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A PARTIAL INDEX AND BIBLIOGRAPHY OF THE DEVONIAN FAUNAS OF NORTH AMERICA

By

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Texas School of Mines, 1916

A Thesis Submitted to the Faculty of the Graduate School of the University of Colorado in Partial Fulfillment of the Requirements for the Degree M.S.

Department of Geology

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This Thesis for the Masters degree, by

Lloyd R. Nelson

not proof read, has been approved for the

Department of

Geology

By

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Junius Henderson

Date 5/24/ 1929

PREFACE

This manuscript is a partial list of the Devonian invertebrates of North America, although one phylum of vertebrates (Pisces) is represented. The phylum Protozoa is not listed for only two species were noted in the literature from which this work was taken. The Porifera have been included in the phylum Coelenterata fro the present, but will be represented by a separate phylum when the index has been completed.

No attempt has been made at arranging the material according to classes. However, when the index is completed, the material will be arranged according to classes as given by Zittel, and the generic and specific names listed alphabetically under each class. As the index now stands, the genera and species are arranged alphabetically disregarding entirely, the class distinction.

Whenever the Geographical as well as the Geological position was foumd, it was incorporated with the species citation It will be noticed, however, that there are many citations in which no location is given. This is because the particular publication in which the species were originally described was either not obtainable at the Library of the University of Colorado or that time prevented searching the literature in in which they were originally described.

The vertebrates hold a very minor position in this manuscript, as interest was primarily with the invertebrate faunas But whenever reference was made to the vertebrates, in the literature that was searched, they were noted and listed.

It is my intention to continue this work and within a short time have it completed.

My thanks is extended to Professors George, Toepelman and Henderson, of the University of Colorado, for the appreciated interest they have shown in my behalf.

L. A. Nelson.

University of Colorado.

May 1929.

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C O E L E N T E R A T A

Genus ACERVULARIA Schweigger

Acervularia bassleri Webster and Fenton

Acervularia bassleri Webster and Fenton, Contr. Mus. Univ. Mich., I, p.58-59, pl.13, f.2; pl.14, f.4, 5, 1924; Hackberry Stage, Mich.

Acervilaria bassleri depressa Webster and Fenton

Acervularia bassleri depressa Webster and Fenton, Contr. Mus. Geol. Univ. Mich., I, pl.12, f.1, 2, 1924; Hackberry Stage, Mich.

Acervularia bassleri magna Webster and Fenton

Acervularia bassleri magna Webster and Fenton, Contr. Mus. Univ. Mich., I, p.61, pl.14, f.6, 1924; Hackberry Stage.

Acervularia communis Simpson, See Cyathophyllum inequale (Hall)

Acervularia davidsoni Edwards and Haime

Acervularia profunda Hall, Geol. Surv. Iowa, I, pt.2, p. 477-478, pl.1, f.7, a, b, c, 1858.

Acervularia davidsoni? Hall, Geol. Surv. Iowa, I, pt.2, p. 476-477, pl.1, f.8a, b, 1858.

Acervularia davidsoni. Edwards and Haime, Polyp. Foss. des Palaeoz., p.418, pl.9, f.4, 4a, 4b, 1851.-Calvin, Am. Geol. 9, p.355-358, 1892;-Keyes, Pal. Mo., pl.1, Mo. Geol. Surv. 4, p.104-105, 1894.-Lambe, Cont. to Canadian Pal., 4, pt.2, p.164-165, pl.14, f.3, 1900.-Grabau & Shimer, N. Am. Index Foss., I, p.69, f.106, 1909.-Cleland, Wisc. Geol. Nat. Hist. Surv. Bull. XXI, pl. 1, f.3, 4, 1911.-Branson, Geol. Mo., p.100-101, pl.3, f.8, 1918; Mo. Bur. Geol. & Mines, XVII, 2d. ser., p.52, pl.4, f.9, 10, 1922; Gallaway and Mineola I, s. Mo.

Cyathophyllum davidsoni. Rominger, Geol. Surv. Mich., 3, pt.2, p.107, pl.37, f.4, 1876.-Davis, Kentucky Fossil Corals, pt.2, pl.93, f.2; pl.113, f.3, 1885.

Acervularia inequalis Hall and Whitfield

Acervularia inequalis. Hall and Whitfield, 23d. Ann.

Rep.N.Y.State Nat.Hist.,p.233,pl.9,f.11,12, 1873.-Fenton and Fenton,Contr.Mus.Geol.Univ. Mich.,1,pl56-57,pl.14,f.7-8,1924;Spirifer zone, Hackberry stage.Hackberry Grove.

NOT Cyathophyllum inequale Swartz,Md.Geol.Surv.L. Dev.p.205,pl.20,f.1-4, 1913.

Acervularia? inequalis Hall & Whitfield,See Cyathophyllum inequale (Hall)

Acervularia profunda Hall,See Acervularia davidsoni E & H

Acervularia whitfieldi Fenton add Fenton

Acervularia whitfieldi Fenton and Fenton,Contr.Mus. Univ.Mich.1,p.57-58,pl.4.f.1-3,1924;Spirifer zone. Hackberry Stage.

Acrophyllum rugosum Greene

Acrophyllum rugosum Greene,Contr.Pal.Ind.1,pt.6,p. 48,pl.17,f.1-3,1901; Corniferous group.Falls of the Ohio.

Genus ALVEOLITES Lamarck

Alveolites dispansa Greene

Alveolites dispansa Greene,Contr.Pal.Ind.,1,pt.14, p.138,pl.40,f.1-3,1903; Hamilton Group.Near Charlestown, Ind.

Alveolites rockfordensis Hall and Whitfield

Alveolites rockfordensis.Hall and Whitfield,23d.Ann. Rep.N.Y.State Cab.Nat.Hist.p.299,1873.-Fenton and Fenton,Contr.Mus.Univ.Mich.,1,p.61-62,pl.12,f.3-6; pl.13,f.1,1924; Spirifer zone.Hackberry Stage.

Alveolites subangularis Greene

Alveolites subangularis Greene,Contr.Pal.Ind.1,pt.14, p.138,pl.40,f.4-6,1903; Hamilton Group.Near Charlestown,Ind.

Genus AMPLEXUS Sowerby
(Mineral Conchology,1,p.165)

Amplexus hamiltoniae Hall

Amplexus hamiltoniae.Hall,Illinois Dev.Foss.,pl.19, 1876.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.124,f.

5,1899;Moscow shales.-Grabau and Shimer,A.Am. Index.Foss.,1,p.59,f.86,1909.-Prosser,Md.Geol. Surv.,Mid.& Up.Dev.,p.120-121,pl.7,f.2,1913; Romney Form.,Hamilton Member.E.bank Evitts Creek below Wolfe Mill near Cumb.,Md.

Amplexus intermittens Hall

Amplexus intermittens.Hall,Ill.Dev.Foss.,pl.32,f. 8-13.

Amplexus(?) intermittens GrabaumBuffalo Soc.Nat.Sci., Bull.6,p.124.f.6,1899; Lower Moscow shale.N.Y.

Asterocerum pyriforme Hall,See Favosites pyriformis Hall

Genus ASTRAEOSPONGIA Roemer 1854

Astraeospongia hamiltonensis Meek and Worthen

Astraeospongia hamiltonensis Meek and Worthen,Proc. Chicago Acad.Sci.,1,p.12,1866; Ill.Geol.Surv.,3, p.419,pl.10,f.6,1868; Hamilton Group.New Buffalo, Iowa.

Astroita sp.? Peter Wolfart,See Pleurodictyum problematicum Goldf?

Astylospongia inornata Hall,See Hindia sphaeroidalis Duncan.

Aulacophyllum convergens Hall,See Heliophyllum convergens(Hall)

Aulocophyllum sulcatum E & H., See Heliophyllum sulcatum (D'Orbigny)

Genus AULOPORA Goldfuss
(Goldf.Petrefact.Germ.p.82)

Aulipora saxivadum C.L.Fenton,See Aulopora paucitubulata Fenton & Fenton.

Aulopora adnascens Fenton and Fenton

Aulopora adnascens Fenton and Fenton,Contr.Mus.Univ. Mich.,1,p.65,pl.16,f.3,4, 1924; Spirifer zone. Hackberry Stage.

Aulopora annectens C.L.Fenton,See Aulopora expansa Fenton and Fenton.

Aulopora expansa Fenton and Fenton

Aulopora annectens C.L.Fenton,Am.Jour.Sci.,4th.ser., 48,p.369,1919.
Aulopora expansa Fenton and Fenton,Contr.,Mus.Univ. Mich.,1,p.67,pl.16,f.10, 1924; Lower Owen.Hackberry Stage.

Aulopora filimormis Billings,See Hederella filiformis (Billings)

Aulopora incrustans Fenton and Fenton

Aulopora incrustans Fenton and Fenton,Contr.Mus.Univ. Mich.,1,p.68,pl.16,f.1, 1924; Spirifer zone.Hackberry Stage. Hackberry Grove.

Aulopora Iowaensis Fenton and Fenton,See Aulopora Iowensis Hall and Whitfield.

Aulopora iowensis Hall and Whitfield

Aulopora iowensis Hall and Whitfield,23d.Ann.Rep.N.Y. State Cab.Nat.Hist.,p.235,pl.10,f.5,1873.
Aulopora iowaensis Fenton and Fenton,Contr.Mus.Univ. Mich.,1,p.65-66,pl.16,f.2,1924; Spirifer zone. Hackberry Stage.Hackberry Grove and Rockport,Mich.

Aulopora maxima Fenton and Fenton

Aulopora maxima Fenton and Fenton,Contr.Mus.Univ.Mich 1,p.66-67,pl.16,f.7,1924; Spirifer zone.Hackberry Stage.

Aulopora minima Fenton and Fenton

Aulopora minima Fenton and Fenton,Contr.Mus.Univ. Mich.1,p.69,pl.16,f.5,6, 1924; Spirifer zone. Hackberry Stage.

Aulopora paucitubulata Fenton and Fenton

Aulipora saxivadum of some collections identified by C.L.Fenton.
Aulopora paucitubulata Fenton and Fenton,Contr.Mus. Univ.Mich.,1,p.68-69,pl.16,f.9,1924; Spirifer zone Hackberry Stage. Hackberry Grove.

Aulopora repens(Knorr and Walch)

Melliporites repens Knorr et Walch,Rec.des mon.catastr.,t.3,p.157,sup.pl.6,f.1,1775.
Aulopora serpens.Goldfuss,Petref.Germ.,1,p.82,pl.29, f.1,1829; Grabau,Buffalo Soc.Nat.Sci.Bull.6,p.132, f.15,1899,Demisa bed,N.Y.

Aulopora repens Milne-Edwards and Haime,Polyp.Foss. des Terr.Pal.,p.312, 1857.
Aulopora seprens. Rominger Geol.Surv.Mich.,3,pl.2, p.87-88, pl.33,f.2,1876.- Cleland,Wisc.Geol.Nat. Hist.Surv.Bull.21,p.34,pl.2,f.4,1911.
Aulopora repens. Clarke and Swartz,Md.Geol. Surv. Mid.& Up.Dev.,p.542, pl.45, f.10,11,1913; Jennings Form.,Parkhead Member. S.E. of Cumb., Md.- Branson,Mo. Bur. Geol. & Mines,17,2d.ser.,p.55, pl.4,f.4,1922; Snuder Creek shale. Mo.

Aulopora saxivadum Hall and Whitfield

Auolopora saxivadum. Hall and Whitfield,23d.Ann.Rep. N.Y.State Cab.Nat.Hist.,p.235,pl.10,f.6,1873.- Fenton and Fenton, Contr.Mus.Univ.Mich.,1,p.64,pl. 16,f.8,1924; Spirifer zone.Hackberry Stage.

Aulopora schohariae Hall

Aulopora schohariae.Hall,26th.Ann.Rep.N.Y.State Mus., p.110,1874; 32d.Rep.N.Y.State Mus.,p.142,1879. Rep.N.Y.State Geol. for 1882, pl.2,f.1-6, 1883; Pal.N.Y.6,p.3,pl.2,f.1-6,1887.-Swartz,Md.Geol. Surv.,L.Dev.,p.319,pl.26,f.2,3,1913; Helderberg Form.,Keyser Member. Hyndman,Penn.Becraft Member. Ernstville,Md.

Aulopora schucherti Swartz.

Aulopora schucherti Swartz,Md.Geol.Surv.,L.Dev.,p. 319-320,pl.26,f.4,5, 1913; Helderberg Form.Keyser Member. Keyser,W.Va.;Cash Valley, Devil's Backbone Md.; Hyndman, Penn. New Scotland Member.Cherry Run W.Va.

Aulopora serpens Rominger,Cleland,See Aulopora repens (Knorr and Walch)
Aulopora serpens Grabau,See Aulopora repens(Knorr and Walch)
Aulopora serpens Goldfuss

Aulopora serpens Goldfuss,See Aulopora repens(Knorr and Walch)

Aulopora tubaeformis Goldfuss

Aulopora tubaeformis. Goldfuss,Petrefact.Germ.p.83, pl.29,-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.132, f.16,1899; Just below trilobite beds.Avery's Ravine,N.Y.

Genus BARYPHYLLUM Edwards and Haime (1850. Brit. Foss. Corals, p.66)

Baryphyllum? arenarium Meek and Worthen

Baryphyllum? arenarium Meek and Worthen, Ill. Geol. Surv. 3, p.409, pl.9, f.2a,b, 1868; Corniferous group W. Jonesboro, Union Co., Ill.

Genus BLOTHROPHYLLUM

Blothrophyllum bellicinctum Greene

Blothrophyllum bellicinctum Greene, Contr. Pal. Ind., 1, pt.4, p.33, pl.11, f.9, 10, 1910; Helderberg group. Falls of the Ohio.

Blothrophyllum bucculentum Greene

Blothrophyllum bucculentum Greene, Contr. Pal. Ind., 1, pt.3, p.24, pl.9, f.3-5, 1899; Hamilton group. N.W. Charlestown, Ind.

Blothrophyllum cingulatum Greene

Blothrophyllum cingulatum Greene, Contr. Pal. Ind., pt.2, p.10, pl.4, f.11-13, 1899p Helderberg group. Falls of the Ohio.

Blothrophyllum coniferum Greene

Blothrophyllum coniferum Greene, Contr. Pal. Ind., 1, pt. 6, p.46-47; pl.16, f.2-6, 1901; Helderberg group. Falls of the Ohio.

Blothrophyllum conigerum Greene

Blothrophyllum conigerum Greene, Pal. Ind. 1, pt.3, p. 24-25, pl.9, f.6-8, 1899; Hamilton group. near Charlestown, Ind.

Blothrophyllum flexosum Greene

Blothrophyllum flexosum Greene, Contr. Pal. Ind. 1pt.2, p.10-11, pl.5, f.6-8, 1899; Hamilton group. Near Charlestown, Ind.

Blothrophyllum houghtoni (Rominger)

Example Cyathophyllum houghtoni Rominger, Foss. Corals, p.104, pl.36, upper tier of figures, 1876.
Cyathophyllum houghtoni Hall, Illustr. Dev. Corals, pl. 30, f.1, 2, 1876.
Blothrophyllum houghtoni Greene, Contr. Pal. Ind., 1, pt

Genus BLOTHROPHYLLUM

Blothrophyllum bellicinctum Greene

Blothrophyllum bellicinctum Greene, Contr. Pal. Ind., I, pt.4, p.33, pl.11, f.9, 10, 1910; Helderberg group. Falls of the Ohio.

Blothrophyllum bucculentum Greene

Blothrophyllum bucculentum Greene, Contr. Pal. Ind., I, pt. 3, p.24, pl.9, f.3-5, 1899; Hamilton group. N.W. Charlestown, Ind.

Blothrophyllum cingulatum Greene

Blothrophyllum cingulatum Greene, Contr. Pal. Ind., I, pt.2, p.10, pl.4, f.11-13, 1899; Helderberg group. Falls of the Ohio.

Blothrophyllum coniferum Greene

Blothrophyllum coniferum Greene, Contr. Pal. Ind., I, pt.6, p.46-47, pl.16, f.2-6, 1901; Helderberg group. Falls of the Ohio.

Blothrophyllum conigerum Greene

Blothrophyllum conigerum Greene, Pal. Ind., I, pt.3, p.24-25, pl.9, f.6-8, 1899; Hamilton group. near Charlestown, Ind.

Blothrophyllum flexosum Greene

Blothrophyllum flexosum Greene, Contr. Pal. Ind., I, pt.2, p.10-11, pl.5, f.6-8, 1899; Hamilton group. Near Charlestown, Ind.

Blothrophyllum houghtoni (Rominger)

Example Cyathophyllum houghtoni Rominger, Foss. Corals, p.104, pl.36, upper tier of figures, 1876.
Cyathophyllum houghtoni Hall, Illustr. Dev. Corals, pl.30, f.1,2, 1876.
Blothrophyllum houghtoni Greene, Contr. Pal. Ind., I, pt.16, p.156, pl.46, f.1-4, 1903; Hamilton group. Stripping above cement rock throughout Clark County, Ind; same hor. at Crab Orchard, Ky; Hamilton group, Pavillion Center, Genesee Co., N.Y; Little Traverse Bay, Mich.

Blothrophyllum incultum Greene

Blothrophyllum incultum Greene, Contr. Pal. Ind., I, pt.3, p.25, pl.9, f.9, 10, 1899; Hamilton group. Near Charles-

town, Ind.

Bordenia knappi Greene

Bordenia knappi Greene, Contr. Pal. Ind., I, pt.11, p.99, pl.31, f.4-11, 1903; Hamilton group. Charlestown, Ind.

Caenostroma constellatum Spencer, See Stromatopora constellata Hall.

Calamopora basaltica Goldfuss, See Favosites basalticus Goldf.

Calamopora epidermata Rominger, See Favosites basalticus Goldf.

Camphophyllum ellipticum Whiteaves, See Chonophyllum ellipticum Hall and Whitfield

(??) Camphophyllum ellipticum Whiteaves, See Tabulophyllum ehlersi Fenton and Fenton

Camphophyllum nanum Hall and Whitfield, See Charactophyllum nanum (Hall and Whitfield)

Caninia sulcata D'Orbigny, See Heliophyllum sulcatum (D'Orbigny)

Caryophyllia cornicula Lesueur, See Heliophyllum corniculum (Lesuenr)

Catenipora escharoides Hall, See Halysites catenulatus Linne.

Genus CERATOPORA Grabau 1899
(Proc. Bost. Soc. Nat. Hist., XXVIII, No116)

Ceratopora conglomerata Greene

Ceratapora conglomerata Greene, Contr. Pal. Ind., I, pt.9, p.77, pl.25, f.11-13, 1902; Helderberg group. Falls of the Ohio.

Ceratopora dichotoma Grabau

Ceratopora dochotoma. Grabau, Proc. Bost. Soc. Nat. Hist., XXVIII, p.418, pl.2, 4, 1899; Buffalo Soc. Nat. Sci., Bull.6, p.135, f.18, 1899; Lower Moscow shales. N.Y.

Ceratopora flabellata Greene

Ceratopora flabellata Greene, Contr. Pal. Ind., I, pt.3, p. 25, pl.25, f.2-4, 1899; Hamilton group. B.& O.R.R. Cut

n.e.Jeffersonville,Ind.

Ceratopora grabaui Branson

Ceratopora grabaui Branson,Mo.Bur.Geol.&Mines,XVII, 2d.ser.,p.56,pl.4,f.2,3;pl.3,f.5,1922;Mineola l.s. Montgomery Co.,and Ralls Co.,Mo.

Ceratopora jacksoni Grabau

Ceratopora jacksoni Grabau,Proc.Bost.Soc.Nat.Hist., XXVIII,p.415,pl.1,2,1899;Buffalo Soc.Nat.Sci.,Bull. 6,p.134,f.17,1899;Demissa bed. Eighteen Mile Creek, N.Y.

Ceratopora? marylandica Swartz

Ceratopora? marylandica Swartz,Md.Geol.Surv.L.Dev.,p. 320,pl.26,f.6,7,1913;Helderberg Form.,Keyser Member. Keyser,W.Va.

Ceratopora nanus Greene

Ceratopora nanus Greene,Contr.Pal.Ind.,I,pt.9,p.76, pl.25,f.7-10, 1902;Hamilton group.Charlestown,Ind.

Ceratopora separata Greene

Ceratopora separata Greene,Contr.Pal.Ind.,I,pt.9,p.76, pl.25,f.5,6,1902;Hamilton group. Charlestown, and in the trippings above the Cement Rock,throughout Clark Co.,Ind.

Ceratopora snyderensis Branson

Ceratopora snyderensis Branson,Mo.Bur.Geol.& Mines, XVII, 2d.ser.,p.56,pl.3,f.2,1922;Snyder Creek shale. Callaway Co.,Mo.

Genus CHARACTOPHYLLUM Simpson
(1900.Bull.N.Y.State Mus.XXXIX,No.8,p.209-210)

Charactophyllum nanum (Hall & Whitfield)

Camphophyllum nanum Hall and Whitfield,23d.Ann.Rep. N.Y.State Cab.Nat.Hist.,p.232,1873.
Charactophyllum nanum.Simpson,Bull.N.Y.State Mus., VIII,No.39,p.209,perhaps f.28,1900.-Fenton and Fenton,Contr.Mus.Univ.Mich.,I,p.26,pl.1,f.1-3, 1924; Spirifer zone.Hackberry Stage.

Genus CHONOPHYLLUM Edwards & Haime.

Chonophyllum ellipticum C.L.Fenton,See Tabulophyllum

ehlersi Fenton and Fenton.

Not Chonophyllum ellipticum C.L.Fenton, See Chonophyllum ellipticum Hall and Whitfield.

Chonophyllum ellipticum Hall and Whitfield

Chonophyllum ellipticum Hall and Whitfield, 23d. Ann. Rep. N.Y. State Cab. Nat. Hist., p.233, pl.9, f.13, 1873.
Camphophyllum ellipticum Whiteaves, Contr. to Canadian Pal., I, pt.3, p.202, pl.27, f.5, 6, 1891.
Chonophyllum ellipticum. Sherzer, A Revision and Monograph of the genus Chonophyllum, Geol. Soc. Am., III, p.269-270, 1892.-Branson, Mo. Bur. Geol. & Mines, XVII, 2d. ser., p.51, pl.1, f.2-5; pl.2, f.6, 1922; Snyder Creek Shale and Callaway l.s. Mo.
Not Chonophyllum ellipticum C.L. Fenton, Am. Jour. Sci., 4th. ser., XLVIII, p.369, 370, 1919.
Chonophyllum ellipticum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.89, pl.3, f.5-8, 1924; Spirifer zone. Hackberry Stage.

Chonophyllum (Ptychophyllum) ellipticum Hall and Whitfield, See Chonophyllum ellipticum Hall and Whitfield.

Chonophyllum infundibulum Greene

Chonophyllum infundibulum Greene, Contr. Pal. Ind. I, pt.6, p.49, pl.18, f.6-10, 1901; Hamilton group. Near Charlestown, Ind.

Chonophyllum pugmaeum Greene

Chonophyllum pygmaeum Greene, Contr. Pal. Ind., I, pt.13, p. 130, pl.37, f.4, 1903; Corniferous group. Falls of the Ohio.

Chonophyllum typicum Greene

Chonophyllum typicum Greene, Contr. Pal. Ind., I, pt.6, p. 48-49, pl.18, f.3-5, 1901; Hamilton group. Near Charlestown, Ind.

Chonostegites ordinatum Miller, See Haimeophyllum ordinatum Billings.

Cladochonus humilis Clarke and Swartz

Cladochonus humilis Clarke and Swartz, Md. Geol. Surv., Mid. & Up. Dev., p.542-543, pl.46, f.1, 2, 1915; Jennings Form., Chemung Member. Ellerslie, Md. Woodmont Member, Ithaca Fauna. Hancock; Hancock-Harrisonville Road, n.e. Hancock; Berkeley Springs, W.Va.

Genus CLADOPORA Hall

Cladopora floydensis Fenton and Fenton

Cladopora floydensis Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.63,pl.12,f.7,8,1924;Spirifer zone,Hackberry Stage.

Cladopora gurleyi Greene

Cladopora gurleyi Greene,Contr.Pal.Ind.,I,pt.3,p.23, pl.9,f.1,1899;Corniferous group.Falls of the Ohio.

Cladopora intermedia Greene

Cladopora intermedia Greene,Contr.Pal.Ind.,I,pt.3,p. 24,pl.9,f.2,1899; Corniferous group. Falls of the Ohio.

Cladopora multiseriata Weller

Cladopora multiseriata.Weller,Pal.N.J.III,p.271,pl.26, f.2,3,1903;Cladopora l.s. Near Hainesville,N.J.-Swartz,Md.Geol.Surv.,L.Dev.,p.217-218, not figured, 1913; Helderberg Form.,Keyser Member,Cumberland,Md.

Cladopora rectilineata Simpson

Cladopora rectilineata. Simpson,Trans.Amer.Phiha.Soc., N.Ser.,16,p.459,f.30,1889.-Weller,Pal.N.J.,III,p. 221,pl.17,f.14-17,1903.-Swartz,Md.Geol.Surv.,L.Dev. p.216-217,pl.25,f.4-7,1913;Helderberg Form.,Keyser Member.Keyser,W.Va.

Cladopora cf rectilineata Simpson var Swartz

Cladopora cf rectilineata Simpson var Swartz,Md.Geol. Surv.,L.Dev.,p.217,not figured,1913.Helderberg Form. Keyser Member.Md.

Clamopora fibrosa F.Roemer(not Goldfuss),See Hindia sphaeroidalis Duncan.

Cliona hackberryensis Thomas

Cliona hackberryensis. Thomas,Bull.Lab.Nat.Hist.State Univ.Iowa,VI,p.165,pl. 1911.-Fenton and Fenton, Contr.Mus.Geol.Univ.Mich.,I,p.23,pl.1,f.8,1924; Hackberry Stage.

Genus COLUMNARIA Goldfuss

Columnaria helderbergiae Swartz

Columnaria? helderbergiae Swartz,Md.Geol.Surv.,L.Dev.,

p.207,pl.21,f.10,11,1913;Helderberg Form.,Keyser Member.Warrior Mountain,Allegany Co.,Md.

Columnaria inequalis Hall,See Cyathophyllum inequale (Hall)

Corps particuliers Knorr and Walch,See Pleurodictyum problematicum Goldfuss?

