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Type Fossil Miscellanea (Worms, Problematica, Conoidal Shells, Trace Fossils) In Field Museum

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INTRODUCTION

This catalogue of type and referred specimens of fossil Miscellanea in Field Museum of Natural History has the same coverage as Volume W (Miscellanea) of the *Treatise on Invertebrate Paleontology* (Moore, 1962), except that conodonts and hyolithids are omitted. The first section lists "worms," scolecodonts (fossil annelid jaws), and problematic body fossils. The second section is comprised of small conoidal shells of uncertain affinities (defined by Fisher, 1962). Trace fossils (tracks, trails, burrows) are listed in the third section.

In each section, specimens are listed under the originally described name. The date and authorship of the specific name are always given. Genera, and species within genera, are arranged alphabetically. Unnamed species (for example, *Cornulites* sp.) follow all named species in chronological order. Vernacular names (for example, "Fucoid") follow all scientific names in alphabetical order.

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GEOLOGY.

Only holotypes are recognized as valid types. All other primary and secondary types, including "paratypes," "cotypes," and "plesiotypes," are listed as "referred specimens." Artificial casts are indicated as "plastoholotype" or "plastoplesiotype," and the depository of the original specimen is indicated. Specimens originally deposited in the Walker Museum, University of Chicago, now on permanent loan to Field Museum, are prefixed UC. Specimens prefixed P, PE, PF, and PP were deposited directly into the collections of Field Museum. Others prefixed H, HTP, and W were originally described from private collections, but now bear PE numbers. We have attempted to list all nomenclatorial changes affecting our specimens. Changes based on specimens other than ours are given under "Remarks."

Scolecodonts described by Gries (1944) are not listed in the "worm" section of this catalogue. Although the specimens were to be deposited in the Walker Museum (J. P. Gries and F. C. Potter, pers. comm., 1975), they were apparently never catalogued, and have not been relocated.

We thank D. W. Fisher, J. P. Gries, R. G. Osgood, Jr., F. C. Potter, R. P. Richards, E. S. Richardson, Jr., J. Waddington, and S. Ware for information on problems encountered in the preparation of this catalogue. This is the sixteenth catalogue of type invertebrate fossils in Field Museum. The following are listed in this catalogue:

I. "Worms" and Problematic Body Fossils

Phylum Annelida, Class Polychaeta

Arabellites
Howellitubus
Longitubus
Nawnites
Serpula
Spirorbis
"Oliver Hardy" worm

Phylum Annelida, Class Oligochaeta

Oligochaete

Phylum Chaetognatha, Class Uncertain

Paucijaculum

Phylum Echinodermata, Class Uncertain

Proastrum

Phylum Nematoda, Class Uncertain

Nemavermes

Phylum Nemertina, Class Uncertain

Archisymplectes

Phylum Priapulida, Class Uncertain

Priapulites

Phylum Sipunculoida, Class Uncertain

Lecthaylus

Phylum Uncertain

Escumasia
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Ptychostylus
Tullimonstrum
Vermes *incertae sedis*

II. Small Conoidal Shells

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Coleoprion
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Cornulites
Styliola
Tentaculites

III. Trace Fossils

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Cyathophycus
Dactyloidites
Haplotichnus
Monocraterion
Paleophycus
Plangtichnus
Rusophycus
Scalarituba
Scolithus
Spirophyton
Taonurus
Treptichnus
Trichophycus
Walcottia
Fucoid?
Minced *Myalina* debris
Snail burrow
Tracks of Crustacea or fishes
Tracks of a trilobite?
Trails of Gastropoda

I. "WORMS" AND PROBLEMATIC BODY FOSSILS

Arabellites hindei U. P. James, 1884

Holotype: by monotypy: UC 924 (missing)
U. P. James, 1884, p. 149, pl. 7, fig. D
Bassler, 1915, p. 58

=*Grubia* (*Arabellites*) *hindei* (U. P. James, 1884)
Gries, 1944, pp. 24-25

Upper Ordovician, Cincinnatian Series, Maysville Stage, Fairmount Formation.

In the bed of a "run" in Warren County, Ohio, about 4 miles from Loveland, Clermont County, Ohio (U. P. James, 1884, p. 149). Near Murdock, Warren County, Ohio (UC Catalogue).

Remarks: A hand specimen labelled "Type" no longer contains this scolecodont. The holotype was removed from matrix by H. W. Scott sometime before 1935 (Gries, 1944, p. 25), and is now missing. The generic name *Grubia* Croneis and Scott *in* Gries, 1944 (not discussed by Howell, 1962) is incorrectly listed as a manuscript name by Jansonius and Craig, 1971. It is apparently a valid name.

Archisymplectes rhothon Schram, 1973

Holotype: by original designation: PE 12670
Schram, 1973, p. 988, pl. 1, fig. 6

Referred specimen: PE 12669
Schram, 1973, p. 988, pl. 1, fig. 5

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, SW¼, Sec. 32, T32N., R9E., Will County, Illinois.

Remarks: Archisymplectes rhothon is the type species of *Archisymplectes* Schram, 1973 (Phylum Nemertina).

Escumasia roryi Nitecki and Solem, 1973

Holotype: by original designation: PP 16740
Nitecki and Solem, 1973, pp. 903-907, pl. 1, fig. 2
Hakes *in* Häntzschel, 1975, p. W151

Referred specimens: PP 16700, PP 16762, PP 16763, PE 9742, PE 23414
Nitecki and Solem, 1973, pp. 903-907

Referred specimen: PP 16731
Nitecki and Solem, 1973, pp. 903-907, pl. 1, fig. 3

Referred specimen: PP 18140
Nitecki and Solem, 1973, pp. 903-907, pl. 2, fig. 4

Referred specimen: PE 9741
Nitecki and Solem, 1973, pp. 903-907, pl. 1, fig. 6

Referred specimen: PE 9743
Nitecki and Solem, 1973, pp. 903-907, pl. 1, fig. 1

Referred specimen: PE 14100
Nitecki and Solem, 1973, pp. 903-907, pl. 2, fig. 2

Referred specimen: PE 14101
Nitecki and Solem, 1973, pp. 903-907, pl. 2, fig. 1

Referred specimen: PE 21803
Nitecki and Solem, 1973, pp. 903-907, pl. 2, fig. 5

Referred specimen: PE 21614
Nitecki and Solem, 1973, pp. 903-907, pl. 1, fig. 4

Referred specimen: PE 24002 (W 90)
Nitecki and Solem, 1973, pp. 903-907, pl. 2, fig. 6

Referred specimen: PE24004 (W 82)
Nitecki and Solem, 1973, pp. 903-907, pl. 1, fig. 5

Referred specimen: PE 24005
Nitecki and Solem, 1973, pp. 903-907, pl. 2, fig. 3

Middle Pennsylvanian, Desmoinesian (Westphalian C), Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, Kankakee County, Illinois.

