



**A Type Catalog of Fossil Invertebrates
(Archaeocyatha, Porifera,
Receptaculitidae and Stromatoporoidea)
in the Yale Peabody Museum**

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Abstract

Type material for 116 nominal species of fossil archaeocyathids, poriferans, receptaculitids and stromatoporoids are in the Invertebrate Paleontology Collections of Yale University's Peabody Museum of Natural History. Primary types for 66 nominal species include 51 holotypes and 26 syntypes (representing 15 nominal species). Secondary types for 13 nominal species include 51 paratypes. Tertiary types for 56 nominal species include 174 hypotypes. Most types are from Newfoundland, Quebec, Kentucky, New York State, and Tennessee and have been described by C.E. Beecher, G.H. Girty, James Hall, W.A. Parks, and W.H. Twenhofel.

Key Words

Type Catalog, Archaeocyatha, Porifera, Stromatoporoidea, Receptaculitidae, Anticosti Island, Newfoundland, C.E. Beecher, G.H. Girty, James Hall, W.A. Parks, W.H. Twenhofel.

Introduction

This catalog lists all known fossil archaeocyathid, poriferan, receptaculitid and stromatoporoid types in the Invertebrate Paleontology Collections housed in Yale University's Peabody Museum of Natural History. This is the fifth in a series of type catalogs of fossil invertebrates and is a product of an ongoing computerization project to improve the accessibility of the type collections.

Described specimens of *Acrolichas minganensis* (Billings) (YPM 42988), *Beatricia nodulosa* Billings (YPM 6239), *Eospongia roemeri* (Billings) (YPM 35513 and 35514), syntypes of *Cambrocyathus amourensis* Okulitch (YPM 17048B) and *Stromatocerium canadense minimum* Parks (YPM 42989), and the holotype of *Stromatopora(?) aporita* Parks are missing and cannot be located. The collections have been thoroughly searched by the curatorial staff in the 1960s and 1990s and it is believed that these specimens are permanently lost. Any information on the whereabouts of these specimens would be greatly appreciated.

Organization

Specimens are listed under the originally described binomen; genera and species within genera are presented alphabetically. Each entry includes the catalog number used by the Division of Invertebrate Paleontology prefixed with the coden YPM and the type status of the original designa-

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tion, followed by all known references to that name. Any subsequent designations are listed under the original designation and are cross-referenced in the body of the text. Errors and inconsistencies appear in footnotes after the locality description.

The type designations used are holotype, syntype, and neotype for name bearers; paratype and allotype for secondary types; and hypotype for all tertiary types. Name bearers and secondary types are defined as used in the *International Code of Zoological Nomenclature* (ICZN, 1985). Tertiary types or hypotypes are treated here as any described, figured or measured specimen used in a publication to augment the knowledge of a previously defined species, or any referred specimen that cannot be placed unequivocally in a known species (e.g., *Strobilospongia* sp.).

Locality descriptions follow each entry or set of entries with identical locality data. The locality information includes the stratigraphy, geography, collector and date. Stratigraphy has been standardized using *Stratigraphic Nomenclature Databases for the United States, its Possessions and Territories* (MacLachlan et al., 1992). Group, formation and member names are abbreviated with *Grp*, *Fm* and *Mbr* respectively.

Catalog of Archaeocyatha, Porifera, Receptaculitidae and Stromatoporoidea

Acrolichas minganensis (Billings)

HYPOTYPE YPM 42988†

Raymond, P.E. 1925. Bull. Mus. Comp. Zool. v.67,n.1,p.125.

Ordovician, Mingan Fm. Twenhofel zone A5, Bald Island, Mingan Islands, Quebec, Canada. Collector: Twenhofel, W.H.

†A thorough search of the collections by the curatorial staff in the 1960s and 1980s failed to locate this specimen. It is believed to be permanently lost.

Actinostroma cf. *mirum* Parks

HYPOTYPE YPM 13245

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, Niagaran, La Vieille Fm. Lower La Vieille Fm, near base of section, Black Cape, Quebec, Canada. Collector: Schuchert, C., 08/1905.

Actinostroma mirum Parks

HOLOTYPE YPM 13214

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.6,pl.1,f.5,6.

Parks, W.A. 1935. J. Paleont. v.9,n.1,p.21, pl.7,f.1,2.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, Bouleaux Fm. Loose on beach, Anse a La Barbe, Gascons, Quebec, Canada. Collector: Schuchert, C., 1905.

Actinostroma perforatum Parks

HOLOTYPE YPM 13236

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.5,pl.1,f.3,4.

Parks, W.A. 1935. J. Paleont. v.9,n.1,p.27, pl.6,f.8.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.131.

Middle Silurian, Niagaran, La Vieille Fm. Near the top of the limestone, ridge W of Port Daniel RR station which extends from Clemville N to Barrachois, Quebec, Canada. Collector: Schuchert, C., 08/1923.

Actinostroma praecursum Parks

HOLOTYPE YPM 13208

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.4,pl.1,f.1,2.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.131.

Middle Silurian, Niagaran, Bouleaux Fm. Shore of bay, Anse a La Barbe, Quebec, Canada. Collector: Schuchert, C., 08/1905.

Anostylostroma jewetti (Girty)

See *Clathrodictyon jewetti* Girty.

***Archaeoscyphia annulata* Cullison**

HOLOTYPE YPM 17135

Cullison, J.S. 1944. Bull. Tech. Ser. Missouri Univ. Sch. Mines Met. p.48,pl.24,f.10.

Early Ordovician, Jefferson City Grp, Rich Fountain Fm. Chert and dolomite, middle Rich Mountain Fm, E side of road, elevation 1180 ft, US Hgwy 63 at its crest over Pilot Knob; NW corner SE1/4NW1/4sec27,T36N,R08W, Phelps Co., Missouri, USA. Collector: Cullison, J.S.

***Archaeosycon vesiculosum* Okulitch**

HOLOTYPE YPM 17046

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc. Am. n.48,p.82,pl.15,f.1.

Nitecki, M.H. 1967 Fieldiana: Geol. v.17, n.2,p.155.

Early Cambrian. Point Amour, Labrador, Newfoundland, Canada. Collector: Dunbar, C.O.

***Aulacera nodulifera* (Foerste)**

HOLOTYPE YPM 9200B

Galloway, J.J. and Joseph St. Jean, Jr. 1961. Bull. Am. Paleont. v.43,n.194,p.36, pl.4,f.3b.

Late Ordovician, Vaureal Fm. Battery Point, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H., 1909.

***Aulacera nodulosa* (Billings)**

HYPOTYPE YPM 9200A

Galloway, J.J. and Joseph St. Jean, Jr. 1961. Bull. Am. Paleont. v.43,n.194,p.34.

Late Ordovician, Vaureal Fm. Battery Point, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H., 1909.

HYPOTYPE YPM 19556

Galloway, J.J. and Joseph St. Jean, Jr. 1961. Bull. Am. Paleont. v.43,n.194, p.34,pl.12,f.6.

Late Ordovician, Vaureal Fm. Cliff, 0.5 mi W of West Point, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H.

***Beatricia nodulosa* Billings**

HYPOTYPE YPM 6239†

Twenhofel, W.H. 1926. Nat. Hist. v.26,n.5, p.518.

Ordovician, Ellis Bay Fm. Cape James, Anticosti Island, Quebec, Canada.

†A thorough search of the collections by the curatorial staff in the 1960s and 1980s failed to locate this specimen. It is believed to be permanently lost.

***Brachiospongia digitata* (Owen)**

HYPOTYPE YPM 4669

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.2,f.1,2.

Rauff, H. 1894. Palaeont. (Stuttgart). v.40, p.273,tf.52.

Middle Ordovician, Trenton Limestone. Russell farm, Benson Creek, Franklin Co., Kentucky, USA. Collector: Summers, R.H.