Genus CRASPEDOPHYLLUM Dybowsky
Beschr.,von neuen Devonischen Arten de Zoantharia Rugosa,p.153

Craspedophyllum archiaci (Billings)

Diphyphyllum archiaci Billings,Canadian Jour.,V,p.260 f.8,
Craspedophyllum archiaci Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.129,1899;Hamilton group/Shore Lake Erie. N.Y.

Craspedophyllum subcaespirosum (Nicholson)

Heliophyllum subcaespitosum Nicholson,Geol.Mag.,London,Dec.11,vol.I,p.58,pl.4,f.9,1874.

Craspedophyllum subcaespitosum Grabau,Buffalo Soc.Nat. Sci.,Bull.6,p.130,f.11,1899¢Encrinal l.s.Morse Creek,N.Y.

Craterellina robusta Ulrich and Bassler

Craterellina robusta Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.539-540,pl.98,f.21,1913;Oriskany Form., Shriver Member.2qst.Bridge,Cumberland,Md.

Genus CYATHOPHYLLUM Doldfuss

Cyathophyllum clarki Swartz

Cyathophyllum clarki Swartz,Md.Geol.Surv.,L.Dev.,p. 210-212,pl.19,f.5-9,1913;Helderberg Form.,Keyser Member.Cumberland,Devil's Backbone;Pinto:Martin Mountain,Md.

Cyathophyllum conatum Hall

Cyathophyllum conatum.Hall,Ill.Dev.,Foss,,pl.XXXI,1876
Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.128,f.10B,1899
Hamilton group.Eighteen Mile Creek,Erie County,N.Y.

Cyathophyllum cornicula Rominger, See Helipphyllum corniculum (Leseuer)

Cyathophyllum davidsoni. Davis,Rominger,See Acervularia. davidsoni Edwards and Haime

Cyathophyllum halli (Edwards and Haime)

Strombodes helianthoides? Hall,Geol.N.Y.,pt.4,p.209, f.3,1843.

Helipphyllum halli. Milne-Edwards and Haime,Polyp. Foss.des Terr.Palaeoz.,p.408,pl.7,f.6,6a,b,1851; Brit.Foss.Corals,p.235,pl.51,f.3,1853.-Billings, Canadian Jour.,New ser.,IV,p.124-126,1859.-Hall, Illus.Dev.Foss.,pl.23,f.1-5,12;pl.25,f.1-7;pl.26, f.1,2,5,1876;12th.Ann.Rep.Ind.Dept.Geol.Nat.Hist., p.259,pl.6,f.1,1883.-Grabau and Shimer,N.Am.Index Foss.,I,p.68,f.102,1909.-Cleland,Bull.21,Wisc.Geol. Nat.Hist.Surv.,p.28,pl.1,f.5,1911.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.124,f.7,1899; Demissa bed, N.Y.

Helipphyllum Friense Billings,Can.Jour.New Ser.,IV,p. 124-126,1859.

Heliophyllum canadense Billings,ibidem.,1859.

Heliophyllum cayugaense Billings,ibidem.,1859.

Heliophyllum colbornense Nicholson,Can.Nat.,New Ser., VII,p.143,1873; Pal.Ont.,p.25,pl.5,f.4,1874.

Heliophyllum proliferum Nicholson,Geol.Mag.,New Ser.,I, p.59,1874; Pal.Ont.,p.27,1874.

Cyathophyllum halli. Rominger,Geol.Surv.Mich.,Foss. Corals,p.98,pl.35,1876.-Davis,Kentucky Foss.Corals, pl.77,92,f.2,3,1885.-Lambe,Contr.Can.Pal.,pt.1,p. 148,1899.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser., p.49,pl.1,f.1,1922; Callaway l.s. Mo.

Cyathophyllum houghtoni Hall,See Blothrophyllum houghtoni (Rominger)

Cyathophyllum houghtoni Rominger,See Blothrophyllum houghtoni (Rominger)

Cyathophyllum inequale (Hall)

Columnaria inequalis Hall,Pal.N.Y.,II,p.323,pl.72,f. 3a,b,4a-c,1882.

Acervularia? inequalis Hall and Whitfield,23d.Rept.

N.Y.State Mus.Nat.Hist.,p.233,1873.

Acervularia communis Simpson,Trans.Amer.Philos.Soc. XVI,p.459,and text fig.,1889.

Prismatophyllum inequalis Weller,Pal.N.J.,III,p.219, pl.17,f.12,13,1903.

Cyathophyllum inequale Swartz,Md.Geol.Surv.,L.Dev.,p. 205,pl.20,f.1-4,1913;Helderberg Form.,Keyser Member,Martin Mountain,Allegany Co.,Md.

Not Cyathophyllum inequale Swartz,See Acervularia inequalis Hall and Whitfield.

Cyathophyllum marylandicum Swartz

Cyathophyllum marylandicum Swartz,Md.Geol.Surv.,L.Dev., p.204,pl.21,f.1,2,1913; Helderberg Form.,Keyser Member.Keyser,W.Va.

Cyathophyllum cherni Swartz

Cyathophyllum cherni Swartz,Md.Geol.Surv.,L.Dev.,p.205, pl.19,f.10,11,1913;Helderberg Form.,Martin Mountain, Allegany Co.,Md.

Cyathophyllum radiculum Rominger

Cyathophyllum radiculum.Rominger? Geol.Surv.Mich.,III, p.109,pl.39,f.3,1876.-Swartz,Md.Geol.Surv.,L.Dev., p.202,pl.19,f.12-17,1913; Helderberg Form.Near Cumberland,Md.

Cyathophyllum schucherti Swartz

Cyathophyllum schuchert Swartz,Md.Geol.Surv.,L.Dev.,p. 203-204,pl.20,f.5-9,1913; Helderberg Form.,Keyser Member.Pinto,Cash Valley,Devil's Backbone,Md;Ryndman, Penn.

Cyathophyllum vesiculosum Goldfuss,See Cystiphyllum vesiculosum Phillips.

Cyathophyllum vesiculatum Hall,See Helipphyllum vesiculatum (Hall)

Cyathophyllum zenkeri Billings,See Helipphyllum zenkeri (Billings)

Cyathophyllum zenkeri. Lambe,Nicholson,See heliophyllum zenkeri (Billings)

Genus CYSTIPHYLLUM Londsdale
(1839,Murch.Sil.Syst.,p.691)

Cystiphyllum sp. Swartz

Cystiphyllum sp. Swartz,Md.Geol.Surv.,p.208,not figured,1913; Helderberg Form.,Keyser Member.Pinto,Md.

Cystiphyllum americanum Milne-Edwards and Haime

Cystiphyllum cylindricum Hall,Geol.N.Y.,IV,p.209,f.1,2, (not Lonsdale)

Cystiphyllum americanum. Milne-Edwards and Haime,Mon. Pol.Foss.d.Terr.Pal.,p,464,pl.13,f.4,4a,1851.-Rominger,Geol.Surv.Mich.,III,pt.2,p.138,pl.1,figs.upper tier of plate and right hand one of lower tier 1876.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.126,127, f.10,1899;Moscow sh. N.Y.

Cystiphyllum vesiculosum Grabau and Shimer,N.Am.Index Foss.,I,p.63,f.93,1906.

Cystiphyllum americanum Prosser,Md.Geol.Surv.,Mid.& Up.Dev.,p.121-122,pl.7,f.4,5,1913; Romney Form., Hamilton Member.E.bank Evitts Creek below Wolfe Mill,near Cumberland,Md.

Cystiphyllum clavatum Greene

Cystiphyllum clavatum Greene,Contr.Pal.Ind.,I,pt.17, pl.50,f.2,1904; Corniferous group. Falls of the Ohio

Cystiphyllum conifollis Hall

Cystiphyllum conifollis.Hall,Ill.Dev.Foss,,pl.30,f.3-9.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.126,f.9, 1899.

Cystiphyllum conspicunum Greene

Cystiphyllum conspicunum Greene,Contr.Pal.Ind.,I,pt. 20,p.203,pl.60,f.6-8,1904;Up.Helderberg group.Falls of the Ohio.

Cystiphyllum constrictum Greene

Cystiphyllum constrictum Greene,Contr.Pal.Ind.,I,pt.4, p.30,pl.10,f.9-12,1900; Corniferous group.Falls of the Ohio.

Cystiphyllum crassatum Greene.

Cystiphyllum crassatum Greene,Contr.Pal.Ind.,I,pt.2,p.

11,pl.5,f.9,10,1899; Hamilton group.Near Charlestown,Ind.

Cystiphyllum crenatum Greene

Cystiphyllum crenatum Greene,Contr.Pal.Ind.,I,p.203-204,pl.59,f.12-20,1904;Up.Helderberg group.Falls of the Ohio.

Cystiphyllum cylindricum Hall,See Cystiphyllum americanum Milne-Edwards and Haime

Cystiphyllum diversum Greene

Cystiphyllum diversum Greene,Contr.Pal.Ind.,I,pt.6,p.46,pl.17,f.9,10,1901;Hamilton group.Near Charlestown, Ind.

Cystiphyllum expansum Greene

Cystiphyllum expansum Greene,Contr.Pal.Ind.,I,pt.6,p.45-46,pl.17,f.6-8,1901;Up.Helderberg group.Falls of the Ohio.

Cystiphyllum fasciculatum Swartz

Cystiphyllum fasciculatum Swartz,Md.Geol.Surv.,L.Dev.,p.207-208,pl.21,f.7-9,1913; Helderberg Form.near Cumberland,Md.208

Cystiphyllum fulcratum Greene

Cystiphyllum fulcratum Greene,Contr.Pal.Ind.,I,pt.17,p.169-170,pl.50,f.1,1904; Corniferous group.Falls of the Ohio.

Cystiphyllum gemmatum Greene

Cystiphyllum gemmatum Greene,Contr.Pal.Ind.,I,pt.2,p.11-12,pl.6,f.2-4,1899;Hamilton group.m.w.Charlestown,Ind.

Cystiphyllum infundibuliformis Greene

Cystiphyllum infundibuliformis Greene,Contr.Pal.Ind.,I,pt.4,p.31,pl.12,f.10-12,1900;Up.Helderberg group.Falls of the Ohio.

Cystiphyllum invaginatum Greene

Cystiphyllum invaginatum Greene,Contr.Pal.Ind.,I,pt.5,p.34,pl.13,f.1,2,1900;Hamilton group.Charlestown, and above the Cement Rock,throughout Clark County, Ind.

Cystiphyllum laciniatum Greene

Cystiphyllum laciniatum Greene,Contr.Pal.Ind.,I,pt.2, p.13,pl.6,f.10-12, 1899;Hamilton group.Near Charlestown,Ind.

Cystiphyllum lamellatum Greene

Cystiphyllum lamellatum Greene,Contr.Pal.Ind.,I,pt.4, p.29,pl.10,f.4,5,1900;Hamilton group.n.w.Charlestown,Ind.

Cystiphyllum multicrenatum Greene

Cystiphyllum multicrenatum Greene,Contr.Pal.Ind.,I,pt. 8,p.63,pl.22,f.5-7,1901; Helderberg group.Falls of the Ohio.

Cystiphyllum mundulum Hall and Whitfield

Cystiphyllum mundulum.Hall and Whitfield,23d.Rep.N.Y. State Cab.Nat.Hist.,p.234,1873.-Fenton and Fenton, Contr.Mus.Univ.Mich.,I,p.41,pl.3,f.3,1924; Spirifer zone.Hackberry Stage.

Cystiphyllum osculum Greene

Cystiphyllum osculum Greene,Contr.Pal.Ind.,I,pt.4,p. 30,pl.10,f.6-8,1900;Hamilton group.Near Charlestown, and the Cement Quarries in Clark Co.,Ind.

Cystiphyllum ossiculum Greene

Cystiphyllum ossiculum Greene,Contr.Pal.Ind.,I,pt.2,p. 12-13,pl.6,f.5-7,1899;Hamilton group.Near Charlestown,Ind.

Cystiphyllum parasiticum Greene

Cystiphyllum parasiticum Greene,Contr.Pal.Ind.,I,pt.4, p.31,pl.12,f.7-9,1900;Up.Helderberg group.Falls of the Ohio.

Cystiphyllum secundum D'Orbigny,See Cystiphyllum vesiculosum Phillips.

Cystiphyllum varians Hall

Cystiphyllum varians. Hall,Ill.Dev.Foss.,pl.29.-Grabau, Buffalo Soc.Nat.Sci.,Bull.6,p.127,f.10A,1899;Hamilton group.Eighteen Mile Creek(Coll.Am.Mus.Nat.Hist., N.Y.)

Cystiphyllum vesiculosum Grabau and Shimer,See Cystiphyll-

um americanum Milne-Edwards and Haime(?)

Cystiphyllum vesiculosum Phillips

Cyathophyllum vesiculosum Goldfuss,Germ.Petref.,p.58, pl.17,f.5;pl.18,f.1,1826.

Cystiphyllum secundum D'Orbigny,Prod.de Pal.,I,p.106, 1850.

Cystiphyllum vesiculosum. Phillips,Palaeozoic Foss., 1841.-De Verneuil and Jules Haime,Bull.Soc.Geol. France,2d.ser.,VII,p.162,1850.-D'Orbigny,Prod.de Pal.,I,p.106,1850.-Milne-Edwards and Jules Haime, Pal.Foss.des Terr.Palaeoz.,p.462,1851.-McCoy,British Palawozoic Fossils,1851.-Edwards and Haime, Brit.Foss.Coral,p.243,pl.56,f.1,1a,b,1853.

Genus DICTYONEMA Hall
(1852.Pal.N.Y.,II,p.174)

Dictyonema hamiltoniae Hall

Dictyonema hamiltoniae? Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.120,f.1,1899. Idleword Cliff.

Dictyonema sp. Hall ? Canadian Organic Remains,Decade II,p.58,named but not described,1865.

Genus DIPHYPHYLLUM Lonsdale

Diphyphyllum adjunctum Greene

Diphyphyllum adjunctum Greene,Contr.Pal.Ind.,I,pt.4,p. 27-28,pl.12,f.1,1900; Up.Helderberg group.Falls of the Ohio.

Diphyphyllum archiaci Billings,See Craspedophyllum archiaci Billings.

Diphyphyllum dilatum Greene

Diphyphyllum dialatum Greene,Contr.Pal.Ind.,I,pt.20, p.199-200,pl.58,f.9-12,1904;Hamilton group. Speed's Quarry,Clark Co.,Ind.

Diphyphyllum expansum Greene

Diphyphyllum expansum Greene,Contr.Pal.Ind.,I,pt.3, p.25,pl.9,f.11,1899;Up.Helderberg group.Falls of the Ohio.

Diphyphyllum laxum Greene

Diphyphyllum laxum Greene,Contr.Pal.Ind.,I,pt.4,p.26-27,pl.10,f.2,3,1900;Hamilton group.Near Charlestown, Ind.

Diphyphyllum prolatum Greene

Diphyphyllum prolatum Greene,Contr.Pal.Ind.,I,pt.4,p.27,pl.11,f.1,1900;Hamilton group. Near Charlestown, Ind.

Diphyphyllum tubiforme Fenton and Fenton

Diphyphyllum tubiforme Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.42,pl.2,f.1-4, 1924; Spirifer zone. Hackberry Stage.

Diphyphyllum unicum Greene

Diphyphyllum unicum Greene,Contr.Pal.Ind.,I,pt.1,p.5, pl.3,f.6-10,1898;Hamilton group. Near Charlestown, Ind.

Diphyphyllum wadsworthi Greene

Diphyphyllum wadsworthi Greene,Contr.Pal.Ind.,I,pt.4, p.26,pl.10,f.1,1900;Hamilton group. Clark County quarries,Clark Co.,Ind.

Genus DIPLOPHYLLUM Hall

Diplophyllum callawayensis Branson

Diplophyllum callawayensis Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.50,pl.3,f.4,1922; Callaway l.s. Boone and Callaway Cos.,Mo.

Enterolasma (Streptelasma) strictum Shimer,See Streptelasma Hall

Enterolasma strictum Simpson,See Streptelasma strictum Hall

Genus FAVOSITES Lamark
(Hist.des Ann.Sans Vert.,II,p.204)

Favosites sp.Stewart

Favosites sp. Stewart,The Dev. of Mo.,p.222,pl.57,f.9, 10,1922;Little Saline Creek l.s. Ste Genevieve Co., Mo.

Favosites sp.Clarke and Swartz

Favosites sp. Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.

Dev.,p.541,pl.45,f.9,1913;Jennings Form.,Chemung? Member.Sideling Hill Creek,Allegany Co.,Md.

Favosites sp. Steinmann,See Hindia spaheroidalis Duncan.

Favosites sp. Weller

Favosites sp. Weller,Pal.N.J.,III,p.341,not figured, 1903;Mid.& Up. Oriskany. Near Flatorookville,N.Y.

Favosites alpenensis Winchell

Favosites alpenensis Winchell,Rep.Lower Pen.of Mich., p.88.

Favosites hamiltonensis Rominger,Geol.Surv.Mich.,Foss. Corals,p.28,pl.7,f.3,4,1876.

Favosites gothlandica Whiteaves, Contr.Can.Pal.,I,pt.4, p.272,1892.

Favosites alpenensis. Lambe,Contr.Can.Pal,,IV,pt.1,p.18, 1899.-Grabau and Shimer,N.Am.Index Foss.,I,p.87, 1909.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.53, pl.2,f.1-3,1922;Callaway l.s. Also in the Mineola and Cooper l.s.Missouri.

Favosites alpenensis ? Cleland,Wisc.Geol.Surv.,Bull.21, p.31,pl.1,f.8,1911.

Favosites argus Hall

Favosites argus. Hall,Ill.Dev.Foss.,pl.34.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.130-131,f.12,1899;Demissa bed(?) Eighteen Mile Creek,N.Y.

Favosites basaltica. Billings,Lambe,See Favosites basalticus Goldfuss.

Favosites basalticus Goldfuss

Calamopora basaltica Goldfuss,Petrer.Germ.,I,p.78,pl. 26,f.4a (in part),1829.

Favosites gothlandica Billings,Can.Jour.Nat.Sci.,IV, p.104,f.2,3,4,1859.

Favosites basaltica. Billings,Can.Jour.Nat.Sci.,IV,p. 106,f.8,1859.-Lambe,Contr.Pal.Can.,IV,pt.1,p.8-10, pl.1,f.3,3a,1889

Calamopora epidermata Rominger,Am.Jour.Sci.,2d.ser., XXXIV,p.396,1862.

Favosites gothlandica Nicholson,Pal.Ont.,p.45(With reference only to the coral from the Corniferous limestone and Hamilton formation)1874.

Favosites Forbesi Nicholson,Pal.Ont.p.48,pl.7,f.8;pl. 8,f.4,1874.

Favosites Forbesi var.tuberosa Nicholson,Pal.Tab.Corals p.62,pl.3,f.2,2a-e,1879.

Favosites epidermata Hall,Illus.Dev.Foss.,pl.6,f.1-5, pl.12,f.6,9-13;1876.

Favosites epidermata var corticosa Hall,idem.,p.10,f. 1-6,pl.11,f.11,12,1876.

Favosites epidermatus Rominger,Geol.Surv.,Mich.,Foss., Corals,p.28,pl.8,f.1,2,3,1876.

Favosites tuberosa.Hall,Illus.Dev.Foss.,pl.6,f.6;pl.8, f.1-7;pl.11,f,1,1876.-Whiteaves,Contr.Can.Pal.,I,pt. 2,p.121,1889.

Favosites tuberosa var.Hall,idem.pl.1,f.1pl.4,f.1;pl.7, f.1,1876.

Favosites tuberosus Rominger,Geol.Surv.Michl,Foss.Corals p.39,pl.9,f.1,2,1876.

Favosites basalticus Swartz,Md.Geol.Surv.,L.Dev.,p.212-213,pl23.f.6-7,1913;Helderberg Form.,Near Cumb.,Md.

Favosites clavatulus Greene

Favosites clavatulus Greene,Contr.Pal.Ind.,I,pt.5,p.41, pl.15,f.1-3,1900;Corniferous group.Falls of the Ohio

Favosites clausus Rominger

Favosites clausus.Rominger,Geol.Surv.,Mich.,p.37,pl.14, upper left-hand figure,1876.-Greene,Contr.Pal.Ind.,I pt.17,p.168,pl.49,fupper figure,1904;Hamilton group. Speed's Quarry Clark County,Ind.

Favosites conica Hall,See Favosites conicus Hall

Favosited conicus Hall

Favosited conica Hall,26th.Ann.Rep.N.Y.State Mus.Nat.Hist.,p.112,1874;32d.Ann.Rep.N.Y.State Mus.Nat.Hist., p.146,1879.

Favosites conicus.Hall,Rep.State Geol.N.Y.for 1882.pl.3 f.4,6-13;1883;Pal.N.Y.,VI,p.9,pl.3,f.4,6-13,1887.-

Girty,48th.Ann.Rep.N.Y.State Mus.Nat.Hist.,II,p.302, 1895;U.S.G.S. 19th.Ann.Rep.,pt.3,p.560,1899.-Swartz, Md.Geol.Surv.,L.Dev.,p.212,pl.23,f.5-7,1913;Helderberg Form,,New Scotland Member; Oriskany Form.,Ridgely Member.Md.-Tansey,The Dev. of Mo.,p.178-179,pl. 41,f.2-7,1922.Bailey l.s. Little Saline Creek,Ste. Genevieve Co.,Mo.

Favosites epidermata Hall,See Favosites basalticus Goldfuss.

Favosites epidermata var.corticosa Hall,See Favosites basalticus Goldfuss.

Favosites epidermatus Rominger,See Favosites basalticus Goldfuss.

Favosites favosus var.integritabulatus Swartz

Favosites favosus var.integritabulatus Swartz,Md.Geol. Surv.,L.Dev.,p.214,pl.24,f.1,2,1913;Helderberg Form., Keyser Member.Warrior Mountain,Md.

Favosites Forbesi Nicholson,See Favosites basalticus Goldfuss.

Favosites Forbesi var.tuberosa Nicholson,See Favosites basalticus Goldfuss.

Favosites globosus Greene

Favosites globosus Greene,Contr.Pal.Ind.,I,pt.1,p.5,pl. 3,f.3-5,1898;Hamilton group.n.w.Charlestown,Ind.

Favosites Gothlandica Billings,See Favosites basalticus Goldfuss.

Favosites Gothlandica Nicholson,See Favosites basalticus Goldfuss.

Favosites Gothlandica Whiteaves,See Favosites basalticus Goldfuss.

Favosites hamiltonensis Rominger,See Favosites alpenensis Winchell.

Favosites hamiltoniae Hall

Favosites hamiltoniae.Hall,Ill.Dev.Foss.,pl.34.-Grabau, Buffalo Soc.Nat.Sci.,Bull.6,p.131,f.13,1899;Encrinal l.s.Lake Shore,Erie Co.,N.Y.

Favosites helderbergiae Hall

Favosites helderbergiae. Hall 26th.Ann.Rep.N.Y.State

Mus.Nat.Hist.,p.111,1874;32d.Ann.Rep.N.Y.State Mus. Nat.Hist.,p.145,1879;Rep.State Geol.N.Y.for 1882, pl.4,f.1,2;pl.5,f.1-3,pl.6,f.1-8,1883.Pal.N.Y.,VI, p.8,pl.4,f.1,2,pl.5,f.1-3pl.6,f.1-8,1887.-Girty,48th Ann.Rep.N.Y.State Mus.,Nat.Hist.,II,p.302,1895.-Weller,Pal.N.J.,III,p.270,1903;Coeymans l.s.New Jersey.-Shimer,N.Y.State Mus.,Bull.80,p.235,1905.-Clarke N.Y.State Mus.,Me.,IX,pt.1,p.113,218,1908;N.Y.State Mus.,Mem.,IX,pt.2,p.49,1909.-Grabau and Shimer,N.Am. Index Foss.,I,p.85,f.138,1909.-Swartz,Md.Geol.Surv., L.Dev.,p.208,pl.22,f.1,1913;Helderberg Form.,Coeymans Member.Dawson,Md.-Tansey,The Dev. of Mo.,p.177-178, pl.40,f.12-17,pl.41,f.1,1922;Bailey l.s.Little Saline Creek Mo.-Stewart,The Dev. of Mo.,p.282,pl.57,f.8, 1922 Little Saline l.s.Ste Genevieve Co.,Mo.

Favosites helderbergiae var.praecedens Schuchert

Favosites helderbergiae var praecedens.Schuchert,Am. Geol.XXXI,p.164,1903.-Swartz,Md.Geol.Surv.,L.Dev.,p. 209-211,pl.22,f.2-7,1913;Helderberg Form.,Keyser Member.Devil's Backbone;Cash Valley;Pinto;Flintstone, Md.;Near Keyser W.Va.,Hyndman,Penn

Favosites limitaris Rominger

Favosites limitaris.Rominger,Fossil Corals,Geol.Surv., Mich.,III,pt.2,p.36,pl.13.-Hall,Ind.Dept.Geol.Nat. Hist.,12th.Ann.Rep.p.256-257,pl.4,f.5,6,1883.-Davis, Ky.Foss.Corals,pl.30;pl.31f,1,1885.-Grabau and Shimer,N'Am.Index Foss.,I,p.88,f.142,1909.-Branson,Mo Bur.Geol.& Mines,XVII,2d.ser.p.54,pl.3,f.1,1922; Callaway l.s.Also in Mineola and Cooper l.s.Mo.

Favosites pyriforme Weller,See Favosites pyriformis Hall

Favosited pyriformis Hall

Asterocerum pyriforme Hall,Pal.N.Y.,II,p.123,pl.44a, f.1a-e,1852.

Favosites pyriforme Weller,Pal.N.J.,III,p.220,pl.17,f. 3-5,1903.

Favosites pyriformis Swartz,Md.Geol.Surv.,L.Dev.,p.221, pl.23,f.1-4,1913;Helderberg Form.,Keyser Member.Md.

Favosites rotundituba Greene

Favosites rotundituba Greene,Contr.Pal.Ind.,I,pt.1,p. 4,pl.3,f.1,2,1896;Corniferous group.Falls of the Ohio.

Favosites rotundus Greene

Favosites rotundus Greene, Contr. Pal. Ind., I, pt.5, p.41, pl.15, f.4-6, 1900; Corniferous group. Falls of the Ohio.

Favosites seamani Greene

Favosites seamani Greene, Contr. Pal. Ind., I, pt.9, p.75, pl.25, f.1, 1902; Corniferous group. Falls of the Ohio.