Remarks: Escumasia roryi is the type species of *Escumasia* Nitecki and Solem, 1973 (Kingdom Animalia, Phylum Uncertain).

Gluteus minimus Davis and Semken, 1975

Referred specimen: UC 10621
Davis and Semken, 1975, pp. 251-254

Upper Devonian, Maple Mill Shale.

Near Maple Mill along the English River, Washington County, Iowa. Collected by S. Weller, 1902.

Referred specimens: four specimens: UC 5971 (UF 569)
Davis and Semken, 1975, pp. 251-254

Upper Devonian.

Burlington, Des Moines County, Iowa. Collected by C. R. Eastman.

Remarks: Gluteus minimus is the type species of *Gluteus* Davis and Semken, 1975 (Kingdom Animalia, Phylum Uncertain).

Grubia (Arabellites) hindei (U. P. James, 1884)

See: *Arabellites hindei* U. P. James, 1884

Howellitubus whitfieldorum Richardson, 1956

Holotype: by original designation: PE 150
Richardson, 1956, pp. 60-61, fig. 33
Howell, 1962, p. W157, fig. 96.8
Langford, 1963, p. 15, fig. 13

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

About 2½ miles north of Braidwood, on or near the Will-Grundy County Line, Illinois. Collected by the Whitfield family.

Remarks: Howellitubus whitfieldorum is the type species of *Howellitubus* Richardson, 1956 (Phylum Annelida, Class Polychaeta).

Lecthaylus gregarius S. Weller, 1925

Holotype: UC 31530
S. Weller, 1925, pp. 541-544, text-fig. 1
Roy and Croneis, 1931, pp. 234-242

Middle Silurian, Late Wenlock-Ludlow, Racine Dolomite, "*Lecthaylus* Shale."

In the rock excavated during the construction of the Calumet feeder for the Chicago drainage canal, just southwest of Blue Island, Cook County, Illinois. Collected by E. DeLosch.

Remarks: S. Weller considered *Lecthaylus gregarius* to be a colonial animal consisting of 10 or more individuals.

Referred specimens: two specimens: UC 31531
S. Weller, 1925, pp. 541-544

Referred specimens: three specimens: UC 31533
S. Weller, 1925, pp. 541-544
Roy and Croneis, 1931, pp. 234-242, pl. 43, figs. 2, 3, 10

Referred specimens: four specimens: UC 31534
S. Weller, 1925, pp. 541-544

Referred specimens: two specimens: P 23254B and P 23254C
Roy and Croneis, 1931, pp. 234-242, pl. 44, figs. 1-3

Referred specimen: P 23254A
Roy and Croneis, 1931, pp. 234-242, pl. 43, fig. 1

=*Lecathylus* (sic) *gregarius* S. Weller, 1925
Howell, 1962, p. W170, fig. 108, no. 9
Tasch, 1973, p. 447, text-fig. 9.3 (Bb)

Middle Silurian, Late Wenlock-Ludlow, Racine Dolomite, "*Lecthaylus* Shale."

In the rock excavated during the construction of the Calumet feeder for the Chicago drainage canal, just southwest of Blue Island, Cook County, Illinois. Collected by F. H. Letl and B. Patterson, 1930.

Remarks: Lecthaylus gregarius is the type species of *Lecthaylus* S. Weller, 1925 (Phylum Sipunculoida, Order Uncertain).

Longitubus linearis (sic) (S. Weller, 1907)

Referred specimens: two specimens: PE 3426
Richardson, 1956, p. 61, text-fig. 32

Upper Cretaceous, Merchantville Clay.

Graham Brick Company Pit, Maple Shade, Burlington County, New Jersey. Collected by E. S. Richardson, Jr., 1946.

Remarks: L. linearis is a misspelling of *L. lineatus* (S. Weller, 1907).

Nawnites gilboensis Roy, 1929

Holotype: by monotypy: P 21897
Roy, 1929, pp. 208-210, pl. 36, fig. I, no. 1a-1b
Howell, 1962, p. W151, text-fig. 90

Middle Devonian, Ithaca Sandstone Beds.

Riverside Quarry, Gilboa, Schoharie County, New York. Collected by Hugh Nawn.

Remarks: Nawnites gilboensis is the type species of *Nawnites* Roy, 1929 (Phylum Annelida, Class Polychaeta, Family Nereidae).

Nemavermes mackeei Schram, 1973

Holotype: by original designation: PE 21551
Schram, 1973, p. 987, pl. 2, fig. 1

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, NE¼ of SW¼ of Sec. 8, Kankakee County, Illinois.

Referred specimen: PE 21550
Schram, 1973, p. 987

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, NE¼ of NE¼ of Sec. 5, T31N., R9E., Kankakee County, Illinois.

Referred specimen: PE 24846 (H 124)
Schram, 1973, p. 987, pl. 2, figs. 2 and 3

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, Will and Kankakee Counties, Illinois.

Remarks: Nemavermes mackeei is the type species of *Nemavermes* Schram, 1973 (Phylum Nematoda, Order Uncertain).

Parsimonia antiquata (J. de C. Sowerby, 1829)

See: *Serpula antiquata* J. de C. Sowerby, 1829

Paucijaculum samamithion Schram, 1973

Holotype: by original designation: PE 11640
Schram, 1973, pp. 987-988, pl. 2, fig. 5

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, NW¼ of SE¼ of Sec. 5, T31N., R9E., Kankakee County, Illinois.

Referred specimen: PE 12835
Schram, 1973, p. 988, pl. 1, fig. 7

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, SE¼ of NE¼ of Sec. 5, T31N., R9E., Kankakee County, Illinois.

Remarks: Paucijaculum samamithion is the type species of *Paucijaculum* Schram, 1973 (Phylum Chaetognatha, Order Uncertain).

Priapulites konecniorum Schram, 1973

Holotype: by original designation: PE 21555
Schram, 1973, pp. 985-987, pl. 1, fig. 1

Referred specimen: PE 21412 (missing)
Schram, 1973, pp. 985-987

Referred specimen: PE 25135 (H 125) (missing)
Schram, 1973, pp. 985-987, pl. 1, fig. 4

Middle Pennsylvanian, Desmoinesian, Westphalian C, Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, Will and Kankakee Counties, Illinois.

Remarks: Priapulites konecniorum is the type species of *Priapulites* Schram, 1973 (Phylum Priapulida, Order Uncertain).

Proastrum rectibrachium Grubbs, 1939

Holotype: by original designation: UC 46031
Grubbs, 1939, p. 551, pl. 61, figs. 36, 38

Middle Silurian, Late Wenlock-Ludlow, Racine Dolomite.

Federal Stone Company Quarry, Chicago, Cook County, Illinois.

Remarks: Proastrum rectibrachium is the type species of *Proastrum* Grubbs, 1939 (Phylum Echinodermata, Class Unknown). *Proastrum* is not listed by Spencer and Wright, 1966.

