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# FIELDIANA Geology

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## Type Graptolithina in Field Museum of Natural History

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### INTRODUCTION

This catalogue includes type and referred specimens of Graptolithina in Field Museum of Natural History. The Walker Museum of Paleontology, University of Chicago specimens, now permanently housed at Field Museum, bear the catalogue numbers prefixed "UC"; the prefix "P" identifies specimens belonging to Field Museum.

Only the holotypes are designated "types" in the catalogue; all other cotypes, syntypes, paratypes, and plesiotypes are listed as "referred specimens."

The primary reference used in determining subsequent nomenclatorial changes was Ruedemann (1947), the latest monograph on North American graptolites and their literature. When possible, all references listed in synonymies in that monograph have been examined; that not seen is so noted in the References.

A number of specimens are listed as "Gurley *in* Bassler" and, "Gurley *in* Ruedemann." In such listings, "Gurley" refers to

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R[evere] R. Gurley, M.D. (dates unknown), a sometime employee of the U.S. Geological Survey, who left an unfinished monograph on graptolites (Bassler, 1909, p. 1). In the cases referred to, Bassler and Ruedemann quoted the descriptions and reproduced the illustrations from Gurley's manuscript. Accounts of their use of Gurley's material may be found in Ruedemann (1908b, pp. 5-7) and Bassler (1909, pp. 1-3).

The abbreviations USNM (U.S. National Museum, Smithsonian Institution) and NYSM (New York State Museum) identify specimens not in the Field Museum collections.

Generic and specific names are arranged alphabetically. The represented genera are grouped in the following systematic outline according to their assignments in Bulman (1970):

Phylum Hemichordata Bateson, 1885, emend. Fowler, 1892

Class Graptolithina Bronn, 1846

Order Dendroidea Nicholson, 1872

*Callograptus* Hall, 1865

*Dendrograptus* Hall, 1858

*Desmograptus* Hopkinson, 1875

*Dictyonema* Hall, 1851; listed as *Odontocaulis*; *Dictyonema*?  
listed as *Inocaulis*

*Palaeodictyota* Whitfield, 1902

*Thallograptus* Ruedemann, 1925; listed as *Inocaulis*

Order Tuboidea Kozłowski, 1938

*Reticulograptus* Wiman, 1901; listed as *Dictyonema*

Order Graptoloidea Lapworth, 1875

*Diplograptus* M'Coy, 1850

*Monograptus* Geinitz, 1852

Ordinal position uncertain; not Graptoloidea

*Chaunograptus* Hall, 1879, [not 1883, as in Bulman, 1970,  
p. 55]; listed as *Dendrograptus* (*Chaunograptus*)

*Coelograptus* Ruedemann, 1947; listed as *Dendrograptus*?

We are grateful to Robert Conrad, New York State Museum, for the loan of material from that institution and to Robert L. Carroll, Redpath Museum, McGill University, for a photograph of a specimen in his collection.

## CATALOGUE OF TYPES

*Callograptus strictus* Gurley, 1909

Holotype: by monotypy, UC 13513.

Gurley in Bassler, 1909, p. 15, pl. 3, fig. 3, text-fig. 17.

Ruedemann, 1947, p. 209, pl. 17, fig. 30.

"Niagaran (Blue Building beds of section)."

Hamilton, Ontario, Canada.

**Chaunograptus novellus** (Hall, 1879)

See: *Dendrograptus* (*Chaunograptus novellus*) Hall, 1879.

**Coelograptus problematicus** (Spencer, 1878)

See: *Dendrograptus?* *problematicus* (Spencer, 1878).

**Dendrograptus** (**Chaunograptus**) **novellus** Hall, 1879

Holotype: not designated; cotype (syntype) UC 11989.

Referred specimen: UC 11989.

Hall, 1879, p. 2.

Hall, 1882, p. 225, pl. 1, fig. 1.

= *Chaunograptus novellus* (Hall, 1879).

Clarke & Ruedemann, 1903, p. 41.

Ruedemann, 1908b, pp. 225-226.

Ruedemann, 1947, p. 254, pl. 39, fig. 1.

Waldron Shale.

Waldron, Shelby County, Indiana.

Remarks: Cotype (syntype) is NYSM 3170/1 (also listed as 228); this is the specimen represented by Hall, 1882, pl. 1, fig. 2 (Clarke & Ruedemann, 1903, p. 41).

**Dendrograptus ontarioensis** Bassler, 1909

Holotype: by monotypy, UC 13506.

Bassler, 1909, p. 12, pl. 1, fig. 4, text-fig. 12.

Ruedemann, 1947, p. 218, pl. 21, figs. 9, 10.

"Niagaran dolomites."

Hamilton, Ontario, Canada.

**Dendrograptus?** **problematicus** (Spencer, 1878)

Referred specimen: UC 13510.

Bassler, 1909, pp. 10-11, pl. 1, fig. 1.

= *Coelograptus problematicus* (Spencer, 1878).

Ruedemann, 1947, pp. 266-267, pl. 91, fig. 4.