HYPOTYPE YPM 23289

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,tf.2.

Middle Ordovician, Trenton Limestone. 2.5 mi S of Frankfort on the Isaac Williams farm on Cedar Run, Franklin Co., Kentucky, USA. Collector: Went, E.C.

HYPOTYPE YPM 23290

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,tf.3.

HYPOTYPE YPM 23291

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,tf.4.

HYPOTYPE YPM 23292

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.2,f.4.

Middle Ordovician, Trenton Limestone. Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

HYPOTYPE YPM 27601

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.2,f.5-7.

Middle Ordovician, Trenton Limestone. Russell farm, Benson Creek, Franklin Co., Kentucky, USA. Collector: Summers, R.H.

HYPOTYPE YPM 27602

Linney, W.M. 1884. Kentucky Geol. Surv. p.13.

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.3,f.1.

Foerste, A.F. 1909. Bull. Denison Univ. Sci. Lab. v.14,p.300.

Middle Ordovician, Trenton Limestone. N part of Spencer Co., Kentucky, USA. Collector: Linney, W.M.

HYPOTYPE YPM 27608

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.4,f.1.

Rauff, H. 1894. Palaeont. (Stuttgart). v.40, p.274,tf.54.

Middle Ordovician, Trenton Limestone. Brachiosponge bed, Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

HYPOTYPE YPM 27609†

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.4,f.3.

Middle Ordovician, Trenton Limestone. Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

HYPOTYPE YPM 27610

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.4,f.4.

Middle Ordovician, Trenton Limestone. Bensen Creek, Franklin Co., Kentucky, USA.

HYPOTYPE YPM 27611

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.4,f.5.

Middle Ordovician, Trenton Limestone. Bensen Creek, Franklin Co., Kentucky, USA.

HYPOTYPE YPM 27612†

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.4,f.7.

Middle Ordovician, Trenton Limestone. Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

HYPOTYPE YPM 28147

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.4,f.2.

Middle Ordovician, Trenton Limestone. Brachiosponge bed, Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

HYPOTYPE YPM 30063

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.19,pl.2,f.3.

Middle Ordovician, Trenton Limestone. Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

†This specimen includes one thin section.

See also *Brachiospongia hoveyi* (Marsh), *Brachiospongia lyonii* Marsh and *Brachiospongia roemerana* Marsh.

***Brachiospongia hoveyi* (Marsh)†**

HYPOTYPE YPM 27615††

Hovey, H.C. 1875. Trans. Kansas Acad. Sci., 1874 v.3,p.11,tf.2.

=*Brachiospongia digitata* (Owen). Hypotype. Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.7.

=*Brachiospongia digitata* (Owen). Hypotype. Rigby, J.K. and M.H. Nitecki. 1968. Fieldiana: Geol. v.18,n.1,p.56.

Middle Ordovician, Trenton Limestone. Brachiosponge bed, Benson Creek area, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

†This taxon, *Brachiospongia hoveyi* (Marsh), is a nomen nudum. *B. hoveyi* was proposed by Marsh (1868) in a paper he read before the American Association for the Advancement of Science. Only the title of Marsh's paper was published; no description of *B. hoveyi* was published.

††This is a replica. The whereabouts of the actual specimen is unknown.

***Brachiospongia lyonii* Marsh**

HOLOTYPE YPM 27616†

Marsh, O.C. 1867. Am. J. Sci. ser.2,v.44, n.30,p.88.

=*Brachiospongia digitata* (Owen). Hypotype. Rigby, J.K. and M.H. Nitecki. 1968. Fieldiana: Geol. v.18,n.1,p.76.

Middle Ordovician, Trenton Limestone. S fork of Benson Creek, Franklin Co., Kentucky, USA. Collector: Lyon, W.T.

†This is a replica. The whereabouts of the actual specimen is unknown.

***Brachiospongia roemerana* Marsh**

HOLOTYPE YPM 23288

Marsh, O.C. 1867. Am. J. Sci. ser.2,v.44, n.30,p.38.

Hovey, H.C. 1875. Trans. Kansas Acad. Sci., 1874. v.3,p.10,tf.1.

=*Brachiospongia digitata* (Owen).

Hypotype. Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2, pt.1,p.19,tf.1.pl.1,f.1,2.

=*Brachiospongia digitata* (Owen).

Hypotype. Rauff, H. 1894. Palaeont. (Stuttgart). v.40, tf.53.

=*Brachiospongia digitata* (Owen). Hypotype.

Rigby, J.K. and M.H. Nitecki. 1968. Fieldiana: Geol. v.18,n.1,p.76.

Middle Ordovician, Trenton Limestone., Brachiospongia bed, Frankfort area, Franklin Co., Kentucky, USA.

***Calathospongia carceralis* Hall and Clarke**

HYPOTYPE YPM 13660

Caster, K.E. 1939. J. Paleont. v.13,n.1, p.13,pl.4,f.5,6.†

Mississippian, Tidioute Shale. Part of a sponge mat, "Yankee Bush" Hill, Warren, Warren Co., Pennsylvania, USA. Collector: Beecher, C.E.

†The image is reversed on pl.4,f.6.

***Calathospongia carlli* Hall and Clarke**

SYNTYPE YPM 24828

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.158,tf.21.

Early Mississippian, Waverly Grp. Sandstone of the Waverly Grp at Warren, Warren Co., Pennsylvania, USA. Collector: Beecher, C.E.

***Cambrocyathus amourensis* Okulitch**

SYNTYPE YPM 17041

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc. Am. n.48,p.76,pl.10,f.3,pl.11,f.3.†

=*Pycnoidocyathus amourensis*. Nitecki, M.H. 1967 Fieldiana: Geol. v.17,n.2,p.192.

Early Cambrian. East of Anse Eclair, Newfoundland, Canada. Collector: Dunbar, C.O.

SYNTYPE YPM 17042A

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc. Am. n.48,p.76,pl.9,f.3-B.

=*Pycnoidocyathus amourensis*. Nitecki, M.H. 1967 Fieldiana: Geol. v.17,n.2,p.192.

SYNTYPE YPM 17042B

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc. Am. n.48,p.76,pl.9,f.3-B,pl.11,f.1.††

=*Pycnoidocyathus amourensis*. Nitecki, M.H. 1967 Fieldiana: Geol. v.17,n.2,p.192.

SYNTYPE YPM 17042C

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc. Am. n.48,p.76,pl.9,f.3-B.

=*Pycnoidocyathus amourensis*. Nitecki, M.H. 1967 Fieldiana: Geol. v.17,n.2,p.192.

Early Cambrian. Taylor's Gulch, Labrador, Newfoundland, Canada. Collector: Dunbar, C.O.

SYNTYPE YPM 17048B†††

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc. Am. n.48, pl.14,f.5.†††

Nitecki, M.H. 1967 Fieldiana: Geol. v.17, n.2,p.179.

Early Cambrian. Point Amour, Labrador, Newfoundland, Canada. Collector: Dunbar, C.O.

†Incorrectly cited as 17042 on pl.11,f.3.

††Incorrectly cited as 17041 on pl.11,f.1.

†††A thorough search of the collections by the curatorial staff in the 1960s and 1980s failed to locate this specimen. It is believed to be permanently lost.

††††Two trays of sawed specimens exist labeled "Cotypes". One of the trays has four sawed pieces (YPM 17048A) that may belong to the single large piece (YPM 17048B) in the other tray, but they do not appear to match. It appears that, the thin section figured by Okulitch (1943)

on pl.17,f.1 and Okulitch (1946) pl.41,f.1,2 of *Exocyathus canadensis* (ROM slide 67) with an overgrowth of *Cambrocyathus amourensensis* was made from YPM 17048, not YPM 25643 (25643 is a ROM number), as stated in the plate explanation.