Protoscolex magnus Miller and Faber, 1893

Holotype: not designated, to be selected from: UC 8782

Referred specimens: two specimens: UC 8782
Miller and Faber, 1893, p. 83, pl. 1, figs. 5-6
Bassler, 1915, p. 1,050

Upper Ordovician, Cincinnatian Series, Eden Stage, Fulton Formation (Bassler, 1915, p. 1,050). Utica Shale (Miller and Faber, 1893, p. 83).

Near the low water mark, below Mowry's foundry, First Ward, Cincinnati, Ohio. Faber Collection.

Remarks: (Phylum, Class, and Order Uncertain).

Protoscolex (?) **ruedemanni** Roy and Croneis, 1931

Holotype: by original designation: UC 22375
Roy and Croneis, 1931, pp. 245-246, pl. 44, fig. 4

Middle Silurian, Late Wenlock-Ludlow, Racine Dolomite, "*Lecthaylus* shale."

In the rock excavated during the construction of the Calumet feeder for the Chicago drainage canal, just southwest of Blue Island, Cook County, Illinois. Collected by T. A. Link.

Remarks: (Phylum, Class, and Order Uncertain).

Ptychostylus heterocostalis Gurley, 1884

Holotype: not designated, to be selected from: UC 6333

Referred specimens: seven specimens: UC 6333
Gurley, 1884, pp. 5-6

Upper Pennsylvanian.

Kansas City Missouri. Collected by W. J. Parrish.

Remarks: Ptychostylus heterocostalis is the type species of *Ptychostylus* Gurley, 1884. Originally described as "Protista" (=Porifera), Rowley (1908, pp. 65-66) assigned *Ptychostylus* to "Plantae?"

Ptychostylus subtumidus Gurley, 1884

Holotype: not designated, to be selected from: UC 6332

Referred specimens: two specimens: UC 6332
Gurley, 1884, p. 6
Rowley, 1908, pp. 65-66

Upper Devonian or Lower Mississippian, "Kinderhook shales."

Pike County, Missouri. Collected by R. R. Rowley.

Remarks: Gurley (1884) described *Ptychostylus* as "Protista" (=Porifera), but Rowley (1908) assigned the genus to "Plantae?".

Serpula annulata Fenton and Fenton, 1924

Referred specimen: UC 26075
Fenton and Fenton, 1924, p. 199, pl. 40, figs. 10-11

Upper Devonian, Lime Creek Formation, Cerro Gordo Member.

Bird Hill, 5 miles west and 1 mile south of Rockford, on the Floyd-Cerro Gordo County line, Iowa. Fenton Collection.

Remarks: (Phylum Annelida, Class Polychaeta).

Serpula antiquata J. de C. Sowerby, 1829

Referred specimens: three specimens: P 3312, P 3313, and P 3314
Richardson, 1956, p. 60

Lower Cretaceous, Albian, Gault Clay

Folkestone, Kent, England. Purchased from Ward's.

Remarks: Serpula antiquata = *Parsimonia antiquata* (J. de C. Sowerby, 1829). Regenhardt, 1961, p. 39

Serpula insita White, 1878

Holotype: not designated, to be selected from: UC 6347

Referred specimens: three specimens: UC 6347
White, 1879, p. 37
White, 1880, p. 171, pl. 42, fig. 8a (UC 6347a)

Pennsylvanian, "Coal Measures," "earthy carbonaceous layer."

Newport, Vermilion County, Illinois. Gurley Collection.

Remarks: (Phylum Annelida, Class Polychaeta).

Spirorbis anthracosia Whitfield, 1881

Referred specimens: PE 16028 ("PE 12028")
Olson, 1946, p. 295

Upper Pennsylvanian.

SW½, Sec. 15, T7N., R3E., about 3½ miles southeast of Falmouth (Falmouth Channel), Jasper County, Illinois (Locality 211).

Remarks: Stored with "ostracod assemblage" type slides.

Spirorbis carinacinctus Grubbs, 1939

Holotype: by original designation: UC 46026
Grubbs, 1939, p. 550, pl. 61, fig. 30

Middle Silurian, Late Wenlock-Ludlow, Racine Dolomite.

Federal Stone Company Quarry, Chicago, Cook County, Illinois. Grubbs Collection.

Spirorbis hackberryensis Fenton and Fenton, 1924

Referred specimens: numerous specimens: UC 26076 (missing)
Fenton and Fenton, 1924, pp. 199-200

Upper Devonian, Lime Creek Formation, Owen Limestone Member or Cerro Gordo Member.

Probably south bank of Lime Creek, Hackberry Grove, Portland Township, Cerro Gordo County, Iowa. Fenton Collection.

Spirorbis kinderhookensis Gurley, 1883

Holotype: not designated, to be selected from: UC 6322

Referred specimens: four specimens: UC 6322 (missing)
Gurley, 1883, p. 9
Rowley, 1908, p. 67
Williams, 1943, pp. 62-63, pl. 6, figs. 23-24

Upper Devonian or Lower Mississippian, Lousiana Limestone.

Lousiana, Pike County, Missouri. Collected by R. R. Rowley. Gurley Collection.

Spirorbis ? lovelandensis U. P. James, 1878

Holotype: by original designation: UC 1568
U. P. James, 1878, p. 7

=?*Cornulites* sp.
Bassler, 1915, p. 1,180

=*Microceras minutissimus* Ulrich, 1879
U.C. Catalogue

Upper Ordovician, Cincinnatian Series, Maysville Stage, Liberty or Whitewater Formations (U.C. Catalogue).

Loveland, Clermont County, Ohio. James Collection.

Remarks: Microceras = *Cyrtolites*
Knight et al., 1960, p. I175

Spirorbis sp.

Referred specimen: UC 14876
S. Weller, 1916, p. 263, pl. 19, fig. 20

Upper Mississippian, Meramec Series, Ste. Genevieve Limestone.

In a rock gorge just above the bridge of State Route 156, over Fountain Creek, as shown on Waterloo Quadrangle map of 1913 (or just under or slightly below the bridge as shown on 1954 map), 2 miles southwest of Waterloo. SW¼, Sec. 27, T. 2S., R. 10W., Waterloo Quadrangle, Illinois. Collected by S. Weller, 1906.

