (Retispira) reticulata Elias 1958 see **Knightities (Retispira) reticulata**

BULIMELLA Hall 1858 [not Pfeiffer 1854]

Type species: *Bulimella bulimiformis* Hall (1858) p. 29

[Knight (1941) p. 62 noted that this homonymous name was replaced by *Bulimorpha* Whitfield (1882a).]

Bulimella bulimiformis Hall 1858 see **Bulimorpha bulimiformis**

Bulimella canaliculata Hall 1858 see **Girtyspira canaliculata**

Bulimella elongata Hall 1858 see **Bulimorpha elongata**

BULIMORPHA Whitfield 1882

Type species: *Bulimella bulimiformis* Hall (1858) p. 29

Bulimella Hall (1858) p. 29 [not Pfeiffer 1854]

Bulimorpha Whitfield (1882a) p. 74 [for *Bulimella* Hall 1858]

Soleniscus (Bulimorpha) Knight (1931b) p. 192

Bulimorpha Knight (1936) p. 523

Bulimorpha? alvaensis Beede 1907 see **Girtyspira? alvaensis**

Bulimorpha bulimiformis (Hall)

Bulimella bulimiformis Hall (1858) p. 29

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Bulimorpha bulimiformis Whitfield (1882a) p. 74, pl. 8, figs. 37-39

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Hall (1883) p. 366, pl. 31, figs 37-39

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Keyes (1889a) p. 300

Keyes (1894b) [1895] p. 204

Miss., St. Louis Ls.: St. Louis, Mo.

Cummings (1906) p. 1343, pl. 25, figs. 37-39

Miss., Salem Ls.: Spergen Hill, Bloomington, Paynters Hill, Harrodsburg, Ellettsville, Stinesville, and Romona, Ind.

Girty (1915a) p. 221

Bulimorpha canaliculata Branson and Greger (1918) p. 322, pl. 19, fig. 15

Miss. and Penn., Amsden Fm.: Wind River Mts., Wyo.

Soleniscus (Bulimorpha) bulimiformis Knight (1931b) p. 193

Bulimorpha bulimiformis Knight (1936) p. 523-533

Soleniscus (Bulimorpha) bulimiformis C. Branson (1937) p. 658

Bulimorpha bulimiformis Knight (1941) p. 63, pl. 94, figs. 1a-d

Miss., Spergen Ls. of former usage (=Salem Ls.): Bloomington, Ind.

Knight (1944) p. 479, pl. 196, figs. 5, 6

Miss., Salem Ls.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. 1320, fig. 212, no. 2

M. Miss.: Indiana

Bulimorpha canaliculata (Hall) see **Girtyspira canaliculata**

Bulimorpha canaliculata (Hall) Branson and Greger 1918 see **Bulimorpha bulimiformis** (Hall)

Bulimorpha chrysalis (Meek and Worthen) see **Ianthinopsis regularis** (Cox)

Bulimorpha chrysalis var. **delawarensis** Girty 1908 see **Ianthinopsis regularis** (Cox)

Bulimorpha elegans Girty

Bulimorpha elegans Girty (1927) p. 432 pl. 25, figs. 31, 32

Miss., Brazer Ls.: Henry quad., Idaho

Easton (1962) p. 100, pl. 13, figs. 17, 18

U. Miss., Heath Fm.: Central Montana

Bulimorpha elongata (Hall)

Bulimella elongata Hall (1858) p. 30

Miss., St. Louis Ls.: Spergen Hill, Ind.

Polyphemopsis teretiformis Hall (1877a) p. 245 [for *P. elongata* Hall 1858]

Bulimorpha elongata Whitfield (1882a) p. 75, pl. 8, fig. 40

Miss., St. Louis Ls.: Spergen Hill, Ind.

Hall (1883) p. 368, pl. 31, fig. 40

Miss., St. Louis Ls.: Spergen Hill and Lanesville, Ind.

Keyes (1889f) [1890] p. 301

Polyphemopsis teretiformis Miller (1889) p. 423

Bulimorpha elongata Cumings (1906) p. 1344, pl. 25, fig. 40

Miss., Salem Ls.: Spergen Hill, Ind.

Bulimorpha? elongata Girty (1915a) p. 221

Bulimorpha inornata (Meek and Worthen) Keyes 1889 see **Ianthinopsis regularis** (Cox)

Bulimorpha? keokuk (Worthen) see **Holopea keokuk**

Bulimorpha maxneri Bell

Bulimorpha maxneri Bell (1929) p. 179, pl. 31, figs. 23–25

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Bulimorpha meeki Sayre 1930 see **Girtyspira minuta** (Stevens)

Bulimorpha melanoides (Whitfield) see **Ianthinopsis melanoides**

Bulimorpha minuta (Stevens) Keyes 1889 see **Girtyspira minuta**

Bulimorpha minuta (Stevens) Girty 1915 see **Ianthinopsis regularis** (Cox)

Bulimorpha nitidula (Meek and Worthen) Price 1914 see **Soleniscus typicus** Meek and Worthen

Bulimorpha nodosa (Stevens)

Loxonema nodosa Stevens (1858) p. 260

Carb., "Coal Measures": Summit, Ohio

Bulimorpha? nodosa Girty (1915a) p. 187, 221

Bulimorpha peracuta (Meek and Worthen) see **Meekospira peracuta**

Bulimorpha pygmaea Weller 1916 see **Girtyspira pygmaea**

Bulimorpha? tenuicarinarum (Stevens)

Loxonema tenui-carinata Stevens (1858) p. 260

Carb., "Coal Measures": Summit, Ohio

Bulimorpha? tenuicarinarum Girty (1915a) p. 187, 221

Bulimorpha? turnerensis Sayre 1930 see **Girtyspira minuta** (Stevens)

Bulimorpha whitfieldi S. Weller

Bulimorpha whitfieldi S. Weller (1916) p. 260, pl. 18, figs. 15-17
Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Bulimorpha species of authors

Bulimorpha(?) sp. Sage (1954) p. 105, pl. 21, figs. 2a, b
Carb., U. Windsor Ser., *Eumorphoceras* subzone: Antigonish area, Nova Scotia

?Busyconidae

Family ?Busyconidae, genus and species indeterminate Beus (1965) p. 3, pl. 1, figs. 1-8
Perm., Kaibab Fm.: Flagstaff, Ariz. (found in a pocket on the eroded surface of the Kaibab near characteristic Permian fossils)

CALLISPIRA Nelson 1947

Type species: *Callispira quinquecostata* Nelson (1947) p. 464
Callispira Nelson (1947) p. 463

Callispira novemcostata Nelson

Callispira novemcostata Nelson (1947) p. 465, pl. 65, fig. 7
M. Penn., Magdalena Gr., Strawn equiv.: Franklin Mts., Vinton, Tex.

Callispira quinquecostata Nelson

Callispira quinquecostata Nelson (1947) p. 464, pl. 65, figs. 6a, b
M. Penn., Magdalena Gr., Strawn equiv.: Franklin Mts., Vinton, Tex.; Anthony, N. Mex.

Callispira species of authors

Callispira sp. Hoare (1961) p. 178, pl. 22, fig. 2
M. Penn., Robinson Branch Ls.: Henry County, Mo.

CALLISTADIA Knight 1945

Type species: *Callistadia bella* Knight (1945b) p. 578
Callistadia Knight (1945b) p. 577

Callistadia bella Knight

Callistadia bella Knight (1945b) p. 578, pl. 79, figs. 1a-c
Perm., Leonard Ser., Bone Spring Ls.: Apache Canyon, Sierra Diablo, Tex.;
u. part Leonard Ser.: Split Tank, Tex.
Knight, Batten, and Yochelson (1960) p. 1202, fig. 116, no. 5
M. Perm.: Texas

CALLITOMARIA Batten 1956

Type species: *Callitomaria stanislavi* Batten (1956) p. 43
Callitomaria Batten (1956) p. 43

Callitomaria magna Batten

Callitomaria magna Batten (1958) p. 207, pl. 36, figs. 1-4
Perm., u. part Leonard Ser.: Hess Canyon quad., Texas

Callitomaria stanislavi Batten

Callitomaria stanislavi Batten (1956) p. 43

Perm., Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

Batten (1958) p. 207, pl. 36, figs. 5-15

Perm., l. part Leonard to m. part Guadalupe Ser.: Van Horn quad. and San Diablo area, Texas

Knight, Batten, and Yochelson (1960) p. 1216, fig. 130, no. 9

M. Perm.: Texas

CAPULUS Montfort 1810

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. All but two North American late Paleozoic species originally assigned to this taxon were reassigned.]

Capulus acutirostris (Hall) see **Platyceras** (**Orthonychia**) **acutirostris**

Capulus acutirostris (Hall) Claypool 1886 see **Platyceras** (**Orthonychia**) **parvum** (Swallow)

Capulus biserialis (Hall) see **Platyceras** (**Orthonychia**) **biserialis**

Capulus chesterensis (Meek and Worthen) see **Platyceras** (**Orthonychia**) **chesterense**

Capulus cornuforme (Winchell) see **Platyceras** (**Orthonychia**) **cornuforme**

Capulus cyrtolites (McChesney) see **Platyceras** (**Orthonychia**) **cyrtolites**

Capulus equilaterus (Hall) see **Platyceras** (**Orthonychia**) **equilaterum**

Capulus fissurella (Hall) see **Platyceras** (**Orthonychia**) **fissurellum**

Capulus formosus (Keyes) see **Platyceras** (**Orthonychia**) **formosum**

Capulus haliotoides (Meek and Worthen) see **Platyceras** (**Platyceras**) **haliotoides**

Capulus? **haworthi** Beede 1907 see **Lepetopsis** **haworthi**

Capulus herzeri (Winchell) see **Platyceras** (**Orthonychia**) **herzeri**

Capulus infundibulum (Meek and Worthen) Keyes 1890 see **Platyceras** (**Orthonychia**) **pabulocrinus** (Owen)

Capulus latus (Keyes) see **Platyceras** (**Orthonychia**) **latum**

Capulus lodiensis (Meek) see **Platyceras** (**Orthonychia**) **lodiensis**

Capulus nasutus (Miller) see **Platyceras** (**Platyceras**) **nasutum**

Capulus obliquus (Keyes) see **Platyceras** (**Orthonychia**) **obliquum**

Capulus occidens (Walcott) see **Platyceras** (**Orthonychia**) **occidens**

Capulus ovalis (Stevens) see **Platyceras** (**Orthonychia**) **ovalis**

Capulus paralius (White and Whitfield) see **Platyceras** (**Orthonychia**) **paralium**

Capulus parvum Swallow 1858 see **Platyceras** (**Orthonychia**) **parvum**

Capulus? **piso** (Walcott) see **Platyceras** (**Orthonychia**) **piso**

Capulus quincyensis (McChesney) see **Platyceras** (**Orthonychia**) **quincyense**

Capulus sellardsi Beede

Capulus sellardsi Beede (1907) p. 170, pl. 7, figs. 8-8f

Perm., Whitehorse Ss.: Whitehorse Spring, Okla.

Gryphellina sellardsi Newell (1940) p. 289-290, pl. 1, figs. 8-13

Perm., Rush Springs Fn., Dozier Ss. Mbr.: NW. Texas; Whitehorse Ss.: Whitehorse Spring, Okla.

[This was originally described as a gastropod. Further investigation has shown it is a pelecypod; Newell (1940) p. 289 designated this species as the type species of *Gryphellina* Newell.]

Capulus spinigerus (Worthen) see **Platyceras** (**Orthonychia**) **spinigerum**

Capulus striatulus Girty

Capulus striatulus Girty (1927) p. 430, pl. 25, figs. 33–38
Miss., Brazer Ls.: Henry quad., Idaho

Capulus striatulus gracilis Girty

Capulus striatulus var. *gracilis* Girty (1927) p. 431, pl. 25, figs. 39–41
Miss., Brazer Ls.: Henry quad., Idaho

Capulus subplicatum (Meek and Worthen) see **Platyceras (Orthonychia) subplicatum**

Capulus sulcatus Keyes 1890 see **Platyceras (Orthonychia) sulcatus**

Capulus tribulosus (White) see **Platyceras (Orthonychia) tribulosum**

Capulus trigonalis (Stevens) see **Platyceras (Orthonychia) trigonalis**

Capulus triplicatus Swallow

Capulus triplicatus Swallow (in Shumard and Swallow, 1858) p. 205
Carb., "Coal Measures": Near Bull Creek, Santa Fe Road, Kans.
Keyes (1890) d [1891] p. 180

[Keyes suggested that this species is a *Myalina*.]

Capulus vomerium (Winchell) see **Platyceras (Orthonychia) vomerium**

Capulus species of authors see **Platyceras (Orthonychia)** species of authors

CERAUNOCOCHLIS Knight 1931

Type species: *Ceraunocochlis fulminula* Knight (1931b) p. 194
Ceraunocochlis Knight (1931b) p. 203

Ceraunocochlis blatta Knight

Ceraunocochlis blatta Knight (1931b) p. 203, pl. 21, figs. 2a–d
Penn., top of Labette Sh.: St. Louis, Mo.

Ceraunocochlis fulminula Knight

Ceraunocochlis fulminula Knight (1931b) p. 194, 203, pl. 21, figs. 1a–d; pl. 27, fig. 1
Penn., top of Labette Sh.: St. Louis, Mo.
Knight (1941) p. 74–75, pl. 92, figs. 7a, b
Penn., top of Labette Sh.; Henrietta Fm. of former usage (= Marmaton Gr.):
Feeffe Creek, near Lackland Sta., St. Louis, Mo.
Knight (1944) p. 479, pl. 196, figs. 1, 2
Penn., Des Moines Ser.: Mississippi Valley
Knight, Batten, and Yochelson (1960) p. 1320, fig. 212, no. 6
M. Penn.: Missouri

Ceraunocochlis harrodsburgensis (Cumings)

Subulites harrodsburgensis Cumings (1906), p. 1363, pl. 24, figs. 7–7b
Miss., Salem Ls.: Harrodsburg and Bloomington, Ind.
Ceraunocochlis harrodsburgensis Knight (1931b) p. 194
Miss., Spergen Ls. of former usage (= Salem Ls.): Indiana
Knight (1944) p. 447, pl. 196, figs. 3, 4
Miss., Salem Ls.: Mississippi Valley

CERITHIOIDES Haughton 1859

Type species: *Cerithioides telescopium* Haughton (1859) p. 282
Cerithioides Haughton (1859) p. 282

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. One North American late Paleozoic identification assigned to this taxon has not been reassigned.]

Cerithioides gleanensis Longstaff

Cerithioides(?) *gleanensis* var. E. Elias (1958) p. 13, pl. 2, fig. 1

Miss., Redoak Hollow Fm.: Oklahoma

[No synonymy is presented of this European species.]

CHEMNITZIA Orbigny 1837

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. Formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Chemnitzia attenuata Stevens 1858 see *Zygopleura attenuata*

Chimnitzia [sic] **parva** Cox 1857 see *Zygopleura parva*

Chemnitzia swallowiana Shumard 1859 see *Zygopleura swallowiana*

Chemnitzia tenuilineata Shumard 1855 see *Loxonema tenuilineata*

CIBECUIA Winters 1956

Type species: *Cibecua cedarensis* Winters (1956) p. 44

Cibecua Winters (1957) p. 44

Cibecua cedarensis Winters

Cibecua cedarensis Winters (1956) p. 44

Perm., Supai Fm., Fort Apache Mbr.: Fort Apache Indian Reservation, E. Ariz.
Knight, Batten, and Yochelson (1960) p. 1293, fig. 191, no. 13

Perm., Supai Fm., Fort Apache Mbr.: Fort Apache Indian Reservation, E. Ariz.
Winters (1963) p. 39, pl. 4, figs. 5a-6b.

Perm., Bone Spring Ls.: Apache Canyon, Sierra Diablo, Culberson County, Tex.

CINCLIDONEMA Knight 1945

Type species: *Cinclidonema texanum* Knight (1945b) p. 584

Cinclidonema Knight (1945)b p. 584

Cinclidonema texanum Knight

Cinclidonema texanum Knight (1945b) p. 584, pl. 80, figs. 4a-c

Penn., Canyon Gr., Graford Fm., Bridgeport Clay Mbr.: Bridgeport, Wise County, Tex.

Knight, Batten, and Yochelson (1960) p. 1239, fig. 152, no. 5

U. Penn.: Texas

COLPITES Knight 1936

Type species: *Naticopsis monilifera* White (1880b) p. 168

Colpites Knight (1936) p. 529

Colpites minuta (Sayre)

Naticopsis minuta Sayre (1930) [1931] p. 142, pl. 18, figs. 5, 5a

Penn., Drum Ls., oolitic mbr.: Muncie, Kans.

Angyomphalus minutus Knight (1933a) p. 46, 55, pl. 8, figs. 5a-c

Penn., Labette Sh.: St. Louis County, Mo.

Colpites minuta Knight (1936) p. 529

Colpites monilifera (White)

- Naticopsis monilifera* White (1880b) p. 168, pl. 42, figs. 3a-c
 Carb., "U. Coal Measures": Pleasant Hill, Cass County, Mo.
 White (1881) p. 34, pl. 3, figs. 3a-d
 Carb.: Near Taos, N. Mex.
- Pleurotomaria monilifera* Keyes (1894b) [1895] p. 144
 Carb., "U. Coal Measures": Pleasant Hill and Kansas City, Mo.
- Naticopsis monilifera* Girty (1903) p. 464
 Penn., Hermosa and Rico Fms.: San Juan region, Colorado
- Pleurotomaria monilifera* Morgan (1924) pl. 49, fig. 20
 Penn., Savanna Fm.: Stonewall quad., Oklahoma
- Naticopsis? monilifera* Sayre (1930) [1931] p. 141, pl. 18, figs. 6, 6a
 Penn., Drum Ls., oolitic mbr.: Turner, Kans.
- Anguomphalus moniliferus* Knight (1933a) p. 46
- Colpites monilifera* Knight (1936) p. 529
 Knight (1941) p. 83-84, pl. 22, figs. 1a-c
 U. Carb.: Pleasant Hill, Cass County, Mo.
 Knight, Batten, and Yochelson (1960) p. 1198, fig. 112, no. 7
 Penn. to M. Perm.: North America

Colpites species of authors

- Colpites?* sp. Easton (1942) pl. 11, figs. 10, 11
 Miss., Pitkin Ls.: Arkansas

CYCLITES Knight 1940

- Type species: *Pleurotomaria multilineata* Girty (1908a) [1909] p. 468
Cyclites Knight (1940) p. 311

Cyclites costatus Yochelson

- Cyclites costatus* Yochelson (1956b) p. 249, pl. 21, figs. 24-27, 29, 30
 Perm., Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

Cyclites depressus (Beede)

- Worthenopsis? depressa* Beede (1907) p. 164, pl. 8, figs. 4, 4a
 Perm., Whitehorse Ss.: Whitehorse Spring, Okla.
- Pleurotomaria multilineata* Girty (1908a) [1909] p. 468, pl. 23, fig. 25
 Perm., Delaware, Mountain Gr.: Guadalupe Mts., Tex.
- Cyclites depressus* Knight (1940) p. 311-312, pl. 8, figs. 1a-e
 Perm., Whitehorse Ss.: Oklahoma; lower middle part Delaware Mountain Gr.:
 Guadalupe Mts., Tex.
- Knight, Batten, and Yochelson (1960) p. 1225, fig. 139, no. 5
 M. Perm.: Texas

CYCLOBATHMUS Knight 1940

- Type species: *Trepostira haworthi* Beede (1907) p. 166
Cyclobathmus Knight (1940) p. 314

Cyclobathmus haworthi (Beede)

- Trepostira haworthi* Beede (1907) p. 166, pl. 8, figs. 3-3b
 Perm., Whitehorse Ss.: Whitehorse Spring, Okla.; Quartermaster Fm.: Dozier,
 Tex.

- Cyclobathmus haworthi* Knight (1940) p. 314–315, pl. 9, figs. 3a, b
Perm., Rush Springs Fm., Dozier Ss. Mbr.: Oklahoma; Texas
Knight, Batten, and Yochelson (1960) p. 1225, fig. 139, no. 3
M. Perm.: Texas

CYCLONEMA Hall 1852

Type species: *Pleurotomaria bilex* Conrad (1842) p. 271

Cyclonema Hall (1852a) p. 89

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. All but two formally named late Paleozoic species originally assigned to this taxon were reassigned.]

Cyclonema globosa S. Weller

Cyclonema globosa S. Weller (1916) p. 256, pl. 18, fig. 37

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Cyclonema leavenworthana (Hall) see *Amaurotoma leavenworthana*

Cyclonema pulchellus Miller and Gurley

Cyclonema pulchellus Miller and Gurley (1896b) p. 19, pl. 3, fig. 6

Miss., Knobstone Gr.: Near New Albany, Ind.

Cyclonema strigillata (Herrick) see *Worthenia strigillata*

Pleurotomaria (*Cyclonema*?) *strigillata* Herrick 1888 see *Worthenia strigillata*

Cyclonema subangulatum (Hall) see *Amaurotoma subangulatum*

Cyclonema species of authors

Cyclonema? Herrick (1888a) pl. 8, fig. 17

Miss., Waverly Gr. of former usage.: Licking County, Ohio

CYCLOZYGA Knight 1930

Type species: *Cyclozyga mirabilis* Knight (1930) p. 74

Cyclozyga Knight (1930) p. 19

Zygopleura (*Cyclozyga*) Elias (1958) p. 16

Cyclozyga Knight, Batten, and Yochelson (1960) p. 1315

Cyclozyga carinata Knight

Cyclozyga carinata Knight (1930) p. 75, pl. 5, fig. 8

Penn., top of Labette Sh.: St. Louis, Mo.

Cyclozyga mirabilis Knight

Cyclozyga mirabilis Knight (1930) p. 74, pl. 5, fig. 7

Penn., top of Labette Sh.: St. Louis, Mo.

Knight (1936) p. 520

Knight (1941) p. 91–92, pl. 49, fig. 1

Penn., top of Labette Sh.; Henrietta Fm. of former usage (=Marmaton Gr.):

Fefee Creek, near Lackland Sta., St. Louis County, Mo.

Cyclozyga mirabilis Knight (1944) p. 463, pl. 187, fig. 30

Knight, Batten, and Yochelson (1960) p. 1315, fig. 208, no. 3

M. Penn.: Missouri

Cyclozyga neotenica (Elias)

Zygopleura (*Cyclozyga*) *neotenica* Elias (1958) p. 16, pl. 2, figs. 13, 14

Miss., Redoak Hollow Fm.: Oklahoma

CYLCIOSCAPHA Yochelson 1956

Type species: *Amphiscapha* (*Cylicioscapha*) *texana* Yochelson (1956b) p. 225

Amphiscapha (*Cylicioscapha*) Yochelson (1956b) p. 199

Cylicioscapha Knight, Batten, and Yochelson (1960) p. 1195

Cylicioscapha grada (Yochelson and Dutro)

Amphiscapha (*Cylicioscapha*) *grada* Yochelson and Dutro (1960) p. 134, pl. 12, figs. 27-29
Perm. and Trias., Sadlerochit Fm.: Cache Creek, Canning River, Alaska

Cylicioscapha texana (Yochelson)

Euomphalus subquadratus (Meek and Worthen) White (1891) p. 25 (not pl. 3, fig. 9)

Perm.: Military Crossing, Baylor County County, Tex.

Amphiscapha (*Cylicioscapha*) *texana* Yochelson (1956b) p. 225, pl. 13, figs. 7-11, 15, table 11
Penn., Wolf Mountain Sh.: W. of Perrin, Tex., Perm., Belle Plains Fm.: Military Crossing, Big Wicita River, Tex.

Cylicioscapha texana Knight, Batten, and Yochelson (1960) p. 1195, fig. 108, no. 9,
U. Penn.: Texas

Cylicioscapha williamsi (Yochelson)

Amphiscapha (*Cylicioscapha*) *williamsi* Yochelson (1956b) p. 227, pl. 13, figs. 12-14, 16-19
Perm., Bone Spring Ls.: Van Horn quad., Texas

CYLINDRITOPSIS Gemmellaro 1889

Type species: *Cylindritopsis ovalis* Gemmellaro (1889) p. 114

(S.D. Crossmann (1909a) p. 104)

Cylindritopsis Gemmellaro (1889) p. 113

Soleniscus (*Cylindritopsis*) Knight (1931b) p. 193

Cylindritopsis Knight (1936) p. 523

Cylindritopsis vaningeni (Knight) see ***Oncochilus vaningeni***

CYMATOSPIRA Knight 1942

[This name was reduced to subgeneric rank under *Knightites* Moore (1941) by Yochelson (1960) p. 241.]

Cymatospira montfortianum (Norwood and Pratten) see ***Knightites*** (***Cymatospira***) ***montfortianus***

CYRTOLITES Conrad 1838

Type species: *Cyrtolites ornatus* Conrad (1838) p. 118

Cyrtolites Conrad (1838) p. 118

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. With one exception formally named late Paleozoic species originally assigned to this taxon were reassigned.]

Cyrtolites bennetti Rowley

Cyrtolites bennetti Rowley (1901a) p. 351, pl. 28, figs. 61, 62

Miss. l. part Burlington Ls.: Louisiana, Mo.

Cyrtolites? ***Gillianus*** White and St. John see ***Porcellia gilliana***

DAWSONELLA Bradley 1874

Type species: *Anomphalus meeki* Bradley (1872) p. 88

Dawsonella Bradley (1874) p. 151

Dawsonella meeki (Bradley)

Anomphalus meeki Bradley (1872) p. 88, fig. 2

Carb., "Coal Measures": Petty's Ford, Little Vermilion River, below Georgetown, Vermilion County, Ill.

Dawsonella meeki Bradley (1874) p. 151

Dawson (1880) p. 413, figs. 12, 13

Carb., "Coal Measures": Petty's Ford, Vermilion River, Ill.

Whitfield (1881) p. 127, figs. 5, 6

White (1883a) p. 453, pl. 2, figs. 3, 4

Knight (1941) p. 97-98, pl. 96, figs. 1a-c

U. Carb., ls. with underclay: Petty's Ford, Little Vermilion River, Vermilion County, Ill.

Dawsonella? meeki Yen (1949) p. 236

U. Carb.(?): No locality cited

Dawsonella meeki Peck and MacFarland (1954) p. 297, 304, pl. 29, figs. 5, 6

Carb.: Little Vermilion River, Vermilion County, Ill.

Knight, Batten, and Yochelson (1960) p. I279, fig. 189, no. 3

M. Penn.: Illinois

DENDROPUPA Owen 1861

Type species: *Pupa vestuta* Dawson (1855) p. 270

Dendropupa Owen (1861) p. 94

Dendropupa? bigsbii (Dawson) see **Anthrocopupa? bigsbii**

Dendropupa grandaevus (Dawson)

Strophites grandaevus Dawson (1880) p. 413, fig. 15 on p. 412

L. Carb.: Canada

Strophella grandaevus Knight (1941) p. 341, fig. 5

L. Carb.: St. John, New Brunswick

Yen (1949) p. 237

Dev. or Carb.: Canada

Dendropupa pervetus Woodward 1908 see **Maturipupa primaeva** (Matthew)

Dendropupa primaeva (Matthew) see **Maturipupa primaeva**

Dendropupa vetusta (Dawson)

Pupa vetusta Dawson (1855) p. 270, figs. 1-3

Carb., "Coal Fm.": South Joggins, Nova Scotia

Dawson (1868) [see Dawson 1855] p. 383, figs. 149a-d

Carb., "Coal Measures": Joggins, Nova Scotia

Dawson (1880) p. 405, figs. 1-4

Carb., "Coal Measures": Joggins, Nova Scotia

White (1883a) p. 456, pl. 2, figs. 1, 2

Dendropupa vetusta Henderson (1935) p. 149

U. Carb.: No locality cited

Knight (1941) p. 98, pl. 96, figs. 6a-e

U. Carb., "Coal Measures": South Joggins, Nova Scotia

Yen (1949) p. 238

U. Carb.: Nova Scotia

Knight, Batten, and Yochelson (1960) p. I318, fig. 211, no. 1

Penn.: Nova Scotia

Dendropupa vetusta tenuistriata (Dawson)

Pupa vetusta var. *tenuistriata* Dawson (1880) p. 406

Carb., "Coal Measures": South Joggins, Nova Scotia

Dendropupa vetusta var. *tenuistriata* Henderson (1935) p. 150

U. Carb.: No locality cited

Yen (1949) p. 238

U. Carb.: Nova Scotia

Dendropupa species of authors

Dendropupa? (undet.) Woodward (1908) p. 74

Perm., Peruvian [sic Permian] ls.: Near Valley Grove, Ohio County, W. Va.

DIAPHOROSTOMA Fischer 1885

[Knight (1941) p. 99 noted that this name is a junior objective synonym of *Platyostoma* Conrad (1842).]

Diaphorostoma cf. *carleyana* (Hall) see *Naticopsis* (*Naticopsis*) *carleyana*

DICHOSTASIA Yochelson 1956

Type species: *Dichostasia complex* Yochelson (1956b) p. 257

Dichostasia Yochelson (1956b) p. 208

Dichostasia complex Yochelson

Dichostasia complex Yochelson (1956b) p. 257, pl. 23, figs. 12-15, table 35

Perm., Leonard Ser.: Hess Canyon quad., Texas; Word Fm.: Hess Canyon quad., Texas

Knight, Batten, and Yochelson (1960) p. 1300, fig. 196, no. 4

M. Perm.: Texas

Dichostasia simplex Yochelson

Dichostasia simplex Yochelson (1956b) p. 257, pl. 23, figs. 7-11, table 34

Perm., Hueco ls.: Orogrande quad., New Mexico; Leonard Ser.: Hess Canyon quad., Texas

DICTYOTOMARIA Knight 1945

[This name was reduced to subgeneric rank under *Glyptotomaria* Knight (1945) by Batten (1958) p. 210.]

Dictyotomaria *lineata* (Sayre) see **Glyptotomaria** (*Dictyotomaria*) *lineata*

Dictyotomaria *meekana* (Hall) see **Glyptotomaria** (*Dictyotomaria*) *meekana*

Dictyotomaria *quadrilineatus* (Girty) see **Glyptotomaria** (*Dictyotomaria*) *quadrilineatus*

Dictyotomaria *reticulatus* (Girty) see **Glyptotomaria** (*Dictyotomaria*) *reticulatus*

Dictyotomaria *scitula* (Meek and Worthen) see **Glyptotomaria** (*Dictyotomaria*) *scitula*

DIPLOCONULA Yochelson 1956

Type species: *Diploconula biconvex* Yochelson (1956b) p. 247

Diploconula Yochelson (1956b) p. 203

Diploconula biconvexa Yochelson

Diploconula biconvexa Yochelson (1956b) p. 247, pl. 21, figs. 16-23, table 25

Perm., Leonard Ser. and Word Fm.: Hess Canyon quad., Texas

Knight, Batten, and Yochelson (1960) p. 1197, fig. 111, no. 3

M. Perm.: Texas

DISCOTOMARIA Batten 1956

Type species: *Discotomaria basisulcata* Batten (1956) p. 43

Discotomaria Batten (1956) p. 43

Discotomaria basisulcata Batten

Discotomaria basisulcata Batten (1956) p. 43

Perm., Leonard Ser.: Glass Mts., Tex.

Batten (1958) p. 216, pl. 37, figs. 9-11, 17, 18, 21-23

U. Penn. to u. part Leonard Ser. (Perm.): Hess Canyon and Altuda quads., Texas

Knight, Batten, and Yochelson (1960) p. 1216, fig. 130, no. 5a, b

Perm., Leonard Ser.: Texas

Discotomaria costata Batten

Discotomaria costata Batten (1958) p. 216, pl. 37, figs. 24, 25

Perm., u. part Leonard to m. part Guadalupe Ser.: Orogrande quad., New Mexico; Guadalupe Mts., Tex.

Discotomaria dubia Batten

Discotomaria dubia Batten (1958) p. 215, pl. 37, figs. 15, 16

Perm., u. part Leonard Ser.: Hess Canyon quad., Texas

Discotomaria nodosa Batten

Discotomaria nodosa Batten (1958) p. 215, pl. 37, figs. 12-14, 19-20

Perm., Wolfcamp to Leonard Ser.: Orogrande quad., New Mexico; Hess Canyon quad., Texas

DISCOTROPIS Yochelson 1956

Type species: *Discotropis publicus* Yochelson (1956b) p. 242

Discotropis Yochelson (1956b) p. 203

Discotropis girtyi Yochelson

Discotropis girtyi Yochelson (1956b) p. 241, pl. 20, figs. 1-7

Perm., Bone Spring Ls.: Texas

Discotropis publicus Yochelson

Euomphalus sulcifer angulatus Girty, Newell and others (1953) pl. 23, fig. 40

Discotropis publicus Yochelson (1956b) p. 243, pl. 21, figs. 1-11, table 24

Perm., Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.; Bell Canyon Fm., Pinery Ls. Mbr.: Guadalupe Mts., Tex.

Knight, Batten, and Yochelson (1960) p. 1196, fig. 111, no. 2

M. Perm.: Texas

Discotropis sulcifer (Girty)

Euomphalus sulcifer Girty (1908a) [1909] p. 482, pl. 16, figs. 23, 24

Perm., Dark limestone: Guadalupe Mts., Tex.

Euomphalus sulcifer var. *angulatus* Girty (1908a) [1909] p. 483, pl. 16, fig. 25

Perm., Dark limestone: Guadalupe Mts., Tex.

Schizostoma sulcifer Girty (1915a) p. 177

U. Carb.: North America

Schizostoma sulcifer var. *angulatus* Girty (1915a) p. 177

Discotropis sulcifer Yochelson (1956b) p. 242, pl. 20, figs. 8-19, table 23

Perm., Leonard Ser.: Hess Canyon quad., Texas

Discotropis species of authors

- Discotropis* sp. 1. Yochelson (1956b) p. 246, pl. 20, figs. 20-22
Perm., Word Fm. and Bone Spring Ls.: Hess Canyon and Van Horn quads., Texas
- Discotropis* sp. 2. Yochelson (1956b) p. 247, pl. 21, figs. 12, 13
Perm., Leonard Ser.: Hess Canyon quad., Texas
- Discotropis* sp. 3. Yochelson (1956b) p. 247, pl. 21, figs. 14, 15
Perm., Bell Canyon Fm.: Guadalupe Mts., Tex.

DONALDINA Knight 1933

- Type species: *Aclisina grantonensis* Donald (1898) p. 60
Donaldina Knight (1933a) p. 57

Donaldina attenuata ardmorensis Elias

- Donaldina attenuata* var. *ardmorensis* Elias (1958) p. 18, pl. 2, fig. 6; text fig. 3
Miss., Redoak Hollow Fm.: Oklahoma

Donaldina grantonensis (Donald)

- Donaldina grantonensis* Elias (1958) p. 19, pl. 2, fig. 4, text fig. 2
Miss., Redoak Hollow Fm.: Oklahoma
[No synonymy is presented of this European species.]

Donaldina robusta (Stevens)

- Aclis robusta* Stevens (1858) p. 259
Carb., "Coal Measures": Danville, Ill.
Meek and Worthen (1873) p. 596, pl. 29, fig. 6
Carb., "Coal Measures": Danville, Ill.
- Aclis?* *stevensoni* White (1881) p. 35, pl. 3, figs. 9a, b
Carb.: Coyote Creek, N. Mex.
- Aclisina robusta* Keyes (1888) [1889] p. 240
Carb., "L. Coal Measures": Des Moines, Iowa
Keyes (1894b) [1895] p. 202
Carb., "U. Coal Measures": Kansas City, Mo.
Mark (1912) [1913] p. 313, pl. 16, fig. 4
Penn., Conemaugh Fm., Cambridge Ls. Mbr.: Petersburg, Ohio; Portersville Ls.: Portersville, Ohio
- Aclisina pumila* Mark (1912) [1913] p. 314, pl. 16, fig. 10
Penn., Portersville Ls.: Portersville, Ohio
- Aclisina robusta* Knight (1931a) p. 10, pl. 1, figs. 2a-f; text figs. 1b, i
Penn., top of Labette Sh.: St. Louis, Mo.
- Donaldina robusta* Knight (1944) p. 463, pl. 187, figs. 27-29
Penn.: Mississippi Valley
Hoare (1961) p. 177, pl. 21, fig. 25; pl. 22, fig. 1
M. Penn., Tiawah Ls.: Henry County, Mo.

Donaldina stevensana (Meek and Worthen)

- Turritella?* *stevensana* Meek and Worthen (1866a) p. 382, pl. 27, figs. 8, 8a
Carb., "U. Coal Measures": North Branch Saline Creek, Gallatin County, Ill.
- Aclisina stevensana* Keyes (1894b) [1895] p. 202
Carb., "U. Coal Measures": Kansas City, Mo.
- Aclisina stevensiana?* [sic] Girty (1903) p. 459
Carb.: Glenwood Springs, Colo.

- Aclisina stevensana* Mark (1912) [1913] p. 313, pl. 16, fig. 5
Penn., Conemaugh Fm., Cambridge Ls. Mbr.: Drummond Knob, Ohio; Portersville Ls.: Portersville, Ohio
- Aclisina formosa* Mark (1912) [1913] p. 314, pl. 16, fig. 7
Penn., Portersville Ls.: Portersville, Ohio
- Aclisina stevenisana* [sic] Price (1914b) p. 543
Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Hutton, Md.
Price (1916) p. 728
Penn., Kanawha Fm., Gilbert Sh. Mbr.: Wyoming County, W. Va.
- Aclisina stevensana* Warthin (1930) p. 54, pl. 7, fig. 24
Penn.: Oklahoma
Sayre (1930) [1931] p. 149, pl. 17, fig. 5
Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.
Knight (1931a) p. 2, 8, pl. 1, figs. 1a-g; text figs. 1, 1a, h
Penn., top Labette Sh.: St. Louis, Mo.
- Donaldina stevensana* Knight (1933a) p. 58
Knight (1936) p. 532
Knight (1944) p. 463, pl. 187, figs. 25, 26
Penn.: Mississippi Valley
Hoare (1961) p. 176, pl. 21, fig. 24
M. Penn., Seville Ls.: Vernon County, Mo.

***Donaldina stevensana gibbosa* (Warthin)**

- Aclisina stevensana* var. *gibbosa* Warthin (1930) p. 54, pl. 7, fig. 25
Penn., Holdenville Sh.: 3 miles E. of Ada, Okla.

***Donaldina swallowiana* (Geinitz)**

- Turbonilla swallowiana* Geinitz (1866) p. 5, table 1, fig. 19
Penn., "Dyas": Nebraska City, Nebr.
- Aclis swallowiana* [sic] Meek (1872a) p. 229, pl. 11, fig. 7a, b
Carb., "U. Coal Measures": Nebraska City, Nebr.
- Aclisina swallowiana* [sic] S. Weller (1898) p. 54
- Aclisina conditi* Mark (1912) [1913] p. 314, pl. 16, figs. 8, 9
Price (1916) p. 729
Penn., Kanawha Fm., Gilbert Sh. Mbr.: Wyoming County, Ohio
- Aclisina swallowiana* [sic] Mark (1912) [1913] p. 313, pl. 16, fig. 6
Penn., Conemaugh Fm., Cambridge Ls. Mbr.: Drummond Knob, Ohio; Portersville Ls.: Portersville, Ohio
- Aclisina swallowiana* [sic] Sayre (1930) [1931] p. 149, pl. 17, fig. 6
Penn., Drum Ls., oolitic mbr.: Turner, Kans.
Knight (1931a) p. 2
- Donaldina swallowiana* Knight (1933a) p. 57

***Donaldina tenuis* (Koninck)**

- Solenospira pygmaea* S. Weller (1916) p. 256, pl. 18, figs. 105 (6?)
Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.
- C. Branson (1937) p. 658
Miss., Sacajawea Fm.: Wyoming
- Donaldina* sp. cf. *D. tenuis* Elias (1958) p. 20, pl. 2, fig. 5, text fig. 1
Miss., Redoak Hollow Fm.: Oklahoma
[No synonymy is presented of this European species.]

Donaldina species of authors

Donaldina? sp. Walter (1953) p. 702, pl. 73, fig. 12

Perm., Rustler Fm., gray ls. of l. mbr.: Culberson County, Tex.

ECCULIOMPHALUS Portlock 1843

Type species: *Ecculiomphalus bucklandi* Portlock (1843) p. 411

(S.D. Miller (1889) p. 403)

Ecculiomphalus Portlock (1843) p. 411

Ecculiomphalus gyroceras (Roemer)

Euomphalus gyroceras Roemer (1852) p. 91, pl. 11, figs. 6a, b

Carb.: San Saba Valley, Tex.

Eccyliomphalus [sic] *gyroceras* Miller (1889) p. 403

Phanerotinus gyroceras Weller (1898) p. 420

Eccyliomphalus [sic] *gyroceras* Bassler (1915) p. 467

[Bassler indicates this is Lower Ordovician, not Carboniferous.]

Eccyliomphalus paradoxus* (Winchell) see *Straparollus* (*Serpulaspira*) *paradoxus

ECTOMARIA Koken 1896

Type species: *Murchisonia nieszowskii* Schmidt (1858) p. 202

Ectomaria Koken (1896) p. 395

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. One late Paleozoic species assigned to this taxon has not been reassigned.]

Ectomaria attenuata (Hall)

Murchisonia attenuata Hall (1856) p. 27

Miss., St. Louis Ls.: Spergen Hill, Ind.

Whitfield (1882a) p. 88, pl. 9, fig. 13

Miss., St. Louis Ls.: Spergen Hill, Ind.

Hall (1883) p. 360, pl. 32, fig. 13

Miss., St. Louis Ls.: Spergen Hill, Ind.

Solenispira [sic] *attenuata* Ulrich (1897) p. 1022

Cummings (1906) p. 1359, pl. 26, fig. 13

Miss., Salem Ls.: Spergen Hill, Paynters Hill, Harrodsburg, Bloomington, Ellettsville, Stinesville, and Romona, Ind.

EIRYLSIA Batten 1956

Type species: *Eirylsia exquisita* Batten (1956) p. 44

Eirylsia Batten (1956) p. 44

Eirylsia exquisita Batten

Eirylsia exquisita Batten (1956) p. 44

Perm., Bone Spring Ls.: Sierra Diablo, Tex.

Batten (1958) p. 233, pl. 41, figs. 1-6, 18

Perm., Leonard to Guadalupe Ser.: N. portal of Apache Canyon, Van Hess quad., and Guadalupe Mts., Tex.

Knight, Batten, and Yochelson (1960) p. 1207, fig. 118, no. 9

M. Perm.: Texas

Eirylsia nodosa Batten

Eirylsia nodosa Batten (1958) p. 236, pl. 41 fig. 20-22

Perm., Guadalupe Ser.: Hess Canyon quad. and Guadalupe Mts., Tex.

Eirlysia reticulata Batten

Eirlysia reticulata Batten (1958) p. 234, pl. 41, figs. 7-17, 19

Perm., u. part Wolfcamp to Guadalupe Ser.: Guadalupe Mts., N. Mex.; Guadalupe Mts., Tex.

ELASMONEMA Fisher 1885

Type species: *Loxonema bellatula* Hall (1861) p. 104

(S.D. Miller (1889) p. 339)

Elasmonema Fischer (1885) p. 778

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic.]

Elasmonema (Anematina) *minutissimus* (Knight) see *Anematina minutissimus*

Elasmonema (Anematina) *proutanum* (Hall) see *Anematina proutana*

ELKOCERAS Lintz and Lohr 1958

Type species: *Elkoceras volborthi* Lintz and Lohr (1958) p. 977

Elkoceras Lintz and Lohr (1958) p. 977

[Lintz (1962) p. 612 considered this name a subjective synonym of *Straparollus* (*Euomphalus*) Sowerby (1814).]

Elkoceras volborthi Lintz and Lohr 1958 see *Straparollus* (*Euomphalus*) *volborthi*

EOPTYCHIA Longstaff 1933

Type species: *Loxonema sulcatum* Koninck (1881) p. 54

Eoptychia Longstaff (1933a) p. 112

Eoptychia? intermittens Hoare

Eoptychia? intermittens Hoare (1961) p. 164, pl. 21, figs. 3, 4

M. Penn., Robinson Branch Ls.: Honey Creek, Henry County, Mo.

Eoptychia rothi (Knight)

Pseudozygopleura (*Pseudozygopleura*) *rothi* Knight (1930) p. 37, pl. 1, fig. 8

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Pseudozygopleura*) *rothi* Knight (1936) p. 520-521

Eoptychia rothi Knight (1944) p. 461, pl. 186, fig. 27

Penn., Des Moines Ser.: Mississippi Valley

Eoptychia trochus (Knight)

Pseudozygopleura (*Pseudozygopleura*) *trochus* Knight (1930) p. 37, pl. 1, fig. 7

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Pseudozygopleura*) *trochus* Knight (1936) p. 520-521

Eoptychia trochus Knight (1944) p. 46, pl. 186, fig. 26

Penn., Des Moines Ser.: Mississippi Valley

Eoptychia? trochus Hoare (1961) p. 164, pl. 21, fig. 2

M. Penn., Robinson Branch Ls.: Henry County, Mo.

EOTROCHUS Whitfield 1882

Type species: *Pleurotomaria concava* Hall (1858) p. 24 [not Deshayes 1836 = *Pleurotomaria tenuimarginata* Hall in Miller (1877) p. 245]

Eotrochus Whitfield (1882a) p. 77

Eotrochus concavus (Hall) Whitfield 1882 see *Eotrochus tenuimarginatus* (Hall in Miller 1877)

Eotrochus? liratus H. Chronic 1952 see *Sallya liratus*

Eotrochus tenuimarginatus (Hall in Miller)

Pleurotomaria concava Hall (1858) p. 24 [not Deshayes 1836]

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Pleurotomaria tenuimarginatus Hall in Miller (1877a) p. 245

Eotrochus concavus Whitfield (1882a) p. 78, pl. 9, figs. 21-23

Miss., St. Louis Ls.: Spergen Hill, Ind.; Alton Ill.

Hall (1883) p. 365, pl. 32, figs. 21-23.

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Cumings (1906) p. 1347, pl. 26, figs. 21-23

Miss., Salem Ls.: Spergen Hill, Paynters Hill, and Stinesville, Ind.; Alton, Ill.

Eotrochus tenuimarginatus Knight (1941) p. 113-114, pl. 58, figs. 3a, b

Miss., Salem Ls.: Spergen Hill, Washington County, Ind.

Knight, Batten, and Yochelson (1960) p. I298, fig. 195, no. 6

M. Miss.: North America

Eotrochus species of authors

Eotrochus sp. S. Weller (1916) p. 257, pl. 18, figs. 40, 41

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

EUCOCHLIS Knight 1933

Type species: *Eucochlis perminuta* Knight (1933a) p. 55

Eucochlis Knight (1933a) p. 40

Eucochlis perminuta Knight

Eucochlis perminuta Knight (1933a) p. 53, pl. 9, figs. 2a-f; pl. 12, fig. 5

Penn., Labette Sh.: Stratmann, St. Louis County, Mo.

Knight (1941) p. 116-117, pl. 51, fig. 5

U. Carb., top of Labette Sh.; Henrietta Fm. of former usage (=Marmaton Gr.):

Feeffee Creek, near Lackland Sta., St. Louis County, Mo.

Eucochlis perminuta Knight (1944) p. 471, pl. 193, fig. 20

Penn.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. I243, fig. 155, no. 5

M. Penn.: Missouri

EUCONOSPIRA Ulrich 1897

Type species: *Pleurotomaria turbiniformis* Meek and Worthen (1860) [1861] p. 461

(S.D. Knight (1937) p. 710)

Euconospira Ulrich (1897) p. 955

Euconospira arizonensis (H. Chronic)

Pernotrochus arizonensis H. Chronic (1952) p. 120, pl. 3, figs. 5a-7

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Euconospira arkansana Mather

Euconospira arkansana Mather (1915) p. 235, pl. 15, fig. 25

Penn., Morrow Ser.: Fayetteville, Ark.; Chouteau, Okla.

Euconospira bicarinata (McChesney) Girty 1903 see *Euconospira turbiniformis* (Meek and Worthen)

Euconospira? cryptolirata H. Chronic

Euconospira? cryptolirata H. Chronic (1952) p. 116, pl. 2, figs. 11, 12

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

***Euconospira disjuncta* Girty**

Euconospira disjuncta Girty (1910a) p. 230

Miss.; basal part Fayetteville Sh.: Fayetteville quad., Arkansas

Girty (1915b) p. 114, pl. 11, fig. 10

Miss., Batesville Ss.: Ramsey Ferry, Ark.

***Euconospira halliana* (Shumard)**

Pleurotomaria halliana Shumard (1859) [1860] p. 399

Perm., White ls.: Guadalupe Mts.

Euconospira halliana Girty (1908a) [1909] p. 478

***Euconospira hermosana* Girty**

Euconospira hermosana Girty (1934a) p. 253-254, figs. 10-12

Penn., McCoy Fm.: Eagle County, Colo.

***Euconospira missouriensis* (Swallow)**

Trochus missouriensis Swallow (1860) p. 657

Carb., "Coal Measures": Jackson County, Mo.

Pleurotomaria missouriensis Keyes (1894b) [1895] p. 136, pl. 48, figs. 3a, b

Carb., "U. Coal Measures": Kansas City, Mo.

Euconospira missouriensis Ulrich (1897) p. 956

Greger (1917) p. 114, pl. 3

Penn., Drum Ls.: Kansas City, Mo.

Pleurotomaria missouriensis Morgan (1924) pl. 49, fig. 19

Penn., Wapanucka Fm.: Stonewall quad., Oklahoma

Euconospira missouriensis Sayre (1930) [1941] p. 138, pl. 13, fig. 12

Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.; Kansas City, Mo.

***Euconospira obsoletu* Girty**

Euconospira obsoletu Girty (1908a) [1909] p. 477, pl. 8, fig. 14

Penn., m. part Capitan Ls.: Guadalupe Mts., Tex.

***Euconospira planibasalis* Ulrich**

Euconospira planibasalis Ulrich (1897) p. 1080, figs. a, b, c

U. Carb.: Kansas City, Mo.

***Euconospira pulchra* Batten**

Euconospira pulchra Batten (1958) p. 228, pl. 39, figs. 24, 25; pl. 40, figs. 1-9

Perm., Wolfcamp to Guadalupe Ser.: Hess Canyon quad., W. of Van Horn, and Altuda quad., Texas

***Euconospira spiroperforata* Batten**

Euconospira spiroperforata Batten (1958) p. 230, pl. 39, fig. 23; pl. 40, figs. 12-14

Perm., Wolfcamp to Guadalupe Ser.: Carlsbad Caverns W. quad., New Mexico; Altuda quad., Texas

Euconospira taggarti (Meek) see *Pleurotomaria taggarti*

***Euconospira turbiniformis* (Meek and Worthen)**

Pleurotomaria bicarinata McChesney (1859) p. 60, [not Sowerby 1818]

Carb., "Coal Measures": Lasalle, Ill.

Pleurotomaria turbiniformis Meek and Worthen (1860) [1861] p. 461

Carb., "U. Coal Measures": Lasalle, Ill.

- Meek and Worthen (1866a) p. 359, pl. 28, figs. 8a-c
 Carb., "U. Coal Measures": Lasalle, Ill.
- White (1884b) p. 160, pl. 32, figs. 7, 8
 Carb., "U. Coal Measures": Lasalle and Paris, Ill.; Vigo County, Ind.
- Keyes (1894b) [1895] p. 135, pl. 48, figs. 6a, b
 Carb., "U. Coal Measures": Kansas City, Mo.
- Euconospira turbiniformis* Ulrich (1897) p. 949, 956, figs. d, e, on p. 1080
 U. Carb.: Kansas City, Mo.
- Euconospira bicarinata* Girty (1903) p. 454
 Penn., Hermosa Fm.: San Juan region, Colorado
- Euconospira turbiniformis* Shimer (1926) p. 80
 Perm.: Minnewanka region, Alberta
- Sayre (1930) [1931] p. 137, pl. 15, fig. 5
 Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.; Kansas City, Mo.
- Knight (1941) p. 118-119, pl. 35, figs. 1a-c
 Penn., La Salle Ls.: La Salle, Ill.
- Knight (1944) p. 457, pl. 185, fig. 11
 Penn.: Mississippi Valley
- Knight, Batten, and Yochelson (1960) p. 1204, fig. 118, no. 10
 U. Penn.: Illinois
- Sturgeon (1964a) p. 206, pl. 33, figs. 27, 28
 Penn., Allegheny Fm., Vanport Ls. Mbr.: Mahoning County, Ohio

***Euconospira varizona* Batten**

- Euconospira varizona* Batten (1958) p. 232, pl. 39, figs. 18-22; pl. 40, figs. 10-11
 Perm., Wolfcamp to Guadalupe Ser.: Hess Canyon quad., Texas

***Euconospira* species of authors**

- Euconospira* [sic] sp. *a.* Girty (1903) p. 454
 Penn., Rico Fm.: San Juan region, Colorado
- Euconospira* sp. *b.* Girty (1903) p. 454
 Penn., Rico Fm.: San Juan region, Colorado
- Euconospira* sp. Girty (1908a) [1909] p. 478
 Girty (1915b) p. 115
 Miss., Batesville Ss.: Ramsey Ferry, Ark.
- Allen and Lester (1954) p. 129, pl. 33, fig. 5
 Miss.: Little Sand Mtn., E. of Ringgold, Ga.

***EULIMA* Risso 1826**

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. Formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Eulima?* *peracuta* Meek and Worthen 1860 see *Meekospira peracuta

***EUNEMA* Salter 1859**

Type species: *Eunema strigillatum* Salter (1859) p. 29

Eunema Salter (1859) p. 29

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic.]

Eunema?* *salteri* Meek and Worthen 1860 see *Orthonema salteri

EUOMPHALUS J. Sowerby 1814

[This name was reduced to subgeneric rank under *Straparollus* Sowerby (1814) by Knight (1934a) p. 144.]

Euomphalus ammon White and Whitfield 1862 see *Straparollus* (*Straparollus*) *ammon*

Euomphalus angularis (Weller) see *Straparollus* (*Euomphalus*) *angularis*

Euomphalus boonensis Swallow 1863 see *Straparollus* (*Euomphalus*) *boonensis*

Euomphalus catilloides (Conrad) see *Straparollus* (*Amphiscapha*) *catilloides*

Euomphalus exortivus Dawson 1868 see *Straparollus* (*Euomphalus*) *exortivus*

Euomphalus gyroceras Roemer 1852 see *Ecculiomphalus gyroceras*

Euomphalus kaibabensis H. Chronic 1952 see *Straparollus* (*Euomphalus*) *kaibabensis*

Euomphalus latus Hall 1858 see *Straparollus* (*Euomphalus*) *latus*

Euomphalus lens Hall 1860 see *Pleurotomaria?* *lens*

Euomphalus luxus White 1875 see *Straparollus* (*Euomphalus*) *subplanus* (White)

Euomphalus multistriatus E. Branson 1938 see *Straparollus* (*Euomphalus*) *multistriatus*

Euomphalus obtusus Hall 1858 see *Straparollus* (*Straparollus*) *obtus*

Euomphalus (*Straparollus*) *ophirensis* Hall and Whitfield 1877 see *Straparollus* (*Straparollus*) *ophirensis*

Euomphalus pernodosus (Meek and Worthen) White 1877 see *Straparollus* (*Euomphalus*) *kaibabensis* (H. Chronic)

Euomphalus perspectivus Swallow 1863 see *Straparollus* (*Euomphalus*) *planidorsatus* (Meek and Worthen)

Euomphalus planidorsatus Meek and Worthen 1860 see *Straparollus* (*Euomphalus*) *planidorsatus*

Euomphalus planispira Hall 1856 see *Straparollus* (*Straparollus*) *planispira*

Euomphalus quadrivolvus Hall 1856 see *Straparollus* (*Straparollus*) *quadrivolvus*

Euomphalus roberti White 1862 see *Straparollus* (*Euomphalus*) *roberti*

Euomphalus rugosus Hall 1858 [not Sowerby 1812] see *Straparollus* (*Amphiscapha*) *subrugosus* Meek and Worthen

Euomphalus similis Meek and Worthen 1861 see *Straparollus* (*Euomphalus*) *similis*

Euomphalus similis var. *planus* Meek and Worthen 1861 see *Straparollus* (*Euomphalus*) *similis planus*

Euomphalus spergenensis Hall 1856 see *Straparollus* (*Straparollus*) *spergenensis*

Euomphalus spergenensis var. *planorbiformis* Hall 1856 see *Straparollus* (*Straparollus*) *spergenensis planorbiformis*

Euomphalus spirorbis Hall 1860 see *Straparollus* (*Straparollus*) *spirorbis*

Euomphalus springvalensis White 1876 see *Straparollus* (*Straparollus*) *springvalensis*

Euomphalus subplanus Hall 1852 see *Straparollus* (*Euomphalus*) *subplanus*

Euomphalus subquadratus (Meek and Worthen) see *Straparollus* (*Amphiscapha*) *subquadratus*

Euomphalus subquadratus (Meek and Worthen) White 1891 [part] see *Cylicioscapha texana* (Yochelson)

Euomphalus subquadratus (Meek and Worthen) White 1891 [part] see *Straparollus* (*Euomphalus*) *cornudanus* (Shumard)

Euomphalus (*Straparollus*) *subrugosus* (Meek and Worthen) Walcott 1884 see *Straparollus* (*Amphiscapha*) *subrugosus*

Euomphalus subrugosus Meek and Worthen 1873 [part] see *Straparollus* (*Amphiscapha*) *subrugosus*

Euomphalus subrugosus Meek and Worthen 1873 [part] see **Straparollus** (*Amphiscapha*) **reedsii** Knight

Euomphalus sulcifer Girty see **Discotropis sulcifer**

Euomphalus sulcifer Girty, Newell and others 1953 see **Straparollus** (**Euomphalus**) **levicarinatus** Yochelson

Euomphalus sulcifer var. **angulatus** Girty 1908 see **Discotropis sulcifer** (Girty)

Euomphalus sulcifer angulatus Girty, Newell and others 1953 see **Discotropis publicus** Yochelson

Euomphalus umbilicatus Meek and Worthen see **Straparollus** (**Euomphalus**) **umbilicatus**

Euomphalus utahensis Hall and Whitfield, Girty 1912 see **Straparollus** (**Euomphalus**) **utahensis**

Euomphalus (**Straparollus**) **utahensis** Hall and Whitfield 1877 see **Straparollus** (**Euomphalus**) **utahensis**

Euomphalus (**Omphalotrochus**) **whitneyi** Meek 1964 see **Omphalotrochus whitneyi**

Euomphalus ——— White 1891 see **Omphalotrochus** species of authors

Euomphalus sp. Plummer and Moore 1921 see **Straparollus** (**Euomphalus**) **plummeri** Knight

Euomphalus sp. Plummer and Moore 1921 see **Straparollus** (**Straparollus**) **savagei** Knight

Euomphalus (resembles **E. quadratus** McCoy) Dawson 1868 see **Straparollus** (**Euomphalus**) (resembles **E. quadratus** McCoy)

Euomphalus? sp. (juvenile) H. Chronic 1952 see **Straparollus** (**Euomphalus?**) sp., juvenile

Euomphalus species of authors see **Straparollus** (**Euomphalus**) species of authors

EUPHEMITELLA Tasch 1953

Type species: *Euphemitella emrichi* Tasch (1953) p. 398

Euphemitella Tasch (1953) p. 397

Euphemitella emrichi Tasch

Euphemitella emrichi Tasch (1953) p. 398, pl. 49, figs. 8, 9

Penn., Stotler Ls., Dry Sh. Mbr.: Kansas

[The type is a steinkern, and the generic and specific characters are indeterminate according to Knight, Batten, and Yochelson (1960) p. 1184.]

EUPHEMITES Warthin 1930

Type species: *Bellerophon urii* Fleming (1828) p. 338

Euphemites Warthin (1930) p. 44

Euphemites aequisulcatus H. Chronic

Euphemites aequisulcatus H. Chronic (1952) p. 113, pl. 1, figs. 1a-c; table 2

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Yochelson (1960) p. 246, pl. 47, figs. 29-34

Perm., Bone Spring Ls., Leonard Ser. and Word Fm.: Glass Mts., Tex.

Euphemites arenarius (Shimer)

Euphemus carbonarius arenarius Shimer (1926) p. 79, pl. 7, fig. 13

Perm.: Minnewanka region, Alberta

Euphemites arenarius Yochelson (1960) p. 246

Euphemites batteni Yochelson

Euphemites batteni Yochelson (1960) p. 249, pl. 46, figs. 10-17; table 4

Perm., Word Fm.: Glass Mts.; Cherry Canyon Fm.: Guadalupe Mts., Tex.

Euphemites blaneyanus (McChesney)

Bellerophon blaneyanus McChesney (1859) p. 60

Carb., "Coal Measures": Saline and Peoria Counties, Ill.; Danville and Grayville, Ill.

McChesney (1865) pl. 2, figs. 3a-c

McChesney (1868) p. 45, pl. 2, figs. 5a-c

Carb., "Coal Measures": Saline and Peoria Counties, Ill.; Danville and Grayville, Ill.

Euphemites blaneyanus King (1940) p. 151-152, pl. 27, figs. 1-3

Penn., Mineral Wells Fm.: Mineral Wells, Palo Pinto County, Tex.

Euphemites callosus (J. Weller)

Euphemus callosus J. Weller (1930) p. 15, pl. 2, figs. 1a-3b

Penn.: Greene County, Ill.

Euphemites callosus Moore (1941) p. 133-135, 140, 141, text figs. 1a-c, 2a-c, 4a, b

Penn.: Illinois

Euphemites carbonarius (Cox)

Bellerophon carbonarius Cox (1857) p. 562

Carb., "Coal Measures": Kentucky

Geinitz (1866) p. 6, table 1, fig. 8

Penn., "Dyas": Nebraska City, Nebr.

Herrick (1887a) p. 19, pl. 2, fig. 20

Carb., "Coal Measures": Flint Ridge, Ohio

Smith (1896) p. 39

Carb., "L. Coal Measures": Conway County, Ark.

Euphemus carbonarius Ulrich (1897) p. 855

Girty (1899a) p. 592

Bellerophon carbonarius Woodruff (1906) p. 282

Carb.: Weeping Water, Nebr.

Euphemus carbonarius Price (1914b) p. 533

Penn., Conemaugh Fm., Ames Ls. Mbr.: Preston County, W. Va.; Brush Creek

Ls. Mbr.: Bruceton Mills, W. Va.; Hutton, Garrett County, Md.

Price (1915) p. 612, pl. 42, fig. 9

Penn., Eagle Ls.: Mingo County, W. Va.

Mather (1915) p. 233

Penn., Morrow Ser.: Fayetteville, Ark.

E. Branson (1916) p. 659

Perm. and Trias., Embar Fm. of former usage: Wyoming

Shimer (1919) p. 488

Perm. and Trias., Kaibab and Moenkopi Fms.: Arizona

Plummer and Moore (1921) [1922] pl. 14, fig. 23; pl. 22, figs. 11-13

Penn., Mineral Wells Fm.: Mineral Wells, Tex.; Graham Fm., Gunsight Ls.

Mbr.: S. of Gunsight, Tex.

Morningstar (1922) p. 249, pl. 15, figs. 4, 5

Penn., Harrison "ore": Jackson County; Sharon "ore": Scioto County; Boggs

Ls.: Muskingum County; Pottsville Fm., l. part Mercer Mbr.: Generally; l.

Mercer "ore": Jackson County; McArthur Mbr.: Vinton County, Ohio

Morgan (1924) pl. 49, figs. 7, 7a

Penn., Boggy Fm.: Stonewall quad., Oklahoma

C. Branson (1930) p. 53

Perm., Phosphoria Fm., l. chert mbr.: Wind River Mts., Wyo.

Bellerophon (Euphemus) carbonarius Morse (1931) p. 322, pl. 53, fig. 3

Penn., Kendrick Sh. and Magoffin Beds: Kentucky

Euphemites carbonarius R. H. King (1940) p. 151

[King (1940) p. 150 suggested use of this species name be discontinued for additional material as the original species description is inadequate by currently accepted standards.]

C. Branson (1948) p. 699

Hoare (1961) p. 141, pl. 19, figs. 13, 14

M. Penn., Robinson Branch Ls.: Henry County, Mo.

Euphemites circumcostatus* Walter 1953 see *Euphemitopsis circumcostatus

***Euphemites compressus* Elias**

Euphemites compressus Elias (1958) p. 1, pl. 1, figs. 3, 4

Miss., Redoak Hollow Fm.: Oklahoma

***Euphemites crenulatus* Yochelson**

Euphemites crenulatus Yochelson (1960) p. 249, pl. 47, figs. 22–28

Perm., Word Fm.: Glass Mts., Tex.

***Euphemites enodis* Sturgeon**

Euphemites enodis Sturgeon (1964a) p. 197, pl. 32, figs. 1–5; pl. 36, figs. 12, 13

Penn., Allegheny Fm., Vanport and Columbiana Ls. Mbrs.: Mahoning and Columbiana Counties, Ohio

***Euphemites exquisitus* Yochelson**

Euphemites exquisitus Yochelson (1960) p. 248, pl. 46, figs. 4–9, table 3

Perm., Bone Spring Ls.: Hueco Mts.–Sierra Diablo Plateau; Leonard Ser.: Glass Mts.; Word Fm.: Glass Mts., Tex.

***Euphemites galericulatus* (Winchell)**

Bellerophon galericulatus Winchell (1862) [1863] p. 426

Miss., Marshall Fm.: Marshall, Battle Creek, and other locations, Michigan

Herrick (1888a) p. 89, pl. 2, fig. 34; pl. 9, fig. 32

Miss., Waverly Gr. of former usage: Licking County, Ohio

Lane and Cooper (1900) p. 273

Miss., Point Aux Barques Ss.: Marshall and Battle Creek, Mich.

Euphemites galericulatus Butts (1940) [1941] p. 224, pl. 125, figs. 19–22

Miss., Cuyahoga Gm.: Licking County, Ohio; Price Fm.: 1 mile NW. of Cleveland, Russell County, Va.; Price Fm.: SW. Virginia; Licking County, Ohio

***Euphemites graffhami* Moore**

Euphemites graffhami Moore (1941) p. 142–145, pl. 2, figs. 1a–d, 2, 3a, b, 4a, b, 5a, b, 6a, b, text figs. 3c, d

Penn., Deer Creek Ls., u. part Ozawkie Ls. Mbr.: W. of Lawrence, Kans.

***Euphemites imperator* Yochelson**

Euphemites imperator Yochelson (1960) p. 247, pl. 46, figs. 18–22; pl. 48, fig. 27

Perm., Leonard Ser. and Word Fm.: Glass Mts., Tex.; Bone Spring Ls.: Hueco Mts.–Sierra Diablo Plateau, Tex.

***Euphemites incarinatus* Easton**

Euphemites incarinatus Easton (1943) p. 150, pl. 24, fig. 22

Miss., Pitkin Ls.: Near Jasper, Ark.

Euphemites inspeciosus (White)

Bellerophon inspeciosus White (1881) p. 30, pl. 4, fig. 4a-d

Carb.: Near Taos and at Taos Peak, N. Mex.

Euphemus inspeciosus Girty (1889a) p. 592

Euphemus inspeciosus? Girty (1909c) p. 100

Perm., Yeso Fm.: Alamillo and Mesa del Yeso, N. Mex.; San Andres Ls.: Nogal Creek and Engle, N. Mex.

Euphemus inspeciosus Girty (1912d) p. 54, pl. 7, figs. 5-5b

Perm., Park City Fm.: Park City district, Utah

Euphemites inspeciosus King (1940) p. 152, pl. 24, fig. 6

Penn., Graford Fm.: W. of Brownwood, Brown County, Tex.

Euphemites kingi Yochelson

Euphemites kingi Yochelson (1960) p. 249, pl. 47, figs. 5-11

Perm., Bone Spring Ls.: Hueco Mts.-Sierra Diablo Plateau, Tex.

Euphemites lentiformis (Weller)

Euphemus lentiformi Weller (1916) p. 258, pl. 14, figs. 9, 10

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Euphemites lentiformis Knight (1944) p. 445, pl. 179, figs. 27, 28

Miss., Ste. Genevieve Ls.: Illinois; Missouri

Euphemites luxuriosus Yochelson

Euphemites luxuriosus Yochelson (1960) p. 250, pl. 47, figs. 1-4

Perm., Cherry Canyon Fm.: Guadalupe Mts., Tex.

Euphemites multiliratus Sturgeon

Euphemites multiliratus Sturgeon (1964a) p. 195, pl. 31, figs. 6-8; pl. 36, fig. 16

Penn., Allegheny Fm., Washingtonville Sh., Vanport Ls., and Columbiana Ls.

Mbrs.: Mahoning and Columbiana Counties, Ohio

Euphemites nautiloides (Winchell)

Bellerophon nautiloides Winchell (1862) [1863] p. 427

Miss., Marshall Fm.: Moscow, Battle Creek, Marshall, and Grandville, Mich.

Winchell (1865) [1866] p. 131

Miss., Marshall Fm.: Hillsdale, Mich.

Claypole (1886) p. 246

Carb., "L. Coal Measures": Wilkes-Barre, Pa.

Euphemites nautiloides Hyde (1953) p. 322, pl. 46, figs. 22-26

Miss., Black Hand Fm.: Vinton and Jackson Counties, Ohio

Euphemites nodocarinatus (Hall)

Bellerophon nodocarinatus Hall (1858) p. 723, pl. 29, figs. 15a-c

Carb., "Coal Measures": Illinois; Iowa

White (1884b) p. 159, pl. 33, figs. 3-5

Carb., "Coal Measures": New Harmony, Ind.

Bellerophon nodocarinatus? Heilprin (1886a) p. 457, fig. 7a

Penn., Mill Creek Ls.: Wilkes-Barre, Pa.

Heilprin (1886b) p. 277, fig. 13

Penn., Mill Creek Ls.: Wilkes-Barre, Pa.

- Bellerophon nodocarinatus* Herrick (1887a) p. 18, pl. 3, fig. 3
 Carb., "Coal Measures": Flint Ridge, Ohio
 Keyes (1894b) [1895] p. 152, pl. 50, figs. 4a-c
 Carb., "U. Coal Measures": Kansas City, Mo.
- Euphemus nodocarinatus* Ulrich (1897) p. 855
 Girty (1899a) p. 592
 Girty (1903) p. 475
 Penn., Hermosa and Rico Fms.: San Juan region, Colorado
 Morningstar (1922) p. 249, pl. 15, figs. 1-3
 Penn., Pottsville Fm., l. part Mercer Mbr.: Generally; McArthur Ls.: Vinton County, Ohio
 Morgan (1924) pl. 49, fig. 8
 Penn., Holdenville Sh.: Stonewall quad., Oklahoma
- Euphemites nodocarinatus* King (1940) p. 152-153, pl. 24, fig. 7
 Penn., Millsap Lake Fm.: SW. of Millsap, Palo Pinto County, Tex.
 Knight (1944) p. 445, pl. 179, figs. 32, 33
 Penn.: Widespread in central United States
 Chow (1951) p. 34, pl. 4, figs. 4a-c
 Penn., Mill Creek Ls.: Wilkes-Barre, Pa.
 Hoare (1961) p. 142, pl. 19, fig. 15
 M. Penn., Robinson Branch Ls.: Henry County, Mo.
 Sturgeon (1964a) p. 198, pl. 31, figs. 9, 10
 Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Tuscarawas County: Vanport Ls. Mbr.: Columbiana County, Ohio

***Euphemites randolphensis* (S. Weller)**

- Euphemus randolphensis* S. Weller (1920) p. 365, pl. 9, figs. 7-10
 Miss., basal part Okaw Fm.: Camp Creek, Randolph County, Ill.; basal part Golconda Fm.: SE. of Vienna, Johnson County, Ill.

***Euphemites regulatus* Moore**

- Euphemites regulatus* Moore (1941) p. 143-147, pl. 1, figs. 6a, b
 Penn., Deer Creek Ls., u. part Ozawkie Ls. Mbr.: W. of Lawrence, Kans.

***Euphemites sacajawensis* C. Branson**

- Bucanopsis* or *Bellerophon* E. Branson and Greger (1918) p. 324, pl. 19, figs. 9, 10
 Miss. and Penn., Amsden Fm.: Wind River Mts., Wyo.
Euphemites sacajawensis C. Branson (1937) p. 658, pl. 89, figs. 24, 25, 33
 Miss., Sacajawea Fm.: Wyoming
 Easton (1962) p. 98, pl. 13, figs. 9, 10
 U. Miss., Heath Fm.: Central Montana

***Euphemites sparciliratus* Yochelson**

- Euphemites sparciliratus* Yochelson (1960), p. 251, pl. 47, figs. 12-19; table 5
 Perm., Bone Spring Ls. and Word Fm.: Glass Mts.; Cherry Canyon Fm.: Guadalupe Mts., Tex.

***Euphemites subglobosus* Hyde**

- Euphemites subglobosus* Hyde (1953) p. 323, pl. 46, figs. 17-20
 Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio
Euphemites subpapillosus* (White) see *Euphemitopsis subpapillosus

Euphemites urii (Fleming)

Bellerophon urii Keyes (1888) [1889] p. 235

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1891) [1892] p. 255

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 149, pl. 50, figs. 5a-c

Carb., "U. Coal Measures": Kansas City, Mo.

Euphemus cf. *urii* Bell (1929) p. 172, pl. 30, fig. 8

Carb., U. Windsor Ser.: Horton-Windsor district, Nova Scotia

[Bell indicated that the identification is questionable because this specimen may be identical with *Euphemus*? sp. S. Weller.]

Euphemites urii King (1940) p. 150

[No synonymy is presented of this European species.]

Euphemites vittatus (McChesney)

Bellerophon urii Norwood and Pratten (1855) p. 75, pl. 9, figs. 6a-c [not Fleming 1828]

Carb., "Coal Measures": Galatin and Grayville, Ill.; New Harmony, Ind.

Bellerophon vittatus McChesney (1859) p. 59

Carb., "Coal Measures": Mouth of Rush Creek, Ind., Grayville, Ill.

Bellerophon carbonarius Meek (1872a) p. 224, pl. 4, fig. 16; pl. 4, figs. 11a-c

Carb., "U. Coal Measures": Nebraska City, Nebr.: "Coal Measures": Iowa Kansas.; Missouri; Illinois; Kentucky; Indiana

White (1884b) p. 158, pl. 33, figs. 6-8

Carb., "Coal Measures": Indiana

Euphemus carbonarius Girty (1915a) p. 174, pl. 21, figs. 1-3b

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma

Euphemites vittatus King (1940) p. 150, pl. 24, figs. 4, 5

Penn., Graham Fm.: S. of Gunsight; N. of Stephens-Eastland County line, Tex.

Graford Fm.: W. side Martins Lake; S. of Bridgeport, Wise County, Tex.

Moore (1941) p. 137, 140, pl. 2, fig. 7; text figs. 1f, 3b

Penn., Cisco Gr., Graham Fm., Wayland Sh. Mbr.: S. of Gunsight, Tex.

Knight (1944) p. 445, pl. 179, figs. 29-31

Penn.: Widespread in central United States

Euphemites species of authors

Euphemus? sp. S. Weller (1899) p. 40, pl. 5, figs. 10, 11

Miss., Vermicular ss.: Northview, Webster County, Mo.

S. Weller (1901) p. 193

Miss., Northview Sh.: Northview, Mo.