***Cambrocyathus profundus* (Billings)**

HYPOTYPE YPM 17044A, 17044B

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc. Am. n.48,p.72,pl.9,f.3A.

Early Cambrian. Taylor's Gulch, Labrador, Newfoundland, Canada. Collector: Dunbar, C.O.

***Caryospongia cf. juglans* (Quenstedt)**

HYPOTYPE YPM 13298

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.33,pl.7,f.2.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.130.

HYPOTYPE YPM 30879, 30880

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.33.

Middle Silurian, Niagaran, La Vieille Fm. Knoby layers in lower part of fm, shore of Port Daniel Barrachois, W side, just N of Legrande Hotel, Quebec, Canada. Collector: Dart, J.D., 1922.

***Ceratodictya annulata* (Hall)**

HYPOTYPE YPM 24829

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.120,pl.22,f.3,4.

Late Devonian, Chemung Fm. Deyo Basin, Naples, Ontario Co., New York, USA. Collector: Clarke, J.M.

***Chaunactis* sp. 1**

HYPOTYPE YPM 19607B

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.95,pl.30,f.1,4,5.

HYPOTYPE YPM 19607C

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.95,pl.30,f.6.

HYPOTYPE YPM 19607D

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.95.

Early Permian, Leonardian, Leonard Fm. Section 12, upper part of bed 24, SW side of hill 4920, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

***Chaunactis* sp. 2**

HYPOTYPE YPM 19605A

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.95,pl.31,f.1,3.

HYPOTYPE YPM 19605B

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.95,pl.31,f.2.

HYPOTYPE YPM 19605C - 19605G

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.95.

Permian, Word Fm. Fourth limestone, Section 17, N of junction of Road and Gilliland Canyons, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

HYPOTYPE YPM 19607A

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.95,pl.30,f.2,3.

Early Permian, Leonardian, Leonard Fm. Section 12, upper part of bed 24, SW side of hill 4920, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

***Clathrodictionary crickmayi* Parks**

HYPOTYPE YPM 13221

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Stearn, C.W. and Claude Hubert. 1966. Can. J. Earth Sci. v.3,p.35,tbl.2.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspe Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

***Clathrodictionary jewetti* Girty**

HOLOTYPE YPM 22459†

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894. v.2,p.298,pl.6,f.5,6.

Parks, W.A. 1909. Toronto Univ. Stud. Geol. Ser. n.6,p.247,pl.16,f.1,2.††

Parks, W.A. 1936. Toronto Univ. Stud. Geol. Ser. n.39,p.36,pl.7,f.8,pl.8,f.8.†††

=*Anostylostroma jewetti*. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.10,tbl.1,ff.3.1-4.

Early Devonian, Helderberg Grp, Coeymans Limestone. Cedarville, Albany Co., New York, USA.

†This specimen includes three thin sections (22459A-24459C).

††Both the thin section illustrated in pl.16,f.1 and the thin section illustrated in pl.16,f.2 were cut from the same hand specimen. The former thin section, located in the Royal Ontario Museum, has been given to Peabody; the later thin section has not been located.

†††Described as the "holotype" on p.38, but this specimen was was not designated in Girty (1895).

Clathrodictyon regulare von Rosen

HYPOTYPE YPM 13227

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

HYPOTYPE YPM 13228

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.8,pl.1,f.7,8.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Stearn, C.W. and Claude Hubert. 1966. Can. J. Earth Sci. v.3,p.36.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspé Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13264, 13272

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, Niagaran, La Vieille Fm. Along RR cut just W of Yale Peabody Museum Invertebrate Paleontology Locality B0900, W of water tower, Anse a La Vieille, Quebec, Canada. Collector: Northrop, S.A., 1927.

Clathrodictyon cf. regulare von Rosen

HYPOTYPE YPM 13230

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspé Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13248

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, Niagaran, West Point Fm. Beach shingle derived from zone 21, shore section E of Black Cape, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13271

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, Niagaran, West Point Fm. (intermediate beds); Pillar Point, E of McGinnis Cove, Quebec, Canada. Collector: Dart, J.D., 1922.

Clathrodictyon regulare var. von Rosen

HYPOTYPE YPM 13229

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspé Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

Clathrodictyon sp. A

HYPOTYPE YPM 13255

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspé Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

Clathrodictyon sp. B

HYPOTYPE YPM 13234, 13239

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.134.

Middle Silurian, Niagaran, Gascons Fm. *Monograptus* zone; at the little stream which plunges over the cliff on the S side of Port Daniel Bay, Quebec, Canada. Collector: Schuchert, C., 08/1923.

Clathrodictyon stylum Parks

HOLOTYPE YPM 13304

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.10,pl.2,f.7,8,pl.3, f.1,pl.8,f.1.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Middle Silurian, Niagaran, Gascons Fm. Stream drift, Little Port Daniel River, lower third of Range VI, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13307

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Middle Silurian, Niagaran, Gascons Fm. *Monograptus* zone; at the little stream which plunges over the cliff on the S side of Port Daniel Bay, Quebec, Canada. Collector: Schuchert, C., 08/1923.

Clathrodictyon stylum crassum Parks

HOLOTYPE YPM 13302

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.12,pl.3,f.2,3.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.134.

Middle Silurian, West Point Fm. 1 mi W of West Point Lighthouse, Port Daniels, Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13301

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Middle Silurian, Niagaran. Beach shingle at Sandy Cove between West Point and Indian Point, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13303

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Middle Silurian, West Point Fm. 1 mi W of West Point Lighthouse, Port Daniels, Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13305

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Middle Silurian, Niagaran, West Point Fm. Shore, W of lighthouse [W of Yale Peabody Museum Invertebrate Paleontology Locality B950] between West Point and Indian Point, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13308

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Middle Silurian, Niagaran, West Point Fm. Beach pebble at outcrop, shore between West Point and Indian Point, Quebec, Canada. Collector: Northrop, S.A., 1927.

Clathrodictyon variolare von Rosen

HYPOTYPE YPM 13260

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.8,pl.2,f.1.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, Niagaran, Gascons Fm. Dark green shale at mouth of Chourinard Brook E of Gascons, Quebec, Canada. Collector: Schuchert, C., 08/1923.

Clathrodictyon vesiculosum minutum (Rominger)

HYPOTYPE YPM 13219

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.9,pl.2,f.3.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.133.

Middle Silurian, Bouleaux Fm. Loose on beach, Anse a La Barbe, Gascons, Quebec, Canada. Collector: Schuchert, C., 1905.

Clathrodictyon vesiculosum var. nov. Parks

HOLOTYPE YPM 13449

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.9,pl.2,f.2.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.132.

Middle Silurian, Niagaran, Clemville Fm. *Camartoechia fringilla* zone, Little Port Daniel River, about 0.25 mi up stream from bridge, outskirts of Clemville, Quebec, Canada. Collector: Schuchert, C., 08/1923.

***Clathrosporgia abacus* (Hall)**

See *Dictyophyton* (*Clathrosporgia*) *abacus* Hall.

***Dictyophyton* (*Clathrosporgia*) *abacus* Hall**

HYPOTYPE YPM 24831

Hall, James. 1884. New York St. Mus., 35th Ann. Rpt., 1883. p.474, pl.19, f.2, 4.

=*Clathrosporgia abacus* (Hall). Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2, p.153, pl.49, f.5-7.

HYPOTYPE YPM 24832

Hall, James. 1884. New York St. Mus., 35th Ann. Rpt., 1883 p.474, pl.19, f.23.

=*Clathrosporgia abacus* (Hall). Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2, p.153, pl.49, f.8.

Early Mississippian, Waverly Grp. Sandstone of the Waverly Grp at Warren, Warren Co., Pennsylvania, USA. Collector: Beecher, C.E.