Tullimonstrum gregarium Richardson, 1966

Holotype: by original designation: PE 10504
Richardson, 1966, pp. 75-76, text-fig. 1
Tasch, 1973, p. 460, text-fig. 9.11(Bc)

Referred specimen: PE 7051
Johnson and Richardson, 1969, pp. 142-143, text-fig. 79a
Richardson and Johnson, 1971, p. 1,228, text-fig. 2c
Häntzschel, 1975, pp. W152-W153, fig. 93, no. 1c

Referred specimen: PE 8719
Johnson and Richardson, 1969, p. 127

Referred specimen: PE 9407 (missing)
Richardson, 1966, pp. 75-76, text-fig. 3
Richardson, 1968, figured on p. 6
Tasch, 1973, p. 460, text-fig. 9.11(Bb)

Referred specimen: PE 10505
Richardson, 1966, pp. 75-76, text-fig. 2

Richardson and Johnson, 1969, pp. 134-137, text-fig. 72a
Tasch, 1973, p. 460, text-fig. 9.11(Ba)

Referred specimen: PE 10616
Johnson and Richardson, 1969, p. 142, text-fig. 78

Referred specimen: PE 10621
Johnson and Richardson, 1969, pp. 139-142, text-fig. 77b

Referred specimen: PE 10628
Johnson and Richardson, 1969, pp. 130-134, text-figs. 69 and 70

Referred specimen: PE 11211
Johnson and Richardson, 1969, pp. 137-138, text-figs. 73-75

Referred specimen: PE 13867
Johnson and Richardson, 1969, text-fig. 64

Referred specimen: PE 14058 (HTP 727)
Johnson and Richardson, 1969, pp. 134-145, text-fig. 71

Referred specimen: PE 14059 (HTP 759)
Johnson and Richardson, 1969, p. 142, text-fig. 77a

Referred specimen: PE 14060 (HTP 5212)
Johnson and Richardson, 1969, text-fig. 65

Middle Pennsylvanian, Desmoinesian (Westphalian C), Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, Will and Kankakee Counties, Illinois.

Remarks: *Tullimonstrum gregarium* is the type species of *Tullimonstrum* Richardson, 1966.

Oligochaete

Referred specimen: PE 8001
Zangerl and Richardson, 1963, pp. 124, 128, 129, pl. 21, fig. C

Middle Pennsylvanian, Desmoinesian (Westphalian C), Linton Formation, Mecca Quarry Shale Member.

Mecca Quarry, Wabash Township, Parke County, Indiana (SW¼ NE¼ Sec. 29, T15N., R8W) about 1 mile southeast of Mecca.

"Oliver Hardy" (undescribed polychaete)

Referred specimen: PE 33390 (H66)
Richardson, 1968, figured on p. 8

=Undescribed polychaete
Johnson and Richardson, 1970, pl. 5, fig. B

Middle Pennsylvanian, Desmoinesian (Westphalian C), Carbondale Formation, Francis Creek Shale.

Pit Eleven, Peabody Coal Company, Will and Kankakee Counties, Illinois.

Vermes *incertae sedis* Roy and Croneis, 1931

Referred specimen: UC 22374.1
Roy and Croneis, 1931, p. 246, pl. 44, fig. 5

Referred specimen: UC 22374.2
Roy and Croneis, 1931, p. 246, pl. 44, fig. 6

Referred specimen: UC 22374.3
Roy and Croneis, 1931, p. 246

Middle Silurian, Late Wenlock-Ludlow, Racine Dolomite, "*Lecthaylus* shale."

In the rock excavated during the construction of the Calumet feeder for the Chicago drainage canal, just southwest of Blue Island, Cook County, Illinois. Collected by T. A. Link.

II. SMALL CONOIDAL SHELLS OF UNCERTAIN AFFINITIES

Coleolus crenatocinctum Hall, 1879

Referred specimen: UC 14114
Hall, 1879, pp. 188-189, pl. 32, fig. 3

Middle Devonian, Onondaga Limestone.

Eastman's Quarry in the south part of Oneida County, New York. James Hall Collection.

Referred specimen: UC 14115
Hall, 1879, pp. 188-189, pl. 32, fig. 4

Middle Devonian, Onondaga Limestone.

South of Columbia, Herkimer County, New York. James Hall Collection.

Remarks: UC 14115 does not match the published figure exactly.

Coleolus herzeri Hall, 1888

Holotype: by monotypy: UC 23158
Hall, 1888, p. 7, pl. 114, fig. 29

Lower Mississippian, Upper Waverly Group, Kinderhook-Osagean.

Medina, Medina County, Ohio. James Hall Collection.

Coleolus tenuicinctum (Hall, 1876)

Referred specimen: UC 13145
Hall, 1879, pp. 185-186, pl. 32A, fig. 10
Kindle, 1901, p. 735
Shimer and Shrock, 1944, p. 526, pl. 214, fig. 19

Middle Devonian, Jeffersonville Limestone.

Falls of the Ohio, Louisville, Kentucky. James Hall Collection.

Remarks: UC 13145 is a "cotype" (U.C. Catalogue), however it is not figured by Hall, 1876, pl. 32, figs. 5-9. *Coleolus tenuicinctum* is the type species of *Coleolus* Hall, 1879 (Fisher, 1962, p. W134).

Coleoprion ? tenuis Hall, 1879

Holotype: by monotypy: UC 12515
Hall, 1879, p. 184, pl. 32A, figs. 1-2

Middle Devonian, Hamilton Group.

Arkona, Ontario. James Hall Collection.

Conchicolites (Ortonia) conica Nicholson, 1872

Referred specimen: UC 12188
Miller, 1874, pp. 11-13, text-fig. 4

=*Cornulites* sp.
Hall, 1888, pp. 8-17, pl. 115, fig. 11

=*Cornulites conicus* (Nicholson, 1872)
Bassler, 1915, p. 278

Upper Ordovician, Cincinnatian Series, Maysville Stage.

Stone quarry on the east side of the Avondale Pike, near the top of the hill, at the head of Deercreek, near Cincinnati, Ohio. James Hall Collection.

Cornulites carbonarius Gurley, 1883

Holotype: by monotypy: UC 6321
Gurley, 1883, pp. 8-9
Rowley, 1908, p. 66
Williams, 1943, p. 63, pl. 6, fig. 30

Upper Devonian, Louisiana Limestone.

Pike County, Missouri. Collected by R. R. Rowley. Gurley Collection.

Remarks: *Cornulites* ranges from the Middle Ordovician to Middle Devonian, Mississippian? (D. W. Fisher, 1962, p. W137). The Mississippian assignment was based on *C. carbonarius* (D. W. Fisher, pers. comm., July 8, 1975). The Louisiana Limestone, originally considered Mississippian, is now assigned to the Upper Devonian (Collinson et al., 1968, p. 962).

Cornulites cingulatus Hall, 1888

Referred specimen: PE 16580
Richards, 1974, p. 514, pl. 1, fig. 5

Middle Devonian, Erian, Silica Shale.

Medusa Quarry, Sylvanian, Lucas County, Ohio. Collected by R. D. Hoare. Donated by R. P. Richards.

Remarks: PE 16580 is attached to *Paraspirifer brownockeri* Stewart, 1927.

Cornulites clintoni Hall, 1879

Referred specimen: UC 12202
Hall, 1888, pp. 18-19, pl. 116, fig. 22
Bassler, 1915, p. 278

Middle Silurian, "Clinton Group."

Near Lockport, Niagara County, New York. James Hall Collection.

Cornulites conicus (Nicholson, 1872)

See: *Cornulites* (*Ortonia*) *conica* Nicholson, 1872

Cornulites immaturus Hall, 1888

Holotype: not designated, to be selected from: UC 12181

Referred specimens: numerous individuals on a single slab of rock: UC 12181
Hall, 1888, p. 18, pl. 115, fig. 40
Bassler, 1915, p. 279

Upper Ordovician, Utica Shale.