Euphemus sp. undet. S. Weller (1905) p. 630

Miss., Kinderhook Ser. "English River Grit": Maples Mill, on English River, near Wellman Washington County, Iowa

Euphemus? sp. Beede (1911) p. 184

Carb.: Oyster Basin, Coffin Island, Quebec

Euphemus sp. Girty (1915a) p. 120

Miss., Batesville Ss.: Batesville quad., Arkansas

Euphemites sp. Easton (1942) pl. 10, figs. 10, 11

Miss., Pitkin Ls.: Arkansas

H. Chronic (1952) p. 113, pl. 2, fig. 2

Perm.: Loc. 3, Walnut Canyon, Ariz.

Euphemites sp. (a) Walter (1953) p. 696-697, pl. 70, fig. 10

Perm., Rustler Fm; basal ls. of l. mbr.: Culberson County, Tex.

Euphemites sp. Yochelson (1960) p. 252, pl. 47, figs. 20, 21

Perm., Wolfcamp Ser. and Hueco Ls.: Texas

Yochelson and Dutro (1960) p. 131, pl. 12, figs. 2-4

U. Miss., Alapah Ls.: Killik River quad., Alaska

Winters (1963) p. 29, pl. 2, fig. 4

Perm., Supai Fm.: E. Arizona

EUPHEMITOPSIS Yochelson 1960

Type species: *Euphemitopsis multinodosa* Yochelson (1960) p. 252

Euphemitopsis Yochelson (1960) p. 235

Euphemitopsis circumcostatus (Walter)

Euphemites circumcostatus Walter (1953) p. 696, pl. 73, figs. 20, 21, 23, 24

Perm. Rustler Fm., thin bedded ls. of l. mbr.: Culberson County, Tex.

Euphemitopsis circumcostata Yochelson (1960) p. 252

Euphemitopsis multinodosus Yochelson

Euphemitopsis multinodosa Yochelson (1960) p. 252, pl. 48, figs. 1-12

Perm., Admiral and Clyde Fms.: Baylor County; Lueders Ls.: N. central Texas;

Hueco Ls.: Hueco Mts.-Sierra Diablo Plateau, Tex.; Colina Ls.: Cochise County, Ariz.

Euphemitopsis paucinodosus Yochelson

Euphemitopsis paucinodosa Yochelson (1960) p. 253, pl. 47, figs. 38-41

Perm., Leonard Ser.: Glass Mts., Tex.

Euphemitopsis subpapillosus (White)

Bellerophon carbonarius var. *subpapillosus* White (1876a) p. 92

Perm., u. part, Aubrey Gr.: Beehive Point, near Echo Canyon, and near Echo Park, Utah

Bellerophon subpapillosus White (1879) p. 218

Carb.: Wild Band Pockets, N. Arizona

White (1880b) p. 138, pl. 34, fig. 3a

U. Carb.: NW. Colorado; N. Arizona

Euphemus subpapillosus Girty (1899a) p. 592

Euphemus subpapillosus? Girty (1903) p. 476

U. Carb., Bellerophon ls.: Diamond Peak, Uinta Mts., Colo.

Euphemus subpapillosus Girty (1909b) p. 99

Perm., San Andres Ls.: Engle, N. Mex.; Abo Ss.: Sandia Mts., N. Mex.; Yeso

Fm.: San Andreas and Fra Cristoba, N. Mex.

Girty (1910c) [1911] p. 47

Perm., phosphate beds of Park City Fm.: Sublette Range, Wyo.

Girty (1912d) p. 54, pl. 7, fig. 6

Perm., Park City Fm.: Park City district, Utah

C. Branson (1930) p. 54, pl. 16, figs. 19-21

Perm., Phosphoria Fm., Top Ls. mbr.: Wind River Mts. and Owl Creek Mts., Wyo.; Sublette Range, Wyo.

Euphemites subpapillosus Knight (1953) p. 85, pl. 25A, figs. 1-8

Perm., Monos Fm., *Spiriferellina* zone: Near El Antimonio, W. Sonora, Mexico

Euphemitopsis subpapillosus Yochelson (1960) p. 252, 254, pl. 48, figs. 13, 14

Perm., Yeso Fm.: Otero County, N. Mex.

Euphemitopsis species of authors

Euphemitopsis sp. Yochelson (1960) p. 254, pl. 47, figs. 35-37

Perm., Bone Spring Ls.: Guadalupe Mts., Tex.

EUPHEMUS McCoy 1881 [not Laporte-Castelnau 1836]

Type species: *Bellerophon urii* Fleming (1828) p. 338

(S.D. Waagen (1880) p. 131)

[Knight (1941) p. 123 noted that this homonymous name was replaced by *Euphemites* Warthin (1930).]

Euphemus callosus J. Weller 1930 see *Euphemites callosus*

Euphemus carbonarius (Cox) see *Euphemites carbonarius*

Euphemus carbonarius (Cox) Girty 1915 see *Euphemites vittatus* (McChesney)

Euphemus carbonarius arenarius Shimer 1926 see *Euphemites arenarius*

Euphemus inspeciosus (White) see *Euphemites inspeciosus*

Euphemus lentiformis S. Weller 1916 see *Euphemites lentiformis*

Euphemus nodocarinatus (Hall) see *Euphemites nodocarinatus*

Euphemus randolphensis S. Weller 1920 see *Euphemites randolphensis*

Euphemus subpapillosus (White) see *Euphemitopsis subpapillosus*

Euphemus cf. *urii* Bell see *Euphemites urii*

Euphemus species of authors see *Euphemites* species of authors

EUSTYLUS Kittl 1894 [not Schoenhere 1843]

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Eustylus? *semicostatus* (Meek) see *Palaeostylus* (*Pseudozygopleura*) *semicostatus*

EXOXYROCERAS Meek and Worthen 1868

Type species: *Platyceras reversum* Hall (1860) p. 91

Exogyroceras Meek and Worthen (1868) p. 508

[Knight, Batten, and Yochelson (1960) p. 1240 considered this name a subjective synonym of *Platyceras* (*Platyceras*) Conrad (1840).]

Exogyroceras reversum (Hall) see *Platyceras* (*Platyceras*) *reversum*

FLEMINGELLA Knight 1936

Type species: *Trochella prisca* McCoy (1846) p. 43

Flemingella Knight (1936) p. 527

[Knight, Batten, and Yochelson (1960) p. 1298 considered this name a subjective synonym of *Pseudophorus* Meek (1873).]

Flemingella dispersa (Dawson) see *Pseudophorus dispersa*

Flemingella minuta (Bell) see *Pseudophorus minuta*

Flemingella stulta (Herrick) see *Pseudophorus stulta*

FLEMINGIA Koninck 1881 [not Johnson 1845]

[Knight (1941) p. 125 note that this name is a suppressed objective synonym of *Flemingella* Knight (1936).]

Flemingia dispersa (Dawson) see *Pseudophorus dispersa*

Flemingia minuta Bell 1929 see *Pseudophorus minuta*

Flemingia stultus Herrick 1888 see *Pseudophorus stulta*

Pleurotomaria (*Flemingia*) *stulta* Herrick 1888 see *Pseudophorus stulta*

FUSUS Bruguière 1789

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One North American late Paleozoic species originally assigned to this taxon was reassigned.]

Fusus? inhabilis Morton 1836 see **Ianthinopsis primogenius** (Conrad)

GIRTYSPIRA Knight 1936

Type species: *Bulimella canaliculata* Hall (1856) p. 29

Girtyspira Knight (1936) p. 524

Girtyspira? alvaensis (Beede)

Bulimorpha? alvaensis Beede (1907) p. 169, pl. 8, fig. 11

Perm., Whitehorse Ss.: Whitehorse Spring, Okla.

Sphaerodoma? alvaensis Girty (1915a) p. 198, 220

Girtyspira? alvaensis Knight (1940) p. 313, pl. 8, fig. 3

Girtyspira angulifera (White)

Macrocheilus angulifera White (1874) p. 22

Carb., "Coal Measures": Camp Cottonwood, near Spring Mts., Nev.

S. White (1877) p. 160, pl. 12, figs. 3a-f

Carb. Camp Cottonwood, near Springs Mts., Nev.

Soleniscus? anguliferus Keyes (1889c) p. 307

S. Weller (1898) p. 567

Actaeonina angulifera Knight (1932) p. 192

Girtyspira angulifera Knight (1936) p. 524

Girtyspira canaliculata (Hall)

Bulmella canaliculata Hall (1856) p. 29

Miss., St. Louis Ls.: Spergen Hill, Ind.

Bulimorpha canaliculata Whitfield (1882a) p. 74, pl. 8, fig. 41

Miss., St. Louis Ls.: Spergen Hill, Ind.

Hall (1883) p. 367, pl. 31, fig. 41

Miss., St. Louis Ls.: Spergen Hill and Lanesville, Ind.

Keyes (1889f) [1890] p. 300

Cummings (1906) p. 1343, pl. 25, fig. 41

Miss., Salem Ls.: Spergen Hill, Ind.

Morse (1911) p. 400, fig. 25

Miss., Maxville Ls.: Mount Perry-Fultonham, Ohio

Bulimorpha canaliculata Girty (1915a) p. 221

Bulimorpha canaliculata? Snider (1915) p. 116

Miss., Mayes Fm.: NE. Oklahoma

Actaeonina canaliculata Knight (1932) p. 192

Girtyspira canaliculata Knight (1936) p. 524

Knight (1941) p. 129-130, pl. 92, figs. 4a, b

Miss., Salem Ls.: Spergen Hill, Washington County, Ind.

Knight (1944) p. 477, pl. 195, fig. 15

Miss., Salem, Ls.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. 1321, fig. 214, no. 1

M. Miss.: Indiana

Girtyspira minuta (Stevens)

Loxonema minutum Stevens (1858) p. 59

Carb., "Coal Measures": Sangamon County and Danville, Ill.

- Actaeonina minuta* Meek and Worthen (1873) p. 594, pl. 29, fig. 2
Carb., "Coal Measures"; Danville, Ill.
- Actaeonina minuta* Keyes (1888) [1889] p. 240
Carb., "L. Coal Measures": Des Moines, Iowa
- Bulimorpha minuta* Keyes (1889f) [1890] p. 301
Keyes (1891) [1892] p. 263
Carb. "L. Coal Measures": Des Moines, Iowa
- Mark (1912) [1913] p. 317, pl. 16, fig. 15
Penn., Portersville Ls.: Portersville, Ohio
- Macrochilina? danvillensis* Girty (1915a) p. 196, 220
- Polyphemopsis minuta* Girty (1915a) p. 220
- Bulimorpha minuta* Girty (1915a) p. 221
Girty (1915e) p. 362 (not pl. 29, figs. 4a, b)
- Macrochilina danvillensis* Warthin (1930) p. 47, pl. 7, fig. 11
Penn.: Oklahoma
- Bulimorpha meeki* Sayre (1930) [1931] p. 146, pl. 16, fig. 6
Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.
- Bulimorpha minuta* Warthin (1930) p. 48, pl. 7, fig. 12
Penn., Holdenville Sh.: Oklahoma
- Bulimorpha? turnerensis* Sayre (1930) [1931] p. 147, pl. 16, fig. 7
Penn., Drum Ls., oolitic mbr.: Turner, Kans.
- Actaeonina minuta* Knight (1932) p. 198, pl. 28, figs. 2a, b, 3a-p
Penn., top of Labette Sh.: St. Louis, Mo.
- Girtyspira minuta* Knight (1936) p. 524
Knight (1944) p. 477, pl. 195, figs. 13, 14
Penn., Des Moines Ser.: Mississippi Valley

***Girtyspira pygmaea* (S. Weller)**

- Bulimorpha pygmaea* S. Weller (1916) p. 260, pl. 18, figs. 7, 8
Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.
- Girtyspira pygmaea* Knight (1936) p. 524
Knight (1944) p. 477, pl. 195, figs. 11, 12
Miss., Ste. Genevieve Ls.: Mississippi Valley

***Girtyspira* species of authors**

- Girtyspira?* sp. H. Chronic (1952) p. 130, pl. 5, fig. 1
Perm., Kaibab Ls.: Walnut Canyon, Ariz.
- Girtyspira* sp. Batten (1964) p. 15, fig. 19
Perm.: E. Arizona

GLABROCIINGULUM Thomas 1940

Type species: *Glabrocingulum beggi* Thomas (1940) p. 39

Glabrocingulum Thomas (1940) p. 38

[Sloan (1955) p. 275 divided this taxon into two subgenera, both of which range into the late Paleozoic. Elias (1958) p. 7 considered *Glabrocingulum* Thomas a subjective synonym of *Phymatopleura* Girty (1939). Knight, Batten, and Yochelson (1960) p. 1206 considered *Glabrocingulum* Thomas a full genus with two subgenera.:

Glabrocingulum coronatum* H. Chronic 1952 see *Glabrocingulum* (*Glabrocingulum*) *coronatum

Glabrocingulum grayvillense* (Norwood and Pratten) see *Glabrocingulum* (*Glabrocingulum*) *grayvillense

Glabrocingulum laeviliratum* H. Chronic 1952 see *Glabrocingulum* (*Glabrocingulum*) *laeviliratum

Glabrocingulum wannense (Newell) see **Glabrocingulum** (**Glabrocingulum**) **wannense**

Glabrocingulum species Easton 1942 see **Glabrocingulum** (**Glabrocingulum**) species of authors

GLABROHINGULUM (ANANIAS) (Knight) 1945

Type species: *Phanerotrema? welleri* Newell (1935) p. 348

Ananias Knight (1945b) p. 573

Glabrocingulum (*Ananias*) Sloan (1955) p. 275

Glabrocingulum (*Ananias*) **franciscanus** (H. Chronic) see **Apachella franciscanus**

Glabrocingulum (*Ananias*) **manzanicum** (Girty)

Phanerotrema manzanicum Girty (1909c) p. 96, pl. 11, figs. 3, 4

Perm., Yeso Fm.: Alamillo, N. Mex.; Abo Ss.: Sandia Mts., N. Mex.

Ananias manzanicum Knight (1945b) p. 574

Perm., Yeso Fm.: Alamillo, N. Mex.; Abo Ss.: Sandia Mts., N. Mex.

Glabrocingulum (*Ananias*) *manzanicum* Sloan (1955) p. 276

Glabrocingulum (*Ananias*) **marcouianum** (Geinitz)

Pleurotomaria marcouiana Geinitz (1866) p. 10, table 1, fig. 10

Penn., "Dyas": Nebraska City, Nebr.

Meek (1872a) p. 233, pl. 11, fig. 8

Carb., "U. Coal Measures": Nebraska City, Nebr.

Phanerotrema marcouianum [sic] Ulrich (1897) p. 952

Pleurotomaria marcouianum [sic] S. Weller (1898) p. 456

Herrick (1900) pl. 2, fig. 10

Perm.: Near Tularosa, N. Mex.

Ananias marcouiana Knight (1945b) p. 574

Glabrocingulum (*Ananias*) *marcouiana* Sloan (1955) p. 277

Glabrocingulum (*Ananias*) **nodocostatus** Hoare

Glabrocingulum (*Ananias*) *nodocostatus* Hoare (1961) p. 156, pl. 20, figs. 10, 11

M. Penn., Tiawah Ls.: Appleton City, St. Clair County, Mo.

Glabrocingulum (*Ananias*) **welleri** (Newell)

Worthenia tabulata Plummer and Moore (1921) [1922] pl. 19, fig. 21 (not pl. 22, figs. 17-19)

Penn., Graham Fm., Wayland Sh. Mbr.: S. of Gunsight, N. of Brownwood and Wayland, Tex.

Phanerotrema? welleri Newell (1935) p. 348, pl. 36, figs. 3a-g

Penn., Stanton Ls., Eudora Sh. Mbr.: Montgomery County, Kans.; Stranger Fm.: Peru, Kans.

Ananias welleri Knight (1945b) p. 573

Penn.: Kansas

Glabrocingulum (*Ananias*) *welleri* Sloan (1955) p. 277

Knight, Batten, and Yochelson (1960) p. I206, fig. 11, no. 12

Penn.: Kansas

Glabrocingulum (*Ananias*) *welleri?* Hoare (1961) p. 155, pl. 20, fig. 9

M. Penn., Seville Ls.: Henry County, Mo.

Glabrocingulum (*Ananias*) **whitei** (Knight)

Pleurotomaria grayvillensis White (1880b) p. 140, pl. 34, fig. 5a

U. Carb.: Wild Band Pockets, Ariz.

Ananias whitei Knight (1945b) p. 574

Perm. Kaibab Ls.: Wild Band Pockets, Ariz.

Glabrocingulum (Ananias) whitei Sloan (1955) p. 277

GLABROCIINGULUM (GLABROCIINGULUM) Thomas 1940

Type species: *Glabrocingulum beggi* Thomas (1940) p. 39

Glabrocingulum Thomas (1940) p. 38

Glabrocingulum (Glabrocingulum) Sloan (1955) p. 275

***Glabrocingulum (Glabrocingulum) beedei* (Mark)**

Worthenia beedei Mark (1912) [1913] p. 312, pl. 16, fig. 1

Penn., Portersville Ls.: Portersville, Ohio; Conemaugh Fm., Ames Ls. Mbr.:

New Concord, Ohio

Glabrocingulum (Glabrocingulum) beedei Sturgeon (1964b) p. 742, pl. 121, figs. 1-5

Penn., Conemaugh Fm., Ames Ls. Mbr.: S. of New Concord, Muskingum County, Ohio

***Glabrocingulum (Glabrocingulum) binodosum* Sadlick and Neilsen**

Glabrocingulum (Glabrocingulum) binodosum Sadlick and Neilsen (1963) p. 1096, pl. 149, figs. 1-9; text figs. 5, 6

Miss.: Millard County, Utah

***Glabrocingulum (Glabrocingulum) coronatum* (H. Chronic)**

Glabrocingulum? *coronatum* H. Chronic (1952) p. 118, pl. 3, figs. 1a-3

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Glabrocingulum (Glabrocingulum) coronatum Sloan (1955) p. 277

Perm., Kaibab Ls.: Arizona

Batten (1964) p. 8, figs. 11, 12

Perm.: Faught Ridge, Hog Wash, Ariz.

***Glabrocingulum (Glabrocingulum) gibber* (H. Chronic)**

Ananias gibber H. Chronic (1952) p. 115

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Glabrocingulum (Glabrocingulum) gibber Sloan (1955) p. 277

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

***Glabrocingulum (Glabrocingulum) grayvillense* (Norwood and Pratten)**

Pleurotomaria grayvillensis Norwood and Pratten (1855) p. 75, pl. 9, figs. 7a, b

Carb., "Coal Measures": Grayville, Ill.; Rush Creek, Posey County, Ind.: Shawneetown and Galatia, Ill.

Geinitz (1866) p. 9, table 1, fig. 9

Penn., "Dyas": Nebraska City, Nebr.

Meek (1872a) p. 233, pl. 11, fig. 9

Carb., "U. Coal Measures": Nebraska City, Nebr.; Illinois: Iowa: Missouri: Kansas.

Carb., "L. Coal Measures": Illinois; West Virginia

Keyes (1888) [1889] p. 238

Carb., "L. Coal Measures": Des Moines, Iowa

Ulrich (1897) p. 952

Phanerotrema cf. *grayvillensis* Girty (1903) p. 455

Penn., Weber(?) Fm.: Leadville district, Colorado

Phanerotrema grayvillense Price (1914b) p. 537

Penn., Conemaugh Fm., Ames Ls. Mbr.: Preston County, W. Va.; Brush Creek Ls. Mbr.: Bruceton Mills, W. Va.; Hutton, Garrett County, Md.

Girty (1915a) p. 149, pl. 23, figs. 2-8c

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma

Phanerotrema grayvillense? Price (1916) p. 727

Penn., Kanawha Fm., Eagle Ls. Mbr.: Fayetteville County, W. Va.

Phanerotrema grayvillense Plummer and Moore (1921) [1922] pl. 14, figs. 18, 19, 19a: pl. 22, figs. 14, 15

Penn., Mineral Wells Fm.: Mineral Wells, Tex.

Morningstar (1922) p. 254

Penn., Pottsville Fm., l. part Mercer Mbr.: Perry and Stark Counties; McArthur Ls.: Vinton County, Ohio

Morgan (1924) pl. 49, figs. 14, 14a

Miss., Caney Sh.: Stonewall quad., Oklahoma

Warthin (1930) p. 46, pl. 7, fig. 9

Penn.: Oklahoma

Glabrocingulum grayvillense Knight (1944) p. 455, pl. 184, figs. 21-23

Penn.: Widespread throughout the United States

Knight (1945b) p. 574

Plummer (1950) pl. 21, figs. 16a, b

Penn., Canyon Gr.: From exposure 3 miles SE. of Placid, McCulloch County, Tex.

Glabrocingulum (Glabrocingulum) grayvillense Sloan (1955) p. 277

Hoare (1961) p. 154, pl. 20, figs. 6, 7

M. Penn., Robinson Branch Ls.: Henry County, Mo.

Glabrocingulum (Glabrocingulum) grayvillense Sturgeon (1964a) p. 207, pl. 33, figs. 7-10; pl. 36, fig. 19

Penn., Columbiana Ls.: Columbiana County; Washingtonville Sh.: Muskingum County, Ohio

***Glabrocingulum (Glabrocingulum) inflatum* (Elias)**

Baylea [*Trepostira*] *inflata* Elias (1958) pl. 1, figs. 8, 9 [*B. [Trepostira] stellaeformis* in text, p. 5]

Miss., Redoak Hollow Fm.: Oklahoma

Glabrocingulum (Glabrocingulum) inflatum Sadlick and Neilsen (1963) p. 1097, 1102

Miss.: Oneida County, Idaho

***Glabrocingulum (Glabrocingulum) laeviliratum* H. Chronic**

Glabrocingulum laeviliratum H. Chronic (1952) p. 117, pl. 2, figs. 7-9b; text fig. 4

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Glabrocingulum (Glabrocingulum) laeviliratum Sloan (1955) p. 277

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

***Glabrocingulum (Glabrocingulum) quadrigatum* Sadlick and Neilsen**

Glabrocingulum (Glabrocingulum) quadrigatum Sadlick and Neilsen (1963) p. 1098, pl. 150, figs. 1-12; text figs. 5, 7

Miss., Chainman Sh.: Millard County, Utah

***Glabrocingulum (Glabrocingulum) stellaeformis* (Hyde)**

Mourlonia? *stellaeformis* Hyde (1953) p. 325, pl. 46, figs. 1-4

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

Glabrocingulum (Glabrocingulum) stellaeformis Sadlick and Neilsen (1963) p. 1095

Miss., Chainman Sh.: Millford County, Utah

Glabrocingulum (Glabrocingulum) wannense (Newell)

Phanerotrema? *wannense* Newell (1935) p. 347, pl. 36, figs. 2a-c

Penn., sh. of Lansing age: Wann, Okla.

Glabrocingulum wannense Knight (1944) p. 455, pl. 184, fig. 24

U. Penn., Missouri Ser.: Midcontinent region

Ananias wannense Knight (1945b) p. 574

Glabrocingulum (Glabrocingulum) wannense Sloan (1955) p. 277

Penn.: Oklahoma

Glabrocingulum cf. *G. (G.) wannense* Sturgeon (1964a) p. 208, pl. 33, figs. 3-6; pl. 36, fig. 20

Penn., Allegheny Fm., Vanport Ls. Mbr.: Columbiana and Muskingum Counties, Ohio

Glabrocingulum (Glabrocingulum) species of authors

Glabrocingulum sp. Easton (1942) pl. 11, fig. 12

Miss., Pitkin Ls.: Arkansas

Easton (1962) p. 100, pl. 13, fig. 12

U. Miss., Heath Fm.: Central Montana

Glabrocingulum (Glabrocingulum) sp. Yochelson and Dutro (1960) p. 138, pl. 13, figs. 11-13

Perm. Siksikpuk Fm.: N. Alaska

Glabrocingulum sp. Mudge and Yochelson (1962) [1963] p. 93, pl. 17, figs. 8, 9, 15

Penn., Stotler Ls., Dry Sh. Mbr.: Greenwood County, Kans.

GLYPTOBASIS Koninck 1881 [not McLachlan 1871]

[This homonym was considered a subjective synonym of *Cerithioides* Houghton (1859) by Knight (1941, p. 132) and was not replaced. One North American late Paleozoic species originally assigned to this taxon was reassigned.]

Glyptobasis marshalli Roundy 1914 see **Hemizyga (Hemizyga) marshalli**

GLYPTOSPIRA H. Chronic 1952

Type species: *Glyptospira cristulata* H. Chronic (1952) p. 128

Glyptospira H. Chronic (1952) p. 127

Glyptospira cristulata H. Chronic

Glyptospira cristulata H. Chronic (1952) p. 128, pl. 4, figs. 4a-6b; text fig. 9

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Winters (1963) p. 47, pl. 5, figs. 5a-c

Perm., Supai Fm.: E. Arizona

GLYPTOTOMARIA Knight 1945

Type species: *Glyptotomaria apiarium* Knight (1945b) p. 577

Glyptotomaria Knight (1945b) p. 577

[Batten (1958) p. 210 divided this taxon into two subgenera, both of which range into the late Paleozoic.]

Glyptotomaria apiarium Knight 1945 see **Glyptotomaria (Glyptotomaria) apiarium**

Glyptotomaria species of authors see **Glyptotomaria (Glyptotomaria)** species of authors

GLYPTOTOMARIA (DICTYOTOMARIA) (Knight) 1945

Type species: *Pleurotomaria scitula* Meek and Worthen (1861) p. 461

Dictyotomaria Knight (1945b) p. 576

Glyptotomaria (Dictyotomaria) Batten (1958) p. 210

Glyptotomaria (Dictyotomaria) lineata (Sayre)

Ptychomphalus lineata Sayre (1930) [1931] p. 135, pl. 14, figs. 5-5b

Penn., Drum Ls., oolitic mbr.: Turner, Kans.

Dictyotomaria lineata Knight (1945b) p. 576

Penn., Cherryvale Fm., Westerville Ls. Mbr.: Kansas City, Mo.

Glyptotomaria (Dictyotomaria) meekana (Hall)

Pleurotomaria meekana Hall (1856) p. 22

Miss., St. Louis Ls.: Spergen Hill, Ind.

Pleurotomaria(?) *meekana* Whitfield (1882a) p. 82, pl. 9, figs. 8, 9

Miss., St. Louis Ls.: Alton, Ill.

Pleurotomaria meekana Hall (1883) p. 353, pl. 32, figs. 8, 9

[Does not occur at Spergen Hill, Ind.]

Cumings (1906) p. 1352, pl. 26, figs. 8, 9

Miss., Salem Ls.: Stinesville, Ellettsville, and Harrodsburg, Ind.; Alton, Ill.

Dictyotomaria meekana Knight (1945b) p. 576

Glyptotomaria (Dictyotomaria) quadrilineatus (Girty)

Orestes? *quadrilineatus* Girty (1934a) p. 257-259, figs. 20-22

Penn., McCoy Fm.: Eagle County, Colo.

Phymatopleura quadrilineatus Girty (1939) p. 32

Dictyotomaria quadrilineatus Knight (1945b) p. 576

Glyptotomaria (Dictyotomaria) reticulatus (Girty)

Orestes? *reticulatus* Girty (1934a) p. 255-257, figs. 17-19

Penn., McCoy Fm.: Eagle County, Colo.

Phymatopleura reticulatus Girty (1939) p. 33

Dictyotomaria reticulatus Knight (1945b) p. 576

Glyptotomaria (Dictyotomaria) scitula (Meek and Worthen)

Pleurotomaria scitula Meek and Worthen (1860) [1861] p. 461

Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

Meek and Worthen (1866a) p. 353, pl. 28, figs. 9a-d

Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

Dictyotomaria scitula Knight (1945b) p. 576, pl. 79, figs. 3a, b

Penn., Des Moines Ser., Labette Sh.: St. Louis County, Mo.

Glyptotomaria (Dictyotomaria) scitula Knight, Batten, and Yochelson (1960) p. 1215, fig. 130, no. 8

M. Penn.: Missouri

Glyptotomaria (Dictyotomaria) cf. *G. (Dictyotomaria) scitula* Sturgeon (1964a) p. 212, pl. 32, figs. 9, 10

Penn., Allegheny Fm., Vanport Ls. Mbr.: Tuscarawas County, Ohio

Glyptotomaria (Dictyotomaria) scitula Sturgeon (1964b) p. 744, pl. 121, figs. 6-9

Penn., "L. Coal Measures": Hodges Creek, Macoupin County, Ill.

GLYPTOTOMARIA (GLYPTOTOMARIA) Knight 1945

Type species: *Glyptotomaria apiarium* Knight (1945b) p. 577

Glyptotomaria Knight (1945b) p. 577

Glyptotomaria (Glyptotomaria) Batten (1958) p. 210

Glyptotomaria (Glyptotomaria) apiarium Knight

- Glyptotomaria apiarium* Knight (1945b) p. 577, pl. 79, figs. 4a-c
 Penn., Mineral Wells Fm., Keechi Creek Sh. Mbr.: N. of Union Hill School and
 NNW of Mineral Wells, Tex.; Cisco Gr., Graham Fm., Gonzales Ls. Mbr.:
 N. of Finis, Young County, and Graham, Tex.
- Glyptotomaria (Glyptotomaria) apiarium* Knight, Batten, and Yochelson (1960) p. 1215,
 fig. 130, no. 10
 Penn.: Texas

Glyptotomaria (Glyptotomaria) marginata Batten

- Glyptotomaria (Glyptotomaria) marginata* Batten (1958) p. 211, pl. 37, figs. 1-4
 Penn., Wolfcamp to Leonard Ser.: Hess Canyon quad.; Altuda quad.; Sierra
 Diablo area, Texas

Glyptotomaria (Glyptotomaria) pistra Batten

- Glyptotomaria (Glyptotomaria) pistra* Batten (1958) p. 212, pl. 37, figs. 5-8
 Perm., u. part Leonard thru m. part Guadalupe Ser.: Guadalupe Mts.; Hess
 Canyon quad., Texas

Glyptotomaria (Glyptotomaria) species of authors

- Glyptotomaria* sp. Winters (1963) p. 35, pl. 2, figs. 9a-c
 Perm., Supai Fm.: E. Arizona

GONIASMA Tomlin 1930

- Type species: *Murchisonia lasallensis* Worthen (1890) p. 141
Goniospira Girty (1915e) p. 356
Goniasma Tomlin (1930) p. 23 [for *Goniospira* Girty 1915]

Goniasma geminocarinata (H. Chronic)

- Murchisonia geminocarinata* H. Chronic (1952) p. 123, pl. 4, figs. 12-14; text fig. 7
 Perm. Kaibab Ls.: Walnut Canyon, Ariz.
- Goniasma geminocarinata* Batten (1964) p. 14, figs. 16-18
 Perm.: St. Johns, Hog Wash, and Faught Ridge, E. Arizona

Goniasma helicaformis (Sayre)

- Goniospira helicaformis* Sayre (1930) [1931] p. 136, pl. 15, fig. 2
 Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.
- Goniasma helicaformis* Tomlin (1930) p. 22-24

Goniasma lasallensis (Worthen)

- Murchisonia lasallensis* Worthen (1890) p. 141, pl. 25, figs. 7, 7a
 Carb., "U. Coal Measures": Lasalle, Ill.
- Worthenia? lasallensis?* Girty (1903) p. 457
 Penn., Hermosa Fm.: San Juan region, Colorado
- Goniospira lasallensis* Girty (1915e) p. 356, pl. 30, figs. 7-8a
 Penn., Lansing Fm.: Kenmoor, St. Joseph, Weston, Leavenworth, Lansing, and
 Smithville, Mo.
- Goniasma lasallensis* Girty (1939) p. 30, figs. 15-19
 Penn., ls. of Magdalena(?) Gr.: La Luz Canyon, La Luz, N. Mex.
- Knight (1941) p. 133-134, pl. 42, figs. 6a-c
 Penn., La Salle Ls.: LaSalle, Ill.

Knight (1944) p. 459, pl. 185, fig. 21

Penn: Mississippi Valley

Goniasma cf. *G. lasallensis* Sturgeon (1964a) p. 217, pl. 34, fig. 20; pl. 36, fig. 1

Penn. Allegheny Fm., Vanport Ls. Mbr.: Columbiana, Mahoning, and Vinton Counties, Ohio

***Goniasma terebra* (White)**

Murchisonia terebra White (1879) p. 219

Carb.: Wild Band Pockets, N. Arizona

White (1880b) [1883] p. 139, pl. 34, fig. 4a

U. Carb.: Wild Band Pockets, N. Arizona

Keyes (1894b) [1895] p. 146, pl. 49, fig. 4

Carb., "U. Coal Measures": Kansas City, Mo.

Murchisonia? *terebra* Girty (1906c) p. 99

Perm., Abo Ss.: Sandia Mts., N. Mex.; San Andres Ls.: Caballos Mts., N. Mex.;

Yeso Fm.: San Andres, N. Mex.

Murchisonia? aff. *terebra* Girty (1909c) p. 99

Perm., San Andres Ls.: Mesa del Yeso, Caballos Mts., Nogal Creek, and Fra

Cristobal, N. Mex.; Yeso Fm.: San Andres, N. Mex.

Murchisonia terebra Morgan (1924) pl. 49, fig. 10

Penn., Savanna Fm.: Stonewall quad., Oklahoma

Murchisonia terebra? Warthin (1930) p. 47, pl. 7, fig. 10

Penn.: Oklahoma

Goniasma terebra Winters (1963) p. 37, pl. 4, figs. 7-10b

Perm., Supai Fm.: E. Arizona

***Goniasma* species of authors**

Goniasma? sp. H. Chronic (1952) p. 123, pl. 4, fig. 9; text fig. 8

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Goniasma sp. Walter (1953) p. 697, pl. 73, fig. 4

Perm., Rustler Fm., dol. and ls. of lower mbr.; member N(=Culebra Dol. Mbr.):

Culberson County, Tex.

Goniasma sp. Winters (1963) p. 38, pl. 4, figs. 11a, b

Perm., Supai Fm.: E. Arizona

GONIOSPIRA Girty 1915 [not Donald 1902, not Cossmann 1895]

Type species: *Murchisonia lasallensis* Worthen (1890) p. 141

[This homonymous name was replaced by *Goniasma* Tomlin (1930) p. 23.]

Goniospira helicaformis* Sayre 1930 see *Goniasma helicaformis

Goniospira lasallensis* (Worthen) see *Goniasma lasallensis

GOSSELETINA Fischer 1885

Type species: *Pleurotomaria callosa* Koninck (1843) p. 406

Gosseletina Fischer (1885) p. 850

Gosseletina beckwithana* (McChesney) see *Shansiella beckwithana

***Gosseletina persimplex* (Girty)**

Pleurotomaria? *persimplex* Girty (1915e) p. 355, pl. 32, figs. 1-2a

Penn., Cherokee Sh.: Garland, Henry County, Mo.

Gosseletina persimplex Hoare (1961) p. 152, pl. 20, figs. 3-5

M. Penn., Robinson Branch Ls.: Henry Count, Mo.

Gosseletina spironema (Meek and Worthen)

- Pleurotomaria spironema* Meek and Worthen (1866c) [1867] p. 272
 Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.
 Meek and Worthen (1873) p. 601, pl. 28, fig. 5
 Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.
 Morgan (1924) pl. 49, fig. 22
 Penn., Holdenville Sh.: Stonewall quad., Oklahoma
Gosseletina spironema Knight (1944) p. 453, pl. 183, fig. 33
 Penn., Des Moines Ser.: Mississippi Valley
 Hoare (1961) p. 151, pl. 20, figs. 1, 2
 M. Penn., Tiawah Ls.: Henry County, Mo.
Gosseletina cf. *Gossettina spironema* Sturgeon (1964a) p. 209
 Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Starke County, Ohio

Gosseletina subglobosa (Hall in Miller)

- Pleurotomaria rotundata* Hall (1856) p. 23 [not Hall 1843]
 Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.
Pleurotomaria subglobosa Hall in Miller (1877a) p. 245
 Whitfield (1882a) p. 79, pl. 9, fig. 10
 Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.
 Hall in Miller (1883) p. 355, pl. 32, fig. 10
 Miss., St. Louis Ls.: Spergen Hill, Bloomington, and Lanesville, Ind.; Alton, Ill.
 Cumings (1906) p. 1348, pl. 26, fig. 10
 Miss., Salem Ls.: Spergen Hill, Bloomington, Harrodsburg, Ellettsville, Stinesville, and Romona, Ind.; Alton, Ill.
Gosseletina subglobosa Knight (1944) p. 453, pl. 183, fig. 32
 Miss., Salem Ls.: Mississippi Valley

Gosseletina species of authors

- Gosseletina?* sp. Easton (1942) pl. 10, figs. 12-14
 Miss., Pitkin Ls.: Arkansas
 Yochelson and Dutro (1960) pl. 139, pl. 13, figs. 20, 21
 L. Miss.: Howard Pass quad., N. Alaska

HELCIONOPSIS Ulrich and Scofield 1897

Type species: *Helcionopsis striata* Ulrich in Ulrich and Scofield (1897) p. 827

Helcionopsis Ulrich and Scofield (1897) p. 821

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. One North American late Paleozoic species assigned to this taxon has not been reassigned.]

Helcionopsis? reticulatus Easton

- Helcionopsis? reticulatus* Easton (1943) p. 150, pl. 24, fig. 23
 Miss., Pitkin Ls.: SE. of West Fork, Ark.

HELICOSPIRA Girty 1915

Type species: *Murchisonia buttersi* Girty (1912c) p. 6

Helicospira Girty (1915c) p. 356

Helicospira buttersi (Girty)

- Murchisonia buttersi* Girty (1912c) p. 6, pl. 1, figs. 7-8
 Perm.(?) and Trias.(?), Lykins Fm.: Heygood Canyon, Colo.

Helicospira buttersi Knight (1941) p. 143, pl. 43, fig. 3

Perm.(?) and Trias.(?), Lykins Fm.: Heygood Canyon, Colo.

Knight, Batten, and Yochelson (1960) p. 1293, fig. 191, no. 13

Perm. or Trias.: Colorado

HELICOSTYLUS Knight 1934

[Knight (1941) p. 144 noted that this name is a junior objective synonym of *Strophostylus* Hall (1859).]

Helicostylus girtyi Knight 1934 see Strophostylus girtyi

HELMINTHOZYGA Knight 1930

Type species: *Helminthozyga vermicula* Knight (1930) p. 63

Helminthozyga Knight (1930) p. 16

***Helminthozyga vermicula* Knight**

Helminthozyga vermicula Knight (1930) p. 63

Penn., top of Labette Sh.: St. Louis, Mo.

Knight (1944) p. 463, pl. 187, figs. 14, 15

Penn., Des Moines Scr.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. 1313, fig. 8, no. 11

Miss. to Penn.: North America

HEMIZYGA Girty 1915

Type species: *Hemizyga elegans* Girty (1915e) p. 361

(S.D. Knight (1930) p. 17)

Hemizyga Girty (1915e) p. 361

[Knight (1930) p. 18 divided this taxon into three subgenera, all of which range into the late Paleozoic.]

***Hemizyga*? cancellata Sayre 1930 see *Hemizyga* (*Hemizyga*?) cancellata**

***Hemizyga dubia* Girty 1915 see *Hemizyga* (*Plocezyga*) dubia**

***Hemizyga elegans* Girty 1915 see *Hemizyga* (*Hemizyga*) elegans**

***Hemizyga grandicostata* Girty 1915 see *Hemizyga* (*Hemizyga*) grandicostata**

***Hemizyga inflata* (Knight) see *Hemizyga* (*Hemizyga*) inflata**

***Hemizyga nodosa* Warthin 1930 see *Hemizyga* (*Hemizyga*) nodosa**

***Hemizyga* sp. Plummer and Moore 1921 see *Palaeostylus*? species of authors**

***Hemizyga* sp. Morningstar 1922 see *Hemizyga* (*Hemizyga*) species of authors**

HEMIZYGA (HEMIZYGA) Girty 1915

Types species: *Hemizyga elegans* Girty (1915e) p. 362

Hemizyga Girty (1915e) p. 361

Hemizyga (*Hemizyga*) Knight (1930) p. 18

Hemizyga Knight (1944) p. 463

Hemizyga (*Hemizyga*) Knight, Batten, and Yochelson (1960) p. 1314

***Hemizyga* (*Hemizyga*?) cancellata (Mark)**

Aclisina (?) *cancellata* Mark (1912) [1913] p. 315, pl. 16, fig. 11

Penn., Portersville Ls.: Portersville, Ohio

Hemizyga? *cancellata* Sayre (1930) [1931] p. 145, pl. 17, fig. 11

Penn., Drum Ls., oolitic mbr.: Turner, Kans.

Hemizyga (*Hemizyga*?) *cancellata* Knight (1930) p. 18

Hemizyga (Hemizyga) corbis Knight

- Hemizyga (Hemizyga) corbis* Knight (1930) p. 70, pl. 4, fig. 15; pl. 5, fig. 3
Penn., top of Labette Sh.: St. Louis, Mo.

Hemizyga (Hemizyga) corpulentissima Knight

- Hemizyga (Hemizyga) corpulentissima* Knight (1930) p. 72, pl. 5, fig. 4
Penn., top of Labette Sh.: St. Louis, Mo.

Hemizyga (Hemizyga) elegans Girty

- Hemizyga elegans* Girty (1915e) p. 362, pl. 32, figs. 7-7b
Penn., Cherokee Sh.: Garland, Henry County, Mo.
Hemizyga (Hemizyga) elegans Knight (1930) p. 13, 23
Hemizyga elegans Knight (1941) p. 146, pl. 49, fig. 3
U. Carb. about 100 ft below top of Cherokee Sh.: Honey Creek, near Garland,
Henry County, Mo.
Knight (1944) p. 463, pl. 187, fig. 18
Penn., Des Moines Ser.: Mississippi Valley
Hemizyga (Hemizyga) elegans Knight, Batten, and Yochelson (1960) p. 1313, fig. 208, no. 5
M. Penn.: Missouri
Hoare (1961) p. 172, pl. 21, fig. 17
M. Penn., Robinson Branch Ls.: Henry County, Mo.

Hemizyga (Hemizyga) grandicostata Girty

- Hemizyga grandicostata* Girty (1915e) p. 362, pl. 32, figs. 8-8b
Penn., Cherokee Sh.: Garland, Henry County, Mo.
Hemizyga (Hemizyga) grandicostata Knight (1930) p. 18, 23

Hemizyga (Hemizyga) illineata Knight

- Hemizyga (Hemizyga) illineata* Knight (1930) p. 71, pl. 5, figs. 2a, b
Penn., top of Labette Sh.: St. Louis, Mo.

Hemizyga (Hemizyga) inflata Knight

- Hemizyga (Hemizyga) inflata* Knight (1930) p. 69, pl. 5, fig. 1
Penn., top of Labette Sh.: St. Louis, Mo.
Hemizyga inflata Knight (1944) p. 463, pl. 187, fig. 17
Penn., Des Moines Ser.: Mississippi Valley
Hemizyga (Hemizyga)? inflata Hoare (1961) p. 172, pl. 21, fig. 18
M. Penn., Robinson Branch Ls.: Henry County, Mo.

Hemizyga (Hemizyga) marshalli (Roundy)

- Glyptobasis marshalli* Roundy (1914) p. 447, pl. 3, figs. 1-7
Miss., Spergen Ls. of former usage (=Salem Ls.): Stinesville, Spergen Hill, and
Harrodsburg, Ind.
Strophostylus (Anematina) marshalli Knight (1933a) p. 37
Anematina marshalli Knight (1944) p. 471, pl. 192, figs. 16, 17
Miss., Salem Ls.: Mississippi Valley
Strianematina marshalli H. Chronic (1952) p. 130
Miss., Salem Ls.: Mississippi Valley

Hemizyga (Hemizyga) nodosa Warthin

- Hemizyga nodosa* Warthin (1930) p. 51, pl. 7, fig. 18
Penn., Holdenville Sh.: E. of Ada, Okla.

Hemizyga (Hemizyga) pulchrelirata (H. Chronic)

Strianematina pulchrelirata H. Chronic (1952) p. 130, pl. 5, fig. 3
Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Hemizyga (Hemizyga) species of authors

Hemizyga sp. Morningstar (1922) p. 260, pl. 15, fig. 25
Penn., Pottsville Fm., Mercer Mbr.: Licking County Ohio
Strianematina sp. Winters (1963) p. 43, pl. 5, fig. 9
Perm., Supai Fm.: E. Arizona

HEMIZYGA (HYPHANTOZYGA) Knight 1930

Type species: *Hemizyga (Hyphantozyga) gracilis* Knight (1930) p. 73
Hemizyga (Hyphantozyga) Knight (1930) p. 18
Hyphantozyga Knight (1944) p. 463
Hemizyga (Hyphantozyga) Knight, Batten, and Yochelson (1960) p. I315

Hemizyga (Hyphantozyga) filicosta Hoare

Hemizyga (Hyphantozyga) filicosta Hoare (1961) p. 175, pl. 21, fig. 23
M. Penn., Tiawah Ls.: Henry County, Mo.

Hemizyga (Hyphantozyga) gracilis Knight

Hemizyga (Hyphantozyga) gracilis Knight (1930) p. 73, pl. 5, fig. 5
Penn., top of Labette Sh.: St. Louis, Mo.
Hyphantozyga gracilis Knight (1941) p. 155, pl. 49, fig. 2
U. Carb., top of Labette Sh.; Henrietta Fm. of former usage (=Marmaton Gr.):
Feeffee Creek, near Lackland Sta., St. Louis County, Mo.
Knight (1944) p. 463, pl. 187, fig. 16
Penn., Des Moines Ser.: Mississippi Valley
Hemizyga (Hyphantozyga) gracilis Knight, Batten, and Yochelson (1960) p. I315, fig. 208, no. 9
M. Penn.: Missouri

Hemizyga (Hyphantozyga) species of authors

Hemizyga (Hyphantozyga) sp. Knight (1930) p. 74, pl. 5, fig. 6
Penn., top of Labette Sh.: St. Louis, Mo.

HEMIZYGA (PLOCEZYGA) Knight 1930

Type species: *Hemizyga (Plocezyga) corona* Knight (1930) p. 64
Hemizyga (Plocezyga) Knight (1930) p. 18
Plocezyga Knight (1944) p. 463
Hemizyga (Plocezyga) Knight, Batten, and Yochelson (1960) p. I315

Hemizyga (Plocezyga) abolescens Knight

Hemizyga (Plocezyga) abolescens Knight (1930) p. 66, pl. 4, fig. 7
Penn., top of Labette Sh.: St. Louis, Mo.

Hemizyga (Plocezyga) angularis Knight

Hemizyga (Plocezyga) angularis Knight (1930) p. 65, pl. 4, figs. 8a, b
Penn., top of Labette Sh.: St. Louis, Mo.
Plocezyga angularis Knight (1944) p. 463, pl. 187, fig. 31
Penn., Des Moines Ser.: Mississippi Valley

Hemizyga (Plocezyga) convertacostata Hoare

- Hemizyga (Plocezyga) convertacostata* Hoare (1961) p. 174, pl. 21, fig. 21
M. Penn.: Honey Creek, Henry County, Mo.

Hemizyga (Plocezyga) corona Knight

- Hemizyga (Plocezyga) corona* Knight (1930) p. 64, pl. 4, fig. 4
Penn., top of Labette Sh.: St. Louis, Mo.
Plocezyga corona Knight (1941) p. 261, pl. 49, fig. 4
U. Carb., top of Labette Sh.; Henrietta Fm. of former usage (= Marmaton Gr.)
Feeffee Creek, near Lackland Sta., St. Louis County, Mo.
Knight (1944) p. 463, pl. 187, fig. 19
Penn., Des Moines Ser.: Mississippi Valley
Hemizyga (Plocezyga) corona Knight, Batten, and Yochelson (1960) p. 1315, fig. 208,
no. 8
M. Penn.: Missouri

Hemizyga? (Plocezyga?) costata (Mark)

- Aclisina (?) costata* Mark (1912) [1913] p. 315, pl. 16, fig. 12
Penn., Portersville Ls.: Portersville, Ohio
Hemizyga? (Plocezyga?) costata Knight (1930) p. 18, 23, 73

Hemizyga (Plocezyga) dubia Girty

- Hemizyga dubia* Girty (1915e) p. 361, pl. 32, figs. 9-9b
Penn., Cherokee Sh.: Garland, Henry County, Mo.
Hemizyga (Plocezyga) dubia Knight (1930) p. 18, 23

Hemizyga? (Plocezyga?) ornata (Mark)

- Aclisina (?) ornata* Mark (1912) [1913] p. 316, pl. 16, fig. 13
Penn., Portersville Ls.: Portersville, Ohio
Hemizyga? (Plocezyga?) ornata Knight (1930) p. 18, 23, 73

Hemizyga (Plocezyga) percostata Knight

- Hemizyga (Plocezyga) percostata* Knight (1930) p. 68, pl. 4, fig. 6
Penn., top of Labette Sh.: St. Louis, Mo.
Hoare (1961) p. 173, pl. 21, figs. 19, 20
M. Penn., Robinson Branch Ls.: Henry County, Mo.

Hemizyga (Plocezyga) tenuilirata Knight

- Hemizyga (Plocezyga) tenuilirata* Knight (1930) p. 67, pl. 4, figs. 5a, b
Penn., top of Labette Sh.: St. Louis, Mo.
Hoare (1961) p. 174, pl. 21, fig. 22
M. Penn., Robinson Branch Ls.: Henry County, Mo.

Hemizyga (Plocezyga) tenuis Knight

- Hemizyga (Plocezyga) tenuis* Knight (1930) p. 65, pl. 4, fig. 9
Penn., top of Labette Sh.: St. Louis, Mo.

HOLOPEA Hall 1847

- Type species: *Holopea symmetrica* Hall (1847) p. 170
(S.D. Bassler (1915) p. 625)
Holopea Hall (1847) p. 169

Holopea blairi (Miller)

Macrochilina blairi Miller (1891) p. 84, pl. 14, fig. 5

Miss., Chouteau Ls.: Sedalia, Mo.

Miller (1892b) [1894] p. 694, pl. 14, fig. 5

Miss., Chouteau Ls.: Sedalia, Mo.

Soleniscus? blairi S. Weller (1898) p. 567

Holopea blairi Girty (1915a) p. 189, 197

Holopea cerithiformis (Meek and Worthen) see *Streptacis cerithiformis*

Holopea conica Winchell

Holopea conica Winchell (1863) [1864] p. 21

Yellow ss.: Burlington, Iowa

Holopella mira Winchell (1863) [1864] p. 22

Yellow ss.: Burlington, Iowa

Holopea subconica Winchell (1863) [1864] p. 21 [not Hall 1859]

Yellow ss.: Burlington, Iowa

[Weller (1898) p. 308 recognized that this name was a homonym of *H. subconica* Hall (1859); in 1901, he placed it in synonymy of *Holopea conica* Winchell.]

Holopea conica S. Weller (1901) p. 153, pl. 12, figs. 4-7

Miss., Kinderhook Ser.: Burlington, Iowa

Holopea cooperensis (Swallow)

Macrocheilus cooperensis Swallow (1863) p. 100

Miss., Archimedes ls.: Cooper County, Mo.

Sphaerodoma cooperensis Keyes (1889g) [1890] p. 305

Soleniscus cooperensis Keyes (1894b) [1895] p. 210

Miss., Keokuk ls.: Cooper County, Mo.

Sphaerodoma cooperensis S. Weller (1898) p. 576

Holopea cooperensis Girty (1915a) p. 189, 197

Holopea fasciata (King)

Loxonema fasciata King (1850) p. 209, pl. 16, fig. 30

Swallow (in Swallow and Hawn) (1858) p. 196

L. Perm.: Kansas

Holopea fasciata Girty (1915a) p. 189

[No synonymy is presented of this European species.]

Holopea fountainensis S. Weller

Holopea fountainensis S. Weller (1916) p. 260, pl. 18, figs. 10, 11

Miss., Ste. Genevieve ls.: Waterloo, Monroe County, Ill.

Holopea grandis Miller and Gurley

Holopea grandis Miller and Gurley (1896b) p. 19, pl. 2, figs. 33, 34

Miss., Knobstone Gr.: Near New Albany, Ind.

Holopea inconspicua Girty

Loxonema? inconspicuum Girty (1908a) p. 486, pl. 24, fig. 19

Perm., basal black ls.: Guadalupe Mts., Tex.

Holopea inconspicua Girty (1915a) p. 189

Holopea keokuk (Worthen)

Polyphemopsis? keokuk Worthen (1884) p. 9

Miss., l. part Keokuk ls.: Keokuk, Iowa

Polyphemopsis keokuk Keyes (1889g) [1890] p. 301

Polyphemopsis? keokuk Worthen (1890) p. 144, pl. 23, fig. 3

Miss., Keokuk ls.: Keokuk, Iowa

Bulimorpha? keokuk S. Weller (1898) p. 151

Holopea keokuk Girty (1915a) p. 189, 220

Holopea micula* (Girty) see *Anematina micula

***Holopea missouriensis* E. Branson**

Holopea missouriensis E. Branson (1938b) p. 44, pl. 24, figs. 9, 11, 17

L. Miss.: Missouri

***Holopea modesta* Girty**

Macrocheilina? modesta Girty (1908a) [1909] p. 489, pl. 24, fig. 20

Perm., basal black ls.: Guadalupe Mts., Tex.

Holopea modesta Girty (1915a) p. 189

***Holopea newtonensis* Whitfield**

Holopea newtonensis Whitfield (1882b) p. 224

Miss., Maxville ls.: Newtonville, Ohio

Whitfield (1891) p. 591, pl. 14, fig. 12

Miss., Maxville ls.: Newtonville, Ohio

Whitfield (1895) p. 477, pl. 10, fig. 12

Miss., Maxville ls.: Newtonville, Ohio

Morse (1911) p. 398, fig. 23

Miss., Maxville ls.: White Cottage, Ohio

Girty (1915a) p. 190

Holopea newtonensis? Snider (1915) p. 117

Miss., Fayetteville sh. and Pitkin ls.: NE. Oklahoma

***Holopea oligospira* (Winchell)**

Loxonema oligospira Winchell (1863) [1864] p. 22

Yellow ss.: Burlington, Iowa

Loxonema oligospira S. Weller (1900) p. 106, pl. 7, fig. 4

Chonopectus ss.: Burlington, Iowa

Holopea oligospira Girty (1915a) p. 190

***Holopea parvulus* Boos**

Holopea parvulus Boos (1929) p. 252, pl. 27, fig. 5

Perm., Sumner Gr., Luta ls. of former usage: Kansas; Oklahoma

Holopea peoriensis?* (Worthen) see *Palaeostylus* (*Pseudozygopleura*) *peoriensis

Holopea permiana* (Beede) see *Streptacis permiana

Holopea proutana* Hall 1856 see *Anematina proutana

Holopea* (*Callonema?*) *proutana* Whitfield 1882 see *Anematina proutana

***Holopea shumardiana* (Winchell)**

Murchisonia shumardiana Winchell (1863) [1864] p. 20

Yellow ss.: Burlington, Iowa

Loxonema shumardana S. Weller (1900) p. 106, pl. 7, fig. 5

Chonopectus ss.: Burlington, Iowa

Holopea shumardana Girty (1915a) p. 190

***Holopea subconica* Winchell 1863 [not Hall 1859] see *Holopea conica* Winchell**

Holopea subcorpulenta* (Whitfield) see *Ianthinopsis subcorpulentus

Holopea turritiformis (Hall)

Loxonema turritiformis Hall (1860) p. 109

Miss., Goniaticite ls.: Rockford, Ind.

Holopea turritiformis Girty (1915a) p. 190

HOLOPELLA M'Coy 1851

Type species: *Holopella gracilior* M'Coy (1851) p. 47

(S.D. Knight (1937) p. 710)

Holopella M'Coy (1851) p. 47

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. One North American late Paleozoic species placed in the genus was reassigned.]

Holopella mira Winchell 1863 see **Holopea mira**

HYPHANTOZYGA Knight 1930

Type species: *Hemizyga* (*Hyphantozyga*) *gracilis* Knight (1930) p. 73

Hemizyga (*Hyphantozyga*) Knight (1930) p. 18

Hyphantozyga Knight (1944) p. 463

Hemizyga (*Hyphantozyga*) Knight, Batten, and Yochelson (1960) p. 1315

Hyphantozyga gracilis (Knight) see **Hemizyga** (**Hyphantozyga**) **gracilis**

HYPSELENTOMA J. Weller 1929

Type species: *Pleurotomaria perhumerosa* Meek (1872a) p. 232

Hypselentoma J. Weller (1929a) p. 10

Hypselentoma humerosa J. Weller 1929 see **Amaurotoma humerosa**

Hypselentoma inornata (Meek)

Pleurotomaria inornata Meek (1872a) p. 232, pl. 4, fig. 14

Carb., "U. Coal Measures": Near Nebraska City, Nebr.

Hypselentoma inornata J. Weller (1929a) p. 10

Hypselentoma perhumerosa (Meek)

Pleurotomaria perhumerosa Meek (1872a) p. 232, pl. 4, figs. 13a, b

Carb., "U. Coal Measures": Near Nebraska City, Nebr.; Rulo, Nebr.; "Coal Measures": Ill.

Keyes (1894b) [1895] p. 140, pl. 48, fig. 5

Carb., "U. Coal Measures": Kansas City, Mo.

Barbour (1903) pl. 2, fig. 19

Carb.: Nebraska

Woodruff (1906) p. 284, pl. 15, fig. 1

Carb.: Weeping Water and Louisville, Nebr.

Pleurotomaria aff. *perhumerosa* Girty (1915b) p. 113, pl. 11, figs. 7, 7a

Miss., Batesville Ss.: Round Mtn., Batesville quad., Arkansas

Pleurotomaria perhumerosa Morgan (1924) pl. 49, fig. 21

Penn., Wetumka Sh.: Stonewall quad., Oklahoma

Hypselentoma perhumerosa J. Weller (1929a) p. 10

Pleurotomaria aff. *perhumerosa* Croneis (1930) p. 62, pl. 15, fig. 21

Miss., Batesville Ss.: Arkansas

Hypselentoma perhumerosa Knight (1941) p. 156-157, pl. 21, figs. 2a-c

U. Carb.: Rulo and Nebraska City, Nebr.

Baylea perhumerosa Knight (1944) p. 453, pl. 184, figs. 8, 9

Penn., Missouri Ser.: Midcontinent region

Knight, Batten, and Yochelson (1960) p. 1202, fig. 116, no. 8

U. Penn.: Nebraska

Mudge and Yochelson (1962) [1963] p. 93

Penn., Stotler ls., Dry Sh. Mbr.: Riley County, Kans.

IANTHINOPSIS Meek and Worthen 1866

Type species: *Platystoma? tumida* Meek and Worthen (1861) p. 463

Plectostylus Conrad (1842) p. 275 [not Beck 1837]

Ianthinopsis Meek and Worthen (1866a) p. 362

***Ianthinopsis brevis* (White)**

Soleniscus brevis White (1880c) p. 28, pl. 4, figs. 5a-c

Carb.: Coyote Creek, north of Black Lake, and near Taos, N. Mex.

Soleniscus (Macrocheilus) ventricosus White (1884a) [part] p. 187, pl. 8, fig. 12 (not fig. 11)

Carb.: Illinois

White (1884a) [part] p. 155, pl. 34, fig. 12 (not fig. 11)

Carb., "Coal Measures": Illinois; Iowa; New Mexico

Soleniscus brevis Keyes (1889b) p. 423, pl. 20, figs. 12, 14

Keyes (1889g) [1890] p. 307

Keyes (1894b) [1895] p. 212

Carb., "U. Coal Measures": Kansas City and Clinton, Mo.

Sphaerodoma? brevis Price (1914b) p. 540

Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge, Newburg, and Fellows-ville, W. Va.

Soleniscus (Macrochilina) brevis Knight (1931b) p. 199, 215, pl. 24, figs. 1a-h; pl. 27, fig. 7

Penn., Fort Scott Ls. and top of Labette Sh.: St. Louis, Mo.

Sphaerodoma brevis Williams (1960) p. 912, p. 121, fig. 33

Penn., L. Kittanning shale: Benezette, Pa.

Ianthinopsis brevis Hoare (1961) p. 190, pl. 23, figs. 5, 6

M. Penn., Tiawah Ls.: Henry County, Mo.

Sturgeon (1964a) p. 218, pl. 35, figs. 10, 11; pl. 36, fig. 15

Penn., Allegheny Fm., Vanport Ls. Mbr.; Columbiana Ls. Mbr.: Mahoning County, Ohio

***Ianthinopsis gouldiana* Girty**

Ianthinopsis gouldiana Girty (1912a) p. 141

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Girty (1915a) p. 223, pl. 23, figs. 1, 1a

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

***Ianthinopsis hildrethii* (Conrad)**

Plectostylus hildrethii Conrad (1842) p. 275, pl. 17, fig. 2

Carb.: Flint Ridge, Ohio

Sphaerodoma hildrethii Girty (1915a) p. 199

Soleniscus (Macrochilina) hildrethii Knight (1931b) p. 199

Strobus hildrethii Knight (1941) p. 256, pl. 95, fig. 3

U. Carb.: Flint Ridge, Ohio

***Ianthinopsis intercalaris* (Meek and Worthen)**

Macrocheilus intercalaris Meek and Worthen (1860) [1861] p. 467

Carb., "U. Coal Measures": Springfield, Ill.

Macrocheilus pulchellus Meek and Worthen (1860) [1861] p. 467

Carb., "U. Coal Measures": Springfield Ill.

Macrocheilus intercalaris Meek and Worthen (1866a) p. 371, pl. 31, fig. 6a, b

Carb., "U. Coal Measures": Springfield, Ill.; Pittsburgh, Pa.

Macrocheilus intercalaris var. *pulchellus* Meek (1872a) p. 228, pl. 6, fig. 8

Carb., "U. Coal Measures": Near Nebraska City, Nebr.; Springfield, Ill.; "Coal Measures": Pittsburgh, Pa.; "L. Coal Measures": West Virginia

Sphaerodoma intercalaris Girty (1915a) p. 199, 205, pl. 24, figs. 1-2a

Penn., Wewoka Fm.: Wewoka and Colgate quads., Oklahoma

Soleniscus (Macrochilina) intercalaris Knight (1931b) p. 199, pl. 26, fig. 2

Ianthinopsis intercalaris Sturgeon (1964a) p. 218, pl. 35, figs. 8, 9; pl. 36, figs. 17, 18

Penn., Columbiana Ls. and Washingtonville Sh.: Columbiana County, Ohio

***Ianthinopsis keyesi* (Rowley)**

Macrochilina keyesi Rowley (1900a) p. 268, pl. 5, figs. 65, 66

Miss., l. part Burlington Ls.: Louisiana, Mo.

Sphaerodoma keyesi Girty (1915a) p. 199

***Ianthinopsis klippiarti* (Meek)**

Macrocheilus klippiarti Meek (1872c) p. 328

Miss., "L. Coal Measures": Near Somerset, Perry County, Ohio

Meek (1875b) p. 346, pl. 20, figs. 4a-c

Miss., "L. Coal Measures": Near Somerset, Perry County, Ohio

Soleniscus klippiarti Keyes (1889b) p. 423, pl. 20, fig. 11

Keyes (1889g) [1890] p. 308

Mark (1911) p. 308, pl. 8, fig. 14

Penn., Pottsville Fm., Mercer Mbr.: Newark-Zanesville region, Ohio

Sphaerodoma klippiarti Girty (1915a) p. 199

Soleniscus (Macrochilina) klippiarti Knight (1931b) p. 200

Ianthinopsis klippiarti Hoare (1961) p. 193, pl. 23, fig. 18

M. Penn., Tiawah Ls.: Henry County, Mo.

Sturgeon (1964b) p. 746, pl. 122, figs. 8-10

Penn., Pottsville Fm., l. part Mercer Mbr.: Near Somerset, Perry County, Ohio

***Ianthinopsis littonanus* (Hall)**

Natica littonana Hall (1856) p. 30

Miss., St. Louis Ls.: Bloomington, Ind.

Macrocheilus littonanum Whitfield (1882a) p. 72, pl. 8, fig. 28

Miss., St. Louis Ls.: Bloomington, Ind.

Macrocheilus? littonanus Hall (1883) p. 369, pl. 31, fig. 28

Miss., St. Louis Ls.: Bloomington, Ind.

Sphaerodoma littonana Keyes (1889g) [1890] p. 305

Macrocheilus littonanus Cumings (1906) p. 1341, pl. 25, fig. 28

Miss., Salem Ls.: Bloomington, Ind.

Sphaerodoma littonana Keyes (1894b) [1895] p. 214

Miss., Kaskaskia Ls. of former usage: St. Genevieve, Mo.

Sphaerodoma littonana Girty (1915a) p. 199

Strobus littonanus Knight (1944) p. 479, pl. 196, fig. 13

Miss., Salem Ls.: Mississippi Valley

***Ianthinopsis medialis* (Meek and Worthen)**

Macrocheilus medialis Meek and Worthen (1860) p. 466

Carb., "U. Coal Measures": Springfield, Ill.

Meek and Worthen (1866a) p. 370, pl. 31, figs. 5a, b

Carb., "U. Coal Measures": Springfield, Ill.

- Soleniscus*? (*Macrocheilus*) *medialis* White (1884a) p. 187, pl. 8, figs. 15, 16
 Carb.: Indiana
 White (1884b) p. 156, pl. 34, figs. 15, 16
 Carb., "Coal Measures": Vermilion County, Ind.
- Machrocheilus medialis* Herrick (1887a) p. 21, pl. 2, fig. 16
 Carb., "Coal Measures": Flint Ridge, Ohio
- Soleniscus medialis* Herrick (1887b) pl. 14, fig. 4
 Carb., "Coal Measures": Flint Ridge, Ohio
- Sphaerodoma medialis* Keyes (1889g) [1890] p. 306
 Keyes (1891) [1892] p. 262
 Carb., "L. Coal Measures": Des Moines, Iowa
 Keyes (1894b) [1895] p. 215
 Carb., "U. Coal Measures": Kansas City; Clinton, Mo.
- Sphaerodoma* aff. *medialis* Girty (1909c) p. 108
 Perm., San Andres Ls.: Caballas Mts. and Engle, N. Mex.
- Sphaerodoma medialis* Girty (1915a) p. 199
- Soleniscus* (*Machrochilina*) *medialis* Knight (1931b) p. 200, 217, pl. 25, figs. 4a-c; pl. 27, fig. 9
 Penn., l. part Fort Scott Ls.; top of Labette Sh.: St. Louis, Mo.
- Strobus medialis* Knight (1944) p. 479, pl. 196, fig. 14
 Penn.: Mississippi Valley

***Ianthinopsis melanoides* (Whitfield)**

- Polyphemopsis melanoides* Whitfield (1882b) p. 225
 Miss., Maxville Ls.: Newtonville, Ohio
 Whitfield (1891) p. 592, pl. 14, fig. 13
 Miss., Maxville Ls.: Newtonville, Ohio
 Whitfield (1895) p. 478, pl. 10, fig. 13
 Miss., Maxville Ls.: Newtonville, Ohio
- Bulimorpha melanoides* Weller (1898) p. 152
 Morse (1911) p. 399, fig. 24
 Miss., Maxville Ls.: White Cottage, Mount Perry-Fultonham, and Maxville, Ohio
- Sphaerodoma melanoides* Girty (1915a) p. 199, 220

***Ianthinopsis paludinaeformis* (Hall)**

- Macrocheilus paludinaeformis* Hall (1858) p. 719, pl. 29, fig. 10
 Carb., "L. Coal Measures": Des Moines Valley, Iowa
- Machrocheilus ventricosus* Hall (1858) p. 718, pl. 29, fig. 8 [not Goldfuss 1841]
 Carb., "L. Coal Measures": Des Moines Valley, Iowa
- Soleniscus* (*Macrocheilus*) *paludinaeformis* White (1884a) p. 187, pl. 8, fig. 17
 Carb.: Indiana
 White (1884b) p. 154, pl. 34, fig. 17
 Carb., "Coal Measures": Vermilion County, Ind.
- Soleniscus* (*Machrocheilus*) *ventricosus* White (1884a) [part], p. 187, pl. 8, fig. 11 (not fig. 12)
 Carb.: Illinois
 White (1884b) [part] p. 155, pl. 34, fig. 11 (not fig. 12)
- Soleniscus paludinaeformis* Keyes (1889b) p. 423, pl. 20, fig. 16
 Keyes (1889g) [1890] p. 308
 Keyes (1891) [1892] p. 262
 Carb., "L. Coal Measures": Des Moines, Iowa
 Keyes (1894b) [1895] p. 211
 Carb., "U. Coal Measures": Kansas City, Mo.

- Soleniscus* cf. *paludiformis* [sic] Girty (1903) p. 466
Carb.: Glenwood Springs, Colo.
- Soleniscus paludinaeformis* Mark (1912) [1913] p. 317, pl. 6, fig. 17
Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Glouster, Ohio; Ames Ls. Mbr.: Caldwell; New Concord, Ohio; Portersville Ls.: Santoy, Ohio
- Soleniscus brevis* Mark (1912) [1913] p. 318, pl. 16, fig. 18
Penn., Conemaugh Fm., Ames Ls. Mbr.: New Concord, Ohio; Portersville Ls.: Portersville, Ohio
- Sphaerodoma?* *ventricosa* Price (1914b) p. 541
Penn., Conemaugh Fm., Ames Ls. Mbr.: Kingwood, Trowbridge, and Fellows-ville, W. Va.
- Sphaerodoma ventricosa* Girty (1915a) p. 200, 213, pl. 24, figs. 4, 4a
Penn., Wewoka Fm., Wewoka and Coalgate quads., Oklahoma
- Sphaerodoma paludiformis* [sic] Girty (1915a) p. 200, 207, pl. 29, figs. 5-6a
Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
- Sphaerodoma brevis* var. Girty (1915a) p. 204, pl. 24, figs. 7, 7a
Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
- Sphaerodoma brevis* Morningstar (1922) p. 261, pl. 15, figs. 22-24
Penn., Pottsville Fm., l. part Mercer Mbr.: Perry and Stark Counties; u. part Mercer Mbr.: Holmes County; McArthur Ls.: Vinton County, Ohio
- Sphaerodoma ventricosa* Morningstar (1922) p. 264
Penn., Pottsville Fm., l. part Mercer Mbr.: Muskingum County; u. part Mercer Mbr.: Holmes County, Ohio
- Sphaerodoma brevis* Morgan (1924) pl. 50, figs. 5, 5a
Penn., Wetumka and Boggy Fms.: Stonewall quad., Oklahoma
- Sphaerodoma gracilis* Morgan (1924) pl. 50, fig. 6
Penn., Boggy Fm.: Stonewall quad., Oklahoma
- Sphaerodoma paludinaeformis* Sayre (1930) [1931] p. 148, pl. 16, fig. 5
Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.
- Soleniscus (Macrochilina) paludinaeformis* Knight (1931b) p. 200, 213, pl. 23, figs. 2a-m; pl. 27, fig. 6
Penn., l. part Fort Scott Ls.; top of Labette Sh.: St. Louis, Mo.
- Sphaerodoma brevis* Morse (1931) p. 324, pl. 53, fig. 23
Penn., Kendrick Sh.: Kentucky
- Soleniscus (Macrochilina) ventricosus* Knight (1931b) p. 199, 214
- Strobeus ventricosus* Knight (1936) p. 523
- Strobeus paludinae formis* Knight (1944) p. 479, pl. 196, fig. 9
Penn.: Mississippi Valley
- Ianthinopsis paludinaeformis* Hoare (1961) p. 191, pl. 23, figs. 14, 15
M. Penn., Seville Ls.: Barton County, Mo.
- Sturgeon (1964a) p. 218, pl. 35, figs. 12-15; pl. 36, fig. 3
Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Vinton County; Vanport Ls. Mbr.: Mahoning County; Washingtonville Sh. Mbr.: Coshocton County, Ohio
- Ianthinopsis pinguis* (Winchell)**
- Macrocheilus pinguis* Winchell (1863) [1864] p. 21
Yellow ss.: Burlington, Iowa
- Sphaerodoma pinguis* Keyes (1889e) [1890] p. 296
Miss., Kinderhook Ser.: Burlington, Iowa
- Keyes (1889) p. 306
- Keyes (1894b) [1895] p. 213
Miss., Burlington Ls.: Louisiana, Mo.

- S. Weller (1900) p. 108, pl. 6, figs. 1, 2
 Chonopectus ss.: Burlington, Iowa
 S. Weller (1905) p. 62
 Miss., Kinderhook Ser.: Kinderhook, Ill.
 Girty (1915a) p. 200

***Ianthinopsis primigenius* (Conrad)**

- Stylifer primogenia* Conrad (1835) p. 267, pl. 12, fig. 2
 Carb.: Inclined plane of Allegheny Mts., Pa.
Fusus? inhabilis Morton (1836) p. 152, pl. 2, fig. 14
 Carb., "Coal measures": Ohio Valley
Macrocheilus inhabilis Norwood and Pratten (1855) p. 76, pl. 9, figs. 9a, b
 Carb., "Coal Measures": Grayville and Galatia, Ill.: Posey County, Ind.
Macrocheilus primogenia Hall (1858) p. 720, pl. 29, figs. 11a, b
 Penn.: Ohio; Indiana; Illinois; Iowa
Macrocheilus texanus Shumard (1859) p. 402
 Carb., "Coal Measures": W. of Sierra Hueco, El Paso County, Tex.
Soleniscus (Macrocheilus) texanus White (1884a) p. 187, pl. 8, figs. 13, 14
 Carb., "Coal Measures": Indiana
Soleniscus? (Macrocheilus) primigenius? White (1884a) p. 187, pl. 8, fig. 3
 Carb.: Illinois
Soleniscus? (Macrocheilus) primigenius White (1884a) p. 157, pl. 34, fig. 3
 Carb., "Coal Measures": Ohio; Indiana; Illinois; Iowa
Soleniscus? (Macrocheilus) ponderosus White (1884a) p. 156, pl. 34, figs. 1, 2
 Carb., "U. Coal Measures": Iowa
Soleniscus? (Macrocheilus) texanus White (1884a) p. 155, pl. 34, figs. 13, 14
 Carb., "Coal Measures": Danville, Ill.
Soleniscus? (Macrocheilus) ponderosus? White (1884a) p. 187, pl. 8, figs. 1, 2
 Carb.: S. Iowa
Macrocheilus primigenius Heilprin (1886a) p. 446, fig. 16; p. 157, fig. 16a
 Penn., Mill Creek Ls.: Wilkes-Barre, Pa.
 Heilprin (1886b) p. 274, fig. 16; p. 276, fig. 16a
 Penn., Mill Creek Ls.: Wilkes-Barre, Pa.
Sphaerodoma primogenia Keyes (1889c) p. 306
Sphaerodoma texana Keyes (1889c) p. 306
Sphaerodoma primogenia Keyes (1894b) [1895] p. 215
 Carb., "U. Coal Measures": Kansas City, Mo.
Macrocheilus (Soleniscus) primigenius Smith (1896) p. 41
 Carb., "L. Coal Measures": Conway County, Ark.
Sphaerodoma aff. *texana* Girty (1909c) p. 109, pl. 11, fig. 7
 Perm.; San Andres Ls.: Caballos Mts., N. Mex.
Sphaerodoma primogenia Raymond (1910) p. 157, pl. 26, fig. 5
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Donohoe, Pa.
 Raymond (1911) p. 98, pl. 5, fig. 5
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Donohoe, Pa.
Sphaerodoma? primigenia Price (1914b) p. 540
 Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge, W. Va.
Sphaerodoma? primigenia var. *intermedia* Price (1914b) p. 541, pl. 43, figs. 24-28
 Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge, W. Va.
Sphaerodoma primigenia Girty (1915a) p. 200, 208, pl. 24, figs. 13-17a
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
Sphaerodoma texana (1915a) p. 200

- Sphaerodoma brevis* Girty (1915a) [part] p. 201, pl. 24, figs. 9-12a (not figs. 8a, b)
Penn. Wewoka Fm.: Oklahoma
- Sphaerodoma primigenia* Plummer and Moore (1921) [1922] pl. 14, figs. 15, 16; pl. 22, figs. 1-3
Penn., Mineral Wells Fm.: Mineral Wells, Tex.; Graham Fm., Wayland Sh.
Mbr.: NW. of Brownwood; S. of Gunsight, Tex.
- Morningstar (1922) p. 263
Penn., Pottsville Fm., Sharon "ore": Scotio County; l. part Mercer Mbr.: Perry County; McArthur Ls.: Vinton County, Ohio
- Morgan (1924) pl. 50, fig. 9
Penn., Belle City Ls.: Stonewall quad., Oklahoma
- Sphaerodoma primigenius* Sayre (1930) [1931] p. 148, pl. 16, figs. 3, 3a
Penn., Drum Ls., oolitic mbr.: Independence, Kans.
- Morse (1931) p. 325, pl. 53, fig. 24
Penn., Kendrick Sh.: Kentucky
- Soleniscus (Macrochilina) texanus* Knight (1931b) p. 199
Soleniscus (Macrochilina) primigenius Knight (1931b) p. 184, 207
Strobeus primigenia Knight (1936) p. 533
- Spaerodoma primigenium* Knight (1941) p. 329, pl. 95, figs. 1s, b
U. Carb.: Conemaugh Fm., Brush Creek Ls. Mbr.: Ben's Creek, Pa.
- Strobeus primigenius* Knight (1944) p. 479, pl. 196, fig. 10, 11
Penn.: Mississippi Valley
- Ianthinopsis primigenius* Hoare (1961) p. 189, pl. 23, figs. 11-13
M. Penn., Tiawah Ls.: Barton County, Mo.