***Ectenodictya expansa* Hall**

SYNTYPE YPM 24835†

Hall, James. 1884. New York St. Mus., 35th Ann. Rpt., 1883. p.475, pl.20, f.10.

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2, p.154, pl.53, f.3.

Early Mississippian, Waverly Grp. Sandstone of the Waverly Grp at Warren, Warren Co., Pennsylvania, USA. Collector: Beecher, C.E.

†Labeled and marked with a red star as a type by C.E. Beecher.

***Ectenodictya implexa* Hall**

SYNTYPE YPM 24830†

Hall, James. 1884. New York St. Mus., 35th Ann. Rpt., 1883. p.475, pl.19, f.1.

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2, p.164, pl.54, f.3.

Early Mississippian, Waverly Grp. Sandstone of the Waverly Grp at Warren, Warren Co., Pennsylvania, USA. Collector: Beecher, C.E.

†Labeled and marked as type with red star by C.E. Beecher.

***Eospongia roemeri* (Billings)**

HYPOTYPE YPM 26210

Twenhofel, W.H. 1938a. Spec. Pap. Geol. Soc. Am. n.11, p.35, pl.5, f.3.

Ordovician, Mingan Fm. Sea Cow Island, Mingan Islands, Quebec, Canada. Collector: Twenhofel, W.H.

HYPOTYPE YPM 32678†

Twenhofel, W.H. 1938a. Spec. Pap. Geol. Soc. Am. n.11, p.35.

Ordovician, Mingan Fm. Sea Cow Island, Mingan Islands, Quebec, Canada. Collector: Twenhofel, W.H.

HYPOTYPE YPM 35513††, 35514††

Twenhofel, W.H. 1938a. Spec. Pap. Geol. Soc. Am. n.11, p.35.

Ordovician, Mingan Fm. Lower 50 or 60 feet of the Mingan Fm on Quarry or Sea Cow islands or Clearwater Point, Gaspé Peninsula, Quebec, Canada. Collector: Twenhofel, W.H.

†This specimen lot is represented by fifteen individuals.

††A thorough search of the collections by the curatorial staff in the 1960s and 1980s failed to locate these specimens. They are believed to be permanently lost.

***Eospongia varians* Billings**

HYPOTYPE YPM 26211

Twenhofel, W.H. 1938a. Spec. Pap. Geol. Soc. Am. n.11, p.36, pl.5, f.2.

HYPOTYPE YPM 32682†, 32688†

Twenhofel, W.H. 1938a. Spec. Pap. Geol. Soc. Am. n.11, p.35.

Ordovician, Mingan Fm. Eskimoe Island, Mingan Islands, Quebec, Canada. Collector: Twenhofel, W.H.

†These two specimen lots are represented by twelve and six individuals, respectively.

***Gaspospongia basalis* Parks**

HOLOTYPE YPM 13282

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33, p.35, pl.7, f.3, 4.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21, p.130.

Rigby, J.K. 1967. J. Paleont. v.41,n.3,p.774, pl.102,f.6-8.

Middle Silurian, Niagaran, La Vieille Fm. *Stricklandia* zone W end of section, Black Cape, Quebec, Canada. Collector: Schuchert, C., 08/1905.

***Girtyocoelia dunbari* King**

HOLOTYPE YPM 16595

King, R.H. 1943. Bull. Kansas Geol. Surv. n.47,pt.1,p.33,pl.3,f.6.

Early Permian, Leonardian, Leonard Fm. First limestone member, or slightly below, at W end of Dugout Mt, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

***Goldsonia burntensis* Shrock and Twenhofel**

HOLOTYPE YPM 25597[†]

Shrock, R.R. and W.H. Twenhofel. 1939. J. Paleont. v.13,n.3,p.247,pl.27,f. 2,3.

=*Ischadites burntensis*. Nitecki, M.H. 1972. Fieldiana: Geol. v.28,p.77,f.35.

Early Silurian, Pike Arm Fm. Fossiliferous black argillite, Burnt Island in Goldson Arm near New World Island, Newfoundland, USA. Collector: Twenhofel, W.H., 1936.

[†]This specimen includes two thin sections (25597 A-25597B).

***Habrostoma barritti* (Girty)**

See *Syringostroma barretti* Girty.

***Habrostoma centrotum* (Girty)**

See *Syringostroma centrotum* Girty.

***Habrostoma consimile* (Girty)**

See *Syringostroma consimile* Girty.

***Habrostoma foveolatum* (Girty)**

See *Syringostroma foveolatum* Girty.

***Habrostoma microporum* (Girty)**

See *Syringostroma consimile* Girty and *Syringostroma microporum* Girty.

***Hindia fibrosa* (Roemer)**

HYPOTYPE YPM 30861

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.130.

Middle Silurian, Indian Point Fm. Shore at Indian Point, Port Daniel, Quebec, Canada. Collector: Schuchert, C., 1924.

***Hyalostelia anticostiana* Twenhofel**

HOLOTYPE YPM 10404[†]

Twenhofel, W.H. 1928. Mem. Can. Geol. Surv. n.154,p.103,pl.1,f.2.

=*Twenhofelella anticostiana*. Rigby, J.K. 1974. Can. J. Earth Sci. v.11,n10,tf.3a-3c.

Silurian, Jupiter Fm. W of Jupiter River, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H.

[†]This specimen includes two thin sections (10404A and 10404B) and one mold.

***Hydnoceras phymatodes* Hall and Clarke**

SYNTYPE YPM 4657

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.104,pl.6,f.4,5.

Late Devonian, Chemung Grp. Bath, Steuben Co., New York, USA.

***Hydnoceras tuberosum* Conrad**

HYPOTYPE YPM 24826

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.97,pl.6,f.3(left).

HYPOTYPE YPM 28134

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.97,pl.6,f.3(right).

Late Devonian, Chemung Fm. Cohocton, Steuben Co., New York, USA. Collector: Clarke, J.M.

***Hydnoceras variabile* Hall and Clarke**

SYNTYPE YPM 24827

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.108,pl.37,f.4,6.

Late Devonian, Chemung Fm. Deyo Basin, Naples, Ontario Co., New York, USA. Collector: Clarke, J.M.

***Hydriodictya cylix* Hall and Clarke**

SYNTYPE YPM 24833

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.78,pl.16,f.2,pl.55, f.7.

SYNTYPE YPM 28133

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.78,pl.5,f.1,2.

Late Devonian, Chemung Fm. Deyo Basin, Naples, Ontario Co., New York, USA. Collector: Clarke, J.M.

***Ischadites burntensis* (Shrock and Twenhofel)**

See *Goldsonia burntensis* Shrock and Twenhofel.

***Ischadites cf. koenigi* Murchinson**

HYPOTYPE YPM 22760

Twenhofel, W.H. 1928. Mem. Can. Geol. Surv. n.154,p.103.

Silurian, Jupiter Fm. W of Jupiter River, Anticosti Island, Quebec, Canada. Collector: Twenhofel, W.H., 1909.

***Ischadites keonigi* Murchinson**

See *Receptaculites pedunculatus* Twenhofel.

***Ischadites rhomboideus* Twenhofel**

HOLOTYPE YPM 15296A

Twenhofel, W.H. 1938a. Spec. Pap. Geol. Soc. Am. n.11,p.36,pl.6,f.4.

HYPOTYPE YPM 15296B

Twenhofel, W.H. 1938a. Spec. Pap. Geol. Soc. Am. n.11,p.36.

Ordovician, Mingan Fm. Bald Island, Mingan Islands, Quebec, Canada. Collector: Twenhofel, W.H.

***Jereina ramosa* Finks**

PARATYPE YPM 19589

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.75.

Permian, Word Fm. Lower limestone, Section 12, 0.25 mi S of locality B3074, and 0.2 mi E of locality B3075, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

***Newella mira* (Newell)**

See *Parallelopora mira* Newell.