"Niagaran."

Hamilton, Ontario, Canada.

Remarks: Ruedemann, 1947, pl. 91, fig. 4, incorrectly refers to this specimen as "paratype."

**Desmograptus micronematodes** (Spencer, 1882)

Referred specimens: four specimens, P 23310.

Roy & Croneis, 1931, p. 244, pl. 45, figs. 3, 4, 6, 8.

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

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

**Dictyonema? congregatum** (Gurley, 1909)

See: *Inocaulis congregatus* Gurley, 1909.

**Dictyonema crassibasale** Gurley, 1909

Holotype: not designated; two cotypes (syntypes) UC 13502, UC  
13504.

Referred specimen: UC 13502.

Gurley *in* Bassler, 1909, pp. 19-24, pl. 3, fig. 1, text-fig. 23.

Referred specimen: UC 13504.

Gurley *in* Bassler, 1909, pp. 19-24, text-fig. 25.

"Niagaran."

Hamilton, Ontario, Canada.

Remarks: Another cotype (syntype) is USNM 55297.

**Dictyonema crassibasale?** Gurley, 1909

Referred specimen: P 23307.

Roy & Croneis, 1931, p. 243, pl. 45, fig. 2.

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

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

**Dictyonema desmoides** Gurley, 1909

See: *Odontocaulis occidentalis* Gurley, 1909.

**Dictyonema parallelum** Gurley, 1909

Holotype: by monotypy, UC 13505.

Gurley *in* Bassler, 1909, pp. 37-38, pl. 4, fig. 2, text-fig. 47.

Ruedemann, 1947, pp. 183-184, pl. 8, fig. 15.

"Niagara dolomite."

Hamilton, Ontario, Canada.

**Dictyonema percrassus [percrassum]** Gurley, 1909

Holotype: not designated; cotype (syntype) UC 13511.

Referred specimen: UC 13511.

Gurley *in* Bassler, 1909, pp. 35-36, text-fig. 45.

Ruedemann, 1947, p. 184.

"Glaciated chert beds, Niagara Formation."

Hamilton, Ontario, Canada.

Remarks: Bassler (1909, p. 36) indicates that another cotype is in the "Spencer collection" (presumably the J.W. Spencer collection at the University of Missouri (Bassler, op. cit., p. 4)).

**Dictyonema polymorphum** Gurley, 1908

Referred specimen: UC 13517 (presumably a lectoparatype).

Gurley in Ruedemann, 1908b, pp. 158-162, pl. 3, fig. 6.

= *Reticulograptus polymorphus* Gurley, 1908.

Ruedemann, 1947, pp. 199-200, pl. 8, fig. 10.

"Niagara chert and glaciated chert beds."

Hamilton, Ontario, Canada.

Remarks: UC 13517 is probably a *de facto* lectoparatype, inasmuch as a subsequent author, Ruedemann (1908b, p. 159), chose a "type" which is now USNM 54278. At the same time, however, he incorrectly designated another specimen (now UC 13517) a "cotype" and repeated the error in 1947 (Ruedemann, 1947, pl. 8, fig. 10). In the latter reference (p. 200), he also incorrectly referred to UC 13517 as a "plesiotype."

**Dictyonema retiforme** (Hall, 1843)

Referred specimen: P 23306.

Roy & Croneis, 1931, pp. 242-243, pl. 45, fig. 1.

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

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

See also: *Dictyonema websteri* Dawson, 1860.

**Dictyonema tenellum** Spencer, 1878

Referred specimen: P 23308.

Roy & Croneis, 1931, p. 243, pl. 45, fig. 5.

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

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

**Dictyonema websteri** Dawson, 1860

Holotype: not specifically designated; UC 13133 may be the holotype or part of a type suite.

Dawson, 1860a, p. 7, text-fig. 2.

Dawson, 1860b, p. 139, text-fig. 2.

Dawson, 1860c, p. 60, text-fig. 46 (fide Ruedemann, 1947, p. 190).

= *Dictyonema retiforme* (Hall, 1843)

Ruedemann, 1908a, p. xlvi.

"Niagaran."

Beech Hill, New Canaan, Nova Scotia.

Remarks: According to Dawson, 1860b, p. 138, text-fig. 2, and a preprint of that paper (Dawson, 1860a, p. 7, text-fig. 2), the name *Dictyonema websteri* is attributed to James Hall: "will be described by that palaeontologist under the name of *D. websteri*." Presumably the same thing (if not in identical wording) is stated and the same figure given in the Dawson, 1860c reference above (not seen), *Supplementary Chapter to Acadian Geology*. In later editions of *Acadian Geology* (see, for example, the fourth edition, 1891, p. 562, text-fig. 196) all reference to Hall has been dropped. The species was apparently never described or figured by Hall, and the name should be attributed to Dawson. Although he never described it, he did figure it (Ruedemann, 1908a, p. xlvi) and therefore fulfilled the requirement of establishing a name in a publication prior to 1931 by publication of a figure with a name. It remains to be determined, then, if UC 13133 is a type and, if so, what kind (Is it a counterpart of Redpath Museum 1077, which is stated to be "holotype" of *D. websteri* (see Alison & Carroll, 1972, *Catalogue of type and figured fossils in the Redpath Museum, McGill University*)?) A photograph of the Redpath Museum specimen does not seem to correspond with UC 13133, nor do any of the specimens on the Redpath Museum slab seem to correspond to Dawson's published figure of *D. websteri*. It also should be determined, if possible, which of the three 1860 publications by Dawson (including the preprint, 1860a) is the earliest.