Ianthinopsis regularis (Cox)

- Loxonema regularis* Cox (1857) p. 566, pl. 8, fig. 2
Carb., "Coal Measures": Daviess County, Ky.
- Loxonema carinata* Stevens (1858) p. 259
Carb., "Coal Measures": Danville, Ill.
- Loxonema newberryi* Stevens (1858) p. 259
Carb., "Coal Measures": Danville, Ill.
- Macrochilus newberryi* Hall (1858) p. 719, pl. 29, fig. 9
Carb., "Coal Measures": Danville, Ill.
- Macrochilus fusiformis* Hall (1858) p. 718, pl. 29, fig. 7
Carb., "Coal Measures": Alpine Dam, Iowa
- Loxonema inornata* Meek and Worthen (1860) [1861] p. 465
Carb., "U. Coal Measures": Springfield, Ill.
- Polyphemopsis inornata* Meek and Worthen (1866a) p. 374, pl. 31, figs. 8a-c
Carb., "U. Coal Measures": Springfield, Ill.
- Polyphemopsis chrysalis* Meek and Worthen (1866c) [1867] p. 267
Carb., "L. Coal Measures": Hodges Creek, Macoupin County, Ill.
- Meek and Worthen (1873) p. 596, pl. 28, fig. 7
Carb., "Coal Measures": Hodges Creek, Macoupin County, Ill.
- Macrochilus newberryi* Meek and Worthen (1873) p. 594, pl. 28, fig. 14
Carb., "Coal Measures": Danville, Ill.
- Polyphemopsis fusiformis* White (1880c) p. 519, pl. 8, fig. 6
Carb., "Coal Measures": Newport, Ind.
- Soleniscus planus* White (1881) p. 29, pl. 4, figs. 4a-c
Carb.: Coyote Creek and N. of Black Lake, N. Mex.
- Soleniscus planus* White (1884a) p. 187, pl. 8, figs. 9, 10
Carb.: Illinois
- White (1884b) p. 153, pl. 34, figs. 9, 10
Carb., "Coal Measures": Danville, Ill.

- Soleniscus (Macrocheilus) fusiformis* White (1884a) p. 187, pl. 8, figs. 4-6
 Carb.: Illinois
 White (1884b) p. 154, pl. 34, figs. 4-6
 Carb., "Coal Measures": Illinois; Iowa
- Polyphemopsis?* sp.? White (1884b) p. 164, pl. 32, fig. 6
 Carb., "Coal Measures": Newport, Ind.
- Soleniscus (Macrocheilus) newberryi* White (1884a) p. 187, pl. 8, figs. 7, 8
 Carb.: Illinois
 White (1884b) p. 153, pl. 34, figs. 7, 8
 Carb., "Coal Measures": Danville, Ill.
- Soleniscus planus* Herrick (1887b) pl. 14, figs. 5, 6
 Carb., "Coal Measures": Flint Ridge, Ohio
- Polyphemopsis inornata* Herrick (1887a) p. 20, pl. 2, fig. 15
 Carb., "Coal Measures": Flint Ridge, Ohio
- Macrocheilus (Soleniscus) fusiformis?* Herrick (1887b) p. 147, pl. 14, fig. 7
 Carb., "Coal Measures": Flint Ridge, Ohio
- Macrocheilus fusiformis* Herrick (1888b) pl. 11, fig. 7
 Carb., "Coal Measures": Fultonham, Ohio
- Macrocheilus newberryi* Keyes (1888) [1889] p. 240
 Carb., "L. Coal Measures": Des Moines, Iowa
- Soleniscus newberryi* Keyes (1889b) p. 423, pl. 20, fig. 5
 Keyes (1889c) p. 308
- Soleniscus planus* Keyes (1889b) p. 423, pl. 20, fig. 18
- Bulimorpha inornata* Keyes (1889g) [1890] p. 301
- Soleniscus carinatus* Keyes (1889b) p. 423
 Keyes (1889c) p. 307
- Soleniscus attenuatus* Keyes (1889b) p. 423, pl. 20, figs. 7-9
- Soleniscus?* *attenuatus* Keyes (1889c) p. 307
- Bulimorpha chrysalis* Keyes (1889c) p. 300
- Bulimorpha?* *chrysalis* Keyes (1891) [1892] p. 264
- Macrocheilus regularis* Whitfield (1891) p. 600, pl. 15, fig. 3
 Carb., "Coal Measures": Carbon Hill, Hocking County, Ohio
- Soleniscus newberryi* Keyes (1891) [1892] p. 260
 Carb., "L. Coal Measures": Des Moines, Iowa
 Keyes (1894b) [1895] p. 212
 Carb., "U. Coal Measures": Kansas City, Mo.
- Bulimorpha inornata* Keyes (1894b) [1895] p. 205, pl. 55, fig. 6
 Carb., "U. Coal Measures": Kansas City, Mo.
- Macrocheilus regularis* Whitfield (1895) pl. 11, fig. 13
 Carb., "Coal Measures": Carbon Hill, Hocking County, Ohio
- Macrocheilus* cf. *fusiformis* Smith (1896) p. 41
 Carb., "L. Coal Measures": Conway County, Ark.
- Polyphemopsis inornata* Smith (1896) p. 41
 Carb., "U. Coal Measures": Crawford County, Ark.
- Meekospira inornata* Ulrich (1897) p. 1079
- Bulimorpha chrysalis* Girty (1903) p. 466; pl. 10, figs. 6, 6a, 7, 7a
 Penn., Rico Fm.: San Juan region, Colorado; Carb.: Leadville district, Colorado
- Bulimorpha chrysalis* var. *delawarensis* Girty (1908a) [1909] p. 487, pl. 23, fig. 21
 Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.
- Soleniscus fusiformis* Raymond (1910) p. 156, pl. 24, fig. 7
 Penn., Vanport Ls.: New Castle, Pa.
 Raymond (1911) p. 97, pl. 3, fig. 7
 Penn., Vanport Ls.: New Castle, Pa.

- Subulites (Polyphemopsis) inornatus* Crook (1912) p. 15, fig. 8
Penn.: Vicinity of Springfield, Ill.
- Sphaerodoma? fusiformis?* Price (1914b) p. 542
Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Reedeville, W. Va.
- Sphaerodoma planus* Girty (1915a) p. 200
- Sphaerodoma carinata* Girty (1915a) p. 198
- Sphaerodoma regularis* Girty (1915a) p. 200
- Sphaerodoma* aff. *S. regularis?* Girty (1915a) p. 212
- Sphaerodoma newberryi* Girty (1915a) p. 199
- Bulimorpha chrysalis* Girty (1915a) p. 221
- Sphaerodoma paludiniiformis* Girty (1915a) p. 207, pl. 24, figs. 5, 6, 6a
Penn., Wewoka Fm.: Oklahoma
- Bulimorpha inornata* Girty (1915a) p. 221, 222, pl. 25, figs. 10, 10a
Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
- Sphaerodoma fusiformis* Girty (1915a) p. 198
- Bulimorpha chrysalis* var. *delawarensis* Girty (1915a) p. 221
- Bulimorpha minuta* Girty (1915e) pl. 29, figs. 4, 4a, 4b (not p. 362)
Penn., Cherokee Sh.: Garland, Henry County, Mo.
- Sphaerodoma fusiformis* Price (1920) p. 609
Penn., Kanawha Fm., Kanawha black flint: Webster County, W. Va.
- Bulimorpha inornata?* Plummer and Moore (1921) [1922] pl. 14, figs. 5, 5a
Penn., Mineral Wells Fm.: Mineral Wells, Tex.
- Morningstar (1922) p. 260
Penn., Pottsville Fm., l. part Mercer Mbr.: Perry, Licking, and Stark Counties;
u. part Mercer Mbr.: Muskingum County; McArthur Ls.: Vinton County,
Ohio
- Sphaerodoma newberryi* Morningstar (1922) p. 263
Penn., Pottsville Fm., l. part Mercer Mbr.: Perry County; McArthur Ls.: Vinton
County, Ohio
- Sphaerodoma regularis* Morningstar (1922) p. 264
Penn., l. part Mercer Mbr.: Perry, Licking, and Stark Counties, Ohio
- Sphaerodoma klipparti* Morningstar (1922) p. 262, pl. 15, fig. 21
Penn., l. part Mercer Mbr.: Generally; McArthur Ls.: Vinton County, Ohio
- Sphaerodoma fusiformis?* Morningstar (1922) p. 261
Penn., l. part Mercer Mbr.: Perry and Muskingum Counties; McArthur Ls.:
Vinton County, Ohio
- Soleniscus fusiformis* Morgan (1924) pl. 50, fig. 4
Penn., Wewoka Fm.: Stonewall quad., Oklahoma
- Sphaerodoma fusiformis* Sayre (1930) [1931] p. 147, pl. 16, fig. 10
Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.
- Bulimorpha chrysalis* [sic] Sayre (1930) [1931] p. 146, pl. 16, fig. 9
Penn., Drum Ls., oolitic mbr.: Turner, Kans.
- Soleniscus (Macrochilina) regularis* Knight (1931b) p. 200, 220, pl. 24, figs. 2a-n; pl. 27,
fig. 10
Penn.: St. Louis, Mo.
- Strobeus regularis* Knight (1944) p. 479, pl. 196, fig. 12
Penn.: Mississippi Valley
- Macrocheilus regularis* Peck and MacFarland (1954) p. 305
Carb.: Carbon Hill, Hocking, Ohio
- Soleniscus (Macrochilina) regularis* var. *Elias* (1958) p. 21, pl. 2, figs. 8-10
Miss., Redoak Hollow Fm.: Oklahoma

Ianthinopsis regularis Hoare (1961) p. 192, pl. 23, figs. 16, 17

M. Penn., Robinson Branch Ls.: Henry County, Mo.

Sturgeon (1964a) p. 219, pl. 35, figs. 3-5; pl. 36, figs. 4, 5

Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Tuscarawas County; Vanport Ls.

Mbr.: Columbiana County; Columbiana Ls. Mbr.: Mahoning County, Ohio

***Ianthinopsis reticulatus* (Hyde)**

Strobeus reticulatus Hyde (1953) p. 335, pl. 48, figs. 7-11

Miss.: Sciotoville, Ohio

***Ianthinopsis stinesvillensis* (Cumings)**

Macrocheilus stinesvillensis Cumings (1906) p. 1341, pl. 24, figs. 10, 10a

Miss., Salem Ls.: Stinesville, Ind.

Sphaerodoma stinesvillensis Girty (1915a) p. 200

***Ianthinopsis subcorpulentus* (Whitfield)**

Macrocheilus subcorpulentus Whitfield (1882b) p. 224

Miss., Maxville Ls.: Newtonville, Ohio

Sphaerodoma subcorpulenta Keyes (1889g) [1890] p. 306

Macrocheilus subcorpulentus Whitfield (1891) p. 591, pl. 14, fig. 14

Miss., Maxville Ls.: Newtonville, Ohio

Whitfield (1895) p. 478, pl. 10, fig. 14

Miss., Maxville Ls.: Newtonville, Ohio

Sphaerodoma subcorpulenta Morse (1911) p. 401, fig. 26

Miss., Maxville Ls.: White Cottage and Mount Perry, Fultonham, Ohio

Holopea subcorpulenta Girty (1915a) p. 190, 197

Sphaerodoma subcorpulenta Snider (1915) p. 117

Miss., Mayes, Fayetteville, and Pitkin Fms.: NE. Oklahoma

Easton (1942) pl. 10, fig. 9

Miss., Pitkin Ls.: Arkansas

***Ianthinopsis tantilla* (Rowley)**

Macrochilina tantilla Rowley (1900a) p. 268, pl. 5, figs. 57, 58

Miss., l. part Burlington Ls.: Louisiana, Mo.

Sphaerodoma tantilla Girty (1915a) p. 200

***Ianthinopsis tumida* (Worthen)**

Platystoma? tumida Meek and Worthen (1860) [1861] p. 463

Carb., "Coal Measures": Grayville, Ill.

Pleurotomaria? tumida Meek and Worthen (1866a) p. 361, pl. 31, figs. 1a, b

Carb., "U. Coal Measures": Grayville, Ill.

Platystoma grayvillensis Worthen (1882) p. 38

Ianthinopsis tumida Knight (1941) p. 159, pl. 94, figs. 3a, b

U. Carb.: Grayville, Ill.

Knight, Batten, and Yochelson (1960) p. 1321, fig. 213, no. 4

U. Penn.: Texas

***Ianthinopsis worthenanus* (Miller)**

Macrochilina worthenanus Miller (1889) p. 409

Macrocheilus altonensis Worthen (1890) p. 143, pl. 24, figs. 1, 1a [not Worthen, 1873]

Miss., St. Louis Ls.: Alton, Ill.

Sphaerodoma worthenana Girty (1915a) p. 200

Ianthinopsis species of authors

- Macrocheilus* (undet.) Meek and Worthen (1866a) p. 372, pl. 27, fig. 10
 Carb., "U. Coal Measures": Bridge over north branch of Saline River, Gallatin County, Ill.
- Cummings (1906) p. 1341, pl. 24, figs. 3, 3a
 Miss., Salem Ls.: Spergen Hill, Ind.
- Sphaerodoma*? sp. Beede (1911) p. 184
 Carbonic fauna: Oyster basin, Coffin Island, Quebec
- Price (1914b) p. 542
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Preston County, W. Va.; Hutton, Md.
- Girty (1915c) p. 39
 Miss., "Boone" chert: Batesville, Ark.
- Sphaerodoma* sp. Mather (1915) p. 241, pl. 15, fig. 26
 Penn., Morrow Ser.: Fayetteville, Ark.; Choteau, Okla.
- Strobeus* sp. Easton (1942) pl. 11, figs. 2, 3
 Miss., Pitkin Ls.: Arkansas
- Ianthinopsis*? sp. Yochelson and Dutro (1960) p. 144, pl. 14, fig. 3
 Miss.: N. Alaska
- Ianthinopsis* sp. Sturgeon (1964a) p. 220, pl. 35, figs. 16, 17; pl. 36, fig. 21
 Penn.: Mahoning County, Ohio

IGOCERAS Hall 1860

Type species: *Calceola plicata* Conrad (1840) p. 207

Igoceras Hall (1859b) [1860] p. 330

[Knight (1934a) p. 148 considered this name a subjective synonym of *Orthonychia* Hall (1843); Knight (1944) p. 473 reduced *Orthonychia* to subgeneric rank under *Platyceras* Conrad (1840).]

Igoceras banffense* Warren 1927 see *Platyceras* (*Orthonychia*) *banffense

Igoceras capulus* (Hall) see *Lepetopsis capulus

***Igoceras compressum* Warren 1927 [not Girty 1910] see *Platyceras* (*Orthonychia*) *kindlei* Warren**

Igoceras fissurellum* (Hall) see *Platyceras* (*Orthonychia*) *fissurella

Igoceras pabulocrinus* (Owen) see *Platyceras* (*Orthonychia*) *pabulocrinus

Igoceras quincyense* Keyes 1892 see *Platyceras* (*Orthonychia*) *quincyense

Igoceras subplicatum* (Meek and Worthen) see *Platyceras* (*Orthonychia*) *subplicatum

Igoceras undata* (Winchell) see *Platyceras* (*Orthonychia*) *undata

***Igoceras* species of authors see *Platyceras* (*Orthonychia*) species of authors**

INACHUS Hisinger 1837

[Knight (1941) p. 72 noted that this name is a suppressed objective synonym of *Centrifugus* Bronn (1834); that genus is not currently considered to range into the Paleozoic. One North American late Paleozoic species originally assigned to *Inachus* was reassigned.]

Inachus catilloides* Conrad 1842 see *Straparollus* (*Amphiscapha*) *catilloides

INCRISPELLA Tasch 1963

Type species: *Incrispella rectotortis* Tasch (1963) p. 1246

Incrispella Tasch (1963) p. 1246

Incrispella heliciis Tasch

Incrispella heliciis Tasch (1963) p. 1246, pl. 173, figs. 7-9
Perm. rocks of Leonard age: Dickinson County, Kans.

Incrispella modicis Tasch

Incrispella modicis Tasch (1963) p. 1246, pl. 173, figs. 10-13
Perm., rocks of Leonard age: Dickinson County, Kans.

Incrispella rectotortis Tasch

Incrispella rectotortis Tasch (1963) p. 1246, pl. 173, figs. 3-6
Perm., rocks of Leonard age: Dickinson County, Kans.

ISONEMA Meek and Worthen 1866

Type species: *Isonema depressum* Meek and Worthen (1866c) p. 251

Isonema Meek and Worthen (1866c) p. 251

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. One North American late Paleozoic species was reassigned.]

Naticopsis (*Isonema*) **humilis** Keyes 1889 see **Naticopsis** (**Jedria**) **ventrica** (Norwood and Pratten)

JEDRIA Yochelson 1953

[This name was proposed as a subgenus under *Naticopsis* M'Coy (1846) by Yochelson (1953) p. 65.]

Naticopsis (**Jedria**) **meeki** (Knight) see **Naticopsis** (**Jedria**) **meeki**

KANSANA Tasch 1953

Type species: *Kansana discoidalisa* Tasch (1953) p. 396

Kansana Tasch (1953) p. 396

[Knight, Batten, and Yochelson (1960) p. 1201 considered this name a subjective synonym of *Trepostira* (*Trepostira*) Ulrich and Scofield.]

Kansana discoidalisa Tasch 1953 see **Trepostira** (**Trepostira**) **discoidalisa**

KINISHBIA Winters 1956

Type species: *Kinishbia nodosa* Winters (1956) p. 45

Kinishbia Winters (1956) p. 45

Kinishbia nodosa Winters

Kinishbia nodosa Winters (1956) p. 45

Perm., Supai Fm., Fort Apache Mbr.: Fort Apache Indian Reservation, E. Arizona

Knight, Batten, and Yochelson (1960) p. 1317, fig. 210, no. 3

M. Perm.: North America

Winters (1963) p. 44, pl. 4, figs. 12a-13

Perm., Supai Fm.: E. Arizona

KNIGHTITES Moore 1941

Type species: *Knightites multicornutus* Moore (1941) p. 153

Knightites Moore (1941) p. 152

[Yochelson (1960) p. 226 divided this taxon into three subgenera, all of which range into the late Paleozoic.]

Knightites multicornutus Moore 1941 see **Knightites** (**Knightites**) **multicornutus**

KNIGHTITES (CYMATOSPIRA) Knight 1942

Type species: *Bellerophon montfortianus* Norwood and Pratten (1855) p. 74

Cymatospira Knight (1942) p. 487

Knightites (*Cymatospira*) Yochelson (1960) p. 226

***Knightites* (*Cymatospira*) *montfortianus* (Norwood and Pratten)**

Bellerophon montfortianus Norwood and Pratten (1855) p. 74, pl. 9, figs. 5a-c

Carb., "Coal Measures": Galatia, Ill.; New Harmony, Ind.

Geinitz (1866) p. 8, table 1, fig. 13

Carb., "Coal Measures": Nebraska City, Nebr.

Bellerophon interlineatus Geinitz (1866) p. 8, table 1, fig. 14

Carb., "Coal Measures": Nebraska City, Nebr.

Bellerophon montfortianus Meek (1872a) p. 225, pl. 11, figs. 15, 12?

Carb., "U. Coal Measures": Nebraska City, Nebr.; "Coal Measures": Nebraska;

Kansas; Iowa; Missouri; Illinois; "L. Coal Measures": West Virginia

White (1876a) p. 92

Perm., u. Aubrey Gr.: Confluence of Grand and Green Rivers, Utah

Herrick (1887a) p. 19, pl. 2, figs. 1; pl. 5, fig. 8, 8A

Carb., "Coal Measures": Flint Ridge, Ohio

Keyes (1888) [1889] p. 235

Carb., "L. Coal Measures": Des Moines, Iowa

White (1891) p. 26, pl. 3, figs. 15, 16

Perm.: Goodwin Creek, Baylor County, Tex.

Keyes (1891) [1892] p. 254

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 151

Carb., "U. Coal Measures": Kansas City, Mo.

Patellostium montfortianum Ulrich (1897) p. 854

Carb., "Coal Measures": No locality cited

Girty (1899a) p. 589

Bellerophon montfortianis Herrick (1900) pl. 2, fig. 25

Perm., base of section: Above smelter east of Sandia Mts., Bernalillo County, N. Mex.

Patellostium montfortianum Girty (1903) p. 473

Penn., Hermosa Fm.: San Juan region, Colorado; Weber(?) Ss.: Leadville district, Colorado

Price (1914b) p. 533

Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge, Newburg, and Fellowsville, W. Va.; Brush Creek Ls. Mbr.: Bruceton Mills, W. Va.; Oakland and Hutton, Garret County, Md.

Girty (1915a) p. 172, pl. 20, figs. 1-3b

Penn., Wewoka Fm.: Wewoka and Colgate quads., Oklahoma

Morningstar (1922) p. 251, pl. 14, figs. 13, 14

Penn., Mercer Ls., McArthur Mbr.: Vinton and Hocking Counties, Ohio

Morgan (1924) pl. 49, figs. 13, 13a

Penn., Wewoka Fm.: Stonewall quad., Oklahoma

Cymatospira montfortianum Knight (1942) p. 487

Cymatospira montfortianus Knight (1944) p. 445, pl. 179, figs. 34-41

Penn.: Mississippi Valley and Rocky Mtn. region

Knightites (Cymatospira) montfortianus Knight, Batten, and Yochelson (1960) p. 1184, fig. 103, no. 1

U. Penn.: Texas

Yochelson (1960) p. 226

Hoare (1961) p. 144, pl. 19, figs. 6-8

M. Penn., Tiawah Ls.: Henry County, Mo.

***Knightites (Cymatospira) montfortianum intermedia* Elias**

Patellostium (Patellilabia) montfortianum var. (?) *intermedia* Elias (1958) p. 5, pl. 1, figs. 1, 2
Miss., Redoak Hollow Fm.: Oklahoma

KNIGHTITES (KNIGHTITES) Moore 1941

Type species: *Knightites multicornutus* Moore (1941) p. 153

Knightites Moore (1941) p. 152

Knightites (Knightites) Yochelson (1960) p. 226

***Knightites (Knightites) bransoni* Yochelson**

Knightites (Knightites) bransoni Yochelson (1960) p. 270, pl. 53, figs. 13-17, table 19
Perm., Hueco Ls.: Otero County, N. Mex.

***Knightites (Knightites) maximus* Yochelson**

Knightites (Knightites) maximus Yochelson (1960) p. 271, pl. 54, figs. 10-17, table 20
Perm., Belle Plains Fm., Elm Creek Ls. Mbr.: Falls of Elm Creek, Coleman County, Tex.; Clyde Fm., Grape Creek Ls. Mbr.: Little Bluff on Colorado River, Runnels County, Tex.

***Knightites (Knightites) medius* Yochelson**

Knightites (Knightites) medius Yochelson (1960) p. 271, pl. 53, figs. 22, 23
Perm., Clyde Fm., Grape Creek Ls. Mbr.: W. of Runnels-Coleman County line, Runnels County, Tex.

***Knightites (Knightites) multicornutus* Moore**

Knightites multicornutus Moore (1941) p. 153-156, pl. 3, figs. 1a, b, 2a, b, 3a, b, 4, 5a, b, 6a-d, 7, 8a-c, 9, 10a, b; text figs. 6a, b

U. Penn. Deer Creek Ls., Ozawie Ls. Mbr.: W. of Lawrence, Kans.

Knight (1952) p. 53-55; text fig. 10

Knightites (Knightites) multicornutus Knight, Batten, and Yochelson (1960) p. 1184, fig. 103, no. 2

U. Penn.: Kansas

Yochelson (1960) p. 226

***Knightites (Knightites)* species of authors**

Knightites (Knightites) sp. Yochelson (1960) p. 272, pl. 54, figs. 7, 8
Perm., Leonard Ser.: Altuda quad., Tex.

KNIGHTITES (RETISPIRA) Knight 1945

Type species: *Retispira bellireticulata* Knight (1945a) p. 335

Retispira Knight (1945a) p. 335

Bucanopsis (Retispira) Elias (1958) p. 3

Knightites (Retispira) Yochelson (1960) p. 226

Knightites (Retispira) bellireticulata (Knight)

Retispira bellireticulata Knight (1945a) p. 335, pl. 49, figs. 1a-c

Penn., Bend Gr. Smithwick Sh.: Texas

Yochelson (1960) p. 226

Knightites (Retispira) bellireticulata Knight, Batten, and Yochelson (1960) p. 1184, fig. 103, no. 5

M. Perm.: Texas

Knightites (Retispira) eximia Yochelson

Knightites (Retispira) eximia Yochelson (1960) p. 273, pl. 55, figs. 1-37, table 21

Perm., Hueco Ls.: Near Orogrande quad., New Mexico; Gym Ls. of former usage: Tres Hermanas Mts., N. Mex.; Admiral Fm.: E. of crossing Hord's Creek Coleman County, Tex.

Knightites (Retispira) fragilis Yochelson

Knightites (Retispira) fragilis Yochelson (1960) p. 274, pl. 54, figs. 1-6, 9

Perm., Bone Spring Ls.: NW. Wall Apache Canyon, N. of Van Horn quad., Tex.

Knightites (Retispira) girtyi Yochelson

Knightites (Retispira) girtyi Yochelson (1960) p. 276, pl. 56, figs. 4-8, table 23

Perm., Bone Spring Ls.: Top of Shirttail Canyon, Guadalupe Mts., Tex.; Leonard Ser.: Hess Canyon quad., Texas; Word Fm.: Hess Canyon quad., Texas

Knightites (Retispira) kansasensis (Shumard)

Bellerophon kansasensis Shumard (1858) p. 204

Carb., "U. Coal Measures": Valley of the Verdigris, Kans.

Bucanopsis? kansasensis Ulrich (1897) p. 854

Patellostium kansasensis Girty (1899a) p. 589

Bucanopsis kansasensis Price (1914b) p. 534

Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge and Fellowsville, W. Va.

J. Weller (1929b) p. 319

Knightites (Retispira) kansasensis Yochelson (1960) p. 226

Knightites (Retispira) marcouianus (Geinitz)

Bellerophon marcouianus Geinitz (1866) p. 7, table 1, fig. 12

Penn., "Dyas": Nebraska City, Nebr.

Meek (1872a) p. 226, pl. 4, fig. 17; pl. 11, figs. 13a, b

Carb., "U. Coal Measures": Nebraska City, Nebr.; Union County, Iowa; "Coal Measures": Illinois; "L. Coal Measures": West Virginia

Herrick (1887a) p. 20, pl. 5, fig. 7

Carb., "Coal Measures": Flint Ridge, Ohio

Bellerophon marcouianus [sic] Keyes (1894b) p. 148, pl. 51, fig. 3

Carb., "U. Coal Measures": Kansas City, Mo.

Bellerophon marcouianus [sic] Smith (1896) p. 39

Carb., "U. Coal Measures": Sebastian County, Ark.

Bucanopsis marcouiana Ulrich (1897) p. 854

Girty (1899a) p. 591

Bellerophon marcouianus Morgan (1924) pl. 49, fig. 4

Penn., Wetumka Fm.: Stonewall quad., Oklahoma

J. Weller (1929b) p. 321

Knightites (Retispira) marcouianus Yochelson (1960) p. 227

Knightites (Retispira) meekianus (Swallow)

- Bellerophon meekianus* Swallow (in Shumard and Swallow, 1858) p. 204
 Carb., "M. Coal Measures": Lexington, Mo.; "L. Coal Measures": Howard County, Mo.
- Bellerophon meekianus* Keyes (1894b) [1895] p. 149
 Carb., "L. Coal Measures": Howard County and Lexington, Mo.
- Bucanopsis meekiana* Ulrich (1897) p. 854
- Bucanopsis meekana* Girty (1899a) p. 591
- Bucanopsis meekiana* Girty (1915a) p. 196, pl. 2, figs. 4-6
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
- Price (1918) p. 800
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Upshur and Barbour Counties, W. Va.
- Morningstar (1922) p. 250
 Penn., Pottsville Fm., l. part Mercer Mbr.; Muskingum Ls.: Licking County; McArthur Ls.: Jackson and Vinton Counties, Ohio
- Morgan (1924) pl. 49, fig. 5
 Penn., Boggy Fm.: Stonewall quad., Oklahoma
- Bellerophon meekianus* J. Weller (1929b) p. 321
- Bucanopsis meekiana* Warthin (1930) p. 45, pl. 7, fig. 8
 Penn.: Oklahoma
- Bellerophon* (*Bucanopsis*) *meekianus* Morse (1931) p. 323, pl. 53, figs. 11, 11a
 Penn., Kendrick Sh., Magoffin Beds, and Flint Ridge flint: Kentucky
- Knightites (Retispira) meekianus* Yochelson (1960) p. 227

Knightites (Retispira) modesta (Girty)

- Bucanopsis modesta* Girty (1909c) p. 103, pl. 11, fig. 1
 Perm., San Andres Ls.: Caballos Mts., N. Mex.
- Knight (1944) p. 443, pl. 179, figs. 6-8
 Perm.: San Andres, N. Mex.
- Retispira modesta* H. Chronic (1952) p. 114
 Perm., Kaibab Ls.: Walnut Canyon, Ariz.
- Yochelson (1960) p. 275, pl. 56, figs. 15-32, table 22
 Perm., Bone Spring Ls.: S. side Apache Canyon, Sierra Diablo area, Texas
- Knightites (Retispira) modesta* Winters (1963) p. 29, pl. 2, figs. 1a-2c
 Perm., Supai Fm.: E. Arizona

Knightites (Retispira) nodocostata (Gurley)

- Bellerophon nodocostatus* Gurley (1884) p. 9
 Carb., "U. Coal Measures": Near Oakwood, Vermilion County, Ill.
- Bellerophon rugopleurus* Gurley (1884) p. 11
 Carb., "U. Coal Measures": Near Oakwood, Vermilion County, Ill.
- Bellerophon decussatus?* Herrick (1887a) p. 19, pl. 2, fig. 12
 Carb., "Coal Measures": Flint Ridge, Ohio
- Bellerophon stevensianus* Girty (1899a) p. 593
- Patellostium rugopleurus* Girty (1899a) p. 589
- Patellostium nodocostatum* Girty (1899a) p. 589
 Carb., "U. Coal Measures": Atoka quad., Indian Territory [Oklahoma]
- Patellostium* aff. *nodicostatum* Girty (1909c) p. 102
 Perm., Abo. Ss.: Sandia Mts. and Abo Canyon, N. Mex.; Yeso Fm.: Mesa del Yeso, N. Mex.; San Andres Ls.: Mesa del Yeso, N. Mex.

Bucanopsis nodocostata J. Weller (1929b) p. 318, pl. 1, fig. 1

Carb., "U. Coal Measures": Near Oakwood, Vermilion County, Ill.

Bucanopsis rugopleurus J. Weller (1929b) p. 232, pl. 1, figs. 3a, b

Knightites (Retispira) nodocostata Yochelson (1960) p. 227

***Knightites (Retispira) nodulifera* Hoare**

Knightites (Retispira) nodulifera Hoare (1961) p. 146, pl. 19, figs. 11, 12

M. Penn.: S. of Pittsburg, Cherokee County, Kans.

***Knightites (Retispira) perlatus* (Conrad)**

Bellerophon perlatus Conrad (1842) p. 270

Carb.: Inclined plane of Allegany Mts., Pa.

Bucanopsis perlata Girty (1899a) p. 591

Price (1914b) p. 534

Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge and Fellowsville, W. Va.;

Brush Creek Ls. Mbr.: Oakland, Md.

Bellerophon perlatus J. Weller (1929b) p. 321

Knightites (Retispira) perlatus Yochelson (1960) p. 227

[Yochelson suggested that this specific name be restricted to the type lot because the species is indeterminate by currently accepted standards.]

***Knightites (Retispira?) reticulata* (Elias)**

Bucanopsis (Retispira?) reticulata Elias (1958) p. 3, pl. 1, figs. 5-7

Miss., Redoak Hollow Fm.: Oklahoma

***Knightites (Retispira) subcordiformis* (Herrick)**

Bellerophon subcordiformis Herrick (1887a) p. 18, pl. 2, figs. 7a-c

Carb., "Coal Measures": Flint Ridge, Ohio

Girty (1899a) p. 593

?*Knightites (Retispira) subcordiformis* Yochelson (1960) p. 227

***Knightites (Retispira) tenuilineata* (Gurley)**

Bellerophon tenuilineata Gurley (1884) p. 10

Carb., "U. Coal Measures": Near Oakwood, Vermilion County, Ill.

Bucanopsis tenuilineata Girty (1899a) p. 591

Sayre (1930) [1931] p. 129, pl. 13, figs. 6, 6a

Penn., Drum Ls., sh. mbr.: Turner, Cherryvale, and Independence, Kans.

Bucanopsis tenuilineatus J. Weller (1929b) p. 320, pl. 1, figs. 4, 5a, b

Carb., "U. Coal Measures": Near Oakwood, Vermilion County, Ill.

Knight (1944) p. 443, pl. 179, figs. 3-5

Penn.: Widespread in Mississippi Valley

?*Knightites (Retispira) tenuilineata* Yochelson (1960) p. 227

Knightites (Retispira) tenuilineata Hoare (1961) p. 145, pl. 19, figs. 9, 10

M. Penn., sh. overlying Wier-Pittsburgh coal: Henry County, Mo.

Mudge and Yochelson (1962) [1963] p. 92, pl. 16, figs. 23, 24

Penn., Zeandale Ls. and Stotler Ls.: Greenwood County, Kans.

***Knightites (Retispira) texana* Yochelson**

Knightites (Retispira) texana Yochelson (1960) p. 277, pl. 57, figs. 14-16, 20-27, table 24

Perm., Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex. Word Fm.: Hess Canyon quad., Texas

Knightites (*Retispira*) *textiliformis* (Gurley)

- Bellerophon textiliformis* Gurley (1883) p. 6
 Carb., "U. Coal Measures": Kansas City, Mo.
- Bellerophon bellus* Keyes (1894b) [1895] p. 148, pl. 50, fig. 7
 Carb., "U. Coal Measures": Kansas City, Mo.
- Patellostium textiliforma* Girty (1899a) p. 589
- Patellostium nodocostatum* Girty (1899a) p. 590
 Carb., "U. Coal Measures": Atoka quad., Indian Territory [Oklahoma]
- Patellostium bellum* Girty (1903) p. 474
 Penn., Hermosa and Rico Fms.: San Juan region, Colorado
- Bellerophon bellus* Woodruff (1906) p. 282, pl. 15B, fig. 2
 Carb.: Weeping Water, Nebr.
- E. Branson (1916) p. 660, pl. 3, figs. 16, 17
 Perm. and Trias. Embar Fm. of former usage: Wyoming
- Morgan (1924) pl. 49, fig. 1
 Penn., Ada Fm.: Stonewall quad., Oklahoma
- Bucanopsis textiliformis* J. Weller (1929b) p. 315, pl. 1, figs. 7a, b, 8
 Carb., "U. Coal Measures": Kansas City, Mo.
- Sayre (1930) : [1931] p. 129, pl. 13, figs. 4, 5
 Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.; Kansas City, Mo.
- Retispira textiliformis* Knight (1945a) p. 336
- Knightites (Retispira) textiliformis* Yochelson (1960) p. 226

Knightites (*Retispira*) *textilis* (Hall in Miller)

- Bellerophon cancellatus* Hall (1856?) [1864] [not Hall 1847], p. 31
 Miss., Warsaw Ls.: Bloomington and Spergen Hill, Ind.
- Bellerophon textilis* Hall in Miller (1877a) p. 243
 Whitfield (1882a) p. 90, pl. 8, figs. 4, 5
 Miss., Warsaw Ls.: Spergen Hill and Bloomington, Ind.
- Hall (1883) p. 371, pl. 31, figs. 4, 5
 Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.
- Bellerophon textilis?* Walcott (1884) p. 257, pl. 18, fig. 18
 L. Carb.: Eureka district, Nev.
- Bucanopsis textilis* Ulrich (1897) p. 854
 Cumings (1906) p. 1362, pl. 25, figs. 4, 5
 Miss., Salem, Ls.: Spergen Hill, Bloomington, Paynters Hill, Harrodsburg, and Stinesville, Ind.
- Bucanopsis cancellata?* Girty (1911) p. 93
 Miss., Moorefield Fm.: Batesville quad., Arkansas
- Girty (1915b) p. 119
 Miss., Batesville Ss.: Spring Creek and Ramsey Ferry, Batesville quad., Arkansas
- Bucanopsis textilis* Knight (1944) p. 443, pl. 179, figs. 1, 2
 Miss.: Indiana; Meramec Ser.: Arkansas; rocks of Moorefield age: Nevada
- Retispira textilis* H. Chronic (1952) p. 114
 Miss.: Indiana; rocks of Moorefield age: Arkansas; Nevada

Knightites (*Retispira*) *undulata* (H. Chronic)

- Retispira undulata* H. Chronic (1952) p. 113, 114, pl. 2, figs. 1a, b
 Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Knightites (*Retispira*) species of authors

- Knightites (Retispira)* sp. 1. Yochelson (1960) p. 278, pl. 57, figs. 28, 31
 Perm., Wolfcamp Ser.: Altuda quad., Texas

- Knightites (Retispira)* sp. 2. Yochelson (1960) p. 279, pl. 56, figs. 1-3
Perm., Capitan Ls. and Carlsbad Gr. of former usage (= Artesia Gr.): Near Whites City, N. Mex.
- Knightites (Retispira?)* sp. Yochelson and Dutro (1960) p. 132, pl. 12, fig. 1
L. Miss.: Howard Pass quad.; Alaska; Perm.: W. of West Camp on Joe Creek, Alaska
- ?*Knightites (Retispira)* sp. Hoare (1961) p. 147, pl. 19, figs. 19, 20
M. Penn., Seville Ls.: Henry County, Mo.
- Retispira* sp. Easton (1962) p. 98, pl. 13, fig. 8
U. Miss., Heath Fm.: Central Montana
- Knightites (Retispira)* sp. Mudge and Yochelson (1962) [1963] p. 92, pl. 16, fig. 19
Penn. to Perm., Stotler Ls., Falls City Ls., and Onaga Sh.: Kansas

LABRIDENS Yochelson 1956

- Type species: *Labridens shupei* Yochelson (1956a) p. 46
Labridens Yochelson (1956a) p. 45

Labridens shupei Yochelson

- Labridens shupei* Yochelson (1956a) p. 46
Perm. l. part Word Fm. and u. part Leonard Ser.: Glass Mts.; near old Word Ranch House, Hess Canyon quad., Brewster County, Tex.
Knight, Batten, and Yochelson (1960) p. 1321, fig. 213, no. 1
M. Perm.: Texas

LACOTELLA Tasch 1963

- Type species: *Lacotella marionensis* Tasch (1963) p. 1246
Lacotella Tasch (1963) p. 1246

Lacotella marionensis Tasch

- Lacotella marionensis* Tasch (1963) p. 1246, pl. 173, fig. 2
Perm. rocks of Leonard age: Marion County, Kans.

LACUNOSPIRA Batten 1958

- Type species: *Lacunospira alta* Batten (1958) p. 237
Lacunospira Batten (1958) p. 237

Lacunospira alta Batten

- Lacunospira alta* Batten (1958) p. 237, pl. 41, fig. 23; pl. 42, figs. 2-5, 7
Perm., u. part Wolfcamp to Guadalupe Ser.: Hess Canyon quad., Texas
Knight, Batten, and Yochelson (1960) p. 1331
Perm.: Texas

Lacunospira altsia Batten

- Lacunospira altsia* Batten (1958) p. 239, pl. 42, figs. 1, 6
Perm., Leonard and Guadalupe Ser.: N. of Van Horn quad.; Hess Canyon quad., Texas

Lacunospira lirata Batten

- Lacunospira lirata* Batten (1958) p. 238, pl. 42, fig. 8
Perm., Guadalupe Ser.: Altuda quad., Texas

LAMELLOSPIRA Batten 1958

- Type species: *Lamellospira conica* Batten (1958) p. 217
Lamellospira Batten (1958) p. 217

Lamellospira cincta Batten

- Lamellospira cincta* Batten (1958) p. 222, pl. 38, figs. 18-20
Perm., l. part Word Fm.: Hess Canyon quad., Texas

Lamellospira conica Batten

- Lamellospira conica* Batten (1958) p. 219, pl. 38, figs. 1-17
Perm., u. part Wolfcamp to m. part Guadalupe Ser.: Guadalupe Mts., N. Mex.;
W. of Van Horn, Tex.
Knight, Batten, and Yochelson (1960) p. I331
Perm.: Texas

LEPETOPSIS Whitfield 1882

- Type species: *Patella levettei* White (1882) p. 359
Lepetopsis Whitfield (1882a) p. 67

Lepetopsis? capitanensis (Girty)

- Patella capitanensis* Girty (1908a) [1909] p. 465, pl. 8, fig. 8
Perm., top of Capitan Ls.: Guadalupe Mts., Tex.
Lepetopsis? capitanensis Yochelson (1960) p. 282, pl. 57, figs. 9-12
Perm., Carlsbad Gr. of former usage (=Artesia Gr.): Summit El Capitan,
Guadalupe Mts., Tex.

Lepetopsis capulus (Hall)

- Platyceras? capulus* Hall (1860) p. 91
Miss., Burlington Ls.: Quincy, Ill.; Burlington, Iowa
Metoptoma (Platyceras?) umbella Meek and Worthen (1866c) [1867] p. 267
Miss., Burlington Ls.: Quincy, Ill.; Honey Creek, Henderson County, Ill.
Metoptoma? umbella Meek and Worthen (1868) p. 506, pl. 15, figs. 6a-c, 7
Miss., Burlington Ls.: Quincy, Ill.; Honey Creek, Henderson County, Ill.
Keyes (1889e) [1890] p. 292
Miss., Burlington Ls.: Burlington, Iowa
Platyceras capulus Keyes (1890d) p. 179
Igoceras capulus Keyes (1892a) p. 276
Keyes (1894a) p. 183, pl. 52, figs. 1a, b
Miss., Burlington Ls.: Hannibal and Ritter's Station, Mo.
Lepetopsis capulus Thomas (1925) pl. 4, fig. 22
Miss.: Burlington, Iowa

Lepetopsis haworthi (Beede)

- Capulus? haworthi* Beede (1907) p. 169, pl. 8, figs. 12-12b
Perm., Quartermaster Fm.: Dozier, Tex.
Lepetopsis? haworthi Knight (1940) p. 302, pl. 4, figs. 1a-c
Perm., Rush Springs Fm., Dozier Ss. Mbr.: Collingsworth and Hall Counties,
Tex.
Lepetopsis haworthi Knight (1944) p. 469, pl. 191, fig. 11
Perm., rocks of Guadalupe age: Mississippi Valley

Lepetopsis levettei (White)

- Patella levettei* White (1882) p. 359, pl. 39, figs. 4, 5
Miss., Warsaw Ls.: Spergen Hill, Ind.
Lepetopsis levettei Whitfield (1882a) p. 68, pl. 8, figs. 9-12
Miss., Warsaw Ls.: Spergen Hill, Ind.

Hall (1883) pl. 31, figs. 8-12

Miss., St. Louis Ls.: Spergen Hill, Ind.

Rowley (1901b) p. 70, pl. 23, figs. 34, 35

Miss., Keokuk Ls.: Edwardsville, Ind.

Cummings (1906) p. 1337, pl. 25, figs. 8-12

Miss., Salem Ls.: Spergen Hill, Ind.

Lepetopsis levettei? Girty (1915d) p. 112

Miss., Batesville Ss.: Batesville, Ark.

Lepetopsis levettei Knight (1941) p. 167, 168, pl. 2, figs. 2a-c

L. Carb., Salem Ls.: Spergen Hill, Washington County, Ind.

Knight (1944) p. 469, pl. 191, figs. 3, 4

Miss., Salem Ls.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. 1232, fig. 143, no. 3

M. Miss.: Indiana

***Lepetopsis parrishi* Gurley**

Lepetopsis parrishi Gurley (1884) p. 7

Carb., "U. Coal Measures": Kansas City, Mo.

Newell (1935) p. 351, pl. 35, figs. 1, 2

Penn., Olathe Ls.: Fredonia, Kans.

Knight (1944) p. 469, pl. 192, figs. 1, 2

Penn., Missouri Ser.: Mississippi Valley

Yochelson (1960) p. 281, pl. 57, figs. 30, 33, 34

Perm., Bone Spring Ls.: Van Horn quad., Texas; Word Fm.: Hess Canyon quad.,

Texas; Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

***Lepetopsis patella* Yochelson**

Lepetopsis patella Yochelson (1960) p. 280, pl. 57, figs. 1, 2, 4-7, table 25

Perm., Wolfcamp Ser.: Wolfcamp Hills, Hess Canyon quad., Texas

***Lepetopsis peregrina* Newell**

Lepetopsis peregrina Newell (1935) p. 352, pl. 35, figs. 3-7

Penn., Olathe Ls.: Fredonia, Kans.

***Lepetopsis* species of authors**

Patella? ———? White (1891) p. 25, pl. 3, fig. 14

Perm.: Goodwin Creek, Baylor County, Tex.

Lepetopsis sp. Mather (1915) p. 231, pl. 16, figs. 5, 5a

Penn., Morrow Ser.: Fayetteville, Ark.

cf. *Lepetopsis* H. Chronic (1952) p. 127, pl. 4, figs. 3a, b

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Lepetopsis sp. 1. Yochelson (1960) p. 282, pl. 57, figs. 3, 8, 13

Perm., Wolfcamp Ser.: Hess Canyon quad., Texas

Lepetopsis sp. 2. Yochelson (1960) p. 283, pl. 57, figs. 29, 32

Perm., Wolfcamp Ser.: Hess Canyon quad., Texas

LEPTOMPHALUS Yochelson 1956

[This name was proposed as a subgenus under *Straparollus* Sowerby (1814) by Yochelson (1956b) p. 197.]

Straparollus* (*Leptomphalus*) *micidus* Yochelson 1956** see ***Straparollus* (*Leptomphalus*) *micidus

LEPTOPTYGMA Knight 1936

Type species: *Auriptygma virgatum* Knight (1931b) p. 226

Leptoptygma Knight (1936) p. 523

Leptoptygma primum (Elias)

Auriptygma primum Elias (1958) p. 21, pl. 2, fig. 11 (*Auriptygma* sp. A in text).

Miss., Redoak Hollow Fm.: Near Milo, Okla.

Leptoptygma simplex (Knight)

Sphaerodoma brevis (White) Girty (1915a) p. 201, pl. 24, figs. 8, 8a, b (not figs. 9-12)

Penn., Wewoka Fm.: Oklahoma

Auriptygma simplex Knight (1931b) p. 225, pl. 25, figs. 3a-f

Penn., l. part Fort. Scott Ls.; top of Labette Sh.: St. Louis, Mo.

Leptoptygma simplex Knight (1936) p. 523

Knight (1944) p. 479, pl. 196, figs. 17, 18

Penn., Des Moines Ser.: Mississippi Valley

Leptoptygma subtilistriatum (Knight)

Auriptygma subtilistriatum Knight (1931b) p. 225, pl. 25, figs. 1a, b

Penn., top of Labette Sh.: St. Louis, Mo.

Leptoptygma subtilistriatum Knight (1936) p. 523

Leptoptygma virgatum (Knight)

Sphaerodoma gracilis (Cox) Girty (1915a) p. 204, pl. 24, figs. 3, 3a

Penn., Wewoka Fm.: Oklahoma

Auriptygma virgatum Knight (1931b) p. 226, pl. 24, figs. 2a-d; pl. 27, fig. 3

Penn., top of Labette Sh.: St. Louis, Mo.

Leptoptygma virgatum Knight (1936) p. 523

Knight (1941) p. 170, pl. 94, fig. 6

U. Carb., top of Labette Sh.; Henrietta Fm. of former usage (=Marmaton Gr.):

Feefee Creek, near Lackland Station, St. Louis County, Mo.

Knight (1944) p. 479, pl. 196, fig. 19

Penn., Des Moines Ser.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. I320, fig. 212, no. 1

M. Penn.: Missouri

Leptoptygma species of authors

Leptoptygma? sp. Easton (1942) pl. 11, fig. 1

Miss., Pitkin Ls.: Arkansas

Leptoptygma sp. Easton (1942) pl. 11, fig. 9

Miss., Pitkin Ls.: Arkansas

LEPTOZYGA Knight 1930

[This name was proposed by Knight (1930) p. 16 as a subgenus of *Pseudozygopleura* Knight (1930); Knight (1944) p. 461 elevated it to generic rank. Knight, Batten, and Yochelson (1960) p. I313, considered it a subgenus of *Palaeostylus* Mansuy (1914).]

Leptozyga minuta (Knight) see **Palaeostylus (Leptozyga) minutus**

LITTORINA Férussac 1822

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Littorina wheeleri Swallow 1860 see **Trachydomia wheeleri**

LOXONEMA Phillips 1841

Type species: *Terebra? sinuosa* Sowerby (1839) p. 619

(S.D. King (1850) p. 209)

Loxonema Phillips (1841) p. 98

Loxonema attenuatum (Stevens) see ***Zygopleura attenuata***

Loxonema attenuata var. ***semicostata*** Meek 1879 see ***Palaeostylus*** (***Pseudozygopleura***) ***semicostatus***

Loxonema acutulum Dawson 1868 see ***Aclisina acutula***

Loxonema bella Walcott 1884 see ***Palaeostylus*** (***Pseudozygopleura***) ***bellus***

Loxonema cara Dawson 1883 see ***Palaeostylus*** (***Pseudozygopleura***) ***carus***

Loxonema carinata Stevens 1858 see ***Ianthinopsis regularis*** (Cox)

Loxonema cerithiformis Meek and Worthen 1860 see ***Streptacis cerithiformis***

Loxonema danvillensis Stevens 1858 see ***Soleniscus danvillensis***

Loxonema delphicola Hall

Loxonema delphicola Hall (1879) p. 47, pl. 13, figs. 19–25; pl. 14, figs. 1, 2

Dev., Hamilton Gr.: New York

Loxonema delphicola? Herrick (1888c) pl. 9, fig. 15

Bedford Sh.: Central College, Ohio

Loxonema (cf. *delphicola*) Herrick (1889) pl. 4, fig. 15

Bedford Sh.: Ohio

Loxonema delphicola Herrick (1895) pl. 20, fig. 15

Sh. above Berea Ss.: Ohio

Girty (1915a) p. 186

Loxonema difficile Sardeson

Loxonema difficile Sardeson (1902) p. 304, pl. 17, figs. 3, 4

Miss., Kinderhook Ser.: Humboldt and Rutland, Iowa

Girty (1915a) p. 186

Loxonema fasciatum King 1850 see ***Holopea fasciata***

Loxonema Halli Norwood and Pratten 1855 see ***Soleniscus? halli***

Loxonema? inconspicuum Girty 1908 see ***Holopea? inconspicua***

Loxonema inornata Meek and Worthen 1860 see ***Ianthinopsis regularis*** (Cox)

Loxonema knighti Yochelson

Loxonema knighti Yochelson (1962) p. 79, pl. 17, figs. 9–14

Miss., Redwall Ls.: Jerome, Ariz.

Loxonema minutum Stephens 1858 see ***Girtyspira minuta***

Loxonema missouriensis Williams

Loxonema missouriensis Williams (1943) [1944] p. 103, pl. 9, fig. 23

Ss. beds of Louisiana Ls.: Kissenger, Pike County, Mo.

Loxonema multicostatum Meek and Worthen 1861 see ***Palaeostylus*** (***Pseudozygopleura***) ***multicostatus***

Loxonema newberryi Stevens 1858 see ***Ianthinopsis regularis*** (Cox)

Loxonema nitidula Meek and Worthen 1860 see ***Soleniscus typicus*** Meek and Worthen

Loxonema nodosa Stevens 1858 see ***Bulimorpha? nodosa***

Loxonema oligospira Winchell 1863 see ***Holopea oligospira***

Loxonema(?) parva Stauffer and Schroyer*Loxonema(?) parva* Stauffer and Schroyer (1920) p. 145, pl. 18, figs. 17-21

L. Perm., Washington Fm.: Pleasant Grove, Ohio

Loxonema parvum (Cox) see **Zygopleura parva****Loxonema Peoriensis** Worthen 1884 see **Palaeostylus (Pseudozygopleura) peoriensis****Loxonema permiana** Beede 1907 see **Streptacis permiana****Loxonema pikensis** Hyde*Loxonema pikensis* Hyde (1953) p. 329, pl. 48, figs. 3-6

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

Loxonema plebium Herrick 1887 see **Zygopleura plebia****Loxonema plenum** Herrick 1887 see **Zygopleura plena****Loxonema plicatum** Whitfield 1882 see **Zygopleura plicata****Loxonema polita** Stevens 1858 see **Soleniscus politus****Loxonema quadricarinatus** Worthen 1884 see **Stegocoelia (Stegocoelia) wortheni** Knight**Loxonema regularis** Cox 1857 see **Ianthinopsis regularis****Loxonema rockymontanum** Shimer 1926 see **Anematina rockymontanum****Loxonema rugosa** Meek and Worthen 1860 see **Palaeostylus (Pseudozygopleura) scitulus** (Meek and Worthen)**Loxonema scitula** Meek and Worthen 1860 see **Palaeostylus (Pseudozygopleura) scitulus****Loxonema semicostata** Meek and Worthen 1873 see **Palaeostylus (Pseudozygopleura) semicostatus****Loxonema shumardana** Weller 1900 see **Holopea shumardana****Loxonema swallowanum** (Shumard) see **Zygopleura swallowiana****Loxonema tenuicarinata** Stevens 1858 see **Bulimorpha? tenuicarinatum****Loxonema tenuilineata** (Shumard)*Chemitzia tenuilineata* Shumard (1855) p. 207, pl. C, fig. 12

Miss., Chouteau Ls.: Cooper County, Mo.

Loxonema tenuilineatum Keyes (1894b) [1895] p. 206

Miss., Chouteau Ls.: Chouteau Springs, Mo.

Aclisina tenuilineata Girty (1915a) p. 185*Loxonema tenuilineatum* E. Branson (1938a) p. 106, pl. 14, figs. 19,

L. Miss.: Missouri

Loxonema turritiformis Hall 1860 see **Holopea turritiformis****Loxonema vincta** Hall 1856 see **Murchisonia (Murchisonia) vincta****Loxonema worthenia** S. Weller 1916 see **Palaeostylus (Pseudozygopleura) wortheni****Loxonema yandellana** Hall*Loxonema yandellana* Hall [1856?] (1864) p. 28

Miss., St. Louis Ls.: Spergen Hill, Ind.

Whitfield (1882a) p. 77, pl. 8, figs. 35, 36

Miss., St. Louis Ls.: Spergen Hill, Ind.

Hall (1883) p. 365, pl. 31, figs. 35, 36

Miss., St. Louis Ls.: Spergen Hill, Ind.

Loxonema yandellana? Herrick (1888) p. 86, pl. 8, fig. 23

Miss., Waverly Gr. of former usage: Licking County, Ohio

Loxonema yandellana Cumings (1906) p. 1346, pl. 25, figs. 35, 36

Miss., Salem Ls.: Spergen Hill, Harrodsburg, Romona, Big Creek, and Stinesville, Ind.

***Loxonema zygopleuroides* Warthin**

Loxonema zygopleuroides Warthin (1930) p. 48, pl. 7, fig. 13

Penn., Holdenville Sh.: E. of Ada, Okla.

***Loxonema* species of authors**

Loxonema (sp. undet.) Meek and Worthen (1873) pl. 29, figs. 3a, b

Carb., "Coal Measures": No locality cited

Loxonema (*Michelia*?) (sp. undet.) Meek and Worthen (1873) pl. 29, figs. 4a, b

Carb., "Coal Measures": No locality cited

Herrick (1888a) pl. 7, fig. 7

Miss., Waverly Gr. of former usage: Newark, Ohio

S. Weller (1899) p. 44, pl. 5, fig. 5

Miss., Vermicular ss.: Northview, Webster County, Mo.

Loxonema sp. Herrick (1893) [1895] pl. 18, fig. 7

Miss., rocks of Kinderhook age: Granville, Ohio

Girty (1899a) p. 572, pl. 66, fig. 9a

Miss., Madison Ls.: Yellowstone National Park

S. Weller (1900) p. 107, pl. 7, fig. 2

Chonopectus ss.: Burlington, Iowa

S. Weller (1901) p. 153, 190, pl. 17, fig. 9

Miss., Kinderhook Ser.: Burlington, Iowa

S. Weller (1901) p. 143

Miss., Northview Sh.: Northview, Mo.

Loxonema? sp. Girty (1903) p. 314

Miss., Leadville Ls.: Crested Butte and Aspen districts, Colorado

Loxonema sp. Girty (1903) p. 461

Penn., Weber(?) Fm.: Leadville district, Colorado

Prosser (1912) p. 43

Bedford Fm.: Euclid Creek at falls, Ohio

Loxonema? sp. Girty (1915b) p. 125

Miss., Batesville Ss.: Round Mtn. and Marshall, Ark.

Plummer and Moore (1921) [1922] pl. 14, figs. 7, 7a

Penn., Mineral Wells Fm.: Mineral Wells, Tex.

Loxonema sp. Girty (1927) [1928] p. 123

L. Miss., Pocono Fm.: Broad Top coal field, Pa.

Loxonema? sp. undet. E. Branson (1938a) p. 179, pl. 20, figs. 22, 23, 32

L. Miss.: Missouri

Loxonema sp. undet. E. Branson (1938b) p. 45, pl. 24, fig. 1

L. Miss.: Missouri

Loxonema sp. Yochelson and Dutro (1960) p. 144, pl. 14, fig. 4

Miss.: N. Alaska

Brindle (1960) p. 104, pl. 28, fig. 2

Miss.: SE. Saskatchewan

Loxonema sp. Herrick 1887 see ***Zygopleura plenum*** (Herrick)

LUNULAZONA Sadlick and Nielsen 1963

Type species: *Lunulazona costata* Sadlick and Nielsen (1963) p. 1089

Lunulazona Sadlick and Nielsen (1963) p. 1089

Lunulazona costata Sadlick and Nielsen

Lunulazona costata Sadlick and Nielsen (1963) p. 1091, pl. 148, figs. 1-11, text figs. 2-5
Miss., Chainman Sh.: Granite Mts., Juab County, Utah

Lunulazona species of authors

Lunulazona sp. A. Sadlick and Nielsen (1963) p. 1093, pl. 148, figs. 12, 13; pl. 150, fig. 13
Miss., Chainman Sh.: Wendover, Elko County, Nev.

MACROCHEILUS Phillips 1841 [not Kirby 1838]

[Knight (1941) p. 186 noted that this name is a suppressed objective synonym of
Macrochilina Bayle (1880).]

Macrocheilus altonensis Worthen 1873 see **Soleniscus altonensis**

Macrocheilus altonensis Worthen 1890 [not Worthen 1873] see **Ianthinopsis worthenianus** (Miller)

Macrocheilus angulifera White 1874 see **Girtyspira angulifera**

Macrocheilus cooperensis Swallow 1863 see **Holopea cooperensis**

Macrocheilus fusiformis Hall see **Ianthinopsis regularis** (Cox)

Macrocheilus gracilis Cox 1858 see **Soleniscus gracilis**

Macrocheilus hallanum Geinitz 1866 see **Soleniscus hallanum**

Macrocheilus humilis Keyes 1888 see **Soleniscus humilis**

Macrocheilus inhabilis Norwood and Pratten 1855 [not Morton 1836] see **Ianthinopsis primogenius** (Conrad)

Macrocheilus intercalaris Meek and Worthen 1860 see **Ianthinopsis intercalaris**
Macrocheilus intercalaris var. **pulchellus** (Meek and Worthen) see **Soleniscus intercalaris**

Macrocheilus kansasensis Swallow 1858 see **Soleniscus kansasensis**

Macrocheilus klipparti Meek 1872 see **Ianthinopsis klipparti**

Macrocheilus littonanum (Hall) see **Ianthinopsis littonanum**

Macrocheilus? littonanum (Hall) see **Ianthinopsis littonanum**

Macrocheilus medialis Meek and Worthen 1860 see **Ianthinopsis medialis**

Macrocheilus? micula Girty 1909 see **Anematina micula**

Macrocheilus missouriensis Swallow 1858 see **Soleniscus missouriensis**

Macrocheilus newberryi (Stevens) Hall 1858 see **Ianthinopsis regularis** (Cox)

Macrocheilus paludinaeformis Hall 1858 see **Ianthinopsis paludinaeformis**

Macrocheilus pinguis Winchell 1883 see **Ianthinopsis pinguis**

Macrocheilus ponderosus Swallow 1858 see **Soleniscus ponderosa**

Macrocheilus primogenia (Conrad) see **Ianthinopsis primogenius**

Macrocheilus (Soleniscus) primogenius (Conrad) see **Ianthinopsis primogenius**

Macrocheilus pulchellus Meek and Worthen 1860 see **Ianthinopsis intercalaris**
(Meek and Worthen)

Macrocheilus regularis (Cox) see **Ianthinopsis regularis**

Macrocheilus spiratus M'Coy 1858 see **Soleniscus** species of authors

Macrocheilus stinesvillensis Cumings 1906 see **Ianthinopsis stinevillensis**

Macrocheilus subcorpulentus Whitfield 1882 see **Ianthinopsis subcorpulentus**

Macrocheilus terranovicus Dawson 1883 see **Zygopleura terranovica**

Macrocheilus texanus Shumard 1859 see **Ianthinopsis primogenius** (Conrad)

Macrocheilus ventricosus Hall 1858 see **Ianthinopsis paludinaeformis** (Conrad)

Macrocheilus undet. Meek and Worthen 1866 see **Ianthinopsis** species of authors

Macrocheilus sp.? Walcott 1884 see **Soleniscus altonensis** (Worthen)

Macrocheilus species of authors see **Soleniscus** species of authors

MACROCHILINA Bayle 1880

Type species: *Bucinum acutum* Sowerby (1827) p. 127
(S.D. Keyes (1889b) p. 421)

Macrochilina Bayle (1880) p. 241

[Knight, Batten, and Yochelson (1960) p. 1321, noted that this name is a subjective synonym of *Soleniscus* Meek and Worthen (1861).]

Macrochilina blairi Miller 1891 see *Holopea? blairi*

Macrocheilina? danvillensis Girty 1915 see *Girtyspira minuta* (Stevens)

Macrocheilina keyesi Rowley 1900 see *Ianthinopsis keyesi*

Macrocheilina? modesta Girty 1908 see *Holopea modesta*

Macrochilina symmetrica (King) see *Soleniscus symmetrica*

Macrochilina tantilla Rowley 1900 see *Ianthinopsis tantilla*

Macrochilina worthenanus Miller 1889 see *Ianthinopsis worthenanus*

Macrochilina species of authors see *Soleniscus* species of authors

MATURIPUPA Pilsbry 1926

Type species: *Pupa vermillionensis* Bradley (1872) p. 87

Maturipupa Pilsbry (1926) p. 317

Maturipupa primaeva (Matthew)

Pupa primaeva Matthew (1895) p. 98, pl. 1, figs. 10a, b

Dev.: Canada

Pupa pervetus (in error) Dawson (1895) p. 84

Dendropupa pervetus Woodward (1908) p. 74, 77

U. Dev.: No locality cited

Pupa primaeva Pilsbry (1926) p. 318

Dendropupa primaeva Henderson (1935) p. 149

U. Carb.: Canada

Maturipupa primaeva Yen (1949) p. 236

L. Carb.: Canada

Maturipupa vermillionensis (Bradley)

Pupa vermillionensis Bradley (1872) p. 87, fig. 1

Carb., "Coal Measures": Petty's Ford, Little Vermilion River, Vermilion County, Ill.

Dawson (1880) p. 410, figs. 8, 9, 14c

Carb., "Coal Measures": Petty's Ford, Vermilion River, Ill.

White (1883a) p. 456, pl. 2, figs. 13, 14

Knight (1941) p. 190, pl. 96, figs. 4a, b

U. Carb., ls.: Petty's Ford, Little Vermilion River, Vermilion County, Ill.

Maturipupa vermillionensis Yen (1949) p. 236

Pupa vermillionensis Peck and MacFarland (1954) p. 297, 306, pl. 29, fig. 4

Carb.: Little Vermilion River, Vermilion County, Ind.

[Authors intentionally use original name for record purposes.]

Maturipupa vermillionensis Knight, Batten, and Yochelson (1960) p. 1318, fig. 211, no. 2

M. Penn.: Illinois

MEEKOSPIRA Ulrich and Scofield 1897

Type species: *Eulina? peracuta* Meek and Worthen (1861) p. 466

Meekospira Ulrich and Scofield (1897) p. 1097

Meekospira bella (Walcott) see *Palaeostylus (Pseudozygopleura) bellus*

Meekospira choctawensis Girty

- Meekospira peracuta* var. *choctawensis* Girty (1912a) p. 139
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
 Girty (1915a) p. 216, pl. 25, figs. 5-8a
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
Meekospira peracuta choctawensis Plummer and Moore (1921) [1922] [part] pl. 22, figs. 6, 7, (not pl. 14, figs. 3, 3a)
 Penn., Mineral Wells Fm.: Mineral Wells, Tex.; Graham Fm., Wayland Sh.
 Mbr.: S. of Gunsight, Tex.
 Morgan (1924) pl. 49, figs. 9, 9a
 Penn., Wetumka Fm.: Stonewall quad., Oklahoma
Meekospira peracuta var. *choctawensis* Warthin (1930) p. 52, pl. 7, fig. 19
 Penn.: Oklahoma
Meekospira choctawensis Knight (1932) p. 197
 U. Penn.: Missouri

Meekospira knighti Winters

- Meekospira knighti* Winters (1963) p. 48, pl. 5, fig. 8
 Perm., Supai Fm.: E. Arizona
Meekospira inornata (Meek and Worthen) Ulrich 1897 see **Ianthinopsis regularis** (Cox)

Meekospira minuta S. Weller

- Meekospira minuta* S. Weller (1916) p. 261, pl. 18, fig. 9
 Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.
Meekospira minuta Knight (1944) p. 477, pl. 195, fig. 9
 Miss., Ste. Genevieve Ls.: Mississippi Valley
Meekospira nitidula (Meek and Worthen) see **Soleniscus typicus** (Meek and Worthen)

Meekospira peracuta (Meek and Worthen)

- Eulima? peracuta* Meek and Worthen (1860) [1861] p. 466
 Carb., "L. Coal Measures": Jacksburg, St. Clair County, Ill.; "U. Coal Measures": Springfield, Ill.
Polyphemopsis peracuta Meek and Worthen (1861) [1862] p. 148
 Meek and Worthen (1866a) p. 375, pl. 31, figs. 7a, b
 Carb., "U. Coal Measures": Urbana, St. Clair County; Springfield, Ill.
Polyphemopsis nitidula White (1882) p. 370, pl. 42, figs. 7, 8
 Carb., "Coal Measures": Eugene, Vermilion County, Ind.
 White (1884b) p. 163, pl. 27, figs. 7, 8
 Carb., "Coal Measures": Eugene, Vermilion County, Ind.
Polyphemopsis peracuta White (1884b) p. 163, pl. 32, figs. 9, 10
 Carb., "Coal Measures": Indiana (?)
 Keyes (1889f) p. 302
Eulima? peracuta Keyes (1894b) [1895] p. 205
 Carb., "U. Coal Measures": Sullivan County, Mo.
Meekospira peracuta Ulrich (1897) p. 1079
Subulites (Polyphemopsis) peracuta Crook (1912) p. 15, fig. 8
 Penn.: Vicinity of Springfield, Ill.
Meekospira peracuta choctawensis Plummer and Moore (1921) [1922] [part] pl. 14, figs. 3a (not pl. 22, figs. 6, 7)
 Penn., Mineral Wells Fm.: Mineral Wells, Tex.
Meekospira peracuta Knight (1932) p. 195, pl. 27, figs. 2a-1
 Penn., top of Labette Sh.: St. Louis, Mo.

Knight (1941) p. 191-192, pl. 92, figs. 3a, b

U. Carb.: Springfield, Ill.

Knight (1944) p. 477, pl. 195, fig. 20

Penn., Des Moines Ser.: Mississippi Valley

Plummer (1950) pl. 21, fig. 12

Penn., Canyon Gr.: Exposure 3 mi. SE. of Placid, McCullach County, Tex.

Knight, Batten, and Yochelson (1960) p. 1321, fig. 214, no. 2

M. Penn.: Illinois

Hoare (1961) p. 187, pl. 23, figs. 1, 2

Hoare (1961) p. 187, pl. 23, figs. 1, 2

M. Penn., Tiawah Ls.: Barton County, Mo.

Meekospira peracuta var. **choctawensis** Girty 1911 see **Meekospira choctawensis**

Meekospira peracuta choctawensis (Girty) Plummer and Moore 1921 [part]

(pl. 14, figs. 3, 3a (not pl. 22, figs. 6, 7) see **Meekospira peracuta** (Meek and Worthen)

Meekospira? sulcata Batten

Meekospira? sulcata Batten (1964) p. 15, figs. 20-22

Perm.: St. Johns and Hog Wash, E. Arizona

Meekospira species of authors

Pseudomelania sp. a. Girty (1908a) [1909] p. 486

Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.

Pseudomelania? sp. b. Girty (1908a) [1909] p. 487

Perm., Delaware Mountain Gr.: Delaware Mts., Tex.

Pseudomelania sp. Girty (1910c) [1911] p. 53

Perm., phosphate beds of Park City Fm.: Thomas Fork, Wyo.

Meekospira? sp. Mather (1915) p. 240, pl. 16, fig. 6

Penn., Morrow Ser.: Fayetteville, Ark.; Fort Gibson, Okla.

Meekospira sp. Knight (1932) p. 197, pl. 27, figs. 1a-c

Penn., top of Labette Sh.: St. Louis, Mo.

Meekospira? sp. 1. H. Chronic (1952) p. 131, pl. 5, fig. 2

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Meekospira? sp. 2. H. Chronic (1952) p. 131, pl. 5, fig. 4

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Meekospira sp. Williams (1960) p. 912, pl. 121, fig. 32

Penn., L. Kittanning shale: Monaca, Pa.

METOPTOMA Phillips 1836

Type species: *Metoptoma oblongata* Phillips (1836) p. 224

(S.D. Miller (1889) p. 409)

Metoptoma Phillips (1836) p. 223

Metoptoma peroccidens Walcott

Metoptoma peroccidens Walcott (1884) p. 260, pl. 18, fig. 16

L. Carb.: Eureka district, Nevada

Metoptoma texana Yochelson

Metoptoma texana Yochelson (1960) p. 280, pl. 56, figs. 9-14

Perm., Wolfcamp Ser.: NE. of Marathon, Hess Canyon quad., Texas

Metoptoma (Platyceras?) umbella Meek and Worthen 1866 see **Leptetopsis capulus** (Hall)

Metoptoma undata Winchell 1865 see **Platyceras (Orthonychia) undata**

MICRODOMA Meek and Worthen 1867

Type species: *Microdoma conicum* Meek and Worthen (1866) [1867] p. 269
Microdoma Meek and Worthen (1866c) [1867] p. 269

Microdoma conicum Meek and Worthen

- Microdoma conica* Meek and Worthen (1866c) [1867] p. 269
 Carb., "L. Coal Measures": Macoupin County, Ill.
 Meek and Worthen (1873) p. 598, pl. 28, fig. 2
 Carb., "L. Coal Measures": Macoupin County, Ill.
Microdoma conicum Knight (1933a) p. 48, pl. 9, figs. 2a-i; pl. 12, figs. 6a, b
 Penn., Pawnee Ls. and Labette Sh.: St. Louis County, Mo.
 Knight (1941) p. 196-197, pl. 54, figs. 6a, b
 U. Carb. St. David Ls. and Carbondale Fm.: Hodges Creek, Macoupin County, Ill.
 Knight (1944) p. 471, pl. 192, figs. 9-11
 Penn., Des Moines Ser.: Mississippi Valley
 Knight, Batten, and Yochelson (1960) p. 1242, fig. 154, no. 3
 M. Penn.: Illinois
 Hoare (1961) p. 180, pl. 22, fig. 3
 M. Penn., Robinson Branch Ls.: Henry County, Mo.

Microdoma ornatus Sayre

- Microdoma ornatus* Sayre (1930) [1931] p. 140, pl. 16, fig. 4
 Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.

MICROMPHALUS Knight 1945

Type species: *Micromphalus turris* Knight (1945b) p. 585
Micromphalus Knight (1945b) p. 585

Micromphalus turris Knight

- Micromphalus turris* Knight (1945b) p. 585, pl. 30, figs. 3a-c
 Miss., Ste. Genevieve(?) Ls.: Elizabethtown, Ky.
 Knight, Batten, and Yochelson (1960) p. 1194, fig. 108, no. 11
 M. Miss.: Kentucky

MICROPTYCHIS Longstaff 1912

Type species: *Microptychis wrighti* Longstaff (1912) p. 307
Microptychis Longstaff (1912) p. 307

Microptychis cerithiformis (Meek and Worthen) see ***Streptacis cerithiformis***

Microptychis crenimarginis (Knight)

- Streptacis crenimarginis* Knight (1931a) p. 13, pl. 2, figs. 3a-c; text fig. 1L
 Penn., top of Labette Sh.: St. Louis, Mo.
Microptychis crenimarginatus Knight (1944) p. 461, pl. 186, figs. 28, 29
 Penn., Des Moines Ser.: Mississippi Valley
 ?*Microptychia* [sic] *crenimarginis* Hoare (1961) p. 163, pl. 21, fig. 1
 M. Penn., Tiawah Ls.: Henry County, Mo.