Favosites schriveri (Herzer)

Thecia schriveri Herzer, 10th. Ann. Rep. Ohio, Acad. Sci., p. 54, pl.10, f.15, 1902.

Favosites ? schriveri Swartz, Md. Geol. Surv., L. Dev., p.214-215, pl.34, f.3-6, 1913; Oriskany Form., Ridgely Member. Monster Rock; W. Md. R.R. opposite Keyser, W. Va.

Facosites tuberosa Hall, See Favosited basalticus Goldfuss.

Favosites tuberosa Whiteaves. See Favosites basalticus Godlf.

Favosites tuberosus Rominger, See Favosites basalticus Goldf.

Genus HADROPHYLLUM E.& H.
(1850. British Foss. Corals, p.67)

Hadrophyllum woodi Grabau

Hadrophyllum woodi Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p 128, f.100, 1899; Moscow sh. Eighteen Mile Creek, N.Y.

Compare Amplexus (?) intermittens.

Haimeophyllum ordinatum Billings

Chonostegites ordinatum S.A. Miller, N. Am. Geol. & Pal., p. 178, f.151, 1889.

Haimeophyllum ordinatum. Billings. Fossil Corals of the rocks of Canada West., p.43, f.29, 1859.-Greene, Contr. Pal. Ind., I, pt.20, p.198-199, pl.58, f.7, 8, 1904; Up. Helderberg group. Falls of the Ohio.

Halysites catenulatus Linne

? Tubipora catenularia Linne, Syst. Nat., 12th. ed., p.1270. 1767.

Catenipora escharoides Hall, Pal. N.Y., II, p.127, pl.35, f. 1a-c, 1852.

Halysites catenulatus Swartz,Md.Geol.Surv.,L.Dev.,p. 220-221,pl.26,f.8,1913;Helderberg Form.,Keyser Member.Devil's Backbone; Cash Valley; Pinto; Rawlings, Md.

Genus HELIOPHYLLUM Hall
(1848.Dana's Zoophytes,p.356)

Heliophyllum sp.Prosser

Heliophyllum sp. Prosser,Md.Geol.Surv.,Mid.& Up.Dev., p.121,pl.7,f.3,1913;Romney Form.,Hamilton Member. Ernstville,Md.

Heliophyllum adnascens Greene

Heliophyllum adnascens Greene,Contr.Pal.Ind.,I,pt.10, p.85,pl.28,f.3-5,1902; Hamilton group. Near Charlestown, Ind.

Heliophyllum agassizi Greene

Heliophyllum agassizi Greene,Contr.Pal.Ind.,I,pt.2,p. 14,pl.5,f.1,1899; Corniferous group. Falls of the Ohio.

Heliophyllum ampliatum Greene

Heliophyllum ampliatum Greene,Contr.Pal.Ind.,I,pt.8,p. 62,pl.22,f.1,2,1901; Up. Helderberg group. Falls of the Ohio.

Heliophyllum beecheri Greene

Heliophyllum beecheri Greene,Contr.Pal.Ind.,I,pt.3,p. 19,pl.8,f.9,1899;Hamilton group. Near Charlestown, Ind.

Heliophyllum bordeni Greene

Heliophyllum bordeni Greene,Contr.Pal.Ind.,I,pt.2,p. 13-14,pl.4,f.9,10,1899;Hamilton group.Near Charlestown,Ind.

Heliophyllum canadense Billings, See Cyathophyllum halli (Edwards and Haime)

Heliophyllum cayugaense Billings,See Cyathophyllum Halli (Edwards and Haime)

Heliophyllum colbornense Nicholson,See Cyathophyllum halli (Edwards and Haime)

Heliophyllum collatum Greene

Heliophyllum collatum Greene, Contr. Pal. Ind., I, pt. 7, p. 55, pl. 29, f. 4-7, 1901; Up. Helderberg group. Falls of the Ohio.

Heliophyllum conditum Greene

Heliophyllum conditum Greene, Contr. Pal. Ind., I, pt. 20, p. 199, pl. 58, f. 3-6, 1904; Hamilton group. Near Charlestown, Ind.

Heliophyllum confluens Hall

Heliophyllum confluens. Hall, Ill. Dev. Foss., Corals, pl. 26, -Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p. 126, f. 8, 1899 Encrinal l. s. Lake Shore, Erie, Co., N.Y.

Heliophyllum conglomeratum Greene

Heliophyllum conglomeratum Greene, Contr. Pal. Ind., I, pt. 15, p146, pl. 43, not figured, 1903; Up. Helderberg Group. Falls of the Ohio.

Heliophyllum congregatum Greene

Heliophyllum congregatum Greene, Contr. Pal. Ind., I, pt. 15, p. 146-147, pl. 43, lower fig., 1903; Up. Helderberg group. Near Gibson's Station, Clark Co., Ind.

Heliophyllum conigerum Greene

Heliophyllum conigerum Greene, Contr. Pal. Ind., I, pt. 8, p. 62-63, pl. 22, f. 3, 4, 1901; Hamilton group. Near Charlestown, Ind.

Heliophyllum convergens (Hall)

?Aulacophyllum convergens Hall, 35th. Ann. Rep. N.Y. State Mus. Nat. Hist., Advance Sheets p. 22, 1882; Ind. Geol. Rep. p. 281, pl. 17, f. 1, 21882. -Greene Contr., Pal. Ind., I, pt. 14, p. 139, pl. 40. f. 7-13, 1903; Hamilton group. Near Charlestown, Ind.

Heliophyllum corniculum (Lesueur)

Caryophyllia cornicula Lesuer, Mem. du Mus., VI, p. 287, 1820.

Zaphrentis cornicula Milne-Edwards and Haime, Polypiers Foss. des Terr. Pal., p. 327, pl. 6, f. 1a-e, 1851.

Cyathophyllum cornicula Rominger, Geol. Surv., Michl, III, p 102, pl. 35, 1876.

Heliophyllum corniculum/Grabau and Shimer, N. Am. Index

Foss.,I,p.68,f.104,1909.-Cleland,Wisc.Geol.Surv., Bull.21,p.29,pl.1,f.2,1911.-Swartz,Md.Geol.Surv.,L. Dev.,p.206,pl.21,f.3-6,1913;Helderberg Form.Martim Mountain,Allegany Co.,Md.

Heliophyllum crotalum Greene

Heliophyllum crotalum Greene,Contr.Pal.Ind.,I,pt.12,p. 111,pl.34,f.5,6,1903;Hamilton group.N.W.Charlestown, Ind.

Heliophyllum dispansum Greene

Heliophyllum dispansum Greene,Contr.Pal.Ind.,I,p.110, pl.34,f.3,4,1903;Hamilton group.N.W.Charlestown, Ind.

Heliophyllum dispassum Fenton and Fenton

Heliophyllum secrutarium C.L.Fenton,Am.Jour.Sci.,4th. ser.,XLVIII,p.370,1919.

Heliophyllum dispassum Fenton and Fenton,Contr.Mus.Geol. Univ.Mich.,I,p.27,pl.10,f.4-8,1914;Spirifer zone. Hackberry Stage.

Heliophyllum eriense Billings,See Cyathophyllum halli (Edwards and Haime)

Heliophyllum gradatum Greene

Heliophyllum gradatum Greene,Contr.Pal.Ind.,I,pt.19,p. 185-186,pl.56,f.1,1904;Corniferous group.Falls of the Ohio.

Heliophyllum gurleyi Greene

Heliophyllum gurleyi Greene,Contr.Pal.Ind.,I,pt.2,p.16, pl.6,f.1,1899;Hamilton group.Near Charlestown,Ind., and at different Cement Quarries in Clark Co.,Ind.

Heliophyllum halli Billings,See Cyathophyllum halli(Edwards and Haime)

Heliophyllum halli Cleland,See Cyathophyllum halli(Edwards and Haime)

Heliophyllum halli Edwards and Haime,See Cyathophyllum halli(Edwards and Haime)

Heliophyllum halli Grabau and Shimer,See Cyathophyllum halli(Edwards and Haime)

Heliophyllum halli Grabau,See Cyathophyllum halli (Edwards

and Haime)

Heliophyllum hammelli Greene

Heliophyllum hammelli Greene, Contr. Pal. Ind., I, pt. 7, p. 55. pl. 20, f. 1-3, 1901; Up. Helderberg group. Falls of the Ohio.

Heliophyllum ignotum Greene

Heliophyllum ignotum Greene, Contr. Pal. Ind., I, pt. 10, p. 85, pl. 28, f. 1, 2, 1902; Hamilton group, Near Charlestown, Ind.

Heliophyllum inflexum Greene

Heliophyllum inflexum Greene, Contr. Pal. Ind., I, pt. 20, p. 200, pl. 59, f. 1-4, 1904; Up. Helderberg group. Falls of the Ohio.

Heliophyllum jacksoni Greene

Heliophyllum jacksoni Greene, Contr. Pal. Ind., I, pt. 4, p. 32, pl. 11, f. 7, 8, 1900; Hamilton group. Near Charlestown, Ind.

Heliophyllum lemoni Greene

Heliophyllum lemoni Greene, Contr. Pal. Ind., I, pt. 5, p. 35-36, pl. 14, f. 17, 1900; Corniferous group. Falls of the Ohio.

Heliophyllum minusculum Greene.

Heliophyllum minusculum Greene, Contr. Pal. Ind., I, pt. 5, p. 35, pl. 13, f. 7, 8. 1900; Up. Helderberg group. Falls of the Ohio.

Heliophyllum mirum Greene

Heliophyllum mirum Greene, Contr. Pal. Ind., I, pt. 12, p. 110, pl. 34, f. 1, 2, 1903; Hamilton group. N. W. Charlestown, Ind.

Heliophyllum nanum Greene

Heliophyllum nanum Greene, Contr. Pal. Ind., I, pt. 1, p. 1-2, pl. 1, f. 2-4, 1898; Hamilton group. Near Charlestown, Ind.

Heliophyllum nilesi Greene

Heliophyllum nilesi Greene, Contr. Pal. Ind., I, pt. 2, p. 15, pl. 5, f. 2, 3, 1899; Corniferous group. Falls of the Ohio.

Heliophyllum obesum Greene

Heliophyllum obesum Greene, Contr. Pal. Ind., I, pt. 3, p. 17 pl. 7, f. 1-4, 1899; Hamilton group. Near Charlestown, Ind.

Heliophyllum obliquum Greene

Heliophyllum obliquum Greene, Contr. Pal. Ind., I, pt. 20, p. 200-201, pl. 59, f. 5-7, 1904; Up. Helderberg group. Falls of the Ohio.

Heliophyllum osculatum Greene

Heliophyllum osculatum Greene, Contr. Pal. Ind., I, pt. 1, p. 1, pl. 1, f. 1; pl. 2, f. 1-3, 1898; Hamilton group. Near Charlestown, and different quarries in Clark Co., Ind.

Heliophyllum partitum Greene

Heliophyllum partitum Greene, Contr. Pal. Ind., I, pt. 2, p. 18-19, pl. 8, f. 7, 8, 1899; Up. Helderberg group, Falls of the Ohio.

Heliophyllum parvulum Greene

Heliophyllum parvulum Greene, Contr. Pal. Ind., pt. 18, p. 180, pl. 53, f. 7-9, 1904; Hamilton group. Charlestown, Ind.

Heliophyllum proliferum Hall, See Cyathophyllum halli (Edwards and Haime)

Heliophyllum proliferum Nicholson, See Cyathophyllum halli (Edwards and Haime)

Heliophyllum rowleyi Greene

Heliophyllum rowleyi Greene, Contr. Pal. Ind., I, pt. 6, p. 47, pl. 16, f. 1, 1901; Corniferous group. Falls of the Ohio.

Heliophyllum seamani Greene

Heliophyllum seamani Greene, Contr. Pal. Ind., I, pt. 3, p. 17-18, pl. 7, f. 5, 1899; Corniferous group. Falls of the Ohio

Heliophyllum scrutarium Clarke and Swartz

Heliophyllum scrutarium Clarke and Swartz, Md. Geol. Surv Mid. & Up. Dev., p. 540-541, pl. 45, f. 7, 8, 1913; Jennings Form., Chemung ., Member. Sideling Hill Creek, Allegany Co., Md.

Heliophyllum scrutarium C.L. Fenton, See Heliophyllum dispassum Fenton and Fenton

Heliophyllum sherzeri Greene

Heliophyllum sherzeri Greene, Contr. Pal. Ind., I, pt. 5, p. 34-35, pl. 13, f. 3-6, 1900; Up. Helderberg group. Falls of the Ohio.

Heliophyllum solidum (Hall and Whitfield)

Zaphrentis solida Hall and Whitfield, 23 Ann. Rep. N.Y. State Cab. Nat. Hist., p. 231, pl. 9, f. 5, 1875.

Heliophyllum solidum Fenton and Fenton. Contr. Mus. Univ. Mich., I, p. 28, pl. 1, f. 4-7, 1934; Spirifer zone. Hackberry Stage.

Heliophyllum spiculatum Greene

Heliophyllum spiculatum Greene, Contr. Pal., Ind., I, pt. 7, p. 56, pl. 19, f. 1, 1901; Up. Helderberg group. Strow's Mill Clark Co., Ind.

Heliophyllum subcaespitosum Nicholson, See Craspedophyllum subcaespitosum (Nicholson)

Heliophyllum sulcatum (D'Orbigny)

Caninia sulcata D'Orbigny, Prodr. d. Palaeontology, T. I, p. 105, 1850.

Aulacophyllum Sulcatum. E. & H. Polypiers Fossils des Terr. Palaeox., p. 355, pl. 6, f. 2, 1851.-Hall, Ind. Geol. Surv., p. 379, pl. 17, f. 7-10, 1882.

Heliophyllum sulcatum Greene, Contr. Pal. Ind., I, pt. 19, p. 185, pl. 55, f. 1-6, 1904; Up. Helderberg group. Falls of the Ohio.

Heliophyllum tunidulum Greene

Heliophyllum tumidulum Greene, Contr. Pal. Ind., I, pt. 1, p. 2, pl. 1, f. 5-7, 1898; Hamilton group. Near Charlestown Ind.

Heliophyllum turgidum Greene

Heliophyllum turgidum Greene, Contr. Pal. Ind., I, pt. 2, p. 15-16, pl. 5, f. 4, 5, 1899; Hamilton group. Near Charlestown, Ind.

Heliophyllum vesiculatum (Hall)

Cyathophyllum vesiculatum Hall, 35th. Ann, Rep. N.Y. State Mus. Nat. Hist., Advance Sheets, 1882; Ind. Geol. Rep., p. 297, pl. 23, f. 6, 1882.

Heliophyllum vesiculatum Greene, Contr. Pal. Ind., I, pt. 16,

p.157,pl.46,f.7-12,1903;Up.Helderberg.Falls of the Ohio

Heliophyllum zenkeri (Billings)

Cyathophyllum zenkeri.Billings,Can.Jour.new ser.,V,p.262, 1860.-Nicholson,Pal.Ont.,p.76,1875.-Lambe,Contr.Can. Pal.,IV.pt.2,p.138,pl.12,1900.

Heliophyllum zenkeri Greene,Contr.Pal.Ind.,I,pt.14,p.139-140,pl.40,f.14-18,1903;Hamilton group. Stripping above Cement Rock at different Cement Quarries throughout Clark Co.,Ind.

Genus HINDIA Duncan

Hindia fibrosa Clarke, See Hindia sphaeroidalis Duncan

Hindia fibrosa Hinde, See Hindia sphaeroidalis Duncan

Hindia fibrosa Rauff,See Hindia sphaeroidalis Duncan

Hindia fibrosa F. Roemer, See Hindia sphaeroidalis Duncan

Hindia fibrosa Roemer,See Hindia sphaeroidalis Duncan

Hindia fibrosa Weller,See Hindia sphaeroidalis Duncan.

Hindia sphaeroidalis Duncan

Clamopora fibrosa Roemer,Sil.Fauna des Westl.Tenn.,p.20, pl.2,f.2,(non Goldfuss), 1860.

Monticulipora petropolitana F. Roemer,Die foss. Fauna d. Sil. Diluvial-Geschiebe von Sodewitz,1861.

Astylospongia inornata Hall, 16th. Rep.N.Y.State Cab.Nat. Hist., p.70,1863.

Favosites sp. Steinmann,Neuses Jahrfur Min.,I, Heft,I,p. 91,1886.

Hindia fibrosa. Hinde, Ann. & Mag.Nat.Hist.,ser.5,XIX,p. 75,1887.-Girty, Rep.N.Y.State Geol.for 1894,p.263,pl. 2,f.2,1895.-Weller,Pal.N.J.,III,p.297,pl.32,f.1,2, 1903;New Scotland l.s. N.J.-Clarke,N.Y.State Mus., Mem.IX,pt.1,p.116,1908;N.Y.State Mus.Mem.IX,pt.2,p. 50,1909.-Tansey,The Dev. of Mo.,p.176,pl.40,f.1-4, 1922.-Hinde, Cat.Foss.Sponges of Brit.Mus.,p.57,pl. 13,f.1,1883.-F.Roemer,Lith.Errat. in Pal. Abhand,, herausg.von Dames u.Kayser,II,p.63,(310),pl.4(27),f.17, 1885.-Rauff,Sitzungsber. d.Niederrh.Gesell.fur Nat.und Heilk.zu Bonn,Sitz.von Mai 10,1886,p.163-172,1886.

Hindia sphaeroidalis. Duncan,Ann.& Mag.Nat.Hist.,ser.5,

IV,p.84,pl.9,1879.-Ulrich,Geol.Surv.Ill.,VIII,p.226, f.9,10,on p.224,1890.-Rauff,Paleospongiologie,pt.1, p.335,pl.15-17,f.1-4,1894.-Girty,U.S.G.S.,19th.Ann. Rep.,pt.3,p.552,1899.-Swartz,Md.Geol.Surv.,L.Dev.,p. 195-198,pl.17,f.1-4,1913;Helderberg Form.Keyser Member.Md.

Sphaeroliths nicholsoni Hinde,Abstract Proc.Geol.Soc., No.305,p.88,in Quart.Jour.Geol.Soc.,XXXI,1875.

Idiostroma sp. Swartz

Idiostroma sp. Swartz,Md.Geol.Surv.,L.Dev.,p.227,1913; Helderberg Form.,Keyser Member.Near Cumberland,Md.

Genus MACGEEA Webster
(1889.Am.Nat.,XXIII,p.710)
(1924.Contr.Mus.Univ.Mich.,I,p.53)

Macgeea culmula Webster

Macgeea culmula.Webster,Am.Nat.,XXIII,p.712,1889.- Fenton and Fenton,Contr.Mus.Univ.Mich.,I,p.54,1924. Hackberry Stage.

Macgeea solitaria (Hall and Whitfield)

Pachyphyllum solitarium Hall and Whitfield,23d.Ann.Rep. N.Y.State Cab.Nat.Hist.,p.232,pl.9,f.6,7,1873.

Macgeea solitaria.Webster,Am.Nat.,XXIII,p.711,1889.- Fenton and Fenton,Contr.Mus.Univ.Mich.,I,p.54-55,pl. 9,f.7-10,1924; Spirifer zone.Hackberry Stage.

Melliporites repens Knorr et Walch,See Aulopora repens Knorr and Walch.

Genus MICHELINIA De Koninck

Michelinia bridghami Greene

Michelinia bridghami Greene,Contr.Pal.Ind.,I,pt.5,p. 40,pl.14,f.14-16,1900;Hamilton group. Charlestown, Ind

Michelinia lenticularis Hall,See Pleurodictyum lenticulare (Hall)

Michelinia minuta Greene

Michelinia minuta Greene,Contr.Pal.Ind.,I,pt.1,p.5-6,pl. 3,f.11,12,1898;Hamilton group.Near Gibson's Station, Clark Co.,Ind.

Michelinia neglecta Greene.

Michelinia neglecta Greene, Contr. Pal. Ind., I, pt. 3, p. 20, pl. 7, f. 16, 1899; Up. Helderberg group. Falls of the Ohio

Michelinia papulosa Greene

Michelinia papulosa Greene, Contr. Pal. Ind., I, pt. 3, p. 20, pl. 7, f. 13-15, 1899; Up. Helderberg group. Falls of the Ohio.

Michelinia spiculata Greene

Michelinia spiculata Greene, Contr. Pal. Ind., I, pt. 3, p. 19-20, pl. 7, f. 11, 12, 1899; Up. Helderberg group. Falls of the Ohio.

Michelinia tantilla Greene

Michelinia tantilla Greene, Contr. Pal. Ind., I, pt. 3, p. 21, pl. 9, f. 12, 1899; Hamilton group. Near Charlestown, Ind.

Michelinia wardi Greene

Michelinia wardi Greene, Contr. Pal. Ind., I, pt. 13, p. 130, pl. 37, f. 1-3, 1903; Hamilton group. Strippings above Cement beds, throughout Clark Co., Ind.

Genus MICROCYCLUS Meek and Worthen
(1868. Ill. Geol. Surv., III, p. 1420)

Microcyclus discus Meek and Worthen

Microcyclus discus Meek and Worthen, Ill. Geol. Surv., III, p. 420, pl. 11, f. 7a, b, 1868; Devil's Backbone, Jackson Co., Ill. Hamilton group.

Genus PACHYPHYLLUM Edwards & Haime

Pachyphyllum crassicostatum Webster

Pachyphyllum crassicostatum. Webster, Am. Nat., XXIII, p. 623, 1899.-Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 51-52, pl. 8, f. 1; pl. 9, f. 1-5, 1924; Hackberry Stage.

Pachyphyllum crassicostatum var Webster, See Pachyphyllum crassicostatum nanum Fenton and Fenton

Pachyphyllum crassicostatum nanum Fenton and Fenton

Pachyphyllum crassicostatum var. Webster, Am. Nat., XXIII, p. 623, 1889.

Pachyphyllum crassicostatum nanum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 52-53, pl. 9, f. 6, 1924; Spirifer zone. Hackberry Stage.

Pachyphyllum irregulare Webster and Fenton

Pachyphyllum irregulare Webster and Fenton, Contr. Mus. Univ. Mich., I, p. 49-50, pl. 10, f. 1, 2; pl. 11, 1924; Spirifer zone. Hackberry Stage.

Pachyphyllum levatum Webster and Fenton

Pachyphyllum levatum Webster and Fenton, Contr. Mus. Univ. Mich., I, p. 48-49, pl. 5, f. 4; pl. 12, f. 9-10, 1924; Spirifer zone. Hackberry Stage. Rockford and Hackberry Grove.

Pachyphyllum ordinatum Webster, See Pachyphyllum woodmani ordinatum Webster.

Pachyphyllum owenense Webster and Fenton

Pachyphyllum owenense Webster and Fenton, Contr. Mus. Univ. Mich., I, p. 5-51, pl. 7, f. 5, 1924; Acervularia zone. Hackberry Stage.

Pachyphyllum solitarium Hall and Whitfield, See Madgeea solitaria (Hall and Whitfield)

Pachyphyllum woodmani (White)

Smithia woodmani White, Geol. Iowa, I, p. 188, 1870.

Pachyphyllum woodmani. Hall and Whitfield, 23d. Ann. Rep., N. Y. State Cab. Nat. Hist., p. 231, pl. 9, f. 9, 1873.-Webster, Am. Nat., XXIII, p. 622, 1889.-Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 46-47, pl. 7, f. 1-3; pl. 8, f. 2; pl. 9, f. 11, 12; pl. 10, f. 3, 1924; Upper portions of Dev. of Iowa; Spirifer zone, Hackberry Stage.

Pachyphyllum woodmani ordinatum Webster

Pachyphyllum ordinatum Webster, Am. Nat., XXIII, p. 624, 1889.

Pachyphyllum woodmani ordinatum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 47-48, pl. 7, f. 4, 1924; Hackberry Stage. Hackberry Grove.

Genus PLEURODICTYUM Goldfuss
(1829. Petref. Germ., I, p. 113, 209)

Pleurodictyum lenticulare (Hall)

Michelinia lenticularis Hall, 36th. Ann. Rep. N. Y. State Mus. Nat. Hist., p. 113, 1874; 32d. Ann. Rep. N. Y. State Mus. Nat. Hist., p. 145, 1879; Rep. State Geol. N. Y. for 1882, pl. 3, f. 1-3, 5, 1883; Pal. N. Y., VI, p. 7, pl. 3, f. 1-3, 5, 1887.

Pleurodictyum lenticulare. Beecher, Trans. Conn. Acad.,

VIII,p.207,1891,-Girty, 48th. Ann.Rep. N.Y.State Mus. Nat.Hist.,II,p.305,1895.-Swartz,Md.Geol.Surv.,L.Dev., p.218,pl.26,f.1,1913;Helderberg Form.,Coeymans Member. Warren Point,Penn.-Tansey,The Dev. of Mo.,p.180,pl. 42,f.9,1922;Bailey l.s. Little Saline Creek,Ste Genevieve Co.,Mo.

Pleurodictyum problematicum Goldfuss?

Astroita,Peter Wolfart,Hist.Nat.Hass,infer.,pl30,tab.25, f.5,1719,Liebknecht,Hass,Subter,tab.2,f.4,1759.

Corps,particuliers,etc.,Knorr et Walch,Rec.des Mon.des Catastr.,III,p.199,supp.pl.10b,f.1,2,3, 1775.

Pleurodictyum problematicum Goldfuss,Petref.Germ.,t.I,p. 113,pl.38,f.18;1828.-Bronn,Leth.Geog.,t.I,p.56,pl.3, f.12,(1835-1837).-Phillips,Palaeozoic Foss.,p.19,pl. 9,f.24,1841.-De Verneuil et Haime,Bull.Geol.Soc.,Fr., t.VII,p.164,1851.-Edwards and Haime,Arch.Mus.,t.V,p. 210,pl.18,f.3,4,5,6,1845.-Meek and Worthen,Ill.Geol. Surv.,III,p.407,pl.9,f.1a,b,c,1868;Corniferous group. W.Jones-boro,Union Co.,Ill.

Pleurodictyum stylopora (Eaton)

Pleurodictyum stylopora.Hall,Ill.Dev.Foss.,pl.18.-Grabau Buffalo Soc.Nat.Sci.,Bull.6,p.131,f.14,1899;Pleurodictyum beds. Avery's Creek and the Lake Shore.N.Y.