***Ozarkocoelia irregularis* Cullison**

HOLOTYPE YPM 17136

Cullison, J.S. 1944. Bull. Tech. Ser. Missouri Univ. Sch. Mines Met. p.47,pl.24,f.1-8.

Early Ordovician, Jefferson City Grp, Rich Fountain Fm. residual chert and in place, immediate vicinity of the Missouri School of Mines and Metallurgy Experimental Mine, elevation 1000ft; SE corner SW1/4SW1/4 sec10,T37N,R08W, Phelps Co., Missouri, USA. Collector: Cullison, J.S.

PARATYPE YPM 17137

Cullison, J.S. 1944. Bull. Tech. Ser. Missouri Univ. Sch. Mines Met. p.47.

Early Ordovician, Jefferson City Grp, Rich Fountain Fm. *Ozarkocoelia* zone, top of School Mine ledge, S side of road below house, Osage Co Hgwy "E"; SE corner NW1/4sec15,T42N, R09W, Osage Co., Missouri, USA. Collector: Cullison, J.S.

***Parallelopora mira* Newell**

PARATYPE YPM 24754†

Newell, N.D. 1935. J. Paleont. v.9,n.4,p.341.

=*Newella mira* (Newell). Wood, R., J. Reitner, and R.R. West. 1989. Lethaia. v.22,n.1,p.87.

PARATYPE YPM 24754A

Newell, N.D. 1935. J. Paleont. v.9,n.4,p.341.

Hartman, W.D. and T.F. Goreau. 1970. Sym. Zool. Soc. London. p.225,f.15.

=*Newella mira* (Newell). Wood, R., J. Reitner, and R.R. West. 1989. Lethaia. v.22,n.1,p.87.

Late Pennsylvanian, Lansing Grp, Vilas Shale. Near center SW Sec11T20SR19E, base of Vila, at a RR quarry, Anderson Co., Kansas, USA. Collector: Newell, N.D.

†This specimen lot is represented by 13 individuals.

***Parallelostroma barretti* (Girty)**

See *Syringostroma barretti* Girty.

?*Parallelostroma centrotum* (Girty)

See *Syringostroma centrotum* Girty.

***Parallelostroma foveolatum* (Girty)**

See *Syringostroma foveolatum* Girty.

***Parallelostroma microporum* Girty**

See *Syringostroma barretti* Girty.

?*Parallelostroma microporum* (Girty)

See *Syringostroma consimile* Girty and
Syringostroma microporum Girty.

***Pattersonia tuberosa* (Beecher)**

See *Strobilospongia tuberosa* Beecher.

***Physospongia dawsoni* (Whitfield)**

HYPOTYPE YPM 24834

Hall, James and J.M. Clarke. 1898. New
York St. Mus. Mem. n.2,p.189,pl.62,f.8.

Early Mississippian, Edwardsville Fm.
Crawfordsville, Montgomery Co., Indiana, USA.
Collector: Bradley, F.H.

***Pleurostoma subundata* Northrop**

HOLOTYPE YPM 13321

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.209,pl.22,f.2.

Middle Silurian, Indian Point Fm. Shore at Indian
Point, Port Daniel, Quebec, Canada. Collector:
Schuchert, C., 1924.

***Protopharetra dunbari* Okulitch**

SYNTYPE YPM 17043

Okulitch, V.J. 1943. Spec. Pap. Geol. Soc.
Am. n.48,p.71,pl.6,f.5,pl.9,f.3(lower center).

Nitecki, M.H. 1967 Fieldiana: Geol. v.17,
n.2,p.187.

Early Cambrian. Taylor's Gulch, Labrador,
Newfoundland, Canada. Collector: Dunbar, C.O.

***Pycnoidocyathus amourensis* (Okulitch)**

See *Cambrocyathus amourensis* Okulitch.

***Receptaculites infundibuliformis* Eaton**

HYPOTYPE YPM 27025

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894. v.2,p.271,pl.3,f.3,4.

HYPOTYPE YPM 27026

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894. v.2,p.271,pl.2,f.4-6,pl.3,f.2.

Early Devonian, Helderberg Grp. Clarksville, Albany
Co., New York, USA. Collector: Beecher, C.E.

HYPOTYPE YPM 35516

Hall, James and G.B. Simpson. 1887.
Paleont. New York. v.6,p.290.

Early Devonian, Helderberg Grp. Lower Helderberg,
Clarksville, Albany Co., New York, USA.

HYPOTYPE YPM 63284

Girty, G.H. 1895. New York St. Mus., 48th
Ann. Rpt., 1894. v.2,p.271.

Early Devonian, Helderberg Grp. Clarksville, Albany
Co., New York, USA. Collector: Beecher, C.E.

See also *Receptaculites monticulatus* Hall.

***Receptaculites monticulatus* Hall**

HOLOTYPE YPM 27027

Hall, James. 1883. New York State
Geologist Rpt., 1882. pl.23,f.3-7.

=*Receptaculites infundibuliformis* Eaton.

Hypotype. Hall, James and G.B. Simpson.
1887. Paleont. New York. v.6,p.290,pl.24,f.3-7.

=*Receptaculites infundibuliformis* Eaton.

Hypotype. Girty, G.H. 1895. New York St.
Mus., 48th Ann. Rpt., 1894. v.2,p.271.

Early Devonian, Helderberg Grp. Lower Helderberg,
Clarksville, Albany Co., New York, USA.

***Receptaculites pedunculatus* Twenhofel**

HOLOTYPE YPM 23286

Twenhofel, W.H. 1938b. Trans. Wisconsin
Acad. Sci. Arts Let. n.11,p.546.

=*Ischadites keonigi* Murchinson. Nitecki, M.H.
1972. Fieldiana: Geol. v.28,p.55,tf.24d.

Middle Silurian. Either upper part of the Coral
Beds [Waukesha Dolomite] or lower part of the
Racine Dolomite, a quarry near Cedarburg, about
16 mi N and a little west of Milwaukee, Ozaukee
Co., Wisconsin, USA.

***Rosenella(?) densa* Parks**

HOLOTYPE YPM 13258

Parks, W.A. 1933. Toronto Univ. Stud.
Geol. Ser. n.33,p.13,pl.3,f.4,pl.8,f.7.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.134.

Middle Silurian, Niagaran, La Vieille Fm. Along RR cut just W of Yale Peabody Museum Invertebrate Paleontology Locality B0900, W of water tower, Anse a La Vieille, Quebec, Canada. Collector: Northrop, S.A., 1927.

***Spongia* gen. et sp.**

HYPOTYPE YPM 13291

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.35.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.131.

Middle Silurian, Niagaran, Bouleaux Fm. Upper Bouleaux, upper 300 ft of sandy shales of Black Cape section, Quebec, Canada. Collector: Schuchert, C.

HYPOTYPE YPM 30881

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.34.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.131.

Middle Silurian, Niagaran, La Vieille Fm. knoby layers in lower part of fm, shore of Port Daniel Barrachois, W side, just N of Legrande Hotel, Quebec, Canada. Collector: Dart, J.D., 1922.

***Stereodictyum orthoplectum* Finks**

PARATYPE YPM 19594A, 19594B

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.108.

Early Permian, Wolfcampian, Wolfcamp Fm. 1 mi NW of Wolfcamp, Section 23, bed 12 of Wolfcamp section and above, differentiated into 2 parts, low and high, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

PARATYPE YPM 20201A, 20201B, 20201C

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.108.

Early Permian, Leonardian, Hess Limestone. Upper fossil horizon, on scarp E of head of E fork of Hess Canyon about 0.25 mi below and SE of hill 5767, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

***Stioderma coscinum* Finks**

PARATYPE YPM 19593

Finks, R.M. 1960. Bull. Am. Mus. Nat. Hist. v.120,art.1,p.133,pl.47,f.7,8.