**Diplograptus (Orthograptus) calcaratus** var. **incisus** Lapworth, 1908

See: *Diplograptus foliaceus* var. *incisus* Lapworth, 1908.

**Diplograptus foliaceus** var. **incisus** Lapworth, 1908

Referred specimen: UC 59467 (counterpart of NYSM 7153).

Lapworth in Ruedemann, 1908b, pp. 347-349, pl. 24, fig. 5.

= *Diplograptus (Orthograptus) calcaratus* var. *incisus* Lapworth, 1908.

Ruedemann, 1947, p. 400, pl. 68, fig. 1.

Middle Ordovician, Normanskill Shale.

Glenmont, New York.

Remarks. Charles Lapworth's manuscript description of this variety was first published by Ruedemann (1908b, p. 347). Lapworth based it on specimens from the Normanskill Shale at Stockport, New York and from "1/2 mile below Little Méchin Point (415), Lower Canada" (Lapworth *in* Ruedemann, *op. cit.*, p. 347). Ruedemann added to Lapworth's description and included specimens from the Normanskill Shale at Glenmont, New York. See Ruedemann, *op. cit.*, pp. 6, 340, 341, 344, 346, 348, 349, for his comments on Lapworth's manuscript discussion of *D. foliaceus*.

**Inocaulis congregatus** Gurley, 1909

Holotype: by monotypy, UC 13508.

Gurley *in* Bassler, 1909, p. 54, text-fig. 70.

= *Dictyomena? congregatum* (Gurley, 1909).

Ruedemann, 1947, pp. 177-178, pl. 9, fig. 15.

"Niagaran Formation."

Hamilton, Ontario, Canada.

**Inocaulis diffusus crassiramus** Gurley, 1909

Holotype: by monotypy, UC 13507.

Gurley *in* Bassler, 1909, pp. 53-54, pl. 5, fig. 2, text-fig. 69.

= *Thallograptus diffusus* var. *crassiramus* (Gurley, 1909).

Ruedemann, 1947, p. 234, pl. 27, figs. 10, 11.

"Niagara dolomite (Blue Building Bed)."

Hamilton, Ontario, Canada.

**Inocaulis divaricatus** Hall, 1879

Holotype: by monotypy, UC 11981.

Hall, 1879, p. 2.

Hall, 1882, p. 225, pl. 1, fig. 3.

Ruedemann, 1947, p. 239, pl. 32, fig. 7.

Waldron Shale.

Waldron, Shelby County, Indiana.

**Monograptus? chicagoensis** Grubbs, 1939

Holotype: by original designation, UC 46012.

Grubbs, 1939, pp. 545-546, pl. 61, fig. 20.

Ruedemann, 1947, pp. 474-475, pl. 86, fig. 44.

Referred specimens: four specimens (paratypes), UC 46013.

Grubbs, 1939, pp. 545-546.

Ruedemann, 1947, pp. 474-475.

Middle Silurian, Racine Dolomite.

In siliceous nodules, Federal Stone Quarry, Chicago, Illinois.

**Monograptus vomerinus** (Nicholson, 1872)

Referred specimens: 10 specimens, P 23311 (four unfigured specimens missing).

Roy & Croneis, 1931, p. 245, pl. 45, figs. 9-14.

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

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

**Odontocaulis occidentalis** Gurley, 1909

Holotype: not designated; cotype (syntype), UC 13514.

Referred specimen: UC 13514.

Gurley *in* Bassler, 1909, p. 44.

= *Dictyonema desmoides* Gurley, 1909.

Ruedemann, 1947, pp. 179, 195.

"Niagara chert."

Hamilton, Ontario, Canada.

Remarks: Ruedemann (1947, p. 179) incorrectly refers to USNM 55306, a cotype (syntype), as the "holotype" of *Odontocaulis occidentalis* and also incorrectly identifies it as the "holotype" of *Dictyonema desmoides* (Ruedemann, *op. cit.*, pl. 11, figs. 15, 16).

**Palaeodictyota bella** (Hall & Whitfield, 1875)

Referred specimen: P 23309.

Roy & Croneis, 1931, p. 244, pl. 45, fig. 7.

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

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

**Reticulograptus polymorphus** (Gurley, 1908)

See *Dictyonema polymorphum* Gurley, 1908.

**Thallograptus diffusus** var. **crassiramus** (Gurley, 1909)

See *Inocaulis diffusus crassiramus* Gurley, 1909.

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