Microptychis species of authors

- Microptychis* sp. Easton (1942) pl. 11, fig. 4
 Miss., Pitkin Ls.: Arkansas

MOGULIA Waagen 1880

Type species: *Mogulia regularis* Waagen (1880) p. 157

Mogulia Waagen (1880) p. 131, 156

[Knight, Batten, and Yochelson (1960) p. 1182 considered this name a subjective synonym of *Bellerophon* (*Bellerophon*) Montfort (1808).]

Mogulia? sp. Girty 1909 see **Warthia** species of authors

MOURLONIA Koninck 1883

Type species: *Helix carinatus* Sowerby (1813) p. 34

Mourlonia Koninck (1883) p. 75

Mourlonia angulata Easton

Mourlonia angulata Easton (1943) p. 150, pl. 24, figs. 17-19

Miss., Pitkin Ls.: Eureka Springs quad., Arkansas

Mourlonia? cancellata H. Chronic

Mourlonia? cancellata H. Chronic (1952) p. 119, pl. 3, figs. 4a-c

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Mourlonia minuta S. Weller

Mourlonia minuta S. Weller (1916) p. 253, pl. 18, figs. 35, 36

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Mourlonia minuta Yochelson and Dutro 1960 [not Weller 1916] see **Mourlonia sablei** Yochelson and Dutro

Mourlonia mississippiensis (White and Whitfield)

Pleurotomaria mississippiensis White and Whitfield (1862) p. 302

"Chemung Gr.": Burlington, Iowa

Whitfield (1891) p. 609

Whitfield (1895) p. 494

Worthenia mississippiensis S. Weller (1901) p. 200, pl. 20, fig. 12

Miss., Kinderhook Ser.: Burlington, Iowa

Mourlonia mississippiensis Knight (1944) p. 457, pl. 185, figs. 1,2

L. Miss.: Mississippi Valley

Mourlonia northviewensis S. Weller

Mourlonia northviewensis S. Weller (1899) p. 41, pl. 5, fig. 13

Miss., Vermicular ss.: Northview, Webster County, Mo.

S. Weller (1901) p. 149

Miss., Northview Sh.: Northview, Mo.

E. Branson (1938b) p. 41, pl. 24, figs. 27

L. Miss.: Missouri

Mourlonia? reloba Yochelson and Dutro

Mourlonia? reloba Yochelson and Dutro (1960) p. 136, pl. 13, figs. 6-9

Perm., Siksikpuk Fm.: N. Alaska

Mourlonia sablei Yochelson and Dutro

Mourlonia minuta Yochelson and Dutro (1960) p. 136, pl. 13, figs. 4, 5 [not Weller 1916]

Miss., Lisburne Gr.: W. fork of Utokok River, N. Alaska

Mourlonia sablei Yochelson and Dutro (1963) p. 725

Mourlonia solida Hyde

Mourlonia solida Hyde (1953) p. 326, pl. 46, figs. 6-10

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

Mourlonia? stellaformis Hyde 1953 see **Glabrocingulum (Glabrocingulum) stellaformis**

Mourlonia textus Hyde

Mourlonia textus Hyde (1953) p. 327, pl. 46, fig. 5

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

Mourlonia species of authors

Mourlonia? Bell (1929) p. 173, pl. 30, figs. 10, 10a

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

MURCHISONIA Archiac and Verneuil 1841

Type species: *Muricites turbinatus* Schlotheim (1820) p. 145

(S.D. Woodward (1851) p. 147)

Murchisonia Archiac and Verneuil (1841) p. 154

[Knight, Batten, and Yochelson (1960) p. 1291, divided this taxon into five subgenera, only one of which ranges into the late Paleozoic.]

Murchisonia (Stegocoelia) abrupta Bell 1929 see **Stegocoelia (Stegocoelia) abrupta**

Murchisonia archimedeia McChesney 1861 see **Murchisonia (Murchisonia) archimedeia**

Murchisonia attenuata Hall 1856 see **Ectomaria attenuata**

Murchisonia buttersi Girty 1912 see **Helicospira buttersi**

Murchisonia collingsworthensis Beede 1907 see **Murchisonia (Murchisonia) gouldii** Beede

Murchisonia (Stegocoelia) compactoidea Bell 1929 see **Stegocoelia (Stegocoelia) compactoidea**

Pleurotomaria (Murchisonia?) conula Hall 1858 see **Spiroscala conula**

Murchisonia copei White 1881 see **Stegocoelia (Taosia) copei**

Murchisonia elegantula Hall 1856 see **Bembexia elegantula**

Murchisonia geminocarinata H. Chronic 1952 see **Goniasma geminocarinata**

Murchisonia gouldii Beede 1907 see **Murchisonia (Murchisonia) gouldii**

Murchisonia gypsea Dawson 1868 see **Murchisonia (Murchisonia) gypsea**

Murchisonia indianensis Miller and Gurley 1896 see **Murchisonia (Murchisonia) indianensis**

Murchisonia inornata Meek and Worthen 1866 see **Murchisonia (Murchisonia) inornata**

Murchisonia insculpta Hall 1856 see **Murchisonia (Murchisonia) insculpta**

Murchisonia kansasensis Swallow 1858 see **Murchisonia (Murchisonia) kansasensis**

Murchisonia keokuk Worthen 1890 see **Murchisonia (Murchisonia) keokuk**

Murchisonia lasallensis Worthen 1890 see **Goniasma lasallensis**

Murchisonia (Pleurotomaria) limitaris Hall 1860 see **Murchisonia (Murchisonia) limitaris**

Murchisonia marcouiana Geinitz 1866 see **Worthenia? marcouiana**

Murchisonia matheri Sayre 1930 see **Murchisonia (Murchisonia) matheri**

Pleurotomaria (Murchisonia?) meta Meek and Worthen 1865 see **Pleurotomaria meta**

Murchisonia minima Swallow 1858 see **Acisina minuta** (Stevens)

Murchisonia missouriensis Girty 1915 see **Murchisonia (Murchisonia) missouriensis**

- Murchisonia nebrascensis* Geinitz 1866 see *Orthonema nebrascense*
Murchisonia neglecta Winchell 1863 see *Murchisonia* (*Murchisonia*) *neglecta*
Murchisonia obsoleta Meek 1871 see *Murchisonia* (*Murchisonia*) *obsoleta*
Murchisonia perversa Swallow 1858 see *Murchisonia* (*Murchisonia*) *perversa*
Murchisonia proluxa White and Whitfield 1862 see *Murchisonia* (*Murchisonia*) *proluxa*
Murchisonia pygmaea Rowley 1895 see *Murchisonia* (*Murchisonia*) *pygmaea*
Murchisonia quadricarinata Worthen 1894 see *Stegocoelia* (*Stegocoelia*) *wortheni* Knight
Murchisonia quadricincta Winchell 1863 see *Murchisonia* (*Murchisonia*) *quadricincta*
Murchisonia shumardiana Winchell 1863 see *Holopea shumardiana*
Murchisonia sinistroesa Knight 1934 see *Murchisonia* (*Murchisonia*) *sinistroesa*
Murchisonia subangulata (Verneuil?) Swallow 1858 see *Murchisonia* (*Murchisonia*) species of authors
Murchisonia subtaeniata Geinitz 1866 see *Orthonema subtaeniatum*
Murchisonia terebra White 1879 see *Murchisonia* (*Murchisonia*) *terebra*
Murchisonia terebriformis Hall 1858 see *Murchisonia* (*Murchisonia*) *terebriformis*
Murchisonia texana Shumard 1860 see *Murchisonia* (*Murchisonia*) *texana*
Murchisonia tricingulata Dawson 1868 see *Murchisonia* (*Murchisonia*) *tricingulata*
Murchisonia turritella Hall 1856 see *Stegocoelia* (*Stegocoelia*) *turritella*
Murchisonia uninodocarinata Hyde 1953 see *Murchisonia* (*Murchisonia*) *uninodocarinata*
Murchisonia vermicula Hall 1856 see *Murchisonia* (*Murchisonia*) *vermicula*
Murchisonia vineta Hall 1856 see *Murchisonia* (*Murchisonia*) *vineta*
Murchisonia species of authors see *Murchisonia* (*Murchisonia*) species of authors

MURCHISONIA (GONIOSTROPHA) Oehlert 1888

Type species: *Murchisonia bachelieri* Rouault (1851) p. 384

Goniostropha Oehlert (1888) p. 78, 85

[Knight, Batten, and Yochelson (1960) p. I291 placed *Goniostropha* Oehlert (1888) in the subjective synonymy of *Murchisonia* (*Murchisonia*) Archiac and Verneuil (1841).]

Murchisonia (*Goniostropha*?) sp. aff. *M. (G.?) tatei* (Donald) Elias 1958 see *Murchisonia* (*Murchisonia*) *tatei*

MURCHISONIA (MURCHISONIA) Archiac and Verneuil 1841

Type species: *Muricites turbinatus* Schlottheim (1820) p. 145

(S.D. Woodward (1851) p. 147)

Murchisonia Archiac and Verneuil (1841) p. 154

Murchisonia (*Murchisonia*) Knight, Batten, and Yochelson (1960) p. I291

Murchisonia (*Murchisonia*) *archimedeae* McChesney

Murchisonia archimedeae McChesney (1861) p. 89

Carb., "Coal Measures": LaSalle, Ill.

McChesney (1865) pl. 2, figs. 16a, b

McChesney (1868) p. 48, pl. 2, figs. 16a, b

Carb., "Coal Measures": LaSalle, Ill.

Murchisonia (*Murchisonia*) *gouldii* Beede

Murchisonia gouldii Beede (1907) p. 167, pl. 8, figs. 6-6b

Perm., Whitehorse Ss.: Whitehorse Spring, Okla.; Quartermaster Fm.: Dozier, Tex.

- Murchisonia collingsworthensis* Beede (1907) p. 166, pl. 8, figs. 7, 7a
Perm., Quartermaster Fm.: Dozier, Tex.
- Orthonema? texana* Beede (1907) p. 168, pl. 8, figs. 5, 5a
Perm., Quartermaster Fm.: Dozier, Tex.; Whitehorse Ss.: Whitehorse Spring, Okla.
- Hills (1940) p. 162-163
Perm., transition between bedded Carlsbad Gr. (=Artesia Fm.?) and true reef ls. of Capitan Ls.: Winkler County, Tex.
- Knight (1940) p. 306-309, pl. 5, figs. 1-14; pl. 6, figs. 1a-e
Perm., Whitehorse Ss.: Texas; Oklahoma; Capitan(?) Ls.: Texas
- Clifton (1942) p. 694, pl. 101, fig. 29
Perm., Leonard Ser., Blaine Fm., Acme Mbr.: N. and NW. of Quanah, Tex.; Dog Creek Sh., Guthrie Mbr.: Stonewall County, Tex.
- Murchisonia gouldii* Knight (1944) p. 459, pl. 186, figs. 6-8
Perm., Guadalupe Ser.: SW. United States
- Branson (1948) p. 712
- Murchisonia?* cf. *Murchisonia gouldii* Walter (1953) p. 697-698, pl. 73, fig. 7
Perm., Rustler Fm., ls. and dol. of l. mbr.: Culberson County, Tex.; Capitan Ls.: Meekler County, Tex.; Blaine and Dog Creek Fms.: Texas; Whitehorse Ss.: Oklahoma

***Murchisonia* (*Murchisonia*) *gypsea* Dawson**

- Murchisonia gypsea* Dawson (1868) p. 310, fig. 123
Carb., ls.: Windsor, Nova Scotia
- Bell (1929) p. 173, pl. 30, figs. 11, 12
Carb., Windsor Ser.: Horton-Windsor district, Nova Scotia

***Murchisonia* (*Murchisonia*) *indianensis* Miller and Gurley**

- Murchisonia indianensis* Miller and Gurley (1896b) p. 18, pl. 2, figs. 31, 32
Miss., Knobstone Gr.: New Albany, Ind.

***Murchisonia* (*Murchinsonia*) *inornata* Meek and Worthen**

- Murchisonia inornata* Meek and Worthen (1866a) p. 276
Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.
- Meek and Worthen (1873) p. 599, pl. 28, fig. 6
Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

***Murchisonia* (*Murchisonia*) *insculpta* Hall**

- Murchisonia insculpta* Hall (1856) p. 26
Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.
- Whitfield (1882a) p. 85, pl. 9, fig. 18
Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.
- Hall (1883) p. 359, pl. 32, fig. 18
Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.
- Cummings (1906) p. 1356, pl. 26, fig. 18
Miss., Salem Ls.: Spergen Hill, Bloomington, Harrodsburg, Ellettsville, Stinesville, and Romona, Ind.

***Murchisonia* (*Murchisonia*) *kansasensis* Swallow**

- Murchisonia kansasensis* Swallow (in Shumard and Swallow, 1858) p. 195
Perm.: Valley of Cottonwood, Kans.

Murchisonia (Murchisonia) keokuk Worthen

Murchisonia keokuk Worthen (1890) p. 141, pl. 23, figs. 2, 2a
Miss., Keokuk Ls.: Keokuk, Iowa

Murchisonia (Murchisonia) limitaris Hall

Murchisonia (Pleurotomaria?) limitaris Hall (1860) p. 108
Miss., Goniaticite ls.: Rockford, Ind.

Murchisonia (Murchisonia) matheri Sayre

Murchisonia matheri Sayre (1930) [1931] p. 135, pl. 16, figs. 1-2
Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.

Murchisonia (Murchisonia) missouriensis Girty

Murchisonia missouriensis Girty (1915e) p. 355, pl. 30, figs. 6, 6a
Penn., Cherokee Sh.: Garland, Henry County, Mo.
Murchisonia (Murchisonia) missouriensis Hoare (1961) p. 161, pl. 20, fig. 13
M. Penn., Robinson Branch Ls.: Henry County, Mo.

Murchisonia (Murchisonia) neglecta Winchell

Murchisonia neglecta Winchell (1863) [1864] p. 20
Yellow ss.: Burlington, Iowa

Murchisonia (Murchisonia) obsoleta Meek

Murchisonia obsoleta Meek (1871d) [1872] p. 175
Carb., "Coal Measures": Danville, Ill.

Murchisonia? (Murchisonia?) perversa Swallow

Murchisonia (?) perversa Swallow (in Shumard and Swallow, 1858) p. 195
Perm.: Valley of Cottonwood, Kans.

Murchisonia? (Murchisonia?) proluxa White and Whitfield

Murchisonia? proluxa White and Whitfield (1862) p. 303
"Chemung Gr.": Burlington, Iowa
Murchisonia proluxa Winchell (1871) p. 257
Miss., Waverly Gr. of former usage: Sciotoville, Ohio
Keyes (1889e) [1890] p. 297
Miss., Kinderhook Ser.: Burlington, Iowa

Murchisonia? (Murchisonia?) pygmaea Rowley

Murchisonia (?) pygmaea Rowley (1895) p. 222, fig. 20
Louisiana Ls.: Louisiana, Mo.
Murchisonia pygmaea S. Weller (1898) p. 359
Murchisonia? pygmaea Rowley (1908) p. 91, pl. 19, fig. 7
Louisiana Ls.: Louisiana, Mo.
Williams (1943) [1944] p. 102, pl. 9, figs. 21, 22
Clay partings of Louisiana Ls.: Louisiana, Mo.

Murchisonia (Murchisonia) quadricincta Winchell

Murchisonia quadricincta Winchell (1863) [1864] p. 19
Yellow ss.: Burlington, Iowa
Winchell (1871) p. 257
Miss., Waverly Gr. of former usage: Sciotoville, Ohio

- Murchisonia quadricincta*? Herrick (1888a) p. 87, pl. 2, fig. 28
 Miss., Waverly Gr. of former usage: Licking County, Ohio
Murchisonia quadricincta S. Weller (1900) p. 107, pl. 7, fig. 3
 Chonopectus ss.: Burlington, Iowa

***Murchisonia* (*Murchisonia*) *sinistroesa* Knight**

- Orthonema liratum* Sayre (1930) [1931] [part] pl. 17, figs. 2-3 (not p. 151)
 Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.
Murchisonia sinistroesa Knight (1934b) p. 444, pl. 56, fig. 5
 Penn., Cherryvale Fm., Westerville Ls. Mbr.: Muncie, Kans.

***Murchisonia* (*Murchisonia*) *tatei* (Donald)**

- Murchisonia* (*Goniostropha*?) sp. aff. *M. (G.?) tatei* Elias (1958) p. 14, pl. 2, fig. 2
 Miss., Redoak Hollow Fm.: Oklahoma
 [No synonymy is presented of this European species.]
Murchisonia terebra* (White) 1879 see *Goniasma terebra

***Murchisonia* (*Murchisonia*) *terebriformis* Hall**

- Murchisonia terebriformis* Hall (1858) p. 28
 Miss., St. Louis Ls.: Bloomington, Ind.
 Whitfield (1882a) p. 86, pl. 9, figs. 15, 16
 Miss., St. Louis Ls.: Bloomington, Ind.
 Hall (1883) p. 362, pl. 32, figs. 15, 16
 Miss., St. Louis Ls.: Bloomington and Lanesville, Ind.
 Cumings (1906) p. 1357, pl. 26, figs. 15, 16
 Miss., Salem Ls.: Bloomington, Harrodsburg, Ellettsville, Stinesville, and Romona, Ind.

***Murchisonia* (*Murchisonia*) *texana* Shumard**

- Murchisonia texana* Shumard (1860) p. 626
 Carb., "Coal Measures": 9 miles east of Indian Reservation, Young County, Tex.

***Murchisonia* (*Murchisonia*) *tricingulata* Dawson**

- Murchisonia tricingulata* Dawson (1868) p. 310
 Carb., ls.: Windsor and Pugwash, Nova Scotia

***Murchisonia* (*Murchisonia*) *uninodocarinata* Hyde**

- Murchisonia uninodocarinata* Hyde (1953) p. 328, pl. 46, figs. 15, 16
 Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

***Murchisonia* (*Murchisonia*) *vermicula* Hall**

- Murchisonia vermicula* Hall (1856) p. 27
 Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.
 Whitfield (1882a) p. 87, pl. 9, fig. 11
 Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.
 Hall (1883) p. 361, pl. 32, fig. 11
 Miss., St. Louis Ls.: Lanesville and Bloomington, Ind.
Solenospira vermicula Ulrich (1897) p. 1022
 Cumings (1906) p. 1357, pl. 26, fig. 11
 Miss., Salem Ls.: Spergen Hill, Bloomington, Paynters, Hill, Harrodsburg, Bloomington, Ellettsville, Stinesville, and Romona, Ind.
Murchisonia vermicula Morse (1911) p. 409, figs. 32a, b
 Miss., Maxville Ls.: Mount Perry, Fultonham, Ohio

Murchisonia (Murchisonia) vincta (Hall)

- Loxonema vincta* Hall (1856) p. 28
 Miss., St. Louis Ls.: Spergen Hill, Ind.
Murchisonia vincta Whitfield (1882a) p. 86, pl. 9, fig. 14
 Miss., St. Louis Ls.: Spergen Hill, Ind.
 Hall (1883) p. 363, pl. 32, fig. 14
 Miss., St. Louis Ls.: Spergen Hill, Ind.
 Cumings (1906) p. 1359, pl. 26, fig. 14
 Miss., Salem Ls.: Spergen Hill, Ellettsville, Stinesville, and Romona, Ind.
 Knight (1944) p. 459, pl. 186, fig. 3
 Miss., Salem Ls.: Mississippi Valley

Murchisonia (Murchisonia) species of authors

- Murchisonia subangulata* (Verneuil?), Shumard and Swallow, (1858) p. 196
 U. Perm.: Kansas
 [This assignment follows S. Weller, 1898]
Murchisonia sp.? Winchell (1871) p. 260
 Miss., Waverly Gr. of former usage: Near Shafer's, Pa.
Murchisonia sp. Herrick (1888a) pl. 7, fig. 6
 Miss., Waverly Gr. of former usage: Moot's Run, Licking County, Ohio
Murchisonia ———? White (1891) p. 25, pl. 3, figs. 12, 13
 Perm.: Military Crossing, Baylor County, Tex.
Murchisonia sp. Herrick (1893) [1895] pl. 18, fig. 6
 Miss., Cuyahoga Gr.: Moot's Run, Licking County, Ohio
 Sardeson (1902) p. 305
 Carb.: Humboldt, Iowa
Murchisonia sp. undet. S. Weller (1905) p. 629
 Miss., Kinderhook Ser., "English River Grit": Maples Mill, on English River,
 near Wellman, Washington County, Iowa
Murchisonia? sp. b. Girty (1908a) [1909] p. 479
 Perm., Delaware Mountain Gr.: Delaware Mts., Tex.
Murchisonia? sp. Snider (1915) p. 116
 Miss., Mayes Fm.: NE. Oklahoma
Murchisonia sp. Plummer and Moore (1921) [1922] pl. 14, figs. 4, 4a, 6, 6a
 Penn., Mineral Wells Fm.: Mineral Wells, Tex.
Murchisonia sp. H. Chronic (1952) p. 124, pl. 4, fig. 11, text fig. 8
 Perm., Kaibab Ls.: Walnut Canyon, Ariz.
 ?*Murchisonia* sp. Brindle (1960) p. 104, pl. 28, fig. 1
 Miss: SE. Saskatchewan
 cf. *Murchisonia* sp. Yochelson and Dutro (1960) p. 144, pl. 14, fig. 1
 U. Miss., Alapah Ls.: N. Alaska

NATICA Scopoli 1777

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. Formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Natica altonensis McChesney 1865 see *Naticopsis* (*Jedria*) *ventrica* (Norwood and Pratten)

Natica carlyana Hall 1856 see *Naticopsis* (*Naticopsis*) *carleyana*

Natica chesterensis Swallow 1863 see *Naticopsis* (*Naticopsis*) *chesterensis*

Natica littonana Hall 1856 see *Ianthinopsis littonanus*

Natica magister Stevens 1858 see *Naticopsis* (*Jedria*) *ventrica* (Norwood and Pratten)

Natica shumardi McChesney 1860 see *Naticopsis* (*Naticopsis*) *shumardi*

Natica ventrica Norwood and Pratten 1855 see *Naticopsis* (*Jedria*) *ventrica*

NATICELLA Münster 1841 [not Guilding 1840]

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. Formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Naticella americana Girty 1915 see *Natiria americana*

Naticella transversa Beede 1907 see *Naticopsis* (*Naticopsis*) *transversa*

NATICOPSIS M'Coy 1846

Type species: *Naticopsis phillipsi* M'Coy (1846) p. 33

(S.D. Meek and Worthen (1866a) p. 364)

Naticopsis M'Coy (1846) p. 33

[Yochelson (1953) p. 65 divided this taxon into four subgenera, three of which range into the late Paleozoic.]

Naticopsis altonensis McChesney 1868 see *Naticopsis* (*Jedria*) *ventrica* (Norwood and Pratten)

Naticopsis altonensis McChesney, Morgan 1924 see *Naticopsis* (*Naticopsis*) *scintilla* Girty

Naticopsis altonensis? var. *giganteus* Meek and Worthen 1873 see *Naticopsis* (*Naticopsis*) *scintilla* Girty

Naticopsis carleyana (Hall) see *Naticopsis* (*Naticopsis*) *carleyana*

Naticopsis chesterensis (Swallow) see *Naticopsis* (*Naticopsis*) *chesterensis*

Naticopsis deformis Girty 1909 see *Naticopsis* (*Naticopsis*) *deformis*

Naticopsis depressus Winchell 1863 see *Naticopsis* (*Naticopsis*) *depressa*

Naticopsis? *diminuta* Stauffer and Schroyer 1920 see *Naticopsis*? (*Naticopsis*?) *diminuta*

Naticopsis dispassa Dawson 1868 see *Naticopsis* (*Naticopsis*) *howi* Dawson

Naticopsis dubia Rowley 1901 see *Naticopsis* (*Naticopsis*) *dubia*

Naticopsis genevievensis (Meek and Worthen) see *Naticopsis* (*Naticopsis*) *genevievensis*

Naticopsis gracilis C. Branson 1930 see *Naticopsis* (*Naticopsis*) *gracilis*

Naticopsis harttii Bell 1929 see *Naticopsis* (*Naticopsis*) *harttii*

Naticopsis hollidayi Meek and Worthen 1860 see *Trachydomia nodosa* Meek and Worthen

Naticopsis howi Dawson 1868 see *Naticopsis* (*Naticopsis*) *howi*

Naticopsis judithae Knight 1933 see *Naticopsis* (*Naticopsis*) *judithae*

Naticopsis kaibabensis H. Chronic 1952 see *Naticopsis* (*Naticopsis*) *kaibabensis*

Naticopsis littonana var. *genevievensis* Meek and Worthen 1866 see *Naticopsis* (*Naticopsis*) *genevievensis*

Naticopsis madisonensis Worthen 1884 see *Naticopsis* (*Naticopsis*) *madisonensis*

Naticopsis marthae Knight 1933 see *Naticopsis* (*Naticopsis*) *marthae*

Naticopsis meeki Knight 1933 see *Naticopsis* (*Jedria*) *meeki*

Naticopsis minuta Sayre (1930) see *Colpites minuta*

Naticopsis monilifera White 1880 see *Colpites monilifera*

Naticopsis nana Meek and Worthen 1860 see *Naticopsis* (*Naticopsis*) *nana*

Naticopsis nodosus Meek and Worthen 1860 see *Trachydomia nodosa*

Naticopsis nodosa var. *hollidayi* Meek and Worthen 1860 see *Trachydomia nodosa*

Naticopsis ortonii Whitfield 1882 see *Trachydomia ortonii*

- Naticopsis paucivolutus* S. Weller 1906 see *Naticopsis* (*Naticopsis*) *paucivolutus*
Naticopsis peoriensis (McChesney) see *Naticopsis* (*Naticopsis*) *peoriensis*
Naticopsis permianus (Beede) see *Naticopsis* (*Naticopsis*) *transversa* (Beede)
Naticopsis picta Girty 1912 see *Naticopsis* (*Naticopsis*) *picta*
Naticopsis (*Nerita*) *pricei* Shumard 1858 see *Naticopsis* (*Jedria*) *ventrica* (Meek and Worthen)
Naticopsis pricei Shumard, Sayre 1930 see *Naticopsis* (*Naticopsis*) *scintilla* (Girty)
Naticopsis pulchella Morningstar 1922 see *Naticopsis* (*Naticopsis*) *pulchella*
Naticopsis remex White 1876 see *Naticopsis* (*Naticopsis*) *remex*
Naticopsis scintilla Girty 1915 see *Naticopsis* (*Naticopsis*) *scintilla*
Naticopsis shumardi (McChesney) see *Naticopsis* (*Naticopsis*) *shumardi*
Naticopsis subovatus Worthen 1873 see *Naticopsis* (*Naticopsis*) *subovatus*
Naticopsis tayloriana Girty 1911 see *Naticopsis* (*Naticopsis*) *tayloriana*
Naticopsis torta (Meek) Raymond 1910 [OPERCULUM] see *Naticopsis* (*Jedria*) *ventrica* (Norwood and Pratten)
Naticopsis torta (Meek) see *Naticopsis* (*Jedria*) *ventrica* (Norwood and Pratten)
Naticopsis transversa (Beede) see *Naticopsis* (*Naticopsis*) *transversa*
Naticopsis ventricosa (Norwood and Pratten) see *Naticopsis* (*Jedria*) *ventrica* (Norwood and Pratten)
Naticopsis virgata Knight 1933 see *Naticopsis* (*Naticopsis*) *virgata*
Naticopsis waterlooensis S. Weller 1916 see *Naticopsis* (*Naticopsis*) *waterlooensis*
Naticopsis wheeleri (Swallow) see *Trachydomia wheeleri*
Naticopsis wheeleri var. White 1881 see *Trachydomia whitei* Knight
Naticopsis wortheni S. Weller 1916 see *Naticopsis* (*Naticopsis*) *wortheni*
Naticopsis wortheni Knight 1933 [not S. Weller 1916] see *Naticopsis* (*Naticopsis*) *wortheniana* Knight
Naticopsis wortheniana Knight 1934 see *Naticopsis* (*Naticopsis*) *wortheniana*
Naticopsis ziczac Whitfield 1882 see *Naticopsis* (*Naticopsis*) *ziczac*
Naticopsis species of authors see *Naticopsis* (*Naticopsis*) species of authors

NATICOPSIS (JEDRIA) Yochelson 1953

Type species: *Naticopsis meeki* Knight (1933b) p. 373

Naticopsis McCoy (1846) p. 33

Naticopsis (*Jedria*) Yochelson (1953) p. 65

***Naticopsis* (*Jedria*) *meeki* Knight**

Naticopsis meeki Knight (1933b) p. 363, p. 373, pl. 42, figs. 1a-l, 2b

Penn.: St. Louis, Mo.

Naticopsis (*Jedria*) *meeki* Yochelson (1953) p. 65

Knight, Batten, and Yochelson (1960) p. 1276, fig. 181, no. 1

M. Penn.: Missouri

Hoare (1961) p. 181, pl. 22, figs. 10, 11

M. Penn., Tiawah Ls.: Barton County, Mo.

***Naticopsis* (*Jedria*) *ventrica* (Norwood and Pratten)**

Natica ventrica Norwood and Pratten (1855) p. 76, pl. 9, figs. 10a, b

Carb., "Coal Measures": 1 mile south of New Harmony, Ind.

Naticopsis (*Nerita*) *Pricei* Shumard (1858) p. 202

Carb., "U. Coal Measures": Boone County, Mo.; Cottonwood Creek and Verdigris River, Kans.

Natica magister Stevens (1858) p. 261

Miss., Archimedes ls.: Near Makanda, Ill.

- Natica altonensis* McChesney (1865) pl. 2, figs. 14a-c
 Carb., "Coal Measures": Alton, Ill.
- Naticopsis altonensis* McChesney (1868) p. 50, pl. 2, figs. 14a-c
 Carb., "Coal Measures": Alton, Ill.
- Platyceras tortum* Meek (1871d) [1872] p. 171
 Carb., "Coal Measures": Greentown, Stark County, Ohio
- Naticopsis ventricosus* Meek and Worthen (1873) p. 592, pl. 28, fig. 13
 Carb., "Coal Measures": 1 mile S. of New Harmony, Ind.
- Natica altonensis* Meek and Worthen (1873) p. 595, pl. 28, figs. 11a, b (*Naticopsis altonensis*? on plate description)
 Carb., "Coal Measures": Macoupin County, Ill.
- Platyceras tortum* Meek (1875b) p. 345, pl. 20, figs. 1a-c
 Carb., "Coal Measures": Greentown, Stark County, Ohio
- Natica altonensis* White (1881) p. 35, pl. 3, fig. 6a
 Carb.: Near Taos, N. Mex.
- Naticopsis torta* Keyes (1890d) [1891] p. 180
- Naticopsis tortum* Keyes (1894b) [1895] pl. 54, figs. 6, 6a
- Naticopsis ventricosa* Keyes (1894b) [1895] p. 199
 Carb., "U. Coal Measures": Kansas City and Clinton, Mo.
- Natica altonensis* Girty (1903) p. 463
 Penn., Hermosa Fm.: San Juan region and Sinbads Valley, Colo.; Rico Fm.: San Juan region, Colorado
- Naticopsis* aff. *altonensis* Girty (1909c) p. 106
 Perm., San Andres Ls.: Mesa del Yeso, N. Mex.
- Naticopsis torta* Raymond (1910) p. 157, pl. 24, figs. 13, 14
 Penn., Vanport Ls.: New Castle, Pa.
- Raymond (1911) p. 97, pl. 3, figs. 13, 14
 Penn., Vanport Ls.: New Castle, Pa.
- Naticopsis altonensis* Girty (1912b) p. 338-340, pl. 1, figs. 1-8
 Penn.: Henry, Garland County, Mo.
- Morningstar (1922) p. 255, pl. 15, fig. 15
 Penn., Pottsville Fm., Boggs Mbr.: Muskingum County; l. part Mercer Mbr.: Muskingum, Perry and Mahoning Counties, Ohio
- Naticopsis ventricosus* Morningstar (1922) p. 251
 Penn., Pottsville Fm., l. part Mercer Mbr.: Muskingum County, Ohio
- Naticopsis tortum* Morningstar (1922) p. 257, pl. 15, figs. 17, 18
 Penn., McArthur Ls.: Vinton County, Ohio
- Naticopsis pricei* Sayre (1930) [1931] p. 141, pl. 18, figs. 1-1b
 Penn., Drum Ls., oolitic mbr.: Turner, Muncie, and Independence, Kans.; Kansas City, Mo.
- Naticopsis ventricosa* Knight (1933b) p. 363, p. 369, pl. 41, figs. 2a-j; pl. 42, fig. 2a; pl. 44, figs. 1a, b
 Penn.: Missouri; Oklahoma
- Naticopsis torta* Knight (1933b) p. 367, pl. 44, fig. 2
 Carb., "Coal Measures": Greentown, Summit County, Ohio
- [Knight suggested that use of the specific name for additional material be discontinued because the original species description is inadequate by currently accepted standards.]
- Naticopsis ventricosa* Knight (1936) p. 531
 Knight (1944) p. 475, pl. 194, figs. 17-19
 Penn., l. part Des Moines Ser.: Mississippi Valley
- Naticopsis* (*Fedria*) *ventricosa* Yochelson (1953) p. 65
 Hoare (1961) p. 182, pl. 22, figs. 14, 15
 M. Penn., Robinson Branch Ls.: Henry County, Mo.

Naticopsis (Jedria) ventricosa (Norwood and Pratten) see **Naticopsis (Jedria) ventrica** (Norwood and Pratten)

NATICOPSIS (NATICOPSIS) M'Coy 1846

Type species: *Naticopsis phillipsii* M'Coy (1846) p. 33
(S.D. Meek and Worthen (1866a) p. 364)

Naticopsis M'Coy (1846) p. 33

Naticopsis (Naticopsis) Yochelson (1953) p. 65

Naticopsis (Naticopsis) apachensis Winters

Naticopsis apachensis Winters (1963) p. 45, pl. 6, figs. 14a-c

Perm., Supai Fm.: E. Arizona

Naticopsis (Naticopsis) carleyana (Hall)

Natica carlyana Hall (1856) p. 31

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.

Naticopsis carleyana Whitfield (1882a) p. 71, pl. 8, figs. 26, 27

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.

Hall (1883) p. 369, pl. 31, figs. 26, 27

Strophostylus? carleyana Keyes (1894b) [1895] p. 196

Miss., St. Louis Ls.: Alton, Ill.

Strophostylus carleyana Cumings (1906) p. 1340, pl. 25, figs. 26, 27

Miss., Salem Ls.: Spergen Hill, Bloomington, Harrodsburg, Romona, Stinesville, and Ellettsville, Ind.; Alton, Ill.

Strophostylus carleyanus Grabau and Shimer (1909) p. 678, fig. 949

Miss., St. Louis Ls.: Illinois; Indiana

Strophostylus carleyana Morse (1911) p. 408, fig. 31

Miss., Maxville Ls.: Mount Perry-Fultonham, Ohio

Strophostylus aff. *carleyanus* Girty (1911) p. 94, pl. 8, figs. 6, 6a

Miss., Moorefield Fm.: Batesville quad., Arkansas

Girty (1915b) p. 124, pl. 11, figs. 13, 13a

Miss., Batesville Ss.: Round Mtn. and Marshall, Ark.

Strophostylus carleyanus var. *Shimer* (1926) p. 81

L. Miss.: Minnewanka region, Alberta

Diaphorostoma cf. *carleyana* Bell (1929) p. 180, pl. 31, fig. 22

Carb., U. Windsor Ser.: Horton-Windsor district, Nova Scotia

Strophostylus carleyanus Butts (1940) [1941] p. 235, pl. 128, fig. 15

Miss., St. Louis Ls.: NW. of Bandys Chapel (Baptist Valley), Tazewell County, Va.

Naticopsis carleyanus Knight (1944) p. 475, pl. 194, figs. 15, 16

Miss., Salem Ls.: Mississippi Valley

Naticopsis (Naticopsis) chesterensis (Swallow)

Natica chesterensis Swallow (1863) p. 100

Miss., Kaskaskia Ls. of former usage: Chester, Ill.; Ste. Genevieve, Mo.

Naticopsis chesterensis S. Weller (1898) p. 370

Naticopsis (Naticopsis) deformis Girty

Naticopsis deformis Girty (1909c) p. 106, pl. 11, fig. 9 (not fig. 8)

Perm., Abo Ss.: Sandia Mts.; Abo Canyon, N. Mex.; San Andres Ls.: Engle, N. Mex.

Winters (1963) p. 45, pl. 11, fig. 9 (not fig. 8)

[Winters (1963) p. 45 suggested that fig. 9 of *N. deformis* Girty (1909) be restricted to that species; however, he considered both illustrated specimens unrecognizable and suggested use of the specific name for additional material be discontinued, as the original species description is inadequate by currently accepted standards.]

Naticopsis (Naticopsis) deformis Girty 1909 [fig. 8] see **Naticopsis (Naticopsis)** species of authors

Naticopsis (Naticopsis) depressa Winchell

Naticopsis depressus Winchell (1863) [1864] p. 22

Yellow ss.: Burlington, Iowa

Naticopsis depressa Keyes (1889e) [1890] p. 293

Miss., Kinderhook Ser.: Burlington, Iowa

S. Weller (1900) p. 108, pl. 6, figs. 3, 4

Chonopectus ss.: Burlington, Iowa

S. Weller (1905) p. 629

Miss., Kinderhook Ser., "English River Grit": Maples Mills, on English River, near Wellman, Washington County, Iowa

Naticopsis? (Naticopsis?) diminuta Stauffer and Schroyer

Naticopsis (?) *diminuta* Stauffer and Schroyer (1920) p. 145, pl. 18, figs. 22, 23

L. Perm., l. part Washington Fm.: Pleasant Grove, Ohio

Tilton (1930) p. 112, pl. 4, fig. A

U. Penn., Washington Fm., base of Elm Grove Ls. Mbr.: Ogleby Park, W. Va.

Naticopsis (Naticopsis) dubia Rowley

Naticopsis dubia Rowley (1901b) p. 66, pl. 23, figs. 9-11

Miss., Keokuk Ls.: Pitchers Point, Salt River, Ky.

Naticopsis (Naticopsis) genevievensis (Meek and Worthen)

Naticopsis littonana var. *genevievensis* Meek and Worthen (1866c) p. 268

Miss., Chester Ser.: Ste. Genevieve County, Mo.; Randolph County, Ill.

Sphaerodomia littonana var. *genevievensis* S. Weller (1898) p. 575

Naticopsis genevievensis Girty (1915b) p. 121

Miss., Batesville Ss.: Round Mtn., Batesville quad., Arkansas

Girty (1915a) p. 197

Naticopsis (Naticopsis) gracilis C. Branson

Naticopsis gracilis C. Branson (1930) p. 57, pl. 15, figs. 11, 12

Perm., Phosphoria Fm., Rex Chert Mbr.: Fort Hall Indian Reservation, Idaho

Naticopsis (Naticopsis) harttii Bell

Naticopsis harttii Bell (1929) p. 179, pl. 31, figs. 16-18

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Naticopsis (Naticopsis) howi Dawson

Naticopsis howi Dawson (1868) p. 309, fig. 119

Carb., ls.: Windsor, Gay's Head, De Bert River, and other localities, Nova Scotia

Naticopsis dispassa Dawson (1868) p. 309, fig. 120

Carb., ls.: Pugwash and Windsor, Nova Scotia

Naticopsis howi Bell (1929) p. 178, pl. 31, figs. 12, 13, 13a, 14?, 15

Miss., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Stacy (1953) p. 86, pl. 18, figs. 4, 5

Miss., L. Windsor Ser.: Nova Scotia

Naticopsis (Naticopsis) judithae Knight

Naticopsis judithae Knight (1933b) p. 382, pl. 44, figs. 7a-d
Penn.: St. Louis, Mo.

Naticopsis (Naticopsis) kaibabensis H. Chronic

Naticopsis kaibabensis H. Chronic (1952) p. 133, pl. 5, figs. 10a-11b; text fig. 10
Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Naticopsis (Naticopsis) madisonensis Worthen

Naticopsis madisonensis Worthen (1884) p. 9
Miss., St. Louis Ls.: Madison County, Ill.
Worthen (1890) p. 144, pl. 25, figs. 4-6
Miss., St. Louis Ls.: Madison County, Ill.

Naticopsis (Naticopsis) marthae Knight

Naticopsis marthae Knight (1933b) pl. 381, pl. 41, figs. 1a-k
Penn.: St. Louis, Mo.
Winters (1963) p. 45

Naticopsis (Naticopsis) nana Meek and Worthen

Platystoma nana Meek and Worthen (1860) [1861] p. 463
Carb., "U. Coal Measures": Springfield, Ill.
Naticopsis nana Meek and Worthen (1861) [1862] p. 148
Meek and Worthen (1866a) p. 365, pl. 31, figs. 4a, b
Carb., "U. Coal Measures": Springfield, Ill.
White (1877) p. 159, pl. 12, figs. 4a, b
Carb.: Camp Cottonwood, near Spring Mtn., Lincoln County, Nev.
White (1884b) p. 162, pl. 36, figs. 6, 7
Carb., "M. and U. Coal Measures": Indiana
Herrick (1888a) pl. 11, fig. 8
Carb., "Coal Measures": Fultonham, Ohio
Keyes (1891) [1892] p. 257
Carb., "L. Coal Measures": Des Moines, Iowa
Strophostylus nana Keyes (1894b) [1895] p. 196
Carb., "U. Coal Measures": Clinton and Kansas City, Mo.
Naticopsis nana Smith (1896) p. 40
Carb., "U. Coal Measures": Sebastian County, Ark.
Strophostylus cf. nanus Girty (1903) p. 462
Carb.: Glenwood Springs, Colo.
Strophostylus nanus Price (1915) p. 614
Penn., Eagle Ls.: Mingo County, W. Va.
Naticopsis nana Girty (1915e) p. 355
Penn., Cherokee Sh.: Garland, Henry County, Mo.; Douglas Gr.: Fort Leavenworth, Kans.
Naticopsis nanus Morningstar (1922) p. 256
Penn., Pottsville Fm., 1. part Mercer Mbr.: Muskingum and Stark Counties;
u. part Mercer Mbr.(?): Mahoning County; McArthur Ls.: Vinton and
Hocking Counties, Ohio
Strophostylus nana Morgan (1924) pl. 50, fig. 10
Penn., Francis Fm.: Stonewall quad., Oklahoma
Naticopsis nana Knight (1933b) p. 368
Penn., "U. Coal Measures": Springfield, Ill.

Naticopsis (Naticopsis) nana Hoare (1961) p. 184, pl. 22, figs. 12, 13
M. Penn., Robinson Branch Ls.: Henry County, Mo.

***Naticopsis (Naticopsis) paucivolutus* S. Weller**

Naticopsis paucivolutus S. Weller (1906) p. 458, pl. 7, figs. 27, 28
Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.

***Naticopsis (Naticopsis) peoriensis* (McChesney)**

Platystoma peoriensis McChesney (1859) p. 62
Carb., "U. Coal Measures": Peoria and Fulton Counties, Ill.
McChesney (1865) pl. 2, figs. 11a, b
Platystoma peoriense McChesney (1868) p. 49, pl. 2, figs. 11a, b
Carb., "U. Coal Measures," ls.: Peoria and Fulton Counties, Ill.
Strophostylus peoriensis Keyes (1894b) [1895] p. 197, pl. 52, fig. 6
Carb., "U. Coal Measures": Kansas City, Mo.
Sayre (1930) [1931] p. 140, pl. 18, figs. 2-2b
Penn., Drum Ls., oolitic mbr.: Kansas City, Mo.
Naticopsis peoriensis Knight (1933b) p. 367, pl. 43, fig. 1
Penn., "U. Coal Measures": Peoria and Fulton Counties, Ill.
[Knight suggested use of this specific name be discontinued for additional material, as the original species description is inadequate by currently accepted standards.]

***Naticopsis (Naticopsis) picta* Girty**

Naticopsis picta Girty (1912b) p. 339 pl. 1, figs. 9-11
Miss., Chester Ser.: Tobensport, Perry County, Ind.

***Naticopsis (Naticopsis) pulchella* Morningstar**

Naticopsis pulchella Morningstar (1922) p. 256, pl. 15, fig. 16
Penn., Pottsville Fm., black sh. in l. part Mercer Mbr.: Stark County, Ohio
Knight (1933b) p. 363, 377, pl. 44, fig. 3
Penn.: Stark County, Ohio

***Naticopsis (Naticopsis) remex* White**

Naticopsis remex White (1876a) p. 109
Penn. and Perm., l. part Aubrey Gr.: Confluence of Grand and Green Rivers, Utah
White (1880b) p. 139, pl. 34, fig. 6a
M. Carb.: Confluence of Grand and Green Rivers, Utah
White (1880b) [1883] p. 139, pl. 34, fig. 6a
M. Carb.: Confluence of Grand and Green Rivers, Utah
White (1891) p. 24, pl. 3, fig. 10
Perm.: Military Crossing and Godwin Creek, Baylor County, Tex.
Strophostylus remex Keyes (1894b) [1895] p. 197, pl. 55, figs. 7a, b
Carb., "U. Coal Measures": Kansas City, Mo.
Girty (1903) p. 463, pl. 10, figs. 4, ka, 5-5b
Penn., Rico Fm.: San Juan region, Colorado; Minturn Fm., Robinson Ls. Mbr.: Leadville district, Colorado
Naticopsis remex Morgan (1924) pl. 49, figs. 12, 12a
Penn., Belle City and Holdenville Fms.: Stonewall quad., Oklahoma
Naticopsis remex Knight (1933b) p. 367, pl. 44, fig. 4
Penn. and Perm., l. part Aubrey Gr.: Confluence of Grand and Green Rivers, Utah

[Knight suggested use of this specific name be discontinued for additional material, as the original species description is inadequate by currently accepted standards.]

Naticopsis cf. *N. remex* Easton (1962) p. 100, pl. 13, fig. 13

U. Miss., Heath Fm.; Miss. or Penn., Cameron Creek Fm.: Central Montana

***Naticopsis* (*Naticopsis*) *scintilla* Girty**

Naticopsis altonensis? var. *giganteus* Meek and Worthen (1873) pl. 28, figs. 12a, b [not *N. giganteus* Hall and Whitfield (1872)]

Carb., "Coal Measures": No locality cited

Naticopsis scintilla Girty (1915e) p. 358, pl. 29, figs. 3-3c

Penn., Kansas City Gr.: Kansas City, Mo.

Naticopsis altonensis Morgan (1924) pl. 49, figs. 11, 11a

Penn., Holdenville Sh.: Stonewall quad., Oklahoma

Sayre (1930) [1931] p. 142, pl. 18, fig. 7

Penn., Drum Ls., oolitic mbr.: Kansas City, Mo.

Naticopsis pricei Sayre (1930) [1931] p. 141, pl. 18, figs. 1-1b

Penn., Drum Ls., oolitic mbr.: Turner, Muncie, and Independence, Kans.; Kansas City, Mo.

Trachydromia pustulosa Sayre (1930) [1931] p. 152, pl. 18, figs. 3, 3a

Penn., Drum Ls., oolitic mbr.: Muncie and Turner, Kans.; Kansas City, Mo.

Naticopsis scintilla Knight (1933b) p. 374, pl. 40, figs. 1a-n; pl. 42, fig. 2c

Penn.: Illinois; Missouri; Kansas

Knight (1944) p. 475, pl. 194, figs. 22, 23

Penn., Missouri Ser.: Mississippi Valley

***Naticopsis* (*Naticopsis*) *shumardi* (McChesney)**

Natica shumardi McChesney (1859) p. 62

Carb., "Coal Measures": La Salle, Ill.

McChesney (1865) pl. 2, figs. 15a, b

Naticopsis shumardi McChesney (1868) p. 49, pl. 2, figs. 15a, b

Carb., "Coal Measures": La Salle, Ill.

White (1891) p. 24, pl. 3, fig. 11

Perm.: Goodwin Creek, Baylor County, Tex.

Knight (1933b) p. 363, 380, pl. 44, figs. 5a-d

Penn.: Illinois

***Naticopsis* (*Naticopsis*) *subovata* Worthen**

Naticopsis subovatus Worthen (1883) p. 295, pl. 28, fig. 9

Carb., "U. Coal Measures": LaSalle, Ill.

Strophostylus subovatus S. Weller (1898) p. 615

Strophostylus subovatus? Girty (1903) p. 463, pl. 10, figs. 3, 3a

Penn., Hermosa Fm.: San Juan region, Colorado

Strophostylus subovatus Mather (1915) p. 238, pl. 15, figs. 23, 23a

Penn., Morrow Ser.: Fayetteville, Ark.

Naticopsis subovatus Morgan (1924) pl. 49, fig. 12b

Penn., Francis Fm.: Stonewall quad., Oklahoma

Naticopsis subovata Knight (1933b) p. 363, 379, pl. 43, figs. 2a-j

Penn.: Illinois; Kansas; Missouri

Knight (1944) p. 475, pl. 194, figs. 20, 21

Penn., Missouri Ser.: Mississippi Valley

Mudge and Yochelson (1962) [1963] p. 94, pl. 17, fig. 16

Penn., Zeandale Ls., Tarkio Ls. Mbr.: Pottawatomie County, Kans.

Naticopsis (Naticopsis) suturicompta Yochelson and Dutro

Naticopsis (Naticopsis) suturicompta Yochelson and Dutro (1960) p. 142, pl. 14, figs. 20-25
Miss., Alapah Ls.: Chandler Lake quad., N. Alaska

Naticopsis (Naticopsis) tayloriana Girty

Naticopsis tayloriana Girty (1910c) [1911] p. 51, pl. 6, fig. 6
Perm., phosphate beds of Park City Fm.: Montpelier, Idaho

Naticopsis (Naticopsis) transversa (Beede)

Strophostylus permianus Beede (1907) p. 170, pl. 8, figs. 2-2c
Perm., Whitehorse Ss.: Whitehorse Spring, Okla.; Quartermaster Fm.: Dozier, Tex.

Naticella transversa Beede (1907) p. 171, pl. 8, figs. 1, 1a
Perm., Quartermaster Fm.: Dozier, Tex.

Naticopsis transversa Knight (1940) p. 312, 313, pl. 7, figs. 1-7; pl. 6, figs. 3a-c
Perm., Whitehorse Ss.; Rush Springs Fm., Dozier Ss. Mbr.; Marlow Fm., Verden Ss. Mbr.: Oklahoma; Texas

Naticopsis transversus Roth, Newell, and Burma (1941) p. 317, pl. 45, fig. 10
Perm., Quartermaster Fm., thin fossiliferous dolomite near base of Dorey Sh.
Mbr.: Briscoe County, Tex.

Naticopsis transversa Knight (1944) p. 475, pl. 194, fig. 24
Perm., Guadalupe Ser.: SW. United States

Naticopsis (Naticopsis) virgata Knight

Naticopsis virgata Knight (1933b) p. 363, 380, pl. 44, figs. 60a-g
Penn.: St. Louis, Mo.

Naticopsis (Naticopsis) waterlooensis S. Weller

Naticopsis waterlooensis S. Weller (1916) p. 259, pl. 19, figs. 3-6
Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Naticopsis (Naticopsis) wortheni S. Weller

Naticopsis wortheni S. Weller (1916) p. 259, pl. 19, figs. 1, 2
Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Naticopsis (Naticopsis) wortheniana Knight

Naticopsis wortheni Knight (1933b) [not Weller 1916] p. 363, 377, pl. 43, figs. 3a-k
Penn.: St. Louis, Mo.

Naticopsis wortheniana Knight (1934b) p. 446
Knight (1936) p. 530

Naticopsis (Naticopsis) ziczac Whitfield

Naticopsis ziczac Whitfield (1882b) p. 223

Miss., Maxville Ls.: Newtownville, Ohio

Whitfield (1891) p. 590, pl. 14, figs. 15, 16

Miss., Maxville Ls.: Newtownville, Ohio

Whitfield (1895) p. 477, pl. 10, figs. 15, 16

Miss., Maxville Ls.: Newtownville, Ohio

Grabau and Shimer (1909) p. 673, fig. 933

Miss., Maxville Ls.: Newtonville, Ohio

Morse (1911) p. 402, figs. 27a, b

Miss., Maxville Ls.: White Cottage and Mount Perry, Fultonham, Ohio

Naticopsis (Naticopsis) species of authors

- Naticopsis?* sp. n. Herrick (1888a) p. 87, pl. 12, fig. 37
Miss., Waverly Gr. of former usage: Licking County, Ohio
- Naticopsis* sp. Smith (1896) p. 41
Carb., "U. Coal Measures": Scott County, Ark.
- Naticopsis?* sp. Girty (1899b) p. 572, pl. 66, fig. 12
Miss., Madison Ls.: Yellowstone National Park
- Naticopsis* sp. Beede (1902b) p. 7; pl. 1, fig. 12
Perm., red beds: White Horse Springs, Okla.
- Girty (1908a) [1909] p. 485, pl. 23, figs. 18, 19
Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.; basal black ls.: Guadalupe Mts., Tex.
- Girty (1909b) p. 43, pl. 5, fig. 3
- Naticopsis deformis* Girty (1909c) p. 106, pl. 11, fig. 8 (not fig. 9)
[Winters (1963) p. 45 considered that this specimen was unrecognizable.]
- Plummer and Moore (1921) [1922] pl. 7, fig. 7
Penn., Marble Falls Ls.: W. of Wallace Creek, 7 miles SW. of San Saba, Tex.;
Miss., Caney Sh.: Atoka quad., Oklahoma
- Warthin (1930) p. 47
Penn.: Oklahoma
- Easton (1942) pl. 10, fig. 19
Miss., Pitkin Ls.: Arkansas
- H. Chronic (1952) p. 134, pl. 5, fig. 12
Perm., Kaibab Ls.: Walnut Canyon, Ariz.
- Burke (1955) p. 15
Miss. and Penn., Amsden Fm.: South Pass, Fremont County, Wyo.
- Kemp (1957) p. 975, pl. 123, figs. 6-8
Perm., Belle Plains Fm., Elm Creek Ls. Mbr.: Baylor County, Tex.
- Naticopsis (Naticopsis)* sp. Yochelson and Dutro (1960) p. 143, pl. 14, fig. 5
L. Miss.: N. Alaska
- Naticopsis* sp. Mudge and Yochelson (1962) [1963] p. 94, pl. 17, figs. 13, 14, 17-19
Penn. and Perm.: Kansas
- Naticopsis (Jedria)* spp. Sturgeon (1964a) p. 216, pl. 32, figs. 12, 13, 16, 17
Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Muskingum, Vinton, and Jackson Counties, Ohio
- Naticopsis (Nerita) Pricei* Shumard 1858 see *Naticopsis (Jedria) ventrica* (Norwood and Pratten)

NATIRIA Koninck 1881

Type species: *Natica lirata* Phillips (1836) p. 224

Natiria Koninck (1881) p. 5

Natiria americana (Girty)

- Naticella americana* Girty (1915e) p. 359, pl. 32, figs. 3-3c
Penn., Cherokee Sh.: Garland, Henry County, Mo.
- Natiria americana* Knight (1933b) p. 391, pl. 46, figs. 7a-c
Penn.: Missouri
- Hoare (1961) p. 185, pl. 22, fig. 9
M. Penn., Robinson Branch Ls.: Henry County, Mo.

NEILSONIA Thomas 1939

Type species: *Neilsonia roscobiensis* Thomas (1939) p. 36

Neilsonia Thomas (1939) p. 46

Neilsonia species of authors

Neilsonia sp. Easton (1942) pl. 11, fig. 5

Miss., Pitkin Ls.: Arkansas

Neilsonia? sp. Yochelson and Dutro (1960) p. 138, pl. 13, fig. 25

U. Miss., Alapah Ls.: Killik River quad., N. Alaska

NERITA Linnaeus 1758

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Naticopsis (Nerita) Pricei Shumard 1858 see **Naticopsis (Jedria) ventrica** (Norwood and Pratten)

NODOSPIRA Yochelson and Dutro 1960

Type species: *Nodospira ornata* Yochelson and Dutro (1960) p. 137

Nodospira Yochelson and Dutro (1960) p. 137

Nodospira ornata Yochelson and Dutro

Nodospira ornata Yochelson and Dutro (1960) p. 137, pl. 13, figs. 14-17

U. Miss., Alapah Ls.: Chandler Lake quad., N. Alaska

OLIVELLITES Fenton and Fenton 1937

Type species: *Olivellites plummeri* Fenton and Fenton (1937) p. 453

Olivellites Fenton and Fenton (1937) p. 452

[The type species is based on a burrow, "the work of an animal"; it may not be a gastropod.]

Olivellites plummeri Fenton and Fenton

Olivellites plummeri Fenton and Fenton (1937) p. 453, text fig. 1, p. 453

Penn., Sandstones of Cisco Gr.: W. of Cisco, E. of Eastland, Eastland County, Tex.

OMPHALOTROCHUS Meek 1864

Type species: *Euomphalus (Omphalotrochus) whitneyi* Meek (1864) p. 15

Omphalotrochus Meek (1864) p. 15

Omphalotrochus alleni Yochelson

Omphalotrochus alleni Yochelson (1956b) p. 233, pl. 15, figs. 14-16

Perm., Wolfcamp Ser.: Altuda quad., Texas

Omphalotrochus cochisensis Yochelson

Omphalotrochus cochisensis Yochelson (1956b) p. 230, pl. 17, figs. 1-6; pl. 18, figs. 15, 16 table 14

Perm., Colina Ls.: Pearce quad., Arizona

Omphalotrochus conoideus Girty 1908 see **Babylonites conoideus**

Omphalotrochus ferrieri Girty 1908 see **Babylonites ferrieri**

Omphalotrochus hessensis Yochelson

Omphalotrochus hessensis Yochelson (1956b) p. 234, pl. 16, figs. 1-7, table 17

Perm., Hueco Ls.: Van Horn quad., Texas

Omphalotrochus obtusispira (Shumard)

Pleurotomaria obtusispira Shumard (1859) p. 401

Carb., "Coal Measures": Sierra Hueco, El Paso County, Tex.

Omphalotrochus obtusispira Girty (1937) p. 203, pl. 33, figs. 1-17

Knight (1944) p. 467, pl. 191, figs. 12-15

Perm., Wolfcamp Ser.: SW. United States

Yochelson (1956b) p. 231, pl. 15, figs. 1-13, table 15

Perm., Gym Ls. of former usage: Florida Mts., N. Mex.

Mudge and Yochelson (1962) [1963] p. 92, pl. 17, figs. 3, 4

Perm., Beattie Ls., Florena Sh. Mbr.: Cowley County, Kans.

Omphalotrochus spinosus Yochelson

Omphalotrochus spinosus Yochelson (1956b) p. 236, pl. 14, figs. 11-13

Perm., Hueco Ls.: Baylor Mts., Van Horn quad., Texas

Omphalotrochus springvalensis (White) see **Straparollus** (**Straparollus**) **springvalensis**

Omphalotrochus whitneyi (Meek)

Euomphalus (*Omphalotrochus*) *whitneyi* Meek (1864) p. 15, pl. 2, figs. 8, 8a

Carb.: Bass Ranch, Shasta County, Calif.

Omphalotrochus whitneyi Knight (1941) p. 214-215, pl. 77, figs. 1-5

Perm., McCloud Ls.: Bass Ranch, Shasta County, Calif.

Knight (1944) p. 467, pl. 191, fig. 21

Perm., Wolfcamp Ser.: W. Texas

Yochelson (1956b) p. 228, pl. 14, figs. 1-3

Perm., McCloud Ls.: Redding quad., Shasta County, Calif.

Knight, Batten, and Yochelson (1960) p. 1196, fig. 111, no. 4

L. Perm.: California

Omphalotrochus wolfcampensis Yochelson

Omphalotrochus wolfcampensis Yochelson (1956b) p. 233, pl. 14, figs. 4-10, table 16

Perm., Wolfcamp Ser.: Hess Canyon quad., Texas; Red Eagle Ls.: Osage County, Okla.

Mudge and Yochelson (1962) [1963] p. 93, pl. 17, figs. 5, 6

Perm., Genola Ls., Neva Ls. Mbr.: Lyon County, Kans.

Omphalotrochus(?) sp. A Knight 1950 see **Babylonites** species of authors

Omphalotrochus species of authors

Euomphalus? White (1891) p. 25

Perm.: Military Crossing, Baylor County, Tex.

[Assigned here by Yochelson (1956b) p. 202]

Omphalotrochus sp. Yochelson (1954) p. 233

Perm.: U.S.S.R.; United States

Omphalotrochus sp. Yochelson (1956b) p. 236, pl. 18, figs. 11-14

Perm., Bone Spring Ls.: Van Horn quad., Texas

Yochelson (1961) p. B-327, text fig. 100.1

Perm.: Arizona; Kansas; New Mexico; Oklahoma; Texas; South Dakota;

Wyoming; Utah; Idaho; Oregon; California

ONCOCHILUS Pethö 1882

Type species: *Natica globulosa* Klipstein (1843) p. 196

(S.D. Cossman (1925) p. 193)

Oncochilus Pethö (1882) p. 291

[Although this genus has a post-Paleozoic type species, there is no reason to question the assignment of late Paleozoic species to this taxon.]

***Oncochilus insolitus* H. Chronic**

Oncochilus insolitus H. Chronic (1952) p. 132, pl. 5, fig. 7

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Winters (1963) p. 46, pl. 5, figs. 1, 2

Perm., Supai Fm.: E. Arizona

***Oncochilus vaningeni* (Knight)**

Soleniscus (*Cylindritopsis*) *vaningeni* Knight (1931b) p. 223, pl. 21, figs. 3a-d; pl. 27, fig. 4

Penn.: St. Louis, Mo.

Cylindritopsis vaningeni Knight (1936) p. 533

Cylindrotopsis [sic] *vaningeni* Knight (1944) p. 479, pl. 196, fig. 7

Penn., Des Moines Ser.: Mississippi Valley

Oncochilus vaningeni H. Chronic (1952) p. 131

ORESTES Girty 1912 [not Redtenbacher 1906]

Type species: *Orestes nodosus* Girty (1912a) p. 137

Orestes Girty (1912a) p. 136

[Knight (1941) p. 244 noted that this homonymous name was replaced by *Phymatopleura* Girty (1939).]

Orestes brazoensis* Girty 1915 see *Phymatopleura brazoensis

Orestes intertexta* (Meek and Worthen) see *Phymatopleura intertexta

Orestes nodosus* Girty 1912 see *Phymatopleura nodosus

Orestes pagoda* Newell 1935 see *Borestus pagoda

Orestes?* *quadrilineatus* Girty 1934 see *Glyptomaria* (*Dictyotomaria*) *quadrilineatus

Orestes?* *reticulatus* Girty 1934 see *Glyptomaria* (*Dictyotomaria*) *reticulatus

ORTHONEMA Meek and Worthen 1862

Type species: *Eunema* (?) *salteri* Meek and Worthen (1860) [1861] p. 464

Orthonema Meek and Worthen (1861) [1862] p. 146

***Orthonema bilineatum* Mark**

Orthonema bilineatum Mark (1912) [1913] p. 316, pl. 16, fig. 14

Penn., Conemaugh Fm., Ames Ls. Mbr.: New Concord, Ohio

Knight (1934b) p. 440, pl. 56, fig. 2

Penn., Conemaugh Fm., Ames Ls. Mbr.: New Concord, Ohio

***Orthonema carbonarium* Worthen**

Orthonema carbonaria Worthen (1884) p. 7

Carb., "Coal Measures": Peoria County, Ill.

Orthonema carbonarium Worthen (1890) p. 145, pl. 24, figs. 4, 4a

Carb., "Coal Measures": Peoria County, Ill.

Warthin (1930) p. 52, pl. 7, fig. 20

Penn.: Oklahoma

Knight (1934b) p. 442, p. 57 fig. 4

Penn. Lonsdale Ls.: Peoria County, Ill.

Orthonema conicum Meek and Worthen

- Orthonema conica* Meek and Worthen (1866) [1867] p. 270
Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.
Meek and Worthen (1873) p. 590, pl. 29, fig. 5
Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.
Keyes (1888) [1889] p. 24
Carb., "L. Coal Measures": Des Moines, Iowa
Orthonema conicum Knight (1934b) p. 445, pl. 57, figs. 2a, b
Penn., St. David Ls.: Hodge's Creek, Macoupin County, Ill.
Knight (1944) p. 475, pl. 195, fig. 2
Penn., Des Moines Ser.: Mississippi Valley
Orthonema dozierenensis Beede 1907 see *Stegocoelia* (*Taasia*) *dozierenensis*

Orthonema glassmani E. Branson

- Orthonema glassmani* E. Branson (1938b) p. 45, pl. 24, figs. 26
L. Miss.: Missouri

Orthonema inornatum Knight

- Orthonema inornatum* Knight (1934b) p. 446, pl. 57, figs. 1a-d
Penn., Top of Labette Sh.: St. Louis County, Mo.
Hoare (1961) p. 186, pl. 22, fig. 18
M. Penn., Robinson Branch Ls.: Henry County, Mo.

Orthonema liratum Sayre

- Orthonema liratum* Sayre (1930) [1931] [part] p. 151 (not pl. 17, figs. 2, 3)
Penn., Cherryvale Fm., Westerville Ls. Mbr.: Muncie Kans.
Knight (1934b) p. 443, pl. 56, fig. 4
Penn., Cherryvale Fm., Westerville Ls. Mbr.: Muncie, Kans.
Orthonema liratum Sayre 1930 [1931] [part] p. 151 see ***Orthonema sayrei*** Knight
Orthonema liratum Sayre 1930 [1931] [part] (pl. 17, figs. 2, 3) see ***Murchisonia***
(***Murchisonia***) ***sinistroesa*** Knight

Orthonema marvinwelleri Knight

- Orthonema marvinwelleri* Knight (1934b) p. 444, pl. 57, figs. 3a-c
Penn., Pawnee Ls.: St. Louis County, Mo.
Knight (1944) pl. 195, figs. 3, 4
Penn., Des Moines Ser.: Mississippi Valley

Orthonema nebrascense (Geinitz)

- Murchisonia nebrascensis* Geinitz (1866) p. 12, table 1, fig. 17
Penn. "Dyas": Nebraska City, Nebr.
Meek (1872a) p. 234, pl. 11, fig. 6
Penn., Table Creek Sh.: Nebraska City, Nebr.
Orthonema nebrascense Warthin (1930) p. 52, pl. 7, fig. 21
Penn.: Oklahoma
Orthonema quadricarinatum (Worthen) see *Stegocoelia* (*Stegocoelia*) *wortheni*
Knight

Orthonema salteri (Meek and Worthen)

- Eunema?* *salteri* Meek and Worthen (1860) p. 461
Carb., "U. Coal Measures": Springfield, Ill.

- Orthonema salteri* Meek and Worthen (1866a) p. 381, pl. 31, figs. 14a-c
 Carb., "L. Coal Measures": Hodge's Creek, Macoupin, County, Ill.
 Knight (1934b) p. 438, pl. 56, figs. 1a-d
 Penn., Carbondale Fm., St. David Ls. Mbr.: Hodge's Creek, Macoupin County,
 Ill.
 Knight (1936) p. 533
 Knight (1941) p. 220-221, pl. 50, fig. 3
 Penn., Carbondale Fm., St. David Ls. Mbr.: Hodge's Creek, Macoupin County,
 Ill.
 Knight (1944) p. 475, pl. 195, fig. 1
 Penn., Des Moines Ser.: Mississippi Valley
 Knight, Batten, and Yochelson (1960) p. I317, fig. 210, no. 5
 M. Penn.: Illinois

***Orthonema sayrei* Knight**

- Orthonema liratum* Sayre (1930) [1931] p. 151 (not pl. 17, figs. 2, 3)
 Penn., Cherryvale Fm., Westerville Ls. Mbr.: Muncie, Kans.
Orthonema sayrei Knight (1934b) p. 439, pl. 56, fig. 3
 Penn., Cherryvale Fm., Westerville Ls. Mbr.: Muncie, Kans.

***Orthonema schucherti* Knight**

- Orthonema schucherti* Knight (1934b) p. 441, pl. 6, figs. 6a, b
 Penn., Graham Fm., Jacksboro Ls. Mbr.: Graham, Tex.
 Knight (1944) p. 477, pl. 195, fig. 5
 Penn., Virgil Ser.: Mississippi Valley

***Orthonema socorroense* Girty**

- Orthonema socorroense* Girty (1909c) p. 109, pl. 11, figs. 12, 13
 Perm., Yeso Fm.: Alamillo, N. Mex.

***Orthonema? striatonodosum* H. Chronic**

- Orthonema? striatonodosum* H. Chronic (1952) p. 134, pl. 5, figs. 13a-14; text fig. 11
 Perm., Kaibab Ls.: Walnut Canyon, Ariz.

***Orthonema strigatum* Warthin**

- Orthonema strigatum* Warthin (1930) p. 53, pl. 7, fig. 23
 Perm., Holdenville Sh.: E. of Ada, Okla.

***Orthonema subtaeniatum* (Geinitz)**

- Murchisonia subtaeniata* Geinitz (1866) p. 12, table 1, fig. 18
 Perm.: Nebraska City, Nebr.
Orthonema subtaeniata Meek (1872a) p. 288, pl. 11, fig. 10
 Carb., "U. Coal Measures": Nebraska City, Nebr.; W. Iowa
Orthonema subtaeniatum Mark (1912) [1913] p. 316, pl. 16, fig. 3
 Penn., Portersville Ls.: Portersville, Ohio; Conemaugh Fm., Cambridge Ls. Mbr.:
 Norwick, Ohio
 Knight (1934b) p. 437
***Orthonema? texana* Beede 1907 see *Murchisonia* (*Murchisonia*) *gouldii* Beede**

***Orthonema weneri* Knight**

- Orthonema weneri* Knight (1934b) p. 441, pl. 56, figs. 7a-c
 Penn., Pawnee Ls.: St. Louis County, Mo.

Orthonema species of authors

- Orthonema*? sp. Herrick (1887b) pl. 14, fig. 10
Penn., "Coal Measures": Flint Ridge, Ohio
- Orthonema* sp. a. Girty (1909b) p. 111
Perm., San Andres Ls.: Mesa del Yeso and Nogal Creek, N. Mex.; Yeso Fm.: Mesa del Yeso, N. Mex.
- Orthonema* sp. b. Girty (1909c) p. 112
Dev. and Miss., Caballos Novaculite; Perm., San Andres Ls.: New Mexico
- Orthonema* sp. C. Branson (1930) p. 57, pl. 12, fig. 10
Perm., Phosphoria Fm. ls. mbr.: Owl Creek Mts., Wyo.
- Orthonema* sp. 1. H. Chronic (1952) p. 135, pl. 5, fig. 18
Perm., Kaibab Ls.: Walnut Canyon, Ariz.
- Orthonema* sp. 2. H. Chronic (1952) p. 136, pl. 5, fig. 15
Perm., Kaibab Ls.: Walnut Canyon, Ariz.
- Orthonema* sp. Batten (1964) p. 10, fig. 14
Perm.: Faught Ridge, E. Arizona

ORTHONYCHIA Hall 1943

[This name was reduced to subgeneric rank under *Platyceras* Hall (1843) by Knight (1944) p. 473.]

- Orthonychia acutirostre* (Hall) see *Platyceras* (*Orthonychia*) *acutirostris*
- Orthonychia boonvillensis* (Miller) see *Platyceras* (*Orthonychia*) *boonvillensis*
- Orthonychia bushbergensis* E. Branson 1938 see *Platyceras* (*Orthonychia*) *bushbergensis*
- Orthonychia chesterensis* (Meek and Worthen) see *Platyceras* (*Orthonychia*) *chesterensis*
- Orthonychia compressa* Girty 1910 see *Platyceras* (*Orthonychia*) *compressum*
- Orthonychia compressus* Warren 1927 [not Girty 1910] see *Platyceras* (*Orthonychia*) *kindlei* Warren
- Orthonychia cornuforme* (Winchell) see *Platyceras* (*Orthonychia*) *cornuforme*
- Orthonychia costata* Warren 1927 see *Platyceras* (*Orthonychia*) *costata*
- Orthonychia cyrtolites* (McChesney) see *Platyceras* (*Orthonychia*) *cyrtolites*
- Orthonychia formosum* (Keyes) see *Platyceras* (*Orthonychia*) *formosum*
- Orthonychia jeffersonensis* Weller 1906 see *Platyceras* (*Orthonychia*) *jeffersonensis*
- Orthonychia mayesense* Snider 1915 see *Platyceras* (*Orthonychia*) *mayesense*
- Orthonychia parva* (Swallow) see *Platyceras* (*Orthonychia*) *parva*
- Orthonychia undata* (Winchell) see *Platyceras* (*Orthonychia*) *undata*
- Orthonychia ungula* Weller 1906 see *Platyceras* (*Orthonychia*) *ungula*
- Orthonychia* species of authors see *Platyceras* (*Orthonychia*) species of authors

OXYDISCUS Koken 1889

[Knight (1941) p. 223 noted that this name is a junior objective synonym of *Tripododiscus* Meek and Worthen (1866).]

- Oxydiscus cyrtolites* (Hall) see *Tropidodiscus* *cyrtolites*
- Oxydiscus venatus* Girty 1910 see *Tropidodiscus* *venatus*

PALAEOCAPULUS Grabau and Shimer 1909

Type species: *Platyceras* (*Orthonychia*) *lodiense* Meek (1871d) [1872] p. 170

Palaeocapulus Grabau and Shimer (1909) p. 686

[Knight (1944) p. 473 considered this name a subjective synonym of *Orthonychia* Hall (1843) and reduced the genus *Orthonychia* Hall to subgeneric rank under *Platyceras* Conrad (1840).]

Palaeocapulus equilateralis (Hall) see **Platyceras** (**Orthonychia**) **equilateralis**

Palaeocapulus lodiensis (Meek) see **Platyceras** (**Orthonychia**) **lodiensis**

PALAEOSTYLUS Mansuy 1914

Type species: *Palaeostylus pupoides* Mansuy (1914) p. 48

(S.D. Cossmann (1918) p. 323)

Palaeostylus Mansuy (1914) p. 48

[Knight, Batten, and Yochelson divided this taxon into four subgenera, all of which range into the late Paleozoic.]

Palaeostylus species of authors see **Palaeostylus** (**Palaeostylus**) species of author

PALAEOSTYLUS (LEPTOZYGA) Knight 1930

Type species: *Pseudozygopleura* (*Leptozyga*) *minuta* Knight (1930) p. 63

Pseudozygopleura (*Leptozyga*) Knight (1930) p. 63

Leptozyga Knight (1944) p. 461

Palaeostylus (*Leptozyga*) Knight, Batten, and Yochelson (1960) p. I313

Palaeostylus (Leptozyga) minutus (Knight)

Pseudozygopleura (*Leptozyga*) *minuta* Knight (1930) p. 16, 63, pl. 4, fig. 2; text fig. 3G

Penn., top of Labette Sh.: St. Louis Mo.

Paleostylus (*Leptozyga*) *minuta* Knight (1936) p. 521, 532

Leptozyga minuta Knight (1941) p. 172-173, pl. 49, fig. 8

Penn., top of Labette Sh.; Henrietta Fm. of former usage (=Marmaton Gr.):

Feeffe Creek, near Lackland Sta., St. Louis County, Mo.