Holland Patent, Oneida County, New York. James Hall Collection.

Cornulites missouriensis Ball, 1928 *nomen nudum*

Referred specimens: three specimens: UC 34523
Ball, 1928, p. 266

Middle Silurian, Late Wenlock-Early Ludlow, Bainbridge Formation, *Merista* Bed.

Greither Hills about 2¼ miles southeast of Ozora along the road from Ozora to St. Mary's, Ste. Genevieve County, Missouri. Collected by J. R. Ball.

Cornulites perspinosus Grubbs, 1939

Holotype: by original designation: UC 46027
Grubbs, 1939, p. 550, pl. 61, fig. 33

Referred specimens: two specimens: UC 46028
Grubbs, 1939, p. 550, pl. 61, fig. 34

Middle Silurian, Late Wenlock-Ludlow, Racine Dolomite.

Federal Stone Company Quarry, Chicago, Cook County, Illinois. Grubbs Collection.

Cornulites proprius Hall, 1879

Referred specimen: UC 11999
Hall, 1888, pp. 19-20, pl. 116, fig. 6
Bassler, 1915, p. 280

Referred specimens: six specimens: UC 32308 (one missing)
Hall, 1888, pp. 19-20, pl. 116, fig. 19
Hall, 1888, pp. 19-20, pl. 116, fig. 15 (specimen missing)
Bassler, 1915, p. 280

Middle Silurian, Wenlock, Waldron Shale.

Waldron, Shelby County, Indiana. James Hall Collection.

See also: *Cornulites* sp.

Cornulites richmondensis (Miller, 1874)

Referred specimen: UC 29366
Evans, 1926, p. 200

Upper Ordovician, Maquoketa Formation.

Along the banks of the Kankakee River at Wilmington, Will County, Illinois. Collected by University of Chicago field class.

Cornulites richmondensis (Miller, 1874)

See: *Cornulites* sp.

Cornulites sterlingensis (Meek and Worthen, 1865)

See: *Cornulites* sp.

Cornulites tenuistriatus (Meek and Worthen, 1865)

See: *Tentaculites tenuistriatus* (Meek and Worthen, 1865)

Cornulites sp.

Referred specimens: three specimens on one rock: UC 12199
Hall, 1888, pp. 8-17, pl. 115, figs. 28-30

=*Cornulites richmondensis* (Miller, 1874)
Hall, 1888, explanation of pl. 115

Upper Ordovician, Cincinnatian Series.

Richmond, Wayne County, Indiana.

Referred specimen: thin section: UC 12207A
Hall, 1888, pp. 8-17, pl. 115, fig. 32

=*Cornulites sterlingensis* (Meek and Worthen, 1865)
Hall, 1888, explanation of pl. 115

Upper Ordovician, Cincinnatian Series.

Cincinnati, Ohio (Hall, 1888). Richmond, Wayne County, Indiana (U.C. Catalogue). James Hall Collection.

Referred specimens: three thin sections: UC 12207B, C, D
Hall, 1888, pp. 8-17, pl. 115, figs. 35, 36, 38, 39

=*Cornulites richmondensis* (Miller, 1874)
Hall, 1888, explanation of pl. 115

Upper Ordovician, Cincinnatian Series.

Richmond, Wayne County, Indiana. James Hall Collection.

Referred specimen: UC 12182
Hall, 1888, pp. 8-17, pl. 115, figs. 1-2
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimens: two specimens: UC 12183
Hall, 1888, pp. 8-17, pl. 115, fig. 3
Upper Ordovician, Cincinnatian Series.
Versailles, Ripley County, Indiana. James Hall Collection.

Referred specimen: UC 12184
Hall, 1888, pp. 8-17, pl. 115, fig. 4
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12185
Hall, 1888, pp. 8-17, pl. 115, figs. 6-7
Upper Ordovician, Cincinnatian Series.
Versailles, Ripley County, Indiana. James Hall Collection.

Referred specimen: UC 12186
Hall, 1888, pp. 8-17, pl. 115, fig. 8
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12187
Hall, 1888, pp. 8-17, pl. 115, figs. 9-10
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12189
Hall, 1888, pp. 8-17, pl. 115, fig. 12
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12190
Hall, 1888, pp. 8-17, pl. 115, fig. 13
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12191
Hall, 1888, pp. 8-17, pl. 115, fig. 14
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12192
Hall, 1888, pp. 8-17, pl. 115, figs. 15-16
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12193
Hall, 1888, pp. 8-17, pl. 115, fig. 17
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12194
Hall, 1888, pp. 8-17, pl. 115, figs. 18-20
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12195
Hall, 1888, pp. 8-17, pl. 115, figs. 21-23
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC12196
Hall, 1888, pp. 8-17, pl. 115, fig. 24
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12197
Hall, 1888, pp. 8-17, pl. 115, figs. 25-26
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12198
Hall, 1888, pp. 8-17, pl. 115, fig. 27
Upper Ordovician, Cincinnatian Series.
Cincinnati, Ohio. James Hall Collection.

Referred specimens: two thin sections: UC 12206
Hall, 1888, pp. 8-17, pl. 115, figs. 33-34

Upper Ordovician, Cincinnatian Series.

Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 12201
Hall, 1888, pp. 8-17, pl. 115, fig. 31

Upper Ordovician, Cincinnatian Series.

Two miles north of Cape Girardeau, Cape Girardeau County, Missouri. James Hall Collection.

Referred specimen: UC 12200
Hall, 1888, pp. 8-17, pl. 115, fig. 43

Upper Ordovician, Cincinnatian Series.

Cincinnati, Ohio. James Hall Collection.

Referred specimen: UC 32938
D. J. Fisher, 1925, p. 42, pl. 5, fig. 3

Middle Silurian, "Niagaran" (Joliet?) Dolomite.

Joliet, Will County, Illinois. Collected by S. Weller.

Referred specimen: PE 16578
Richards, 1974, p. 518

=*Cornulites richmondensis* (Miller, 1874)
FMNH Catalogue

Upper Ordovician, Richmondian Series, Tanner's Creek Formation.

Stream cut at Roseburgh, Union County, Indiana. Gift of R. P. Richards.

Remarks: PE 16578 was used in preparation of Table 1 in Richards, 1974. The specimen is attached to *Rafinesquina alternata* (Emmons, 1842).

Referred specimen: PE 16579
Richards, 1974, p. 518

=*Cornulites proprius* Hall, 1875
FMNH Catalogue

Middle Silurian, Wenlock, Waldron Shale.

Blue Ridge Quarry, Waldron, Shelby County, Indiana. Donated by M. S. Halleck.

Remarks: PE 16579 was used in preparation of Table 1 in Richards, 1974. The specimen is attached to *Stegerhynchus whitii* (Hall, 1863).