Prismatophyllum inequalis Weller,See Cyathophyllum inequale (Hall)

Genus PTYCHOPHYLLUM Edwards & Haime

Ptychophyllum gemmatum Greene

Ptychophyllum gemmatum Greene,Contr.Pal.Ind.,I,pt.4,p.28 pl.12,f.23,1900;Up.Helderberg group.Falls of the Ohio

Ptychophyllum robustum Greene

Ptychophyllum robustum Greene,Contr.Pal.Ind,,I,pt.5,p. 39-40,pl.14,f.1,2,1900;Corniferous group. Falls of the Ohio.

Smithia johanni Hall and Whitfield,See Strombodes johanni (Hall and Whitfield)

Smithia multiradiata Hall and Whitfield,See Strombodes johanni multiradiatus (Hall and Whitfield)

Smithia woodmani White,See Pachyphyllum woodmani (White)

Sphaeroliths nicholsoni Hinde, See Hindia sphaeroidalis Duncan.

Genus STEREOLASMA

Stereolasma rectum (Hall)

Strombodes (?) rectus Hall, Geol. N.Y., pt.4, p.209, f.5, 1843

Streptelasma rectum. Hall (in part), Ill. Dev. Foss., pl.19, f.9, 1876.-Grabau, Buffalo Soc. Nat. Sci., Bull.6, p.122, f.2, 1899; Moscow sh. N.Y.

Streptelasma (Stereolasma) rectum, Grabau and Shimer, N. Am Index Foss., I, p.56, f.78, 79, 1906.

Stereolasma rectum. Simpson, Bull. N.Y. State Mus., No.39, p. 205, 1900.-Clarke, N.Y. State Mus. Bull. 65, p.55, 1903.-Prosser, Md. Geol. Surv., Mid.& Up. Dev., p.119-120, pl.7, f11, 1913; Romney Form., Hamilton Member, Ernstville, Md.

Genus STREPTELASMA Hall
(1847. Pal. N.Y., I, p.17)

Streptelasma sp. Girty

Streptelasma sp. Girty, U.S.G.S., 20th. Ann. Rep., p.38-39, 1900; Ouray l.s. Gunnison; Durango, Colo.

Streptelasma cooperensis Branson

Streptelasma cooperensis Branson, Mo. Bur. Geol.& Mines, XVII, 2d. ser., p.48, pl.1, f.6, 7, 1922; Callaway l.s. Boone and Maniteau Cos. Also in Cooper l.s. same Counties. Mo.

Streptelasma cumberlandica Swartz

Streptelasma cumberlandica Swartz, Md. Geol. Surv., L. Dev., p.199, pl.18, f.1, 2, 1913; Helderberg Form., Near Cumb., Md.

Streptelasma (Streeolasma) rectum Grabau and Shimer, See Stereolasma rectum(Hall)

Streptelasma rectum Hall, See Stereolasma rectum(Hall)

Streptelasma (Petraia)stricta Hall, See Streptelasma strictum Hall

Streptelasma stricta Hall, See Streptelasma strictum Hall

Streptelasma strictum Hall

Streptelasma (Petraia)stricta Hall, 26th. Ann. Rep. N.Y.

State Mus.Nat.Hist.,p.114,1874.

Streptelasma stricta Hall,32d.Ann.Rep.N.Y.State Mus. Nat.Hist.,p.142,1879.

Enterolasma strictum Simpson,N.Y.State Mus.,Bull.39,p. 203,f.11,12(p.204), 1900.

Enterolasma (Streptelasma) strictum Shimer,N.Y.State Mus Bull.80,p.235,1905.

Streptelasma strictum.Hall,Rep.State Geol.N.Y. for 1882, pl.1,f.1-10,1883;Pal.N.Y.,VI,pt.1,p.1,pl.1,f.1-10, 1887.-Girty,48th.Ann.Rep.N.Y.State Mus.Nat.Hist.,II, p.300,1895.-Weller,Pal.N.J.,III,p.298,pl.33,f.3,4, 1903;New Scotland-Becroft Fauna.-Swartz,Md.Geol.Surv. L.Dev.,p.198,pl.17,f.5-9,1913;Helderberg Form.,New Scotland Member.Md.-Tansey, The Dev. of Mo.,p.177,pl. 40,f.5-11,1922;Bailey l.s. Little Saline Creek,Mo.

Streptelasma ungula Hall

Streptelasma ungula.Hall,Ill.Dev.Foss.,pl.19.-Grabau, Buffalo Soc.Nat.Sci.,Bull.6,p.128,f.3,1899;Moscow sh.

Genus STRIATOPORA Hall
(1852.Pal.N.Y.II,p.156)
(1858.Iowa Rep.,p.479)

Striatopora sp. Swartz

Striatopora sp. Swartz,Md.Geol.Surv.,p.216,pl.25,f.3, 1913;Helderberg Form.,Keyser Member. Devil's Backbone,Md.

Striatopora bella Swartz

Striatopora bella.Swartz,Md.Geol.Surv.,L.Dev.,p.215,pl. 25,f.1,2,1913;Helderberg Form.,New Scotland Member. Cherry Run,W.Va1-Tansey,The Dev. of Mo.,p.179-180,pl. 25,f.1,2,1922;Bailey l.s. Little Saline Creek,Ste Genevieve Co.,Mo.

Striatopora bellistriata Greene

Striatopora bellistriata Greene,Contr.Pal.Ind.,I,pt.12, p.112,pl.34,f.12;pt.13,p.131,pl.37,f.8,1903;Up.Helderberg group. Falls of the Ohio.

Striatopora limbata Hall?, See Trachypora limbata (Eaton)

Striatopora missouriensis Meek and Worthen

Striatopora missouriensis.Meek and Worthen,Ill.Geol.Surv

III,p.369,pl.7,f.4,1868.-Keyes,Mo.Geol.Surv.,IV,pt. 1,p.121,1894.-Tansey,The Dev. of Mo.,p.179,pl.42, f.1-4,1922; Bailey l.s. Little Saline Creek,Ste Genevieve Co.,Mo.

Genus STROMATOPORA Goldfuss.

Stromatopora barretti Grabau and Shimer, See Syringostroma barretti Girty.

Stromatopora centrota Grabau and Shimer,See Syringostroma centrotum Girty.

Stromatopora concentrica Goldfuss

Stromatopora concentrica Weller,Pal.N.J.,III,p.271,not figured,1903;Coeymans l.s. N.J.

Stromatopora concentrica Hall,See Stromatopora constellata Hall.

Stromatopora constellata Hall

Stromatopora constellata.Hall,Pal.N.Y.,II,p.324,pl.72, f.2a,b,1852,-Whiteaves,Can.Rec.Scil,VII,pl.137,1896.

Stromatopora concentrica Hall,Pal.N.Y.,II,pl.73,f.2,2a, 2b,1852.

Caenostroma constellatum Spencer,Bull.Univ.State of Mo., I,No.1,p.48,pl.6,f.2,1882.

Cf.Stromatopora hudsonica. Dawson,Quart.Jour.Geol.Soc., XXXV,p.52,pl.4,f.9a,b;pl.5,f.10,1879.-Nicholson,Mon. Brit.Strom.,p.172,1891;Ann. & Mag.Nat.Hist.,p.312, pl.8,f.1-3,1891.

Stromatopora constellata. Parks,Univ. Toronto Studies, Geol.Ser.,No.5,p.44-46,1908.-Swartz,Md.Geol.Surv.,L. Dev.,p.221-224,pl.27,f.1-6;pl.28,f.1,2;pl.29;pl.30, f.1,1913;Helderberg Form.,Keyser Member.Corriganville;Cumberland,Md.;Keyser,W.Va.

Stromatopora solidula Hall and Whitfield

Stromatopora solidula.Hall and Whitfield,23d.Ann.Rep. N.Y.State Cab.Nat.Hist.,p.277,pl.9,f.4.-Branson, Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.56,pl.4,f.1;pl. 5,f.1-6,1922;Snyder Creek sh.Callaway Co.,Mo.

Genus STROMBODES

Strombodes helianthoides? Hall,See Cyathophyllum halli (Edwards and Haime)

Strombodes johanni (Hall and Whitfield)

Smithia johanni Hall and Whitfield,23d.Ann.Rep.N.Y. State Cab.Nat.Hist.,p.234,pl.9,f.10,1873.

Strombodes johanni Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.43,pl.15,f.6,7,1924;Spirifer zone.Hackberry Stage.

Strombodes johanni multiradiatus (Hall and Whitfield)

Smithia multiradiata Hall and Whitfield,23d.Ann.Rep. N.Y.State Cab.Nat.Hist.,p.234,1873.

Strombodes johanni multiradiatus Fenton and Fenton,Contr Mus.Univ.Mich.,I,p.44,pl.15,f.1,1924.Spirifer zone. Hackberry Stage.

Strombodes marginatus Fenton and Fenton

Strombodes marginatus Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.44-45,pl.15,f.2-5,1924;Spirifer zone.Hackberry Stage.Hackberry Grove,Mich.

Strombodes (?)rectus Hall,See Stereolasma rectum(Hall)

Syringopora rockfordensis Fenton and Fenton

Syringopora rockfordensis Fenton and Fenton,Contr.Mus. Univ.Mich.,I,p.70,pl.16,fll.1924;Spirifer zone. Hackberry Stage.Rockford,Mich.

Genus SYRINGOSTROMA Goldfuss

Syringostroma barretti Girty

Syringostroma barretti.Girty,48th.Rep.N.Y.State Mus.,II, p.296,pl.7,f.5,6,1895.-Parks,Univ.Toronto Studies, Geol.ser.,No.6,p.16-19,1909.

Stromatopora barretti Grabau and Shimer,N.Am.Index Foss. I,p.45,f.72,1909.

Syringostroma barretti Swartz,Md.Geol.Surv.,L.Dev., pl.28,f.3,4,1913;Helderberg form.,Keyser Member. B.& O.R.R.Cut s. of Cookerly,Md.

Syringostroma centrotum Girty

Syringostroma cenrtotum. Girty,48th.Ann.Rep.N.Y.State Mus.,II,p.293,pl.7,f.1,2,1894.-Parks,Univ. Toronto Studies,Geol.Ser.,No.6,p.12-14,1909.-Swartz,Md.Geol. Surv.,L.Dev.,p.225-227,pl.28,f.5,6ppl.30,f.2,1913; Helderberg Form.,Keyser Member.Warrior Mountain,Md.

Genus TABULOPHYLLUM Fenton and Fenton
(1924. Contr. Mus. Geol. Univ. Mich., I, p.30)

Tabulophyllum ehlersi Fenton and Fenton

(??) Camphophyllum ellipticum Whiteaves, Contr. Can. Pal., I, pt.3, p.202, pl.27, f.5,6, 1891

Chonophyllum ellipticum C.L. Fenton, Am. Jour. Sci., XLVIII, p.368,370, 1919.

Tabulophyllum ehlersi Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.34-35, pl.3, f.4; pl.6, f.13-16. Hackberry Stage

Tabulophyllum erraticum Fenton and Fenton

Tabulophyllum erraticum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.36, pl.6, f.3-7, 1924; Spirifer zone. Hackberry Stage.

Tabulophyllum exiguum Fenton and Fenton

Tabulophyllum exiguum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.37, pl.3, f.9, 1924; Spirifer zone. Hackberry Stage.

Tabulophyllum expansum Fenton and Fenton

Tabulpphyllum expansum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.39-40, pl.2, f.11,12, 1924; Owen sub-stage, Acervularia zone. Hackberry Stage.

Tabulophyllum longum Fenton and Fenton

Tabulophyllum longum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.39, pl.3, f.1, 1924; Owen Sub-stage, Acervularia zone. Hackberry Stage.

Tabulophyllum magnum Fenton and Fenton

Tabulophyllum magnum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.38, pl.3, f.2; pl.4, f.1,2, 1924; Owen sub-stage Hackberry Stage.

Tabulophyllum ponderosum Fenton and Fenton

Tabulophyllum ponderosum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.40-41, pl.14, f.4,5; pl.5, f.5,6, 1924; Spirifer zone. Hackberry Stage.

Tabulophyllum rectum Fenton and Fenton

Tabulophyllum rectum Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.31-32, pl.6, f.8-12, 1924; Spirifer zone. Hack-

berry Stage.

Tabulophyllum regulare Fenton and Fenton

Tabulophyllum regulare Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.33-34,pl.6,f.1,2,1924; Spirifer zone.Hackberry Stage.

Tabulophyllum robustum Fenton and Fenton

Tabulophyllum robustum Fenton and Fenton, Contr.Mus. Univ. Mich.,I,p.37-38,pl.5,f.1-3,1924; Spirifer zone. Hackberry Stage.

Tabulophyllum rotundum Fenton and Fenton

Tabulophyllum rotundum Fenton and Fenton, Contr.Mus. Univ. Mich.,I,p.35-36,pl.2,f.5-10,1924; Spirifer zone.Hack berry Stage.

Genus TRACHYPORA E.& H.
(1851.Edwards & Haime,Pal.Foss.,d.Terr.Pal.,p.305)

Trachyopora limbata (Eaton)

Striatopora limbata Hall?, Ill. Dev. Foss.,pl.33,

Trachyopora limbata Grabau, Buffalo Soc.Nat.Sci.,Bull.6, p.136,f.19,1899; South shore Lake Erie; Eighteen Mile Creek,N.Y.

Trachyopora oriskania Weller

Trachyoppra oriskania Weller,Pal.N.J.,III,p.341,pl.45, f.1,2,1903; Oriskany fauna. N.J.

Tubipora catenulatta Linne,See Halysites catenulatus Linne

Genus ZAPHRENTIS Rafinesque and Cliff.
(1820. An.Des.Sci.Phys.Brux.,V.p.234)

Zaphrentis sp.Kindle

Zaphrentis sp.Kindle,U.S.G.S.,Bull.391,p.15,pl.1,f.1. 1909; Ouray 1.s. Hillsboro,N.M.

Zaphrentis sp.Meek and Worthen

Zaphrentis sp.Meek and Worthen,Ill.Geol.Surv.,III,p. 410,pl.9,f.3a,b,1868; Corniferous group. W.Jonesboro, Union Co.,Ill.

Zaphrentis sp. Weller

Zaphrentis sp.Weller,Pal.N.J.,III,p.365 not fig.,1903; Onondaga l.s.N.J.

Zaphrentis sp.Weller

Zaphrentis sp.Weller,Pal.N.J.,III,p.372,not fig.,1903; Newfoundland Grit.N.J.

Zaphrentis acuticornis Greene

Zaphrentis acuticornis Greene,Contr.Pal.Ind.,I,pt.1,p. 3-4,pl.2,f.9,10,1898; Hamilton group. Near Charlestown,Ind.

Zaphrentis albacornis Greene

Zaphrentis albacornis Greene,Contr.Pal.Ind.,I,pt.18,p. 177,pl.52,f.6,7,1904;Hamilton group.Charlestown,Ind.

Zaphrentis albersi Greene

Zaphrentis albersi Greene,Contr.Pal.Ind,,I,pt.5,p.38,pl. 15,f.9-11,1900;Up.Helderberg group.Falls of the Ohio

Zaphrentis albus Greene

Zaphrentis albus Greene,Contr.Pal.Ind.,I,pt.6,p.42,pl. 16,f.11,12,1901; Up.Helderberg Group.Falls of the Ohio.

Zaphrentis alveolatus Greene

Zaphrentis alveolatus Greene,Contr.Pal.Ind.,I,pt.18,p. 178-179,pl.53,f.1,2,1904; Hamilton group. Strippings above Cement Rock,throughout Clark Co.,Ind.

Zaphrentis amplexiformis Greene

Zaphrentis amplexiformis Greene,Pal.Ind.,I;pt.10,p.86, pl.28,f.6-8,1902; Hamilton group.Near Charlestown, Ind.

Zaphrentis ampliatus Greene

Zaphrentis ampliatus Greene,Contr.Pal.Ind.,I,pt.2,pt9, pl.4,f.7,8,1899; Hamilton group.Near Charlestown, Ind.

Zaphrentis brevicornis Greene

Zaphrentis brevicornis Greene,Contr.,Pal.Ind.,I,pt.5, p.37,pl.15,f.7,8,1900;Hamilton group.Near Charlestown,Ind.

Zaphrentis caliculus Greene

Zaphrentis caliculus Greene,Contr.Pal.Ind.,I,pt.20,p. 201-202,pl.59,f.8-11,1904;Up.Helderberg group.Falls of the Ohio.

Zaphrentis callosus Greene

Zaphrentis callosus Greene,Contr.Pal.Ind.,I,pt.20,p. 198,pl.58,f.1,2,1904;Up.Helderberg group.Falls of t the Ohio.

Zaphrentis chemungensis Clarke and Swartz

Zaphrentis chemungensis Clarke and Swartz,Md.Geol.Surv Mid.& Up.Dev.,p.540,pl.45,f.3-6,1913;Jennings Form. Chemung Member.National Road on Polish Mountain,Md.

Zaphrentis comis Greene

Zaphrentis comis Greene,Comtr.,Pal.Ind.,I,pt.2,p.8,9,pl 4,f.4-6,1899;Hamilton group.Near Charlestown,Ind.

Zaphrentis cornicula Milne-Edwards and Haime,See Heliophyllum conniculum(Lesuer)

Zaphrentis cornuformis Stewart

Zaphrentis cornuformis Stewart,The Dev. of Mo.,p.221,pl 57,f.3-7,1922;Little Saline l.s.Ste.Genevieve Co., Mo.

Zaphrentis curtus Greene

Zaphrentis curtus Greene,Contr.Pal.Ind.,I,pt.6,p.42-43 pl.16,f.13,14,1901;Up.Helderberg group.Falls of the Ohio.

Zaphrentis grosbachi Greene

Zaphrentis crosbachi Greene,Contr.Pal.Ind.,I,pt.5,p.36 pl.13,f.9-12,1900;Hamilton group.Near Sellersburg,Ind.

Zaphrentis hobbsi Greene

Zaphrentis hobbsi Greene,Contr.Pal.Ind.,I,pt.2,p.23,pl 8,f.4-6,1899;Up.Helderberg group.Falls of the Ohio

Zaphrentis humilis Greene

Zaphrentis humilis Greene,Contr.Pal.Ind.,I,pt.1,p.2-3, pl.1,f.8,9,1889;Hamilton group.Near Charlestown,Ind

Zaphrentis influxus Greene

Zaphrentis inflexus Greene, Contr. Pal. Ind., I, pt. 6, p. 43, pl. 16, f. 15, 16, 1901; Up. Helderberg group. Falls of the Ohio.

Zaphrentis insolens Greene

Zaphrentis insolens Greene, Contr. Pal. Ind., I, pt. 6, p. 44-45, pl. 18, f. 1, 2, 1901; Hamilton group. Near Charlestown, Ind.

Zaphrentis intortus Greene

Zaphrentis intortus Greene, Contr. Pal. Ind., I, pt. 18, p. 179-180, pl. 53, f. 5, 6, 1904; Hamilton group. Near Charlestown, Ind.

Zaphrentis invaginatus Greene

Zaphrentis invaginatus Greene, Contr. Pal. Ind., I, pt. 18, p. 176-177, pl. 52, f. 4, 5, 1904; Hamilton group. Charlestown, Ind.

Zaphrentis ischypus Greene

Zaphrentis ischypus Greene, Contr. Pal. Ind., I, pt. 2, p. 8, pl 4, f. 1-3, 1899; Hamilton group. Near Charlestown, Ind.

Zaphrentis halli Edwards and Haime

Zaphrentis ahlli Greene, Contr. Pal. Ind., I, pt. 18, pl. 179, pl. 53, f. 3, 4, 1904; Hamilton group. Near Charlestown, Ind.

Zaphrentis keyserensis Swartz

Zaphrentis keyserensis Swartz, Md. Geol. Surv., L. Dev., p. 201 pl. 19, f. 1-4, 1913; Helderberg Form., Keyser Member, Keyser, W. Va.

Zaphrentis lamasteri Greene

Zaphrentis lamasteri Greene, Contr. Pal. Ind., I, pt. 6, p. 44, pl. 17, f. 4, 5, 1901; Hamilton group. Clark County Cement Quarries, Clark Co., Ind.

Zaphrentis limatus Greene

Zaphrentis limatus Greene, Contr. Pal. Ind., I, pt. 1, p. 4, pl. 2, f. 11, 12, 13, 1898; Hamilton group. Near Charlestown, Ind.

Zaphrentis marylandicus Clarke And Swartz

Zaphrentis marylandicus Clarke and Swartz, Md. Geol. Surv., Mid. & Up. Dev., p. 539, pl. 45, f. 1, 2, 1913; Hennings Form.,

Chemung Member. National Road on Polish Mountain, Md.

Zaphrentis nanus Greene

Zaphrentis nanus Greene, Contr. Pal. Ind., I, pt. 4, p. 32, pl. 11, f. 2-6, 1900; Hamilton group. Near Charlestown, Ind.

Zaphrentis obliquatus Greene

Zaphrentis obliquatus Greene, Contr. Pal. Ind., I, pt. 3, p. 22, pl. 8, f. 1-3, 1899; Up. Helderberg group. Falls of the Ohio.

Zaphrentis obscurus Greene

Zaphrentis obscurus Greene, Contr. Pal. Ind., I, pt. 8, p. 63-64, pl. 22, f. 8-10, 1901; Up. Helderberg group. Falls of the Ohio.

Zaphrentis prolixus Greene

Zaphrentis prolixus Greene, Contr. Pal. Ind., I, pt. 16, p. 156-157, pl. 46, f. 5, 6, 1903; Up. Helderberg group. Falls of the Ohio.

Zaphrentis pusillus Greene

Zaphrentis pusillus Greene, Contr. Pal. Ind., I, pt. 6, p. 43-44, p. 16, f. 17-19, 1901; Up. Helderberg group. Falls of the Ohio.

Zaphrentis romeri Milne-Edwards and Haime

Zaphrentis romeri. Milne-Edwards and Haime, Polypiers Foss des Terr., Pal. p. 341, 1851.-Hall, Rep. State Geol. N.Y. for 1882, pl. 1, f. 1-21, 1883; Pal. N.Y., VI, pt. 2, pl. 1, f. 11, 12, 1887.-Swartz, Md. Geol. Surv., L. Dev., p. 200, pl. 18, f. 3-7, 1913; Helderberg Form. Cumberland; Devil's Backbone, Md. Oriskany Form., Ridgely Member. Near Cumberland, Md.

Zaphrentis romeri? Weller, Pal. N.J., III, p. 270, 1903; Coeymans l.s. N.J.

Zaphrentis saliensis Stewart

Zaphrentis saliensis Stewart, The Dev. of Mo., p. 221, pl. 57, pf. 1, 2, 1922; Little Saline l.s. Ste Genevieve Co., Mo.

Zaphrentis sellersi Greene

Zaphrentis sellersi Greene, Contr. Pal. Ind., I, pt. 3, p. 21-22, pl. 7, f. 9, 10, 1899; Hamilton group. Speed's Quarry,

Clark County, Ind.

Zaphrentis simplex Hall

Zaphrentis simplex. Hall, Ill. Dev. Foss, , pl. 21-Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p. 123, f. 4, 1899; Moscow sh. N.Y.

Zaphrentis solida Hall and Whitfield, See Heliophyllum solidum (Hall and Whitfield)

Zaphrentis strigatus Greene

Zaphrentis strigatus Greene, Contr. Pal. Ind., I, pt. 18, p. 176, pl. 52, f. 1-3, 1904; Hamilton group. Near Charlestown, Ind.

Zaphrentis subcentralis Greene

Zaphrentis subcentralis Greene, Contr. Pal. Ind., I, pt. 19, p. 186, pl. 56, f. 3-5, 1904; Hamilton group. Speed's Quarry, Clark Co., Ind.

Zaphrentis trisinuatus Greene

Zaphrentis trisinuatus Greene, Contr. Pal. Ind., I, pt. 13, p. 131, pl. 37, f. 5-7, 1903; Corniferous group. Falls of the Ohio.

Zaphrentis varians Greene

Zaphrentis varians Greene, Contr. Pal. Ind., I, pt. 1, p. 3, pl. 2, f. 7, 8, 1898; Hamilton group. Near Charlestown, Ind.

Zaphrentis weberi Greene

Zaphrentis weberi Greene, Contr. Pal. Ind., I, pt. 12, p. 111-112, pl. 34, f. 7-11, 1903; Up. Helderberg Group. Falls of the Ohio.

G R A P T O L I T E S

Genus GLADIOLITES-Retiolites(Barrande). (1859.Hall,Pal.N.Y.,3,Sup.p.517-518)

Graptolithus abnormis Hall

Graptolithus abnormis Hall,Pal.N.Y.,III,p.503-504, 1859;Point Levy,Canada;Hudson River group.

Graptolithus angustifalius Hall

Graptolithus angustifalius Hall,Pal.N.Y.,III,p.515,f. 1,2,1859.Shales Hudson river gr.,near Albany,N.Y.

Graptolithus divoricatus Hall

Graptolithus divoricatus Hall,Pal.N.Y.,III,p.513-514, f.1-4,p.514,1859;Shales Hudson river gr.,Normans-kill near Albany,N.Y.

Graptolithus divergens Hall

Graptolithus divergens Hall,Pal.N,Y.,III,p.510,f.9, 1859;Shales Hudson river gr.,Canada.

Graptolithus gracilis Hall

Graptolithus gracilis Hall,Pal.N.Y.,I,p.274;Pal.N.Y. III,p.510-513,f.1-5,page 511;f.6,p.510,f.7,513, 1859;Shales Hudson river gr.,near Albany,N.Y.

Graptolithus logani Hall

Graptolithus logani Hall,Pal.N.Y.,III,p.502-503,f. 1-3,1859;bituminous shale,Point Levy opp.Quebec.

Graptolithus marcidus Hall

Graptolithus marcidus Hall,Pal.N.Y.,III,p.514-515; f.1-3,p.515,1859;Shales Hudson river gr.,near Albany,N.Y.

Graptolithus multifasciatus Hall

Graptolithus multifasciatus Hall,N.Y.Pal.,III,p.508-509,f.8;p.509,1859,Canada.

Graptolithus spinulosus Hall

Graptolithus spinulosus Hall,Pal.N.Y.,III,p.517,f.on p.517,1859;Shales Hudson river gr.near Albany,N.Y.

Graptolithus whitfieldi Hall

Graptolithus whitfieldi Hall,Pal.N.Y.,III,p.516,f.1, 1859;shales Hudson river gr.,near Albany,N.Y.