Knight (1944) p. 461, pl. 187, fig. 10

Penn., Des Moines Ser.: Mississippi Valley

Palaeostylus (*Leptozyga*) *minutus* Knight, Batten, and Yochelson (1960) p. I313, fig. 208, no. 4

M. Penn.: Missouri

PALAEOSTYLUS (PALAEOSTYLUS) Mansuy 1914

Type species: *Palaeostylus pupoides* Mansuy (1914) p. 48

(S.D. Cossmann (1918) p. 323)

Palaeostylus Mansuy (1914) p. 48

Palaeostylus (*Palaeostylus*) Knight (1932) p. 202

Palaeostylus (Paleostylus) cylindratus (Knight)

Pseudozygopleura (*Pyrgozyga*) *cylindrata* Knight (1930) p. 14, 57, pl. 3 figs. 3a, b

Penn., base of Pawnee Ls. and top of Labette Sh.: St. Louis, Mo.

Paleostylus (*Palaeostylus*) *cylindratus* Knight (1932) p. 202

Knight (1936) p. 521, 532

Pyrgozyga cylindrata Knight (1941) p. 293, pl. 49, fig. 10

Penn., base of Pawnee Ls.; Henrietta Fm. of former usage (=Marmaton Gr.):

"Davis Place" subdivision of Clayton, St. Louis County, Mo.

Palaeostylus cylindrata Knight (1944) p. 461, pl. 187, fig. 11 Penn., Des Moines Ser.: Mississippi Valley

Palaeostylus (Palaeostylus) dunbari (Knight)

Pseudozygopleura (*Pyrgozyga*) *dunbari* Knight (1930) p. 58, pl. 3, figs. 8a, b; text fig. 3E

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Palaeostylus*) *dunbari* Knight (1932) p. 202
Knight (1936) p. 520-521

***Palaeostylus* (*Palaeostylus*) *funis* (Knight)**

Pseudozygopleura (*Pyrgozyga*) *funis* Knight (1930) p. 60, pl. 3, fig. 10
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Palaeostylus*) *funis* Knight (1932) p. 202
Knight (1936) p. 520-521

***Palaeostylus* (*Paleostylus*) *giganticus* Winters**

Paleostylus (*Paleostylus*) [sic] *giganticus* Winters (1963) p. 41, pl. 5, figs. 10, 11
Perm., Supai Fm.: E. Arizona

***Palaeostylus* (*Palaeostylus*) *macrus* (Knight)**

Pseudozygopleura (*Pyrgozyga*) *macra* Knight (1930) p. 58, pl. 3 figs 7a-d, text fig. 3D
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Palaeostylus*) *macra* Knight (1932) p. 202
Knight (1936) p. 521, 532

***Palaeostylus* (*Palaeostylus*) *marvinwelleri* (Knight)**

Pseudozygopleura (*Pyrgozyga*) *marvinwelleri* Knight (1930) p. 59, pl. 3, figs. 9a, b
Penn., l. part Fort Scott Ls. and top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Paleostylus*) *marvinwelleri* Knight (1932) p. 202
Knight (1936) p. 520-521

***Palaeostylus* (*Paleostylus*) *warthini* (Knight)**

Pseudozygopleura (*Pyrgozyga*) *warthini* Knight (1930) p. 61, pl. 3, fig. 5
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Palaeostylus*) *warthini* Knight (1932) p. 202
Knight (1936) p. 520-521, 530, 533

***Palaeostylus* (*Palaeostylus*) species of authors**

Hemizyga n. sp. Plummer and Moore (1921) [1922] pl. 19, fig. 26
Penn., Graford Fm., Brownwood Sh. Mbr.: Near Brooksmith, Tex.

Pseudozygopleura? sp. Knight (1930) p. 56

Palaeostylus? sp. Knight (1936) p. 520-521

PALAEOSTYLUS (STEPHANOZYGA) Knight 1930

Type species: *Zygopleura nodosa* Girty (1915e) p. 360

Pseudozygopleura (*Stephanozyga*) Knight (1930) p. 15

Stephanozyga Knight (1944) p. 461

Palaeostylus (*Stephanozyga*) Knight, Batten, and Yochelson (1960) p. I313

***Paleostylus* (*Stephanozyga*) *nodosus* (Girty)**

Zygopleura nodosa Girty (1915e) p. 360, pl. 32, figs. 10-11a
Penn., Shawnee Gr.: Missouri

Pseudozygopleura (*Stephanozyga*) *nodosa* Knight (1930) p. 15, 23

Stephanozyga nodosa Knight (1941) p. 335-336, pl. 49, figs. 5a, b
Penn., Shawnee Gr.: Calhoun Sh., Holt County, Mo.

Knight (1944) p. 463, pl 187, fig. 13

Paleostylus (*Stephanozyga*) *nodosus* Knight, Batten, and Yochelson (1960) p. I313, fig. 208,
no. 2

M. Penn.: Missouri

Palaeostylus (Stephanozyga) subnodosus (Knight)

Pseudozygopleura (Stephanozyga) subnodosa Knight (1930), p. 62, pl. 4, fig. 1

Penn.: 1. part Fort Scott, Ls.: St. Louis, Mo.

Palaeostylus (Stephanozyga) subnodosa Knight (1936) p. 521, 532

Stephanozyga subnodosus Knight (1944) p. 463, pl. 187, fig. 12

Penn., Des Moines Ser.: Mississippi Valley

Palaeostylus (Stephanozyga)? subnodosa Hoare (1961) p. 171, pl. 21, fig. 15, 16

M. Penn.: Henry County, Mo.

PALAEOSTYLUS (PSEUDOZYGOPLURA) Knight 1930

Type species: *Loxonema semicostata* Meek (1871d) [1872] p. 174

Pseudozygopleura (Pseudozygopleura) Knight (1930) p. 31

Palaeostylus Knight (1944) p. 461

Palaeostylus (Pseudozygopleura) Knight, Batten, and Yochelson (1960) p. I313

Palaeostylus (Pseudozygopleura) acuminatus (Knight)

Pseudozygopleura (Pseudozygopleura) acuminata Knight (1930) p. 55, pl. 3, fig. 3

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) acuminata Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) assertonsoris (Knight)

Pseudozygopleura (Pseudozygopleura) assertonsoris (Knight 1930) p. 52, pl. 3, figs. 1a, b

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) assertonsoris Knight (1936) p. 520-521

Hoare (1961) p. 166, pl. 21, fig. 6

M. Penn., Robinson Branch Ls.: Henry County, Mo.

Palaeostylus (Pseudozygopleura) bellus (Walcott)

Loxonema bella Walcott (1884) p. 258, pl. 24, figs. 1a, b

L. Carb.: Eureka district, Nevada

Meekospira bella? Girty (1915a) p. 218, pl. 25, fig. 9

Pseudozygopleura (Pseudozygopleura) bella Knight (1930) p. 22

Palaeostylus (Pseudozygopleura) bella Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) carus (Dawson)

Loxonema cara Dawson (1883) p. 11

L. Carb. ls.: Windsor, Nova Scotia

Dawson (1880) p. 412

Zygopleura cara Girty (1915a) p. 183

Bell (1929) p. 179, pl. 31, figs. 19, 21

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Palaeostylus (Pseudozygopleura) cara Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) condrai (Knight)

Pseudozygopleura (Pseudozygopleura) condrai Knight (1930) p. 39, pl. 1, fig. 9

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) condrai Knight (1936) p. 520-521

Hoare (1961) p. 165, pl. 21, fig. 5

M. Penn., Robinson Branch Ls.: Crawford County, Kans.

Palaeostylus (Pseudozygopleura) conicus (Knight)

Pseudozygopleura (Pseudozygopleura) conica Knight (1930) p. 39, pl. 2, figs. 1a, b

Penn., base of Pawnee Ls. and top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) conica Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) croneisi (Knight)

Pseudozygopleura (Pseudozygopleura) croneisi Knight (1930) p. 32, pl. 1, fig. 3

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) croneisi Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) deloi (Knight)

Pseudozygopleura (Pseudozygopleura) deloi Knight (1930) p. 47, pl. 2, fig. 10

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) deloi Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) girtyi (Knight)

Pseudozygopleura (Pseudozygopleura) girtyi Knight (1930), p. 38 pl. 1, figs. 6a, b

Penn., top of Labette Sh.: St. Louis Mo.

Palaeostylus (Pseudozygopleura) girtyi Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) eucharis Hoare

Palaeostylus (Pseudozygopleura) eucharis Hoare (1961) p. 170, pl. 21, figs. 13, 14

M. Penn., Robinson Creek Ls.: Honey Creek, Henry County, Mo.

Palaeostylus (Pseudozygopleura) inornatus (Knight)

Pseudozygopleura (Pseudozygopleura) inornata Knight (1930) p. 51, pl. 2, fig. 19

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) inornata Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) kellettae (Knight)

Pseudozygopleura (Pseudozygopleura) kellettae Knight (1930) p. 49, pl. 2, figs. 15a, b; text fig. 3B

Penn., top of Labette Sh.: St. Louis, Mo

Palaeostylus (Pseudozygopleura) kellettae Knight (1936) p. 520-521

Pseudozygopleura kellettae Knight (1944) p. 461, pl. 187, fig. 8

Penn., Des Moines Ser.: Mississippi Valley

Palaeostylus (Pseudozygopleura) kellettae Knight, Batten, and Yochelson (1960) p. 1313

Penn.: Missouri

Palaeostylus (Pseudozygopleura) leveneae (Knight)

Pseudozygopleura (Pseudozygopleura) leveneae Knight (1930) p. 54, pl. 3, figs. 2a, b, text fig. 3A

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) leveneae Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) moorei (Knight)

Pseudozygopleura (Pseudozygopleura) moorei Knight (1930) p. 43, pl. 2, fig. 9

Penn., top of Labette Sh.: St. Louis Mo.

Palaeostylus (Pseudozygopleura) moorei Knight (1936) p. 520-521

Hoare (1961) p. 166, pl. 21, fig. 7

M. Penn., Robinson Branch Ls: Henry County, Mo.

Palaeostylus (Pseudozygopleura) multicostatus (Meek and Worthen)

Loxonema multicostata Meek and Worthen (1861) [1862] p. 146

Carb., "Coal Measures": Hodges Creek, Macoupin County, Ill.

Meek and Worthen (1866a) p. 378, pl. 31, figs. 12a-c

Carb., "Coal Measures": Macoupin County, Ill.

Keyes (1891) [1892] p. 260

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 206

Carb., "U. Coal Measures": Kansas City, Mo.

Zygopleura multicostata Girty (1915a) p. 183

Zygopleura multicostata? Girty (1915a) p. 184, pl. 25, fig. 2

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Zygopleura multicostata Plummer and Moore (1921) [1922] pl. 14, figs. 10, 10a

Penn., Mineral Wells Fm.: Mineral Wells, Tex.

Sayre (1930) [1931] p. 144, pl. 17, fig. 7

Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.

Pseudozygopleura (*Pseudozygopleura*) *multicostata* Knight (1930) p. 22

Palaeostylus (*Pseudozygopleura*) *multicostata* Knight (1936) p. 520-521

***Palaeostylus* (*Pseudozygopleura*) *nanus* (Girty)**

Zygopleura nana Girty (1915e) p. 360, pl. 32, fig. 5, 5a

Penn., Kansas City Gr.: Kansas City, Mo.

Sayre (1930) [1931] p. 145, pl. 17, fig. 10

Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.; Kansas City, Mo.

Pseudozygopleura (*Pseudozygopleura*) *nana* Knight (1930) p. 22

Palaeostylus (*Pseudozygopleura*) *nana* Knight (1936) p. 520-521

***Palaeostylus* (*Pseudozygopleura*) *nigrus* (Knight)**

Pseudozygopleura (*Pseudozygopleura*) *nigra* Knight (1930) p. 48, pl. 2, figs. 14a, b

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Pseudozygopleura*) *nigra* Knight (1936) p. 520-521

***Palaeostylus* (*Pseudozygopleura*) *obtusicauminis* (Knight)**

Pseudozygopleura (*Pseudozygopleura*) *obtusicauminis* Knight (1930) p. 52, pl. 2, fig. 17

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Pseudozygopleura*) *obtusicauminis* Knight (1936) p. 520-521

***Palaeostylus* (*Pseudozygopleura*) *pagodus* (Knight)**

Pseudozygopleura (*Pseudozygopleura*) *pagoda* Knight (1930) p. 45, pl. 2, fig. 6

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Pseudozygopleura*) *pagoda* Knight (1936) p. 520-521

***Palaeostylus* (*Pseudozygopleura*) *peoriensis* (Worthen)**

Loxonema peoriensis Worthen (1884) p. 7

Carb., "Coal Measures": Peoria County, Ill.

Worthen (1890) p. 139, pl. 23, figs. 10, 10b

Carb., "Coal Measures": Peoria County, Ill.

Loxonema? *peoriense* Girty (1903) p. 540, pl. 10, fig. 8

Penn., Rico Fm.: San Juan region, Colorado

Holopea peoriensis? Girty (1915a) p. 190

Penn., Wewoka Fm.: Wewoka quad., Oklahoma

Pseudozygopleura (*Pseudozygopleura*) *peoriensis* Knight (1930) p. 22

Palaeostylus (*Pseudozygopleura*) *peoriensis* Knight (1936) p. 520-521

***Palaeostylus* (*Pseudozygopleura*) *perversus* (Knight)**

Pseudozygopleura (*Pseudozygopleura*) *perversa* Knight (1930) p. 56, pl. 2, figs. 12a, b

Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (*Pseudozygopleura*) *perversa* Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) plummeri (Knight)

Pseudozygopleura (Pseudozygopleura) plummeri Knight (1930) p. 40, pl. 1, figs. 10a, b
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) plummeri Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) pluricostatus (Knight)

Pseudozygopleura (Pseudozygopleura) pluricostata Knight (1930) p. 46, pl. 2, fig. 11
Penn., top of Labette Sh. and base of Pawnee Ls.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) pluricostata Knight (1936) p. 520-521.

Hoare (1961) p. 167, pl. 21, fig. 8

M. Penn., black sh. underlying Tiawah Ls.: St. Claire County, Mo.

Palaeostylus (Pseudozygopleura) praeacutus (Knight)

Pseudozygopleura (Pseudozygopleura) praeacuta Knight (1930) p. 55 pl. 3, fig. 4
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) praeacuta Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) pulchrus (Knight)

Pseudozygopleura (Pseudozygopleura) pulchra Knight (1930) p. 42, pl. 2, fig. 4
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) pulchra Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) pupus (Knight)

Pseudozygopleura (Pseudozygopleura) pupa Knight (1930) p. 49, pl. 2, fig. 13
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) pupa Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) recticostatus (Knight)

Pseudozygopleura (Pseudozygopleura) recticostata Knight (1930) p. 50, pl. 2, fig. 16
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) recticostata Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) restis (Knight)

Pseudozygopleura (Pseudozygopleura) restis Knight (1930) p. 44, pl. 2, fig. 7
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) restis Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) rothi (Knight) see *Eoptychia rothi*

Palaeostylus (Pseudozygopleura) schucherti (Knight)

Pseudozygopleura (Pseudozygopleura) schucherti Knight (1930) p. 46
Penn., top of Labette Sh.: St. Louis, Mo.

Palaeostylus (Pseudozygopleura) schucherti Knight (1936) p. 520-521

Pseudozygopleura schucherti Knight (1944) p. 461, pl. 187, fig. 9

Penn.: Mississippi Valley

Palaeostylus (Pseudozygopleura) schucherti Hoare (1961) p. 168, pl. 21, figs. 9, 10
M. Penn., Robinson Branch Ls.: Henry County, Mo.

Palaeostylus (Pseudozygopleura) scitulus (Meek and Worthen)

Loxonema scitula Meek and Worthen (1860) [1861] p. 464
Carb., "U. Coal Measures": Springfield, Ill.

Loxonema rugosa Meek and Worthen (1860) [1861] p. 465
Carb., "U. Coal Measures": Springfield, Ill.

- Loxonema scitula* Meek and Worthen (1866a) p. 377, pl. 31, figs. 10a-c
 Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.
- Loxonema rugosa* Meek and Worthen (1866a) p. 378, pl. 31, figs. 11a-c
 Carb., "U. Coal Measures": Springfield, Ill.
- White (1881) p. 35, pl. 3, fig. 7a
 Carb., Near Taos and Coyote Creek, N. Mex.
- Loxonema scitula* Keyes (1891) [1892] p. 259
 Carb., "L. Coal Measures": Des Moines, Iowa
- Loxonema scitulum* Keyes (1894b) [1895] p. 206
 Carb., "U. Coal Measures": Kansas City, Mo.
- Zygopleura* aff. *rugosa* Girty (1909c) p. 107
 Perm., Yeso Fm.: Alamilla, N. Mex.
- Zygopleura scitula* Girty (1915a) p. 182
- Zygopleura rugosa* Girty (1915a) p. 183, pl. 25, figs. 1, 1a
 Penn., Wewoka Fm.: Wewoka quad., Oklahoma
- Zygopleura affinis* Girty (1915e) p. 359, pl. 32, figs. 6-6b
 Penn., Cherokee Sh.: Garland, Henry County, Mo.
- Zygopleura rugosa* Plummer and Moore (1921) [1922] pl. 14, figs. 2, 2a
 Penn., Mineral Wells Fm.: Mineral Wells, Tex.
- Warthin (1930) p. 49, pl. 7, fig. 14
 Penn.: Oklahoma
- Sayre (1930) [1931] p. 143, pl. 17, fig. 9
 Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.
- Pseudozygopleura* (*Pseudozygopleura*) *scitula* Knight (1930) pl. 1, figs. 2a-c
 [Knight excluded the reference by White (1881) and by Plummer and Moore (1921) but did not propose reassignment.]
- Palaeostylus* (*Pseudozygopleura*) *scitula* Hoare (1961) p. 168, pl. 21, fig. 11
 M. Penn., Robinson Branch Ls.: Henry County, Mo.
- Pseudozygopleura* (*Pseudozygopleura*) aff. *P. scitula* Easton (1962) p. 100, pl. 13, fig. 11
 U. Miss. or Penn., Cameron Creek Fm.: Central Montana
- Palaeostylus* (*Pseudozygopleura*) *semicostatus* (Meek)**
- Loxonema attenuata* var. *semicostata* Meek (1871d) [1872] p. 174
 Carb., "Coal Measures": Danville, Ill.
- Loxonema semicostata* Meek and Worthen (1873) p. 596, pl. 29, fig. 2
 Carb., "Coal Measures": Danville, Ill.
- Eustylus semicostatus* Girty (1915a) p. 187
- Pseudozygopleura* (*Pseudozygopleura*) *semicostata* Knight (1930) p. 31, pl. 1, figs. 1a-c
 Penn., top of Labette Sh.: St. Louis, Mo.
- Palaeostylus* (*Pseudozygopleura*) *semicostatus* Knight (1936) p. 521, 532
- Pseudozygopleura semicostata* Knight (1941) p. 282-283, pl. 49, figs. 7a-c
 U. Carb., sh. overlying coal bed: Danville, Ill.
- Knight (1944) p. 461, pl. 187, figs. 1, 2
 Penn., Des Moines Ser.: Mississippi Valley
- Palaeostylus* (*Pseudozygopleura*) *semicostatus* Knight, Batten, and Yochelson (1960), p. I313, fig. 208, no. 12
 Penn.: Missouri
- Hoare (1961) p. 169, pl. 21, fig. 1
 M. Penn., Robinson Branch Ls.: Henry County, Mo.
- Palaeostylus* (*Pseudozygopleura*) *sinuosior* (Knight)**
- Pseudozygopleura* (*Pseudozygopleura*) *sinuosior* Knight (1930) p. 42, pl. 2, fig. 3
 Penn., top of Labette Sh.: St. Louis, Mo.
- Palaeostylus* (*Pseudozygopleura*) *sinuosior* Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) tenuivirga (Knight)

- Pseudozygopleura (Pseudozygopleura) tenuivirga* Knight (1930) p. 53, pl. 2, figs. 18a, b
Penn., top of Labette Sh., and base of Pawnee Ls.: St. Louis, Mo.
Palaeostylus (Pseudozygopleura) tenuivirga Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) terebra (Knight)

- Pseudozygopleura (Pseudozygopleura) terebra* Knight (1930) p. 44, pl. 2, fig. 5
Penn., top of Labette Sh.: St. Louis, Mo.
Palaeostylus (Pseudozygopleura) terebra Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) teres (Girty)

- Zygopleura teres* Girty (1915e) p. 360, pl. 32, figs. 4 4a
Penn., Kansas City Gr.: Kansas City, Mo.
Sayre (1930) [1931] p. 143, pl. 17, fig. 13
Penn., Drum Ls., oolitic mbr.: Kansas City, Mo.
Pseudozygopleura (Pseudozygopleura) teres Knight (1930) p. 23
Palaeostylus (Pseudozygopleura) teres Knight (1936) p. 520-521
Palaeostylus (Pseudozygopleura) trochus (Knight) see *Eoptychia trochus*

Palaeostylus (Pseudozygopleura) werner (Knight)

- Pseudozygopleura (Pseudozygopleura) werner* Knight (1930) p. 41, pl. 2, fig. 2
Penn., top of Labette Sh.: St. Louis, Mo.
Palaeostylus (Pseudozygopleura) werner Knight (1936) p. 520-521

Palaeostylus (Pseudozygopleura) williamsi (Knight)

- Pseudozygopleura (Pseudozygopleura) williamsi* Knight (1930) p. 36, pl. 1 figs. 5a-c
Penn., top of Labette Sh. and base of Pawnee Ls.: St. Louis, Mo.
Palaeostylus (Pseudozygopleura) williamsi Knight (1936) p. 520-521
Miss.: Mississippi Valley

Palaeostylus (Pseudozygopleura) wortheni (S. Weller)

- Loxonema wortheni* S. Weller (1916) p. 261, pl. 18, figs. 18-20
Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.
E. Branson and Greger (1918) p. 324, pl. 18, fig. 6
Miss. and Penn., Amsden Fm.: Wind River Mts., Wyo.
Pseudozygopleura wortheni Knight (1944) p. 461, pl. 187, figs. 3-5
Miss., Ste. Genevieve Ls.: Mississippi Valley
Palaeostylus (Pseudozygopleura) wortheni Knight, Batten, and Yochelson (1960) p. 1313
Miss.: Mississippi Valley

Palaeostylus (Pseudozygopleura) species of authors

- Pseudozygopleura (Pseudozygopleura)* sp. A. Knight (1930) p. 35, pl. 1, fig. 4
Penn., base of Pawnee Ls.: St. Louis, Mo.
Palaeostylus (Pseudozygopleura)? sp. A. Knight (1936) p. 520-521
Pseudozygopleura? sp. Easton (1942) pl. 9, fig. 3
Palaeostylus [sic] (*Pseudozygopleura*) sp. Walter (1953) p. 698, pl. 73, fig. 5
Perm., Rustler Fm., dol. of l. mbr.: Culberson County, Tex.

PARAGONIOZONA Nelson 1947

- Type species: *Paragoniozona nodolirata* Nelson (1947) p. 461
Paragoniozona Nelson (1947) p. 460

Paragoniozona aspera (Girty)

- Pleurotomaria aspera* Girty (1934a) p. 259-260, figs. 23-25
Penn., McCoy Fm.: Eagle County, Colo.

Paragoniozona aspera Nelson (1947) p. 461

Penn., Boyd Sh., Brentwood Ls. Mbr.: Woolsey, Ark.

Amaurotoma aspera Elias (1958) p. 12

Paragoniozona cf. *P. aspera* Sturgeon (1964a) p. 214, pl. 33, figs. 1, 2

Penn., Allegheny Fm., Vanport Ls. Mbr.: Columbiana County, Ohio

***Paragoniozona granulostriata* (Meek and Worthen)**

Pleurotomaria granulostriata Meek and Worthen (1860) [1861] p. 459

Carb., "Coal Measures": Hodges' Creek, Macoupin County, Ill.

Pleurotomaria granulo-striata Meek and Worthen (1866a) p. 356, pl. 28 figs. 2a-d

Carb., "L. Coal Measures": Macoupin County, Ill.

Pleurotomaria granulostriata Sayre (1930) [1931] p. 130, pl. 14, figs. 2, 2a

Penn., Drum Ls., oolitic mbr.: Turner, Kans.

Paragoniozona granulostriata Nelson (1947) p. 461

Carb., "L. Coal Measures": Macoupin County, Ill.; Kansas City Fm.: Turner, Kans.

***Paragoniozona millegranosa* (Girty)**

Pleurotomaria millegranosa Girty (1934a) p. 262-266, figs. 28, 29

Penn., Boyd Sh., Brentwood Ls. mbr.: Winslow quad., Arkansas

Paragoniozona millegranosa Nelson (1947) p. 461

Penn., Boyd Sh., Brentwood Ls. mbr.: Cold Springs, Ark.

***Paragoniozona multilirata* Nelson**

Paragoniozona multilirata Nelson (1947) p. 463, pl. 65, figs. 4a-c

M. Penn., Magdalena Gr., Strawn equiv.: Franklin Mts., Vinton, Tex.; and Anthony, N. Mex.

***Paragoniozona nodolirata* Nelson**

Paragoniozona nodolirata Nelson (1947) p. 461, pl. 54, figs. 2a-c

M. Penn., Magdalena Gr., Strawn equiv.: Franklin Mts., Vinton, Tex.

Paragoniozona cf. *P. nodolirata* Batten (1958) p. 205, pl. 36, fig. 17

Perm., Wolfcamp Ser.: Orogrande quad., New Mexico

Knight, Batten, and Yochelson (1960) p. 1215, fig. 130, no. 2

M. Penn.: Texas

***Paragoniozona paucinodosa* Nelson**

Paragoniozona paucinodosa Nelson (1947) p. 461, pl. 65, figs. 3a-c

M. Penn., Magdalena Gr., Strawn equiv.: Franklin Mts., Vinton, Tex.

***Paragoniozona sarlei* Nelson**

Paragoniozona sarlei Nelson (1947) p. 462, pl. 65, fig. 5

Penn., Magdalena Gr.: Franklin Mts., Vinton, Tex.

***Paragoniozona woolseyana* (Girty)**

Pleurotomaria woolseyana Girty (1934a) p. 260-262, figs. 26, 27

L. Penn., Boyd Sh., Brentwood Ls. Mbr.: Winslow quad., Arkansas

Paragoniozona woolseyana Batten (1958) p. 206

PATELLA Linnaeus 1758

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. Formally named North American late Paleozoic species species originally assigned to this taxon were reassigned.]

Patella capitanensis Girty 1908 see *Leptopsis? capitanensis*

Patella levettei? White 1882 see **Lepetopsis levettei**

Patella———? White see **Leptopsis** species of authors

PATELLILABIA Knight 1945

Type species: *Patellilabia tentoriolum* Knight (1945a) p. 337

Patellilabia Knight (1945a) p. 336

Patellostium (*Patellilabia*) Elias (1958) p. 5

Patellilabia Knight Batten, and Yochelson (1960) p. I184

Patellilabia ellipticus (McChesney)

Bellerophon ellipticus McChesney (1859) p. 58

Carb., "Coal Measures": Dr. E. Hall's mill, Pope Creek, Knox County; Carnahan's mine, Mercer County, and Mr. Fisher's mine, near Lacon, Ill.

McChesney (1865) pl. 3, figs. 1, 2

McChesney (1868) p. 44, pl. 3, figs. 1, 2

Carb., "Coal Measures": Knox and Mercer Counties and Lacon, Ill.

Bucanopsis? elliptica Ulrich (1897) p. 854

Bucanopsis elliptica Girty (1899a) p. 591

Patellilabia ellipticus Yochelson (1960) p. 228

Patellilabia junior Yochelson

Patellilabia junior Yochelson (1960) p. 279, pl. 53, figs. 18–21

Perm., Lueders Ls.: Runnels County, Tex.

Patellostium (*Patellilabia*) **montfortianum** var. **intermedia** Elias 1958 see **Knightites** (*Cymatospira*) **montfortianum intermedia**

Patellilabia tentoriolum Knight

Bellerophon marcouianus (Geinitz) Keyes (1894b) [1895] p. 148, pl. 51, fig. 3

Carb., "Coal Measures": Flint Ridge, Ohio

Patellostium marcouianum (Geinitz) Sayre (1930) [1931] p. 128, pl. 13 figs. 9, 9a

Penn., Cherryvale Fm., Westerville Ls. Mbr.: Kansas City, Mo.; Turner, Kans.

Patellilabia tentoriolum Knight (1945a) p. 337, pl. 49, figs. 5a–f

Penn., Cherryvale Fm., Westerville Ls. Mbr.: Kansas City, Mo.; Turner, Kans.

Knight, Batten, and Yochelson (1960) p. I184, fig. 103, no. 3

U. Penn.: Missouri

Yochelson (1960) p. 228

U. Penn.: E. Kansas

Patellilabia tentoriolum? Hoare (1961) p. 148, pl. 19, fig. 18

M. Penn., Seville Ls.: Henry County, Mo.

PATELLOIDEA Tasch 1961

Type species: *Patelloidea limnensis* Tasch (1961) p. 862

Patelloidea Tasch (1961) p. 862

Patelloidea limnensis Tasch

Patelloidea limnensis Tasch (1961) p. 862, pl. 97, figs. 4a–b

Perm., rocks of Leonard age: Jester Creek, Harvey County, Kans.

PATELLOSTIUM Waagen 1880

Type species: *Bellerophon macrostoma* Roemer (1844) p. 80

(S.D. Ulrich and Scofield (1897) p. 854)

Patellostium Waagen (1880) p. 131

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. All but four formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Patellostium bellum (Keyes) see **Knightites (Retispira) textiliformis** (Gurley)

Patellostium branneri (S. Weller)

Bellerophon branneri S. Weller (1897) p. 269, pl. 21, fig. 9

Miss., Batesville Ss.: Batesville, Ark.

Patellostium branneri Girty (1915b) p. 118, pl. 11, fig. 6

Miss., Batesville Ss.: Round Mtn. and Marshall, Ark.

Patellostium kansasense (Shumard) see **Knightites (Retispira) kansasensis**

Patellostium laevigatum Girty

Patellostium laevigatum Girty (1910a) p. 231

Miss., basal part Fayetteville Sh.: Fayetteville quad., Arkansas

Patellostium marcouianum (Geinitz) Sayre 1930 see **Patellilabia tentoriolum** Knight

Patellostium montfortianum (Norwood and Pratten) see **Knightites (Cymatospira) montfortianus**

Patellostium (Patellilabia) montfortianum var. **intermedia** Elias 1958 see **Knightites (Cymatospira) montfortianum intermedia**

Patellostium nodocostatum (Gurley) see **Knightites (Retispira) nodocostatus**

Patellostium ourayensis (Gurley)

Bellerophon ourayensis Gurley (1884) p. 8

U. Carb.: Ouray, Colo.

Patellostium ourayense Girty (1899a) p. 589

Girty (1903) p. 471; pl. 10, figs. 10-10b

Carb.: Near Ouray, Colo.

Patellostium rugopleurus (Gurley) see **Knightites (Retispira) nodocostata** (Gurley)

Patellostium scriptiferum (White)

Bellerophon scriptiferus White (1862) p. 21

"Chemung Gr.": Burlington, Iowa

Patellostium scriptiferus S. Weller (1900) p. 115, pl. 6, fig. 6

Chonopectus ss.: Burlington, Iowa

S. Weller (1905) p. 623

Miss., Kinderhook Ser.: Kinderhook, Ill.

Patellostium textiliforma Girty 1899 see **Knightites (Retispira) textiliformis**

PATELLOSTIUM (PATELLILABIA) Knight 1945

[Elias (1958) p. 5 reduced *Patellilabia* Knight (1945) to subgeneric rank. Knight, Batten, and Yochelson (1960) p. 1184 considered that the name had full generic status.]

Patellostium (Patellilabia) montfortianum var. **intermedia** Elias 1958 see **Knightites (Cymatospira) montfortianum intermedia**

PERMOPLANORBOIDEA Tasch 1961

Type species: *Permoplanorboidea primus* Tasch (1961) p. 862

Permoplanorboidea Tasch (1961) p. 862

Permoplanorboidea primus Tasch

Permoplanorboidea primus Tasch (1961) p. 862, pl. 97, fig. 1

Perm., rocks of Leonard age: Jester Creek, Harvey County, Kans.

PERNOTROCHUS H. Chronic 1952

Type species: *Pernotrochus arizonensis* H. Chronic (1952) p. 120

Pernotrochus H. Chronic (1952) p. 120

[Knight, Batten, and Yochelson (1960) p. 1203 considered this name a subjective synonym of *Euconospira* Ulrich (1897).]

Pernotrochus arizonensis H. Chronic 1952 see **Euconospira arizonensis**

PHANEROTINUS Sowerby 1844

Type species: *Euomphalus cristatus* Phillips (1836) p. 225

(S.D. Koninck (1881) p. 107)

Phanerotinus Sowerby (1884) p. 29

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic.]

Phanerotinus gyroceras (Roemer) see **Ecculiomphalus gyroceras**

Phanerotinus paradoxus Winchell 1863 see **Straparollus (Serpulospira) paradoxus**

Phanerotinus cf. **P. paradoxus** Knight 1958 see **Straparollus (Serpulospira) paradoxus**

Phanerotinus subplanus S. Weller 1898 see **Straparollus (Euomphalus) subplanus**

PHANEROTREMA Fisher 1885

Type species: *Pleurotomaria labrosa* Hall (1860) p. 339

Phanerotrema Fisher (1885) p. 851

Phanerotrema brazerianum Girty

Phanerotrema brazerianum Girty (1927) p. 430, pl. 25, figs. 25-27

Miss., Brazer Ls.: Montpelier quad., Idaho

Phanerotrema brazoense (Shumard) see **Phymatopleura brazoensis**

Phanerotrema aff. **brazoense** (Shumard) see **Phymatopleura brazoensis**

Phanerotrema grayvillense (Norwood and Pratten) see **Glabrocingulum (Glabrocingulum) grayvillense**

Phanerotrema manzanicum Girty 1909 see **Glabrocingulum (Ananias) manzanicum**

Phanerotrema marcouanum (Geinitz) see **Glabrocingulum (Ananias) marcouanum**

Phanerotrema ornatum Sayre

Phanerotrema ornatum Sayre (1930) [1931] p. 136, pl. 15, figs. 3-3b

Penn., Drum Ls., oolitic mbr.: Turner, Cherryville, and Independence, Kans.

Phanerotrema pretissum Girty

Phanerotrema pretissum Girty (1937) p. 209, pl. 33, figs. 22-24

U. Carb., Abo(?) Ss.: Grapevine Canyon, Otero County, N. Mex.

Phanerotrema? **wannense** Newell 1935 see **Glabrocingulum (Glabrocingulum) wannense**

Phanerotrema? **welleri** Newell 1935 see **Glabrocingulum (Ananias) welleri**

Phanerotrema species of authors

Phanerotrema sp. Girty (1903) p. 456

Carb.: Glenwood Springs, Colo.

PHARKIDONOTUS Girty 1912

[This name was reduced to subgeneric rank under *Bellerophon* Montfort (1808) by Yochelson (1960) p. 240.]

Pharkidonotus percarinatus (Conrad) see **Bellerophon (Pharkidonotus) percarinatus**

Pharkidonotus percarinatus var. **tricarinatus** (Shumard) see **Bellerophon (Pharkidonotus) tricarinatus**

PHYMATIFER Koninck 1881

Type species: *Euomphalus pugilis* Phillips (1836) p. 225

Phymatifer Koninck (1881) p. 149

[Knight (1934a) p. 142, considered this name a subjective synonym of *Straparollus* (*Euomphalus*) Sowerby (1814).]

Phymatifer? tricarinatus Girty 1927 see **Straparollus (Euomphalus) tricarinatus**

PHYMATOPLEURA Girty 1939

Type species: *Orestes nodosus* Girty (1912a) p. 137

Phymatopleura Girty (1939) p. 31

Phymatopleura brazoensis (Shumard)

Orestes brazoensis Girty (1915a) p. 158

Plummer and Moore (1921) [1922] p. 151, pl. 22, figs. 16, 16a

Penn., Graham Fm., Wayland Sh. Mbr.: S. of Gunsight, Tex.

Phymatopleura brazoensis Girty (1939) p. 33

Carb.: Young County, Tex.

Knight (1944) p. 455, pl. 183, figs. 35, 36

Penn.: Central United States

Batten (1958) p. 205, pl. 36, fig. 16

Penn., sh.: Glass Mts., Tex.; Perm., Hueco Ls.: Orogrande quad., New Mexico

Elias (1958) p. 8

Phanerotrema aff. *brazoense* Girty (1909c) [not Shumard 1860] p. 97

Perm., San Andres Ls.: Caballos Mts., N. Mex.

Pleurotomaria brazoensis Shumard (1860) p. 624

Carb., "Coal Measures": Young County, Tex.

Phymatopleura aff. *P. brazoensis* Mudge and Yochelson (1962) [1963] p. 93, pl. 17, figs. 10-12

Penn., Root Sh.: Chautauqua County, Kans.

Phymatopleura brazerianum springerensis Elias

Phymatopleura brazerianum var. *springerensis* Elias (1958) p. 9, pl. 1, fig. 14; pl. 2, fig. 7

Miss., Redoak Hollow Fm.: Oklahoma

Phymatopleura heteropleura Elias

Phymatopleura heteropleura Elias (1958) p. 7, pl. 1, figs. 10-13

Miss., Redoak Hollow Fm.: Oklahoma

Phymatopleura intertexta (Meek and Worthen)

Pleurotomaria brazoensis? Shumard, Meek and Worthen (1866a) p. 354, pl. 28, figs. 1a-d

Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.

Pleurotomaria intertexta Meek and Worthen (1866a) p. 355

Worthenia (Orestes) intertexta Price (1914b) p. 536

Penn., Conemaugh Fm., Ames Ls. Mbr.: Preston County, W. Va.

Orestes intertexta Sayre (1930) [1931 p. 138, pl. 13, figs. 8, 8a

Penn., Drum Ls., oolitic mbr.: Turner, Muncie, and Independence, Kans.

Pleurotomaria intertexta Girty (1934a) p. 257

Phymatopleura intertexta Girty (1939) p. 32, footnote

Phymatopleura nodosus (Girty)

Orestes nodosus Girty (1912a) p. 137

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
Girty (1915a) p. 156, pl. 22, figs. 7-10

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma

Phymatopleura nodosus Girty (1939) p. 32

Knight (1941) p. 244-245, pl. 30, figs. 5a, b

U. Carb., Wewoka Fm.: Oklahoma

Knight (1944) p. 455, pl. 183, fig. 37

Penn.: Central United States

Knight, Batten, and Yochelson (1960) p. 1215, fig. 130, no. 6

M. Penn.: Oklahoma

Hoare (1961) p. 153, pl. 20, fig. 8

M. Penn., Seville Ls.: Henry County, Mo.

Phymatopleura nodosa [sic] Sturgeon (1964a) p. 215, pl. 33, figs. 23-26; pl. 36, fig. 11

Penn., Allegheny Fm., Vanport Ls. Mbr.: Mahoning County; Columbiana Ls.

Mbr.: Columbiana County; Washingtonville Sh. Mbr.: Columbiana County, Ohio

Phymatopleura quadrilineatus (Girty) see Glyptotomaria (Dictyotomaria) quadrilineatus

Phymatopleura reticulatus (Girty) see Glyptotomaria (Dictyotomaria) reticulatus

Phymatopleura species of authors

Pleurotomaria brazoensis Keyes (1888) [1889] [not Shumard 1860] p. 237

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 142, pl. 48, figs. 2a, b

Carb., "L. Coal Measures": Clinton, Mo.

Phymatopleura? sp. Girty (1939) p. 32

Phymatopleura sp. Batten (1958) pl. 36, fig. 18

U. Penn., Wann Fm.: Near Copen, Okla.

Yochelson and Dutro (1960) p. 139, pl. 13, figs. 22-24

L. Miss.: Howard Pass quad., Alaska

PHYSA Dapernaud 1801

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic.]

Physa prisca Walcott

Physa prisca Walcott (1883) p. 808, fig. 2

Base of Carb.: Eureka district, Nevada

Walcott (1884) p. 262, fig. 6

L. Carb.: Eureka district, Nevada

MacNeil (1939) p. 359, pl. 37, fig. 15

Cretaceous: Eureka district, Nevada

[This species was originally considered considered Carboniferous; subsequent mapping demonstrated that it comes from beds of Cretaceous age.]

PILEOPSIS Lamarck 1812

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Pileopsis pabulocrinus Owen 1862 see **Platyceras (Orthonychia) pabulocrinus**

PLANOTECTUS Yochelson 1956

Type species: *Planotectus cymbellatus* Yochelson (1956b) p. 228

Planotectus Yochelson (1956b) p. 200

Planotectus cymbellatus Yochelson

Planotectus cymbellatus Yochelson (1956b) p. 228, pl. 13, figs. 20–24, table 13

Perm., Leonard Ser.: Hess Canyon quad., Texas

Planotectus? species of authors

Planotectus? sp. Batten (1964) p. 3, figs. 4–6

Perm.: St. Johns, E. Arizona

PLATYCERAS Conrad 1840

Type species: *Pileopsis vetusta* Sowerby (1829) p. 223

(S.D. Tate (1869) p. 34)

Platyceras Conrad (1840) p. 205

[This name was erroneously considered by Keyes (1894b) p. 164 to be a homonym of *Platycerus* Geoffrey (1762) and a subjective synonym of *Capulus* Montfort (1810); consequently many specific names were unnecessarily transferred to *Capulus*. Girty (1903) p. 310 indicated *Platyceras* Conrad to be a valid genus. Knight, Batten, Yochelson (1960) p. 1240 divided the taxon into six subgenera, two of which range into the late Paleozoic.]

Platyceras acutirostris (Hall see **Platyceras (Orthonychia) acutirostris**

Platyceras? anomalum Rowley see **Helminthochiton anomalus [Amphineura]**

Platyceras biserialis (Hall) see **Platyceras (Orthonychia) biserialis**

Platyceras bivolva White and Whitfield 1862 see **Strophostylus bivolva**

Platyceras boonvillensis Miller see **Platyceras (Orthonychia) boonvillensis**

Platyceras capax Keyes 1888 see **Platyceras (Orthonychia) capax**

Platyceras capulus Hall 1860 see **Lepetopsis capulus**

Platyceras chesterense (Meek and Worthen) see **Platyceras (Orthonychia) chesterensis**

Platyceras circularis Rowley in Greene 1901 see **Platyceras (Platyceras) circularis**

Platyceras cornuforme Winchell 1863 see **Platyceras (Orthonychia) cornuforme**

Platyceras cyrtolites McChesney 1859 see **Platyceras (Orthonychia) cyrtolites**

Platyceras encloides S. Weller 1906 see **Platyceras (Platyceras) encloides**

Platyceras evolutus S. Weller 1906 see **Platyceras (Platyceras) evolutus**

Platyceras fissurella Hall 1860 see **Platyceras (Orthonychia) fissurella**

Platyceras formosum Keyes 1888 see **Platyceras (Orthonychia) formosum**

Platyceras glenparkensis S. Weller 1906 see **Platyceras (Platyceras) glenparkensis**

Platyceras haliotoides Meek and Worthen 1866 see **Platyceras (Platyceras) haliotoides**

Platyceras herzeri Winchell 1870 see **Platyceras (Orthonychia) herzeri**

Platyceras laevigatum Meek and Worthen 1866 see **Platyceras (Orthonychia) ovalis (Stevens)**

Platyceras latum Keyes 1888 see **Platyceras (Platyceras) latum**

- Platyceras lodiensis* (Meek) see *Platyceras* (Orthonychia) *lodiensis*
Platyceras missouriense Miller 1891 see *Platyceras* (Orthonychia) *quincyense* (McChesney)
Platyceras nasutum Miller 1891 see *Platyceras* (Platyceras) *nasutum*
Platyceras nebrascensis Meek 1872 see *Platyceras* (Orthonychia) *parvum* (Swallow)
Platyceras obliquum Keyes 1888 see *Platyceras* (Orthonychia) *obliquum*
Platyceras occidens Walcott 1884 see *Platyceras* (Orthonychia) *occidens*
Platyceras oxynotum Girty 1929 see *Platyceras* (Platyceras) *oxynotum*
Platyceras paralum White and Whitfield 1862 see *Platyceras* (Orthonychia) *paralum*
Platyceras parvum (Swallow) see *Platyceras* (Orthonychia) *parvum*
Platyceras pettisenense Miller 1891 see *Platyceras* (Orthonychia) *quincyense* (McChesney)
Platyceras piso Walcott 1894 see *Platyceras* (Orthonychia) *piso*
Platyceras pulcherrimum Rowley 1908 see *Platyceras* (Platyceras) *pulcherrimum*
Platyceras reversum Hall 1860 see *Platyceras* (Platyceras) *reversum*
Platyceras spinigerum Worthen 1873 see *Platyceras* (Orthonychia) *spinigerum*
Platyceras subelegans Girty 1910 see *Platyceras* (Platyceras) *subelegans*
Platyceras subrectum Hall 1860 see *Platyceras* (Orthonychia) *pabulocrinus* (Owen) [not Hall 1859]
Platyceras subrotundum Snider 1915 see *Platyceras* (Platyceras) *subrotundum*
Platyceras tortum Meek 1871 see *Naticopsis* (Naticopsis) *tortum*
Platyceras tribulosum White 1880 see *Platyceras* (Orthonychia) *tribulosum*
Platyceras uncum Meek and Worthen 1866 see *Platyceras* (Orthonychia) *acutirostris* (Hall)
Platyceras vomerium Winchell 1863 see *Platyceras* (Orthonychia) *vomerium*
Platyceras species of authors see *Platyceras* (Platyceras) species of authors

PLATYCERAS (ORTHONYCHIA) Hall 1843

Type species: *Platyceras* (Orthonychia) *subrectum* Hall (1859b) p. 88

Orthonychia Hall (1843) p. 173

Platyceras (Orthonychia) Knight (1944) p. 473

Platyceras (Orthonychia) *acutirostris* (Hall)

Capulus acutirostris Hall (1856) p. 31

Miss., Warsaw Ls.: Spergen Hill and Bloomington, Ind.

Hall (1858) p. 665, pl. 23, figs. 14a, b

Miss., Warsaw Ls.: Warsaw, Ill.; Spergen Hill and Bloomington, Ind.

Platyceras uncum Meek and Worthen (1866c) [1867] p. 264

Miss., Keokuk Ls.: Nauvoo, Ill.

Meek and Worthen (1868) p. 516, pl. 17, fig. 1

Miss., Keokuk Ls.: Nauvoo, Ill.

Platyceras acutirostris Whitfield (1882a) p. 67, pl. 8, figs. 13-15

Miss., Warsaw Ls.: Spergen Hill, Paynters Hill, Ellettsville, Bloomington, and Crawfordsville, Ind.; Warsaw, Ill.; Tuscumbia, Ala.

Hall (1883) p. 370, pl. 31, figs. 13-15

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Capulus acutirostris Keyes (1890b) [1891] p. 9

Keyes (1890d) [1891] p. 170

Miss., Keokuk Ls.: Warsaw and Nauvoo, Ill.; St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Tuscumbia, Ala.

- Orthonychia acutirostre* Keyes (1892a) [1894] p. 276
 Keyes (1894b) [1895] p. 190, pl. 54, figs. 2a-c
 Miss., Keokuk Ls.: Warsaw and Nauvoo, Ill.; St. Louis Ls.: Spergen Hill and
 Bloomington, Ind.; Tuscumbia, Ala.
- Capulus acutirostris* S. Weller (1897) p. 268
 Miss., Batesville Ss.: Batesville, Ark.
- Orthonychia acutirostre* Cummings (1906) p. 1335, pl. 25, figs. 13-15
 Miss., Salem Ls.: Spergen Hill, Paynters Hill, Ellettsville, Harrodsburg, Bloom-
 ington, Stinesville, Romona, and Crawfordsville, Ind.; Warsaw and elsewhere
 in Illinois; Tuscumbia, Ala.
- Orthonychia acutirostris* Grabau and Shimer (1909) p. 688, figs. 976, 977
 Miss., Keokuk and Warsaw Lss.: Illinois; Indiana; Alabama; St. Louis Ls.:
 Indiana; Illinois; Chester Ser.: Arkansas; "Coal Measures": Pennsylvania
- Morse (1911) p. 406, fig. 30
 Miss., Maxville Ls.: Mount Perry and Fultonham, Ohio
- Platyceras acutirostre?* Girty (1915b) p. 123
 Miss., Batesville Ss.: Round Mtn., Ark.
- Orthonychia acutirostris* Shimer (1926) p. 83
 Miss.: Minnewanka region, Alberta
- Platyceras* (?) sp. cf. *P. acutirostris* Elias (1958) p. 21, pl. 2, fig. 12
 Miss., Redoak Hollow Fm.: Oklahoma

***Platyceras* (*Orthonychia*) *banffense* (Warren)**

- Igoceras banffensis* Warren (1927) p. 60, pl. 7, figs. 3, 4
 Penn.(?), Rundle Ls.: Stoney Squaw Mtn., Alberta

***Platyceras* (*Orthonychia*) *biserialis* Hall**

- Platyceras biserialis* Hall (1860) p. 90
 Miss., Burlington Ls.: Quincy, Ill.
- Meek and Worthen (1868) p. 509, pl. 15, figs. 3a, b
 Miss., Burlington Ls.: Quincy, Ill.
- Capulus biserialis* Keyes (1890d) [1891] p. 167
 Miss., Burlington Ls.: Quincy, Ill.
- Keyes (1890b) p. 9
 Keyes (1894b) [1895] p. 177, pl. 53, figs. 12a, b
 Miss., Burlington Ls.: Quincy, Ill.

***Platyceras* (*Orthonychia*) *boonvillensis* Miller**

- Platyceras boonvillense* Miller (1891) p. 82, pl. 14, figs. 15, 16
 Miss., Keokuk Ls.: Boonville, Mo.
- Miller (1892a) [1894] p. 692, pl. 14, figs. 15, 16
 Miss., Keokuk Ls.: Boonville, Mo.
- Orthonychia boonvillense* Keyes (1894b) [1895] p. 189
 Miss., Keokuk Ls.: Boonville, Mo.

***Platyceras* (*Orthonychia*) *bowsheri* Yochelson**

- Platyceras* (*Orthonychia*) *bowsheri* Yochelson (1956b) p. 258, pl. 24, figs. 5-36
 Perm., Word Fm.: Hess Canyon quad., Texas; Cherry Canyon Fm., Getaway
 Ls. Mbr.: Guadalupe Mts., Tex.

***Platyceras* (*Orthonychia*) *bushbergensis* (E. Branson)**

- Orthonychia bushbergensis* E. Branson (1938a) p. 179, pl. 20, fig. 31
 L. Miss.: Missouri

Platyceras (Orthonychia) capax Keyes

Platyceras capax Keyes (1888) [1889] p. 241, pl., figs. 14, 15

Miss., Burlington Ls.: Near Burlington, Iowa

Keyes (1890d) [1891] p. 179

Capulus capax S. Weller (1898) p. 162

Platyceras (Orthonychia) chesterensis Meek and Worthen

Platyceras (Orthonychia) chesterense Meek and Worthen (1866c) [1867] p. 265

Miss., Chester Ser.: Pope County and Chester, Ill.

Platyceras chesterense Keyes (1888) [1889] p. 242, pl. figs. 4, 5

Capulus chesterensis Keyes (1890b) p. 9

Keyes (1890d) [1891] p. 176, pl. 2, figs. 13a-d

Miss., Chester Ser.: Pope County and Chester, Ill.; Pulaski County, Ky.

Orthonychia chesterense Keyes (1892a) p. 276

Keyes (1894b) p. 191, pl. 54, figs. 1a-d

Miss., Kaskaskia Ls. of former usage: Ste. Genevieve, Mo.

Platyceras (Orthonychia) compressum (Girty)

Orthonychia compressa Girty (1910a) p. 232

Miss., basal part Fayetteville Sh.: Fayetteville quad., Arkansas

Platyceras (Orthonychia) cornuforme Winchell

Platyceras cornuforme Winchell (1863) [1864] p. 18

Yellow ss.: Burlington, Iowa

Keyes (1889e) [1890] p. 294

Miss., Kinderhook Ser.: Burlington, Iowa

Capulus cornuforme Keyes (1890d) [1891] p. 164, pl. 2, fig. 5

Miss., Kinderhook Ser.: Burlington, Iowa; Lodi, Ohio

Orthonychia cornuforme Keyes (1892a) p. 276

Orthonychia cornuformis Woodruff (1906) p. 284

Carb.: Cedar Creek, Nebr.

Platyceras (Orthonychia) cornuforme Hyde (1953) p. 330, pl. 47, figs. 15, 16

Miss., Waverly Gr. of former usage: Lodi, Ohio

Platyceras (Orthonychia) costata (Warren)

Orthonychia costata Warren (1927) p. 60, pl. 7, figs. 5, 6

Penn.(?), Rundle Ls.: Stoney Squaw Mtn., Alberta

Platyceras (Orthonychia) cyrtolites McChesney

Platyceras cyrtolites McChesney (1859) p. 71

Miss., Burlington Ls.: Calhoun County, Ill.

Keyes (1889e) p. 288

Miss., Burlington Ls.: Burlington, Iowa

Capulus cyrtolites Keyes (1890b) p. 9

Keyes (1890d) [1891] p. 167, pl. 2, fig. 2

Miss., Burlington Ls.: Burlington, Iowa; Calhoun County, Ill.

Orthonychia cyrtolites Keyes (1892a) p. 276

Keyes (1894b) p. 188, pl. 53, fig. 15

Miss., Burlington Ls.: Hannibal, Mo.

Shimer (1926) p. 83

Miss.: Minnewanka region, Alberta

Platyceras (Orthonychia) equilaterum Hall

Ancella crassicollis? Owen (1852) table 5, fig. 7

L. Carb., ls.: Keokuk rapids, Mississippi River

Platyceras equilatera Hall (1860) p. 89

Meek and Worthen (1873) p. 518, pl. 17, fig. 2

Miss., Keokuk Ls.: Keokuk, Iowa; Warsaw, Ill.

White (1880c) p. 514, pl. 7, fig. 5

Miss., Keokuk Ls.: Crawfordsville, Ind.

Platyceras equilaterum Keyes (1888) [1889] p. 242, pl., figs. 2, 3

Keyes (1889c) p. 330, figs. 1, 2

Miss., sl. of Keokuk Ls.: Crawfordsville, Ind.

Keyes (1889e) p. 288

Miss., Burlington Ls.: Burlington, Iowa

Capulus equilaterus Keyes (1890b) p. 9

Capulus equilateralis Keyes (1890d) [1891] p. 171, pl. 2

Keyes (1894b) [1895] p. 178, pl. 52, figs. 10a, b

Miss., Burlington Ls.: Burlington, Iowa; Springfield, Mo.; Keokuk Ls.: Wayland, Mo.; Keokuk Ls. and Bonaparte Marble: Iowa; Warsaw and Niota, Ill.

Palaeocapulus equilateralis Grabau and Shimer (1909) p. 687

Miss., Keokuk Ls.: Iowa; Illinois; Maryland; Missouri; Burlington Ls.: Iowa; Missouri

Platyceras equilatera Girty (1915d) p. 21

Miss., Boone Fm.: St. Joe, Ark.

Palaeocapulus equilatera Shimer (1926) p. 82

Miss.: Minnewanka region, Alberta

Platyceras equilatera Hyde (1953) p. 330

Miss.: Sciotoville, Ohio

Platyceras (Orthonychia) extensor Meek and Worthen 1866 see **Platyceras (Orthonychia) pabulocrinus** (Owen)

Platyceras (Orthonychia) fissurella Hall

Platyceras fissurella Hall (1860) p. 90

Miss., Keokuk Ls.: Nauvoo, Ill.

Meek and Worthen (1873) p. 519, pl. 17, fig. 4

Miss., Keokuk Ls.: Warsaw and Nauvoo, Ill.

Keyes (1889e) [1890] p. 289

Miss., Burlington Ls.: Burlington, Iowa

Capulus fissurella Keyes (1890b) p. 9

Keyes (1890d) [1891] p. 173

Miss., Keokuk Ls.: Warsaw and Nauvoo, Ill.; Burlington Ls.: Burlington, Iowa

Igoceras fissurellum Keyes (1892a) p. 276

Keyes (1894b) [1895] p. 186, pl. 52, fig. 2

Miss., Burlington Ls.: Burlington, Iowa; Keokuk Ls.: Warsaw and Nauvoo, Ill.

Platyceras (Orthonychia) formosum Keyes

Platyceras formosum Keyes (1888) [1889] p. 242, figs. 8, 9

Miss., Kinderhook Ser.: Marshall County, Iowa

Capulus formosus Keyes (1890b) p. 9

Keyes (1890d) [1891] p. 164, pl. 2, fig. 8

Miss., Kinderhook Ser.: Marshall County, Iowa

Orthonychia formosum Keyes (1892a) p. 276

Keyes (1894b) [1895] p. 189, pl. 53, fig. 2

Miss., Kinderhook Ser.: Marshall County, Iowa; Burlington Ls.: Louisiana, Mo.

Orthonychia formosa Girty (1903) p. 311

Dev. and Miss., Ouray Ls. unrestricted: San Juan region, Colorado

***Platyceras (Orthonychia) herzeri* Winchell**

Platyceras herzeri Winchell (1871) p. 256

Miss., Waverly Gr. of former usage: Newark, Ohio

Herrick (1888a) p. 91, pl. 2, fig. 24; pl. 5, fig. 8

Miss., Waverly Gr. of former usage: Licking County, Ohio

Keyes (1890d) [1891] p. 130

Herrick (1893) [1895] pl. 21, fig. 8

Miss., rocks of Kinderhook age: Granville, Ohio

Capulus herzeri S. Weller (1898) p. 163

Platyceras herzeri Hyde (1953) p. 330, pl. 47, figs. 17-22

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

***Platyceras (Orthonychia) infabricatus* Hyde**

Platyceras (Orthonychia) infabricatus Hyde (1953) p. 332, pl. 47, figs. 23-27

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

***Platyceras (Orthonychia) infundibulum* Meek and Worthen 1866 see *Platyceras (Orthonychia) pabulocrinus* (Owen)**

***Platyceras (Orthonychia) jeffersonensis* (S. Weller)**

Orthonychia jeffersonensis S. Weller (1906) p. 461, pl. 7, figs. 38, 39

Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.

***Platyceras (Orthonychia) kindlei* Warren**

Igoceras compressus Warren (1927) [not *Orthonychia compressa* Girty 1910] p. 60, pl. 7, figs. 7, 8

Penn.(?), Rundle Ls.: Stoney Squaw Mtn., Alberta

Orthonychia compressus Knight (1934a) p. 148

Platyceras (Orthonychia) kindlei Warren (1964) p. 1113

***Platyceras (Orthonychia) lodiensis* Meek**

Platyceras (Orthonychia?) lodiensis Meek (1871d) [1872] p. 170

Miss., Waverly Gr. of former usage: Lodi, Ohio

Meek (1875b) p. 313, pl. 13, figs. 1a, b

Miss., Waverly Gr. of former usage: Lodi, Ohio

Platyceras lodiensis Herrick (1888b) p. 46, pl. 11, fig. 2; pl. 8, figs. 1, 7

Miss., Waverly Gr. of former usage: Bagdad, Ohio

Capulus lodiensis Keyes (1890d) [1891] p. 165

Miss., rocks of Kinderhook age: Lodi, Ohio

Keyes (1894b) pl. 53, figs. 6a, b

Platyceras lodiensis Herrick (1893) [1895] pl. 19, figs. 1, 7

Miss., Cuyahoga Gr.: Bagdad, Ohio

Palaeocapulus lodiensis Grabau and Shimer (1909) p. 687, fig. 972

Miss., Waverly Gr. of former usage: Ohio

Knight (1941) p. 227-228, pl. 88, fig. 4

Miss., Waverly Gr. of former usage: Lodi, Ohio

Platyceras (Orthonychia) lodiensis Hyde (1953) p. 333, pl. 47, figs. 10-14

Miss., Waverly Gr. of former usage: Lodi, Ohio; Warren, Pa.

Platyceras (Orthonychia) mayesense (Snider)

- Orthonychia mayesense* Snider (1915) p. 118, pl. 7, figs. 8, 9
Miss., Mayes Fm.: NE. Oklahoma

Platyceras (Orthonychia) obliquum Keyes

- Platyceras obliquum* Keyes (1888) [1889] p. 241, pl., figs. 12, 13
Miss., u. part Burlington Ls.: Burlington, Iowa
Keyes (1889e) [1890] p. 290
Miss., Burlington Ls.: Burlington, Iowa
Capulus obliquus Keyes (1890b) p. 9
Keyes (1890d) [1891] p. 168, pl. 2, fig. 3
Miss., Burlington Ls.: Burlington, Iowa
Keyes (1894b) [1895] p. 177, pl. 53, figs. 14a, b
Miss., Burlington Ls.: Hannibal, Mo.: Burlington, Iowa

Platyceras (Orthonychia) occidens Walcott

- Platyceras occidens* Walcott (1884) p. 254, pl. 24, figs. 9, 9a
L. Carb.: Eureka district, Nevada
Capulus occidens Keyes (1890b) p. 9
Keyes (1890d) [1891] p. 163
L. Carb.: Eureka district, Nevada
Keyes (1894b) [1895] pl. 53, figs. 8a, b

Platyceras (Orthonychia) ovalis (Stevens)

- Acroculia ovalis* Stevens (1858) p. 261
Miss., Archimedes ls.: Union County, Ill.
Platyceras laevigatum Meek and Worthen (1866c) [1867] p. 263
Miss., Chester Ser.: Ste. Genevieve County, Mo.; Randolph County, Ill.
Capulus ovalis Keyes (1890d) [1891] p. 176
Miss., Kaskaskia Ls. of former usage: Union and Randolph Counties, Ill.; Ste. Genevieve County, Mo.
Keyes (1892a) p. 276
Keyes (1894b) [1895] p. 180
Miss., Kaskaskia Ls. of former usage: Union and Randolph Counties, Ill.; Ste. Genevieve County, Mo.

Platyceras (Orthonychia) pabulocrinus (Owen)

- Platyceras subrectum* Hall (1860) p. 89 [not Hall, 1859]
Miss., Keokuk Ls.: Keokuk, Iowa; Warsaw, Ill.
Pileopsis pabulocrinus Owen (1862) p. 364, fig. 8
Carb.: Crawfordsville, Ind.
Platyceras (Orthonychia) infundibulum Meek and Worthen (1866c) [1867] p. 266
Miss., Keokuk Ls.: Warsaw, Ill.
Platyceras (Orthonychia) extinctor Meek and Worthen (1866c) [1867] p. 266
Miss., Keokuk Ls.: Warsaw, Ill.
Platyceras infundibulum Meek and Worthen (1873) p. 517, pl. 17, fig. 3
Miss., Keokuk Ls.: Warsaw, Ill.
Keyes (1888) [1889] p. 242, pl., fig. 1
Keyes (1889e) [1890] p. 289
Miss., Burlington Ls.: Burlington, Iowa

Capulus infundibulum Keyes (1890b) p. 9

Keyes (1890d) [1891] p. 174, pl. 2, fig. 10

Miss., Keokuk Ls.: Keokuk, Iowa; Warsaw, Ill.; Crawfordsville, Ind.; Burlington Ls.: Burlington, Iowa

Igoceras pabulocrinus Keyes (1892a) p. 276

Keyes (1894b) [1895] p. 184, pl. 52, figs. 3a, b; pl. 54, figs. 3a, b

Miss., Burlington Ls.: Burlington, Iowa; Springfield, Mo.; Keokuk Ls.: Keokuk, Iowa; Warsaw, Ill.; Crawfordsville, Ind.

Platyceras infundibulum Clarke (1908) pl. 6, fig. 7

Miss.: Crawfordsville, Ind.

***Platyceras* (Orthonychia) *paralum* White and Whitfield**

Platyceras paralum White and Whitfield (1862) p. 302

"Chemung Gr.": Burlington, Iowa

Winchell (1865) p. 131

Lithographic ls.: Clarksville, Mo.

Platyceras sp. (cf. *P. paralum*) Herrick (1888b) p. 92, pl. 1, fig. 23 (fig. 22?)

Miss., Waverly Gr. of former usage: Licking County, Ohio

Platyceras paralum Keyes (1889e) [1890] p. 294

Miss., Kinderhook Ser.: Burlington, Iowa

Capulus paralius Keyes (1890b) p. 9

Keyes (1890d) [1891] p. 166, pl. 2, figs. 1a, b

Miss., rocks of Kinderhook age: Des Moines and Marshall Counties, Iowa; Lodi, Ohio

Keyes (1894b) [1895] p. 174, pl. 53, figs. 1a-d

Miss., Cnouteau Ls.: Sedalia, Mo.; Burlington Ls.: Louisiana, Mo.

S. Weller (1901) p. 201, pl. 20, figs. 13, 14

Miss., Kinderhook Ser., bed 7: Burlington, Iowa

Platyceras paralum Girty (1903) p. 311

Dev. and Miss., Ouray Ls. unrestricted: San Juan region, Colorado

Platyceras paralius S. Weller (1909) p. 319, pl. 15, figs. 17, 18

Miss., Fern Glen Ls.: Missouri

Grabau and Shimer (1909) p. 686, fig. 969

Shimer (1926) p. 82

L. Miss.: Minnewanka region, Alberta

Platyceras paralum Williams (1943) [1944] p. 103-104, pl. 9, fig. 14

Louisiana Ls.: Clarksville, Mo.; Miss., Kinderhook and Osage Ser.: Mississippi Valley; Waverly Gr. of former usage: Ohio; Leadville Ls.: Colorado; L.

Miss.: Near Banff, Alberta

Hyde (1953) p. 333, pl. 47, figs. 28, 29

Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

***Platyceras* (Orthonychia) *parvum* (Swallow)**

Capulus parvus Swallow (in Shumard and Swallow, 1858) p. 205

Carb., "Coal Measures": Valley of the Verdigris, Kans.

Platyceras nebrascensis Meek (1872a) p. 227, pl. 4, figs. 15a, b

Carb., "U. Coal Measures": W. of Nebraska City Landing, Nebr.; "M. Coal Measures": Illinois

Platyceras nebrascense White (1877) p. 159, pl. 12, figs. 5a-d

Carb.: Near Santa Fe, N. Mex.

White (1884b) p. 159, pl. 32, figs. 15, 16

Carb., "Coal Measures": Eugene, Edwardsport, and New Harmony, Ind.

- Capulus acutirostris* Claypole (1886) p. 246
Penn., "L. Coal Measures": Wilkes-Barre, Pa.
- Capulus parvus* Keyes (1890b) p. 9
Keyes (1890d) [1891] p. 177, pl. 2, figs. 14a-c
Carb., "U. Coal Measures": Indiana; Iowa; Nebraska; Kansas; and New Mexico
Keyes (1894b) [1895] p. 180, pl. 54, figs. 5a, b
Carb., "U. Coal Measures": Kansas City, Mo.
- Platyceras parvum* Girty (1903) p. 461, pl. 10, figs. 1, 1a, 2, 2a
Penn., Hermosa Fm.: San Juan region, Colorado
- Capulus parvus* Woodruff (1906) p. 284, pl. 15, B, figs. 5, 6
Carb.: Weeping Water, Nebr.
- Platyceras parvum* Mather (1915) p. 238, pl. 15, fig. 28
Penn., Morrow Ser.: Fayetteville, Ark.; Sawney Hollow, Tahlequah, Choteau, and Fort Gibson, Okla.
- Plummer and Moore (1921) [1922] pl. 14, figs. 22, 22a
Penn., Mineral Wells Fm.: Mineral Wells, Tex.
- Morgan (1924) pl. 49, fig. 16
Penn., Boggy Fm.: Stonewall quad., Oklahoma
- Orthonychia parva* Knight (1934a) p. 163, pl. 25, figs. 1a-i; pl. 26, figs. 1a, b
Penn., Labette Sh.; lower part Fort Scott Ls.: St. Louis County, Mo.
- Platyceras (Orthonychia) parvum* Knight (1944) p. 473, pl. 193, figs. 11, 12
Penn.: Mississippi Valley
- Sturgeon (1964a) p. 215, pl. 32, fig. 8
Penn., Allegheny Fm., Vanport Ls. Mbr.: Mahoning County, Ohio

***Platyceras (Orthonychia) piso* Walcott**

- Platyceras piso* Walcott (1884) p. 254, pl. 24, figs. 7-7b
L. Carb.: Eureka district, Nevada
- Capulus? piso* Keyes (1890d) [1891] p. 164
L. Carb.: Eureka district, Nevada
- Capulus piso* Keyes (1894b) [1895] pl. 53, figs. 7a-c

***Platyceras (Orthonychia) quincyense* McChesney**

- Platyceras quincyensis* McChesney (1861) p. 90
"Subcarb." ls.: Near Quincy, Ill.
- McChesney (1865) pl. 6, figs. 6a, b
- Platyceras quincyense* McChesney (1868) p. 49, pl. 6, figs. 6a, b
"Subcarb.": Quincy, Ill.
- Platyceras (Orthonychia) quincyense* Meek and Worthen (1868) p. 510, pl. 15, figs. 5a, b
Miss., Burlington Ls.: Quincy, Ill.
- Meek and Worthen (1868) p. 290
Miss., Burlington Ls.: Burlington, Iowa
- Platyceras quincyense* Keyes (1889e) [1890] p. 290
Miss., Burlington Ls.: Burlington, Iowa
- Capulus quincyensis* Keyes (1890b) p. 9
Keyes (1890d) [1891] p. 168, pl. 2, fig. 9
Miss., Burlington Ls.: Burlington, Iowa
- Platyceras pettisense* Miller (1891) p. 81, pl. 14, fig. 1
Miss., Burlington Ls.: Sedalia, Mo.
- Platyceras missouriense* Miller (1891) p. 82, pl. 14, fig. 2
Miss., Burlington Ls.: Sedalia, Mo.

Platyceras pettisenae Miller (1892a) [1894] p. 691, pl. 14, fig. 1
Miss., Burlington Ls.: Sedalia, Mo.

Platyceras missouriense Miller (1892a) [1894] p. 692, pl. 14, fig. 2
Miss., Burlington Ls.: Sedalia, Mo.

Igoceras quincyense Keyes (1892a) p. 276
Keyes (1894b) [1895] p. 182, pl. 53, figs. 10 a, b
Miss., Burlington Ls.: Quincy, Ill.; Sedalia, Mo.

Platyceras (Orthonychia) quincyense Knight (1944) p. 473, pl. 193, fig. 18
Miss., Osage Ser.: Mississippi Valley

***Platyceras (Orthonychia) sciotoensis* Hyde**

Platyceras (Orthonychia) sciotoensis Hyde (1953) p. 334, pl. 47, figs. 7-9
Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

***Platyceras (Orthonychia) spinigerum* Worthen**

Platyceras spinigerum Worthen (1883) p. 294, pl. 28, fig. 4
Carb., "Coal Measures": Near Brighton, Ill.

Capulus spinigerus Keyes (1890b) p. 9
Keyes (1890d) [1891] p. 178
Carb., "L. Coal Measures": Brighton, Ill.

***Platyceras (Orthonychia) subplicatum* Meek and Worthen**

Platyceras (Orthonychia) subplicatum Meek and Worthen (1866a) p. 265
Miss., Chester Ser.: Pope County and Chester, Ill.

Meek and Worthen (1868) p. 457, pl. 14, figs. 4a-c
Miss., Waverly Gr. of former usage: Richfield, Ohio

Capulus subplicatum Keyes (1890d) [1891] p. 166
Miss., rocks of Kinderhook age: Richfield, Ohio

Igoceras subplicatum Keyes (1892a) p. 276
Keyes (1894b) [1895] pl. 53, fig. 5
Shimer (1926) p. 83
L. Penn.: Minnewanka region, Alberta

***Platyceras (Orthonychia) sulcatinum* (Keyes)**

Capulus sulcatinus Keyes (1890d) p. 175, pl. 2, figs. 12a, b
Miss., sh. of Keokuk Ls.: Crawfordville, Ind.

***Platyceras (Orthonychia) tribulosum* White**

Platyceras tribulosum White (1880d) p. 168, pl. 41, figs. 6a, b
Miss., Burlington Ls.: Burlington, Iowa

Keyes (1889e) [1891] p. 290
Miss., Burlington Ls.: Burlington, Iowa

Capulus tribulosus Keyes (1890b) p. 9
Keyes (1890d) p. 170, pl. 2, figs. 4a, b
Miss., Burlington Ls.: Burlington, Iowa
Keyes (1894b) [1895] p. 175, pl. 53, figs. 11a-c
Miss., Burlington Ls.: Hannibal and Louisiana, Mo.

Platyceras (Orthonychia) tribulosum Knight (1944) p. 473, pl. 193, fig. 8
Miss., Osage Ser.: Mississippi Valley

***Platyceras (Orthonychia) trigonalis* (Stevens)**

Acroculia trigonalis Stevens (1858) p. 260
Carb., "Coal Measures": Danville, Ill.

Capulus trigonalis S. Weller (1898) p. 166

Platyceras (Orthonychia) undata (Winchell)

- Metoptoma undata* Winchell (1865) [1866] p. 131
 Carb.: Burlington, Iowa
- Metoptoma? undata* Keyes (1889e) [1890] p. 298
 Miss., Kinderhook Ser.: Burlington, Iowa
- Igoceras undata* S. Weller (1901) p. 202, pl. 20, fig. 16
 Miss., Kinderhook Ser., bed, 7: Burlington, Iowa
- Orthonychia undata* Girty (1929a) p. 94, pl. 12, figs. 23, 24
 Miss., part Boone Fm.: Near Batesville, Ark.

Platyceras (Orthonychia) ungula (S. Weller)

- Orthonychia ungula* S. Weller (1906) p. 461, pl. 7, figs. 36, 37
 Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.
- Girty (1929a) p. 94, pl. 12, figs. 21, 22
 Miss., part Boone Fm.: Near Batesville, Ark.