See also: Conchicolites (*Ortonia*) *conica* Nicholson, 1872
Spirorbis ? *lovelandensis* U. P. James, 1878

Styliola fissurella (Hall, 1843)

Referred specimens: numerous specimens on one rock: UC 60630
Hall, 1879, pp. 178-179, pl. 31A

Middle and Upper Devonian, Genesee Slate.

Two-and-three-quarters miles south-southwest of Alden, Erie County, New York, James Hall Collection.

Remarks: Three or more specimens of UC 60630 are figured in Hall, 1879, pl. 31A, but we cannot match the specimens exactly with drawings on pl. 31A. *Styliola* Ludwig, 1864 (in part) =*Tentaculites* Schlotheim, 1820 (D. W. Fisher, 1962, p. W110).

Tentaculites acula Hall, 1888

Holotype: not designated, to be selected from: UC 12205

Referred specimens: two specimens: UC 12205
Hall, 1888, p. 6, pl. 114, figs. 15-17

Lower Devonian, Lower Helderberg (Published). Lower Oriskany, Trilobite Bed (UC Catalogue).

Bennetts Quarry, near Port Jervis, Orange County, New York. James Hall Collection.

Tentaculites attenuata Hall, 1876

Holotype: by monotypy: UC 36343
Hall, 1876, pl. 26, figs. 19-20
Hall, 1879, pp. 170-171, figs. 19-20
Lesley, 1890, p. 1,174, text-fig. on p. 1,174
Shimer and Shrock, 1944, p. 526, pl. 214, fig. 47

Middle Devonian, Hamilton Group.

Near Cooperstown, Ostego County, New York. James Hall Collection.

Tentaculites dexithea Hall, 1888

Holotype: by monotypy: UC 23159
Hall, 1888, p. 6, pl. 114, figs. 18-19

Middle Devonian, Schoharie Grit (Hall, 1888). Base of Onondagan (UC Catalogue).

Pendleton, Madison County, Indiana. James Hall Collection.

Tentaculites elongatus Hall, 1859

"Plastocotype": UC615
Hall, 1859, p. 136, pl. 6, fig. 18
Lesley, 1890, p. 1,175, text-fig. on p. 1,175

Lower Devonian, Helderberg Limestone.

Probably near Schoharie, Schoharie County, New York. James Hall Collection.

Referred specimen: UC 12203
Hall, 1888, p. 6, pl. 114, fig. 14

Lower Devonian, Helderbergian.

Schoharie, Schoharie County, New York. James Hall Collection.

Referred specimen: UC 10475
S. Weller, 1903, p. 363, pl. 50, fig. 4

Lower Devonian, Oriskany Formation.

Peter's Valley, Sussex County, New Jersey, opposite the residence of Mrs. Coss. S. Weller Locality 53B. New Jersey Collection.

Referred specimens: UC 27511
Stewart, 1922, p. 262, pl. 69, fig. 18

Lower Devonian, Little Saline Limestone (Lower Beds).

Quarries of Ozora Marble Company, in east bank of Little Saline Creek, just south of bend in stream from northerly to easterly direction, a little less than 1½ miles west of State Highway H, south of Ozora, Weingarten Quadrangle, Ste. Genevieve County, Missouri. Collected by University of Chicago Ste. Genevieve County field classes.

Tentaculites ? flexuosa Hall, 1847

"Plastoholotype": UC 54057
Hall, 1847, p. 92, pl. 29, fig. 6b

=*Cornulites clintoni* Hall, 1882
Hall, 1882, p. 330

=*Cornulites flexuosus* (Hall, 1847)
Hall, 1888, p. 18, pl. 115, fig. 41
Cumings, 1908, p. 1,067
Bassler, 1915, p. 279

=*Conchicolites flexuosus* (Hall, 1847)
Miller, 1889, p. 517

Middle Ordovician, Trenton Limestone "from sixty to one hundred feet above its base."

Lowville, Lewis County, New York. James Hall Collection.

Tentaculites gyracanthus (Eaton, 1832)

Referred specimen: UC 36338
Hall, 1888, pp. 5-6, pl. 114, figs. 7, 8, 10
Grabau and Shimer, 1910, p. 10, text-fig. 1220a
Shimer and Shrock, 1944, p. 56, pl. 214, fig. 42

Lower Devonian, Helderberg.

Schoharie, Schoharie County, New York. James Hall Collection.

Referred specimen: UC 12516
Hall, 1888, pp. 5-6, pl. 114, fig. 9
Grabau and Shimer, 1910, p. 10, text-fig. 1220b
Shimer and Shrock, 1944, p. 526, pl. 214, fig. 41

Lower Devonian, Helderberg, Manilus Limestone (U.C. Catalogue).

Schoharie, Schoharie County, New York.

Tentaculites niagarensis var. **cumberlandiae** Hall, 1888

Holotype: not designated, to be selected from UC 12204 and an unknown specimen (Hall, 1888, pl. 114, fig. 6)

Referred specimens: three specimens UC 12204
Hall, 1888, p. 5, pl. 114, figs. 3-5

Silurian, "Niagaran Group."

Cumberland, Allegany County, Maryland. James Hall Collection.

Tentaculites tenuistriatus Meek and Worthen, 1865

Holotype: not designated, to be selected from UC 9866 and a specimen in the collections of the University of Illinois

Referred specimen: UC 9866
Meek and Worthen, 1865, p. 254
Meek and Worthen, 1868, pp. 341-342, pl. 4, fig. 7a

=*Cornulites tenuistriatus* (Meek and Worthen, 1865)
Cumings, 1908, p. 1,066
Savage, 1913, pp. 41-42
Savage, 1917, pp. 97-98

Late Ordovician, Girardeau Limestone.

Alexander County, Illinois. Gurley Collection.

Remarks: Meek and Worthen's description of *T. tenuistriatus* is based on UC 9866 and a second specimen also called "Type" in the collections of the University of Illinois. (Savage, 1913, pl. 2, fig. 6 and 1917, pl. 4, fig. 6).

Tentaculites sp.

Referred specimen: UC 23992
Branson and Williams, 1922, p. 157, pl. 39, fig. 6

Middle Devonian, Beauvais Sandstone.

Above quarries of Ozora Marble Company, in east bank of Little Saline Creek, just south of bend in stream from northerly to easterly direction, a little less than 1½ miles west of State Highway H, south of Ozora, Weingarten Quadrangle, Ste. Genevieve County, Missouri. Collected by S. Weller.

See also: *Styliola fissurella* (Hall, 1843)

III. TRACE FOSSILS

Buthotrephis brachiatus Fenton, 1928

Holotype: by original designation: UC 25949
Fenton, 1928, p. 126, pl. 1, fig. 3

Referred specimen: UC 25953
Fenton, 1928, p. 126, pl. 1, fig. 2

Referred specimen: UC 25954 (missing)
Fenton, 1928, p. 126

Middle Ordovician, Plattin Limestone.