Genus PHYLLOGRAPTUS Hall
(1859.Pal.N.Y.,III,Sup.p.504-508)

Phyllograptus ilicifolius,P.angustifolius,P.similis

Phyllograptus ilicifolius,P.angustifolius,P.similis, Pal.N.Y.,III,p.506-509,f.1-3,1859;Canada.

Genus RASTRITES(Barrande)
(1859,Hall,Pal.N.Y.,III,Sup.p.521)

Rastrites barrandi Hall

Rastrites barrandi Hall,Pal.N.Y.,III,p.521-522,f.1,2, on p.522,1859;shales Hudson river gr.,near Albany, N.Y.

Retiograptus geinitzianus Hall

Retiograptus geinitzianus Hall,Pal.N.Y.,III,p.518, 1859;shales Hudson river gr.,near Albany,N.Y.

Genus THAMNOGRAPTUS Hall
(1859,Pal.N.Y.,III,Sup.p.519)

Thamnograptus capillaris Hall

Thamnograptus capillaris Hall,Pal.N.Y.,III,p.520, 1859;shales Hudson river gr.near Albany,N.Y.

Thamnograptus typus Hall

Thamnograptus typus Hall,Pal.N.Y.,III,pl519-520,f.1,p 519;f.2,p.520,1859;Shales Hudson river gr.near Albany,N.Y.

V E R M E S

Genus CORNULITES Schlòtheim 1820.
(Schlotheim Petrefactenkunde,p.378)

Cornulites cingulatus Hall

Cornulites cingilatus.Hall,Pal.N.Y.VII,p.20(Supplement to V),pl.116,f.29,1888.-Clarke,Mem.N.Y.State Mus.,3,p.27,pl.2,f.35-38,1900.-Weller,Pal.N.J.III, p.272,pl.32,f.3,1903;Coeymans l.s.,near Hainesville, N.J.-Chern,Md. Geol.Surv.,L.Dev.,p.258-259,pl.40,f. 16;1913;Helderberg.Formation,Keyser Member,Pinto,Md.

Cornulites hamiltoniae Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.150,f.32,1899;(Compare Pal.N.Y.,VI,52,f.12) Avery's Creek,N.Y.

Genus POLYGNATHUS Hinde
(Quart.Jour.Geol.Soc.,XXXV,p.361)

Polygnathus sp.Kindle,U.S.G.S.,Bull.508,p.67,pl2.f.5,1912; Md.Geol.Surv.,Mid.and Upper Dev.,p.122,pl.7,f.6,1913. Romney Formation,Onondaga Member,Tonoloway,Md.

Polygnathus crassus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.365, pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.155,f. 38,1899;Conodont bed of Genesse,N.Y.

Polygnathus cristatus.Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 366,pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 156,f.41,1899;Conodont beds of Genesse,N.Y.

Polygnathus dubius.Hinde,Quart.Jour.Geol.Soc.,XXXV,p.362, pl.16.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.153,f. 34,1899;Genesse sh.,North Evans,N.Y.

Polygnathus linguiformis,Hinde,Quart.Jour.Geol.Soc.,XXXV, p.367,pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 157,f.44,1899;Conodont bed of Genesse,N.Y.

Polygnathus nasutus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.364, pl.16.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.155,f.35, 1899;Genesse sh.,North Evans,N.Y.

Polygnathus palmatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.367, pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.157,f. 45,1899;Genesse sh.,North Evans,N.Y.

Polygnathus pennatus.Hinde,Quart.Jour.Geol.Soc.,XXXV,p.366, pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.156,f.39, 1899;Conodont bed of Genesse,N.Y.

Polygnathus princeps,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.365,

pl.16.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.155,f.36, 1899;Conodont bed of Genesse,N.Y.

Polygnathus punctatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 367,pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.157, f.43,1899;Genesse sh.,North Evans,N.Y.

Polygnathus simplex,Hinde,QuartmJour.Geol.Soc.,XXXV,p.367, pl.17,- Grabau,Buffalo Soc.Nat.Soil,Bull.6,p.157, f.46,1899;Conodont bed of Genesse,N.Y.

Polygnathus solidus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 365,pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.155, f.37,1899;Conodont bed of Genesse,N.Y.

Polygnathus truncatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 366,pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.156, f.42,1899;Conodont bed of Genesse,N.Y.

Polygnathus tuberculatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 366,pl.17.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.156, f.40,1899;Conodont bed of Genesse,N.Y.

Genus PRIONIODUS Pander 1851
(Monograph d.Foss.Fische,d.Sil.Syst.,p.28)

Prioniodus abbreviatus,Hinde,Quart.Jour.Geol.Soc,,XXXV,p. 359,pl.15.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.150,f. 33 B,1899;Conodont bed of Genesse,N.Y.

Prioniodus acicularis,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 360,pl.15,-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.151, f.33 E,1899;Genesse sh.,North Evans,N.Y.

Prioniodus alatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.361, pl.16.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.153,f. 331,1899;Conodont bed of Genesse,N.Y.

Prioniodus angulatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 360,pl.15.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.151,f. 33 D,1899;Genesse sh.,North Evans,N.Y.

Prioniodus armatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.360, pl.15,-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.152,f. 33 F,1899;Genesse sh.,North Evans,N.Y.

Prioniodus clavatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.360, pl.15,-Grabau,Buffalo Soc.Nat.Sci,,Bull.6,p.151,f. 330,1899;Conodont bed of Genesse,.N.Y.

Prioniodus erraticus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 359,pl.15.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.150, f.33 A,1899;Conodont bed of Genesse,N.Y.

Prioniodus panderi,Hinde,Quart.Jour.Geol.Soc.,XXXV,p.361, pl.16.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.152,f. 33 H,1899;Conodont Bed of Genesse,N.Y.

Prioniodus spicatus,Hinde,Quart.Jour.Geol.Soc.,XXXV,p. 361,pl.16-Grabau,Buffalo Soc.Nat.,Sci.,Bull.6,p.152, f.33 G,1899;Genesse sh.,North Evans,N.Y.

Genus PTERIDICHNITES Clarek and Swartz
(1913.Md.Geol.Surv.,Mid. & Upper Dev.,p.545)

Pteridichnites biseriatus Clarke and Swartz,Md.Geol.Surv., Mid.& Upper Dev.,p.545-546,pl.46,f.6,1913;Jennings Formation,Woodmont Member,Naples Fauna,Tonoloway,Md.

Genus SERPULA Linne

Serpula annulata Fenton and Fenton,Contrib.Mus.Geol.Univ. Mich.,I,p.199,pl.40,f.10.11;Hackberry Stage,Cumberland,Md.

Serpula omphalodes Goldfuss,See Spirorbis omphaloides (Goldfuss)

Serpula welleri Fenton and Fenton,Contr.Mus.Geol.Univ.Mich. I,p.198,pl.41,f.5,1924;Hackberry Stage,Hackberry, Mich.

Genus SPIRORBIS Lamark
1801.Syst.An.sans Vert.,p.326.
1899.Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.148-149.

Spirorbis sp.Clarke and Swartz,Md.Geol.Surv.,Mid.&Up.Dev., p.545,not figured,1913;Jennings Form.,Parkhead Member. 2 mi.n. of mouth of Town Creek,Md.

Spirorbis sp.Kindle,U.S.G.S.,Bull.391,p.15,not figured, 1909;Ouray l.s., Hillsboro,N.M.

Spirorbis angulatus,Hall,15th.Rep.N.Y.State Mus.Nat.Hist., p.84.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.149,f.30, 1899;Demissa bed and on the Lake Shore,N.Y.

Spirorbis angulosus Fenton and Fenton,Contr.Mus.Geol.Univ. Mich.,I,p.200-201,f.12,13,1924;Hackberry Stage,Mich.

Spirorbis arkonensis C.L.Fenton,See Autodetus slocomi F.& F.

Spirorbis gyrus Clarke and Swartz,Md.Geol.Surv.,Mid.& Up. Dev.,p.544-545,pl.46,f.5,1913;Jennings Form.,Chemung? Member,Sideling Hill Creek,Allegany County,Md.

Spirorbus hackberryensis Fenton and Fenton

Spirorbis omphalodes C.L.Fenton,Am.Jour.Sci.,4th.Ser., XLVIII,p.369,371,1919.

Spirorbis hackberryensis F.& F.,Contr.Mus.Geol.Mich.I, p.199-200,pl.41,f.6,1924;Hackberry Stage,Mich.

Spirorbis laxus Hall,Pal.N.Y.,III,p.349,pl.54,f.18a-e, 1859;Lower Helderberg,Schohaire,N.Y.

Spirorbis omphalodes (Goldfuss)

Serpula omphalodes Godlfuss,Petref.Germ.,I,p.235,pl.68, f.3,1833.

Spirorbis omphalodes Nicholson,Rep.Pal.Prov.Ont.,p.121, f.54a,1874

Spirorbis omphalodes Whiteaves,Cont.Can.Pal.,I,pt.3,p. 209,pl.28,f.3,4,4a,5 and 5a,1891.

Spirorbis omphalodes Cleland,Wisc.Geol.Nat.Hist.Surv., Bull.21,p.46,pl.4,f.3,3a,1911.

Spirorbis omphalodes Hinde,Zittel's Textbook of Pal., (English Edition),I, 2nd.ed.f.219,1913.

Spirorbis omphaloides Branson,Mo.Bur.Geol.& Mines,XVII, 2d.Ser.,p.57,pl.6,f.9,10,1922;Snyder Creek sh.,Mo.

E C H I N O D E R M A T A

Actinocrinites polydactylus,Schenectada Reflector,See Mariacrinus pachydactylus Hall

Actinocrinus eucharis Hall,See Gennaerocrinus Hall

Actinocrinus nyassa Hall,See Gennaeocrinus nyassa Hall

Genus ALSOPOCRINUS Tansey

Alsopocrinus anna Tansey

Alsopocrinus anna Tansey,The Dev. of Mo.,p.181,pl.44, f.4-6,1922;Bailey l.s.,Little Saline Creek,Ste Genevieve Co.,Mo.

Genus ANCYROCRINUS Hall
(15th.Rep.N.Y.State Mus.Nat.Hist.,p.89)

Ancyrocrinus bulbosus Hall

Ancyrocrinus bulbosus.Hall,15th.Rep.N.Y.State Mus.Nat. Hist.,p.90.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 147,f.28,1899;Demissa beds.New York,

Genus ANOMALOCYSTITES Hall
(1859.Pal.N.Y.,III,p.132-133)

Anomalocystites cornutus Hall

Anomalocystites cornutus Hall,Pal.N.Y.,III,p.133,pl. 7A,f.5-7,1859;Pentamerus l.s.,L.Helderberg group. Litchfield,Herkimer Co.,N.Y.

Anomalocystites disparilis Hall

Anomalocystites disparilis.Hall,Pal.N.Y.,III,p.145,pl. 88,f.1-4,1859.-Woodward,Geol.Mag.dec.2,VII,p.193, pl.6,f.2,3,1880.

Anomalocystites (?) disparilis.Schuchert,Smit.Misc., Coll.,XLVII,pt.2,p.207,text fig.22,1904;Md.Geol. Surv.,L.Dev.,p.228-229,pl.32,f.1-3,1913;Oriskany Form.,Ridgley Member,Cumberland,Md.

Genus AOROCRINUS Wachsmuth and Springer.

Aorocrinus cassedayi "Lyon.Rowley"

Aorocrinus cassedayi Green,Pal.Ind.I,pt.8,p.65,pl. 23,f.4,5,1901;Hamilton Group.Charlestown,Ind.:Pal.

Ind.,I,pt.11,p.108,pl.33,f.13,14,15,1903;Upper Dev.near Charlestown,Ind.;Pal.Ind.,I,pt.11,p.101-102,pl.32,f.7-9,1903;Upper Dev.near Charlestown, Ind.

Aorocrinus cassedayi var charlestownensis "n.var.(Rowley)"

Aorocrinus cassedayi var charlestownensis Greene,Contr Pal.Ind.,I,pt.8,p.65,pl.23,f.6,1901;Contr.Pal.Ind., I,pt.14,p.142,pl.41,f.8-13,1903;Upper Dev.near Charlestown,Ind.

Aorocrinus depressus "n.sp.(Rowley)"

Aorocrinus depressus Greene,Contr.Pal.Ind.,I,pt.8,p. 65-66,pl.23,f.7,1901;Hamilton Group near Charlestown,Ind.

Apiocystites gebhardii Jaekel,See Leptocrinites gebhardii Conrad.

Genus ARACHNOCRINUS Meek & Worthen.

Arachnocrinus extensus "W & Sp.,Rowley"

Arachnocrinus extensus Greene,Contr.Pal.Ind.,I,pt.13, p.180-181,pl.54,f.1,1904;Upper Helderberg Gr.,Falls of the Ohio.

Aristocrinus concavus Greger,See Dactylocrinus concavus (Rowley)

Aristocrinus concavus Keyes,See Dactylocrinus concavus (Rowley)

Aristocrinus concavus Rowley,See Dactylocrinus concavus (Rowley)

Genus ASPIDOCRINUS Hall
(1859.Pal.N.Y.,III,p.122)

Aspidocrinus callosus Hall

Aspidocrinus callosus Hall,Pal.N.Y.,III,p.123,pl.5, f.13,14,1859;L.Helderberg Gr.,Schoharie,N.Y.

Aspidocrinus digitatus Hall

Aspidocrinus digitatus Hall,Pal.N.Y.,III,p.123,pl.5, f.19-20,1859;L.Helderberg Gr.,Schorarie,N.Y.

Aspidocrinus scutelliformis Hall

Aspidocrinus scutelliformis Hall,Pal.N.Y.,III,p.122,

pl.5,f.15-18;L.Helderberg Gr.,Schoharie,N.Y. 1859.

Astrocrinites pachydactylus Conrad,See Mariacrinus pachydactylus Hall

Astrocrinites pachydactylus Mather,See Mariacrinus pachydactylus Hall.

Genus BOTRYOCRINUS Angelin

Botryocrinus americanus "n.sp.(Rowley)"

Botryocrinus americanus Greene,Contr.Pal.Ind.,I,pt.18, p.184,pl.54,f.12-14,1904;Hamilton Gr.near Charlestown,Ind.

Genus BRACHIOCRINUS Hall
(1859.Pal.N.Y.,III,p.118)

Brachiocrinus nodosarius Hall

Brachiocrinus nodosarius Hall,Pal.N.Y.,III,p.118,pl. 5,f.5-7,pl.6,f.1-3,1859.L.Helderberg Gr.,Schoharie N.Y.

Genus CALCEOCRINUS

Calceocrinus marylandicus Ohern

Calceocrinus marylandicus Ohern,Md.Geol.Surv.,L.Dev., p.253-254,pl.40,f.1-3,1913;Oriskany Form.,Ridgley Member,Quarry opposite Keyser,W.Va.

Genus CAMAROCRINUS Conrad (emended Hyatt)

Camarocrinus stellatus Hall

Camarocrinus stellatus.Hall,28th.N.Y.State Mus.Nat. Hist.,Mus,ed.,p.207,pl.35,f.1-8;Extract,40,1880,p. 5,pl.35,f.1-8;pl.44,f.1-5,1879;-Schuchert,Smith. Misc.Coll.,XLVII,pt.2,No.1482,p.269-270,1904;Md. Geol.Surv.,M.Dev.,p.227-228,pl.31,f.1-5,1913;Helder -berg Form.,Keyser Member,W.Va.;Devil's Backbone,Md

Genus CODASTER McCoy

Codaster sp? Greene

Codaster sp.? Greene,Contr.Pal.Ind.,I,pt.10,p.95-96, pl.30,f.26,27,1902;Upper Dev.,Charlestown,Ind.

Codaster attenuatus "Lyon,Rowley"

Codaster attenuatus Greene,Contr.Pal.Ind.,I,pt.10, p.95,pl.30,f.20,21,1902;Falls of the Ohio;Contr. Pal.Ind.,I,pt.12,p.128,pl.36,f.50,51,1903;Columbus,Ohio.

Codaster attenuatus? Greene,Contr.Pal.Ind.,I,pt.10, p.94,pl.30,f.14,15,1902;Upper Helderberg Gr.,Falls of the Ohio.

Codaster attenuatus var.rombustus "n.var (Rowley)"

Codaster attenuatus var rombustus Greene,Contr.Pal. Ind.,I,p.94,pl.30,f.12,13,16,17,1902;Upper Dev., Cement Quarry,Clark Co.,Ind.

Codaster pyramidatus "Shumard,Rowley"

Codaster pyramidatus Greene,Contr.Pal.Ind.,I,pt.10, p.95,pl.30,f.18,19,22-25,1902;Mid. Dev.,Columbus, Ohio.

Genus CORONOCRINUS Hall
(1859,Pal.N.Y.,IIK,p.124)

Coronocrinus polydactylus Hall

Coronocrinus polydactylus Hall,Pal.N.Y.III,p.124,pl.6, f.4-6,1859;L.Helderberg Group.Schoharie,N.Y.

Genus DACTYLOCRINUS

Dactylocrinus concavus (Rowley)

Taxocrinus concavus Rowley,Am.Geol.,XII,p.304-305,pl. 14,f.2,1893;Am.Geol.,XIII,p.153-154,f.3,9,1894.

Aristocrinus concavus.Rowley,Am.Geol.,XVI,p.217-219,f 1,2,1895.-Keyes,Bull.Geol.Soc.Am.,XIII,p.285,1902; Greger,Am.Jour.Sci.,XXVII,p.376,1909.

Dactylocrinus concavus.Springer,The Crinoid Felxibilia,Smith.Inst.,p.309-310,pl.41,f.7a-c,8a-c,9,1920.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.67,pl.7, f.4,5,1922;Snyder Creek sh.,Mo.

Genus DOLATOCRINUS Lyon

Dolatocrinus sp.?Greene

Dolatocrinus sp.? Greene,Contr.Pal.Ind.,I,pt.11,p.102 pl.32,f.10-12,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus amplus "M & G.,Rowley"

Dolatocrinus amplus ? Greene,Contr.Pal.Ind.,I,pt.15,

p.154-155,pl.45,f.10-12,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus aplatus "M & G.,Rowley"

Dolatocrinus aplatus Greene,Contr.Pal.Ind.,I,pt.13, p.136,pl.39,f.6-8,1903;Up.Dev.,near Charlestown, Ind.

Dolatocrinus arrosus "M & G.,Rowley"

Dolatocrinus arrosus? Greene,Contr.Pal.Ind.,I,pt.13, p.132-133,pl.38,f.9,10,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus arrosus var cognatus "n.var,(Rowley)"

Dolatocrinus arrosus var cognatus Greene,Contr.Pal. Ind.,I,pt.13,p.137,pl.39,f.12-14,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus aspratilis "M & G,.Rowley"

Dolatocrinus aspatilis Greene,Contr.Pal.Ind.,I,pt.11, p.1-2-103,pl.32,f.16-18,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus caelatus " M & G.,Rowley"

Dolatocrinus caelatus Greene,Contr.Pal.Ind.,I,pt.16, p.165,pl.48,f.10-12,1903;Up.Dev.,Speed's Quarry, Clark Co.,Ind.

Dolatocrinus charlestownensis "M & G.,Rowley"

Dolatocrinus charlestownensis Greene,Contr.Pal.Ind.,I, pt.15,p.153-154,pl.45,f.7-9,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus corbuliformis "n.sp.(Rowley)"

Dolatocrinus corbuliformis Greene,Contr.Pal.Ind.,I,pt. 15,p.151,pl.44,f.13-15,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus corporosus " M&G.,Rowley"

Dolatocrinus corporosus Greene,Contr.Pal.Ind.,I,pt.16, p.156-157,pl.47,f.1-3,1903;Up.Dev.,Speed's Quarry, Clarke Co.,Ind.

Dolatocrinus corporosus var concinnus "n.var.(Rowley)"

Dolatocrinus corporosus var concinnus Greene,Contr.

Pal. Ind., I, pt. 15, p. 148-149, pl. 44, f. 4-6, 1903; Up. Dev., near Charlestonw, Indiana.

Dolatocrinus corporosus var decoratus "n.var.(Rowley)"

Dolatocrinus corporosus var decoratus Greene, Contr. Pal. Ind., I, pt. 15, p. 149-150, pl. 44, f. 7-9, 1903; Up. Dev., near Charlestown, Indiana.

Dolatocrinus curriei "n. sp., (Rowley)"

Dolatocrinus curriei Greene, Contr. Pal. Ind., I, pt. 14, p. 143-144, pl. 42, f. 1-6, 1903; Mid. Dev., Fallssof the Ohio

Dolatocrinus depressus (S.A. Miller)

Dolatocrinus depressus Greene, Contr. Pal. Ind., I, pt. 1, p. 6-7, pl. 2, f. 4-6, 1898; Hamilton Gr., near Charlestown Ind.

Dolatocrinus elegantulus "n. sp. (Rowley)"

Dolatocrinus elegantulus Greene, Contr. Pal. Ind., I, pt. 15, p. 150-151, pl. 44, f. 10-12, 1903; Up. Dev., near Charlestown, Ind.

Dolatocrinus excavatus "W & S., Rowley"

Dolatocrinus excavatus Greene, Contr. Pal. Ind., I, pt. 13, p. 134-135, pl. 39, f. 4, 1903; Mid. Dev., Falls of the Ohio

Dolatocrinus excavatus? Greene, Contr. Pal. Ind., I, pt. 14, p. 145, pl. 42, f. 7, 1903; Mid. Dev., Falls of the Ohio; Contr. Pal. Ind., I, pt. 19, p. 191-192, pl. 57, f. 16-18, 1904; Upper Helderberg Group, Falls of the Ohio.

Dolatocrinus excavatus var incarinatus "n.var.(Rowley)"

Dolatocrinus excavatus var incarinatus Greene, Contr. Pal. Ind., I, pt. 12, p. 112-113, pl. 35, f. 1-3, 1903; Mid. Dev., Thompson's Bend, on Silver Creek, Clark Co., Ind

Dolatocrinus fungiferus "n. sp. (Rowley)"

Dolatocrinus fungiferns Greene, Contr. Pal. Ind. I, pt. 13, p. 134, pl. 39, f. 1-3, 1903; Mid. Dev., Falls of the Ohio.

Dolatocrinus greeni " M & G., Rowley"

Dolatocrinus greeni Greene, Contr. Pal. Ind., I, pt. 16, p. 158-159, pl. 47, f. 4, 5, 6, 25, 1903; Up. Dev., near Charlestown, Ind.

Dolatocrinus marshi "Lyon, Rowley"

Dolatocrinus marshi Greene,Contr.Pal.Ind.,I,pt.16,p. 159-160,pl.47,f.7,8,1903;Mid.Dev.,Falls of the Ohio.

Dolatocrinus multibranchiatus "n.sp.,(Rowley)"

Dolatocrinus multibranchiatus Greene,Contr.Pal.Ind.,I, pt.14,p.141,pl.41,f.7,1903;Mid.Dev.,Falls of the Ohio.

Dolatocrinus multinodosus "n.sp.,(Rowley)"

Dolatocrinus multinodosus Greene,Contr.Pal.Ind.,I,pt. 15,p.147-148,pl.44,f.1-3,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus nodosus " M & G.,Rowley"

Dolatocrinus nodosus Greene,Contr.Pal.Ind.,I,pt.16,p. 163-164,pl.48,f.1-3,1903;Up.Dev.,near Charlestown, Ind.

Dolatocrinus noduliferus "n.sp.,(Rowley)"

Dolatocrinus noduliferus Greene,Contr.Pal.Ind.,I,pt. 14,p.140,pl.41,f.1-3,1903;Up.Dev.,near Charlestown, Ind.

Dolatocrinus pernodosus "n.sp.,(Rowley)"

Dolatocrinus pernodosus Greene,Contr.Pal.Ind.,I,pt.12, p.113-114,pl.35,f.4-6,1903;Up.Dev.,near Charlestown Ind.

Dolatocrinus preciosus " M & G.,Rowley"

Dolatocrinus preciosus Greene,Contr.Pal.Ind.,I,pt.15, p.152-153,pl.45,f.1-3,p.153,pl.45,f.4-6,1903;Up.Dev near Charlestown,Indiana.

Dolatocrinus pulchellus " M & G.,Rowley"

Dolatocrinus pulchellus Greene,Contr.Pal.Ind.,I,pt.11, p.109,pl.33,f.16-18,1903;Up.Dev.,near Charlestown, Ind.

Dolatocrinus springeri "n.sp.,(Rowley)"

Dolatocrinus springeri Greene,Contr.Pal.Ind.,I,pt.13, p.136-137,pl.39,f.9-11,1903;Up.Dev.,near Charlestown,Ind.

Dolatocrinus spinosus " M & G.,Rowley"

Dolatocrinus spinosus Greene,Contr.Pal.Ind.,I,pt.16, p.164,pl.48,f.4,1903;Mid.Dev.,Falls of the Ohio.

Dolatocrinus venustus " M & G,,Rowley"

Dolatocrinus venustus Greene,Contr.Pal.Ind.,I,pt.16, p.160,pl.47,f.9,10,1903;Up.Dev.,Speed's Quarry, Clark Co.,Ind.

Dolatocrinus welleri "n.sp.,(Rowley)"

Dolatocrinus welleri Greene,Contr.Pal.Ind.,I,pt.14, p.143,pl.41,f.14,1903;Up.Dev.,Falls of the Ohio

Genus EDRIOCRINUS Hall
(1859.Pal.N.Y.,III,p.119)

Edriocrinus ? sp. Tansey

Edriocrinus ? sp. Tansey,The Dev. of Mo.,p.181,pl.44, f.1-3,1922;Bailey l.s., Little Saline Creek,Ste Genevieve Co.,Mo.

Edriocrinus pocilliformis Hall

Edriocrinus pocilliformis.Hall,Pal.N.Y.,III,p.131,pl. 5,f.8-12,1861;L.Helderberg Gr.,Helderberg Mountains Albany Co.,N.Y.-Meek &Worthe,Geol.Surv.Ill.III,p. 370,pl.7,f.5a,b,1868.-Keyes,Mo.Geol.Surv.,IV,pt.1, p.221,pl.30,f.7,1894.-Talbot,Am.Jour.Sci.,4th.ser. XX,p.23,pl.4,f.1-6,1905;-Ohern,Md.Geol.Surv.,L.Dev. p.257-258,pl.40,f.13-15,1913;Helderberg Form.,New Scotland Member.Cumberland,Md.;Cherry Run,W.Va.