Platyceras (Orthonychia) vomerium Winchell

- Platyceras vomerium* Winchell (1863) [1864] p. 19
 Yellow ss. and base of Burlington Ls.: Burlington, Iowa
- Winchell (1865) [1866] p. 131
 Miss., Marshall Gr. of former usage: Big Brook and Orange, Cuyahoga County, Ohio
- Platyceras vomerium?* Herrick (1888b) pl. 7, fig. 12
- Platyceras vomerium* Keyes (1890d) [1891] p. 180
- Platyceras vomerium?* Herrick (1893) [1895] pl. 18, fig. 12
 Miss., Cuyahoga Gr.: Moot's Run, Licking County, Ohio
- Capulus vomerium* S. Weller (1898) p. 166
 S. Weller (1901) p. 202, pl. 20, fig. 15

Platyceras (Orthonychia) waverlyensis Hyde

- Platyceras (Orthonychia) waverlyensis* Hyde (1953) p. 334, pl. 47, figs. 1-6
 Miss., Logan Fm., Byer Mbr.: Sciotoville, Ohio

Platyceras (Orthonychia) species of authors

- Capulus* sp. S. Weller (1899) p. 43, pl. 5, fig. 15
 Miss., Vermicular ss.: Northview, Webster County, Mo.
- S. Weller (1901) p. 187
 "Miss.," (Ordovician) Sac Ls.: 8 miles NE. of Springfield, Mo.
- S. Weller (1901) p. 143
 Miss., Northview Sl.: Northview, Mo.
- Woodruff (1906) p. 284
 Carb.: Nebraska
- Orthonychia?* sp. Snider (1915) p. 118
 Miss., Mayes Fm.: NE. Oklahoma
- Igoceras* sp. Shimer (1926) p. 84
 Penn.: Minnewanka region, Alberta.
- Orthonychia* sp. Girty (1929a) p. 45
 Miss., Boone Fm.: Near Batesville, Ark.
- Igoceras* sp. Kelly (1930) p. 149
 Penn., Saginaw Fm., ls. mbr.: Near Grand Ledge, Mich.
- Orthonychia* sp. A. Knight (1953) p. 90, pl. 25C, fig. 13
 Perm., Monos Fm., Anidanthus Zone: Near El Antimonio, W. Sonora, Mexico

- Platyceras* (*Orthonychia*) sp. 1. Yochelson (1956b) p. 259, pl. 24, figs. 1-3
Perm., Leonard Ser.: Hess Canyon quad., Texas
- Platyceras* (*Orthonychia*) sp. 2. Yochelson (1956b) p. 260, pl. 24, fig. 4
Perm., Word Fm.: Hess Canyon quad., Texas
- Platyceras* (*Orthonychia*) sp. A. Knight (1958) p. 77, pl. 8, F, figs. 12-14
Miss.: Sonora, Mexico
- Platyceras* (*Orthonychia*) sp. Yochelson and Dutro (1960) p. 141, pl. 14, figs. 17-19
Miss., Wachsmuth Ls.: Phillip Smith Mts. quad., N. Alaska

PLATYCERAS (PLATYCERAS) Conrad 1840

Type species: *Pileopsis vetusta* Sowerby (1829) p. 223
(S.D. Tate (1869) p. 34)

Platyceras Conrad (1840) p. 205

Platyceras (*Platyceras*) Knight (1944) p. 473

***Platyceras* (*Platyceras*) *circularis* Rowley**

Platyceras circularis Rowley (1901) p. 70, pl. 23, figs. 32, 33

Miss., Warsaw Ls.: Lanesville, Ind.

Cumings (1906) p. 1363, pl. 24, figs. 11, 11a

Miss., Salem Ls.: Lanesville, Ind.

***Platyceras* (*Platyceras*) *encloides* S. Weller**

Platyceras encloides S. Weller (1906) p. 459, pl. 7, figs. 35-36

Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.

***Platyceras* (*Platyceras*) *evolutus* S. Weller**

Platyceras evolutus S. Weller (1906) p. 459, pl. 7, figs. 32, 33

Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.

***Platyceras* (*Platyceras*) *glenparkensis* S. Weller**

Platyceras glenparkensis S. Weller (1906) p. 460, pl. 7, figs. 30, 31

Miss., Sulphur Springs, Fm., Glen Park Ls. Mbr.: Glen Park, Mo.

Platyceras aff. *P. glenparkense* Girty (1926) p. 37

Miss., ls. of Boone age: San Saba, Tex.

***Platyceras* (*Platyceras*) *haliotoides* Meek and Worthen**

Platyceras haliotoides Meek and Worthen (1866c) [1867] p. 264

Miss., ss. in Waverly Gr. of former usage: Richfield, Ohio

Meek and Worthen (1868) p. 458, pl. 14, figs. 3a, b

Miss., Waverly Gr. of former usage: Richfield, Ohio

Winchell (1871) p. 257

Miss., Waverly Gr. of former usage: Newark, Ohio

Herrick (1888a) p. 91, pl. 2, fig. 23

Miss., Waverly Gr. of former usage: Licking County, Ohio

Capulus haliotoides Keyes (1890d) [1891] p. 165

Miss., rocks of Kinderhook age: Richfield and Newark, Ohio

Platystoma broadheadi Miller (1891) p. 86, pl. 14, figs. 19, 20

Miss., Chouteau Ls.: Sedalia, Mo.

Miller (1892a) [1894] p. 696, pl. 14, figs. 19, 20

Miss., Chouteau Ls.: Sedalia, Mo.

Capulus haliotoides Keyes (1892a) p. 276

Keyes (1894b) [1895] p. 174, pl. 53, figs. 9a, b

Miss., Kinderhook Ser.: Sedalia, Mo.

Platyceras haliotoides E. Branson (1938a) p. 108, pl. 14, figs. 21-25

L. Miss.: Missouri

Knight (1944) p. 473, pl. 193, fig. 9

Miss., Kinderhook Ser.: Mississippi Valley

***Platyceras (Platyceras) latum* Keyes**

Platyceras latum Keyes (1888) [1889] p. 243, pl., figs. 10, 11

Miss., Burlington Ls.: Burlington, Iowa

Keyes (1889e) [1890] p. 290

Miss., Burlington Ls.: Burlington, Iowa

Capulus latus Keyes (1890b) p. 9

Keyes (1890d) [1891] p. 168

Miss., Burlington Ls.: Burlington, Iowa

Keyes (1894b) [1895] p. 176, pl. 53, figs. 13a, b

Miss., Burlington Ls.: Burlington, Iowa; Hannibal, Mo.

Platyceras latum Girty (1929a) p. 95, pl. 12, figs. 25-27

Miss., m. part Boone Fm.: Near Batesville, Ark.

***Platyceras (Platyceras) nasutum* Miller**

Platyceras nasutum Miller (1891) p. 82, pl. 14, figs. 17, 18

Miss., Chouteau Ls.: Sedalia, Mo.

Miller (1892a) [1894] p. 682, pl. 14, figs. 17, 18

Miss., Chouteau Ls.: Sedalia, Mo.

Capulus nasutum S. Weller (1898) p. 164

Platyceras aff. *P. nasutum* Girty (1926) p. 37

Miss., ls. of Boone age: San Saba, Tex.

Platyceras nasutum E. Branson (1938a) p. 45, pl. 14, figs. 15-18

L. Miss.: Missouri

***Platyceras (Platyceras) oxynotum* Girty**

Platyceras oxynotum Girty (1929a) p. 95, pl. 12, figs. 28, 29

Miss., m. part Boone Fm.: Near Batesville, Ark.

***Platyceras (Platyceras) pulcherrimum* Rowley**

Platyceras pulcherrimum Rowley (1908) p. 89, pl. 19, figs. 11-14

Louisiana Ls. and underlying yellow sh.: Louisiana vicinity, Missouri

Williams (1943) [1944] p. 104, pl. 9, figs. 56-59

Yellow-brown mudstone and ls. beds of Louisiana Ls.: Mississippi River at

Louisiana; Eight Street, Louisiana; 1 mile S. of Louisiana, Mo.; Saverton Sh.:

Missouri

***Platyceras (Platyceras) reversum* Hall**

Platyceras reversum Hall (1860) p. 91

Miss., Burlington Ls.: Missouri

Platyceras (?) *reversum* Meek and Worthen (1868) p. 508, pl. 15, figs. 4a, b

Miss., Burlington Ls.: Booneville, Mo.

Exogyroceras reversum Meek and Worthen (1868) p. 509

Strophostylus reversum Keyes (1895b) [1895] p. 195

Miss., Keokuk Ls.: Booneville, Mo.

Exogyroceras reversum Knight (1941) p. 124, pl. 87, fig. 4

Miss., Burlington Ls.: Booneville, Mo.

Platyceras (Platyceras) subelegans Girty*Platyceras subelegans* Girty (1910a) p. 232

Miss., basal part Fayetteville Sh.: Fayetteville quad., Arkansas

Platyceras (Platyceras) subrotundum Snider*Platyceras subrotundum* Snider (1915) p. 118, pl. 7, figs. 10, 11

Miss., Mayes, Fayetteville and Pitkin Fms.: NE. Oklahoma

Easton (1942) pl. 11, fig. 13

Miss., Pitkin Ls.: Arkansas

Platyceras (Platyceras) species of authors*Platyceras* sp. Herrick (1888a) pl. 1, fig. 22

Herrick (1888c) pl. 3, fig. 3

Miss., Waverly Gr. of former usage: Licking County, Ohio

Platyceras sp.? Herrick (1888a) pl. 7, fig. 38

Miss., Waverly Gr. of former usage: Licking County, Ohio

Platyceras sp. Herrick (1888a) pl. 12, fig. 38

Herrick (1888b) pl. 10, fig. 14

Miss., Waverly Gr. of former usage: Cuyahoga Falls, Ohio

Girty (1899a) p. 574-576, pl. 66, figs. 12a-12c; 11a-11d

Miss., Madison Ls.: Yellowstone National Park

Platyceras sp. A. S. Weller (1916) p. 262, pl. 19, figs. 17, 18*Platyceras* sp. B. S. Weller (1916) p. 262, pl. 19, fig. 19*Platyceras* sp. Girty (1915b) p. 124

Girty (1927) pl. 22, figs. 47-50

Miss., Madison Ls.: Yellowstone National Park

Allen and Lester (1954) p. 89, pl. 23, figs. 1, 2

Platyceras (Platyceras) sp. A. Knight (1958) p. 76, pl. 9, A, figs. 1-5

Miss.: Sonora, Mexico

Yochelson and Dutro (1960) p. 140, pl. 14, fig. 28

L. Miss.: Philip Smith Mts. quad., N. Alaska

Platyceras sp. Brindle (1960) p. 104, pl. 28, figs. 6, 7, 8

Miss.: SE. Saskatchewan

Platyceras (Platyceras) sp. Levin and Fay (1964) p. 22-24, pl. 1, text figs. 1-5

Miss., St. Louis Ls.: St. Louis County, Mo.

PLATYOSTOMA Conrad 1842[This name was reduced to subgeneric rank under *Platyceras* Conrad (1840) by Knigh (1944) p. 473; it is not currently considered to range into the late Paleozoic.]**Platystoma grayvillense** Worthen 1882 see **Ianthinopsis tumida** (Worthen)**Platystoma? tumida** (Worthen) see **Ianthinopsis tumida****PLATYSCHIMA** M'Coy 1846Type species: *Ampullaria helicoides* Sowerby (1826) p. 40

(S.D. Koninck (1881) p. 107)

Platyschima M'Coy (1846) p. 38**Platyschisma barrisi** (Winchell)*Straparollus barrisi* Winchell (1863) [1864] p. 20

Yellow ss.: Burlington, Iowa

Keyes (1889e) [1890] p. 295

Miss., Kinderhook Ser.: Burlington, Iowa

Keyes (1890a) p. 195, pl., figs. 5a-c

Miss., Kinderhook Ser.: SE. Iowa

Platyschisma barrisi S. Weller (1900) p. 110, pl. 6, figs. 15, 16

Chonopectus ss.: Burlington, Iowa

***Platyschisma depressa* S. Weller**

Platyschisma depressa S. Weller (1900) p. 111, pl. 6, figs. 19-21

Chonopectus ss.: Burlington, Iowa

***Platyschisma dubia* Dawson**

Platyschisma dubia Dawson (1868) p. 309, fig. 121

Carb., ls.: Windsor, Nova Scotia

Platyschisma? *dubium* Bell (1929) p. 175, pl. 31, figs. 1-1b, 2

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

***Platyschisma helicoides* Meek and Worthen**

Platyschisma helicoides? Meek and Worthen (1866c) [1867] p. 271

Miss., Chester Ser.: Ste. Genevieve County, Mo.

Knight, Batten, and Yochelson (1960) p. I198, fig. 112, no. 2

Miss.: North America

***Platyschisma missouriensis* S. Weller**

Platyschisma missouriensis S. Weller (1899) p. 42, pl. 5, figs. 1-4

Miss., Vermicular ss.: Northview, Webster County, Mo.

Platyschisma missouriensis S. Weller (1901) p. 190

Miss., Northview Sh.: Northview, Mo.

E. Branson (1938b) p. 42, pl. 24, figs. 31-33

L. Miss.: Missouri

***Platyschisma* species of authors**

Platyschisma sp. Easton (1942) pl. 10, figs. 16, 17

Miss., Pitkin Ls.: Arkansas

Knight (1958) p. 75, pl. 8, H, figs. 17-19

Miss.: Sonora, Mexico

PLATYSTOMA Conrad 1842

Type species: *Platystoma ventricosum* Conrad (1842) p. 275

(S.D. Hall (1859b) p. 20)

[This is an invalid emendation of *Platystoma*.]

Platystoma bivolve (White and Whitfield) see ***Strophostylus bivolve***

Platystoma broadheadi Miller 1891 see ***Platyceras* (*Orthonychia*) *haliotoides***
Meek and Worthen

Platystoma inornatum Walcott 1894 see ***Strophostylus inornatus***

Platystoma peoriensis McChesney 1860 see ***Naticopsis* (*Naticopsis*) *peoriensis***

Platystoma nana Meek and Worthen 1860 see ***Naticopsis* (*Naticopsis*) *nana***

PLATYWORTHENIA H. Chronic 1952

Type species: *Platyworthenia delicata* H. Chronic (1952) p. 121

Platyworthenia H. Chronic (1952) p. 121

[**Knight, Batten, and Yochelson** (1960) p. I209 considered this name a subjective synonym of *Worthenia* Koninck (1883).]

Platyworthenia delicata H. Chronic 1952 see ***Worthenia delicata***

PLATYZONA Knight 1945

Type species: *Pleurotomaria trilineata* Hall (1858) p. 25

Platyzona Knight (1945b) p. 579

Platyzona broadheadi (White) see *Shansiella broadheadi*

Platyzona trilineata (Hall)

Pleurotomaria trilineata Hall (1858) p. 25

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Whitfield (1882a) p. 80, pl. 9, fig. 20

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.

Hall (1883) p. 357, pl. 32, fig. 20

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Cumings (1906) p. 1350, pl. 26, fig. 20

Miss., Salem Ls.: Spergen Hill, Bloomington, Harrodsburg, Ellettsville, Stinesville, and Romona, Ind.; Alton, Ill.

Platyzona trilineata Knight (1945b) p. 579

Knight, Batten, and Yochelson (1960) p. 1296, fig. 192, no. 7

M. Miss.: Indiana

Platyzona species of authors

Platyzona sp. Yochelson and Dutro (1960) p. 144, pl. 14, fig. 2

?U. Miss.: N. Alaska

PLECTOSTYLUS Conrad 1842 [not Beck 1837]

Type species: *Plectostylus hildrethii* Conrad (1842) p. 275

Plectostylus Conrad (1842) p. 275

[Knight, Batten, and Yochelson (1960) p. 1320 noted that this homonymous name is a subjective synonym of *Ianthinopsis* Meek and Worthen (1866).]

Plectostylus hildrethii Conrad 1842 see *Ianthinopsis hildrethii*

PLEURONOTUS Hall 1879

Type species: *Pleuronotus decewi* Billings (1861) p. 358

Pleuronotus Hall (1879) p. 138

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. No formally named North American late Paleozoic species were originally assigned to this taxon.]

Pleuronotus species of authors

Pleuronotus? sp. undet. E. Branson (1938b) p. 44, pl. 24, figs. 2, 3

L. Miss.: Missouri

PLEUROTOMARIA DeFrance 1826

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. All but 64 formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Pleurotomaria adamsi Worthen 1884 see *Baylea adamsi*

Pleurotomaria agnostica Beede 1907 see *Baylea capertoni* (Beede)

Pleurotomaria? *arenarea* Girty 1908 see *Baylea arenarea*

Pleurotomaria? *arenarea* var. *monilifera* Girty 1903 see *Baylea arenarea monilifera*

Pleurotomaria arkansana Girty

Pleurotomaria arkansana Girty (1915b) p. 113, pl. 11, figs. 8, 8a
Miss., Batesville Ss.: Granny Mtn., Ark.

Pleurotomaria aspera Girty 1934 see **Amaurotoma aspera**

Pleurotomaria aspeniana Girty

Pleurotomaria aspeniana Girty (1927) p. 427, pl. 25, figs. 1-7

Miss., Brazer Ls.: Slug Creek quad., Idaho

Pleurotomaria beckwithana McChesney 1860 see **Shansiella beckwithana**

Pleurotomaria bicarinata McChesney 1860 see **Euconispira turbiniformis** (Meek and Worthen)

Pleurotomaria bilineata Sayre

Pleurotomaria bilineata Sayre (1930) [1931] p. 132, pl. 13, fig. 13

Penn., Drum Ls., oolitic mbr.: Kansas City, Mo.

Pleurotomaria bonharborensis Cox

Pleurotomaria bonharborensis Cox (1857) p. 567, pl. 8, figs. 4, 4a

Carb., "Coal Measures": Daviess County, Ky.

Pleurotomaria brazeriana Girty

Pleurotomaria brazeriana Girty (1927) p. 428, pl. 25, figs. 8-12

Miss., Brazer Ls.: Henry quad., Idaho

Pleurotomaria brazonensis Shumard 1860 see **Phymatopleura brazonensis**

Pleurotomaria Brazoensis? Shumard, Meek and Worthen 1866 see **Phymatopleura intertexta** (Meek and Worthen)

Pleurotomaria brazoensis Shumard, Keyes 1888 see **Phymatopleura** species of authors

Pleurotomaria broadheadi White 1880 see **Shansiella broadheadi**

Pleurotomaria capertoni Beede 1907 see **Baylea capertoni**

Pleurotomaria carbonaria Norwood and Pratten 1855 see **Shansiella carbonaria**

Pleurotomaria? carinifera Girty

Pleurotomaria? carinifera Girty (1908a) [1909] p. 475, pl. 23, fig. 24

Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.

Pleurotomaria? carinifera var. Girty (1908a) [1909] p. 476, pl. 29, fig. 19

Perm., Delaware Mountain Gr.: Delaware Mts., Tex.

Pleurotomaria chesterensis Meek and Worthen 1860 see **Borestus chesterensis**

Pleurotomaria? chesterensis Swallow 1863 [not Meek and Worthen 1860] see

Genus and species indeterminate

Pleurotomaria concava Hall 1858 [not Deshayes 1836] see **Eotrochus tenuimarginatus** (Hall in Miller 1877)

Pleurotomaria coniformis Worthen 1882 see **Spiroscala conoides** (Meek and Worthen)

Pleurotomaria conoides Meek and Worthen 1866 see **Spiroscala conoides**

Pleurotomaria (Murchisonia?) conula Hall 1858 see **Spiroscala conula**

Pleurotomaria cooperensis Miller

Pleurotomaria trochiformis Swallow (1863) p. 99 [not Portlock 1843]

Miss., Archimedes ls.: Cooper County, Mo.

Pleurotomaria cooperensis Miller (1889) p. 420

Pleurotomaria coronula Hall 1852 see **Trepostira (Trepostira) sphaerulata** (Conrad)

Pleurotomaria coxana Meek and Worthen

Pleurotomaria coxana Meek and Worthen (1866c) [1867] p. 272

Carb., "L. Coal Measures": Nolan's Furnace, Edmonson County, Ky.

Meek and Worthen (1873) p. 600, pl. 28, fig. 15

Carb., "Coal Measures": Nolan's Furnace, Edmonson County, Ky.

Keyes (1894b) [1895] p. 136

Carb., "U. Coal Measures": Kansas City, Mo.

Pleurotomaria coxana? Morningstar (1922) p. 252

Penn., Pottsville Fm., l. part Mercer Mbr.: Licking County, Ohio

Pleurotomaria coxana Worthen 1884 [not Meek and Worthen 1866] see **Pleurotomaria iowensis** Worthen

Pleurotomaria delawarensis Girty 1908 see **Baylea delawarensis**

Pleurotomaria depressa Cox 1857 see **Trepostira (Trepostira) illinoisensis** (Worthen)

Pleurotomaria dinglei Girty 1927 see **Rhineoderma dinglei**

Pleurotomaria discoidea Girty

Pleurotomaria discoidea Girty (1908a) [1909] p. 470, pl. 8, fig. 13

Perm., m. part Capitan Ls.: Guadalupe Mts., Tex.

Pleurotomaria dispersa Dawson 1868 see **Pseudophorus dispersa**

Pleurotomaria? distans (Lea)

Posidonia? distans Lea (1853) p. 205, pl. 20, fig. 3b

Carb., "Coal Fm.": Wilkes-Barre, Pa.

Pleurotomaria? distans Girty (1908a) [1909] p. 292, pl. 19, fig. 4

Penn.: Wilkes-Barre, Pa.

Pleurotomaria? elderi Girty

Pleurotomaria? elderi Girty (1908a) [1909] p. 476, pl. 29, fig. 18

Perm., Delaware Mountain Gr.: Delaware Mts., Tex.

Pleurotomaria elegantula (Hall) see **Bembexia elegantula**

Pleurotomaria euglyphea Girty

Pleurotomaria euglyphea Girty (1908a) [1909] p. 469, pl. 23, figs. 22, 23

Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.

Pleurotomaria excelsa Newberry

Pleurotomaria excelsa Newberry (1876) p. 140, pl. 3, figs. 4, 4a

U. Carb. Grand River Canyon, near junction Green River, S. Utah

White (1876a) p. 91

Penn. and Perm., l. part, Aubrey Gr.: Confluence of Grand and Green Rivers, Utah

Pleurotomaria exigua Winchell

Pleurotomaria exigua Winchell (1862) [1863] p. 424

Miss., Marshall Fm.: Jefferson, Hillsdale County, Mich.

Pleurotomaria fisheri Sayre

Pleurotomaria fisheri Sayre (1930) [1931] p. 133, pl. 13, figs. 10-10b

Penn., Drum Ls., oolitic mbr.: Turner, Cherryvale, and Independence, Kans.

Pleurotomaria giffordi Worthen 1884 see **Baylea giffordi**

Pleurotomaria glandula Shumard

Pleurotomaria glandula Shumard (1860) p. 626

Carb., "Coal Measures": Buchanan County, Tex.

Pleurotomaria granulostriata Meek and Worthen 1860 see **Paragoniozona granulostriata**

Pleurotomaria grayvillensis Norwood and Pratten 1855 see **Glabrocingulum (Glabrocingulum) grayvillense**

Pleurotomaria grayvillensis Norwood and Pratten, White 1880 see **Glabrocingulum (Ananias) whitei** (Knight)

Pleurotomaria gurleyi Meek 1871 see **Baylea gurleyi**

Pleurotomaria Halliana Shumard 1859 see **Euconospira halliana**

Pleurotomaria harii Miller 1891 see **Shansiella carbonaria** (Norwood and Pratten)

Pleurotomaria haydeniana Geinitz

Pleurotomaria Haydeniana Geinitz (1866) p. 11, table 1, fig. 15

Penn., "Dyas": Nebraska City, Nebr.

Meek (1872a) p. 231, pl. 11, fig. 5

Carb., "U. Coal Measures": Nebraska City, Nebr.

Pleurotomaria haydenana S. Weller (1898) p. 455

Pleurotomaria hickmanensis Winchell

Pleurotomaria Hickmanensis Winchell (1869) p. 445

Sh. above black sh.: Hickman and Maury Counties, Tenn.

Winchell (1871) p. 257

Miss., Waverly Gr. of former usage: Hickman County, Tenn.

Pleurotomaria aff. *P. hickmanensis* Girty (1927) [1928] p. 122, pl. 23, figs. 24-26

Miss., Pocono Fm.: Broad Top coal field, Pennsylvania

Pleurotomaria humerosa Meek and Hayden 1858 see **Amaurotoma humerosa**

Pleurotomaria humilis Hall 1856 see **Rhineoderma wortheni** (Hall)

Pleurotomaria humilis Winchell 1862 [not Hall 1856] see **Genus and species indeterminate**

Pleurotomaria huronensis Winchell

Pleurotomaria huronensis Winchell (1862) [1863] p. 425

Miss., Huron Gr.: Point aux Barques, Mich.

Lane and Cooper (1900) p. 257

Miss., Marshall Fm., Lighthouse zone: Point aux Barques, Mich.

Pleurotomaria idahoensis Girty

Pleurotomaria idahoensis Girty (1910c) [1911] p. 45, pl. 6, fig. 3

Perm., phosphate beds of Park City Fm.: Sublette Range and Thomas Fork, Wyo.; Montpelier, Idaho

Pleurotomaria ignobilis Dawson

Pleurotomaria ignobilis Dawson (1868) p. 310

Carb., ls.: Windsor, Nova Scotia

Pleurotomaria Illinoisensis Worthen 1884 see **Trepospira (Trepospira) illinoisensis**

Pleurotomaria inornata Meek 1872 see **Hypsilentoma inornata**

Pleurotomaria intertexta (Meek and Worthen) see **Phymatopleura intertexta**

Pleurotomaria iowensis Worthen

Pleurotomaria coxana Worthen (1884) p. 6 [not Meek and Worthen 1866]

Miss., Keokuk Ls.: Keokuk, Iowa

Pleurotomaria iowensis Worthen (1890) p. 138, pl. 24, fig. 2
Miss., Keokuk Ls.: Keokuk, Iowa

***Pleurotomaria kansasensis* Sayre**

Pleurotomaria kansasensis Sayre (1930) [1931] p. 134, pl. 14, figs. 1, 1a
Penn., Drum Ls., oolitic mbr.: Muncie, Kans.

***Pleurotomaria Kentuckiensis* Miller 1889 see *Trepostira* (*Trepostira*) *illinoisensis* (Worthen)**

***Pleurotomaria lens* (Hall)**

Euomphalus lens Hall (1860) p. 109

Miss., Goniatic Ls.: Rockford, Ind.

Straparollus lens Meek and Worthen (1866a) p. 159, pl. 14, figs. 7a, b

Miss., Chouteau Ls.: Moniteau County, Mo.; Illinois

Pleurotomaria lens Keyes (1894b) [1895] p. 134

Miss., Chouteau Ls.: Moniteau County, Mo.

Pleurotomaria leavenworthana* Hall 1858 see *Amaurotoma leavenworthana

Pleurotomaria marcouiana* Geinitz 1866 see *Glabrocingulum* (*Ananias*) *marcouianum

Pleurotomaria meekana* Hall 1858 see *Glyptomaria* (*Dictyotomaria*) *meekana

***Pleurotomaria meta* Meek and Worthen**

Pleurotomaria (*Murchisonia*?) *meta* Meek and Worthen (1865b) p. 252

Miss., Keokuk Ls.: Warsaw, Ill.

***Pleurotomaria mica* Girty**

Pleurotomaria mica Girty (1908a) [1909] p. 467, pl. 8, fig. 12

Perm., m. part Capitan Ls.: Guadalupe Mts., Tex.

Pleurotomaria millegranosa* Girty 1934 see *Paragoniozona millegranosa

Pleurotomaria minima* Rowley 1895 see *Bembexia minima

Pleurotomaria mississippiensis* White and Whitfield 1862 see *Mourlonia mississippiensis

Pleurotomaria missouriensis* (Swallow) see *Euconospira missouriensis

***Pleurotomaria mitigata* Hall**

Pleurotomaria? *mitigata* Hall (1860) p. 108

Miss., Goniatic Ls.: Rockford, Ind.

***Pleurotomaria modesta* Keyes 1888 see *Trepostira* (*Trepostira*) *illinoisensis* (Worthen)**

Pleurotomaria monilifera* (White) see *Colpites monilifera

***Pleurotomaria montezuma* Worthen**

Pleurotomaria montezuma Worthen (1883) p. 324

Miss., Burlington Ls.: Montezuma, Pike County, Ill.

Worthen (1890) p. 136, pl. 24, fig. 2

Miss., Burlington Ls.: Montezuma, Pike County, Ill.

Keyes (1894b) p. 134

Miss., Burlington Ls.: Hannibal, Mo.

***Pleurotomaria multilineata* Girty 1908 see *Cyclites depressus* (Beede)**

Pleurotomaria nauvoensis Worthen

- Pleurotomaria nauvoensis* Worthen (1884) p. 5
 Miss., u. part Keokuk Ls.: Nauvoo, Ill.
 Worthen (1890) p. 137, pl. 25, fig. 3
 Miss., Keokuk Ls.: Nauvoo, Ill.

Pleurotomaria neglecta Girty

- Pleurotomaria neglecta* Girty (1908a) [1909] p. 472, pl. 8, fig. 10
 Perm., m. part Capitan Ls.: Guadalupe Mts., Tex.

Pleurotomaria nevadensis Walcott

- Pleurotomaria Nevadaensis* Walcott (1884) p. 259, pl. 24, figs. 2, 2a
 L. Carb.: Eureka district, Nevada
Pleurotomaria aff. *nevadensis* Girty (1910c) [1911] p. 46, pl. 6, figs. 4, 5
 Perm., phosphate beds of Park City Fm.: Woodruff Creek, Utah; Sublette Range and Thomas Fork, Wyo.; and Montpelier, Preuss Range, Idaho

Pleurotomaria newportensis White

- Pleurotomaria newportensis* White (1880d) p. 169, pl. 42, figs. 2a, b
 Carb., "Coal Measures": Newport, Ind.
Pleurotomaria newportensis? Herrick (1887a) p. 21, pl. 2, fig. 18
 Carb., "Coal Measures": Flint Ridge, Ohio
Pleurotomaria newportensis Morningstar (1922) p. 253
 Penn., Pottsville Fm., l. part Mercer Mbr.: Muskingum, Licking, and Stark Counties; McArthur Ls.: Vinton County, Ohio

Pleurotomaria nodomarginata* McChesney 1860 see *Bembexia nodomarginata

Pleurotomaria nodulostriata Hall

- Pleurotomaria nodulostriata* Hall (1856) p. 21
 Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.
 Whitfield (1882a) p. 80, pl. 9, fig. 5
 Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.; Alton, Ill.
 Hall (1883) p. 352, pl. 32, fig. 5
 Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.
 Cumings (1906) p. 1350, pl. 26, fig. 5
 Miss., Salem Ls.: Spergen Hill, Bloomington, Harrodsburg, Ellettsville, and Stinesville, Ind.; Alton, Ill.

Pleurotomaria obtusispira* Shumard 1859 see *Omphalotrochus obtusispira

Pleurotomaria ornatiformis Morningstar

- Pleurotomaria ornatiformis* Morningstar (1922) p. 253, pl. 15, figs. 7-13
 Penn., Pottsville Fm. Harrison "ore": Jackson County; Sharon "ore": Scioto County; l. part Mercer Mbr.: Muskingum County, Ohio

Pleurotomaria pealeana Girty

- Pleurotomaria pealeana* Girty (1927) p. 429, pl. 25, figs. 13-18
 Miss., Brazer Ls.: Slug Creek quad., Idaho

Pleurotomaria perhumerosa* Meek 1872 see *Hypsulentoma perhumerosa

Pleurotomaria perizomata White

- Pleurotomaria perizomata* White (1881) p. 31, pl. 3, figs. 5a-c
 Carb.: Near Taos, N. Mex.

Pleurotomaria perornata Shumard

Pleurotomaria perornata Shumard (1859) p. 401

Carb., "Coal Measures": W. of Sierra Hueco, El Paso County, Tex.

Pleurotomaria? persimplex Girty 1915 see **Gosseletina persimplex**

Pleurotomaria phosphatica C. Branson

Pleurotomaria phosphatica C. Branson (1930) p. 54, pl. 15, figs. 8-10

Perm., Phosphoria Fm., Pustula mbr.: Wind River Mts. and Owl Creek Mts., Wyo.

Pleurotomaria piasaensis Hall 1856 see **Rhineoderma piasaense**

Pleurotomaria planicostata Girty 1937 see **Shansiella planicostata**

Pleurotomaria? planulata Girty

Pleurotomaria? planulata Girty (1908a) [1909] p. 474, pl. 23, fig. 27

Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.

Pleurotomaria cf. *P.? planulata* Girty (1908a) [1909] p. 475

Perm., Delaware Mountain Gr.: Delaware Mts., Tex.

Pleurotomaria pratteni Meek and Worthen

Pleurotomaria Pratteni Meek and Worthen (1860) [1861] p. 459

Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

Meek and Worthen (1866a) p. 357, pl. 28, figs. 7a-d

Carb., "L. Coal Measures": Macoupin County, Ill.

Pleurotomaria proutiana Shumard

Pleurotomaria Proutiana Shumard (1859) p. 401

Carb., "Coal Measures": W. of Sierra Hueco, El Paso County, Tex.

Pleurotomaria proutana S. Weller (1898) p. 459

Pleurotomaria pseudostrigillata Girty

Pleurotomaria strigillata Girty (1908a) [1909] p. 471, pl. 24, fig. 21 [not Herrick 1888]

Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.; basal black ls.: Guadalupe Mts., Tex.

Pleurotomaria pseudostrigillata Girty (1934b) p. 541

Pleurotomaria putilla Girty

Pleurotomaria putilla Girty (1908a) [1909] p. 468, pl. 8, fig. 11

Perm., m. part Capitan Ls.: Guadalupe Mts., Tex.; Delaware Mountain Fm.: Delaware Mts., Tex.

Pleurotomaria quinquesulcata Winchell

Pleurotomaria quinquesulcata Winchell (1865) [1866] p. 131

Miss., oolite bed 6: Burlington, Iowa

Pleurotomaria? quinquesulcata S. Weller (1901) p. 191, pl. 17, figs. 10, 11

Miss., Kinderhook Ser.: Burlington, Iowa

Pleurotomaria reticulata C. Branson

Pleurotomaria reticulata C. Branson (1930) p. 55, pl. 16, figs. 11-13

Perm., Phosphoria Fm., Top Ls. mbr.: Owl Creek Mts., Wyo.

Pleurotomaria richardsoni Girty

Pleurotomaria richardsoni Girty (1908a) [1909] p. 467, pl. 8, fig. 9

Perm., top of Capitan Ls.: Guadalupe Mts., Tex.; Delaware Mountain Gr.: Delaware Mts. and Glass Mts., Tex.

Pleurotomaria riddellii Shumard

Pleurotomaria Riddellii Shumard (1860) p. 625

Carb., "Coal Measures": Palo Pinto County, Tex.

Pleurotomaria riddelli S. Weller (1898) p. 459

Pleurotomaria robusta C. Branson

Pleurotomaria robusta C. Branson (1930) p. 55, pl. 13, figs. 14, 15

Perm., Phosphoria Fm., Top Ls. mbr.: Wind River Mts. and Owl Creek Mts., Wyo.

Pleurotomaria rockymontana Girty 1934 see **Spiroscala rockymontana**

Pleurotomaria? rota Winchell

Pleurotomaria? rota Winchell (1863) [1864] p. 19

Yellow ss. and base of Burlington Ls.: Burlington, Iowa

Pleurotomaria rotundata Hall 1858 [not Hall 1843] see **Gosseletina subglobosa** (Hall in Miller 1877)

Pleurotomaria scitula Meek and Worthen 1860 see **Glyptotomaria (Dictyotomaria) scitula**

Pleurotomaria sedaliense Miller

Pleurotomaria sedaliense Miller (1891) p. 83, pl. 14, fig. 13

Miss., Chouteau Ls.: Sedalia, Mo.

Miller (1892a) p. 693, pl. 14, fig. 13

Miss., Chouteau Ls.: Sedalia, Mo.

Keyes (1894b) [1895] p. 134

Miss., Kinderhook Ser.: Sedalia, Mo.

Branson (1938a) p. 104, pl. 14, fig. 14

L. Miss.: Missouri

Pleurotomaria shumardi Meek and Worthen 1860 see **Bembexia elegantula** (Hall)

Pleurotomaria sinistrorsa Swallow

Pleurotomaria sinistrorsa Swallow (in Shumard and Swallow, 1858) p. 203

Carb., "Coal Measures": No locality cited

Pleurotomaria speciosa Meek and Worthen 1860 see **Worthenia speciosa**

Pleurotomaria sphaerulata Conrad 1842 see **Trepspira (Trepspira) sphaerulata**

Pleurotomaria spironema Meek and Worthen 1866 see **Gosseletina spironema**

Pleurotomaria stella Winchell

Pleurotomaria stella Winchell (1862) [1863] p. 424

Miss., Marshall Fm.: Jefferson, Hillsdale County, Mich.

Pleurotomaris stella? Herrick (1888c) p. 116, pl. 10, fig. 41

Miss., Waverly Gr. of former usage: Newark, Ohio

Pleurotomaria strigillata Herrick 1888 see **Worthenia strigillata**

Pleurotomaris strigillata Girty 1908 [not Herrick 1888] see **Pleurotomaria pseudostrigillata** Girty

Pleurotomaria (Cyclonema?) strigillata Herrick 1888 see **Worthenia strigillata**

Pleurotomaria (Flemingia) stulta Herrick 1895 see **Pseudophorus stulta**

Pleurotomaria subangulata Hall 1858 see **Amaurotoma subangulatum**

Pleurotomaria subcarbonaria Keyes

Pleurotomaria subcarbonaria Keyes (1894b) [1895] p. 135, pl. 49, fig. 2

Miss., Burlington Ls.: Louisiana, Mo.; Kinderhook Ser.: Burlington, Iowa
Morgan (1924) pl. 49, fig. 23

Penn., Boggy Fm.: Stonewall quad., Oklahoma

Pleurotomaria subconstricta Meek and Worthen 1860 see **Baylea subconstricta**

Pleurotomaria subdecussata Geinitz

Pleurotomaria subdecussata Geinitz (1866) p. 10, table 1, fig. 11

Penn., "Dyas": Nebraska City, Nebr.

Meek (1872a) p. 233, pl. 11, fig. 19

Carb., "U. Coal Measures": Nebraska City, Nebr.

Pleurotomaria cf. *subdecussata* Herrick (1900) pl. 2, fig. 9

Perm.: Tularosa, N. Mex.

Pleurotomaria subglobosa Hall in Miller 1877 see **Gosseletina subglobosa**

Pleurotomaria subscalaris Meek and Worthen 1860 see **Worthenia subscalaris**

Pleurotomaria subsinuata Meek and Worthen 1860 see **Amaurotoma subsinuata**

Pleurotomaria subturbinata Meek and Hayden

Pleurotomaria subturbinata Meek and Hayden (1858a) [1859] p. 264

Carb., "U. Coal Measures": Near Helena, Kans.

Meek and Hayden (1865) p. 47, pl. 1, fig. 13

Carb., "Coal Measures": Grasshopper Creek, NE. Kansas

Pleurotomaria sulcomarginata Hall 1879 see **Bembexia sulcomarginata**

Pleurotomaria swallowana Hall

Pleurotomaria Swallowana Hall (1858) p. 24

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Whitfield (1882a) p. 80, pl. 9, figs. 1, 2

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Hall (1883) p. 356, pl. 32, figs. 1, 2

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Pleurotomaria swallowana Cumings (1906) p. 1349, pl. 26, figs. 1, 2

Miss., Salem Ls.: Spergen Hill, Bloomington, Paynters Hill, Ellettsville, and Stinesville, Ind.

Pleurotomaria tabulata (Conrad) see **Worthenia tabulata**

Pleurotomaria taggarti (Meek)

Pleurotomaria taggarti Meek (1874a) p. 231

Carb.: Four-Mile Creek Canyon, Colo.

White (1880b) p. 140, pl. 34, figs. 1a, b

Carb.: Near Horseshoe Mtn., South Park, Colo.

Euconispira [sic] *taggarti* Girty (1903) p. 453; pl. 10, figs. 9, 9a

Penn., Weber(?) Fm.: Leadville district, Colorado

Pleurotomaria taggarti Morgan (1924) pl. 50, fig. 1

Penn., Francis Fm.: Stonewall quad., Oklahoma

Pleurotomaria tectoria Winchell

Pleurotomaria tectoria Winchell (1863) [1864] p. 19

Yellow ss.: Burlington, Iowa

Pleurotomaria tenuicincta Meek and Worthen

Pleurotomaria tenuicincta Meek and Worthen (1860) [1861] p. 459

Penn., "U. Coal Measures": Springfield, Ill.

Meek and Worthen (1866a) p. 355, pl. 28, figs. 3a-d

Penn., "U. Coal Measures": Springfield, Ill.

Smith (1896) p. 40

Carb., "U. Coal Measures": Poteau Mtn., Indian Territory [Oklahoma]

Pleurotomaria tenuimarginata Hall in Miller 1877 see ***Eotrochus tenuimarginatus***

Pleurotomaria tenuistriata Shumard

Pleurotomaria tenuistriata Shumard (1860) p. 625

Carb., "Coal Measures": near Indian Reservation, Young County, Tex.

Pleurotomaria texana Girty 1908 see ***Baylea texana***

Pleurotomaria textiligera Meek 1871 see ***Worthenia textiliger***a

Pleurotomaria trilineata Hall 1858 see ***Platyzona trilineata***

Pleurotomaria trochiformis Swallow 1863 see ***Pleurotomaria cooperensis*** Miller

Pleurotomaria?* tumida** (Worthen) see ***Ianthinopsis tumida

Pleurotomaria turbiniformis Meek and Worthen 1860 see ***Euconospira turbiniformis***

Pleurotomaria vadosa Hall

Pleurotomaria vadosa Hall (1860) p. 108

Miss., Goniatic ls.: Rockford, Ind.

Winchell (1862) [1863] p. 423

Miss., ss. in Marshall(?) Fm.: W. Michigan

Winchell (1865) [1866] p. 132

Miss., Marshall Fm.: Rockford, Ind.

Winchell (1871) p. 257

Miss., Waverly Gr. of former usage: Sciotoville and Rockville, Ohio

Pleurotomaria vadosa? Herrick (1888a) pl. 7, fig. 11

Miss., Waverly Gr. of former usage: E. of Harlem, Ohio

Herrick (1893) [1895] pl. 18, fig. 11

Miss., Cuyahoga Gr.: Near Harlem, Ohio

Pleurotomaria valvatiformis Meek and Worthen

Pleurotomaria valvatiformis Meek and Worthen (1866c) [1867] p. 273

Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.

Pleurotomaria? *valvatiformis* Meek and Worthen (1873) p. 602, pl. 29, fig. 9

Pleurotomaria valvatiformis Keyes (1891) [1892] p. 254

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) p. 137

Carb., "U. Coal Measures": Kansas City, Mo.

Pleurotomaria whitei Winchell

Pleurotomaria Whitei Winchell (1862) [1863] p. 423

Miss., ss. in Marshall(?) Fm.: W. Michigan

Pleurotomaria woolseyana Girty 1934 see ***Paragoniozona woolseyana***

Pleurotomaria wortheni Hall 1858 see ***Rhineoderma wortheni***

Pleurotomaria worthenioides Girty

Pleurotomaria worthenioides Girty (1934a) p. 251-253, figs. 8, 9

Penn., Bloyd Sh., Brentwood Ls. Mbr.: Winslow quad., Arkansas

Pleurotomaria sp. Herrick 1889 see ***Bembexia sulcomarginata*** (Hall)

Pleurotomaria species of authors

- Pleurotomaria* Rogers (1868) p. 833, fig. 691
- Pleurotomaria* (sp. undet.) Meek and Worthen (1873) pl. 19, fig. 1
Miss., Keokuk Ls.: No locality cited
- Pleurotomaria*? (sp. undet.) Meek and Worthen (1873) pl. 26, fig. 6b
Carb., "Coal Measures": No locality cited
- Pleurotomaria* sp.? Herrick (1887a) p. 21, figs. 11, 13
Carb., "Coal Measures": Flint Ridge, Ohio
- Pleurotomaria* sp. Herrick (1888a) pl. 10, fig. 38
Miss., Waverly Gr. of former usage: Ohio
- Smith (1896) p. 40
Carb., "L. Coal Measures": Conway, Franklin, and Pope Counties, Ark.
- Pleurotomaria*? sp. S. Weller (1899) p. 41
Miss., Vermicular ss.: Northview, Webster County, Mo.
- S. Weller (1901) p. 191, pl. 17, fig. 12
Miss., Kinderhook Ser.: Burlington, Iowa
- S. Weller (1901) p. 143
Miss., Northview Sh.: Northview, Mo.
- Pleurotomaria* sp. Beede (1902b) p. 7, pl. 1, figs. 13-13b
Perm. red beds: White Horse Springs, Okla.
- Pleurotomaria*? sp. a. Girty (1903) p. 314
Miss., Millsap Ls. of former usage (=Madison Ls. and older(?) units): Canyon, Colo.
- Pleurotomaria*? sp. b. Girty (1903) p. 31
Penn., pebbles from Millsap Ls.(?) of former usage: Larimer County, Colo.
- Pleurotomaria*? sp.? Rowley (1908) p. 92, pl. 19, figs. 9, 10
Blue sh. underlying Louisiana Ls.: Town Branch, Louisiana, Mo.
- Pleurotomaria*? sp. c. Girty (1908a) [1909] p. 470
Perm. base of Capitan Ls.: Guadalupe Mts., Tex.
- Pleurotomaria* sp. d. Girty (1908a) [1909] p. 472
Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.
- Pleurotomaria*? sp. Girty (1909b) p. 42, pl. 5, fig. 4
Miss., Caney Sh.: Atoka quad., Oklahoma
- Pleurotomaria* sp. Prosser (1912) p. 43
Bedford Fm.: Euclid Creek, Ohio
- Pleurotomaria*? sp. 1. Snider (1915) p. 115
Miss., Mayes Fm.: NE. Oklahoma
- Pleurotomaria*? sp. 2. Snider (1915) p. 115
Miss., Mayes Fm.: NE. Oklahoma
- Pleurotomaria*? sp. 3. Snider (1915) p. 115
Miss., Mayes Fm.: NE. Oklahoma
- Pleurotomaria* sp. Girty (1915b) p. 114
Miss., Batesville Ss.: Round Mtn., Ark.
- Girty (1915c) p. 38
Miss., "Boone" chert: Batesville, Ark.
- Pleurotomaria* several sp. Girty (1926) p. 37
Miss., ls. of Boone age: San Saba, Tex.
- Pleurotomaria* sp. C. Branson (1930) p. 56, pl. 12, fig. 4
Perm., Phosphoria Fm., Top Ls. mbr.: Cody, Wyo.
- Pleurotomaria*? sp. Williams (1943) [1944] p. 103, pl. 9, fig. 32
Clay partings of Louisiana Ls.: Town Branch, Louisiana, Mo.

Pleurotomaria(?) sp. A. Knight (1953) p. 87, pl. 246, fig. 24

Perm., Monos Fm.: El Antimonio, W. Sonora, Mexico

Pleurotomaria(?) sp. B. Knight (1953) p. 87, pl. 246, fig. 25

Perm., Monos Fm.: El Antimonio, W. Sonora, Mexico

Pleurotomaria(?) sp. C. Knight (1953) p. 88

Perm., Monos Fm.: El Antimonio, W. Sonora, Mexico

PLOCEZYGA Knight 1930

[This name was proposed by Knight (1930) p. 17 as a subgenus of *Hemizyga* Girty (1915). Knight (1944) p. 463 elevated it to generic rank. Knight, Batten, and Yochelson (1960) p. 1315 considered it a subgenus of *Hemizyga* Girty (1915).]

Plocezyga angularis (Knight) see ***Hemizyga (Plocezyga) angularis***

Plocezyga corona (Knight) see ***Hemizyga (Plocezyga) corona***

POLEUMITA Clarke and Ruedemann 1903

Type species: *Euomphalus discors* Sowerby (1814) p. 113

Poleumita Clarke and Ruedemann (1903) p. 59

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. One North American late Paleozoic species assigned to this taxon has not been reassigned.]

Poleumita helicina (Schlotheim)

Polytropis helicina Frebold (1931b) p. 17, pl. 1, fig. 30

Perm. (L. Zechstein): E. Greenland

[No synonymy is presented of this European species.]

POLYPHEMOPSIS Portlock 1843

Type species: *Polyphemopsis elongatus* Portlock (1843) p. 416

Polyphemopsis Portlock (1843) p. 415

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. North American late Paleozoic species originally assigned to this taxon were reassigned.]

Polyphemopsis chrysalis Meek and Worthen 1866 see ***Ianthinopsis regularis*** (Cox)

Polyphemopsis elongata Hall 1858 [not Portlock 1843] see ***Bulimorpha elongata***

Polyphemopsis fusiformis (Hall) [not Swallow 1840] see ***Ianthinopsis regularis*** (Cox)

Polyphemus fusiformis Swallow 1840 see ***Soleniscus (Macrochilina) fusiformis***

Polyphemopsis inornata Meek and Worthen 1866 see ***Ianthinopsis regularis*** (Cox)

Polyphemopsis?* keokuk** Worthen 1884 see ***Holopea keokuk

Polyphemopsis melanoides Whitfield 1882 see ***Ianthinopsis melanoides***

Polyphemopsis minuta (Stevens) see ***Girtyspira minuta***

Polyphemopsis nitidula Meek and Worthen 1866 see ***Soleniscus typicus*** (Meek and Worthen)

Polyphemopsis nitidula (Meek and Worthen) see ***Meekospira peracuta*** (Meek and Worthen)

Polyphemopsis peracuta Meek and Worthen 1861 see ***Meekospira peracuta***

Polyphemopsis teretiformis Hall 1877 see ***Bulimorpha elongata*** (Hall)

Polyphemopsis?* White** 1884 see ***Ianthinopsis regularis (Cox)

POLYTROPSIS Koninck 1881 [not Sandberger 1874]

[Knight (1941) p. 267 noted that this name is a suppressed objective synonym of *Poleumita* Clarke and Ruedemann (1903).]

Polytropis helicina Schlotheim see ***Poleumita helicina***

POLYTREMARIA Orbigny 1850

Type species: *Pleurotomaria catenata* Koninck (1843) p. 374

Polytremaria Orbigny (1850) p. 122

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic. One species originally assigned to this taxon was not reassigned.]

Polytremaria (?) solitaria Cumings

Polytremaria (?) solitaria Cumings (1906) p. 1364, pl. 24, figs. 6, 6a
Miss., Salem Ls.: Spergen Hill, Ind.

PORCELLIA Leveillé 1835

Type species: *Porcellia puzo* Leveillé (1835) p. 35

(S.D. Koninck (1833) p. 10)

Porcellia Leveillé (1835) p. 35

Porcellia crassinoda White and Whitfield

Porcellia crassinoda White and Whitfield (1862) p. 303

"Chemung Gr.": Burlington, Iowa

Keyes (1889e) [1892] p. 298

Miss., Kinderhook Ser.: Burlington, Iowa

S. Weller (1900) p. 116, pl. 5, figs. 1, 2

Chonopectus ss.: Burlington, Iowa

Porcellia gilliana (White and St. John)

Cyrtolites? *Gillianus* White and St. John (1868) p. 123, fig. 8

Carb., "U. Coal Measures": Madison County, Iowa

Tomoceras gillianus Knight (1941) p. 348-349, pl. 38, figs. 7a, b

U. Carb.: Madison County, Iowa

Porcellia cf. *P. gillianus* Sturgeon (1964a) p. 211, pl. 34, figs. 21-23

Penn., Allegheny Fm., Vanport Ls. Mbr.: Mahoning County, Ohio

Porcellia nodosa Hall

Porcellia nodosa Hall (1860) p. 92

Miss., Burlington Ls.: Illinois

Meek and Worthen (1868) p. 458, pl. 14, figs. 1a, b

Miss., Kinderhook Ser.: Barry, Pike County, Ill.

Rowley (1889) p. 276

Miss., chert in l. part Burlington Ls.: Louisiana, Mo.

Keyes (1894b) [1895] p. 154, pl. 51, fig. 4

Miss., Burlington Ls.: Louisiana, Mo.

Porcellia obliquinoda White

Porcellia obliquinoda White (1862) p. 21

"Chemung ss.": Burlington, Iowa

S. Weller (1900) p. 116, pl. 5, fig. 3

Chonopectus ss.: Burlington, Iowa

S. Weller (1905) p. 630

Miss., Kinderhook Ser., "English River Grit": Maples Mill, on English River,
Washington County, Iowa

Porcellia ornatissima (Miller, Downs, and Youngquist)

Brittsoceras ornatissimum Miller, Downs, and Youngquist (1949) p. 604, pl. 97, figs. 1-3

Miss., Chouteau Ls.: James River bluff, Turner's Station, Mo.

Porcellia ornatissimum Miller (1950) p. 506

Porcellia peoriensis Worthen

Porcellia peoriensis Worthen (1884) p. 6

Carb., "L. Coal Measures": Peoria County, Ill.

Worthen (1890) p. 138, pl. 23, figs. 4a, b

Carb., "L. Coal Measures": Peoria County, Ill.

Porcellia cf. *P. peoriensis* Sturgeon (1964a) p. 211, pl. 34, fig. 24

Penn., Columbiana Ls.: Tuscarawas County, Ohio

Porcellia peoriensis Sturgeon (1964b) p. 743, pl. 122, figs. 1-3

Penn., "L. Coal Measures": Peoria County, Ill.

Porcellia rectinoda Winchell

Porcellia rectinoda Winchell (1863) [1864] p. 18

Yellow ss.: Burlington, Iowa

Porcellia cf. *rectinoda* S. Weller (1900) p. 113, pl. 5, fig. 7

Miss., Vermicular ss.: Webster County, Mo.

Porcellia rectinoda S. Weller (1900) p. 117

Chonopectus ss.: Burlington, Iowa

S. Weller (1901) p. 193

Miss., Northview Sh.: Northview, Mo.

PORTLOCKIELLA Knight 1945

Type species: *Portlockiella kentuckyensis* Knight (1945b) p. 581

Portlockiella Knight (1945b) p. 579

Portlockiella kentuckyensis Knight

Portlockiella kentuckyensis Knight (1945b) p. 581, pl. 79, figs. 2a-c

Miss., St. Louis Ls.; Fredonia Ls. Mbr. of Ste. Genevieve Ls.: Princeton, Elizabethtown, and Eddyville, Ky.

Knight, Batten, and Yochelson (1960) p. 1212, fig. 124, no. 5

M. Miss.: Kentucky

Portlockiella species of authors

Portlockiella? sp. Yochelson and Dutro (1960) p. 139, pl. 13, figs. 18, 19

U. Miss., Alapah Ls.: Chandler Lake quad., northern Alaska

POSIDONIA Bronn 1828

[This taxon is not a gastropod; it is now commonly considered a pelecypod. One North American late Paleozoic species assigned to this taxon was reassigned.]

Posidonia? *distans* Lea 1853 see **Pleurotomaria?** *distans*

PSEUDOMELANIA Pictet and Campiche 1862

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. No formally named North American late Paleozoic species were originally assigned to this taxon.]

Pseudomelania species of authors see **Meekospira** species of authors

PSEUDOPHORUS Meek 1873

Type species: *Trochita antiqua* Meek (1871c) [1872] p. 82

Pseudophorus Meek (1873a) p. 221

Pseudophorus carbonaria (Meek and Worthen)

Trochita? carbonaria Meek and Worthen (1866a) p. 370

Miss., Chester Ser.: Ste. Genevieve County, Mo.

[Miller (1889) p. 428 stated that this species is "not recognized." Presumably he suggested that this name should not be applied to additional material.]

Pseudophorus dispersa (Dawson)

Pleurotomaria dispersa Dawson (1868) p. 310

Carb.: Windsor, Nova Scotia

Flemingia dispersa Bell (1929) p. 177, pl. 31, figs. 9, 10

Carb., U. Windsor Ser.: Horton-Windsor district, Nova Scotia

Flemingella dispersa Knight (1936) p. 526

Pseudophorus minuta (Bell)

Flemingia minuta Bell (1929) p. 178, pl. 31, figs. 11, 11a

Carb., U.(?) Windsor Ser.: Horton-Windsor district, Nova Scotia

Flemingella minuta Knight (1936) p. 526

Pseudophorus stulta (Herrick)

Flemingia stultus Herrick (1888a) p. 45, pl. 7, fig. 10

Miss., m. part Waverly Gr. of former usage: Ohio

Pleurotomaria (Flemingia) stulta Herrick (1893) [1895] pl. 18, fig. 10

Miss., rocks of Kinderhook age: Granville, Ohio

Flemingella stulta Knight (1936) p. 526

PSEUDOZYGOPLEURA Knight 1930

Type species: *Loxonema attenuata* var. *semicostatum* Meek (1871a) p. 174

Pseudozygopleura Knight (1930) p. 13

[Knight (1930) p. 13 divided this taxon into four subgenera; in (1932) p. 202, he noted that it was a junior subjective synonym of *Palaeostylus* Mansuy (1914).]

Pseudozygopleura kellestae (Knight) see ***Palaeostylus (Pseudozygopleura) kellestae***

Pseudozygopleura wortheni (Weller) see ***Palaeostylus (Pseudozygopleura) wortheni***

***Pseudozygopleura?* sp.** Knight 1930 see ***Palaeostylus?* species of authors**

PSEUDOZYGOPLEURA (LEPTOZYGA) Knight 1930

Type species: *Pseudozygopleura (Leptozyga) minuta* Knight (1930) p. 63

Pseudozygopleura (Leptozyga) Knight (1930) p. 16

Pseudozygopleura (Leptozyga) minuta Knight 1930 see ***Palaeostylus (Leptozyga) minutus***

PSEUDOZYGOPLEURA (PSEUDOZYGOPLEURA) Knight 1930

Type species: *Loxonema attenuata* var. *semicostatum* Meek (1871d) [1872] p. 174

Pseudozygopleura (Pseudozygopleura) Knight (1930) p. 13

Pseudozygopleura (Pseudozygopleura) acuminata Knight 1930 see ***Palaeostylus (Pseudozygopleura) acuminatus***

- Pseudozygopleura* (*Pseudozygopleura*) *assertonsoris* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *assertonsoris*
- Pseudozygopleura* (*Pseudozygopleura*) *bella* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *bellus*
- Pseudozygopleura* (*Pseudozygopleura*) *condrai* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *condrai*
- Pseudozygopleura* (*Pseudozygopleura*) *conica* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *conicus*
- Pseudozygopleura* (*Pseudozygopleura*) *croneisi* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *croneisi*
- Pseudozygopleura* (*Pseudozygopleura*) *deloi* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *deloi*
- Pseudozygopleura* (*Pseudozygopleura*) *girtyi* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *girtyi*
- Pseudozygopleura* (*Pseudozygopleura*) *inornata* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *inornatus*
- Pseudozygopleura* (*Pseudozygopleura*) *kelletae* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *kelletae*
- Pseudozygopleura* (*Pseudozygopleura*) *leveneae* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *leveneae*
- Pseudozygopleura* (*Pseudozygopleura*) *moorei* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *moorci*
- Pseudozygopleura* (*Pseudozygopleura*) *multicostata* (Meek and Worthen) see *Palaeostylus* (*Pseudozygopleura*) *multicostatus*
- Pseudozygopleura* (*Pseudozygopleura*) *nana* (Girty) see *Palaeostylus* (*Pseudozygopleura*) *nanus*
- Pseudozygopleura* (*Pseudozygopleura*) *nigra* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *nigrus*
- Pseudozygopleura* (*Pseudozygopleura*) *obtusicauminis* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *obtusicauminis*
- Pseudozygopleura* (*Pseudozygopleura*) *pagoda* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *pagodus*
- Pseudozygopleura* (*Pseudozygopleura*) *peoriensis* (Worthen) see *Palaeostylus* (*Pseudozygopleura*) *peoriensis*
- Pseudozygopleura* (*Pseudozygopleura*) *perversa* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *perversus*
- Pseudozygopleura* (*Pseudozygopleura*) *plummeri* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *plummeri*
- Pseudozygopleura* (*Pseudozygopleura*) *pluricostata* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *pluricostatus*
- Pseudozygopleura* (*Pseudozygopleura*) *praeacuta* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *praeacutus*
- Pseudozygopleura* (*Pseudozygopleura*) *pulchra* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *pulchrus*
- Pseudozygopleura* (*Pseudozygopleura*) *pupa* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *pupus*
- Pseudozygopleura* (*Pseudozygopleura*) *recticostata* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *recticostatus*
- Pseudozygopleura* (*Pseudozygopleura*) *restis* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *restis*
- Pseudozygopleura* (*Pseudozygopleura*) *rothi* Knight 1930 see *Eoptychia* *rothi*
- Pseudozygopleura* (*Pseudozygopleura*) *schucherti* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *schucherti*

- Pseudozygopleura* (*Pseudozygopleura*) *scitula* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *scitulus*
- Pseudozygopleura* (*Pseudozygopleura*) *semicostata* (Meek) see *Palaeostylus* (*Pseudozygopleura*) *semicostatus*
- Pseudozygopleura* (*Pseudozygopleura*) *sinuosior* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *sinuosior*
- Pseudozygopleura* (*Pseudozygopleura*) *tenuivirga* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *tenuivirgus*
- Pseudozygopleura* (*Pseudozygopleura*) *terebra* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *terebus*
- Pseudozygopleura* (*Pseudozygopleura*) *teres* (Girty) see *Palaeostylus* (*Pseudozygopleura*) *teres*
- Pseudozygopleura* (*Pseudozygopleura*) *trochus* Knight 1930 see *Eoptychia trochus*
- Pseudozygopleura* (*Pseudozygopleura*) *williamsi* Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) *williamsi*
- Pseudozygopleura* (*Pseudozygopleura*) sp. A Knight 1930 see *Palaeostylus* (*Pseudozygopleura*) species of authors

PSEUDOZYGOPLURA (PYRGOZYGA) Knight 1930

Type species: *Pseudozygopleura* (*Pyrgozyga*) *cylindrata* Knight (1930, p. 57
Pseudozygopleura (*Pyrgozyga*) Knight (1930) p. 15

[Knight (1932) p. 202 noted that this name is a junior subjective synonym of *Palaeostylus* Mansuy (1914).]

- Pseudozygopleura* (*Pyrgozyga*) *cylindrata* Knight 1930 see *Palaeostylus* (*Palaeostylus*) *cylindratus*
- Pseudozygopleura* (*Pyrgozyga*) *dunbari* Knight 1930 see *Palaeostylus* (*Palaeostylus*) *dunbari*
- Pseudozygopleura* (*Pyrgozyga*) *funis* Knight 1930 see *Palaeostylus* (*Palaeostylus*) *funis*
- Pseudozygopleura* (*Pyrgozyga*) *macra* Knight 1930 see *Palaeostylus* (*Palaeostylus*) *macrus*
- Pseudozygopleura* (*Pyrgozyga*) *marvinwelleri* Knight 1930 see *Palaeostylus* (*Palaeostylus*) *marvinwelleri*
- Pseudozygopleura* (*Pyrgozyga*) *warthini* Knight 1930 see *Palaeostylus* (*Palaeostylus*) *warthini*

PSEUDOZYGOPLURA (STEPHANOZYGA) Knight 1930

Type species: *Zygopleura nodosa* Girty (1915e) p. 360

Pseudozygopleura (*Stephanozyga*) Knight (1930) p. 15

- Pseudozygopleura* (*Stephanozyga*) *nodosa* (Girty) see *Palaeostylus* (*Stephanozyga*) *nodosus*
- Pseudozygopleura* (*Stephanozyga*) *subnodosa* Knight 1930 see *Palaeostylus* (*Stephanozyga*) *subnodosus*

PTYCHOMPHALUS Agassiz 1837

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. With one exception, formally named North American late Paleozoic species originally assigned to this taxon have not been reassigned.]

Ptychomphalus depressus S. Weller

Ptychomphalus depressus S. Weller (1916) p. 255, pl. 18, fig. 30

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Ptychomphalus? fountainensis S. Weller

Ptychomphalus? fountainensis S. Weller (1916) p. 255, pl. 18, figs. 12-14 Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Ptychomphalus laudenslageri Sayre

Ptychomphalus laudenslageri Sayre (1930) [1931] p. 134, pl. 15, figs. 4, 4a Penna., Drum Ls., oolitic mbr.: Turner and Independence, Kans.

Ptychomphalus lineata Sayre 1930 see **Glyptotomaria (Dictyotomaria) lineata**

Ptychomphalus missouriensis S. Weller

Ptychomphalus missouriensis S. Weller (1906) p. 455, pl. 7, figs. 25, 26 Miss., Sulphur Springs Fm., Glen Park Ls. Msr.: Glen Park, Mo.

Ptychomphalus sinuatus S. Weller

Ptychomphalus sinuatus S. Weller (1916) p. 254, pl. 18, figs. 29, 33, 34 Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Ptychomphalus wortheni S. Weller

Ptychomphalus wortheni S. Weller (1916) p. 253, pl. 18, figs. 24-28 Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.
C. Branson (1937) p. 658, pl. 89, figs. 26, 27
Miss., Sacajawea Fm.: Wyoming

PUPA Röding 1798

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. Formally named North American late Paleozoic species originally assigned to this taxon were reassigned.]

Pupa bigsbii Dawson 1880 see **Anthracopupa bigsbii**

Pupa primaeva Matthew 1895 see **Maturipupa primaeva**

Pupa vermilionensis Bradley 1872 see **Maturipupa vermilionensis**

Pupa vetusta Dawson 1859 see **Dendropupa vetusta**

PYRGOZYGA Knight 1930

[This taxon was proposed by Knight (1930) p. 15, as a subgenus of *Pseudozygopleura* Knight (1930). Knight (1932) p. 202 considered the name a subjective synonym of *Palaeostylus* Mansuy (1914).]

Pyrgozyga cylindrata Knight see **Palaeostylus (Palaeostylus) cylindratus**

RETISPIRA Knight 1945

[This name was reduced to subgeneric rank under *Bucanopsis* Ulrich and Scofield (1897) by Elias (1958) p. 3. Yochelson (1960) p. 226 transferred this taxon to subgeneric rank under *Knightites* Moore (1941).]

Retispira bellireticulata Knight 1945 see **Knightites (Retispira) bellireticulata**

Retispira modesta (Girty) see **Knightites (Retispira) modesta**

Bucanopsis (Retispira?) reticulata Elias 1958 see **Knightites (Retispira) reticulata**

Retispira textiliformis (Gurley) see **Knightites (Retispira) textiliformis**

Retispira textilis H. Chronic 1952 see **Knightites (Retispira) textilis**

Retispira undulata H. Chronic 1952 see **Knightites (Retispira) undulata**

Retispira species of authors see **Knightites (Retispira)** species of authors

RHABDOTOCOCHLIS Knight 1933

Type species: *Rhabdotocochlis rugata* Knight (1933a) p. 51

Rhabdotocochlis Knight (1933a) p. 51

Rhabdotocochlis rugata Knight

Rhabdotocochlis rugata Knight (1933a) p. 51, pl. 10, figs. 1a-f; pl. 12, fig. 4

Penn., Labette Sh.: St. Louis County, Mo.

Knight (1941) p. 298-299, pl. 56, figs. 3a, b

U. Carb., top of Labette Sh.; Henrietta Fm. of former usage (=Marmaton Gr.):
On headwaters branch of Feefee Creek, near Lackland Sta., St. Louis County,
Mo.

Knight, Batten, and Yochelson (1960) p. 1239, fig. 152, no. 12

M. Penn.: Missouri

RHINEODERMA Koninck 1883

Type species: *Pleurotomaria radula* Koninck (1843) p. 371

Rhineoderma Koninck (1883) p. 103

Rhineoderma dinglense (Girty)

Pleurotomaria dinglensis Girty (1927) p. 428, pl. 25, figs. 23-24

Miss., Brazer Ls.: Montpelier quad., Idaho

Rhineoderma dinglensis Yochelson (1962) p. 77, pl. 17, figs. 21-24

Miss., Redwall Ls.: Jerome Hill section, Arizona

Rhineoderma nystii Koninck

Rhineoderma cf. *R. nystii* Knight (1958) p. 75, pl. 8, E, figs. 10, 11

Miss.: Sonora, Mexico

[No synonymy is given of this European species.]

Rhineoderma piasaense (Hall)

Pleurotomaria piasaensis Hall (1856) p. 22

Miss., St. Louis Ls.: Pine Creek, Alton, Ill.

Whitfield (1882a) p. 83, pl. 9, figs. 6, 7

Miss., St. Louis Ls.: Piasa Creek, Alton, Ill.

Hall (1883) p. 354, pl. 32, figs. 6, 7

Miss., St. Louis Ls.: Piasa Creek, Alton, Ill.

Cummings (1906) p. 1353, pl. 26, figs. 6, 7

Miss., Salem Ls.: Paynters Hill, Ellettsville, and Stinesville, Ind.; Piasa Creek,
Alton, Ill.

Rhineoderma piasaense Knight (1944) p. 455, pl. 183, figs. 30, 31

Miss., Salem Ls.: Mississippi Valley

Rhineoderma wortheni (Hall)

Pleurotomaria wortheni Hall (1864) [1856?] p. 23

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Hall (1858) p. 664, pl. 23, figs. 13a-d

Miss., Warsaw Ls.: Spergen Hill and Bloomington, Ind.

Pleurotomaria humilis Hall (1858) p. 21

Miss., St. Louis Ls.: Bloomington and Spergen Hill, Ind.

Whitfield (1882a) p. 82, pl. 9, fig. 3

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Pleurotomaria wortheni Whitfield (1882a) p. 81, pl. 9, fig. 4

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Hall (1883) p. 356, pl. 32, fig. 4

Miss., St. Louis Ls.: Bloomington, Spergen Hill, and Lanesville, Ind.

Pleurotomaria humilis Hall (1883) p. 353, pl. 32, fig. 3

Miss., St. Louis Ls.: Bloomington, Laneville, and Spergen Hill, Ind.

S. Weller (1898) p. 455

Cummings (1906) p. 1352, pl. 26, fig. 3

Miss., Salem Ls.: Spergen Hill and Bloomington, Ind.

Pleurotomaria wortheni Cummings (1906) p. 1351, pl. 26, fig. 4

Miss., Salem Ls.: Spergen Hill and Bloomington, Ind.

Rhineoderma wortheni Knight (1944) p. 455, pl. 183, fig. 29

Miss., Salem Ls.: Mississippi Valley

Rhineoderma species of authors

Rhineoderma? sp. Yochelson and Dutro (1960) p. 135, pl. 12, fig. 34

U. Miss., Alapah Ls.: Chandler Lake quad., Alaska

ROTELLA Lamarck 1822

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Rotella verruculifera White 1881 see ***Anomphalus verruculiferus***

SALLYA Yochelson 1956

Type species: *Sallya linsa* Yochelson (1956b) p. 250

Sallya Yochelson (1956b) p. 250

Sallya bicincta Yochelson

Sallya bicincta Yochelson (1956b) p. 250, pl. 21, figs. 28, 31–34, table 27

Perm., Hueco Ls.: Orogrande quad., New Mexico

Sallya linsa Yochelson

Sallya linsa Yochelson (1956b) p. 250, pl. 22, figs. 1–7, table 28

Perm., Bone Spring Ls.: Apache Canyon, Van Horn quad., Texas; Word Fm.: Hess Canyon quad., Texas; Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

Knight, Batten, and Yochelson (1960) p. 1298, fig. 195, no. 8

M. Perm.: Texas

Sallya liratus (H. Chronic)

Eotrochus? *liratus* H. Chronic (1952) p. 129, pl. 4, figs. 7a–8

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Sallya liratus Yochelson (1956b) p. 250

Sallya striata Yochelson

Sallya striata Yochelson (1956b) p. 251, pl. 22, figs. 8–12, table 29

Perm., Bone Spring Ls.: Guadalupe Mts., Tex.; Word Fm.: Hess Canyon quad., Texas; Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.

SCHIZOSTOMA Brönn 1834

Type species: *Helix catillus* Martin (1793) pl. 7, figs. 3, 4

(S.D. Waagen (1880) p. 87)

Schizostoma Brönn (1834) p. 95

[Knight (1934a) p. 144 considered this name a subjective synonym of *Straparollus* (*Euomphalus*) Sowerby (1814).]

Schizostoma catilloides (Conrad) see ***Straparollus* (*Amphiscapha*) catilloides**

Schizostoma subquadratus (Meek and Worthen) see *Straparollus* (*Amphiscapha*) *subquadratus*

Schizostoma sulcifer (Girty) see *Discotropis sulcifer*

Schizostoma sulcifer var. *angulatus* see *Discotropis sulcifer* (Girty)

SERPULA Linnaeus 1758

[This taxon is not a gastropod; it is now commonly considered a serpulid worm. One North American late Paleozoic species originally assigned to this taxon was reassigned.]

Serpula (*Spirorbis*) *Planorbites* Geinitz 1866 see *Straparollus* (*Amphiscapha*) *subrugosus* Meek and Worthen

SERPULOSPIRA Cossmann 1915

[This name was reduced to subgeneric rank under *Straparollus* Montfort (1810) by Knight, Batten, and Yochelson (1960) p. I192.]

Straparollus (*Serpulospira*) *paradoxus* (Winchell) see *Straparollus* (*Serpulospira*) *paradoxus*

SHANSIELLA Yin 1932

Type species: *Shansiella altispiralis* Yin (1932) p. 13

Shansiella Yin (1932) p. 13

Shansiella beckwithana (McChesney)

Pleurotomaria beckwithana McChesney (1859) p. 61

Carb., "Coal Measures": Danville, Ill.

McChesney (1865) pl. 2, figs. 17a, b

Pleurotomaria Beckwithana McChesney (1868) p. 47, pl. 2, figs. 17a-c

Carb., "Coal Measures": Springfield and Danville, Ill.

Pleurotomaria beckwithana Sayre (1930) [1931] p. 150, pl. 15, figs. 1, 1b

Penn., Drum Ls., oolitic mbr.: Muncie and Independence, Kans.

Gossetina beckwithana Hoare (1961) p. 152

Shansiella beckwithana Sturgeon (1964a) p. 210, pl. 33, figs. 19-22

Penn., Allegheny Fm., Vanport Ls. Mbr.: Columbiana County, Ohio

Shansiella broadheadi (White)

Pleurotomaria broadheadi White (1880b) [1883] p. 169, pl. 42, figs. 1a, b

Carb., "Coal Measures": Kansas City, Mo.

Keyes (1894b) [1895] p. 144, pl. 48, figs. 1a, b

Carb., "U. Coal Measures": Kansas City and Clinton, Mo.

Morningstar (1922) p. 251

Penn., Pottsville Fm., l. part Mercer Mbr.: Licking County, Ohio

Morgan (1924) pl. 49, fig. 18

Penn., Francis Fm.: Stonewall quad., Oklahoma

Platyzona broadheadi Knight (1945b) p. 579

Shansiella broadheadi Hoare (1961) p. 160, pl. 23, fig. 7

M. Penn., Robinson Branch Ls.: Henry County, Mo.

Shansiella carbonaria (Norwood and Pratten)

Pleurotomaria carbonaria Norwood and Pratten (1855) p. 75, pl. 9, fig. 8

Carb., "Coal Measures": Rockcreek, Williamson County, Ill.

Keyes (1888) [1889] p. 239

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1891) [1892] p. 253

Carb., "L. Coal Measures": Des Moines, Iowa

- Pleurotomaria harii* Miller (1891) p. 83, pl. 14, figs. 3, 4
 Carb., "U. Coal Measures": Kansas City, Mo.
 Miller (1892a) [1894] p. 693, pl. 14, figs. 3, 4
 Carb., "U. Coal Measures": Kansas City, Mo.
- Pleurotomaria carbonaria* Keyes (1894b) [1895] p. 138
 Carb., "U. Coal Measures": Kansas City, Mo.
- Pleurotomaria harii* Smith (1896) p. 250
 Carb., "L. Coal Measures": Conway County, Ark.
- Pleurotomaria?* cf. *carbonaria* Girty (1903) p. 459
 Carb.: Glenwood Springs, Colo.
- Pleurotomaria carbonaria* Raymond (1910) p. 157, pl. 26, fig. 1
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Donohoe, Pa.
 Raymond (1911) p. 98, pl. 5, fig. 1
 Penn., Brush Creek Ls. Mbr.: Donohoe, Pa.
- Pleurotomaria carbonaria?* Girty (1915a) p. 163
 Penn., Wewoka Fm.: Wewoka quad., Oklahoma
- Pleurotomaria* aff. *carbonaria* Girty (1915c) p. 37
 Miss., "Boone" chert: Batesville, Ark.
- Pleurotomaria carbonaria* Morningstar (1922) p. 252, pl. 13, fig. 14
 Penn., Pottsville Fm., L. part Mercer Mbr.: Scioto, Licking, and Stark Counties;
 McArthur Ls.: Hocking County, Ohio
 Warthin (1930) p. 45
 Penn.: Oklahoma
- Shansiella carbonaria* Knight (1944) p. 457, pl. 185, fig. 8
 Penn.: Mississippi Valley
 Knight, Batten, and Yochelson (1960) p. 1212, fig. 124, no. 7
 M. Penn.: Missouri
 Hoare (1961) p. 159, pl. 23, fig. 8
 M. Penn., Seville Ls.: Henry County, Mo.
 Surgeon (1964a) p. 209, pl. 32, figs. 18-21; pl. 36, fig. 10
 Penn., Allegheny Fm., Columbiana, Putnam Hill and Vanport Ls. Mbrs.: Eastern Ohio

***Shansiella conica* Batten**

- Shansiella conica* Batten (1958) p. 203, pl. 35, figs. 14, 15, 17, 18
 Perm., Wolfcamp Ser.: Hueco Mts.; Runnels County, Tex.