South Beckett Hill, a large hill south of the Beckett Hills and east of the River Aux Vases; near Ozora, Ste. Genevieve County, Missouri. The outcrop extends west of the hill and in a southeasterly direction to the Little Saline Creek. Fenton Collection.

Remarks: *Buthotrephis* Hall, 1847 =*Chondrites* Sternberg, 1833
Häntzschel, 1962, p. W187
Häntzschel, 1975, p. W49

Buthotrephis regularis Fenton, 1928

Holotype: by monotypy: UC 25951
Fenton, 1928, pp. 125-126, pl. 1, fig. 1

Middle Ordovician, Plattin Limestone.

Near the north end of South Beckett Hill, a large hill south of the Beckett Hills and east of the River Aux Vases, near Ozora, Ste. Genevieve County, Missouri. The outcrop extends west of the hill and in a southeasterly direction to the Little Saline Creek. Fenton Collection.

Remarks: *Buthotrephis* Hall, 1847 =*Chondrites* Sternberg, 1833
Häntzschel, 1962, p. W187.
Häntzschel, 1975, p. W49.

Buthotrephis sp.

Referred specimen: UC 25952
Fenton, 1928, p. 126, pl. 1, fig. 4

Middle Ordovician, Plattin Limestone.

Near the north end of South Beckett Hill, a large hill south of the Beckett Hills and east of the River Aux Vases, near Ozora, Ste. Genevieve county, Missouri. The outcrop extends west of the hill and in a southeasterly direction to the Little Saline Creek. Fenton Collection.

Remarks: *Buthotrephis* Hall, 1847 =*Chondrites* Sternberg, 1833
Häntzschel, 1962, p. W187
Häntzschel, 1975, p. W49

Chondrites spp.

See: *Buthotrephis brachiatus* Fenton, 1928

Buthotrephis regularis Fenton, 1928
Buthotrephis sp.

Cyathophycus siluriana J. F. James, 1891

Holotype: by monotypy: (missing)
J. F. James, 1891, pp. 63-65, figs. 5a-5c

=*Trichophycus silurianum* (J. F. James, 1891)
Bassler, 1915, p. 1,289

=?*Trichophycus lanosum* Miller and Dyer, 1878
Bassler, 1915, p. 1,289

=*Trichophycus venosum* Miller, 1879
Osgood, 1970, pp. 347-348
Häntzschel, 1975, p. W118

Upper Ordovician, Cincinnati Series, Maysville Stage, Corryville Formation.

Cincinnati, Ohio. James Collection.

Dactyloidites asteroides (Fitch, 1850)

Referred specimen: PE 3424
Garrels, 1951, fig. 22.5
Richards, 1953, p. 122, fig. 74

Lower Cambrian.

Granville, Washington County, New York. Collected by S. K. Roy, 1926.

Remarks: Harrington and Moore, 1956, p. F159 suggest that *Dactyloidites* is an alga and not a medusoid. Häntzschel, 1975, p. W147 places this genus among "Trace fossils or medusae *incertae sedis.*"

Haplotichnus indianensis Miller, 1889

Holotype: by monotypy: UC 36076
Miller, 1889, p. 578, text-fig. 1,086
Häntzschel, 1965, p. 43
Häntzschel, 1966, p. 12
Häntzschel, 1975, p. W67

Mississippian, Upper Kaskaskia Group, Kaskaskia Limestone.

Whetstone Quarries, Orange County, Indiana. Faber Collection.

Remarks: *Haplotichnus indianensis* is the type species of *Haplotichnus* Miller, 1889. Miller's figure is highly simplified.

Monocraterion magnificum Matthew, 1891

"*Plastoholotype*": UC 23253
Matthew, 1891, pp. 161-162, pl. 16, figs. 1, 1a-1b
Matthew, 1901, pp. 135-136
Häntzschel, 1965, p. 57

Cambrian, St. John Group, "in the thin-bedded flags of Band c, Division 2" (Matthew, 1891, p. 161).

South of Dunnes Ledges, Courtney Bay, Simonds, St. John County, New Brunswick (J. Waddington, pers. comm., May 29, 1975).

Remarks: The original specimen is in the Royal Ontario Museum, Toronto (J. Waddington, pers. comm., May 29, 1975). Häntzschel, 1962, p. W218 placed *Monocraterion* Torell, 1870 in the synonymy of *Tigillites* Roualt, 1850. Häntzschel, 1975, p. W82, retained *Monocraterion* as a distinct genus.

Paleophycus flexuosus U. P. James, 1879

Holotype?: UC 1268
U. P. James, 1879, p. 18

=*Palaeophycus flexuosus* U. P. James, 1879
J. F. James, 1884, p. 129, pl. 6, fig. 1
J. F. James, 1891, p. 46
Osgood, 1970, pp. 393-394
Häntzschel, 1975, pp. W88-W89

=*Palaeophycus flexuosum* U. P. James, 1879
Bassler, 1915, p. 939

Upper Ordovician, Cincinnatian Series, Eden Stage.

Hillside cut of the Little Miami Railroad, near Milford, Hamilton County, Ohio. James Collection.

Remarks: "*Palaeophycus flexuosum* U. P. James (1879) is of inorganic origin and is not comparable to the species of *Palaeophycus* figured by Hall" (Osgood, 1970, p. 376).

Paleophycus tubulare Hall, 1847

Referred specimen: UC 25950
Fenton, 1928, pp. 126-127, pl. 1, fig. 5

Middle Ordovician, Plattin Limestone.

Near the north end of South Beckett Hill, a large hill south of the Beckett Hills and east of the River Aux Vases, near Ozora, Ste. Genevieve County, Missouri. The outcrop extends west of the hill and in a southeasterly direction to the Little Saline Creek. Fenton Collection.

Plangtichnus erraticus Miller, 1889

Holotype: by monotypy: UC 36077
Miller, 1889, p. 580, text-fig. 1,093
Häntzschel, 1965, p. 72
Häntzschel, 1966, p. 14
Häntzschel, 1975, p. W95

Mississippian, Upper Kaskaskia Group, Kaskaskia Limestone.

Whetstone Quarries, Orange County, Indiana. Faber Collection.

Remarks: *Plangtichnus erraticus* is the type species of the genus *Plangtichnus* Miller, 1889.

Rusophycus chesterense Miller and Gurley, 1897

Holotype: by monotypy: UC 6637
Miller and Gurley, 1897, p. 54, pl. 5, fig. 1

Mississippian, Kaskaskia Group.

Chester, Randolph County, Illinois. Gurley Collection.

Scalarituba missouriensis S. Weller, 1899

Holotype: by monotypy: UC 5964
S. Weller, 1899, p. 12, pl. 1, fig. 1
Branson *in* Branson, ed., 1938, pp. 14-15
Häntzschel, 1962, p. W215
Häntzschel, 1965, p. 82
Conkin and Conkin, 1968, pp. 3-4
Häntzschel, 1975, pp. W104-W106

Lower Mississippian, Kinderhook Series, "Vermicular Sandstone."