Early Permian, Leonardian, Leonard Fm. Section on Baylor Mts, beds 5-6, mostly bed 5, Sierra Diablo, Culberson Co., Texas, USA. Collector: King, R.E.

***Strobilospongia aurita* (Beecher)**

HOLOTYPE YPM 27603

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.28,pl.5,f.1.

Middle Ordovician, Trenton Limestone. Brachiosponge bed, Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

***Strobilospongia* sp.**

HYPOTYPE YPM 27604

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.27,pl.5,f.2.

Middle Ordovician, Trenton Limestone. Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

HYPOTYPE YPM 27605

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.27,pl.5,f.3.

Middle Ordovician, Trenton Limestone. Brachiosponge bed, Bridgeport, Franklin Co., Kentucky, USA. Collector: Beecher, C.E., 1888.

HYPOTYPE YPM 27606

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.27,pl.5,f.4.

Middle Ordovician, Trenton Limestone. Benson Creek, Franklin Co., Kentucky, USA. Collector: Hovey, H.C.

HYPOTYPE YPM 27613†

Beecher, C.E. 1889. Mem. Peabody Mus. Nat. Hist., Yale Univ. v.2,pt.1,p.27,pl.6,f.1.

Middle Ordovician, Trenton Limestone. Bridgeport, Franklin Co., Kentucky, USA. Collector: Beecher, C.E., 1888.

HYPOTYPE YPM 27614†

Beecher, C.E. 1889. Mem. Peabody Mus.
Nat. Hist., Yale Univ. v.2,pt.1,p.27,pl.6,f.2.

Middle Ordovician, Trenton Limestone. Benson
Creek, Franklin Co., Kentucky, USA. Collector:
Beecher, C.E., 1888.

†Each of these specimens include one thin
section, respectively.

***Strobilospongia tuberosa* Beecher**

SYNTYPE YPM 4665

Beecher, C.E. 1889. Mem. Peabody Mus.
Nat. Hist., Yale Univ. v.2,pt.1,p.26,pl.6,f.3-5.

=*Pattersonia tuberosa*. Rauff, H. 1894.
Palaeont. (Stuttgart). v.40,tf.51.

SYNTYPE YPM 27607

Beecher, C.E. 1889. Mem. Peabody Mus.
Nat. Hist., Yale Univ. v.2,pt.1,p.26,pl.5,f.5c,
pl.6,f.6,7.

Middle Ordovician, Trenton Limestone. Turner's
Station. Kentucky, USA. Collector: Fischer, M.

***Stromatocerium canadense minimum*
Parks**

SYNTYPE YPM 42989†

Parks, W.A. 1910. Toronto Univ. Stud.
Geol. Ser. n.7,p.20.††

Middle Ordovician, Trenton Limestone. Benson
Creek or Cedar Run. Franklin Co., Kentucky,
USA. Collector: Beecher, C.E., 1888.

†A thorough search of the collections by the
curatorial staff in the 1960s and 1980s failed to
locate this specimen. It is believed to be
permanently lost.

††This specimen was incorrectly cited as 11965.

***Stromatopora carteri* Nicholson**

HYPOTYPE YPM 13261

Parks, W.A. 1933. Toronto Univ. Stud.
Geol. Ser. n.33,p.17,pl.3,f.8,pl.4,f.1.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.135.

Middle Silurian, Niagaran, Gascons Fm. Dark
green shale at mouth of Chourinard Brook E of
Gascons, Quebec, Canada. Collector: Schuchert,
C., 08/1923.

***Stromatopora cf. carteri* (A) Nicholson**

HYPOTYPE YPM 13231

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.135.

Middle Silurian, Niagaran, Bouleaux Fm. Shore,
E side of Reddish Point extending into Anse-aux-
Gascons, Quebec, Canada. Collector: Northrop,
S.A., 1927.

***Stromatopora cf. carteri* (B) Nicholson**

HYPOTYPE YPM 13259

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.135.

Middle Silurian, Niagaran, Bouleaux Fm. Shore,
E side of Reddish Point extending into Anse-aux-
Gascons, Quebec, Canada. Collector: Northrop,
S.A., 1927.

HYPOTYPE YPM 13265

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.135.

Middle Silurian, Niagaran, Gascons Fm. Shore,
center of Anse-aux-Gascons, Quebec, Canada.
Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13275

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.135.

Middle Silurian, Niagaran, West Point Fm. Shore,
W of lighthouse, just W of Little Cove [W of Yale
Peabody Museum Invertebrate Paleontology
Locality B0948] between West Point and Indian
Point, Quebec, Canada. Collector: Northrop,
S.A., 1927.

HYPOTYPE YPM 13295

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.135.

Middle Silurian, Niagaran, Bouleaux Fm. Shore,
E side of Reddish Point extending into Anse-aux-
Gascons, Quebec, Canada. Collector: Northrop,
S.A., 1927.

HYPOTYPE YPM 13300

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.135.

Middle Silurian, Niagaran, West Point Fm. Shore,
W of lighthouse, just W of Little Cove [W of Yale

Peabody Museum Invertebrate Paleontology
Locality B0948] between West Point and Indian
Point, Quebec, Canada. Collector: Northrop,
S.A., 1927.

***Stromatopora constellata* Hall**

HYPOTYPE YPM 13257

Parks, W.A. 1933. Toronto Univ. Stud. Geol.
Ser. n.33,p.16,pl.3,f.6,7.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

HYPOTYPE YPM 13277

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, West Point Fm. 1 mi W of West
Point Lighthouse, Port Daniels, Quebec, Canada.
Collector: Schuchert, C., 1924.

***Stromatopora aff. constellata* Hall**

HYPOTYPE YPM 13209

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, Niagaran, Bouleaux Fm. Shore of
bay, Anse a La Barbe, Quebec, Canada.
Collector: Schuchert, C., 08/1905.

HYPOTYPE YPM 13226

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, La Vieille Fm. SW corner of
barachois, Port Daniel Gaspé Peninsula,
Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13244

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, Niagaran, Clemville Fm. From the
blocky shaly beds in the lower ss, 17 ft above the
base of the Silurian, near Anse a La Vieille, Quebec,
Canada. Collector: Schuchert, C., 08/1923.

HYPOTYPE YPM 13246

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, Niagaran, Bouleaux Fm. Shore,
E side of Reddish Point extending into Anse aux
Gascons, Quebec, Canada. Collector: Northrop,
S.A., 1927.

HYPOTYPE YPM 13256

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, La Vieille Fm. SW corner of
barachois, Port Daniel Gaspé Peninsula,
Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13270

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, Niagaran, West Point Fm. Shore,
W of lighthouse [W of Yale Peabody Museum
Invertebrate Paleontology Locality B949] between
West Point and Indian Point, Quebec, Canada.
Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13278, 13279

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, West Point Fm. 1 mi W of West
Point Lighthouse, Port Daniels, Quebec, Canada.
Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13297

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.134.

Middle Silurian, Niagaran, La Vieille Fm. First
limestone outcrop, Anse a La Barbe River, lower
limit of Range IV, Quebec, Canada. Collector:
Northrop, S.A., 1927.

***Stromatopora prima* (Parks)**

See *Stromatoporella alcocki* Parks,
Stromatoporella chouinardensis Parks,
Stromatoporella crassa Parks and
Stromatoporella prima Parks.

***Stromatopora* sp. A**

HYPOTYPE YPM 13225

Parks, W.A. 1933. Toronto Univ. Stud. Geol.
Ser. n.33,p.23.†

Northrop, S.A. 1939. Spec. Pap. Geol. Soc.
Am. n.21,p.136.†

Middle Silurian, La Vieille Fm. SW corner of
barachois, Port Daniel Gaspé Peninsula,
Quebec, Canada. Collector: Schuchert, C., 1924.