Edriocrinus sacculus Hall

Edriocrinus sacculus.Hall,Pal.N.Y.,III,p.143,pl.87,f. 1-22,1861;Oriskany s.s.,Cumberland,Md.-Weller,Pal. N.J.,III,p.342,pl.45,f.3-5,1903;Mid.& Up.Dev.Oriskany Fauna,N.J.-Ohern,Md.Geol.Surv.,L.Dev.,p.256-257,pl.40,f.7-12,1913;Oriskany Form.,Ridgely Member Cumberland,Md.;Franklin,W.Va.,-Stewart,The Dev. of Mo.,p.223,pl.57,f.11,1922; Little Saline Creek l.s. Ste Genevieve Co.,Mo.

Elaeacrinus verenuili Bronn,See Nucleocrinus verneuili (Troost)

Elaeacrinus verneuili Dujardin & Hupe,See Nucleocrinus verneuili (Troost)

Elaeacrinus verneuili E.& C.,See Nucleocrinus verneuili (Troost)

Elaeacrinus verneuili Grabau & Shimer, See Nucleocrinus verneuili (Troost)

Elaeacrinus verneuili Roemer, See Nucleocrinus verneuili (Troost)

Elaeacrinus verneuili Shumard, See Nucleocrinus verneuili (Troost)

Eleutherocrinus cassedayi "Shumard & Yandell, Rowley"

Eleutherocrinus cassedayi Greene, Contr. Pal. Ind., I, pt. 10, p. 91, pl. 30, f. 1-4, 1902; Contr. Pal. Ind., I, pt. 16, p. 161, pl. 47, f. 17-20, 1903; Up. Dev., near Charlestown, Ind.

Forbesiocrinus nuntius Hall, See Taxocrinus nuntius Hall

Genus GENNAEOCRINUS W & S.
(1882. Proc. Acad. Nat. Sci., p. 334)

Gennaeocrinus comptus "n. sp. (Rowley)"

Gennaeocrinus comptus Greene, Contr. Pal. Ind., I, pt. 11, p. 105-107, pl. 33, f. 1-3, 1903; Up. Dev., near Charlestown, Ind.

Gennaeocrinus comptus var spiniferus "n. var (Rowley)"

Gennaeocrinus comptus var spiniferus Greene, Contr. Pal. Ind., I, pt. 11, p. 1-7-108, pl. 33, f. 7-9, 1903; Up. Dev., near Charlestown, Indiana.

Gennaeocrinus eucharis Hall

Actinocrinus eucharis Hall, 15th. Rep. N. Y. State Cab. Nat. Hist., p. 130.

Gennaeocrinus eucharis Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p. 142, f. 24e-g, 1899; Demissa beds, N. Y.

Gennaeocrinus facetus "n. sp. (Rowley)"

Gennaeocrinus facetus Greene, Cintr. Pal. Ind., I, pt. 11, p. 99-101, pl. 32, f. 1-6, 1903; Up. Dev., near Charlestown Ind.

Gennaeocrinus kentuckiensis "Shumard? Rowley"

Gennaeocrinus kentuckiensis? Greene, Contr. Pal. Ind., I, pt. 11, p. 108, pl. 33, f. 10-12, 1903; Up. Dev., Falls of the Ohio.

Gennaeocrinus nyassa Hall

Actinocrinus nyassa Hall,15th.Rep.N.Y.State Cab.Nat. Hist.,p.139,1862.

Gennaeocrinus nyassa Grabau,Buffalo Soc.Nat.Sci.,Bubl 6,p.141,f.23a-d,1899;Demissa beds.N.Y.

Gennaeocrinus sculptus "n.sp.,(Rowley)"

Gennaeocrinus sculptus Greene,Contr.Pal.Ind.,I,pt.11,p 107,pl.33,f.4-6,1903;Up.Dev.,near Charlestown,Ind.

Gennaeocrinus simulans" n.sp.,(Rowley)"

Gennaeocrinus simulans Greene,Contr.Pal.Ind.,I,pt.18, p.183-184,pl54.f.9-11,1904;Hamilton Gr.,Charlestown Ind.

Genus HABROCRINUS D'Orbigny

Habrocrinus pentadactylus Grabau

Habrocrinus pentadactylus Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.143,f.25,1899;Moscow shale N.Y.

Hadrocrinus plenissimus "Lyon,Rowley"

Hadrocrinus plenissimus Greene,Contr.Pal.Ind.I,pt.16, p.165,pl.48,f.5,6,1903;Mid.Dev.,Falls of the Ohio.

Hexacrinus humei Springer

Hexacrinus humei Springer,Can.Geol.Surv.,Sec.,45,p.132 pl. 24,f.18,19,1926;Up.Dev.,Root River,N.W.Terr., Canada.

Genus HOMOCRINUS Hall
(1852.Pal.N.Y.,II,p.185)
(1859.Pal.N.Y.,III,p.102)

Homocrinus hartleyi Ohern

Homocrinus hartleyi Ohern,Md.Geol.Surv.,L.Dev.,p.255-256,pl.40,f.6,1913;Oriskany Form.,Ridgely Member, Cumb.,Md.

Homocrinus proboscidalis Hall

Homocrinus proboscidalis.Hall,Pal.N.Y.,III,p.138,pl. 84,f.24,25,1861;Oriskany s.s.,Cumberland,Md.-Ohern Md.Geol.Surv.,L.Dev.,p.255,pl.40,f.4,5,1913;Oriskany Form.,Ridgely Member.,Cumberland,Md.

Homocrinus scoparius Hall

Homocrinus scoparius Hall,Pal.N.Y.,III,p.102,pl.1,f.1.

1859;Helderberg and Schoharie,Litchfield,Herkimer Co.,N.Y.

Icthyocrinus magnardialis Weller

Icthyocrinus magnardialis Weller,Pal.N.J.,III,p.299, pl.33,f.5,1903;New Scotland-Becraft Fauna,N.J.

Genus JAEKELOCYSTIS Schuchert

Jaekelocystis avellana Schuchert

Jaekelocystis avellana Schuchert,Smith.Misc.Coll.XLVII pt.2,No.1482,p.226,pl.37,f.11,12,text fig.28,1904; Md.Geol.Surv.,L.Dev.,p.235,pl.33,f.3,4,1913;Helderberg Form.,Keyser Member,Keyser,W.Va.

Jaekelocystis hartleyi Schuchert

Jaekelocystis hartleyi Schuchert,Am.Geol.XXXII,p.231, 1903;Smith.Misc.Coll.,XLVII,pt.2,No.1482,p.224-225,pl.37,f.4-8,text fig.27,1904;Md.Geol.Surv.,L. Dev.,p.233-234,pl.32,f.12-16,1913;Helderberg Form., Keyser Member.Keyser,West Virginia.

Jaekelocystis papillata Schuchert

Jaekelocystis papillata Schuchert,Smith.Misc.,Coll., XLVII,pt.2,No.1482,p.225,pl.37,f.9,10,1904;Md.Geol Surv.,L.Dev.,p.234-235,pl.33,f.1,2,1913;Helderberg Form.,Keyser Member,Keyser,W.Va.

Lepadocrinus gebhardi Conrad,See Lepocrinites gebhardii Conrad.

Lepadocrinus gebhardi Hoeckel,See Lepocrinites gebhardii Conrad.

Genus LEPOCRINITES Conrad

Lepocrinites gebhardii Conrad

Lepocrinites gebhardii.Conrad.4th.Ann.Rep.N.Y.Geol. Surv.,p.207,1840.-Vanuxem,Rep.3d.Dist.N.Y.Geol.Surv p.117,text fig.4,1842.-Mather,Rep.1st.Dist.N.Y. Geol.Surv.,p.346,text fig.4,1843.-Owen,Am.Jour.Sci. 2d.ser.,p.49,f.4,1846.

Lepocrinites gebhardi Hall,Rep.4th.Dist.N.Y.Geol.Surv. tab.ill.27,f.4,1843.

Lepadocrinus gebhardii Hall,Pal.N.Y.,III,p.127,pl.7, f.1-20,1861;L.Helderberg Group,Helderberg mountains

Schoharie,N.Y.,Cumberland,Md.

Lepocrinites gebhardi.Lincklaen,14th.Rep.N.Y.State Cab Nat.Hist.,p.58,pl.9,f.11,1861.

Lepadocrinus gebhardi Haeckel,Die Amphorideen und Cystoideen,Beitr.Morph.u.Phyl.d.Echinodermen,p.135 1896.

Apiocystites gebhardii Jaekel.Stammesgeschichte der Pelmatozoen,I,pt.282,f.59 on p.280.1899.

Lepocrinites gebhardii Schuchert,Smith.Misc.,Coll., XLVII,pt.2,p.215,1904;Md.Geol.Surv.,L.Dev.,p.229-231,pl.32,f.4-7,1913;Helderberg Form.,Coeymans Member,Md.

Lepocrinites manlius Schuchert

Lepocrinites manlius Schuchert,Smith.Misc.Coll., XLVII,pt.2,No.1482,p.214,215,pl.37,f.2,3,pl.39, f.15,16,text fig.23,1904;Md.Geol.Surv.,L.Dev.,p. 231,pl.32,f.8,9,pl.35,f.15,16,1913;Helderberg Form. Keyser Member.Keyser W.Va.

Genus MARIACRINUS Hall
(1859.Pal.N.Y.,III,p.104)

(1840-1841.Astrocrinites Conrad,In catalogue,Ann.Geol.Rep)

1839.not Astrocrinites of Cumberland

1843.not Astrocrinites of Austin

1831.not Asterocrinus Munster.

Mariacrinus (Technocrinus)andrewsi Hall

Mariacrinus (Technocrinus) andrewsi,See Technocrinus andrewsi (Hall)

Mariacrinus macropetalus Hall

Mariacrinus macropetalus Hall,Pal.N.Y.,III,p.111,pl. 3A,f.k,10,11,12,;pl.3B,f1,2,1861;L.Helderberg Gr., Schoharie,N.Y.

Mariacrinus nobilissimus Hall

Mariacrinus nobilissimus Hall,N.Y.,III,p.105,pl.2,f.1-4;pl.2A,f.1,1861;Pentamerus l.s.,Wheelock's Hill, Litchfield,Herkimer Co.,N.Y.

Mariacrinus pachydactylus Hall

Actinocrinites polydactylus Schenectada Reflector, 1835.

Astrocrinites pachydactylus Conrad,in Catalogue,Ann. Rep.Pal.N.Y.,p.34,1841.

Astrocrinites pachydactylus Mather,Geol.Rep.p.246, 1843.

Mariacrinus pachydactylus Hall,Pal.N.Y.,III,p.107,pl. 3,f.1-4A,1861;L.Helderberg Gr.,Schoharie,N.Y.

Mariacrinus paucidactylus Hall

Mariacrinus paucidactylus Hall,Pal.N.Y.,III,p.109,pl. 3,f.5,1861;L.Helderberg Gr.,Litchfield,Herkimer Co., N.Y.

Mariacrinus plumosus Hall

Mariacrinus plumosus Hall,Pal.N.Y.,III,p.110,pl.3.f. 6-11,1861;Pentamerus l.s.,Wheelock's Hill,Litchfield N.Y.

Mariacrinus ramosus Hall

Mariacrinus ramosus Hall,Pal.N.Y.,III,p.147,pl.2,f.2,3, 1861;Pentamerus l.s.,Wheelock's Hill,Litchfield,N.Y.

Mariacrinus (Technocrinus)sculptus Hall,See Technocrinus sculptus (Hall)

Mariacrinus (Technocrinus) spinulosus Hall,See Technocrinus spinulosus(Hall)

Mariacrinus (Technocrinus)striatus Hall,See Technocrinus striatus (Hall)

Genus MEGISTOCRINUS Branson & Wilson
(1922.Dev.Mo.,XVII,2d.ser.,p.61)
Genus MEGISTOCRINUS Owen & Shumard
(1922.Dev.Mo.,XVII,2d.ser.,p.64-65)

Megistocrinus broadheadii Branson

Megistocrinus broadheadii Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser,,p.65,pl.8,f.5-8,1922;Mineola l.s.,4 miles s.Montgomery Co.,Mo.Maybe Calloway Form.

Megistocrinus circulus "n.sp.(Rowley)"

Megistocrinus circulus Greene,Contr.Pal.Ind.,I,pt.8,p. 72-73,pl.24,f.8,9,10,1901;Up.Dev.,near Charlestown, Ind.

Megistocrinus circulus Rowley

Megistocrinus circulus ? Greene,Contr.Pal.Ind.,I,pt. 18,p.181,pl.54,f.2-4,1904;Hamilton Gr.,near slate cut,Clark Co.,Ind.

Megistocrinus corniger "Rowley"

Megistocrinus corniger Greene,Contr.Pal.Ind.,I,pt.8, p.71,pl.24,f.1-4,1901;Pal.Ind.,I,pt.14,p.145,pl.42 f.8,10,11,12,1903;Up.Dev.,near Charlestown,Ind.

Megistocrinus expansus "Miller and Gurley,Rowley"

Megistocrinus expansus Greene,Contr.Pal.Ind.,I,pt.8,p. 74,pl.24,f.14,15,16,1901;Up.Dev.,near Charlestown, Ind.;Contr. Pal.In.d,I,pt.16,p.160,pl.47,f.11-13; p.166,pl.48,f.7-9,13-15,1903;Up.Dev.,Clark Co.,Ind.

Megistocrinus expansus var inflatus "n.var (Rowley)"

Megistocrinus expansus var inflatus Greene,Contr.Pal. Ind.,I,pt.8,p.72,pl.24,f.5-7,1901;Up.Dev.,near Charlestown,Indiana.

Megistocrinus expansus var magniventrus "n.var.(Rowley)"

Megistocrinus expansus var magniventrus Greene,Contr. Pal.Ind.,I,pt.11,p.103,pl.32,f.19-21,1903;Contr. Pal.Ind.,I,pt.14,p.141,pl.41,f.4-6,1903;Up.Dev., near Charlestown,Indiana

Megistocrinus hemisphericus "M & G.,Rowley"

Megistocrinus hemisphericus Greene,Contr.Pal.Ind.,I, pt.14,p.145,pl.42,f.9,1903;Up.Dev.,near Charlestown,Ind.

Megistocrinus mineolaensis Branson

Megistocrinus mineolaensis Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.66,pl.6,f.2-4,1922;Mineola of Rolls Co.,Mo.

Megistocrinus missouriensis Branson

Megistocrinus missouriensis Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.66,pl.6,f.1;pl.8,f.1,2,1922;Mineola l.s.,Mo.

Megistocrinus oppelti "n.sp.,(Rowley)"

Megistocrinus oppelti Greene,Contr.Pal.Ind.,I,pt.13, p.135,pl.39,f.5,1903;Mid.Dev.,Falls of the Ohio.

Megistocrinus rugosus "L.& C.,Rowley"

Megistocrinus rugosus Greene,Contr.Pal.Ind.,I,pt.13, p.131-132,pl.38,f.1-6,11,1903;Up.Dev.,Falls of the Ohio.

Megistocrinus rugosus var spinuliferus "(Rowley)"

Megistocrinus rugosus Var spinuliferus Greene,Contr. Pal.Ind.,I,pt.11,p.102,pl.32,f.13-15,1903;Up.Dev., near Charlestown,Ind.

Megistocrinus spinulosus "Lyon,Rowley"

Megistocrinus spinulosus Greene,Contr.Pal.Ind.,I,pt. 18,pl.182,pl.54,f.5,6,1904;Up.Helderberg Gr.,Falls of the Ohio.

Megistocrinus unicornis "n.sp.,(Rowley)"

Megistocrinus unicornis Greene,Contr.Pal.Ind.,I,pt.8, p.73,pl.24,f.11,12,13,1901;Up.Dev.,near Charlestown Ind.

Genus MELOCRINUS Goldfuss

Melocrinus calvini W. & Sp.,See Melocrinus gregeri Rowley

Melocrinus gregeri Rowley

Melocrinus gregeri.Rowley,Am.Geol.,XII,p.303-304,pl. 14,f.1,1893.-Greger,Am.Jour.Sci,XXVII,p.376,1909.- Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.59,pl. 7,f.11,12,1922;Snyder Creek Shale,Calloway Co.,Mo.

Melocrinus calvini W & Sp.,Harv.Mus.Comp.Zool.Mem., XX,p.300,pl.22,f.6,1897.

Melocrinus kindlei Springer.

Melocrinus kindlei Springer,Can.Geol.Surv.,sec.45,p. 130-131,pl.24,f.1-9,1926;Up.Dev.,Root River about 40 mi.above its influence with the MacKenzie,N.W. Terr.,Canada.

Melocrinus lylii Greger,See Melocrinus lylii Rowley

Melocrinus lylii Rowley

Melocrinus lylii.Rowley,Am.Geol.,XIII,p.152,f.2,1894.- Greger,Am.Jour.Sci.,XXVII,p.376,1909.-Branson,Mo. Bur.Geol. & Mines,XVII,2d.ser.,p.59,pl.6,f.7-8, 1922;Snyder Creek sh.,Calloway Co.,Mo.

Melocrinus mackenzie Springer

Melocrinus mackenzie Springer, Can. Geol. Surv., Sec. 45, p. 131, pl. 24, f. 10-13, 1926; Up. Dev., Root River about 40 mi. above its influence with the MacKenzie, N.W. Terr., Canada.

Melocrinus tersus Greger, See Melocrinus tersus Rowley.

Melocrinus tersus Rowley

Melocrinus tersus. Rowley, Am. Geol., XIII, p. 151-152, f. 1, 1894.-Greger, Am. Jour. Sci., XXVII, p. 378, 1909.-Branson Mo. Bur. Geol. & Mines, XVII, 2d. ser., p. 60, pl. 7, f. 9, 10, 1922; Snyder Creek Sh., Calloway Co., Mo.

Melocrinus whittakeri Springer

Melocrinus whittakeri Springer, Can. Geol. Surv., Sec. 45, p. 131-132, pl. 24, f. 14-17, 1936; Up. Dev., Trout River, about 15 mi. above its influence with MacKenzie, N.W. Terr., Can.

Genus NORTONECHINUS Thomas

Nortonechinus primus Fenton and Fenton

Nortonechinus primus Fenton & Fenton, Am. Mid. Nat., VIII, p. 220, f. 1-8, 1923; Contr. Mis. Geol. Univ. Mich, I, p. 203-204, pl. 40, f. 1-9; pl. 41, f. 1, 1924; Hackberry Stage, Mich.

Nortonechinus welleri, Thomas, Echinoderms of Lime Creek Beds of Iowa, Nov. 1923; Ia. Geol. Surv., XXIX, p. 483, pl. 47, f. 1-7, pl. 48, f. 1-6, 8-23, Districuted Feb. 27, 1924.

Nortonechinus welleri Thomas, See Nortonechinus welleri F & F.

Genus NUCLEOCRINUS Conrad

Nucleocrinus angularis "Lyon, Rowley"

Nucleocrinus angularis Greene, Contr. Pal. Ind., I, pt. 9, p. 82, pl. 27, f. 1-4, 1902; Up. Dev., near Charlestown, Ind.; Contr. Pal. Ind., I, pt. 19, p. 190, pl. 57, f. 12, 1904; Hamilton Gr., Speed's Quarry, Clark Co., Ind.

Nucleocrinus cucullatus Greene

Nucleocrinus cucullatus Greene, Contr. Pal. Ind., I, pt. 9, p. 77, pl. 26, f. 1, 2, 1902; Mid. Dev., Falls of the Ohio.

Nucleocrinus greenei "M & G., Rowley"

Nucleocrinus greenei Greene, Contr. Pal. Ind., I, pt. 12, p.

129,pl.36,f.57,1903;Up.Dev.,near Charlestown,Ind.; Contr.Pal.Ind.,I,pt.9,p.83,pl.27,f.12-15,1902;Up. Dev.near Charlestown,Ind.

Nucleocrinus imitator "n.sp. (Rowley)"

Nucleocrinus imitator Greene,Contr.Pal.Ind.,I,pt.9,p. 84,pl.27,f.24-28,1902;Up.Dev.,near Charlestown,Ind.; Contr.Pal.Ind.,I,pt.19,p.191,pl.57,f.13-15,1904;Hamilton Gr.,Speed's Quarry,Clark Co.,Ind.

Nucleocrinus lucina "Hall,Rowley,"

Nucleocrinus lucina Greene,Contr.Pal.Ind.,I,pt.19,p. 192,pl.57,f.19,20,1904;Hamilton Gr., Speed's Quarry, Clark Co.,Ind.

Nucleocrinus stichteri "n.sp.(Rowley)"

Nucleocrinus stichteri Greene,Contr.Pal.Ind.,I,p.83-84,pl.27,f.9-11,1902;Up.Dev.,near Charlestown,Ind.

Nucleocrinus venustus "M & G.,Rowley"

Nucleocrinus venustus Greene,Contr.Pal.Ind.,I,pt.9,p. 82-83,pl.27,f.5-8,1902;Up.Dev.,near Charlestown,Ind.

Nucleocrinus verneuili "Troost,Rowley"

Nucleocrinus verneuili Greene,Contr.Pal.Ind.,I,pt.9, p.79-81,pl.26,f.9-15,18-22;pl.27,f.17-23,1902;Mid. Dev.,Falls of the Ohio.

Nucleocrinus verneuili var inflatus "n.var.(Rowley)"

Nucleocrinus verneuili Greene,Contr.Pal.Ind.,I,pt.9, p.78,pl.26,f.3-5,1902;Mid.Dev.,Falls of the Ohio.

Nucleocrinus verneuili var.pomum "Etheridge & Carpenter, Rowley"

Nucleocrinus verneuili var pomum (?) Greene,Contr.Pal. Ind.,I,pt.9,p.79,pl.26,f.16,17,1902;Mid.Dev.,Falls of the Ohio.

Nucleocrinus verneuili var sulcatus "n.var.(Rowley)"

Nucleocrinus verneuili var sulcatus Greene,Contr.Pal. Ind.,I,pt.9,p.78,pl.26,f.6-8;1902;Mid.Dev.,Falls of the Ohio.

Nucleocrinus verneuili "Troost,Rowley"

Nucleocrinus verneuili Greene,Contr.Pal.Ind.,I,pt.12,

p.128-129,pl.36,f.52-56,1903;Mid.Dev.,Falls of the Ohio.

Nucleocrinus Verneuili (Troost)

Pentremites verneuili. Troost,6th.Rep.Geol.State Tenn., p.14,1841.-D'Orbigny,Prod.Pal.Strat.,I,p.102,1849.-Shumard,Trans.St.Louis Acad.Sci.,I,p.247,1857.

Olivanites verneuili.Troost,Am.Jour.Sci.,VIII,p.419, 1849;Proc.Am.Assoc.Adv.Sci.,for 1849,p.62,1850.-Lyon in Owen's 3d.Rep.Geol.Surv.Ky.,p.487-492,t.5,f.1, a-e,1857.

Elaeacrinus verneuili.Roemer,Archiv f.Naturgesch,Jahrg. XVII,Bd.I,p.379,pl.8,f.1,a-d,1851; in Bronn's Lethaea Geogn.,Dritte Aufltheil,II,p.284,4,f.10a,b, 1852-1854.-Bronn,lassen und Ordn.Thier-Reichs,Bd.I, t.23,f.5,A-E,1859.-Dujardin & Hupe,Hist.Nat.Zooph. Echinod.,p.100,1862.-Shumard,Trans.St.Louis Acad. Sci.,II,p.369,1865.-E & C.,Ann. & Mag.Nat.Hist.,IX, p.231,1883;Cat.Blastoidea Brit.Mus.,p.216-218,pl.2, f.45;pl.17,f.19;pl.18,f.16-18;pl.19,f.7,1886.-Grabau & Shimer,N.Am.Index Fossils,II,p.484,f.1796,1910.

Nucleocrinus verneuili.Lyon and Casseday,Proc.Am.Acad. IV,p.295,1859.-Billings,Am.Jour.Sci.,L.p.229,f.3-6, 1870.-Miller, N.Am.Geol.& Pal.,p.263,1889.-Bather, List Blastoidea Brit.Mus.(Nat.Hist.),p.22,1889;A Treatise on Zoology,III,The Echinoderma,p.88,text fig.10,1900.-Rowley,Contr.Indiana Pal.I,p.79-81, and 128-129,pl.26,f.9-15,18-22;pl.27,f.17-23;pl.36, f.52-56,1902-03.-Wood,U.S.Nat.Mus.,Bull.64,p.18-19, pl.3,f.7-13,1909.-Branson,Geology of Mo.,p.100-101, f.11,1918;Mo.Bur.Geol. & Mines,XVII,2d.ser.,p.57, pl.8,f.3-4,1923;Mineola l.s.,Montgomery Co.;Grand Tower on Little Saline Creek,Mo.

Palaeaster clarki Clark and Swartz

Palaeaster clarki Clarke & Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.543-544,pl.46,f.3,4,1913;Jennings Form., Chemung Member,Road n.e.Oakland,Garrett Co.,Md.

Genus PENTREMITES Say.

Pentremites verneuili D'Orb.,Shumard,Troost,See Nucleocrinus verneuili (Troost)

Pentremitidea ? approximata "n.sp.(Rowley)"

Pentremitidea,approximata Greene,Contr.Pal.Ind.,I,pt. 10,p.93,pl.30,f.8,1902;Up.Dev.,near Charlestown, Ind.

Pentremitidea? dubia "n.sp.(Rowley)"

Pentremitidea ? dubia Greene,Contr.Pal.Ind.,I,pt.10, p.92-93,pl.30,f.5,6,7,11,1902;Up.Dev.,near Charlestown,Ind.

Pentremitidea leda var magna "n.var.(Rowley)"

Pentremitidea leda? var magna Greene,Contr.Pal.Ind.,I, pt.10,p.93-94,pl.30,f.9,10;32,33?,1902;Up.Dev.,near Charlestown,Ind.

Genus PLATYCRINUS Miller
(1821.Miller,Nat.Hist. of Crinoidea,p.73)

Platycrinus devonicus "n.sp.(Rowley)"

Platycrinus devonicus Greene,Contr.Pal.Ind.,I,pt.12, p.114-115,pl.35,f.10,11,1903;Mid.Dev.,Falls of the Ohio.

Platycrinus eriensis Hall

Platycrinus eriensis.Hall,15th.Rep.N.Y.State Nat.Hist., p.119,pl.1.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 144,f.26,1899;sh.,Hamilton Gr.,near Hamburgh,Erie Co.,N.Y.