Northview, Webster County, Missouri. S. Weller Locality 1-A. Collected by S. Weller, 1898.

Remarks: *Scalarituba missouriensis* is the type species of *Scalarituba* Weller, 1899.

Scolithus tuberosus Miller and Dyer, 1878

Holotype?: UC 8860
Miller and Dyer, 1878, p. 5, pl. 4, fig. 4
J. F. James, 1892, p. 39, text-fig. 11
Osgood, 1970, pp. 301, 334

Upper Ordovician, Cincinnatian Series, Maysville Stage, Mount Hope Formation.

Cincinnati, Ohio. Faber Collection.

Remarks: UC 8860 is catalogued as "Type" but the original description may have included other specimens.
Scolithus = *Skolithos*
Häntzschel, 1962, p. W215

Spirophyton sp.

Referred specimens: four specimens: UC 5128
Udden, 1898, pp. 193-198, pl. 7, figs. 1-6; pl. 8, figs. 7-8

Upper Devonian, Upper Cedar Valley Limestone.

Buffalo, Muscatine County, Iowa. Collected by J. A. Udden.

Referred specimen: UC 5965
S. Weller, 1899, pp. 46-47, pl. 6, fig. 2

Lower Mississippian, Kinderhook Series, "Vermicular Sandstone."

Northview, Webster County, Missouri. S. Weller Locality 1-A. Collected by S. Weller, 1898.

Remarks: Häntzschel, 1962, p. W220 places *Spirophyton* Hall, 1863 in the synonomy of *Zoophycus* Massalongo, 1855. Häntzschel, 1975, p. W108 treats *Spirophyton* as a valid generic name.

Taonurus sp.

Referred specimens: four specimens: PE 25173
Zangerl and Richardson, 1963, p. 92

Middle Pennsylvanian, Desmoinesian, Brazil Formation.

Main Creek, just below where Dotson's Creek empties into it, Fountain County, Indiana. Locality is marked "L" in Sec. 25 of Zangerl and Richardson, 1963, text-fig. 20.

Referred specimens: two specimens: PE 25174
Zangerl and Richardson, 1963, p. 72

Middle Pennsylvanian, Desmoinesian, Brazil Formation.

Coke Oven Hollow, Parke County, Indiana (one of two localities described by Zangerl and Richardson, 1963, p. 72).

Tigillites sp.

See: *Monocraterion magnificum* Matthew, 1891

Treptichnus bifurcus Miller, 1889

Holotype: by monotypy: UC 54099
Miller, 1889, p. 581, text-fig. 1,095
Häntzschel, 1965, p. 94
Häntzschel, 1966, p. 15
Häntzschel, 1975, pp. W117-W118

Mississippian, Upper Kaskaskia Group, Kaskaskia Limestone.

Whetstone Quarries, Orange County, Indiana. Faber Collection.

Remarks: *Treptichnus bifurcus* is the type species of *Treptichnus* Miller, 1889. Miller's figure is highly simplified.

Trichophycus lanosum Miller and Dyer, 6878

Referred specimen: UC 8892
J. F. James, 1885, p. 158, pl. 9, fig. 4
Bassler, 1915, p. 1,288

Upper Ordovician, Cincinnatian Series, Maysville Stage, Corryville Formation.

Ludlow, Kentucky. Faber Collection.

Remarks: Osgood (1970, p. 350) states that *T. lanosum* "is known only from the two specimens figured by Miller and Dyer," but UC 8892 is a third figured specimen.

See also: *Cyathophycus siluriana* J. F. James, 1891

Trichophycus silurianum (J. F. James, 1891)

See: *Cyathophycus siluriana* J. F. James, 1891

Trichophycus venosum Miller, 1879

Holotype: not designated, to be selected from: UC 8824

Referred specimens: two specimens: UC 8824
Miller, 1879, pp. 112-113, pl. 9, figs. 5, 5a (UC 8824A-B)
J. F. James, 1884, pp. 130-131
Bassler, 1915, p. 1,289
Häntzschel, 1965, p. 95
Osgood, 1970, pp. 347-350

=*Trichophycus venosus* Miller, 1879
Häntzschel, 1975, p. W118

Upper Ordovician, Cincinnatian Series, Maysville Stage, Fairmount Formation.

Cincinnati, Ohio. Faber Collection.

See also: Cyathophycus siluriana J. F. James, 1891

Walcottia sulcata U. P. James, 1881

Holotype: not designated, to be selected from: UC 1563

Referred specimens: two specimens: UC 1563
U. P. James, 1881, p. 44
Bassler, 1915, p. 1320
Osgood, 1970, pp. 378, 398-399
Häntzschel, 1975, p. W189

Upper Ordovician, Cincinnatian Series, Eden Stage, Economy Formation.

Cincinnati, Ohio. James Collection.

Remarks: Häntzschel, 1975, p. W189 includes *Walcottia* among "Unrecognized and unrecognizable 'genera'."

Zoophycus sp.

See: *Spirophyton* sp.

Fucoid (?), gen. and spec. undet.

Referred specimen: UC 26008
Fenton and Fenton, 1924, p. 23, pl. 1, fig. 13

Upper Devonian, Lime Creek Formation, Cerro Gordo Member.

Pit of Rockford Brick and Tile Company, Rockford, Floyd County, Iowa. Fenton Collection.

Minced *Myalina* debris

Referred specimen: PE 8011

Zangerl and Richardson, 1963, pl. 23, fig. C

Middle Pennsylvanian, Desmoinesian (Westphalian C and D), Staunton Formation, Logan Quarry Shale Member.

Garrard Quarry, at head of Coke Oven Hollow, Parke County, Indiana.

Snail burrow

Referred specimen: PE 8014
Zangerl and Richardson, 1963, pl. 20, fig. C

Middle Pennsylvanian, Desmoinesian (Westphalian C), Linton Formation, Mecca Quarry Shale Member.

Mecca Quarry, Wabash Township, Parke County, Indiana (SW¼, NE¼, Sec. 29, T15N, R8W) about 1 mile southeast of Mecca.

Tracks of Crustacea or Fishes

"*Plastoplesiotype*": UC 22210
Hall, 1852, pp. 36-37, 353-354, pl. 16, figs. 1-2

Lower Silurian, Clinton Group.

Ravine below Tisdale's Sawmill in Warren, Herkimer County, New York. James Hall Collection.

Remarks: UC 22210 is a cast of specimens in the "State Collection" (Hall, 1852, p. 37).

Tracks of a Trilobite?

Referred specimens: two specimens: UC 308
U. P. James, 1883, p. 59, pl. 2, fig. 4

Upper Ordovician, Cincinnatian Series.

Two-hundred feet above the Ohio River at Cincinnati, Ohio. James Collection.

Trails of Gastropoda

"*Plastoplesiotype*": UC 22209
Hall, 1852, p. 29, pl. 12, fig. 1

Lower Silurian, Clinton Group.

Ruddock's quarry, Clinton, Oneida County, New York.

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