***Shansiella planicostata* (Girty)**

- Pleurotomaria planicostata* Girty (1937) p. 210, pl. 33, figs. 18-21
 Perm., Abo(?) Ss.: Grapevine Canyon, Otero County, N. Mex.
- Shansiella planicostata* Knight (1944) p. 457, pl. 185, figs. 9, 10
 Perm., Abo Ss.: SW. United States

***Shansiella tabulata* Batten**

- Shansiella tabulata* Batten (1958) p. 202, pl. 35, figs. 16, 19-20
 Perm., Wolfcamp Ser.: Coleman and Runnels Counties, Tex.

SHWEDAGONIA Batten 1956

- Type species: *Shwedagonia elegans* Batten (1956) p. 43
Shwedagonia Batten (1956) p. 43

***Shwedagonia elegans* Batten**

- Shwedagonia elegans* Batten (1956) p. 43
 Perm., Leonard Ser.: Glass Mts., Tex.

Batten (1958) p. 226, pl. 39, figs. 3-8, 11-17

Perm., Wolfcamp to Guadalupe Ser.: Hess Canyon quad., Sierra Diablo area,
Texas

Knight, Batten, and Yochelson (1960) p. 1204, fig. 118, no. 1

Perm.: Texas

SINUITINA Knight 1945

Type species: *Tropidocyclus cordiformis* Newell (1935) p. 349

Sinuitina Knight (1945a) p. 333

***Sinuitina anneae* Conkin**

Sinuitina anneae Conkin (1957) p. 146, pl. 16, figs. 1-13; text fig. 2B

Miss., New Providence Sh.: Jefferson County, Ky.

***Sinuitina cordiformis* (Newell)**

Tropidocyclus cordiformis Newell (1935) p. 349, pl. 36, figs. 1a-d

Penn., Lansing Sh.: Wann, Okla.

Bucanella cordiformis Knight (1944) p. 441, pl. 176, figs. 9-14

Penn., Lansing Gr.: Kansas

Sinuitina cordiformis Knight (1945a) p. 333

Knight, Batten, and Yochelson (1960) p. 1175, fig. 91, no. 5

U. Penn.: Kansas

***Sinuitina keytei* Yochelson**

Sinuitina keyti Yochelson (1960) p. 246, pl. 46, figs. 1-3

Perm., Leonard Ser.: Glass Mts., Tex.

SOLENISCUS Meek and Worthen 1861

Type species: *Soleniscus typicus* Meek and Worthen (1860) [1861] p. 467

Soleniscus Meek and Worthen (1860) [1861] p. 467

Soleniscus (*Macrochilina*) Knight (1931a) p. 192

Soleniscus Knight (1936) p. 522

***Soleniscus altonensis* (Worthen)**

Macrocheilus altonensis Meek and Worthen (1873) p. 593, pl. 28, fig. 8

Carb., "L. Coal Measures": Alton, Ill.

Macrocheli sp.? Walcott (1884) p. 260, pl. 24, fig. 8

L. Carb., ls.: Eureka district, Nevada

Soleniscus altonensis Keyes (1889b) p. 423

Keyes (1889c) [1890] p. 307

Soleniscus aff. *altonensis* Girty (1909c) p. 108, pl. 11, fig. 6

Perm., Abo Ss.: Abo Canyon, N. Mex.

Girty (1910c) [1911] p. 51, pl. 6, fig. 7

Perm., phosphate beds of Park City Fm.: Thomas Fork, Wyo.

Soleniscus (*Macrochilina*) *altonensis* Knight (1931b) p. 199, pl. 26, fig. 1

Soleniscus? *anguliferus* (White) see *Girtyspira angulifera*

***Soleniscus aplatus* Mark**

Soleniscus aplatus Mark (1912) [1913] p. 318, pl. 16, fig. 19

Penn., Conemaugh Fm., Ames Ls. Mbr.: New Concord, Ohio

Soleniscus attenuatus Keyes 1889 see *Ianthinopsis regularis* (Cox)

Warthia sp. Winters (1963) p. 30

Soleniscus? *blairi* (Miller) see *Holopea blairi*

Soleniscus brevis White 1881 see **Ianthinopsis brevis**

Soleniscus brevis White, Mark 1912 see **Ianthinopsis paludinaeformis** (Hall)

Soleniscus carinatus (Stevens) see **Ianthinopsis regularis** (Cox)

Soleniscus cooperensis (Swallow) see **Holopea cooperensis**

Soleniscus danvillensis (Stevens)

Loxonema danvillensis Stevens (1858) p. 259

Carb., "Coal Measures": Danville, Ill.

Sphaerodoma danvillensis Girty (1915a) p. 198

Soleniscus (*Macrochilina*) *danvillensis* Knight (1931b) p. 199

[Knight suggested that use of this specific name for additional material, be discontinued, as the original species description is inadequate by currently accepted standards.]

Soleniscus fusiformis (Hall) [not Swallow 1840] see **Ianthinopsis regularis** (Cox)

Soleniscus glaber Cumings

Soleniscus glaber Cumings (1906) p. 1363, pl. 24, figs. 9, 9a

Miss., Salem Ls.: Spargen Hill, Ind.

Girty (1915a) p. 196

Soleniscus gracilis (Cox)

Macrocheilus gracilis Cox (1857) p. 570, pl. 8, figs. 11, 11a

Carb., "Coal Measures": Bonharbour, Daviess County, Ky.

Keyes (1888) [1889a] p. 239

Carb., "L. Coal Measures": Des Moines, Iowa

Macrocheilus paludinaeformis Herrick (1888c) p. 122, pl. 10, fig. 10

Carb., "Coal Measures": Fultonham, Ohio

Soleniscus gracilis Keyes (1889b) p. 423, pl. 20, fig. 6

Keyes (1889g) [1890] p. 307

Keyes (1891) [1892] p. 262

Carb., "L. Coal Measures": Des Moines, Iowa

[Knight 1931b] p. 215 questioned the citations of Herrick (1888) and of Keyes (1889b, 1889g, 1891).]

Soleniscus gracilis Keyes (1891) [1892] p. 262

Carb., "L. Coal Measures": Clinton, Mo.

Weller (1898) p. 569

Carb., "L. Coal Measures": Iowa; Missouri

Soleniscus (*Macrochilina*) *gracilis* Knight (1931b) p. 199, 213

[Knight suggested that use of this specific name for additional material, be discontinued, as the original species description is inadequate by currently accepted standards.]

Soleniscus hallanus (Geinitz)

Macrocheilus hallanum Geinitz (1866) p. 5, table 1, fig. 7

Penn., "Dyas": Nebraska

Soleniscus hallanus Keyes (1889g) [1890] p. 308

Sphaerodoma hallana Girty (1915a) p. 199

Soleniscus (*Macrochilina*) *hallanus* Knight (1931b) p. 199

[Knight suggested that use of this specific name for additional material be discontinued, as the original species description is inadequate by currently accepted standards.]

Soleniscus? hallii (Norwood and Pratten)

Loxonema hallii (Norwood and Pratten (1855) p. 77, pl. 9, figs. 11a, b

L. Carb., "Coal Measures": Galatia, Ill.; Wabash River below New Harmony, Ind.

Soleniscus? hallii Girty (1915a) p. 196

Soleniscus humilis (Keyes)

Macrocheilus humilis Keyes (1888) [1889] p. 239, pl. 12, fig. 1

Carb., "L. Coal Measures": Des Moines, Iowa

Soleniscus humilis Keyes (1889b) p. 423, pl. 20, fig. 4

Keyes (1889g) [1890] p. 308

Keyes (1891) p. 262

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1892b) p. 23

Carb., "L. Coal Measures": Near Des Moines, Iowa

Sphaerodoma humilis Girty (1915a) p. 199

Sphaerodoma humilis? Morningstar (1922) p. 262

Penn., Harrison "ore": Jackson County, Ohio

Soleniscus (Macrochilina) humilis Knight (1931b) p. 199

[Knight suggested that use of this specific name for additional material be discontinued, as the original species description is inadequate by currently accepted standards.]

Soleniscus kansasensis (Swallow)

Macrocheilus kansasensis Swallow (in Shumard and Swallow, 1858) p. 201

Carb., "U. Coal Measures": Missouri; Willow Springs, Kans.

Soleniscus kansasensis Keyes (1889b) p. 423

Keyes (1889g) [1890] p. 308

Sphaerodoma kansasensis Girty (1915a) p. 199

Soleniscus (Macrochilina) kansasensis Knight (1931b) p. 199

[Knight suggested that use of this specific name for additional material be discontinued, as the original species description is inadequate by currently accepted standards.]

Soleniscus klipparti (Meek) see **Ianthinopsis klipparti**

Soleniscus medialis Herrick 1887 see **Ianthinopsis medialis**

Soleniscus missouriensis (Swallow)

Macrocheilus missouriensis Swallow (in Shumard and Swallow, 1858) p. 201

Carb., "L. Coal Measures": Howard County, Mo.

Soleniscus missouriensis Keyes (1894b) [1895] p. 211

Carb., "U. Coal Measures": Kansas City, Mo.

Sphaerodoma missouriensis Girty (1915g) p. 199

Soleniscus (Macrochilina) missouriensis Knight (1931b) p. 199

[Knight suggested that use of this specific name be discontinued for additional material, as the original species description is inadequate by currently accepted standards.]

Soleniscus newberryi (Stevens) see **Ianthinopsis regularis** (Cox)

Soleniscus paludinaeformis (Hall) see **Ianthinopsis paludinaeformis**

Soleniscus cf. paludiniformis [sic] (Hall) see **Ianthinopsis paludinaeformis**

Soleniscus philipi Winters

Soleniscus philipi Winters (1963) p. 47, pl. 5, figs. 3, 4

Perm., Supai Fm.: E. Arizona

?**Soleniscus planus** White 1881 see **Ianthinopsis regularis** (Cox)

Soleniscus politus (Stevens)

Loxonema polita Stevens (1858) p. 260

Carb., "Coal Measures": Danville, Ill.

Sphaerodoma polita Girty (1915a) p. 200

Soleniscus (Macrochilina) politus Knight (1931b) p. 199

[Knight suggested that use of this specific name for additional material be discontinued, as the original species description is inadequate by currently accepted standards.]

Soleniscus ponderosa (Swallow)

- Macrocheilus ponderosus* Swallow (in Shumard and Swallow, 1858) p. 202
 Carb., "U. Coal Measures": Valley of the Verdigris River, Kans.
 Herrick (1888c) p. 122, pl. 10, fig. 6
 Carb., "Coal Measures": Fultonham, Ohio
Sphaerodoma ponderosa Keyes (1889g) [1890] p. 306
 Keyes (1894b) [1895] p. 213
 Carb., "Coal Measures": Kansas City, Mo.
 ?*Sphaerodoma ponderosa* Girty (1915a) p. 200
Sphaerodoma ponderosa Morgan (1924) pl. 50, fig. 8
 Penn., Belle City Ls.: Stonewall quad., Oklahoma
Soleniscus (*Macrochilina*) *ponderosa* Knight (1931b) p. 199

Soleniscus symmetrica (King)

- Machrochilina symmetrica* Frebold (1931b) p. 17, pl. 1, fig. 31
 Perm. (L. Zechstein): E. Greeland
 [No synonymy is given of this European species.]
Soleniscus? terranovicus (Dawson) see *Zygopleura terranovica*

Soleniscus typicus Meek and Worthen

- Soleniscus typicus* Meek and Worthen (1860) [1861] p. 467
 Carb., "U. Coal Measures": Springfield, Ill.
Loxonema nitidula Meek and Worthen (1860) [1861] p. 465
 Carb., "U. Coal Measures": Springfield, Ill.
Soleniscus typicus Meek and Worthen (1866a) p. 384, pl. 31, figs. 15a, b
 Carb., "U. Coal Measures": Springfield, Ill.
Polyphemopsis nitidula White (1882) p. 370
 Carb., "Coal Measures": Eugene, Vermilion County, Ind.
 [Knight (1931b) p. 207 did not endorse White's (1882) identification and suggested the possibility of reassignment.]
Soleniscus typicus White (1884a) p. 187, pl. 8, figs. 18, 19
 Carb.: No locality cited
 White (1884b) p. 152, pl. 34, figs. 18, 19
 Carb., "U. Coal Measures": Springfield, Ill.
Polyphemopsis nitidula White (1884b) p. 163, pl. 27, figs. 7, 8
 Carb., "Coal Measures": Eugene, Vermilion County, Ind.
Polyphemopsis nitidula Meek and Worthen (1886a) p. 374, pl. 31, figs. 9a, b
 Carb., "U. Coal Measures": Springfield, Ill.
 Keyes (1889b) p. 423, pl. 20, fig. 8
 Keyes (1889g) [1890] p. 308
 [Knight (1931b) p. 207 questioned Keyes' (1889b) identification.]
Meekospira nitidula Ulrich (1897) p. 1079
Soleniscus typicus Mark (1912) [1913] p. 317, pl. 16, fig. 16
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Glouster; Ames Ls. Mbr.: New Concord, Portersville Ls.: Portersville, Ohio
Bulimorpha nitidula Price (1914b) p. 547
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Bruceton Mills, W. Va.
Soleniscus typicalis Girty (1915a) p. 196
 Sayre (1930) [1931] p. 148, pl. 16, fig. 8
 Penn., Drum Ls., oolitic mbr.: Turner and Independence, Kans.

- Soleniscus (Soleniscus) typicus* Knight (1931b) p. 184, 193, 200, 204, figs. 1a-k; pl. 27, fig. 8
Penn., top of Labette Sh.: St. Louis, Mo.
- Soleniscus typicus* Knight (1936) p. 522, 523
Knight (1941) p. 324, pl. 93, figs. 2a-f
U. Carb.: Springfield, Ill.
- Knight (1944) p. 479, pl. 196, figs. 15, 16
Penn., Des Moines Ser.: Mississippi Valley
- Hoare (1961) p. 188, pl. 23, figs. 3, 4
M. Penn., Tiawah Ls.: Barton County, Mo.

***Soleniscus welleri* Knight**

- Soleniscus (Macrochilina) welleri* Knight (1931b) p. 219, pl. 23, figs. 1a-d
Penn., top of Labette Sh.: St. Louis, Mo.

***Soleniscus* species of authors**

- Macrocheilus spiratus* M'Coy, Swallow (in Swallow and Hawn, 1858) p. 196
L. Perin.: Kansas
[Assigned here by Weller (1898) p. 571.]
- Macrocheilus* sp.? Walcott (1884) p. 260, pl. 24, fig. 8
Herrick (1887a) p. 21, pl. 2, fig. 2
Carb., "Coal Measures": Flint Ridge, Ohio
Herrick (1887a) pl. 3, fig. 1
Carb., "Coal Measures": Flint Ridge, Ohio
- Macrocheilus* sp. Cumings (1906) p. 1341, pl. 24, figs. 3, 3a
Miss., Salem Ls.: Spergen Hill, Ind.
- Macrocheilina?* sp. a. Girty (1908a) [1909] p. 489, pl. 23, fig. 20
Perm., Delaware Mountain Gr.: Guadalupe Mts., Tex.
- Macrocheilina?* sp. b. Girty (1908a) [1909] p. 389
Perm., Delaware Mountain Gr.: Delaware Mts., Tex.
- Macrocheilus* sp. Girty (1909b) p. 44
Miss., Caney Sh.: Atoka and McAlester quads., Oklahoma
- Soleniscus* sp. Easton (1962) p. 101, pl. 13, fig. 19
U. Miss., Heath Fm.: Central Montana

SOLENISCUS (BULIMORPHA) Whitfield 1882

- Type species: *Bulimella bulimiformis* Hall (1858) p. 29
Bulimorpha Whitfield (1882a) p. 74
Soleniscus (Bulimorpha) Knight (1931b) p. 192
[Knight (1931b) p. 192 reduced this name to subgeneric rank under *Soleniscus* Meek and Worthen. He restored it to full generic rank (1936) p. 523.]
- Soleniscus (Bulimorpha) bulimiformis* Knight 1931 see *Bulimorpha bulimiformis***

SOLENISCUS (CYLINDRITOPSIS) Gemmellaro 1889

- Type species: *Cylindritopsis ovalis* Gemellaro (1889) p. 114
(S.D. Cossmann 1909b, p. 104)
Cylindritopsis Gemmellaro (1889) p. 113
Soleniscus (Cylindritopsis) Knight (1931b) p. 193
[Knight (1931b) p. 192 reduced this name to subgeneric rank under *Soleniscus* Meek and Worthen. He restored it to full generic rank (1936) p. 523.]
- Soleniscus (Cylindritopsis) vaningeni* Knight 1931 see *Oncochilus vaningeni***

SOLENISCUS (MACROCHEILUS) Phillips 1841 [not Kirby 1838]

[This name is a suppressed objective synonym of *Macrochilina* Bayle (1880).]

Soleniscus (Macrocheilus) fusiformis (Hall) see **Ianthinopsis regularis** (Cox)

Soleniscus? (Macrocheilus) medialis (Meek and Worthen) see **Ianthinopsis medialis**

Soleniscus (Macrocheilus) newberryi (Stevens) see **Ianthinopsis regularis** (Cox)

Soleniscus (Macrocheilus) paludinaeformis (Hall) see **Ianthinopsis paludinaeformis**

Soleniscus (Macrocheilus) ponderosus (Swallow) see **Ianthinopsis primigenius** (Conrad)

Soleniscus? (Macrocheilus) primigenius (Conrad) see **Ianthinopsis primigenius**

Soleniscus (Macrocheilus) texanus White 1884 see **Ianthinopsis primigenius** (Conrad)

Soleniscus (Macrocheilus) ventricosus (Hall) White 1884 [part] [fig. 12] see **Ianthinopsis brevis** (White)

Soleniscus (Macrocheilus) ventricosus (Hall) White 1884 [part] [fig. 11] see **Ianthinopsis paludinaeformis** (Hall)

SOLENISCUS (MACROCHILINA) Bayle 1880

Type species: *Buccinum acutum* Sowerby (1827) p. 127

Macrochilina Bayle (1880) p. 241

Soleniscus (Macrochilina) Knight (1931b) p. 192

[Knight (1931b) p. 192 reduced this name to subgeneric rank under *Soleniscus* Meek and Worthen; subsequently he (1936) p. 521, considered it a subjective synonym of *Soleniscus*.]

Soleniscus (Macrochilina) altonensis (Worthen) see **Soleniscus altonensis**

Soleniscus (Macrochilina) brevis (White) see **Ianthinopsis brevis**

Soleniscus (Macrochilina) danvillensis (Stevens) see **Soleniscus danvillensis**

Macrocheilus (Soleniscus) fusiformis? (Swallow) see **Ianthinopsis regularis** (Cox)

Soleniscus (Macrochilina) gracilis (Keyes) see **Soleniscus gracilis**

Soleniscus (Macrochilina) hallanus (Geinitz) see **Soleniscus hallanus**

Soleniscus (Macrochilina) hildrethii (Conrad) see **Ianthinopsis hildrethii**

Soleniscus (Macrochilina) humilis (Keyes) see **Soleniscus humilis**

Soleniscus (Macrochilina) intercalaris (Meek and Worthen) see **Ianthinopsis intercalaris**

Soleniscus (Macrochilina) kansasensis (Swallow) see **Soleniscus kansasensis**

Soleniscus (Macrochilina) klippiarti (Meek) see **Ianthinopsis klippiarti**

Soleniscus (Macrochilina) medialis (Meek and Worthen) see **Ianthinopsis medialis**

Soleniscus (Macrochilina) missouriensis (Swallow) see **Soleniscus missouriensis**

Soleniscus (Macrochilina) politus (Stevens) see **Soleniscus politus**

Soleniscus (Macrochilina) ponderosa (Swallow) see **Soleniscus ponderosa**

Soleniscus (Macrochilina) primigenius (Conrad) see **Ianthinopsis primigenius**

Soleniscus (Macrochilina) regularis (Cox) see **Ianthinopsis regularis**

Soleniscus (Macrochilina) regularis (Cox) var. Elias 1958 see **Ianthinopsis regularis**

Soleniscus (Macrochilina) texanus (White) see **Ianthinopsis primigenius** (Conrad)

Soleniscus (Macrochilina) welleri Knight 1931 see **Soleniscus welleri**

SOLENISCUS (SOLENISCUS) Meek and Worthen

Type species: *Soleniscus typicus* Meek and Worthen (1860) [1861] p. 467

Soleniscus Meek and Worthen (1860) [1861] p. 467

Soleniscus (Soleniscus) Knight (1931b) p. 193

Soleniscus (Soleniscus) typicus Meek and Worthen see **Soleniscus typicus**

SOLENOSPIRA Ulrich and Scofield 1897

Type species: *Eunema? pagoda* Salter (1859) p. 30

Solenospira Ulrich and Scofield (1897) p. 959

[Knight, Batten, and Yochelson (1960) p. 1291 considered this name a subjective synonym of *Ectomaria* Koken (1896).]

Solenispira [sic] *attenuata* (Hall) see *Ectomaria attenuata*

Solenospira illinoiensis S. Weller 1916 see *Stegocoelia* (*Stegocoelia*) *illinoiensis*

Solenospira pygmaea S. Weller 1916 see *Donaldina tenuis* (Koninck)

Solenospira turritella (Hall) see *Stegocoelia* (*Stegocoelia*) *turritella*

Solenispira vermicula (Hall) see *Murchisonia* (*Murchisonia*) *vermicula*

SPHAERODOMA Keyes 1890

Type species: *Stylifer primogenia* Conrad (1835) p. 267

Sphaerodoma Keyes (1889g) [1890] p. 303

[Knight, Batten, and Yochelson (1960) p. 1320 considered this name a subjective synonym of *Ianthinopsis* Meek and Worthen (1866).]

Sphaerodoma? alvensis (Beede) see *Girtyspira? alvensis*

Sphaerodoma brevis (White) Girty 1915 [pl. 24, figs. 8-8b] see *Leptoptygma simplex* (Knight)

Sphaerodoma brevis (White) see *Ianthinopsis paludinaeformis* (Hall)

Sphaerodoma brevis (White) Girty 1915 [pl. 24, figs. 9-12a] see *Ianthinopsis primigenius* (Conrad)

Sphaerodoma brevis (White) var. Girty 1915 see *Ianthinopsis paludinaeformis* (Hall)

Sphaerodoma carinata (Stevens) see *Ianthinopsis regularis* (Cox)

Sphaerodoma cooperensis (Swallow) see *Holopea cooperensis*

Sphaerodoma danvillensis (Stevens) see *Soleniscus danvillensis*

Sphaerodoma? fusiformis? (Hall) see *Ianthinopsis regularis* (Cox)

Sphaerodoma gracilis (Cox) Girty 1915 see *Leptoptygma virgatum* (Knight)

Sphaerodoma gracilis (Cox) Morgan 1924 see *Ianthinopsis paludinaeformis* (Hall)

Sphaerodoma hallana (Geinitz) see *Soleniscus hallanus*

Sphaerodoma hildrethii (Conrad) see *Ianthinopsis hildrethii*

Sphaerodoma humilis (Keyes) see *Soleniscus humilis*

Sphaerodoma intercalcaris (Meek and Worthen) see *Ianthinopsis intercalcaris*

Sphaerodoma kansasensis (Swallow) see *Soleniscus kansasensis*

Sphaerodoma Keyesi (Rowley) see *Ianthinopsis keyesi*

Sphaerodoma klippiarti (Meek) see *Ianthinopsis klippiarti*

Sphaerodoma littonana (Hall) see *Ianthinopsis littonanus*

Sphaerodoma littonana var. *genevievensis* (Meek and Worthen) see *Naticopsis* (*Naticopsis*) *genevievensis*

Sphaerodoma medialis (Meek and Worthen) see *Ianthinopsis medialis*

Sphaerodoma aff. *medialis* (Meek and Worthen) see *Ianthinopsis medialis*

Sphaerodoma melanoides (Whitfield) see *Ianthinopsis melanoides*

Sphaerodoma missouriensis (Swallow) see *Soleniscus missouriensis*

Sphaerodoma newberryi (Stevens) see *Ianthinopsis regularis* (Cox)

Sphaerodoma paludiniformis [sic] (Hall) see *Ianthinopsis paludinaeformis*

Sphaerodoma pinguis (Winchell) see *Ianthinopsis pinguis*

Sphaerodoma planus (White) see *Ianthinopsis regularis* (Cox)

Sphaerodoma polita (Stevens) see *Soleniscus politus*

Sphaerodoma ponderosa (Swallow) see *Soleniscus ponderosa*

Sphaerodoma primogenia (Conrad) see *Ianthinopsis primogenius*

- Sphaerodoma? primogenia* var. *intermedia* (Meek and Worthen) see *Ianthinopsis primogenius* (Conrad)
Sphaerodoma regularis (Cox) see *Ianthinopsis regularis*
Sphaerodoma aff. *S. regularis?* (Cox) see *Ianthinopsis regularis*
Sphaerodoma stinesvillensis (Cumings) see *Ianthinopsis stinesvillensis*
Sphaerodoma subcorpulenta (Whitfield) see *Ianthinopsis subcorpulentus*
Sphaerodoma tantilla (Rowley) see *Ianthinopsis tantilla*
Sphaerodoma texana (White) Keyes 1889 see *Ianthinopsis primogenius* (Conrad)
Sphaerodoma aff. *texana* Girty 1909 see *Ianthinopsis primogenius* (Conrad)
Sphaerodoma ventricosa (Hall) see *Ianthinopsis paludinaeformis*
Sphaerodoma worthenana (Miller) see *Ianthinopsis worthenana*
Sphaerodoma species of authors see *Ianthinopsis* species of authors

SPIRORBIS Verrill 1882

[This taxon is not a gastropod; it is now commonly considered a serpalid worm. One late Paleozoic species assigned to this taxon was reassigned.]

- Serpula* (*Spirorbis*) *Planorbites* Geinitz 1866 see *Straparollus* (*Amphiscapha*) *subrugosus* Meek and Worthen

SPIROSCALA Knight 1945

- Type species: *Spiroscala pagoda* Knight (1945b) p. 575
Spiroscala Knight (1945b) p. 574

Spiroscala conoides (Meek and Worthen)

- Pleurotomaria conoides* Meek and Worthen (1866c) [1867] p. 271 [not Deshayes 1831]
 Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.
 Meek and Worthen (1873) p. 603, pl. 28, fig. 1
 Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.
Pleurotomaria conformis Worthen (1882) p. 38
 Penn., Des Moines Ser.: Illinois
 Keyes (1894b) [1895] p. 138
 Carb., "U. Coal Measures": Kansas City, Mo.
Spiroscala conoides Knight (1945b) p. 575

Spiroscala conula (Hall)

- Pleurotomaria* (*Murchisonia*) *conula* Hall (1858) p. 26
 Miss., St. Louis Ls.: Spergen Hill, Ind.
 Whitfield (1882a) p. 84, pl. 9, fig. 17
 Miss., St. Louis Ls.: Spergen Hill, Ind.
 Hall (1883) p. 358, pl. 32, fig. 17
 Miss., St. Louis Ls.: Spergen Hill and Lanesville, Ind.
 Cumings (1906) p. 1354, pl. 26, fig. 17
 Miss., Salem Ls.: Spergen Hill, Paynters Hill, Romona, Stinesville, Ellettsville, and Harrodsburg, Ind.
Spiroscala conula Knight (1945b) p. 575

Spiroscala pagoda Knight

- Spiroscala pagoda* Knight (1945b) p. 575, pl. 79, figs. 5a, b
 Penn. Mineral Wells Fm., Keechi Creek Sh. Mbr.: 6 miles NNW of Mineral Wells, Tex.
 Knight, Batten, and Yochelson (1960) p. 1204, fig. 118, no. 3
 U. Perm.: North America

Spiroscala pulchra Batten

Spiroscala pulchra Batten (1958) p. 224, pl. 39, figs. 1, 2

Perm., l. part Leonard Ser. to Word Fm.: Altuda and Hess Canyon quads., Texas

Spiroscala rockymontana (Girty)

Pleurotomaria rockymontana Girty (1934a) p. 254–255, figs. 13–16

Penn., McCoy Fm.: Eagle County, Colo.

Spiroscala rockymontana Knight (1945b) p. 575

Spiroscala species of authors

cf. *Spiroscala* sp. Yochelson and Dutro (1960) p. 137, pl. 13, fig. 10

Perm. and Trias., Sadlerochit Fm.: Northern Alaska

STEGOCOELIA Donald 1889

Type species: *Murchisonia* (*Stegocoelia*) *compacta* Donald (1889) p. 624

Stegocoelia Donald (1889) p. 623

[Knight, Batten, and Yochelson (1960) p. I293 divided this taxon into three subgenera, all of which range into the late Paleozoic.]

Stegocoelia abrupta (Bell) see *Stegocoelia* (*Stegocoelia*) *abrupta*

Murchisonia* (*Stegocoelia*) *abrupta Bell 1929 see *Stegocoelia* (*Stegocoelia*) *abrupta*

Murchisonia* (*Stegocoelia*) *compactoidea Bell 1929 see *Stegocoelia* (*Stegocoelia*) *compactoidea*

Stegocoelia illinoisensis S. Weller 1916 see *Stegocoelia* (*Stegocoelia*) *illinoisensis*

Stegocoelia quadricostata H. Chronic 1952 see *Stegocoelia* (*Stegocoelia*) *quadricostata*

Stegocoelia turritella (Hall) see *Stegocoelia* (*Stegocoelia*) *turritella*

Stegocoelia wortheni Knight 1942 see *Stegocoelia* (*Stegocoelia*) *wortheni*

***Stegocoelia* species of authors** see *Stegocoelia* (*Stegocoelia*) species of authors

STEGOCOELIA (**STEGOCOELIA**) Donald 1889

Type species: *Murchisonia* (*Stegocoelia*) *compacta* Donald (1889) p. 624

Stegocoelia Donald (1889) p. 623

Stegocoelia (*Stegocoelia*) Knight, Batten, and Yochelson (1960) p. I293

Stegocoelia* (*Stegocoelia*) *abrupta (Bell)

Murchisonia (*Stegocoelia*) *abrupta* Bell (1929) p. 173, pl. 30, figs. 16, 17

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Stegocoelia abrupta Stacy (1953) p. 85, pl. 17, fig. 8; pl. 18, fig. 1

Miss., L. Windsor Ser.: Nova Scotia

Stegocoelia* (*Stegocoelia*) *compactoidea (Bell)

Murchisonia (*Stegocoelia*) *compactoidea* Bell (1929) p. 174, pl. 30, figs. 13–15a

Miss., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Stegocoelia* (*Stegocoelia*) *illinoiensis (S. Weller)

Solenospira illinoiensis S. Weller (1916) p. 256, pl. 18, figs. 21–23

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Stegocoelia illinoiensis Knight (1944) p. 459, pl. 185, fig. 18

Miss., Ste. Genevieve Ls.: Mississippi Valley

***Stegocoelia (Stegocoelia) quadricostata* H. Chronic**

- Stegocoelia quadricostata* H. Chronic (1952) p. 126, pl. 4, fig. 10
Perm., Kaibab Ls.: Walnut Canyon, Ariz.

***Stegocoelia (Stegocoelia) turritella* (Hall)**

- Murchisonia turritella* Hall (1856) p. 27
Miss., St. Louis Ls.: Spergen Hill, Ind.
Whitfield (1882a) p. 88, pl. 9, fig. 12
Miss., St. Louis Ls.: Spergen Hill, Ind.
Hall (1883) p. 361, pl. 32, fig. 12
Miss., St. Louis Ls.: Spergen Hill and Lanesville, Ind.
Ulrich (1897) p. 1022
Solenospira turritella Cumings (1906) p. 1359, pl. 26, fig. 12
Miss., Salem Ls.: Spergen Hill, Paynters Hill, Harrodsburg, Bloomington, Big Creek, Stinesville, and Romona, Ind.
Stegocoelia turritella Knight (1944) p. 459, pl. 185, fig. 19
Miss., Salem Ls.: Mississippi Valley

***Stegocoelia (Stegocoelia) wortheni* Knight**

- Loxonema quadri-carinatus* Worthen (1884) p. 7
Carb., "Coal Measures": Peoria County, Ill.
Worthen (1890) p. 140, pl. 23, figs. 9, 9a
Carb., "Coal Measures": Peoria County, Ill.
Murchisonia quadricarinata Keyes (1891) [1892] p. 254
Carb., "L. Coal Measures": Des Moines, Iowa
Orthonema quadricarinatum Warthin (1930) p. 53, pl. 7, fig. 22
Penn.: Oklahoma
Stegocoelia wortheni Knight (1942) p. 488 [for *Stegocoelia quadricarinata* Worthen, not M'Coy (1844)]
Knight (1944) p. 459, pl. 185, fig. 20
Penn.: Mississippi Valley

***Stegocoelia (Stegocoelia)* species of authors**

- Stegocoelia* sp. Easton (1942) pl. 11, fig. 6
Miss., Pitkin Ls.: Arkansas

STEGOCOELIA (TAOSIA) Girty 1939

- Type species: *Murchisonia copei* White (1881) p. 31
Taasia Girty (1939) p. 21
Stegocoelia (Taasia) Knight, Batten, and Yochelson (1960) p. I293

***Stegocoelia (Taasia) copei* (White)**

- Murchisonia copei* White (1881) p. 31, pl. 3, figs. 10a, b
Carb.: Near Taos, N. Mex.
Taasia copei Girty (1939) p. 22, figs. 1-7
Penn. and Perm., Magdalena Gr.: Taos, N. Mex.; McCoy, Colo., Franklin Mts., Vinton, Tex.
Stegocoelia (Taasia) copei Knight, Batten, and Yochelson (1960) p. I293, fig. 191, no. 14
M. Penn.: New Mexico
Stegocoelia (Taasia) cf. *S. (Taasia) copei* Sturgeon (1964a) p. 217, pl. 35, fig. 6
Penn., Allegheny Fm., Vanport Ls. Mbr.: Columbiana County, Ohio

Stegocoelia* (*Taasia*) *crenulata* (Girty)Taasia crenulata* Girty (1939) p. 26, figs. 8-11

Penn. and Perm., Magdalena(?) Gr.: La Luz Canyon, N. Mex.

Stegocoelia* (*Taasia*) *dozierensis* (Beede)Orthonema dozierensis* Beede (1907) p. 168, pl. 8, fig. 8

Perm., Quartermaster Fm.: Dozier, Tex.

Taasia dozierensis Knight (1940) p. 310, pl. 9, figs. 1a-d

Perm., Whitehorse Ss.: Collingsworth and Hall Counties, Tex.

Stegocoelia* (*Taasia*) *percostata* (Girty)Taasia percostata* Girty (1939) p. 25, figs. 12-14

Penn. and Perm., Magdalena(?) Gr.: La Luz Canyon, La Luz, N. Mex.

STEPHANOZYGA Knight 1930

[This name was proposed by Knight (1930) p. 15 as a subgenus of *Pseudozygopleura* Knight (1930). Knight (1944) p. 463 elevated it to generic rank. Knight, Batten, and Yochelson (1960) p. I313, considered it a subgenus of *Palaeostylus* Mansuy (1914).]

Stephanozyga nodosa* (Girty) see *Palaeostylus* (*Stephanozyga*) *nodosus***Stephanozyga subnodosa* (Knight) see *Palaeostylus* (*Stephanozyga*) *subnodosus*****STRAPAROLLUS Montfort 1810**Type species: *Straparollus dionysii* Montfort (1810) p. 174*Straparollus* Montfort (1810) p. 174

[Knight, Batten, and Yochelson (1960) p. I192 divided this taxon into six subgenera, five of which range into the late Paleozoic.]

Straparollus ammon* (White and Whitfield) see *Straparollus* (*Straparollus*) *ammon***Straparollus angularis* S. Weller 1900 see *Straparollus* (*Euomphalus*) *angularis******Straparollus barrisi* Winchell 1863 see *Platyschisma barrisi******Straparollus blairi* Miller 1891 see *Straparollus* (*Straparollus*) *blairi******Straparollus catilloides* (Conrad) Keyes 1891 see *Straparollus* (*Amphiscapha*) *subrugosus* Meek and Worthen*****Straparollus catilloides* (Conrad) see *Straparollus* (*Amphiscapha*) *catilloides******Straparollus cornudanus* Shumard 1859 see *Straparollus* (*Euomphalus*) *cornudanus******Straparollus kingi* E. Branson 1938 see *Straparollus* (*Straparollus*) *kingi******Straparollus latus* (Hall) see *Straparollus* (*Euomphalus*) *latus******Straparollus lens* (Hall) see *Pleurotomaria lens******Straparollus luxus* (White) see *Straparollus* (*Euomphalus*) *subplanus* (Hall)*****Straparollus macromphalus* Winchell 1863 see *Straparollus* (*Straparollus*) *macromphalus******Straparollus minutus* Bell 1929 see *Straparollus* (*Straparollus*) *minutus******Straparollus missouriensis* Miller and Gurley 1896 see *Straparollus* (*Straparollus*) *obtusus* (Hall)*****Straparollus northviewensis* E. Branson 1938 see *Straparollus* (*Straparollus*) *northviewensis******Straparollus obtusa* (Hall) see *Straparollus* (*Straparollus*) *obtusus******Straparollus ophirensis* (Hall and Whitfield) see *Straparollus* (*Straparollus*) *ophirensis******Straparollus pernodosus* (Meek and Worthen) see *Straparollus* (*Euomphalus*) *pernodosus***

Straparollus planidorsatus Meek and Worthen 1866 see *Straparollus* (*Euomphalus*) *planidorsatus*

Straparollus planispira (Hall) see *Straparollus* (*Straparollus*) *planispira*

Straparollus quadrivolvus (Hall) see *Straparollus* (*Straparollus*) *quadrivolvus*

Straparollus roberti (White) see *Straparollus* (*Euomphalus*) *roberti*

Straparollus savagei (Knight) see *Straparollus* (*Straparollus*) *savagei*

Straparollus similis Meek and Worthen 1861 see *Straparollus* (*Euomphalus*) *similis*

Straparollus similis var. *planus* Meek and Worthen 1861 see *Straparollus* (*Euomphalus*) *similis planus*

Straparollus spergenensis (Hall) see *Straparollus* (*Straparollus*) *spergenensis*

Straparollus cf. *spergenensis* (Hall) see *Straparollus* (*Straparollus*) *spergenensis*

Straparollus spergenensis var. *planorbiformis* (Hall) see *Straparollus* (*Straparollus*) *spergenensis planorbiformis*

Straparollus spirorbis (Hall) see *Straparollus* (*Straparollus*) *spirorbis*

Straparollus subquadratus (Meek and Worthen) see *Straparollus* (*Amphiscapha*) *subquadratus*

Straparollus umbilicatus (Meek and Worthen) see *Straparollus* (*Euomphalus*) *umbilicatus*

Straparollus utahensis (Hall and Whitfield) see *Straparollus* (*Euomphalus*) *utahensis*

Straparollus species of authors see *Straparollus* (*Straparollus*) species of authors

STRAPAROLLUS (AMPHISCAPHA) Knight 1942

Type species: *Straparollus* (*Euomphalus*) *reedsii* Knight (1934a) p. 159

Straparollus Montfort (1810) p. 174

Straparollus (*Amphiscapha*) Knight (1942) p. 488

Amphiscapha (*Amphiscapha*) Yochelson (1956b) p. 198

Straparollus (*Amphiscapha*) Knight, Batten, and Yochelson (1960) p. 1192

Straparollus (*Amphiscapha*) *catilloides* (Conrad)

Inachus catilloides Conrad (1842) p. 273, pl. 15, fig. 3

Carb.: Inclined plane of the Alleghany Mts., Pa.

Straparollus catilloides Keyes (1891) [1892] p. 255

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 160

Carb., "U. Coal Measures": Kansas City, Mo.; Atchison, Kans.

Euomphalus catilloides Girty (1903) p. 465

Penn., Hermosa Fm.: San Juan region and Sinbad Valley, Colo.; Penn. and

Perm., Maroon Fm.: Crested Butte district, Colorado

Raymond (1910) p. 157, pl. 25, fig. 5

Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Donohoe, Pa.

Raymond (1911) p. 95, pl. 5, fig. 7

Penn., Brush Creek Ls. Mbr.: Donohoe, Pa.

Schizostoma catilloides Price (1914b) p. 537

Penn., Conemaugh Fm., Ames and Brush Creek Ls. Mbrs.: Preston County, W. Va.

Girty (1915a) p. 177, 179, pl. 21, figs. 4-5b

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma

Euomphalus catilloides Mather (1915) p. 236, pl. 15, fig. 24

Penn., Morrow Ser.: Fayetteville and Kessler Mtn., Ark.; Gibson, Okla.

Price (1916) p. 728

Penn., Kanawha Fm., Winifrede Ls. Mbr.: Raleigh County; Eagle Ls., Fayette County, W. Va.

- Schizostoma catilloides* Plummer and Moore (1921) [1922] pl. 14, figs. 8, 9
Penn., Mineral Wells Fm.: Mineral Wells, Tex.
- Morningstar (1922) p. 255, pl. 15, figs. 19, 20
Penn., Pottsville Fm., Harrison "ore": Jackson County; Sharon "ore": Scioto County, Ohio; Lowellville Ls. Mbr.: Muskingum County; Boggs Mbr.: Muskingum County; 1. part Mercer and McArthur Mbrs.: general; black flint mbr.: Jackson and Vinton Counties, Ohio
- Morgan (1924) pl. 50, fig. 2
Penn., Boggy Fm.: Stonewall quad., Oklahoma
- Euomphalus catilloides* Croneis (1930) p. 80, pl. 20, fig. 12
Penn., Hale Fm.; Bloyd Sh., Brentwood Ls. Mbr.: Arkansas
- Schizostoma catilloides* Croneis (1930) p. 134, pl. 27, figs. 16-19
Penn., Atoka Fm.: Arkansas
- Morse (1931) p. 323, pl. 53, figs. 12, 13
Penn., Kendrick Sh., Magoffin Beds, and Saltlick Beds: Kentucky
- Straparollus (Euomphalus) catilloides* Knight (1934a) p. 155, pl. 23, figs. 2a, b; pl. 26, fig. 4
Penn.: Oklahoma; Missouri
- Straparollus (Amphiscapha) catilloides* Knight (1944) p. 465, pl. 188, figs. 23-25
Penn.: Mississippi Valley
- Amphiscapha catilloides* Plummer (1950) pl. 21, fig. 5
Penn., Canyon Gr.: From exposure 3 miles SE. of Placid, McCulloch County, Tex.
- Straparollus (Amphiscapha) catilloides* Sturgeon (1964a) p. 202, pl. 34, figs. 1-4; pl. 36, fig. 7
Penn., Allegheny Fm., Vanport Ls. Mbr.: Columbiana County; Columbiana Ls. Mbr.: Columbiana County, Ohio

***Straparollus (Amphiscapha) dextratus* (Yochelson)**

- Amphiscapha (Amphiscapha) dextrata* Yochelson (1956b) p. 225, pl. 13, figs. 1, 2, 5, table 10
Perm., Hueco Ls.: Otero County, N. Mex.

***Straparollus (Amphiscapha) elleri* (Burke)**

- Amphiscapha (Amphiscapha) elleri* Burke (1962) p. 124, fig. 1a-n
Penn., Conemaugh Fm., Carnahan Run Sh. Mbr.: Gosser Hill, Leechburg, Pa.

***Straparollus (Amphiscapha) giganteus* (Yochelson)**

- Amphiscapha (Amphiscapha) giganteus* Yochelson (1956b) p. 222, pl. 12, figs. 9-16, table 8
Perm., Putnam Fm., Coleman Junction Ls. Mbr.: S. of Coleman, Tex.

***Straparollus (Amphiscapha) hollingsworthi* Knight**

- Straparollus (Euomphalus) hollingsworthi* Knight (1934a) p. 155, pl. 21, figs. 4a-g
Penn., middle of Boggy Fm.: Pontotoc County, Okla.
- Amphiscapha (Amphiscapha) hollingsworthi* Yochelson (1956b) p. 223

***Straparollus (Amphiscapha) muricatus* Knight**

- Straparollus (Euomphalus) rugosus* (Hall) Meek (1872a) p. 230, pl. 6, figs. 5a, 5b; pl. 11, figs. 4a, b Carb., "U. Coal Measures": Nebraska City, Rock Bluff, Aspinwall, and Cedar Bluff, Nebr.; "Coal Measures": Kansas, Missouri, Iowa, Illinois
- Straparollus (Euomphalus) muricatus* Knight (1934a) p. 160, pl. 21, figs. 3a-f; pl. 26, fig. 3
L. Perm.: Oklahoma; Texas
- Straparollus (Amphiscapha) muricatus* Knight (1944) p. 465, pl. 188, figs. 40-42
Perm.: Midcontinent region

Amphiscapha (*Amphiscapha*) *muricata* Yochelson (1956b) p. 221, pl. 12, figs. 5-8, table 7
Penn., Pueblo Fm.: Saddle Creek, McCulloch County, Tex.; Thrifty Fm., Chaffin
and Crystal Falls Ls. Mbrs.: Eastland, Tex.

Amphiscapha muricata Mudge and Yochelson (1962) [1963] p. 92, pl. 17, figs. 1, 2
Perm., Beattie Ls., Florena Sh. Mbr.: Cowley County, Kans.

Straparollus (*Amphiscapha*) *proximus* Yochelson

Amphiscapha (*Amphiscapha*) *proxima* Yochelson (1956b) p. 223, pl. 12, figs. 17-26, table 9
Perm., Hueco Ls.: Otero County, N. Mex.

Straparollus (*Amphiscapha*) *reedsii* Knight

Straparollus (*Euomphalus*) *subrugosus* Meek and Worthen (1873) [part] pl. 29, figs. 11a-c
(not p. 606)

Penn., Root Sh., No. 8 coal: Near Springfield, Ill.

Straparollus (*Euomphalus*) *reedsii* Knight (1934a) p. 159, pl. 24, figs. 1-9; pl. 26, figs. 5a-c
Penn., St. Louis Ls. outlier: St. Louis County, Mo.

Straparollus (*Amphiscapha*) *reedsii* Knight (1942) p. 488

Knight (1944) p. 465, pl. 188, figs. 26-28

Penn., Des Moines Ser.: Mississippi Valley

Amphiscapha (*Amphiscapha*) *reedsii* Yochelson (1956b) p. 198

Straparollus (*Amphiscapha*) *reedsii* Sturgeon (1964a) p. 203, pl. 34, figs. 5, 6

Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Tuscarawas County; Vanport Ls.
Mbr.: Columbiana County, Ohio

Straparollus (*Amphiscapha*) *subquadratus* Meek and Worthen

Straparollus (*Euomphalus*) *subquadratus* Meek and Worthen (1870) [1871] p. 46

Carb., "U. Coal Measures": Montgomery County, Ill.

Meek and Worthen (1873) p. 605, pl. 29, figs. 12, 13

Carb., "U. Coal Measures": Montgomery County, Ill.

Euomphalus subquadratus Herrick (1887b) p. 147, pl. 14, fig. 9

Carb., "Coal Measures": Flint Ridge, Ohio

Straparollus subquadratus Keyes (1894b) [1895] p. 162

Carb., "U. Coal Measures": Kansas City, Mo.

Smith (1896) p. 40

Carb., "L. Coal Measures": White County, Ark.

Schizostoma subquadratus Girty (1915a) p. 177

Morgan (1924) pl. 50, fig. 3

Penn., Francis Fm.: Stonewall quad., Oklahoma

Straparollus (*Euomphalus*) *subquadratus* Knight (1934a) p. 162, pl. 22, figs. 2a-e; pl. 26,
fig. 2

Penn.: Oklahoma; Penn.(?) or Perm.(?): Texas

Straparollus (*Amphiscapha*) *subquadratus* Knight (1944) p. 465, pl. 188, figs. 29-31

Penn.: Mississippi Valley

Straparollus (*Amphiscapha*) *subrugosus* Meek and Worthen

Euomphalus rugosus Hall (1858) p. 722, pl. 29, figs. 14a-c [not Sowerby (1847)]

Carb., "Coal Measures": Illinois

Serpula (*Spirorbis*) *Planorbites* Geinitz (1866) p. 3, table 1, fig. 6

Carb., "U. Coal Measures": Nebraska

Straparollus (*Euomphalus*) *subrugosus* Meek and Worthen (1873) p. 606 (footnote) (not
pl. 29, fig. 11a-c)

Carb., "Coal Measures": Springfield, Ill.

Euomphalus rugosus Meek (1874b) p. 583

Carb., "Coal Measures": Illinois

Euomphalus (*Straparollus*) *subrugosus* Walcott (1884) p. 255, pl. 18, fig. 19

L. Carb.: Eureka district, Nevada

Euomphalus rugosus White (1884b) p. 161, pl. 32, figs. 11, 12

Carb., "Coal Measures": Indiana

Keyes (1888) [1889] p. 241

Carb., "L. Coal Measures": Des Moines, Iowa

Straparollus catilloides Keyes (1891) [1892] p. 255

Carb., "L. Coal Measures": Des Moines, Iowa

Euomphalus rugosus Woodruff (1906) p. 282, pl. 15B, figs. 7, 8

Carb.: Cedar Creek and Nehawka, Nebr.

Straparollus (*Euomphalus*) *subrugosus* Knight (1934a) p. 157, pl. 23, figs. 1a-1; pl. 26, figs. 6a, b

Penn.: Illinois, Iowa; Texas; Kansas; Oklahoma

Straparollus (*Amphiscapha*) *subrugosus* Knight (1944) p. 465, pl. 188, figs. 34-39

Penn.: Mississippi Valley

Hoare (1961) p. 179, pl. 23, figs. 9, 10

M. Penn., Tiawah Ls.: Barton County, Mo.

STRAPAROLLUS (EUOMPHALUS) Sowerby 1814

Type species: *Euomphalus pentangulatus* Sowerby (1812) p. 97

(S.D. Meek and Worthen (1866a) p. 158)

Straparollus Montfort (1810) p. 174

Euomphalus Sowerby (1814) p. 97

Straparollus (*Euomphalus*) Knight (1934a) p. 142

***Straparollus* (*Euomphalus*) *alaskensis* Yochelson and Dutro**

Straparollus (*Euomphalus*) *alaskensis* Yochelson and Dutro (1960) p. 133 pl. 12, figs. 10-14, 16-19

Perm., Siksikpuk Fm.; Perm. and Trias., Sadlerochit Fm.: Philip Smith quad., Alaska

Straparollus (*Euomphalus*) *ammon* (White and Whitfield) see *Straparollus* (*Straparollus*) *ammon*

***Straparollus* (*Euomphalus*) *angularis* (S. Weller)**

Straparollus angularis S. Weller (1900) p. 110, pl. 6, figs. 13, 14

Chonopectus ss.: Burlington, Iowa

S. Weller (1901) p. 178, pl. 18, figs. 26, 27

Miss., Kinderhook Ser.: Burlington, Iowa.

Euomphalus angularis Girty (1915a) p. 178

***Straparollus* (*Euomphalus*) *boonensis* (Swallow)**

Euomphalus boonensis Swallow (1863) p. 99

Miss., Encrinital ls.: Missouri

Girty (1915a) p. 178

***Straparollus* (*Euomphalus*) *brooksensis* Yochelson and Dutro**

Straparollus (*Euomphalus*) *brooksensis* Yochelson and Dutro (1960) p. 133, pl. 12, figs. 15, 20-23

Miss., Wachsmuth Ls.: Chandler Lake quad., Alaska

Straparollus (*Euomphalus*) *catilloides* (Hall) see *Straparollus* (*Amphiscapha*) *catilloides*

Straparollus (Euomphalus) cornudanus Shumard

Straparollus cornudanus Shumard (1859) p. 400

Carb., "Coal Measures": Sierra Cornudanus, and 4 miles W. of Sierra Hueco, El Paso County, Tex.

Euomphalus subquadratus White (1891) [part] pl. 3, fig. 9 (not p. 25)

Perm.: Military Crossing, Baylor County, Tex.

Straparollus (Euomphalus) cornudanus Yochelson (1956b) p. 212, pl. 9, figs. 3-8; pl. 10, figs. 1-8, table 2

Perm., Admiral Fm., Wildcat Creek Sh. Mbr.: Runnels County, Tex. Clyde Fm., Talpa Ls. Mbr.: Runnels County, Tex. Hueco Ls.: Orogrande quad., New Mexico

Straparollus (Euomphalus) cornudanus Kemp (1957) p. 975, pl. 123, figs. 1-5

Perm., Belle Plains Fm., Elm Creek Ls. Mbr.: Baylor County, Tex.

Straparollus (Euomphalus) exortivus (Dawson)

Euomphalus exortivus Dawson (1868) p. 308, fig. 118

Carb., ls.: East River, Pictou, Nova Scotia

Euomphalus exortivus? Beede (1911) p. 173

Carbonic fauna: Cape LeTrou, Grindstone Island, Quebec

Euomphalus exortivus Girty (1915a) p. 178

Euomphalus exortivus? Bell (1929) p. 175

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Straparollus (Euomphalus) glabribasis Yochelson

Straparollus (Euomphalus) glabribasis Yochelson (1956b) p. 215, pl. 11, figs. 16-23, table 3

Perm., Bone Spring Ls.: Baylor Hills, Tex.

Straparollus (Euomphalus) hollingsworthi Knight 1934 see **Straparollus (Amphiscapha) hollingsworthi**

Straparollus (Euomphalus) kaibabensis (H. Chronic)

Euomphalus pernodosus Meek and Worthen, White (1877) p. 158, pl. 12, figs. 2a, b

Carb.: Mesa, Carrizo River, Ariz.

Euomphalus kaibabensis H. Chronic (1952) p. 126, pl. 4, figs. 15-16c

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Straparollus (Euomphalus) kaibabensis Yochelson (1956b) p. 216, pl. 10, figs. 9-16, table 4

Perm., Leonard Ser. and Word Fm.: Hess Canyon quad., Texas; Colina Ls.: Benson quad., Arizona

Winters (1963) p. 40, pl. 6, figs. 2a-c

Perm., Supai Fm.: E. Arizona

Batten (1964) p. 3, figs. 1-3

Perm.: Faught Ridge, Ariz.

Straparollus (Euomphalus) latus (Hall)

Euomphalus latus Hall (1858) p. 605, pl. 12, figs. 7a, b

Miss., Burlington Ls.: Burlington, Iowa; Quincy, Ill.

Euomphalus latus? Herrick (1888a) p. 87, pl. 12, fig. 26

Miss., Waverly Gr. of former usage: Licking County, Ohio

Euomphalus latus Herrick (1888b) pl. 7, fig. 5

Miss., Waverly Gr. of former usage: Ohio

Straparollus latus Keyes (1889a) p. 292

Miss., Burlington Ls.: Burlington, Iowa

Keyes (1890a) p. 196, pl., figs. 1a, b

Miss., l. part Burlington Ls.: SE. Iowa

Straparollus latus Keyes (1894b) [1895] p. 158, pl. 51, fig. 9

Miss., Burlington Ls.: Springfield, Ash Grove, Osceola, Louisiana, and Hannibal, Mo.

Euomphalus latus Herrick (1893) [1895] pl. 18, fig. 5

Miss., freestone of Kinderhook age: Granville, Ohio

Girty (1915a) p. 178

Straparollus (Euomphalus) latus Knight (1944) p. 465, pl. 188, fig. 15

Miss., Meramec Ser.: Mississippi Valley

***Straparollus (Euomphalus) levicarinatus* Yochelson**

Euomphalus sulcifer Girty, Newell and others (1953) pl. 23, figs. 21–23

Straparollus (Euomphalus) levicarinatus Yochelson (1956b) p. 217, pl. 11, figs. 1–6, 8, 9, table 5

Perm., Word Fm.: Hess Canyon quad., Texas; Cherry Canyon Fm., Getaway Ls. Mbr.: Guadalupe Mts., Tex.; Bell Canyon Fm.: Guadalupe Mts., Tex.

***Straparollus (Euomphalus) multistriatus* (E. Branson)**

Euomphalus multistriatus E. Branson (1938a) p. 105, pl. 14, fig. 1

L. Miss.: Missouri

Straparollus (Euomphalus) muricatus* Knight 1934 see *Straparollus (Amphiscapa) muricatus

***Straparollus (Euomphalus) pernodosus* Meek and Worthen**

Straparollus (Euomphalus) pernodosus Meek and Worthen (1870) p. 45

Carb., "L. Coal Measures": Alton, Ill.

Meek and Worthen (1873) p. 604, pl. 29, fig. 14

Carb., "L. Coal Measures": Alton, Ill.

Keyes (1888) p. 241

Carb., "L. Coal Measures": Des Moines, Iowa

Straparollus pernodosus Keyes (1891) [1892] p. 256

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 161

Carb., "U. Coal Measures": Kansas City, Mo.

Euomphalus pernodosus Reagan (1904) p. 243, plate figs. 14a–e

Penn. and Perm., 1. part Aubrey Gr.: Aubrey Cliff, 1 mile NW. of White River, Ariz.

Euomphalus aff. *pernodosus* Girty (1909) p. 103

Perm., San Andres Ls.: Caballos Mts., N. Mex.

Straparollus (Euomphalus) pernodosus Knight (1934a) p. 143

Knight (1944) p. 465, pl. 188, figs. 20–22

Penn., Des Moines Ser.: Mississippi Valley

Yochelson (1956b) p. 211, pl. 9, figs. 1, 2

Carb., "L. Coal Measures": Alton, Ill.

***Straparollus (Euomphalus) planodorsatus* (Meek and Worthen)**

Euomphalus planodorsatus Meek and Worthen (1860) [1861] p. 462

Miss., Chester Ser.: Thompson's quarry, Randolph County, Ill.

Euomphalus perspicivus Swallow (1863) p. 98

Miss., Kaskaskia Ls. of former usage: No locality cited

Straparollus planidorsatus Meek and Worthen (1866a) p. 302, pl. 24, figs. 2a–c

Miss., Chester Ser.: Thompson's quarry, Randolph County, Ill.

Keyes (1894b) [1895] p. 160

Miss., Kaskaskia Ls. of former usage: Ste. Mary, Mo.

- Euomphalus planidorsatus* Girty (1915a) p. 178
 Girty (1915c) p. 38, pl. 2, figs. 1, 2
 Miss., "Boone" chert: Batesville, Ark.
Straparollus planidorsatus Snider (1915) p. 117
 Miss., Mayes, Fayetteville and Pitkin Fms.: NE. Oklahoma
Straparollus (*Euomphalus*) *planidorsatus* Knight (1944) p. 465, pl. 188, figs. 13, 14
 Miss., Chester Ser.: Mississippi Valley
Straparollus cf. *Straparollus planidorsatus* [sic] Allen and Lester (1954) p. 111, pl. 28, fig. 32
 Miss.: N. of Hollow, Pope Creek at Hooker, Ga.

***Straparollus* (*Euomphalus*) *plummeri* Knight**

- Euomphalus* sp. Plummer and Moore (1921) [1922] pl. 19, figs. 13-15
 Penn., Graford Fm., Brownwood Sh. Mbr.: S. of Brooksmith, Tex.
Straparollus (*Euomphalus*) *plummeri* Knight (1934a) p. 152, pl. 22, figs. 3a-h; pl. 26, fig. 7
 Penn.: Texas; Kansas; Missouri
 Knight (1944) p. 465, pl. 188, figs. 32, 33
 Penn., Missouri Ser.: Mississippi Valley
Straparollus* (*Euomphalus*) *reedsii* Knight 1934 see *Straparollus* (*Amphiscapha*) *reedsii

***Straparollus* (*Euomphalus*) *roberti* (White)**

- Euomphalus roberti* White (1862) p. 22
 Miss., u. part Burlington Ls.: Burlington, Iowa
Straparollus roberti Keyes (1899e) [1890] p. 291
 Miss., Burlington Ls.: Burlington, Iowa
 Keyes (1890a) p. 197, pl., figs. 3a, b
 Miss., u. part Burlington Ls.: SE. Iowa
Euomphalus roberti Girty (1915a) p. 178
***Straparollus* (*Euomphalus*) *rugosus* (Hall) [not Sowerby 1847] Meek 1872 see *Straparollus* (*Amphiscapha*) *muricatus* (Knight)**

***Straparollus* (*Euomphalus*) *serratus* Knight**

- Straparollus* (*Euomphalus*) *serratus* Knight (1934a) p. 154, pl. 20, figs. 4a-c
 Penn., Bend Gr., Marble Falls Ls.: S. of San Saba, Tex.

***Straparollus* (*Euomphalus*) *similis* Meek and Worthen**

- Straparollus similis* Meek and Worthen (1861) [1862] p. 145
 Miss., St. Louis Ls.: Waterloo, Monroe County, Ill.
Straparollus similis var. *planus* Meek and Worthen (1861) p. 146
 Miss., St. Louis Ls.: Waterloo, Monroe County, Ill.
Straparollus similis Meek and Worthen (1866a) p. 286, pl. 19, figs. 4a, b, 5a-c
 Miss., St. Louis Ls.: Waterloo, Monroe County, Ill.
 Whitfield (1891) p. 589, pl. 14, figs. 9-11
 Miss., Maxville Ls.: Newtonville and near Maxville, Ohio
 Whitfield (1895) p. 476, pl. 10, figs. 9-11
 Miss., Maxville Ls.: Maxville and Newtonville, Ohio
Straparollus similis (?) S. Weller (1897) p. 270
 Miss., Batesville Ss.: Batesville, Ark.
Euomphalus similis Grabau and Shimer (1909) p. 659, fig. 909
 Miss., St. Louis Ls.: Ill.; Maxville, Ohio; Batesville, Ark.
Straparollus similis Morse (1911) p. 396, figs. 22a-c
 Miss., Maxville Ls.: Fultonham, White Cottage, Logan, and Maxville, Ohio

Euomphalus similis Girty (1915b) p. 120, pl. 11, fig. 4

Miss., Batesville Ss.: Batesville and Marshall quads., Arkansas

Girty (1915a) p. 178

Straparollus similis var. *planus* Girty (1915a) p. 178

S. Weller (1916) p. 259, pl. 17, figs. 15, 16

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Straparollus similis S. Weller (1916) p. 258, pl. 17, figs. 17-19

Miss., Ste. Genevieve Ls.: Waterloo, Monroe County, Ill.

Euomphalus similis Bell (1929) p. 176

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Croneis (1930) p. 62, pl. 15, fig. 23

Miss., Batesville Ss.: Arkansas

Straparollus (Euomphalus) similis Knight (1944) p. 465, pl. 188, figs. 10-12

Miss., Meramec Ser.: Mississippi Valley

***Straparollus (Euomphalus) subplanus* (Hall)**

Euomphalus subplanus Hall (1852b) p. 414, pl. 2, figs. 7a, b

Carb.: Stansbury's Island, Great Salt Lake, Utah; Big and Little Blue Rivers, Kans.

Euomphalus luxus White (1877) p. 94, pl. 5, figs. 13a, b

"Subcarb.": Ophir City, Utah

Hall and Whitfield (1877) p. 260, pl. 4, figs. 24, 25

Miss., near base of Wasatch Ls. of former usage: Dry Canyon, Oquirrh Mts., and

Logan Canyon, Wasatch Range, Utah

Phanerotinus subplanus S. Weller (1898) p. 420

Sardeson (1902) p. 303, pl. 17, fig. 2

Carb.: Humboldt, Iowa

Straparollus luxus Girty (1903) p. 312

Miss., Leadville Ls.: Crested Butte district, Colorado

Straparollus luxus Girty (1904a) p. 49, pl. 10, figs. 20, 21

Miss., Escabrosa Ls.: Bisbee quad., Arizona

Euomphalus luxus Girty (1915a) p. 178

Euomphalus laxus [sic] Girty (1920) pl. 54, figs. 8, 8a

L. Miss.: Dry Canyon, Oquirrh Mts., Utah

Girty (1927, pl. 22, figs. 42, 43)

Miss., Madison Ls.: Dry Canyon, Utah

Straparollus [sic] *luxus* Armstrong (1958) pl. 1, figs. 13, 14

Miss., Calosa Fm.: Ladron Mts., N. Mex.

Straparollus (Euomphalus) subplanus Yochelson (1962) p. 77, pl. 17, figs. 4, 5, 16

Miss., Redwall Ls.: Jerome Hill section, Arizona

***Straparollus (Euomphalus) subrugosus* Meek and Worthen 1873 [p. 606] see**

Straparollus (Amphiscapha) subrugosus

***Straparollus (Euomphalus) subrugosus* Meek and Worthen 1873 [pl. 29, figs.**

11a-c] see *Straparollus (Amphiscapha) reedsi* Knight

***Straparollus (Euomphalus) subsulcatus* Knight**

Straparollus (Euomphalus) subsulcatus Knight (1934a) p. 161, pl. 22, figs. 1a-f

Penn.: Oklahoma

***Straparollus (Euomphalus) tricarinatus* (Girty)**

Phymatifer? *tricarinatus* Girty (1927) p. 431, pl. 25, figs. 28-30

Miss., Brazer Ls.: Slug Creek quad., Idaho

Straparollus (Euomphalus) tricarinatus Knight (1934a) p. 143

Straparollus (Euomphalus) umbilicatus (Meek and Worthen)

Euomphalus umbilicatus Meek and Worthen (1860) [1861] p. 462

Carb., "L. Coal Measures": St. Clair County, Ill.

Straparollus umbilicatus Meek and Worthen (1866a) p. 362, pl. 29, figs. 1a-c

Carb., "L. Coal Measures": St. Clair County, Ill.

Euomphalus umbilicatus Girty (1915a) p. 178

Straparollus umbilicatus? Shimer (1926) p. 80

Perm.: Minnewanka region, Alberta

Straparollus (Euomphalus) umbilicatus Knight (1934a) p. 151, pl. 21, figs. 2a-c

Penn., l. part Fort Scott Ls.; Pawnee Ls.: St. Louis County, Mo.

Knight (1944) p. 465, pl. 188, figs. 18, 19

Penn., Des Moines Ser.: Mississippi Valley

Straparollus (Euomphalus) utahensis (Hall and Whitfield)

Euomphalus (Straparollus) utahensis Hall and Whitfield (1877) p. 259, pl. 4, figs. 20-23

Miss., near base of Wasatch Ls. of former usage: Dry Canyon, Oquirrh Mts.,

Ogden and Logan Canyons, Wasatch Range, Utah

Straparollus utahensis Girty (1889b) p. 573, pl. 66, figs. 10a-c

Miss., Madison Ls.: Yellowstone National Park

Girty (1903) p. 313

Dev. and Miss., Ouray Ls. unrestricted: San Juan region, Colorado; Miss.,

Leadville Ls.: Aspen district, Colorado

Euomphalus utahensis Girty (1912d) p. 48, pl. 6, figs. 11, 12

Miss., Madison Ls.: Park City district, Utah

Girty (1915a) p. 178

Girty (1920) pl. 54, fig. 9

L. Miss.: Dry Canyon, Oquirrh Mts., Utah

Girty (1927) pl. 22, fig. 44

Miss., Madison Ls.: Dry Canyon, Utah

Straparollus (Euomphalus) utahensis Yochelson (1962) p. 76, pl. 17, figs. 22, 23

Miss., Redwall Ls.: N. Arizona

Straparollus (Euomphalus) volborthi (Lintz and Lohr)

Elkoceras volborthi Lintz and Lohr (1958) p. 979, pl. 128, fig. 1

Miss.: Nevada

Straparollus (Euomphalus) volborthi Lintz (1962) p. 612

Straparollus (Euomphalus) species of authors

Euomphalus (resembles *E. quadratus* M'Coy) Dawson (1868) p. 308

Carb., ls.: Windsor and Gays River, Nova Scotia

Euomphalus — ? — White (1876a) p. 91

Penn. and Perm., l. part Aubrey Gr.: Confluence of Grand and Green Rivers, Utah

Euomphalus sp.? Herrick (1887a) p. 22, pl. 2, figs. 4, 5; pl. 5, fig. 5

Carb., "Coal Measures": Flint Ridge, Ohio

Euomphalus sp. Herrick (1888a) pl. 7, fig. 17

Miss., Waverly Gr. of former usage: Licking County, Ohio

Euomphalus (Straparollus) sp. Smith (1896) p. 40

Carb., "L. Coal Measures": Independence County, Ark.

Euomphalus sp.? Herrick (1900) pl. 2, fig. 15

Perm.: Tularosa, N. Mex.

Euomphalus sp. a. Girty (1909c) p. 104

Perm., San Andres Ls.: Caballos Mts., Nogal Creek and Elephant Butte, N. Mex.

Euomphalus sp. b. Girty (1909c) p. 105

Perm., Abo Ss.: Sandia Mts., N. Mex.; San Andres Ls.: Engle, San Andreas, Elephant Butte, and Caballos Mts., N. Mex.; Yeso Fm.: San Andreas, N. Mex.

Euomphalus sp. Morgan (1924) pl. 49, fig. 6

Penn., Caney Sh.: Stonewall quad., Oklahoma

Euomphalus? sp. (juvenile) H. Chronic (1952) p. 127, pl. 4, fig. 2

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

?*Straparollus* (*Euomphalus*) sp. 1. Yochelson (1956b) p. 218, pl. 11, figs. 7, 10, 11

Perm., Leonard Ser.: Sullivan Ranch Canyon, Altuda quad., Texas

Straparollus (*Euomphalus*) sp. A. Knight (1958) p. 75, pl. 8, I, figs. 20, 21

Miss.: Sonora, Mexico

Straparollus (*Euomphalus*) sp. B. Knight (1958) p. 76, pl. 8, D, fig. 9

Miss.: Sonora, Mexico

Straparollus (*Euomphalus*) sp. Yochelson and Dutro (1960) p. 134, pl. 12, figs. 24–26

Miss., Wachsmuth Ls.: Chandler Lake quad., Alaska

Straparollus (*Euomphalus*) sp. A. Easton (1962) p. 99, pl. 13, fig. 14

U. Miss., Health Fm.: Central Montana

Straparollus (*Euomphalus*) sp. B. Easton (1962) p. 99, pl. 13, fig. 15

Miss. or Penn., Cameron Creek Fm.: Central Montana

Straparollus (*Euomphalus*) sp. Winters (1963) p. 40, pl. 6, figs. 3a–c

Perm., Supai Fm.: E. Arizona

STRAPAROLLUS (LEPTOMPHALUS) Yochelson 1956

Type species: *Straparollus* (*Leptomphalus*) *micidus* Yochelson (1956b) p. 220

Straparollus Montfort (1810) p. 174

Straparollus (*Leptomphalus*) Yochelson (1956b) p. 197

Straparollus (*Leptomphalus*) *micidus* Yochelson

Straparollus (*Leptomphalus*) *micidus* Yochelson (1956b) p. 220, pl. 12, figs. 1–4, table 6

Perm., Bone Spring Ls.: Guadalupe Mts., Tex.

STRAPAROLLUS (SERPULOSPIRA) Cossmann 1915

Type species: *Serpularia centrifuga* Roemer (1843) p. 31

Straparollus Montfort (1810) p. 174

Serpulospira Cossmann (1915) [1916] p. 144

Straparollus (*Serpulospira*) Knight, Batten, and Yochelson (1960) p. I192

Straparollus (*Serpulospira*) *paradoxus* (Winchell)

Phanerotinus paradoxus Winchell (1863) [1864] p. 21

Yellow ss.: Burlington, Iowa

Hall (1879) p. 60, pl. 16, fig. 16

Keyes (1894b) [1895] p. 164, pl. 52, fig. 7

Miss., l. part Burlington Ls.: Louisiana, Mo

Eccyliomphalus paradoxus S. Weller (1895) p. 914

Miss., Chouteau Ls.: Missouri

S. Weller (1899) p. 48, pl. 5, fig. 6

Miss., Vermicular ss.: Northview, Webster County, Mo.

S. Weller (1900) p. 112, pl. 7, fig. 1

Chonopectus ss.: Burlington, Iowa

S. Weller (1901) p. 179

Miss., Kinderhook Ser.: Burlington, Iowa

S. Weller (1901) p. 143

Miss., Northview Sh.: Northview, Mo.

Phanerotinus paradoxus Girty (1904a) p. 49, pl. 10, fig. 19

Miss., Escabrosa Ls.: Bisbee quad., Arizona

E. Branson (1938b) p. 43,

L. Miss.: Missouri

Straparollus (Serpulospira) paradoxus Knight (1944) p. 465, pl. 188, fig. 9

Miss., Burlington Ls.: Mississippi Valley

Phanerotinus cf. *P. paradoxus* Knight (1958) p. 76, pl. 8, J, fig. 22

Miss.: Sonora, Mexico

STRAPAROLLUS (STRAPAROLLUS) Montfort 1810

Type species: *Straparollus dionysii* Montfort (1810) p. 174

Straparollus Montfort (1810) p. 174

Straparollus (Straparollus) Knight (1934a) p. 149

Straparollus (Straparollus) ammon (White and Whitfield)

Euomphalus ammon White and Whitfield (1862) p. 301

"Chemung Gr.": Burlington, Iowa

Straparollus ammon Winchell (1865) [1866] p. 132

"Millstone Grit": W. New York

Straparollus (Euomphalus) ammon Keyes (1889a) [1890] p. 295

Miss., Kinderhook Ser.: Burlington, Iowa

Straparollus ammon Keyes (1894b) [1895] p. 158, pl. 51, fig. 6

Miss., l. part Burlington Ls.: Louisiana, Mo.

S. Weller (1900) p. 109, pl. 6, fig. 22

Chonopectus ss.: Burlington, Iowa

Girty (1915a) p. 178

Butts (1926) p. 168, pl. 53, fig. 9

Miss., Burlington horizon, base of "Fort Payne" chert: Cedar Branch, NW. part of Lauderdale County, Iowa

Straparollus (Straparollus) blairi Miller

Straparollus blairi Miller (1891) p. 86, pl. 15, fig. 3

Miss., Chouteau Ls.: Sedalia, Mo.

Miller (1892a) [1894] p. 696, pl. 15, fig. 3

Miss., Chouteau Ls.: Sedalia, Mo.