Platycrinus plumosus Hall

Platycrinus plumosus Hall,Pal.N.Y.,III,p.113,pl.4,f.1-5,1861;L.Helderberg Gr.,Litchfield,Herkimer Co.,N.Y.

Platycrinus ramulosus Hall

Platycrinus ramulosus Hall,Pal.N.Y.,III,p.115,pl.4,f. 10-13,1861;L.Helderberg Gr.,Litchfield,Herkimer,Co., N.Y.

Platycrinus tentaculites Hall

Platycrinus tentaculites Hall,Pal .N.Y.,III,p.116,pl.5, f.1-4,1861;L.Helderberg Gr.,Schoharie,N.Y.

Genus PROTASTER (Forbes)
Memoirs of the Geol.Surv. of Great Britain
Decade I.
1859.Pal.N.Y.,III,p.134.

Protaster forbesi Hall

Protaster forbesi Hall,Pal.N.Y.,III,p.134,pl.VII A,f. 8-10,1861;Pentamerus l.s.,Litchfield,Herkimer Co., N.Y.

Genus PSEUDOCRINITES Pearce

Pseudocrinites abnormalis Schuchert

Pseudocrinites abnormalis Schuchert, Smith. Misc. Coll., XLVII, pt. 2, No. 1482, p. 231-232, pl. 35, f. 1-12; text fig. 30, 1904; Md. Geol. Surv., L. Dev., p. 238-239, pl. 33, f. 10-12, 1913; Helderberg Form., Keyser Member, Keyser, W. Va.

Pseudocrinites clarki Schuchert

Pseudocrinites clarki Schuchert, Am. Geol., XXXII, p. 237, 1904; Smith. Misc. Coll., XLVII, pt. 2, No. 1482, p. 233-234, pl. 36, f. 4-7; pl. 39, f. 14, 1904; Md. Geol. Surv., L. Dev., p. 240-241, pl. 33, f. 15-18; pl. 35, f. 14, 1913; Helderberg Form Keyser Member, Keyser, W. Va.

Pseudocrinites elongatus Schuchert

Pseudocrinites elongatus Schuchert, Smith1Misc. Colll, XLVII, pt. 2, No. 1482, p. 235-236, pl. 35, f. 6, 7; text fig. 31, 1904; Md. Geol. Surv., L. Dev., p. 241-242, pl. 34, f. 3, 4, 1913; Helderberg Form., Keyser Member. Pleasant Valley, w. of Martin Mountain, Md.

Pseudocrinites gordoni Schuchert

Pseudocrinites gordoni Schuchert, Am. Geol., XXXII, p. 235, 1903; Smith. Misc. Coll., XLVII, pt. 2, No. 1482, p. 229-231, pl. 36, f. 8-12; pl. 39, f. 11-13; text fig. 29, 1904; Md. Geol. Surv., L. Dev., p. 236-237, pl. 33, f. 5-9; pl. 35, f. 11-13, 1913; Helderberg Form., Keyser Member, Keyser, W. Va.

Pseudocrinites perdewi Schuchert

Pseudocrinites perdewi Schuchert, Am. Geol., XXXII, p. 238, 1903; Smith. Misc. Coll., XLVII, pt. 2, No. 1482, p. 236, 237, pl. 36, f. 1-3; pl. 39, f. 8-10; text fig. 32, 1904; Md. Geol. Surv., L. Dev., p. 252-254, pl. 34, f. 5-7; pl. 35, f. 8-10, 1913; Helderberg Form., Keyser Member, Keyser, W. Va.

Pseudocrinites stellatus Schuchert

Pseudocrinites stellatus Schuchert, Am. Geol., XXXII, p. 236, 1903; Smith., Misc. Coll., XLVII, pt. 2, No. 1482, p. 232-233, pl. 35, f. 8, 9; pl. 39, f. 7, 1904; Md. Geol. Surv., L. Dev., p. 239-240, pl. 33, f. 13, 14; pl. 35, f. 7, 1913; Helderberg Form., Keyser Member, Keyser, W. Va.

Pseudocrinites subquardatus Schuchert

Pseudocrinites subquadratus Schuchert, Smith. Misc. Coll., XLVII, pt. 2, No. 1482, p. 234-235, pl. 35, f. 4, 5, 1904; Md. Geol. Surv., L. Dev., p. 237-238, pl. 34, f. 1, 2, 1913; Helder-

bert Form.,Keyser Member,Devil's Backbone,Md.

Scyphocrinus sp. Tansey

Scyphocrinus sp. Tansey,The Dev. of Mo.,p.180-181, pl.42,f.10;pl.43,f.1-6,1922;Bailey l.s.,Little Saline Creek,Ste Genevieve Co.,Mo.

Genus SPHAEROCYSTITES Hall
(1859.Pal.N.Y.,III,p.130)

Sphaerocystites globularis Schuchert

Sphaerocystites globularis Schuchert,Am.Geol.,XXXII, p.233,1903;SmithlMisc.Coll.,XLVII,pt.2,No.1482,p. 252-253,pl.38,f.3-5;pl.39,f.5,6,;text fig.40,41, 1904;Md.Geol.Surv.,L.Dev.,p.247-248,pl.34,f.13,14, pl.35,f.5,6,;pl.36,f.1,1913;Helderberg Form.,Keyser Member,Devil's Backbone,Md.Keyser,W.Va.

Sphaerocystites globularis var ovalis Schuchert

Sphaerocystites globularis var ovalis Schuchert,Smith. Misc.Coll.,XLVII,pt.2,No.1482,p.253,pl.38,f.6,1904; Md.Geol.Surv.,L.Dev.,p.248,pl.36,f.2,1913;Helderberg Form.,Keyser Member,Keyser,W.Va.

Sphaerocystites multifasciatus Hall

Sphaerocystites multifasciatus.Hall,Pal.N.Y.,III,p. 130,7a,f.1-4;1861;L.Helderberg Gr.,Cumberland,Md.-Haeckel,Beitr.Morph.u.Phyl.d.Echinodermen,p.133, 1896.-Jaekel,Stammesgeschichte der Pelmatozoen,I, p.289,1899.-Schuchert,Am.Geol.,XXXII,p.233,1903; Smith.Misc.Coll.,XLVII,pt.2,No.1482,p.250-251,pl. 38,f.1,2;pl.39,f.1-4;text fig.38,39,1904;Md.Geol. Surv.,L.Dev.,p.245-246,pl.34,f.11,12;pl.35,f.1-4, 1913;Helderberg Form.,Keyser Member,Keyser,W.Va.; Cumberland,Md.

Genus STEREOCRINUS Barris
(1922.Dev. of Mo.,XVII,2d.ser.p.61-62)

Genus STEREOCRINUS Branson & Wilson
(1922.Dev. of Mo.,XVII,2d.ser.,p.61)

Stereocrinus indianensis "M & G,,Rowley"

Stereocrinus? indianensis Greene,Contr.Pal.Ind.,I,pt. 18,p.182-183,pl.54,f.7,8,1904;f.7,Hamilton Gr., Speed's Quarry,Clark Co.,Ind.;f.8,Up.Helderberg Gr.,Falls of the Ohio.

Stereocrinus moori Branson

Stereocrinus moori Branson,Mo.Bur.Geol.& Mines,XVII, 2d.ser.,p.62,pl.6,f.5,6;pl.8,f.8,1922;Mineola l.s. Ralls County,Mo.

Stereocrinus springeri Branson

Stereocrinus springeri Branson,Mo.Bur.Geol. & Mines, XVII,2d.ser,,p.63,pl.7,f.1-3,1922;Mineola l.s.near Spalding,Ralls Co.,Mo.

Stereocrinus vandiveri Branson

Stereocrinus vandiveri,Branson,Mo.Bur.Geol. & Mines, XVII,2d.ser.,p.63,pl.7,f.6-8,1922;Mineola l.s., Ralls Co.,Mo.

Genus TAXOCRINUS Phillips
(1843.Morris Cat.Brit.Foss.,p.90)

Taxocrinus concavus Rowley

Taxocrinus concavus Rowley,See Dactylocrinus concavus (Rowley"

Taxocrinus gracilis Meek & Worthen

Taxocrinus gracilis Meek & Worthen,Proc.Acad.Nat.Sci., Phila.,p.142,1865;Ill.Geol.Surv.,III,p.421,pl.13, f.3,1868;"Devil's Backbone,Jackson Co.,Ill.,Hamilton Group.

Taxocrinus nuntius (Hall)

Forbesiocrinus nuntius Hall,15th.Rep.N.Y.State Mus.Nat. Hist.,p.124,1862.

Taxocrinus nuntius Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.145,f.27,1899;sh.Hamilton Gr.,Erie Co.,N.Y.

SubGenus TECHNOCRINUS Hall
(See MARIACRINUS)
(Pal.N.Y.,III,p.139)

Technocrinus andrewsi (Hall)

Mariacrinus (Technocrinus) andrewsi Hall,Pal.N.Y.,III, p.141,pl.86,f.1-4,1861;Oriskany s.s.,Cumberland,Md.

Technocrinus andrewsi.Waschsmuth and Springer,Mem.Mus. Comp.Zool.,No.20,p.306,pl.24,f.3,1897.-Ohern,Md. Geol.Surv.,L.Dev.,p.251,pl.38,f.2.,1913;Oriskany Forml,Ridgely Member,Cumberland,Md.

Technocrinus (?) lepidus Ohern

Technocrinus (?) lepidus Ohern,Md.Geol.Surv.,L.Dev., p.252-253,pl.37,f.3-5;pl.38,f.1;pl.39,1913;Oriskany Form.,Ridgely Member,Cacapon Bridge;Penn. sand Quarry,3 mi.n.Berkeley Springs,W.Va.

Technocrinus sculptus(Hall)

Mariacrinus (Technocrinus) sculptus Hall,Pal.N.Y., III,p.143,pl.86,f.13,14,1861;Oriskany s.s.,Cumberland,Md.

Technocrinus sculptus Ohern,Md.Geol.Surv.,L.Dev.,p. 250,pl.36,f.10,11,1913;Oriskany Form.,Ridgely Member,Cumberland (fide Hall) Md.

Technocrinus spinulosus(Hall)

Mariacrinus (Technocrinus) spinulosus Hall,Pal.N.Y., III,p.140,pl.85,f.1-18,1861;Oriskany s.s.,Cumberland,Md.

Technocrinus spinulosus.Wachsmuth and Springer,Mem. Mus.Compt.Zool.,No.20,p.305,pl.22,f.3,1897.-Ohern, Md.Geol.Surv.,L.Dev.,p.251-252,pl.37,f.1,2,1913; Oriskany Form.,Ridgely Member,Cumberland,Md.

Technocrinus striatus (Hall)

Mariacrinus (Technocrinus) striatus Hall,Pal.N.Y.,III, p.142,pl.86,f.12 and 5-11,1861;Oriskany s.s.,Cumberland,Md.

Technocrinus striatus Ohern,Md.Geol.Surv.,L.Dev.,p.250, pl.36,f.8,9,1913;Oriskany Form.,Ridgely Member,Cumb. (Fide Hall),Md.

Tetracystis chrysalis Schuchert

Tetracystis chrysalis Schuchert,Smith.Misc.Coll.,XLVII, pt.2,No.1482,p.218-219,pl.34,f.9,10,pl.40,f.1-3; text fig.25,1904;Md.Geol.Surv.,L.Dev.,p.232,pl.32, f.10,11,1913;Helderberg Form.,Keyser Member,Keyser, W.Va.

Thamniscus fruticella Hall,See Thamniscus regularis Ulrich and Bassler.

Thamniscus? nysa Hall,See Thamniscus regularis Ulrich & Bassler

Thamniscus regularis Ulrich and Bassler

Thamniscus regularis Ulrich and Bassler

Cf.Thamniscus ? nysa Hall,Rep.State Geol.N.Y.for 1882.pl.22,f.31,32,47,48,also T.fruticella and T.variolata of the same author,work, and plate, f. 33-46,1883.

Thamniscus regularis Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.286,pl.47,f.4-6,1913;Helderberg Form.,Keyser Member.Devil's Backbone,Md.

Thamniscus variolata Hall,See Thamnsicus regularis Ulrich and Bassler.

Thysanocrinus eugenius Ohern

Thysanocrinus eugenius Ohern,Md.Geol.Surv.,L.Dev.,p. 249-250,pl.36,f.3-7,1913;Oriskany Form.,Ridgely Member,Cumberland,Md.

Trimerocystis peculiaris Schuchert

Trimerocystis peculiaris Schuchert,Smith,Misc.,Coll., XLVII,pt.2,No.1482,p.239-240,pl.35,f.1-3;text fig., 34,1904;Md.Geol.Surv.,L.Dev.,p.244-245,pl.34,f.8-10,1913;Helderberg Form.,Keyser Member.Keyser,W.Va.

Xenocidaris americana Thomas

Xenocidaris americana.Thomas,Echinoderms of Lime Creek beds of Iowa,p.13,1923;Ia.Geol.Surv.,XXIX,p.50,f.1-25,Distributed Feb.27,1924.-Fenton and Fenton,Contr Mus.Geol.Univ.Mich.,I,p.204,pl.41,f.2,1924;Hackberry Stage,Mich.

B R Y O Z O A

Genus ACANTHOCLEMA Hall 1887
(Pal.N.Y.,VI,p.72)

Acanthoclema scutulatum Hall,Pal.N.Y.VI,p.190,pls.55-56.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.166,f.58;Hamilton Gr.,w.Hamburgh,Erie Co.,N.Y.1899.

Genus Ascodictyon Fenton & Fenton

Ascodictyon pustulum Fenton & Fenton,Contr.Mus.Geol.Univ. Mich.,I,p.71,pl.17,f.2,1924;Hackberry Stage,Mich.

Ascodictyon siluriense Vine

Ascodictyon siluriense Vine,Proc.Yorkshire Geol. & Polyt Soc.,XII,p.88,pl.2,f.1.-Ulrich and Bassler,Smith. Misc.Coll.,Quart.Issue,XLV,p.286,pl.68,f.11,12,1904; Md.Geol.Surv.,L.Dev.,p.260,pl.46,f.2,1913;Helderberg Form.,Keyser Member,Cash Valley,Md.

Ascodictyon stellatum var.siluriense Vine,Quart.Jour. Geol.Soc.,London,XXXVIII,p.52,f.1,2,1882;Ann. & Mag.Nat.Hist.,Ser.V,vol.XIV,p.81,1884.

Ascodictyon stellatum var siluriense Vine See A.siluriense Vine

Genus BATOSTOMELLA Ulrich and Bassler

Batostomella interporosa Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.270-271,pl.45,f.1,2;pl.48,f.5,1913;Helderberg Form.,Keyser Member,Devil's Backbone,Md.

Genus BOTRYLLOPORA Nicholson 1874
(Geol.Mag.Lond.,N.S.,I,p.160)

Botryllopora socialis Nicholson,

Botryllopora socialis Hall,Pal.N.Y.,VI,p.282,pl.64, 1887.-Grabau,Buffalo Soc.Nat.Scil,Bull.6,p.177,f.75, 1899;Avery's Creek,on the Lake Shore,N.Y.

Genus CALLOPORA Hall

Callopora cincinnatiensis Ulrich,See Lioclema occidens (H. & W)

Callopora macropora Hall,See Callotrypa macropora (Hall)

Callopora (Callotrypa)macropora Hall and Simpson,See Callotrypa macropora (Hall)

Callopora maculosa Hall, See Fistulipora maculosa (Hall)

Callopora (Callotrypa) striata Hall and Simpson, See Callotrypa striata (Hall and Simpson)

Genus CALLOTRYPA Hall

Callotrypa macropora (Hall)

Callopora macropora Hall, (in part) Rep. N.Y. State Geol., pl.11, f.25-29, 1883.

Callopora (Callotrypa) macropora Hall & Simpson, Pal. N.Y., VI, p.24, pl.11, f.25-29; pl.we, f.15-19, 1887.

Callotrypa macropora Simpson, 14th. Ann. Rep. State Geol. N.Y. for 1894, pl.18, f.12-14, 1897.-Ulrich and Bassler Md. Geol. Surv., L. Dev., p.271-272, pl.50, f.9, 10, 1913; Helderberg Form., New Scotland Member, Moore Knob, Md.

Callotrypa striata (Hall & Simpson)

Callopora (Callotrypa) striata Hall & Simpson, Pal. N.Y., VI, p.26, pl.11, f.38-41; pl.23, f.13, 14, 1887.

Callotrypa striata Ulrich and Bassler, Md. Geol. Surv., L. Dev., p.271, pl.50, f.5-8, Helderberg Formation, New Scotland Member, Moore Knob, Md. 1913.

Genus CERAMOPORA Ulrich

Ceramopora? incondita Ulrich and Bassler, Md. Geol. Surv., L. Dev., p.260-261, pl.41, f.13-17; pl.44, f.1-3, 1913; Helderberg Form., Keyser Member. Cumberland, Md.; Keyser W. Va.

Genus CHAETETES Fischer

Chaetetes fruticosus Hall, See Monotrypa fruticosa Hall

Chaetetes furcatus Hall, See Montrypa(?) furcata Hall

Chaetetes ? tabulatus Hall, See Monotryps of tabulata Hall

Chaetetes (Ptychonema) tabulatus Hall & Simpson, See Monotryps tabulata Hall

Genus CHILOTRYPA Ulrich 1913
(Md. Geol. Surv., L. Dev., p.267)

Chilotrypa constricta (Hall)

Trematopora? constricta Hall, Rep. State Geol. N.Y. for 1882 pl.10, f.14-19, 1883.

Diamesopora constricta Hall & Simpson,Pal.N.Y.,VI,p. 19,pl.10,f.14-19,pl.33a,f.7,1887.

Chilotrypa constricta Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.369,pl.50,f.13-15,1913;Helderberg Form., New Scotland Member,Moore Knob,Washington Co.,Md.

Chilotrypa micropora Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.368-269,pl.41,f.9-12,Helderberg Form.,Keyser Member,Keyser,W.Va.

Genus COSCINIUM Keyser

Coscinium missouriensis Branson,Mo.Bur.Geol. & Mines, XVII,2d.Ser.,p.71,pl.9,f.2,1922;Mineola l.s.Montgomery Co.,Mo.

Genus CYCLOTRYPA Ulrich

Cyclotrypa communis Ulrich

Fistulipora communis Ulrich,Geol.Surv.,Ill,.VIII,p.476, pl.47,f.1 and 1a; pl.48,f.1 and 1a,1890.

Cyclotrypa communis Ulrich,Zittels Textbook of Pal., (Eng.ed.),I,p.269,f.443,1896.-Bassler,Zittels Textbook of Pal.,(Eng.ed.),I,2d.ed.,p.329,f.470,1913.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.68,pl.9, f.7-9,1922;Mineola l.s. Montgomery Co.,Mo.

Cyclotrypa magna-monticulata Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.68,pl.9,f.4,5,16;pl.10,f.1,3,6,1922; Mineola l.s.Montgomery Co.,Mo.

Cyphotrypa corrugata (Weller)

Monotrypa corrugata Weller,Pal.N.J.,III,p.223,pl.18,f. 1-5,1903.

Cyphotrypa corrugata Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.269-270,pl.42,f.5-9;pl.44,f.4;pl.52,f.1,2, 1913;Helderberg Form.,Keyser Member,Keyser,W.Va., Cabh Valley,Md.

Genus CYSTODICTYA Ulrich

Cystodictya mineolaensis Branson,Mo.Bur.Geol.& Mines,XVII, 2d.ser.,p.71,pl.9,f.1,3,1922;Mineola l.s.Montgomery Co.,Mo.

Cystodictya rigida (Hall)

Stictopora rigida Hall,Trans.Albany Inst.,X,Abstract,p.

14,1881;Rep. State Geol. N.Y. for 1882,Expl.25,f.15, 16,1883.-Hall and Simpson,Nat.Hist.N.Y.Pal.,VI,p. 91,pl.28,f.15,16,1887.-Stewart,The Dev. of Mo.,p. 228,pl.60,f.6,7,1922;Little Saline Creek l.s.,Ste Genevieve Co.,Mo.

Genus DIAMESOPORA Hall

Diamesopora constricta Hall & Simpson,See Chilotrypa constricta (Hall)

Genus DIPLOSTENOPORA Ulrich & Bassler
(Md.Geol.Surv.,L.Dev.,p.276-278,1913)

Diplostenopora siluriana (Weller)

Escharopora siluriana Weller,Pal.N.J.,III,p.225,pl.18, f.6,7;pl.19,f.8,9,1903.

Diplostemopora siluriana Ulrich and Bassler,Md.Geol. Surv.,L.Dev.,p.277-278,pl.45,f.3-6,pl.48,f.1-3;pl. 52,f,3,4,1913;Helderberg Form.,Keyser Member,Cash Valley near Cumb.,Md.

Genus EDRIOTRYPA Ulrich

Edriotrypa corticosa (Hall)

Trematopora (Chaetetes)corticosa Hall,Rep.State Geol. N.Y.for 1882,pl.10,f.1-10;pl.13,f.4,1883.

Trematopora? (Trematella?) corticosa Hall & Simpson, Pal.N.Y.,VI,pl.15,pl.10,f.1-10;pl.13,f.4;pl.23f,20, 1887.

Edriotrypa corticosa Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.273,pl.50,f.11,12,1913;Helderberg Form., New Scotland Member,Moore Knob,Washington Co.,Md.

Edriotrypa parvulipora Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.272-273,pl.43,f.5-8;pl.44,f.7,8,1913;Helderberg Form.,Keyser Member,Keyser (types),Cherry Run, W.Va.;Cumberland,Md.

Escharopora siluriana Weller,See Diplostenopora siluriana (Weller)

Favosites sphaericus Hall & Simpson,See Monotrypa sphaerica (Hall)

Favosites sphericus Hall, See Monotrypa sphaerica(Hall)

Genus FENESTELLA Miller 1839.
(Lonsdale in Murchison's Sil.Syst.,pt.II,p.677)

Fenestella sp. Tansey,The Dev. of Mo.p.182,pl.44,f.8,1922; Beiley l.s.,Little Saline Creek,Ste Genevieve Co.,Mo.

Fenestella? sp.Weller,Pal.N.J.,III,p.343, not figured,1903; Mid.& Up.Oriskany Fauna,N.J.

Fenestella? sp.Weller,Pal.N.J.,III,p.365,not figured,1903; Onondaga l.s.,New Jersey

Fenestella? sp.Weller,Pal.N.J.,III,p.379,not figured,1903; Monroe sh.,New Jersey

Fenestella (Cycloporina)altidorsata Ulrich and Bassler, Md.Geol.Surv.,L.Dev.,p.282-283,pl.45,f.15;pl.49,f.1-3, 1913;Helderberg Form.,Keyser Member,Devil's Backbone, Md.

Fenestella carinata Fenton and Fenton,Contr.Mus.Geol.Univ. Mich.,I,p.78-79,pl.18,f.14,1924;Hackberry Stage,Mich.

Fenestella compacta Hall,See Polypora compacta (Hall)

Fenestella (Polypora)compacta Hall & Simpson,See Polypora compacta (Hall)

Fenestella coronis Hall;Hall and Simpson,See Semicoscinium coronis (Hall)

Fenestella cumberlandica Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.280-281,pl.47,f.1,2,1913;Helderberg Form., Keyser Member,Cash Valley,Md.

Fenestella diatreta Fenton and Fenton,Contr.Mus.Geol.Univ. Mich.,I,p.76-77,pl.18,f.15,16,1924;Hackberry Stage, Mich.

Fenestella emaciata Hall

Fenestella emaciata Hall,36th.Ann.Rep.N.Y.State Mus.Nat. Hist.,p.68; 41st.Rep.N.Y.State Mus.Nat.Hist.,pl.8.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.159,f.47,1899; Demissa bed,N.Y.

Fenestella hexagonalis Hall,See Polypora hexagonalis Hall

Fenestella (Polypora)hexagonalis Hall & Simpson,See Polypora hexagonalis Hall.

Fenestella idalia Hall

Fenestella idalia Hall,Rep.State Geol.N.Y.for 1882,pl. 21,f.6-9,1883.

Fenestella? idalia Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.281-282,pl.52,f.9-11,1913;Helderberg Form., New Scotland Member,Devil's Backbone,Corriganville, Md.

Fenestella (Hemitrypa) lata Hall,See Unitrypa lata Hall

Fenestella (Unitrypa) lata Hall & Simpson,See Unitrypa lata Hall

Fenestella missouriensis Branson,Mo.Bur.Geol.& Mines,XVII, 2d.ser.,p.69,pl.9,f.13,14,1922;Mineola l.s.,Montgomery,Co.,Mo.

Fenestella (Hemitrypa)nervia Hall,See Polypora compacta (Hall)

Fenestella philia Hall

Fenestella philia Hall, Rep.State Geol.N.Y.for 1882,pl. 20,f.9-11,1883.-Hall & Simpson,Pal.N.Y.VI,p.50,pl. 20,f.9-11,1887.-Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.281,pl.51,f.6-8,1913;Helderberg Form.,New Scotland Member,Moore Knob,Washington Co.,Md.

Fenestella planiramosa Hall

Fenestella planiramosa Hall,36th.Ann.Rep.N.Y.State Mus. Nat.Hist.,p.62;Rep.State Geol.,1887,pl.1.-Grabau, Buffalo Soc.Nat.Sci.,Bull.6,p.159,f.48,1899;Demissa bed,Mo.

Fenestella vara dissemilis Fenton and Fenton,Contr.Geol. Mus.Univ.Mich.,I,p.77-78,pl.18,f.13,1924;Hackberry Stage,Mich.

Genus FISTULICELLA Simpson 1894
(14th.Rep.N.Y.State Geol.,p.606)

Fistulicella plana Hall

Fistulicella plana Hall,Pal.N.Y.,VI,p.215,pl.58.-Grabau Buffalo Soc.Nat.Sci.,Bull.6,p.167,f.60,1899;Demissa bed at Eighteen Mile Creek,Mo.

Genus FISTULIPORA McCoy

Fistulipora? sp.Tansey,The Dev. of Mo.,p.181,pl.44,f.7, 1922;Bailey l.s.,Little Saline Creek,Ste Genevieve Co.,Mo.

Fistulipora actula Stewart,The Dev. of Mo.,p.223,pl.58,f.1, 2,1922;Little Saline Creek l.s.,Ste Genevieve Co.,Mo

Fistulipora communis Ulrich, See Cyclotrypa communis Ulrich

Fistulipora maculosa (Hall)

Callopora maculosa Hall, Rep. State Geol. N.Y. for 1882, pl. 14, f.1-8, 1883.