†A fragment and four thin sections of YPM 13241 was
returned from Royal Ontario Museum (ROM 23141).

***Stromatopora* sp. B**

HYPOTYPE YPM 13212

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, Bouleaux Fm. Shore of bay, Anse a La Barbe, Quebec, Canada. Collector: Schuchert, C., 08/1905.

HYPOTYPE YPM 13232

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, La Vieille Fm. In road near top of hill above RR crossing, Anse a La Vieille, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13235, 13238

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, La Vieille Fm. Near the top of the Limestone, ridge W of Port Daniel RR station which extends from Clemville N to Barrachois, Quebec, Canada. Collector: Schuchert, C., 08/1923.

HYPOTYPE YPM 13242

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, Clemville Fm. *Camarotoechia fringilla* zone, Little Port Daniel River, about 0.25 mi up stream from bridge, outskirts of Clemville, Quebec, Canada. Collector: Schuchert, C., 08/1923.

HYPOTYPE YPM 13247

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, West Point Fm. Beach shingle derived from zone 21, shore section E of Black Cape, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13251, 13253, 13254

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspé Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13263

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, La Vieille Fm. Along RR cut just W of Yale Peabody Museum Invertebrate Paleontology Locality B0900, W of water tower, Anse a La Vieille, Quebec, Canada. Collector: Northrop, S.A., 1927.

HYPOTYPE YPM 13269

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, La Vieille Fm. High in limestone, top of high ridge which ends abruptly at W side of Port Daniel barrachois, Quebec, Canada. Collector: Dart, J.D., 1922.

HYPOTYPE YPM 13280

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, West Point Fm. 1 mi W of West Point Lighthouse, Port Daniels, Quebec, Canada. Collector: Schuchert, C., 1924.

HYPOTYPE YPM 13289

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, Bouleaux Fm. Upper Bouleaux, upper 300 ft of sandy shales of Black Cape section, Quebec, Canada. Collector: Schuchert, C.

***Stromatopora(?) aporita* Parks**

HOLOTYPE YPM 13240†

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.20,pl.4,f.6,7.

=*Stromatopora? aporita*. Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Bouleaux Fm. Base of Bouleaux, W side of McGinnis Cove, E of Port Daniel, Quebec, Canada. Collector: Schuchert, C.

HYPOTYPE YPM 13215

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.20.

=*Stromatopora? aporita*. Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Bouleaux Fm. Loose on beach, Anse a La Barbe, Gascons, Quebec, Canada. Collector: Schuchert, C., 1905.

†A thorough search of the collections by the curatorial staff in the 1980s failed to locate this specimen. It is believed to be permanently lost.

***Stromatopora? aporita* Parks**

HYPOTYPE YPM 13216, 13217

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Bouleaux Fm. Loose on beach, Anse a La Barbe, Gascons, Quebec, Canada. Collector: Schuchert, C., 1905.

See also *Stromatopora(?) aporita* Parks.

***Stromatopora(?) cf. aporita* Parks**

HOLOTYPE YPM 13210

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.20.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Niagaran, Bouleaux Fm. Shore of bay, Anse a La Barbe, Quebec, Canada. Collector: Schuchert, C., 08/1905.

***Stromatopora? aporita tenuis* Parks**

HYPOTYPE YPM 13273

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, West Point Fm. Intermediate beds near upper pink, Harrington cove, Port Daniel, Quebec, Canada. Collector: Schuchert, C., 1924.

See also *Stromatopora(?) aporita tenuis* Parks.

***Stromatopora(?) aporita tenuis* Parks**

HOLOTYPE YPM 13218

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.21,pl.4,f.8.†

=*Stromatopora? aporita tenuis*. Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, Bouleaux Fm. Loose on beach, Anse a La Barbe, Gascons, Quebec, Canada. Collector: Schuchert, C., 1905.

†Incorrectly cited as YPM 13273.

***Stromatopora(?) atlantica* Parks**

SYNTYPE YPM 13222

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.22,pl.8,f.4.†

=*Stromatopora? atlantica*. Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

SYNTYPE YPM 13224

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.22.

=*Stromatopora? atlantica*. Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspe Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

†Incorrectly cited as pl.8,f.3.

***Stromatopora? atlantica* Parks**

See *Stromatopora(?) atlantica* Parks.

***Stromatopora? cf. atlantica* Parks**

HYPOTYPE YPM 13220, 13223

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.136.

Middle Silurian, La Vieille Fm. SW corner of barachois, Port Daniel Gaspe Peninsula, Quebec, Canada. Collector: Schuchert, C., 1924.

***Stromatopora(?) dartiana* Parks**

HOLOTYPE YPM 13241

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.19,pl.4,f.4,5.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.135.†

Middle Silurian, Bouleaux Fm. Base of Bouleaux, W side of McGinnis Cove, E of Port Daniel, Quebec, Canada. Collector: Schuchert, C.

†A fragment and four thin sections of YPM 13241 was returned from Royal Ontario Museum (ROM 23141).

***Stromatoporella alcocki* Parks**

HOLOTYPE YPM 13293

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.31,pl.6,f.6,7.†

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.138.†

=*Stromatopora prima* (Parks). Hypotype. Stearn, C.W. and Claude Hubert. 1966. Can. J. Earth Sci. v.3,p.43.†

Middle Silurian, Niagaran, Bouleaux Fm. Upper Bouleaux, upper 300 ft of sandy shales of Black Cape section, Quebec, Canada. Collector: Schuchert, C.

†A fragment of YPM 13293 was returned from Royal Ontario Museum (ROM 23156).

***Stromatoporella chouinardensis* Parks**

HOLOTYPE YPM 13296

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.30,pl.6,f.4,5.†

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.138.†

=*Stromatopora prima* (Parks). Hypotype. Stearn, C.W. and Claude Hubert. 1966. Can. J. Earth Sci. v.3,p.43.†

Middle Silurian, Niagaran, Gascons Fm. Dark green shale at mouth of Chourinard Brook E of Gascons, Quebec, Canada. Collector: Schuchert, C., 08/1923.

†A fragment of YPM 13293 was returned from Royal Ontario Museum (ROM 23147).

***Stromatoporella crassa* Parks**

HOLOTYPE YPM 13262

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.29,pl.6,f.1,2.†

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.137.†

=*Stromatopora prima* (Parks). Hypotype. Stearn, C.W. and Claude Hubert. 1966. Can. J. Earth Sci. v.3,p.43.†

Middle Silurian, Niagaran, Gascons Fm. Dark green shale at mouth of Chourinard Brook E of Gascons, Quebec, Canada. Collector: Schuchert, C., 08/1923.

†A fragment of YPM 13262 was returned from Royal Ontario Museum (ROM 23149).

***Stromatoporella cf. crassa* (B) Parks**

HYPOTYPE YPM 13292

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.137.

Middle Silurian, Niagaran, Bouleaux Fm. Upper Bouleaux, upper 300 ft of sandy shales of Black Cape section, Quebec, Canada. Collector: Schuchert, C.

***Stromatoporella prima* Parks**

HOLOTYPE YPM 13294

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.28,pl.5,f.6,8.†

=*Stromatopora prima* (Parks). Stearn, C.W. and Claude Hubert. 1966. Can. J. Earth Sci. v.3,p.43.†

Middle Silurian, Niagaran, Bouleaux Fm. Upper Bouleaux, upper 300 ft of sandy shales of Black Cape section, Quebec, Canada. Collector: Schuchert, C.

HYPOTYPE YPM 13249

Parks, W.A. 1933. Toronto Univ. Stud. Geol. Ser. n.33,p.28,pl.5,f.7.

Northrop, S.A. 1939. Spec. Pap. Geol. Soc. Am. n.21,p.137.