Girty (1915a) p. 178

Branson (1938a) p. 105, pl. 14, figs. 20, 28, 29

L. Miss.: Missouri

Straparollus (Straparollus) kingi E. Branson

Straparollus kingi E. Branson (1938b) p. 42, pl. 24, figs. 28-30

L. Miss.: Missouri

Straparollus (Straparollus) macromphalus Winchell

Straparollus macromphalus Winchell (1863) [1864] p. 20

Yellow ss.: Burlington, Iowa

Winchell (1865) [1866] p. 132

Bed 1 and oolite bed 6: Burlington, Iowa

Keyes (1889e) [1890] p. 295

Miss., Kinderhook Ser.: Burlington, Iowa

Keyes (1890a) p. 197, pl. figs. 4a-c

Miss., Kinderhook Ser.: SE. Iowa

S. Weller (1900) p. 109, pl. 6, figs. 17, 18

Chonopectus ss.: Burlington, Iowa

Girty (1915a) p. 178

Straparollus (Straparollus) magnificus Shumard

Straparollus magnificus Shumard (1863) p. 110

Carb.: Kentucky

Anon. (1891) pl. 15, figs. 1-3

Carb.: Kentucky

Straparollus (Straparollus) minutus Koninck

Straparollus minutus Bell (1929) p. 175, pl. 30, figs. 18-21

Carb., L. Windsor Ser. Horton-Windsor district, Nova Scotia

[No synonymy is given of this European species.]

Straparollus (Straparollus) northviewensis E. Branson

Straparollus northviewensis E. Branson (1938b) p. 43, pl. 24, figs. 6-8, 10

L. Miss.: Missouri

Straparollus (Straparollus) obtusus (Hall)

Euomphalus obtusus Hall (1858) p. 523

"Chemung Gr.": Burlington, Iowa

Straparollus obtusus Keyes (1889e) [1890] p. 296

Miss., Kinderhook Ser.: Burlington, Iowa

Keyes (1890a) p. 197, pl., figs. 2a-c

Miss., Kinderhook Ser., oolite: SE. Iowa

Keyes (1894b) [1895] p. 157, pl. 51, fig. 5

Miss., l. part Burlington Ls.: Louisiana and Hannibal, Mo.

Straparollus missouriensis Miller and Gurley (1896b) p. 20, pl. 2, figs. 35, 36

Miss., Chouteau Ls.: Sedalia, Mo.

Straparollus obtusa S. Weller (1901) p. 191, pl. 17, figs. 6-8

Miss., Kinderhook Ser.: Burlington, Iowa

Straparollus obtusus Girty (1915a) p. 178

Thomas (1925) pl. 3, fig. 25

Miss., Kinderhook Ser. (oolitic beds): Humboldt, Iowa

E. Branson (1938a) p. 106, pl. 14, figs. 10-12

L. Miss.: Missouri

E. Branson (1938b) p. 44, pl. 24, figs. 4, 5

L. Miss.: Missouri

Straparollus (Straparollus) ophirensis (Hall and Whitfield)

Euomphalus (Straparollus) ophirensis Hall and Whitfield (1877) p. 261, pl. 4, figs. 26, 27

Miss., Waverly Gr. of former usage: Dry Canyon, Oquirrh Mts., Utah

Straparollus ophirensis Girty (1903) p. 312

Miss., Leadville Ls.: Crested Butte and Aspen, Colo.

Girty (1912d) p. 48, pl. 6, fig. 13

Miss., Madison Ls.: Park City district, Utah

Girty (1915a) p. 178

Girty (1920) pl. 54, figs. 7, 7a

L. Miss.: Dry Canyon, Oquirrh Mts., Utah

Girty (1927) pl. 22, figs. 45, 56

Miss., Madison Ls.: Dry Canyon, Utah

Straparollus (Straparollus) ophirensis Yochelson (1962) p. 75, pl. 17, figs. 17-21
Miss., Redwall Ls.: N. Arizona

***Straparollus (Straparollus) planispira* (Hall)**

Euomphalus planispira Hall (1856) p. 20

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Whitfield (1882a) p. 70, pl. 8, figs. 22, 23

Miss., St. Louis Ls.: Spergen Hill, Paynter's Hill, and Bloomington, Ind.

Hall (1883) p. 351, pl. 31, figs. 22, 23

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Straparollus planispira Cumings (1906) p. 1339

Girty (1915a) p. 178

***Straparollus (Straparollus) quadrivolvus* (Hall)**

Euomphalus quadrivolvus Hall (1856) p. 19

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Whitfield (1882a) p. 71, pl. 8, figs. 24, 25

Miss., St. Louis Ls.: Spergen Hill, Paynter's Hill, and Bloomington, Ind.

Hall (1883) p. 349, pl. 31, figs. 24, 25

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Straparollus quadrivolvus Cumings (1906) p. 1339

Girty (1915a) p. 178

Shimer (1926) p. 80

Miss.: Minnewanka region, Alberta

***Straparollus (Straparollus) savagei* Knight**

Euomphalus sp. Plummer and Moore (1921) [1922] pl. 7, figs. 9, 10

Penn., Smithwick Sh.: Junction of Bend-San Saba and Bend Chappel Roads,
Texas

Straparollus (Straparollus) savagei Knight (1934a) p. 149, pl. 21, figs. 1a-e

Penn., Bend Gr., Smithwick Sh.: San Saba County, Tex.

Straparollus (Straparollus) savagei Knight (1944) p. 465, pl. 188

Penn., Smithwick Sh.: SW. United States

Straparollus savagei Plummer (1950) pl. 17, figs. 1, 2

Smithwick Sh.: Marble Canyon, Sierra Diablo Mts., Culberson County;
Gibbons ranch, San Saba County, Tex.

***Straparollus (Straparollus) spergenensis* (Hall)**

Euomphalus spergenensis Hall (1856) p. 19

Miss., St. Louis Ls.: Spergen Hill and Bloomington, Ind.

Whitfield (1882a) p. 69, pl. 8, figs. 16-19

Miss., St. Louis Ls.: Spergen Hill, Paynter's Hill, Bloomington, and Ellettsville,
Ind.

Hall (1883) p. 350, pl. 31, figs. 16-19

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Straparollus spergenensis Keyes (1894b) [1895] p. 159

Miss., St. Louis Ls.: St. Louis, Mo.

Straparollus cf. *spergenensis* Girty (1903) p. 313

Miss., Leadville Ls.: Leadville district, Colorado

Straparollus spergenensis Cumings (1906) p. 1337, pl. 25, figs. 16-19

Miss., Salem Ls.: Spergen Hill, Paynter's Hill, Bloomington, Ellettsville, Stinesville, and Harrodsburg, Ind.

Grabau and Shimer (1909) p. 655, fig. 900c-e

Miss.: Indiana; Missouri

Girty (1915a) p. 178

Straparollus spergenensis? Snider (1915) p. 116

Miss., Mayes Fm.: NE. Oklahoma

Straparollus cf. *spergenensis* Mather (1915) p. 236, pl. 16, fig. 9

Penn., Morrow Ser.: Chouteau, Okla.

Straparollus (*Straparollus*) *spergenensis* Knight (1944) p. 465, pl. 188, figs. 6-8

Miss., Salem Ls.: Mississippi Valley

***Straparollus* (*Straparollus*) *spergenensis planorbiformis* (Hall)**

Euomphalus spergenensis var. *planorbiformis* Hall (1856) p. 20

Miss., St. Louis Ls.: Bloomington and Spergen Hill, Ind.

Whitfield (1882a) p. 70, pl. 8, figs. 20, 21

Miss., St. Louis Ls.: Spergen Hill, Paynter's Hill, and Bloomington, Ind.

Hall (1883) p. 351, pl. 31, figs. 20, 21

Miss., St. Louis Ls.: Spergen Hill, Lanesville, and Bloomington, Ind.

Straparollus spergenensis var. *planorbiformis* Girty (1915a) p. 178

***Straparollus* (*Straparollus*) *spirorbis* (Hall)**

Euomphalus spirorbis Hall (1860) p. 109

Miss., Goniatic Ls.: Rockford, Ind.

Euomphalus (*spirorbis*?) Herrick (1888a) p. 88, pl. 2, fig. 33

Miss., Waverly Gr. of former usage: Licking County, Ohio

Straparollus spirorbis Girty (1915a) p. 178

***Straparollus* (*Straparollus*) *springvalensis* (White)**

Euomphalus springvalensis White (1876b) [1877] p. 32

Miss., Kinderhook Ser.: Springvale, Humboldt County, Iowa

White (1880) [1883] p. 167, pl. 41, figs. 1a, b

Miss., Kinderhook Ser.: Springvale, Humboldt County, Iowa

Straparollus springvalensis Keyes (1890a) p. 195

Miss., Kinderhook Ser.: Humboldt County, Iowa

Omphalotrochus springvalensis Keyes (1894b) [1895] p. 162, pl. 51, fig. 7

Miss., l. part Burlington Ls.: Louisiana, Mo.

Euomphalus springvalensis Sardeson (1902) p. 305, pl. 17, fig. 1

Carb.: Humboldt, Iowa

Straparollus springvalensis Girty (1915a) p. 178

***Straparollus* (*Straparollus*) *subumbilicatus* Worthen**

Straparollus subumbilicatus Worthen (1890) p. 142, pl. 24, figs. 3-3b

Miss., Chester Ser.: Near Evansville, Randolph County, Ill.

Straparollus subumbilicatus Girty (1915a) p. 178

***Straparollus* (*Straparollus*) *triliris* Easton**

Straparollus triliris Easton (1943) p. 150, pl. 24, fig. 2

Miss., Pitkin Ls.: Cona Hill, Ark.

***Straparollus* (*Straparollus*) *varsoviensis* Worthen**

Straparollus varsoviensis Worthen (1890) p. 142, pl. 25, figs. 2, 2a

Miss., Keokuk Ls.: Warsaw, Ill.

Girty (1915a) p. 178

Straparollus (Straparollus) species of authors

- Straparollus* sp. (?) Shumard (1859) p. 399
Perm., gray ls.: Guadalupe Mts., Tex.
- Straparollus*? Herrick (1887b) pl. 14 fig. 3
Carb. "Coal Measures": Flint Ridge, Ohio
- Straparollus* sp. S. Weller (1897) p. 270
- Straparollus*? sp. S. Weller (1899) p. 43, pl. 5, fig. 14
Miss., Vermicular ss.: Northview, Webster County, Mo.
- S. Weller (1901) p. 178, pl. 15, fig. 25
Miss., Kinderhook Ser.: Burlington, Iowa
- S. Weller (1901) p. 154
Miss., Kinderhook Ser.: Burlington, Iowa
- S. Weller (1901) p. 143
Miss., Northview Sh.: Northview, Mo.
- S. Weller (1905) p. 623, 629
Miss., Kinderhook Ser.: Kinderhook, Ill.; Kinderhook Ser. "English River Grit": Maples Mill on English River, near Wellman, Washington County, Iowa
- Straparollus* (?) sp. A. Knight (1953) p. 89, pl. 246, figs. 28-32
Perm., Monos Fm., *Spiriferallina* zone: El Antimonio, W. Sonora, Mexico
- Straparollus* sp. Allen and Lester (1954) p. 110, pl. 28, fig. 31
Miss.: N. end of Ridge, Cave Springs area, Cherokee, Ga.

STREPTACIS Meek 1872

Type species: *Streptacis whitfieldi* Meek (1872a) p. 173

Streptacis Meek (1872a) p. 173

Streptacis cerithiformis (Meek and Worthen)

- Loxonema cerithiformis* Meek and Worthen (1860) [1861] p. 465
Carb., "U. Coal Measures": Springfield, Ill.
- Meek and Worthen (1866a) p. 379, pl. 31, figs. 13a-c
Carb., "U. Coal Measures": Springfield, Ill.
- Holopea cerithiformis* [sic] Girty (1915a) p. 189
- Streptacis cerithiformis* Knight (1931a) p. 4
- Microptychis cerithiformis* Knight, Batten, and Yochelson (1960) p. 1313, fig. 208, no. 1
M. Penn.: Illinois
- Streptacis cerithiformis* Sturgeon (1964b) p. 747, pl. 122, figs. 11, 12
Penn., "U. Coal Measures": Springfield, Ohio
- Streptacis crenimarginis** Knight 1931 see **Microptychis crenimarginis**

Streptacis meeki Knight

- Streptacis meeki* Knight (1931a) p. 14, pl. 2, figs. 2a, b; text fig. 1g
Penn., top of Labette Sh.: St. Louis, Mo.

Streptacis permiana (Beede)

- Loxonema permiana* Beede (1907) p. 167, pl. 8, figs. 14, 14a
Perm., Quartermaster Fm.: Dozier, Tex.
- Holopea permiana* Girty (1915a) p. 190
- Streptacis permiana* Knight (1940) p. 313, 344, pl. 9, figs. 2a-c
Perm., Rush Springs Fm., Dozier Ss. Mbr.: Collingsworth County, Tex.
- Streptacis*? cf. *S. permiana* Walter (1953) p. 699, pl. 73, fig. 6
Perm., Rustler Fm., gray ls. of l. mbr.: Culberson County, Tex.
- Walter (1954) p. 119 [Correction]

Streptacis scalpta Knight

- Streptacis scalpta* Knight (1931a) p. 12, pl. 2, figs. 4a-g, text figs. lf, k
 Penn., top of Labette Sh.: St. Louis, Mo.
 Knight (1944) p. 463, pl. 187, figs. 20, 21
 Penn.: Mississippi Valley

Streptacis whitfieldi Meek

- Streptacis whitfieldi* Meek (1871a) [1872] p. 173
 Carb., "Coal Measures": Danville, Ill.
 Meek and Worthen (1873) p. 596, pl. 29, fig. 1
 Carb., "Coal Measures": Danville, Ill.
 Keyes (1888) [1889] p. 241
 Carb., "L. Coal Measures": Des Moines, Iowa
 Knight (1931a) p. 3, 12, pl. 2, fig. 1; text figs. 1a-e, j
 Penn., top of Labette Sh.: St. Louis, Mo.
 Knight (1941) p. 338-339, pl. 48, figs. 4a, b
 U. Carb., roof of Danville coal: Danville, Ill.
 Knight (1944) p. 463, pl. 187, figs. 22-24
 Penn.: Mississippi Valley
 Knight, Batten, and Yochelson (1960) p. 1322, fig. 215, no. 1
 M. Penn.: Illinois

STREPTAXIS Gray 1837

[This name as used by S. Weller (1898) p. 611 is considered a typographical error rather than an emendation. The genus *Streptaxis* Gray does not range into the Paleozoic. The specific name referred to herein was reassigned to *Streptacis* Meek (1872).]

Streptaxis whitfieldi (Meek) see *Streptacis whitfieldi*

STRIANEMATINA H. Chronic 1952

Type species: *Strianematina pulchrelirata* H. Chronic (1952) p. 130

Strianematina H. Chronic (1952) p. 130

[Knight, Batten, and Yochelson (1960) p. 1203 considered this name a subjective synonym of *Hemizyga* (*Hemizyga*) Girty (1915).]

Strianematina marshalli (Roundy) see *Hemizyga* (*Hemizyga*) *marshalli*

Strianematina pulchrelirata H. Chronic 1952 see *Hemizyga* (*Hemizyga*) *pulchrelirata*

Strianematina species of authors see *Hemizyga* (*Hemizyga*) species of authors

STROBEUS Koninck 1881

Type species: *Strobeus ventricosus* Koninck (1881) p. 26

(S.D. Cossmann (1909b) p. 102)

Strobeus Koninck (1881) p. 25

[Knight, Batten, and Yochelson (1960) p. 1321 considered this name a subjective synonym of *Ianthinopsis* Meek and Worthen (1866).]

Strobeus hildrethii (Conrad) see *Ianthinopsis hildrethii*

Strobeus littonanus (Hall) see *Ianthinopsis littonanus*

Strobeus medialis (Meek and Worthen) see *Ianthinopsis medialis*

Strobeus paludinaeformis (Hall) see *Ianthinopsis paludinaeformis*

Strobeus primogenia (Conrad) see *Ianthinopsis primogenius*

Strobeus regularis (Cox) see *Ianthinopsis regularis*

Strobeus reticulatus Hyde 1953 see *Ianthinopsis reticulatus*

Strobeus ventricosus (Hall) see *Ianthinopsis paludinaeformis* (Hall)

Strobeus species of authors see *Ianthinopsis* species of authors

STROPHELLA Dawson 1895

Type species: *Strophites grandaeva* Dawson (1880) p. 413

Strophella Dawson (1895) p. 84

[Knight, Batten, and Yochelson (1960) p. I318 considered this name a subjective synonym of *Dendropupa* Owen (1861).]

Strophella grandaevus (Dawson) see ***Dendropupa grandaevus***

STROPHITES Dawson 1880 [not Deshayes 1832]

[This homonym was replaced by *Strophella* Dawson (1895). Knight, Batten, and Yochelson (1960) p. I318 considered *Strophella* Dawson a subjective synonym of *Dendropupa* Owen (1861).]

Strophites grandaevus Dawson 1880 see ***Dendropupa grandaevus***

STROPHOSTYLUS Hall 1859

Type species: *Strophostylus andrewsi* Hall (1860) p. 472

(S.D. Keyes (1890c) p. I113)

Strophostylus Hall (1859b) p. 303

Helicostylus Knight (1934a) p. 149

Strophostylus Knight (1936) p. 526

[Knight (1933a) p. 36 divided *Strophostylus* Hall (1859) into two subgenera, one of which ranges into the late Paleozoic. Knight (1936) p. 526, restored it to the original usage.]

Strophostylus bivolve (White and Whitfield)

Platyceras bivolve White and Whitfield (1862) p. 302

"Chemung Gr.": Burlington, Iowa

Platyceras bivolve? Herrick (1888) p. 92

Miss., Waverly Gr. of former usage: Licking County, Ohio

Platystoma bivolve Keyes (1889a) p. 243

Miss., Kinderhook Ser.: Burlington, Iowa

Keyes (1890d) [1891] p. 179

Strophostylus bivolvus Keyes (1890c) p. 1117, pl. 33, fig. 5

Keyes (1894b) [1895] pl. 53, fig. 4

Strophostylus bivolve S. Weller (1900) p. 108, pl. 5, figs. 4, 5

Chonopectus ss.: Burlington, Iowa

S. Weller (1901) p. 192, pl. 17, figs. 4, 5

Miss., Kinderhook Ser., bed 6: Burlington, Iowa

Strophostylus carleyanus (Hall) see ***Naticopsis (Naticopsis) carleyana***

Strophostylus girtyi (Knight)

Helicostylus girtyi Knight (1934a) p. 165, pl. 25, figs. 2a-f

Penn., Stanton Ls., Stoner Ls. Mbr.: Fredonia, Kans.

Newell (1935) p. 353, pl. 34, figs. 1-5

Penn., Olathe ("Stoner") Ls.: Fredonia, Kans.

Strophostylus girtyi Knight (1936) p. 530

Knight (1944) p. 475, pl. 194, figs. 8-11

Penn., Virgil Ser.: Mississippi Valley

Strophostylus inornatus (Walcott)

Platystoma inornatum Walcott (1884) p. 255, pl. 24, figs. 3, 3a

L. Carb.: Eureka district, Nevada

Strophostylus inornatus S. Weller (1898) p. 614

Carb.: Nevada

Strophostylus madisonensis* Worthen 1884 see *Naticopsis* (*Naticopsis*) *madisonensis

Strophostylus nana* (Meek and Worthen) see *Naticopsis* (*Naticopsis*) *nana

Strophostylus peoriensis* (McChesney) see *Naticopsis* (*Naticopsis*) *peoriensis

***Strophostylus permianus* Beede 1907 see *Naticopsis* (*Naticopsis*) *transversa* (Beede)**

Strophostylus remex* (White) see *Naticopsis* (*Naticopsis*) *remex

Strophostylus reversum* (Hall) see *Platyceras* (*Platyceras*) *reversum

***Strophostylus splendens* Girty**

Strophostylus splendens Girty (1915b) p. 125, pl. 11, figs. 11, 12a

Miss., Batesville Ss.: Ramsey Ferry, Spring Creek, and Round Mtn., Batesville quad.; Granny Mtn. and Marshall, Marshall quad., Arkansas

Strophostylus subovatus* (Worthen) see *Naticopsis* (*Naticopsis*) *subovata

***Strophostylus* species of authors**

Strophostylus? sp. Snider (1915) p. 117

Miss., Pitkin Ls.: NE, Oklahoma

Strophostylus sp. Shimer (1926) p. 81

Miss.: Minnewanka region, Alberta

Strophostylus? sp. C. Branson (1930) p. 57, pl. 14, figs. 11, 12

Perm., Phosphoria Fm., Pustula mbr.: Wind River Mts., Wyo.

Strophostylus sp. Easton (1942) pl. 10, fig. 18

Miss., Pitkin Ls.: Arkansas

Strophostylus sp. A. Elias (1958) p. 22, pl. 1, figs. 17-19

Miss., Redoak Hollow Fm.: Oklahoma

STROPHOSTYLUS (ANEMATINA) Knight 1933

Type species: *Strophostylus* (*Anematina*) *proutanus* Hall (1858) p. 30

Strophostylus (*Anematina*) Knight (1933a) p. 36

Elasmonema (*Anematina*) Knight (1936) p. 526

Anematina Knight (1944) p. 471

Strophostylus* (*Anematina*) *marshalli* (Roundy) see *Hemizyga* (*Hemizyga*) *marshalli

Strophostylus* (*Anematina*) *micula* Knight 1933 see *Anematina micula

Strophostylus* (*Anematina*) *minutissimus* Knight 1933 see *Anematina minutissimus

Strophostylus* (*Anematina*) *proutanus* Knight 1933 see *Anematina proutana

STYLIFER Broderip in Sowerby 1829

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Stylifer primogenia* Conrad 1835 see *Ianthinopsis primogenius

SUBULITES Emmons 1842

Type species: *Subulites elongatus* Emmons (1842) p. 392

Subulites Emmon (1842) p. 392

[This genus has a Paleozoic type species although it is not currently considered to range into the late Paleozoic.]

Subulites harrodsburgensis* Cumings 1906 see *Cerauncochlis harrodsburgensis

***Subulites* (*Polyphemopsis*) *inornatus* Meek and Worthen see *Ianthinopsis regularis* (Cox)**

Subulites* (*Polyphemopsis*) *peracuta* Meek and Worthen see *Meekospira peracuta

TAOSIA Girty 1939

[This name was reduced to subgeneric rank under *Stegocoelia* Donald (1889) by Knight, Batten, and Yochelson (1960) p. 1293.]

Taosia copei Girty 1939 see *Stegocoelia* (*Taosia*) *copei*

Taosia crenulata Girty 1939 see *Stegocoelia* (*Taosia*) *crenulata*

Taosia dozierensis Knight 1940 see *Stegocoelia* (*Taasia*) *dozierensis*

Taasia percostata Girty 1939 see *Stegocoelia* (*Taasia*) *percostata*

TAPINOTOMARIA Batten 1956

Type species: *Tapinotomaria rugosa* Batten (1956) p. 42

Tapinotomaria Batten (1956) p. 42

Tapinotomaria coronata Batten

Tapinotomaria coronata Batten (1958) p. 200, pl. 35, figs. 12, 13

Perm., Guadalupe Ser.: Carlsbad Caverns East quad., Eddy County, N. Mex.;
Guadalupe Mts., Tex.

Tapinotomaria costata Batten

Tapinotomaria costata Batten (1958) p. 194, pl. 34, figs. 1-14; text fig. 13

Perm., Leonard to Guadalupe Ser.: Altuda quad., Texas; Guadalupe Mts.,
N. Mex.

Tapinotomaria crassa Batten

Tapinotomaria crassa Batten (1958) p. 190, pl. 33, figs. 1-20; text figs. 11, 12

Perm., u. part Wolfcamp to Leonard Ser.: Guadalupe Mts., N. Mex.; Altuda
quad., Texas

Tapinotomaria duplicostata Batten

Tapinotomaria duplicostata Batten (1958) p. 198, pl. 34, figs. 15, 16

Perm. u. part Leonard Ser.: Hess Canyon quad., Texas

Tapinotomaria globosa Batten

Tapinotomaria globosa Batten (1958) p. 187, pl. 32, figs. 1-11; text fig. 10

Perm., l. part Wolfcamp to m. part Guadalupe Ser.: W. Texas; New Mexico

Tapinotomaria mirabilis Batten

Tapinotomaria mirabilis Batten (1958) p. 200, pl. 34, figs. 17-19

Perm., u. part Leonard Ser.: Hess Canyon quad., Texas

Tapinotomaria pyramidalis Batten

Tapinotomaria pyramidalis Batten (1958) p. 199, pl. 35, figs. 6-11

Perm., Cherry Canyon Fm.: Guadalupe Mts., Texas

Tapinotomaria rugosa Batten

Tapinotomaria rugosa Batten (1956) p. 42

Perm., Leonard Ser.: Glass Mts., W. Texas

Batten (1958) p. 190, pl. 32, figs. 12-23

Perm., Leonard Ser.: Sierra Diablo and Guadalupe Mts., Texas

Knight, Batten, and Yochelson (1960) p. 1212, fig. 124, no. 6

Perm.: Texas

Tapinotomaria submirabilis Batten

Tapinotomaria submirabilis Batten (1958) p. 200, pl. 34, figs. 20, 21; pl. 35, figs. 1-5

Perm., u. part Leonard Ser.: Hess Canyon quad., Texas

TOMOCERAS White and St. John 1867

Type species: *Cyrtolites? Gillianus* White and St. John (1867) p. 123

Tomoceras White and St. John (1867) p. 123

[Knight, Batten, and Yochelson (1960) p. 1213 considered this name a subjective synonym of *Porcellia* Leveillé (1835).]

Tomoceras gillianus (White and St. John) see *Porcellia gilliana*

TRACHYDOMA Meek and Worthen 1866

Type species: *Naticopsis nodosus* Meek and Worthen (1860) [1861] p. 463

Trachydoma Knight (1933b) p. 363

[This is an invalid emendation of *Trachydomia* Meek and Worthen (1866).]

Trachydoma moorei Knight 1933 see *Trachydomia moorei*

Trachydoma newelli Knight 1933 see *Trachydomia newelli*

Trachydoma nodosum (Meek and Worthen) see *Trachydomia nodosa*

Trachydoma nodulosum Knight 1933 see *Trachydomia nodulosa*

Trachydoma ortonii Knight 1933 see *Trachydomia ortonii*

Trachydoma oweni Knight 1933 see *Trachydomia oweni*

Trachydoma sayrei Knight 1933 see *Trachydomia sayrei*

Trachydoma whitei Knight 1933 see *Trachydomia whitei*

TRACHYDOMIA Meek and Worthen 1866

Type species: *Naticopsis nodosus* Meek and Worthen (1860) [1861] p. 463

Trachydomia Meek and Worthen (1866a) p. 364

Trachydoma Knight (1933b) p. 363

Trachydomia Knight (1941) p. 394

***Trachydomia moorei* Knight**

Trachydoma moorei Knight (1933b) p. 390, pl. 46, figs. 1a-f
Penn.: Kansas

***Trachydomia newelli* Knight**

Trachydoma newelli Knight (1933b) p. 385, pl. 45, figs. 3a-j
Penn.: Kansas

Trachydomia newelli Knight (1944) p. 475, pl. 194, figs. 31, 32
Penn., u. part Missouri Ser.: Mississippi Valley

***Trachydomia nodosa* (Meek and Worthen)**

Naticopsis nodosus Meek and Worthen (1860) [1861] p. 463

Carb., "L. Coal Measures": St. Clair County, Ill.

Naticopsis hollidayi Meek and Worthen (1860) [1861] p. 463

Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

Naticopsis nodosa Meek and Worthen (1866a) p. 366, pl. 31, figs. 2a, b

Carb., "L. Coal Measures": St. Clair County, Ill.

Naticopsis nodosa var. *hollidayi* Meek and Worthen (1866a) p. 367, pl. 31, figs. 3a, b

Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.

Herrick (1888b) pl. 11, fig. 9

Carb., "Coal Measures": Fultonham, Ohio

Trachydomia nodosum Keyes (1894b) [1895] p. 201

Carb., "U. Coal Measures": Kansas City, Mo.

Trachydoma nodosum Knight (1933b) p. 383, pl. 45, figs. 2a-l
Penn.: Illinois; Missouri

Trachydomia nodosa Knight (1936) p. 533

Knight (1941) p. 350, pl. 82, figs. 5a, b

Penn., McLeansboro Gr., Piasa Ls. (Sparland cyclothem): St. Clair County, Ill.

Knight (1944) p. 475, pl. 194, figs. 33-35

Penn., u. part Des Moines Ser.: Mississippi Valley

Knight, Batten, and Yochelson (1960) p. I277, fig. 182, no. 5

M. Penn.: Illinois

Trachydomia nodulosa* WorthenTrachydomia nodulosa* Worthen (1884) p. 8

Carb., "Coal Measures": Peoria County, Ill.

Worthen (1890) p. 146, pl. 23, figs. 11, 11a

Carb., "Coal Measures": Peoria County, Ill.

Trachydomia nodulosum Knight (1933b) p. 389, pl. 46, figs. 3a, b

Penn.: Illinois

Trachydomia nodulosa Knight (1944) p. 475, pl. 194, figs. 29, 30

Penn., Missouri Ser.: Mississippi Valley

Trachydomia ortonii* (Whitfield)Naticopsis ortonii* Whitfield (1882b) p. 230

Carb., "Coal Measures": Falls Township, Hocking County, Ohio

Whitfield (1891) p. 605, pl. 16, figs. 12, 13

Carb., "Coal Measures": Hocking County, Ohio

Whitfield (1895) p. 489, pl. 12, figs. 12, 13

Carb., "Coal Measures": Falls Township, Hocking County, Ohio

Trachydomia ortonii Knight (1933b) p. 388, pl. 46, fig. 5

Penn.: Ohio

Naticopsis ortonii Peck and MacFarland (1954) p. 305

Carb.: Fall Township, Hocking County, Ohio

[The authors intentionally use generic names originally designated by Whitfield in his collection.]

Trachydomia oweni* KnightTrachydomia oweni* Knight (1933b) p. 387, pl. 46, figs. 4a, b

Penn.: Missouri

Trachydomia oweni Knight (1944) p. 475, pl. 194, figs. 27, 28

Penn., l. part Des Moines Ser.: Mississippi Valley

Hoare (1961) p. 184, pl. 22, figs. 16, 17

M. Penn., Robinson Branch Ls.: Henry County, Mo.

Trachydomia pustulosa* Sayre 1930 see *Naticopsis* (*Naticopsis*) *scintilla* (Girty)**Trachydomia raymondi* Sturgeon***Trachydomia wheeleri* (Swallow) Raymond (1910) p. 144, 155, pl. 24, fig. 6

Penn., Allegheny Fm., Vanport Ls. Mbr.: Rochester, Pa.

Raymond (1911) p. 83-84, 95, pl. 3, fig. 6

Penn., Allegheny Fm., Vanport Ls. Mbr.: Rochester, Pa.

Trachydomia raymondi Sturgeon (1964b) p. 745, pl. 122, figs. 4-7

Penn., Allegheny Fm., Vanport Ls. Mbr.: "outcrops along R.R. between Rochester and New Brighton," Pa.

Trachydomia sayrei* KnightTrachydomia wheeleri* (Swallow) Sayre (1930) [1931] p. 151, pl. 18, figs. 4, 4a

Penn., Drum Ls., oolitic mbr.: Turner and Muncie, Kans.; Kansas City, Mo.

Trachydoma sayrei Knight (1933b) p. 385, pl. 45, figs. 4a-d
Penn.: Kansas City, Mo.

Trachydomia sayrei Knight (1944) p. 475, pl. 194, figs. 25, 26
Penn., u. part Missouri Ser.: Mississippi Valley

***Trachydomia wheeleri* (Swallow)**

Littorina wheeleri Swallow (1860) p. 658

Carb., "Coal Measures": Monroe County, Mo.

Naticopsis wheeleri Meek and Worthen (1873) p. 595, pl. 28, fig. 3

Carb., "U. and L. Coal Measures": Springfield and Alton, Ill.

White (1884b) p. 162, pl. 32, figs. 13, 14

Carb., "U. Coal Measures": W. part of Vigo County, Ind.

Trachydomia wheeleri Keyes (1889d) p. 195, fig. 2

Keyes (1891) [1892] p. 257

Carb., "L. Coal Measures": Des Moines, Iowa

Keyes (1894b) [1895] p. 200, pl. 55, fig. 8

Carb., "Coal Measures": Clinton and Kansas City, Mo.; Peoria, Springfield and Alton, Ill.; Des Moines, Iowa

Trachydomia wheeleri Woodruff (1906) p. 284, pl. 15, B fig. 4

Carb.: Weeping Water, Nebr.

Plummer and Moore (1921) [1922] pl. 19, figs. 23, 24

Penn., Graford Fm., Brownwood Sh. Mbr.: Near Brooksmith, Tex.

Morgan (1924) pl. 50, figs. 11, 11a

Penn., Holdenville Sh.: Stonewall quad., Oklahoma

Trachydomia wheeleri (Swallow) Raymond 1910 see *Trachydomia raymondi* Sturgeon

Trachydomia wheeleri (Swallow) Sayre 1930 see *Trachydomia sayrei* Knight

***Trachydomia whitei* Knight**

Naticopsis wheeleri var. White (1881) p. 33, pl. 4, figs. 6a, b

Penn.: Near Taos, N. Mex.

Trachydomia whitei Knight (1933b) p. 386, pl. 46, figs. 2a-d

Penn.: New Mexico; Kansas

***Trachydomia* species of authors**

Trachydomia sp. Morningstar (1922) p. 258

Penn., Pottsville Fm., l. part Mercer Mbr.: Muskingum County; Black Flint Mbr.:

Vinton County, Ohio

Sturgeon (1964a) p. 216, pl. 33, figs. 17, 18

Penn., Allegheny Fm., Putnam Hill Ls. Mbr.: Perry County; Vanport Ls. Mbr.:

Vinton County, Ohio

TREPOSPIRA Ulrich and Scofield 1897

Type species: *Pleurotomaria sphaerulata* Conrad (1842) p. 272

Trepostira Ulrich and Scofield (1897) p. 957

[This name in brackets was used by Elias (1958) p. 7 to indicate a transition between this genus and *Baylea* Koninck (1883). Knight, Batten, and Yochelson (1960) p. 1201 returned *Trepostira* to full generic rank and divided the taxon into two subgenera, both of which range into the late Paleozoic.]

Trepostira convexa Ulrich 1897 see *Trepostira* (*Trepostira*) *illinoisensis* (Worthen)

- Treospira depressa* (Cox) see *Treospira* (*Treospira*) *illinoisensis* (Worthen)
Treospira discoidalis Newell 1935 see *Treospira* (*Treospira*) *discoidalis*
Treospira haworthi Beede 1907 see *Cyclobathmus haworthi*
Treospira illinoisensis (Worthen) see *Treospira* (*Treospira*) *illinoisensis*
 Baylea [*Treospira*] *inflata* Elias 1958 see *Glabrocingulum* (*Glabrocingulum*) *inflatum*
Treospira sphaerulata (Conrad) see *Treospira* (*Treospira*) *sphaerulata*
 Baylea [*Treospira*] *stellaeformis* (Hyde) see *Glabrocingulum* (*Glabrocingulum*) *stellaeformis*

TREOSPIRA (ANGYOMPHALUS) Cossmann 1915

Type species: *Euomphalus radians* Koninck (1843) p. 442

Angyomphalus Cossmann (1915) p. 152

Treospira (*Angyomphalus*) Knight, Batten, and Yochelson (1960) p. 1201

***Treospira* (*Angyomphalus*) *excavata* Easton**

Angyomphalus? *excavatus* Easton (1962) p. 99, pl. 13, fig. 16

U. Miss. or Penn., Heath and Cameron Creek Fms.: Central Montana

***Treospira* (*Angyomphalus*?) species of authors**

Treospira (*Angyomphalus*?) sp. Yochelson and Dutro (1960) p. 136, pl. 12, figs. 35, 36

L. Miss., Lisburne (?) Gr.: Ipnayik River valley, N. Alaska

TREOSPIRA (TREOSPIRA) Ulrich and Scofield 1897

Type species: *Pleurotomaria sphaerulata* Conrad (1842) p. 272

Treospira Ulrich and Scofield (1897) p. 957

Treospira (*Treospira*) Knight, Batten, and Yochelson (1960) p. 1120

***Treospira* (*Treospira*) *discoidalis* Newell**

Treospira (*Treospira*) *discoidalis* Newell (1935) p. 350, pl. 35, figs. 8-11

Penn., Stanton Ls., Eudora Sh. Mbr.: Southern Montgomery County, Kans.;

Iola Ls., Avant Ls. Mbr.: Avant, Okla.

Knight (1944) p. 453, pl. 183, figs. 21-23

Penn., Missouri Ser.: Mississippi Valley

Kansana discoidalina Tasch (1953) p. 396, pl. 49, figs. 1, 2

Penn., Dover Ls.: Greenwood County; Dry Sh.: Lyon County, Elk County, Kans.

[Although this is a secondary subjective homonym, there seems little reason to propose a replacement name, for the species characters are not well known.]

***Treospira* (*Treospira*) *illinoisensis* (Worthen)**

Pleurotomaria depressa Cox (1857) p. 569, pl. 8, figs. 10, 10a [not Phillips 1836]

Carb., "Coal Measures": Bonharbour, Daviess County; and Airdrie, Muhlenberg County, Ky.

Pleurotomaria illinoensis Worthen (1884) p. 4

Carb., "Coal Measures": Mercer County, Ill.

Pleurotomaria modesta Keyes (1888) [1889] p. 238, pl. 12, figs. 2a, 2b

Carb., "L. Coal Measures": Des Moines, Iowa

Pleurotomaria Kentuckiensis Miller (1889) p. 421 [for *P. depressa* Cox 1857, not *P. depressa* Phillips 1836]

Pleurotomaria illinoensis Worthen (1890) p. 135, pl. 23, figs. 6-6b

Carb., "Coal Measures": Mercer County, Ill.

- Pleurotomaria modesta* Keyes (1891) [1892] p. 252
 Carb., "L. Coal Measures": Des Moines, Iowa
 Keyes (1892b) p. 22
 Carb., "L. Coal Measures": Near Des Moines, Iowa
- Pleurotomaria illinoisensis* Keyes (1894b) [1895] p. 139
 Carb., "Coal Measures": Clinton, Knob Noster, and Kansas City, Mo.
- Pleurotomaria modesta* Smith (1896) p. 39
 Carb., "U. Coal Measures": Crawford County, Ark.
- Trepostira depressa* Ulrich (1897) p. 958
Trepostira illinoisensis Ulrich (1897) p. 958, fig. h on p. 1081
Trepostira convexa Ulrich (1897) figs. d, e, f, g on p. 1081
Trepostira illinoisensis Raymond (1910) p. 157, pl. 26, figs. 3, 4
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Donohoe, Pa.
 Raymond (1911) p. 98, pl. 5, fig. 6
 Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Donohoe, Pa.
- Trepostira depressa* Girty (1915a) p. 158, pl. 21, figs. 6-11c
 Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma
 Plummer and Moore (1921) [1922] pl. 14, fig. 21; pl. 22, figs. 20-22; pl. 24, fig. 19
 Penn., Mineral Wells Fm.: Mineral Wells, Tex.; Graham Fm., Wayland Sh.
 Mbr.: S. of Gunsight, Tex.; u. part Harpersville Fm. of former usage (= Pueblo Fm.): W. of Thrifty, Tex.
- Morningstar (1922) p. 254
 Penn., Pottsville Fm., l. part Mercer Mbr.: Muskingum County, Ohio
- Morgan (1924) pl. 50, fig. 12
 Penn., Boggy Fm.: Stonewall quad., Oklahoma
- Morse (1931) p. 321, pl. 53, figs. 14-21
 Penn., Kendrick Sh. and Magoffin Beds: Kentucky
- Hoare (1961) p. 149, pl. 20, figs. 15, 17
 M. Penn., Tiawah Ls.: Barton County, Mo.
- Trepostira* (*Trepostira*) cf. *Trepostira* (*Trepostira*) *illinoisensis* Sturgeon (1964a) p. 203, pl. 34, figs. 7-15; pl. 36, fig. 6
 Penn., Allegheny Fm., Vanport Ls. Mbr.: Columbiana County; Putnam Hills Ls. Mbr.: Tuscarawas County, Ohio
- Trepostira* (*Trepostira*) *illinoisensis* Sturgeon (1964b) p. 742, pl. 121, figs. 10-14
 Penn., black ls. (= Seville Ls.): Mercer County, Ill.

***Trepostira* (*Trepostira*) *minima* Hoare**

- Trepostira* (*Trepostira*) *minima* Hoare (1961) p. 150, pl. 20, figs. 14, 16, 18
 M. Penn., Seville Ls.: Barton County, Mo.

***Trepostira* (*Trepostira*) *sphaerulata* (Conrad)**

- Pleurotomaria sphaerulata* Conrad (1842) p. 272, pl. 16, fig. 13
 Carb.: Inclined plane of the Allegheny Mts., Pa.
- Pleurotomaria coronula* Hall (1852b) p. 413, pl. 2, figs. 6a-d
 Carb.: Missouri River, below Weston, Mo.
- Pleurotomaria sphaerulata* Hall (1858) p. 722, pl. 29, fig. 13
 Penn., "Coal Measures": Indiana; Illinois; Iowa; Missouri; Kansas
 White (1884b) p. 161, pl. 32, figs. 1-3
 Carb., "U. Coal Measures": Indiana
- Keyes (1891) [1892] p. 253
 Carb., "L. Coal Measures": Des Moines, Iowa

- Pleurotomaria sphaerulata* Keyes (1894b) [1895] p. 141
 Carb., "U. Coal Measures": Kansas City, Mo.
- Trepostira sphaerulata* Ulrich (1897) p. 949, 957, figs. a, b, c, on p. 1081
 Carb., "Coal Measures": Springfield, Ill.
- Pleurotomaria sphaerulata* Crook (1912) p. 14, fig. 1
 Penn.: Vicinity of Springfield, Ill.
- Trepostira sphaerulata* Knight (1941) p. 354-355, pl. 31, figs. 4a-d
 U. Carb. "Inclined plane of the Allegheny Mountains," Pa.
 Knight (1944) p. 453, pl. 183, figs. 19, 20
 Penn., u. part Des Moines Ser.: Mississippi Valley
- Trepostira (Trepostira) sphaerulata* Knight, Batten, and Yochelson (1960) p. 1201, fig. 116,
 no. 4
 U. Penn.: Illinois

Trepostira (Trepostira) species of authors

- Trepostira (Trepostira)* sp. Yochelson and Dutro (1960) p. 135, pl. 13, figs. 1-3
 Perm., Siksipuk(?) Fm.: N. Alaska

TROCHITA Schumacher 1817

[This genus is not currently considered to range into the Paleozoic. Miller (1889) p. 428 by inference may have transferred the one assigned North American late Paleozoic species to *Pseudophorus* Meek (1873).]

Trochita? carbonaria Meek and Worthen 1966 see *Pseudophorus carbonaria*

TROCHUS Linnaeus 1758

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Trochus missouriensis Swallow 1860 see *Euconspira missouriensis*

Trochus? species of authors

- Trochus?* sp. Girty (1908a) [1909] p. 484
 Perm., m. part Capitan Ls.: Guadalupe Mts., Tex.

TROPIDOCYCLUS Koninck 1882

[Knight (1941) p. 360 noted that this name is a junior objective synonym of *Tropidodiscus* Meek and Worthen (1866).]

Tropidocyclus cordiformis Newell 1937 see *Sinuinitina cordiformis*

TROPIDODISCUS Meek and Worthen 1866

Type species: *Bellerophon curvilineatus* Conrad (1842) p. 269

Tropidodiscus Meek and Worthen (1866a) p. 160 [for *Tropidodiscus* Meek 1866]

[This genus has a Paleozoic type species, although it is not currently considered to range into the late Paleozoic. Two North American late Paleozoic species assigned to this taxon were not reassigned.]

Tropidodiscus cyrtolites (Hall)

- Bellerophon cyrtolites* Hall (1860) p. 107
 Miss., Goniatic ls.: Rockford, Ind.
 Winchell (1862) [1863] p. 426
 Miss., Marshall Fm.: Moscow, Mich.

- Winchell (1863) [1864] p. 18
 Yellow ss.: Burlington, Iowa
 Winchell (1865) [1865] p. 131
 Miss., Marshall Fm.: Hillsdale, Mich.
 Meek and Worthen (1866a) p. 160, pl. 14, figs. 8a, b
 Miss., Goniatic bed: Rockford, Ind.
 Winchell (1871) p. 257
 Miss., Waverly Gr. of former usage: Granville, Ohio
 Herrick (1888a) p. 88, pl. 2, figs. 27, 29; pl. 8, figs. 20, 21; pl. 9, figs. 29, 31
 Miss., Waverly Gr. of former usage: Licking County, Ohio
Tropidodiscus cyrtolites S. Weller (1899) p. 39, pl. 5, figs. 8-9
 Miss., Vermicular ss.: Northview, Webster County, Mo.
 S. Weller (1901) p. 193
 Miss., Northview Sh.: Northview, Mo.
 S. Weller (1906) p. 455, pl. 7, fig. 29
 Miss., Sulphur Springs Fm., Glen Park Ls. Mbr.: Glen Park, Mo.
Oxydiscus cyrtolites Butts (1940) [1941] p. 227, pt. 126, figs. 6-8, 21, 22
 Miss., Price Fm.: Richlands, Tazewell County, Va.; Cuyahoga Gr.: Licking County, Ohio

***Tropidodiscus venatus* (Girty)**

- Oxydiscus venatus* Girty (1910a) p. 231
 Miss., basal part Fayetteville Sh.: Fayetteville quad., Arkansas

TURBO Linnaeus 1758

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. Five formally named North American late Paleozoic species originally assigned to this taxon were not reassigned.]

***Turbo guadalupensis* Shumard**

- Turbo guadalupensis* Shumard (1859) p. 398
 Perm., Dark ls.: Guadalupe Mts., Tex.
 Girty (1908a) [1909] p. 483
 C. Branson (1964) p. 91

[Branson (1964) p. 91 suggested the "application" of Article 23, International Commission on Zoological Nomenclature, is "desirable" to make "the names of certain poorly founded taxa disappear from the literature".]

***Turbo helycinus* Shumard**

- Turbo helycinus*(?) Shumard (1859) p. 398
 Perm., White ls.: Guadalupe Mts., Tex.

***Turbo insectus* Conrad**

- Turbo insectus* Conrad (1835) p. 267, pl. 12, fig. 4
 Carb.: Inclined plane of Allegheny Mts., Pa.

***Turbo obesus* Shumard**

- Turbo obesus* Shumard (1858) p. 292
 Carb., "U. Coal Measures": Iowa Point, Nebr.
Turbo tabulatus* Conrad 1835 see *Worthenia tabulata

Turbo texana Shumard

Turbo Texanus Shumard (1859) p. 400

Carb., "Coal Measures": W. of Sierra Hueco, El Paso County, Tex.

Turbo texana S. Weller (1898) p. 637

Turbo species of authors

Turbo (two species) Dawson (1868) p. 309

Carb., ls.: Pugwash and Windsor, Nova Scotia

Turbo? sp. Girty (1908a) [1909] p. 484

Perm., Delaware Mountain Gr.: Delaware Mts., Tex.

Turbo n. sp. Plummer and Moore (1921) [1922] p. 46, pl. 7, fig. 11

Penn., Smithwick Sh.: Junction of Bend-San Saba and Bend-Chappel Roads, Tex.

TURBONELLINA Koninck 1881

Type species: *Turbonellina lepida* Koninck (1843) p. 450

(S.D. Knight (1937) p. 710)

Turbonellina Koninck (1881) p. 76

Turbonellina? lata Yochelson and Dutro

Turbonellina? lata Yochelson and Dutro (1960) p. 135, pl. 12, figs. 30-33

L. Miss., Lisburne Gr.: N. Alaska

TURBONILLA Leach 1826

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Turbonilla swallowiana Geinitz 1866 see *Donaldina swallowiana*

TURRITELLA Lamarck 1801

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. One formally named North American late Paleozoic species originally assigned to this taxon was reassigned.]

Turritella? stevensana Meek and Worthen 1866 see *Donaldina stevensana*

WARTHIA Waagen 1880

Type species: *Warthia brevisinuata* Waagen (1880) p. 161

(S.D. Koninck (1882) p. 81)

Warthia Waagen (1880) p. 131, 158

Warthia? americana Girty

Warthia americana Girty (1908a) [1909] p. 481, pl. 23, figs. 15-17

Perm., Delaware Mountain Gr.: Guadalupe Mts. and Delaware Mts., Tex.

Warthia? americana Yochelson (1960) p. 257, pl. 49, figs. 7, 8

Perm., probably Brushy Canyon Fm.: Guadalupe Mts., Tex.

Warthia angustior Yochelson

Warthia angustior Yochelson (1960) p. 256, pl. 49, figs. 1-6

Perm., Bone Spring Ls.: Hueco Mts.-Sierra Diablo Plateau, Tex.

Warthia crassus Yochelson

Warthia crassus Yochelson (1960) p. 255, pl. 49, figs. 14-20, table 8

Perm., Admiral and Clyde Fms.: N. central Texas; Hueco Ls.: Otero County, N. Mex.

Warthia fissus Yochelson

- Warthia fissus* Yochelson (1960) p. 258, pl. 48, figs. 15-19, table 11
Perm., Word Fm.: Glass Mts., W. Texas; Cherry Canyon Fm.: Guadalupe Mts., Tex.

Warthia kingi Moore

- Warthia kingi* Moore (1941) p. 147-149, pl. 3, figs. 11a, b, 12a-c, 13a, b; text fig. 5
Penn., Deer Creek Ls., Ozawkie Ls. Mbr.: W. of Lawrence, Kans.

Warthia saundersi Yochelson

- Warthia saundersi* Yochelson (1960) p. 259, pl. 49, figs. 9-13
Perm., Cherry Canyon Fm.: Guadalupe Mts., Tex.

Warthia waageni Yochelson

- Warthia waageni* Yochelson (1960) p. 256, pl. 49, figs. 21-26, table 10
Perm., Bone Spring Ls.: Hueco Mts.-Sierra Diablo Plateau, Tex.

Warthia welleri Yochelson

- ?*Warthia* sp. H. Chronic (1952) p. 114, pl. 2, figs. 3a-4
Perm., Kaibab Ls.: Walnut Canyon, Ariz.
Warthia welleri Yochelson (1960) p. 255, pl. 48, figs. 20-26, table 9
Perm., Bone Spring Ls.: Hueco Mts.-Sierra Diablo Plateau; Leonard Ser.: Glass Mts.; Word Fm.: W. Texas area
?*Warthia* sp. H. Chronic 1952 see *Warthia welleri* Yochelson

Warthia species of authors

- Mogulia?* sp. Girty (1909c) p. 102
Perm., San Andres Ls.: Caballos Mts., N. Mex.
Warthia sp. A. Knight (1953) p. 86, pl. 25B, figs. 9-12
Perm., Monos Fm.: NE. of El Antimonio, W. Sonora, Mexico
Warthia sp. Winters (1963) p. 30
Perm., Supai Fm.: E. Arizona

WORTHENIA Koninck 1883

- Type species: *Turbo tabulatus* Conrad (1835) p. 267
Worthenia Koninck (1883) p. 64
Worthenia alamillana Girty 1909 see *Baylea alamillana*

Worthenia arizonensis Winters

- Worthenia arizonensis* Winters (1963) p. 35, pl. 2, figs. 5a-7
Perm., Supai Fm.: E. Arizona
Worthenia beedei Mark 1912 see *Glabrocingulum* (*Glabrocingulum*) *beedei*
Worthenia beedei Knight 1940 [not Mark 1912] see *Worthenia whitehorsensis* Saunders and Yochelson

Worthenia castlemanensis Lintz

- Worthenia castlemanensis* Lintz (1958) p. 103, pl. 16, figs. 18-20
Penn., Conemaugh Fm.: Garrett County, Md.

Worthenia corrugata H. Chronic

- Worthenia corrugata* H. Chronic (1952) p. 122, pl. 4, figs. 1a-c; text fig. 6
Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Worthenia delicata (H. Chronic)

Platyworthenia delicata H. Chronic (1952) p. 121, pl. 3, figs. 8a-9; text fig. 5
Perm., Kaibab Ls.: Walnut Canyon, Ariz.

Worthenia (Orestes) intertexta (Meek and Worthen) see *Phymatopleura intertexta*

Worthenia? lasallensis? (Worthen) see *Goniasma lasallensis*

Worthenia longi Bell

Worthenia longi Bell (1930) p. 625, pl. 23, figs. 12, 13, 14

Carb., L. Windsor Ser.: Horton-Windsor district, Nova Scotia

Worthenia? marcouiana (Geinitz)

Murchisonia marcouiana Geinitz (1866) p. 11, table 1, fig. 16

Carb., "U. Coal Measures": Rock Bluff, Nebr.

Girty (1899a) p. 588

Carb., "U. Coal Measures": McAlester quad., Oklahoma

Worthenia? marcouiana? Girty (1903) p. 457

Penn., Rico Fm.: San Juan region, Colorado; Weber(?) Fm.: Leadville district, Colorado

Worthenia mississippiensis (White and Whitfield) see *Mourlonia mississippiensis*

Worthenia speciosa (Meek and Worthen)

Pleurotomaria speciosa Meek and Worthen (1860) [1861] p. 461

Carb., "Coal Measures": Hodge's Creek, Macoupin County, Ill.

Meek and Worthen (1866a) p. 352, pl. 28, figs. 5a-c

Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.

Keyes (1894b) [1895] p. 137

Carb., "U. Coal Measures": Kansas City, Mo.

Pleurotomaria cf. *speciosa* Smith (1896) p. 39

Carb., "U. Coal Measures": Poteau Mtn., Indian Territory [Oklahoma]

Worthenia speciosa Ulrich (1897) p. 953

Sayre (1930) [1931] p. 139, p. 13, figs. 11, 11b

Penn., Drum Ls., oolitic mbr.: Turner, Muncie, and Independence, Kans.

Knight (1944) p. 457, pl. 185, figs. 5-7

Worthenia strigillata (Herrick)

Pleurotomaria (Cyclonema?) strigillata Herrick (1888a) p. 86, pl. 1, figs. 10, 15; pl. 2, fig. 25

Miss., Waverly Gr. of former usage: Licking County, Ohio

Cyclonema strigillata Herrick (1888c) pl. 12, fig. 29

Miss., Waverly Gr. of former usage: Licking County, Ohio

Pleurotomaria strigillata Herrick (1888b) pl. 7, fig. 9

Miss., Waverly Gr. of former usage: Ohio

Herrick (1893) [1895] pl. 18, fig. 9

Miss., rocks of Kinderhook age: Granville, Ohio

Worthenia strigillata Hyde (1953) p. 327

Worthenia subscalaris (Meek and Worthen)

Pleurotomaria subscalaris Meek and Worthen (1860) [1861] p. 460

Carb., "L. Coal Measures": Macoupin County, Ill.

Meek and Worthen (1866a) p. 360, pl. 28, figs. 10a, b

Carb., "L. Coal Measures": Hodge's Creek, Macoupin County, Ill.

Keyes (1894b) [1865] p. 136

Carb., "U. Coal Measures": Kansas City, Mo.

Worthenia subscalaris Ulrich (1897) p. 953

***Worthenia tabulata* (Conrad)**

Turbo tabulatus Conrad (1835) p. 267, pl. 12, fig. 1

Carb.: Inclined plane of the Allegheny Mts., Pa.

Pleurotomaria tabulata Conrad (1842) p. 272

Carb.: Inclined plane of the Allegheny Mts., Pa.

Hall (1858) p. 721, pl. 29, figs. 12a, 12b

Carb., "Coal Measures": Pennsylvania; Indiana; Illinois

White (1880c) p. 519, pl. 18, figs. 4, 5

Carb., "Coal Measures": Rush Creek, Posey County, Ind.

White (1884b) p. 160, pl. 32, figs. 4, 5

Carb., "U. Coal Measures": Rush Creek, Posey County; Wagon-defeat Creek, Sullivan County; Warrick County, Ind.

Pleurotomaria tabulata Keyes (1894b) [1895] p. 142

Carb., "U. Coal Measures": Kansas City, Mo.

Worthenia tabulata Ulrich (1897) p. 949-950, 953

Worthenia tabulata? Girty (1903) p. 456

Penn., Hermosa Fm.: Sinbads Valley, Colo.

Worthenia tabulata Raymond (1910) p. 157, pl. 26, fig. 2

Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Donohoe, Pa.

Raymond (1911) p. 98, pl. 5, fig. 2

Penn., Brush Creek Ls. Mbr.: Donohoe, Pa.

Worthenia tabulata Girty (1915a) p. 152, pl. 22, figs. 1-4a

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma

Worthenia tabulata var. Girty (1915a) p. 154, pl. 22, figs. 5, 6

Penn., Wewoka Fm.: Wewoka and Coalgate quads., Oklahoma

Worthenia tabulata Mather (1915) p. 234, pl. 15, fig. 27

Penn., Morrow Ser.: Fayetteville, Ark.

Plummer and Moore (1921) [1922] pl. 22, figs. 17-19 [not pl. 19, fig. 25]

Penn., Graford Fm., Brownwood Sh. Mbr.: Kyle Mtn., Palo Pinto, Tex.; Graham Fm., Wayland Sh. Mbr.: S. of Gunsight, Tex.; NW. of Brownwood and N. of Wayland, Tex.

Morgan (1924) pl. 50, figs. 13, 13a

Penn., Francis Fm.: Stonewall quad., Oklahoma

Kelly (1930) p. 149, pl. 11, fig. 19

Penn., Saginaw Fm., ls. mbr.: Near Grand Ledge, Mich.

Croncis (1930) p. 86, pl. 22, fig. 9

Penn., Canyon Gr.: SE. of Placid, McCullach County, Tex.

Morse (1931) p. 231, pl. 53, fig. 2

Penn., Elkins Fork and Kendrick Shs.: Kentucky

Knight (1941) p. 385-386, pl. 34, figs. 1a-c

Penn., Conemaugh Fm., Brush Creek Ls. Mbr.: Ben's Creek, Pa.

Knight (1944) p. 457, pl. 185, fig. 4

Penn.: Mississippi Valley

Plummer (1950) pl. 21, figs. 4a, b

Penn., Canyon Gr.: SE. of Placid, McCullach County, Tex.

Knight, Batten, and Yochelson (1960) p. 1209, fig. 121 no. 3

U. Penn.: Pennsylvania

Hoare (1961) p. 158, pl. 20, fig. 12

M. Penn., sh. overlying Wier-Pittsburg coal: Henry County, Mo.

Worthenia cf. *W. tabulata* Sturgeon (1964a) p. 209, pl. 32, fig. 6

Penn., Washingtonville Sh.: Columbiana County, Ohio

Worthenia tabulata (Conrad) Plummer and Moore 1921 pl. 19, fig. 25 [not pl. 22, figs. 17-19] see ***Glabrocingulum (Ananias) welleri*** (Newell)

***Worthenia tenuilineata* Girty**

Worthenia tenuilineata Girty (1929b) p. 141, figs. 16-18 on p. 140

Miss., Fayetteville Sh.: Eureka Springs quad., Arkansas

***Worthenia textiliger* (Meek)**

Pleurotomaria textiliger Meek (1871d) [1872] p. 176

Miss., Waverly Gr. of former usage: Medina, Ohio

Meek (1875b) p. 314, pl. 13, figs. 7a, b

Miss., Waverly Gr. of former usage: Medina, Ohio

Herrick (1888) p. 46

Miss., Waverly Gr. of former usage: Bagdad and Lodi, Ohio

Worthenia textiliger S. Weller (1901) p. 201

***Worthenia thomasi* Elias**

Worthenia thomasi Elias (1958) p. 13, pl. 2, fig. 15; test fig. 4

Miss., Redoak Hollow Fm.: Oklahoma

***Worthenia whitehorsensis* Saunders and Yochelson**

Worthenia beedei Knight (1940) [not Mark 1912] p. 305-306, pl. 8, figs. 2

Perm., Rush Springs Fm., dolomite beds at base of Dozier Ss. Mbr.: Naco Butte

W. of Estelline, Hall County, Tex.

Worthenia whitehorsensis Saunders and Yochelson (1964) p. 1113

***Worthenia* species of authors**

Worthenia? sp. *a.* Girty (1903) p. 458

Penn., Weber (?) Fm.: Leadville district, Colorado

Worthenia? sp. *b.* Girty (1903) p. 458

Carb.: Glenwood Springs, Colo.

Worthenia? sp. Girty (1927) pl. 25, figs. 19, 20

Miss., Brazer Ls.: Slug Creek quad., Idaho

Walter (1953) p. 699-700, pl. 73, fig. 14

Perm., Rustler Fm., l. gray ls. mbr.: Culberson County, Tex.

Worthenia sp. H. Chronic (1952) p. 123, pl. 5, fig. 9

Perm., Kaibab Ls.: Walnut Canyon, Ariz.

WORTHENIOPSIS Böhm 1895

Type species: *Pleurotomaria margarethae* Kittl (1894) p. 114

Wortheniopsis Böhm (1895) p. 219

[This genus has a post-Paleozoic type species although there is no reason to question the assignment of late Paleozoic species to this taxon.]

***Wortheniopsis bicarinata* C. Branson**

Wortheniopsis [sic] *bicarinata* C. Branson (1930) p. 56, pl. 16, figs. 14-16

Perm., Phosphoria Fm., Rex Chert Mbr.: Fort Hall Indian Reservation, Idaho

Wortheniopsis?* [sic] *depressa Beede 1907 see *Cyclites depressa*

Wortheniopsis species of authors

Wortheniopsis [sic] sp. Beede (1907) p. 165, pl. 8, fig. 13
Perm., Quartermaster Fm., Dozier, Tex.

YUNNANIA Mansuy 1912

Type species: *Yunnania termieri* Mansuy (1912) p. 104
(S.D. Cossman (1918) p. 327)

Yunnania Mansuy (1912) p. 103

Yunnania leavenworthana (Hall) see *Amaurotoma leavenworthana*

Yunnania subangulatum (Hall) see *Amaurotoma subangulatum*

Yunnania subsinuata Knight 1933 see *Amaurotoma subsinuata*

Yunnania species of authors

Yunnania sp. Yochelson and Dutro (1960) p. 140, pl. 13, fig. 29
L. Miss.: Noatak quad., N. Alaska

YVANIA Fischer 1885

[Knight (1941) p. 387 noted that this name is a junior objective synonym of *Baylea* de Koninck (1883).]

Yvania adamsi (Worthen) see *Baylea adamsi*

Yvania? agnostica J. Weller 1929 see *Baylea capertoni* (Beede)

Yvania? alamillana (Girty) see *Baylea? alamillana*

Yvania? arenaria (Girty) see *Baylea? arenaria*

Yvania? delawarensis (Girty) see *Baylea? delawarensis*

Yvania giffordi (Worthen) see *Baylea giffordi*

Yvania gurleyi (Meek) see *Baylea gurleyi*

Yvania inclinata J. Weller 1929 see *Baylea inclinata*

Yvania knighti J. Weller 1929 see *Baylea knighti*

Yvania pusilla J. Weller 1929 see *Baylea pusilla*

Yvania salinensis Weller 1929 see *Baylea salinensis*

Yvania subconstricta J. Weller 1929 see *Baylea subconstricta*

Yvania supercrenata J. Weller 1929 see *Baylea supercrenata*

ZAPTYCHIUS Walcott 1883

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. When this genus was first described, it was thought to be from rocks of Carboniferous age.]

Zaptychius carbonaria Walcott

Zaptychius carbonaria Walcott (1883) p. 808, fig. 1

Base of Carb.: Eureka district, Nevada

Walcott (1884) p. 263, fig. 7

L. Carb.: Eureka district, Nevada

MacNeil (1939) p. 259, pl. 37, fig. 12

Cretaceous: Eureka district, Nevada

[This species was originally considered Carboniferous; subsequent mapping demonstrated that it comes from beds of Cretaceous age.]

ZONITES Montfort 1810

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the late Paleozoic. The one species assigned to it has not been reassigned.]

Zonites (Conulus) priscus Carpenter

- Zonites (Conulus) priscus* Carpenter (1867) p. 331, figs. a-c
 Carb., "Coal Formation": South Joggins, Nova Scotia
 Dawson (1868) p. 385, figs. 150a, b
 Carb., "Coal Measures": South Joggins, Nova Scotia
 Dawson (1880) p. 411, figs. 10, 11, 14d
 Carb., "Coal Measures": South Joggins, Nova Scotia
Zonites priscus White (1883) p. 453, pl. 2, figs. 11, 12
Zonites (Conulus) priscus Yen (1949) p. 237
 Systematic position uncertain

ZYGOPLEURA Koken 1892

[This genus has a post-Paleozoic type species; the genus is not currently considered to range into the Paleozoic. With ten exceptions formally named North American late Paleozoic species assigned to this taxon were reassigned.]

Zygopleura affinis Girty 1915 see *Palaeostylus (Pseudozygopleura) scitulus* (Meek and Worthen)

Zygopleura attenuata (Stevens)

- Chemnitzia attenuata* Stevens (1858) p. 259
 Carb., "Coal Measures": Danville, Ill.
Loxonema attenuatum Weller (1898) p. 334
Zygopleura attenuata Girty (1915a) p. 182
 Sayre (1930) [1931] p. 144, pl. 17, fig. 12
 Penn., Drum Ls., oolitic mbr.: Muncie, Kans.
 [Knight (1930) p. 21, 22, suggested use of this specific name for additional material be discontinued, as the original description is inadequate for identification by currently accepted standards.]
Zygopleura cara (Dawson) see *Palaeostylus (Pseudozygopleura) carus*
Zygopleura multicostata (Meek and Worthen) see *Palaeostylus (Pseudozygopleura) multicostatus*
Zygopleura nana Girty 1915 see *Palaeostylus (Pseudozygopleura) nanus*
Zygopleura nodosa Girty 1915 see *Palaeostylus (Stephanozyga) nodosus*

Zygopleura obsoleta (Warthin)

- Zygopleura obsoleta* Warthin (1930) p. 51, pl. 7, fig. 5
 Penn., Holdenville sh.: E. of Ada, Okla.

Zygopleura parva (Cox)

- Chinnitzia* [sic] *parva* Cox (1857) p. 567, pl. 8, figs. 3, 3a
 Penn., "Coal Measures": Daviess County, Ky.
Loxonema parvum S. Weller (1898) p. 335
Loxonema parvum? Girty (1903) p. 460
 Carb.: Glenwood Springs, Colo.
Zygopleura parva Girty (1915a) p. 183
Zygopleura parva? Girty (1915a) p. 184, pl. 25, figs. 3-3b
 Penn., Wewoka Fm.: Wewoka quad., Oklahoma.
Zygopleura parva Warthin (1930) p. 50, pl. 7, fig. 16
 Penn.: Oklahoma
 [Knight (1930) p. 21, 22, suggested use of this specific name for additional material be discontinued, as the original description is inadequate for identification by currently accepted standards.]

***Zygopleura plebeia* (Herrick)**

Loxonema plebium Herrick (1887b) p. 147, pl. 14, fig. 8

Carb., "Coal Measures": Flint Ridge, Ohio

Zygopleura plebeia Girty (1915a) p. 183

Zygopleura plebeia? Girty (1915a) p. 185

Penn., Wewoka Fm.: Coalgate quad., Oklahoma

Zygopleura plebeia Morse (1931) p. 324, pl. 53, fig. 22

Penn., Kendrick Sh.: Kentucky

[Knight (1930) p. 21, 22, suggested that use of this specific name for additional material be discontinued, as the original description is inadequate for identification by currently accepted standards.]

***Zygopleura plena* (Herrick)**

Loxonema sp. Herrick (1887a) p. 22, pl. 3, fig. 2

Carb.: Flint Ridge, Ohio

Loxonema plenum Herrick (1887b) p. 147

Zygopleura plena Girty (1915a) p. 183

Zygopleura plenum? Morningstar (1922) p. 258, pl. 16, figs. 1, 2

Penn., Pottsville Fm., l. part Mercer Mbr.: Perry and Muskingum Counties;

McArthur Ls.: Vinton County, Ohio

[Knight (1930) p. 21, 22, suggested that use of this specific name for additional material be discontinued, as the original description is inadequate for identification by currently accepted standards.]

***Zygopleura plicata* (Whitfield)**

Loxonema plicatum Whitfield (1882b) p. 231

Carb., "Coal Measures": Carbon Hill, Hocking County, Ohio

Whitfield (1891) p. 601, pl. 15, figs. 14, 15

Carb., "Coal Measures": Carbon Hill, Hocking County, Ohio

Whitfield (1895) p. 486, pl. 11, figs. 14, 15

Carb., "Coal Measures": Hocking County, Ohio

Girty (1903) p. 460

Penn., Rico Fm.: San Juan region, Colorado

Zygopleura plicata Price (1914b) p. 538, pl. 43, fig. 29

Penn., Conemaugh Fm., Ames Ls. Mbr.: Trowbridge and Fellowsville, W. Va.

Girty (1915a) p. 183

Morningstar (1922) p. 259

Penn., Pottsville Fm., l. part Mercer Mbr.: Perry and Licking Counties, Ohio

Sayre (1930) [1931] p. 144, pl. 17, fig. 5

[Knight (1930) p. 21, 22, suggested that use of this specific name for additional material be discontinued, as the original description is inadequate for identification by currently accepted standards.]

Peck and MacFarland (1954) p. 305

Carb.: Carbon Hill, Hocking County, Ohio

[The authors intentionally use generic names originally designated by Whitfield in his collection.]

Zygopleura rugosa (Meek and Worthen) see *Palaeostylus* (*Pseudozygopleura*) *scitulus* (Meek and Worthen)

Zygopleura scitula (Meek and Worthen) see *Palaeostylus* (*Pseudozygopleura*) *scitulus*

***Zygopleura swallovia* (Shumard)**

Chemnitzia Swallovia Shumard (1859) p. 399

Perm., ls.: Guadalupe Mts., Tex.

Loxonema swallovanum S. Weller (1898) p. 336

Zygopleura swallovia Girty (1908) [1909] p. 485

Perm., m. part Capitan Ls.: Guadalupe Mts., Tex.

Girty (1915a) p. 183.

[Knight (1930) p. 22 suggested that use of this specific name for additional material, be discontinued, as the original description is inadequate for identification by currently accepted standards.]

Zygopleura teres* Girty 1915 see *Palaeostylus (Pseudozygopleura) teres

***Zygopleura? terranovica* (Dawson)**

Macrocheilus Terranovicus Dawson (1883) p. 14

L. Carb., ls.: St. George's Bay, Newfoundland

Soleniscus? terranovicus S. Weller (1898) p. 571

L. Carb., ls.: St. George's Bay, Newfoundland

Zygopleura? terranovica Girty (1915a) p. 183, 197

L. Carb.: Nova Scotia

***Zygopleura trimera* (Warthin)**

Zygopleura trimera Warthin (1930) p. 50, pl. 7, fig. 15

Penn., Holdenville Sh.: E. of Ada, Okla.

***Zygopleura* species of authors**

Zygopleura sp. Price (1914b) p. 539, pl. 43, fig. 30

Penn. Conemaugh Fm., Ames Ls. Mbr.: Kingwood, W. Va.

Zygopleura sp. A. Elias (1958) p. 15, pl. 2, fig. 3

Miss., Redoak Hollow Fm.: Oklahoma

***Zygopleura* species of authors see *Palaeostylus* species of authors**

ZYGOPLEURA (CYCLOZYGA) Knight 1930

[This name was reduced to subgeneric rank under *Zygopleura* Koken (1892) by Elias (1958) p. 16. It was elevated to full generic level by Knight, Batten, and Yochelson (1960) p. 1315.]

Zygopleura (Cyclozyga) neotenica* Elias 1958 see *Cyclozyga neotenica

GENUS AND SPECIES INDETERMINATE

Pleurotomaria humilis (1862) [1863] p. 424 [not Hall 1856]

Miss., ss. of Marshall (?) Fm.: W. Michigan [Saunders and Yochelson (1964) p. 1114 consider this indeterminate]

Pleurotomaria? chesternensis Swallow (1863) p. 99 [not Meek and Worthen 1860] [Saunders and Yochelson (1964) p. 1113 consider this indeterminate]

Genus et species undet. 1. H. Chronic (1952) p. 133, pl. 5, fig. 8

Perm. Kaibab Ls.: Walnut Canyon, Ariz.

Genus et species undet. 2. H. Chronic (1952) p. 136, pl. 5, figs. 16, 17

Perm. Kaibab Ls.: Walnut Canyon, Ariz.

Other Permian platyceratids Yochelson (1956b) p. 260, pl. 23, figs. 21, 22, 27-29

Perm., Leonard Ser. and Bone Spring Ls.: Texas

Indeterminate bellcrophontaceans Yochelson and Dutro (1960) p. 132

Miss. and Perm.: N. Alaska

- Indeterminate euomphalaceans Yochelson and Dutro (1960) p. 135
Miss. and Perm.: N. Alaska
- Indeterminate murchisoniaceans Yochelson and Dutro (1960) p. 144
L. Miss.: N. Alaska
- Indeterminate pleurotomariaceans Yochelson and Dutro (1960) p. 140
Miss.: N. Alaska
- New genus? A. Yochelson and Dutro (1960) p. 139, pl. 13, fig. 26-28
Miss., Wachsmuth Ls.: Chandler Lake quad., N. Alaska
- New genus? B. Yochelson and Dutro (1960) p. 139, pl. 14, figs. 26, 27
Perm.: Howard Pass quad., N. Alaska
- Euomphalid Brindle (1960) p. 104, pl. 28, figs. 3-5
Miss.: SE. Saskatchewan
- Gastropod sp. undet 1. Tasch (1961) p. 863, pl. 97, fig. 2
Perm., rocks of Leonard age: Harvey County, Kans.
- Gastropods undet. Mudge and Yochelson (1962) [1963] p. 94
Penn. and Perm.: Kansas
- Gastropoda, genus and species undet. 1. Winters (1963) p. 36, pl. 2, figs. 8a-c
Perm., Supai Fm.: E. Arizona
- Gastropoda,? genus and species undet 2. Winters (1963) p. 44, pl. 5, figs. 6, 7
Perm., Supai Fm.: E. Arizona
- Genus and species undet. Batten (1964) p. 11, fig. 15
Perm.: E. Arizona

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the *Journal of the American Medical Association* (JAMA) and the *New England Journal of Medicine* (NEJM).

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the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 12.5 million, and the number of people aged 75 and over has increased from 4.5 million to 6.5 million (Office for National Statistics 1999). The number of people aged 65 and over is projected to increase to 15.5 million by 2020, and the number of people aged 75 and over to 8.5 million (Office for National Statistics 1999). The increase in the number of people aged 65 and over is expected to be due to a combination of factors, including a decline in the birth rate, a decline in the death rate, and a decline in the rate of emigration.

The increase in the number of people aged 65 and over is expected to have a significant impact on the UK's economy and society. The increase in the number of people aged 65 and over is expected to lead to a decline in the number of people in the workforce, which will lead to a decline in the number of people who are able to pay taxes. This will lead to a decline in the amount of money that is available to fund public services, including the National Health Service (NHS). The increase in the number of people aged 65 and over is also expected to lead to a decline in the number of people who are able to support themselves, which will lead to a decline in the number of people who are able to pay for their own care.

The increase in the number of people aged 65 and over is also expected to lead to a decline in the number of people who are able to work, which will lead to a decline in the number of people who are able to pay taxes. This will lead to a decline in the amount of money that is available to fund public services, including the NHS. The increase in the number of people aged 65 and over is also expected to lead to a decline in the number of people who are able to support themselves, which will lead to a decline in the number of people who are able to pay for their own care.

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