Middle Silurian, Niagaran, West Point Fm. Beach shingle derived from zone 21, shore section E of Black Cape, Quebec, Canada. Collector: Northrop, S.A., 1927.

†A fragment of YPM 13294 was returned from Royal Ontario Museum (ROM 23152).

***Stylopegma conica* King**

HOLOTYPE YPM 16596

King, R.H. 1943. Bull. Kansas Geol. Surv. n.47,pt.1,p.20,pl.2,f.2.

Early Permian, Wolfcampian, Wolfcamp Fm. Section 24, bed 4, Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

***Stylopegma dulce* King**

HOLOTYPE YPM 16594

King, R.H. 1943. Bull. Kansas Geol. Surv. n.47,pt.1,p.19,pl.2,f.6,7.

PARATYPE YPM 16597

King, R.H. 1943. Bull. Kansas Geol. Surv. n.47,pt.1,p.19,pl.3,f.4.

Early Permian, Leonardian, Leonard Fm. Section on Baylor Mts, beds 8-9, mostly bed 9, Sierra Diablo, Culberson Co., Texas, USA. Collector: King, R.E.

***Syringostroma barretti* Girty**

HYPOTYPE YPM 22454†

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894. v.2,p.296.††

=*Habrostoma barritti*. Fagerstrom, J.A. 1982 Bull. Geol Surv. Can. n.339,p.13.

=*Parallelostroma barretti*. Stock, C.W. and A.E. Holmes. 1986. J. Paleont. v.60,n.3,p.564.

=*Parallelostroma microporum* (Girty). Hypotype. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.15.†††

Early Devonian, Helderberg Grp, Coeymans Limestone. Cedarville, Albany Co., New York, USA.

†YPM 22454 includes two thin sections (22454A-22454B) and no hand specimen.

††A penciled label found with these two thin sections reads "not type" in G.H. Girty's handwriting.

†††Stock (1988) includes this species (YPM 22454) in the synonymy for ?*Parallelostroma microporum* but refers to it as "*Syringostroma consimile*" in the text on p.15, in the explanation for tbl.4 and in the explanation for tf.5.5-6.

***Syringostroma centrotum* Girty**

HOLOTYPE YPM 22449†

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894. v.2,p.293,pl.7,f.1.

Parks, W.A. 1909. Toronto Univ. Stud. Geol. Ser. n.6,p.252.

=*Habrostoma centrotum*. Fagerstrom, J.A. 1982 Bull. Geol Surv. Can. n.339,p.13.

=? *Parallelostroma centrotum*. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.14,tbl.3,tf.4.3-6.

=*Habrostoma centrotum*. Stock, C.W. 1991 J. Paleont. v.65,n.6,p.905,tbl.3.

PARATYPE YPM 22419††, 22420††

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894. v.2,p.293.

Parks, W.A. 1909. Toronto Univ. Stud. Geol. Ser. n.6,p.252.

=? *Parallelostroma centrotum*. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.14,tbl.3.

=*Habrostoma centrotum*. Stock, C.W. 1991 J. Paleont. v.65,n.6,p.905,tbl.3.

Early Devonian, Helderberg Grp, Coeymans Limestone. Cedarville, Albany Co., New York, USA. Collector: Beecher, C.E.

PARATYPE? YPM 22445 - 22448, 63285 - 63288†††

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894 v.2,p.293.†††

Early Devonian, Helderberg Grp. Lower Pentamerus, Albany Co., New York, USA. Collector: Beecher, C.E.

PARATYPE? YPM 55129†††

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894 v.2,p.293.††††

Early Devonian, Helderberg Grp. Lower Helderberg, Cedarville, Herkimer Co., New York, USA.

†This specimen includes four thin sections (22449A-22449D).

††YPM 22419 and YPM 22420 include two thin sections (22419A-22419B) and (22420A-22420B), respectively.

†††Each of these specimens includes one thin section, respectively.

††††It is unclear from Girty (1895) whether or not this thin section is part of the type series, however, they were found in association with 22419, 22420 and 22449.

***Syringostroma consimile* Girty**

HYPOTYPE YPM 5527†

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894 v.2,p.297.

Parks, W.A. 1909. Toronto Univ. Stud. Geol. Ser. n.6,p.254,pl.18,f.14.

=*Habrostoma consimile*. Fagerstrom, J.A. 1982 Bull. Geol Surv. Can. n.339,p.13.

=? *Parallelostroma microporum* (Girty). Hypotype. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.15,tbl.4,tf.5.5-6.††

=*Habrostroma microporum* Girty. Stock, C.W. 1991 J. Paleont. v.65,n.6,p.906,tbl.6.

Early Devonian, Helderberg Grp, Coeymans Limestone. Cedarville, Albany Co., New York, USA. Collector: Beecher, C.E.

†This specimen includes four thin sections secitons (5527A-5527D).

††Stock (1988) includes this specimens (YPM 5527) in the synonymy for ?*Parallelostroma microporum* but refers to it as "*Syringostroma consimile*" in the text on p.15, in the explanation for tbl.4 and in the explanation for tf.5.5-6.

***Syringostroma foveolata* (Girty)**

See *Syringostroma foveolatum* Girty.

***Syringostroma foveolatum* Girty**

HOLOTYPE YPM 22451†

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894. v.2,p.295,pl.6,f.8.

=*Syringostroma foveolata*. Parks, W.A. 1909. Toronto Univ. Stud. Geol. Ser. n.6, p.260,pl.16,f.1,2.

=*Habrostroma foveolatum*. Fagerstrom, J.A. 1982 Bull. Geol Surv. Can. n.339,p.13.

=*Parallelostroma foveolatum*. Stock, C.W. and A.E. Holmes. 1986. J. Paleont. 60:3,p.572.

=*Parallelostroma foveolatum*. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.12,tbl.2,tf.3.5-6.

PARATYPE YPM 22174-22175†

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894 v.2,p.295.

=*Syringostroma foveolata*. Parks, W.A. 1909. Toronto Univ. Stud. Geol. Ser. n.6,p.260.

=*Parallelostroma foveolatum*. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.12,tbl.2.

Early Devonian, Helderberg Grp, Coeymans Limestone. Cedarville, Albany Co., New York, USA. Collector: Beecher, C.E.

†YPM 22174 includes six thin sections (22174A-22174F) and YPM 22175 and YPM 22451, each include one thin section, respectively.

***Syringostroma microporum* Girty**

HOLOTYPE YPM 9195†

Girty, G.H. 1895. New York St. Mus., 48th Ann. Rpt., 1894 v.2,p.296.

Parks, W.A. 1909. Toronto Univ. Stud. Geol. Ser. n.6,p.259,pl.17,f.3,4.

=? *Parallelostroma microporum*. Stock, C.W. 1988. J. Paleont. v.62,n.1,p.15,tbl.4,tf.5.3-4.

=*Habrostroma microporum*. Stock, C.W. 1991 J. Paleont. v.65,n.6,p.906,tbl.6.

Early Devonian, Helderberg Grp, Coeymans Limestone. Cedarville, Albany Co., New York, USA. Collector: Beecher, C.E.

†This specimen includes ten thin sections (9195A-9195J).

***Twenhofelella anticostiana* (Twenhofel)**

See *Hyalostelia anticostiana* Twenhofel.

***Tylodictya warrenensis* Hall & Clarke**

HOLOTYPE YPM 24836

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.151,tf.19-20.

HYPOTYPE YPM 24837

Hall, James and J.M. Clarke. 1898. New York St. Mus. Mem. n.2,p.151,tf.18.

Early Mississippian, Waverly Grp. Sandstone of the Waverly Grp at Warren, Warren Co., Pennsylvania, USA. Collector: Beecher, C.E.

Acknowledgements

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