Lichenalia maculosa Hall & Simpson, Pal. N.Y., VI, p.30. pl.14, f.1-8, 1887

Fistulipora maculosa Ulrich and Bassler, Md. Geol. Surv., L. Dev., p.262, pl.51, f.1, 2, 1913; Helderberg Form., New Scotland Member, Moore Knob, Washington Co., Md.

Fistulipora minuta Rominger, See Lioclema minutum (Rominger)

Fistulipora occidens Hall & Whitfield, See Lioclema occidens (H & W)

Fistulipora variolata Stewart, The Dev. of Mo., p.223-224, pl. 58, f.3, 4, 1922; Little Saline Creek l.s., Ste Genevieve Co., Mo.

Genus FISTULIPORELLA Simpson 1895.
(14th. Ann. Rep. N.Y. State Geol. for 1894, p.560)

Fistuliporella cumulata Ulrich and Bassler, Md. Geol. Surv., L. Dev., p.263-264, pl.41, f.1-5, 1913; Helderberg Form., Keyser Member, Cash Valley, Pinto, Md; Keyser, W.Va.

Fistuliporella marylandica Ulrich and Bassler, Md. Geol. Surv. L. Dev., p.266, pl.45, f.8-11; pl.48, f.4, 1913; Helderberg Form., Keyser Member, Cash Valley, Md.

Fistuliporella maynardi Ulrich and Bassler, Md. Geol. Surv., L. Dev., p.266-267, pl.46, f.3-7, 1913; Helderberg Form., Keyser Member, Cash Valley, Md.

Fistuliporella minima Ulrich and Bassler, Md. Geol. Surv., L. Dev., p.265-266, pl.43, f.13-16, 1913; Helderberg Form., Keyser Member, Cash Valley, Md; Keyser, W.Va.

Fistuliporella quinquedentata Ulrich and Bassler, Md. Geol. Surv. L. Dev., p.264-265, pl.51, f.6-8, 1913; Helderberg Form., Keyser Member, Keyser, W.Va.

Genus FISTULIPORINA Simpson 1894
(14th. Repl N.Y. State Geol., p.555, pl.XXI)

Fistuliporina digitata (Hall)

Fistuliporina digitata Hall, Pal. N.Y., VI, pl.59, 1887.- Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p.170, f.65, 1899; Hamilton Group. w. Hamburgh, Erie Co., N.Y.

Fistuliporina micropora (Hall)

Fistuliporina micropora Hall,Pal.N.Y.,VI,pls.57,59, 1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.169,f.63, 1899;Hamilton Group,Eighteen Mile Creek,Erie Co.,N.Y

Fistuliporina minuta (Rominger)

Fistuliporina minuta Hall,Pal.N.Y.,VI,p.222,pl.59,1887.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.169,f.64,1899; Hamilton Group.w.Hamburgh,Erie Co.,N.Y.

Fistuliporina scrobiculata (Hall)

Fistuliporina scrobiculata Hall,Pal.N.Y.,VI,pl.58.1887.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.168,f.61,1899; Hamilton Group,Eighteen Mile Creek,Erie Co.,N.Y.

Fistuliporina segregata(Hall)

Fistuliporina segregata Hall,Pal.N.Y.,VI,pl.59,1887.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.168,f.62,1899; Hamilton Group,Eighteen Mile Creek,Erie Co.,N.Y.

Genus GLAUCONOME Goldfuss 1826
(Petrefacta Germaniae,I,p.100)

Glauconome carinata Hall

Glauconome carinata Hall,Pal.N.Y.,VI,p.273,pl.66,1887.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.177,f.74,1899; Hamilton Group,Eighteen Mile Creek,Erie Co.,N.Y.

Genus HEDERELLA Hall 1881
(Trans.Albany Inst.,X,p.194)

Hederella alternata (Hall & Whitfield)

Stromatopora(?) alternata Hall & Whitfield,23d.Ann.Rep. N.Y. State Cab.Nat.Hist.,p.235,pl.10,f.7-8,1873.

Hederella alternata Fenton and Fenton,Contr.Geol.Mus. Univ.Mich.,I,p.72,pl.17,f.5,6,1924;Hackberry Stage, Mich.

Hederella canadensis (Nicholson)

Hederella canadensis Hall,Pal.N.Y.,VI,p.277,pl.65,1887.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.178,f.72,1899; Avery's Ravine,New York.

Hederella filiformis (Billings)

Aulopora filiformis,Billings,Can.Jour.,IV,p.119.-Hall,

Pal.N.Y.,VI,p.278,pl.65,1887.

Hederella filliformis Grabau,Buffalo Soc.Nat.Sci.,Bull 6,p.179,f.77A,1899;Hamilton Gr.,Eighteen Mile Cr.,N Y.

Genus HEMITRYPA Phillips

Hemitrypa mineolaensis Branson,Mo.Bur.Geol.& Mines,XVII 2d.ser.p.70,pl.9,f.10,11,12,pl.10,f.5,1922;Mineola l.s.,Mo.

Genus HERNODIA Hall

Hernodia halyson Fenton and Fenton,Contr.Mus.Geol.Univ. Mich.I,p.73,pl.17,f.4;pl.18,f.4,1924;Hackberry Stage Rockford,Mich.

Hernodia linearis Fenton and Fenton,Contr.Mus.,Geol.Univ. Mich.,I,p.73-74,pl.18,f.7,1924;Hackberry Stage,Mich

Genus HETEROTRYPA Ulrich

Herterotrypa undata Stewart,The Dev. of Mo.,p.224-225,pl. 58,f.7,8,1922;Little Saline Creek l.s.,Ste Genevieve Co.,Mo.

Leioclema minutum Ulrich,See Lioclema minutum (Rominger)

Leioclema occidens Greger,See Lioclema occidens(Hall & Whitfield)

Leioclema occidens Ulrich,See Lioclema occidens(Hall & Whitfield)

Genus LICHENALIA Hall 1852.
(Pal.N.Y.,II,p.171)

Lichenalia maculosa Hall and Simpson,See Fistulipora maculosa (Hall)

Lichenalia stellata Hall

Lichenalia stellata Hall,Pal.N.Y.,VI,p.195,pl.58,1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.171,f.66A, 1899;Demissa bed,New York.

Lichenalia torta Hall

Lichenalia tortata Hall,Pal.N.Y.,VI,p.31,pl.15,f.1-5,7 1887.-Weller,Pal.N.J.,III p.273,-274,pl.36,f.7,8, 1903;Coeymans l.s.N.J.

Genus LIOCLEMA Ulrich

Lioclema minutum(Rominger)

Fistulipora minuta Rominger,Proc.Acad.Nat.Sci.,Phila., p.120,1866.

Leioclema minutum Ulrich,Geol.Surv.,Ill,,VIII,p.427, 1890.

Lioclema minutum Fenton and Fenton,Contr.Mus.Geol.Univ. Mich.,I,p.76,pl.18,f.7,1924;Hackberry Stage,Mich.

Lioclema occidens (Hall & Whitfield)

Fistulipora occidens Hall & Whitfield,23d.Ann.Rep.N.Y. State Cab.Nat.Hist.,p.228-229,pl.10,f.9,10,1873.

Callopora cincinnatiensis Ulrich,Four.Cincinnati Soc. Nat.Hist.,I,p.93,pl.4,f.8,8a,1878.

Lioclema occidens Branson,Mo.Bur.Geol. & Mines,XVII, 2d.ser.,p.69,pl.4,f.7,8;pl.9,f.15;pl.10,f.4,7,1922; Snyder Creek sh.,Missouri.

Callopora cincinnatiensis Ulrich,Jour.Cincinnati Soc. Nat.Hist.,V,p.142,pl.6,f.18.18a,1882.

Leioclema occidens Ulrich,Geol.Surv.,Ill.,VIII,p.426-427,1890

Lioclema occidens Nickles and Bassler,Amer.Foss.Bryozoa,Bull.U.S.G.S.No.173,p.305,1900.

Leioclema occidens Greger,Am.Jour.Sci.,XXVII,p.376,1909

Lioclema occidens (Hall & Whitfield),Fenton and Fenton, Contr.Mus.Geol.Univ.Mich .,I,p.75,pl.17,f.11;pl.18, f.5,6,1924;Hackberry Stage,Michigan.

Lioclema pulchellum Ulrich and Bassler,Md.Geol.Surv.,L.Dev. p.274-275,pl.43,f.9-12;1913;Helderberg Form.Keyser Member,Keyser,W.Va.

Lioclema subramosum Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.273-274,pl.43,f.1-4;pl.44,f.5,1913;Helderberg Form.,Keyser Member,Keyser,W.Va.;Cash Valley,Md.

Genus LOCULIPORA Hall 1887
(Pal.N.Y.,VI,p.33)

Loculipora perforata Hall

Loculipora perforata Hall,36th.Rep.N.Y.State Mus.Nat. His.t,p.65;41st.Rep.N.Y.State Mus.Nat.Hist.,p.10.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.160,f.49,1899; Demissa bed,N.Y.

Meekopora sp. Stewart, The Dev. of Mo., p.224, pl.58, f.5,6, 1922
Little Saline Creek l.s., Ste Genevieve Co., Mo.

Genus MONOTRYPA Nicholson 1879
(Nicholson, Tabulate corals of the Pal. Period, p.293)

Monotrypa amplectens Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p. 137, f.22, 1899. Avery's Creek, New York.

Monotrypa corrugata Weller, See Cyphotrypa corrugata (Weller)

Monotrypa furcata Hall

Chaetetes furcatus Hall, Ill. Dev. Foss,, pls.37,38.

Monotrypa (?)furcata Grabau, Buffalo Soc. Nat. Sci., Bull 6, p.137, f.21, 1899; Demissa bed at Avery's Creek, New York. See Ulrich, Pal. Bryzoa, Pal. Ill,, VIII, pt.2, sec.6, 1890.

Monotrypa sphaerica (Hall)

Favosites sphericus Hall, Rep. State Geol. N.Y. for 1882 pl.7, f.1-12, 1883.

Favosites sphaerricus Hall & Simpson, Pal. N.Y., VI, p.9, pl.7, f.1-12; pl.8, f.8, 1887.

Monotrypa sphaerica Weller, Pal. N.J., III, p.274, pl.26, f.9-11, 1903; Coeymans l.s., N.J.-Ulrich and Bassler Md. Geol. Surv., L.Dev., p.278, pl.52, f.5-8, 1913; Helderberg Form., New Scotland Member, Dawson, Md.

Monotrypa tabulata (Hall)

Chaetetes? tabulatus Hall, Rep. State Geol. N.Y., pl.9, f.12-15, 1882

Chaetetes(Ptychonema)tabulatus Hall & Simpson, Pal. N.Y., VI, p.14, pl.9, f.12-15, 1887.

Monotrypa tabulata Ulrich and Bassler, Md. Geol. Surv., L.Dev., p.278, pl.50, f.1-4, 1913; Helderberg Form., New Scotland Member, Elbow Ridge, Washington Co.; Dawson, Md.

Monticulipora (?) marylandensis Ulrich and Bassler, Md. Geol. Surv., Mid. & Up. Dev., p.123-124, pl.7, f.10-12, 1913; Romney Form., Hamilton Member, Evitts Creek below Wolfe Mill, Md.

Monticulipora petropolitana F. Roemer, See Hindia sphaeroidalis Duncan.

Genus ORTHOPORA Hall

Orthopora bucheri Fenton and Fenton, Contr. Mus. Geol. Univ. Mich., I, p. 79, pl. 18, f. 10-12, 1924; Hackberry Stage, Mich.

Orthopora ovatipora (Hall)

Trematopora? ovatipora Hall, Rep. State Geol. N.Y. for 1882, pl. 11, f. 9-11, 1883.

Trematopora (Orthopora) ovatipora Hall & Simpson, Pal. N.Y., VI, p. 17, pl. 11, f. 9-11; pl. 23, f. 5, 1887.

Orthopora ovatipora Ulrich and Bassler, Md. Geol. Surv., L. Dev., p. 288, pl. 50, f. 16-18, 1913; Helderberg Form., New Scotland Member, Moore Knob, Washington Co., Md.

Orthopora regularis (Hall)

Trematopora regularis Hall, Rep. State Geol. N.Y. for 1882, pl. 11, f. 1-8; pl. 13, f. 1-3 (in part) 1883.

Trematopora (Orthopora) regularis Hall & Simpson, Pal. N.Y., VI, p. 16, pl. 11, f. 1-8; pl. 23, f. 1, 1887.

Orthopora regularis Ulrich and Bassler, Md. Geol. Surv., L. Dev., p. 287-288, pl. 51, f. 15-17, 1913; Helderberg Form., New Scotland Member, Corriganville, Md.

Orthopora rhombifera (Hall)

Trematopora rhombifera Hall, 26th. Ann. Rep. N.Y. State Mus., p. 103, 1874; 32d. Ann. Rep. N.Y. State Mus., p. 152 (reprint 1880, p. 14), 1879; Rep. State Geol. N.Y. for 1882-1883. pl. 11, f. 15-20 (not plate 24, f. 3, 4,), 1883

Trematopora (Orthopora) rhombifera Hall & Simpson, Pal. N.Y., VI, p118, pl. 11, f. 15, 17-20; pl. 23, f. 11, 12 (not pl. 25, f. 29; pl. 26, f. 3, 4,), 1887.

Orthopora rhombifera Ulrich and Bassler, Md. Geol. Surv., L. Dev., p. 286-287, pl. 54, f. 12-14; pl. 48, f. 6; pl. 51, f. 18, 1913; Helderberg Form., Coeymans Member, Cash Valley, Md.; Keyser, W. Va.

Orthopora ulrichi Fenton and Fenton

Orthopora ulrichi F & F., Contr. Mus. Geol. Univ. Mich., I, p. 79, pl. 18, f. 8, 9, 1924; Hackberry Stage, Mich.

Genus PALAESCHARA Hall 1872
(26th. Ann. Rep. N.Y. State Mus. Nat. Hist., p1107)

Paleschara amplectens Hall

Paleschara amplectens,Hall,3d.Ann.Rep.N.Y.State Geol. p.7.-Grabau,Soc.Nat.Sci.,Buffalo,Bull.6,p.171,not figured,1899;Demissa bed,New York,

Paleschara intercella Hall

Paleschara intercella.Hall,3d.Ann.Rep.N.Y.State Geol. p.5.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.170,not figured,1899;Demissa and Stictopora beds,New York

Paleschara reticulata Hall

Paleschara reticulata.Hall,3d.Ann.Rep.N.Y.State Geol. p.6.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.171,f. 66,1899;Demissa bed,New York.

Petalotrypa formosa Fenton and Fenton

Petalotrypa formosa F. & F.,Contr.Mus.Geol.Univ.Mich. I,p.74-75,pl.17,f.8-10;pl.18,f.1-3,1924;Hackberry Stage,Mich.

Genus POLYPORA McCoy 1845
(Carb.Foss.Ireland,p.296)

Polypora compacta (Hall)

Fenestella compacta Hall,Rep.State Geol.N.Y.for 1882, pl.18,f.1-3,1883.

Fenestella (Hemitrypa)nervia Hall,(in part)Rep.N.Y. State Geol.for 1882,pl.32,f.1-3,1883.

Fenestella (Polypora)compacta Hall & Simpson,Pal.N. Y.,VI,p.63,pl.18,f.1-3;pl.22,f.4,5,1887.

Polypora compacta Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.284,pl.51,f.9-11,1913;Helderberg Form., New Scotland Member,Corriganville,Md.

Polypora dictyota Ulrich and Bassler

Polypora dictyota Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.283-284,pl.47,f.3,1913;Helderberg Form., Keyser Member,Cumberland,Md.

Polypora hamiltonensis Prout

Polypora hamiltonensis Prout,Ill.Geol.Surv.,Pal.II,p. 423,pl.21,f.6,6a,1866;Hamilton Group,New Buffalo, Iowa;same position at Rock Island,Ill.

Polypora hexagonalis Hall

Fenestella hexagonalis Hall,Trans.Albany Inst.,X,p.169 (abstract 1881,p.27) 1883.

Fenestella (Polypora) hexagonalis Hall & Simpson,Pal. N.Y.,VI,p.164,pl.33,f.14-20,1887.

Polypora cf hexagonalis Stewart,Dev. of Mo.,p.226-227, pl.60,f.1,2,1922;Little Saline Creek l.s.Ste Genevieve Co.,Mo.

Polypora media Stewart

Polypora media Stewart,Dev. of Mo.,p.227,pl.60,f.3, 1922;Little Saline Creek l.s.,Ste Genevieve,Mo.

Polypora multiplex Hall

Polypora multiplex.Hall,Rep.State Geol.for 1886,p.66, ibid.1887,pl.11,-Grabau,Buffalo Soc.Nat.Sci.,Bull 6,p.162,f.51A,1899;Hamilton Group,Alden,Erie Co., and Eighteen Mile Creek,N.Y.?

Polypora valida Stewart

Polypora valida Stewart,The Dev. of Mo.,p.227,pl.60, f.4,5,1922;Little Saline Creek ls.,Ste Genevieve Co.,Mo.

Genus PTILODICTYA Lonsdale 1839
(Murchison's Sil.System,p.676)

Ptilodictya lobata Weller

Ptilodictya lobata Weller,Pal.N.Y.,III,p.272-273,pl. 26,f.4-6,1903;Coeymans l.s.,New Jersey.

Ptilodictya plumea Hall

Ptilodictya plumea.Hall,Pal.N.Y.,VI,p.271,pl.61,f.1887 Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.176,f.73, 1889;Hamburgh-on-the-Lake,Erie Co.,N.Y.

Ptilodictya tenella Ulrich and Bassler

Ptilodictya tenella Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.288-289,pl.42,f.10;pl.48,f.7,8,1913;Helderberg Form.,Keyser Member,Cumberland,Md.

Genus REPTARIA Rolle 1851
(Leonhard & Bronn,Neues Jahrbuch,p.180)

Reptaria stolonifera Rolle

Reptaria stolonifera.Hall,Pal.N.Y.,VI,p.274,pl.65.

1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.178, f.76,1899;Demissa bed,New York.

Genus RETEPORINA D'Orbigny 1850
(Prodorne de Pal.,I,p.101)

Reteporina striata Hall

Reteporina striata.Hall,6th.Ann.Rep. N.Y.State Geol. p.45,pl.3,1886.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.161,f.50,1899;Demissa bed,New York.

Genus RHOMBOPORA Meek 1872
(Meek,Pal.Eastern Nebraska,p.141)

Rhombopora hexagona (Hall)

Rhombopora hexagona.Hall,Pal.N.Y.,VI,p.178,pls.55, 56,1887.-Simpson,Ibid.pl.19,f.12.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.164,f.53,1899;Hamilton Group Eighteen Mile Creek,Shore Lake Erie,Erie Co.N.Y.

Rhombopora immersa Hall

Rhombopora immersa,Hall,Pal.N.Y.,VI,p.185,pl.56,1887 Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.166,f.57, 1899;Hamilton Group,w.Hamburgh,Erie Co.,N.Y.

Rhombopora lineata Hall

Rhombopora lineata.Hall,Pal.N.Y.VI,p.181,pl.56,55, 1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.165, f.56,1899;Hamilton Group,w.Hamburgh,Erie Co.,N.Y

Rhombopora missouriensis Branson

Rhombopora missouriensis Branson,Mo.Bur.Geol.& Mines XVII,2d.ser.,p.70,pl.9,f.6;pl.10,f.2,1899;Snyder Creek,Calloway Co.,Missouri.

Rhombopora polygona Hall

Rhombopora polygona.Hall,Pal.N.Y.,VI,p.176,not figured,1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.164,1899;Hamilton Group,w.Hamburgh,Erie Co.,N.Y.

Rhombopora reticulata (Hall)

Rhombopora reticulata.Hall,Pal.N.Y.,VI,p.179,pls.55, 56,1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 165,f.54,1899;Hamilton Group,w.Hamburgh,Erie Co., N.Y.

Rhombopora tortalinea Hall

Rhombopora tortalinea.Hall,Pal.N.Y.,VI,p.180,pl.56, 1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.165, f.55,1899;Hamilton Group,Hamburgh-on-the-Lake,Erie Co.,N.Y.

Rhombopora transversa(Hall)

Rhombopora transversa Hall,Pal.N.Y.,VI,p.187,pls.55, 56,1887.-See also Handbook Pal.Bryozoa,pl.19.

Rhombopora ? transversa Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.164,f.52,1899;Hamilton Group,West Hamburgh,Erie Co.,N.Y.

Genus RHOPALONARIA Ulrich

Rhopalonaria attenuata Ulrich and Bassler

Rhopalonaria attenuata Ulrich & Bassler,Smith.Misc. Coll.,XLV,p.368,pl.66,f.4,5,1904;Md.Geol.Surv.,L. Dev.,p.259,pl.46,f.1,1913;Helderberg Form.,Keyser Member,Cash Valley,Md.

Rhopalonaria tenuis Ulrich and Bassler

Rhopalonaria tenuis Ulrich and Bassler,Smith.Misc.Coll.,XLV,No.1452,p.270,pl.66,f.7-9,1904;Md. Geol. Surv.,L.Dev.,p.123,pl.7,f.7-9,1913;Romney Form., Hamilton Member,East bank Evitts Creek below Wolfe Mill,Md.

Genus SEMICOSCINIUM Prout.

Semicoscinium coronis (Hall)

Fenestella coronis Hall,32d.Ann.Rep.N.Y.,State Mus., p.171,(reprint,1880,p.33),1883.

Fenestella coronis Hall & Simpson,Pal.N.Y.,VI,p.51,pl 21,f.1-13,1887.

Semicoscinium coronis Ulrich and Bassler,Md.Geol.Surv L.Dev.,p.285,pl.51,f.3-5,1913;Helderberg Form.,New Scotland Member,Moore Knob,Washington,Co.,Md.

Semicoscinium planum Ulrich and Bassler

Semicoscinium planum Ulrich & Bassler,Md.Geol.Surv., L.Dev.,p.285,pl.45,f.7;pl.49,f.4,1913;Helderberg Form.,Keyser Member,Hyndman,Penn.

Genus STENOPORA Lonsdale

Stenopora incrustans Ulrich and Bassler

Stenopora(?)incrustans Ulrich & Bassler,Md.Geol.Surv. L.Dev.,p.275-276,pl.42,f.11-16;pl.44,f.6,1913; Helderberg Form.,Keyser Member,Cash Valley,Md.

Genus STICTOPORA Hall
(1847 Pal.N.Y.,I,p.73)

Stictopora incisurata Hall

Stictopora incisurata.Hall,Pal.N.Y.,VI,p.241,p.60, 1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.172,f. 67,1899;Encrinal l.s.;Demissa bed;Lake Shore; Avery's Creek,N.Y.

Stictopora palmipes Hall

Stictopora palmipes.Hall,Pal.N.Y.,VI,p.255,pl.60,1887 Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.174,f.69,1899 Sh.Hamilton Group,w.Hamburgh,Erie Co.,N.Y.

Stictopora papillosa Hall

Stictopora papillosa.Hall,Rep.State Geol.N.Y. for 1882,pl.13,f.12,13,1883;-Hall & Simpson,Pal.N.Y., VI,p.37,pl.13,f.12,13,pl.23a,f.16,1887.

Stictopora? papillosa Ulrich and Bassler,Md.Geol.Surv L.Dev.,p.289-290,pl.51,f.12-14,1913;Helderberg Form.,New Scotland Member,Kreighbaum, Md.

Stictopora permarginata Hall

Stictopora premarginata.Hall,Pal.N.Y.,VI,p.258,pl. 63,1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 174,f.70,1899;Hamilton Group,W.Hamburgh,Erie Co., N.Y.

Stictopora recta Hall

Stictopora recta.Hall,Pal.N.Y.,VI,p.253,not figured, 1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.173, not figured.1899;Hamilton Group,W.Hamburgh,Erie Co.,N.Y.

Stictopora rigida Hall,See Cystodictya rigida(Hall)

Stictopora rigida Hall & Simpson,See Cystodictya rigida (Hall)

Stictopora sinuosa Hall

Stictopora sinuosa.Hall,Pal.N.Y.,VI,p.247,pl.61, 1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.173, f.68,1899;Hamilton Group,in Avery's Creek,N.Y.

Genus STREBLOTRYPA Ulrich
(1890.Geol.Surv.Ill.,VIII,p.403)

Streblotrypa hamiltonense (Nicholson)

Streblotrypa hamiltonense,Hall,Pal.N.Y.,VI,p.191,pl. 60,1887.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.167, f.59,1899;Hamilton Group,w.Hamburgh,Erie Co.,N.Y.

Stromatopora(?)alternata Hall & Whitfield,See Hederella alternata (Hall & Whitfield)

Stromatotrypa globularis Ulrich and Bassler

Stromatotrypa globularis Ulrich & Bassler,Md.Geol.Surv.,L.Dev.,p.279-280,pl.42,f.1-4;pl.46,f.8,9,1913 Helderberg Form.,Keyser Member,Keyser,W.Va;Cash Valley, and Cumb.Md.

Genus TAENIOPORA Nicholson
(1874.Geol.Mag.Lond.N.S.,I,p.120)

Taeniopora exigua Nicholson

Taeniopora exigua,Hall,Pal.N.Y.,VI,p.263,pl.62,1887. Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.174,f.71,1899 Hamilton Group,W.Hamburgh,Erie Co.,N.Y.,also Eighteen Mile Creek,N.Y.

Trematopora? constricta Hall,See Chilotrypa constricta (Hall)

Trematopora (Chaetetes)corticosa Hall,See Eridotrypa corticosa (Hall)

Trematopora? (Trematella) corticosa,Hall & Simpson,See Edriotrypa corticosa (Hall)

Trematopora? ovatipora Hall,See Orthopora ovitipora(Hall

Trematopora (Orthopora)ovatipora Hall & Simpson,See Orthopora ovatipora (Hall)

Trematopora regularis Hall,See Orthopora regularis (Hall)

Trematopora (Orthopora)regularis Hall & Simpson,See Orthopora regularis (Hall)

Trematopora rhombifera Hall,See Orthopora rhombifers (Hall)?

Trematopora (Orthopora) rhombifera Hall & Simpson,See Orthopora rhombifera (Hall)?

Genus UNITRYPA Hall 1885
(Rept.N.Y.State Geologist for 1884,p.36)

Unitrypa lata Hall

Fenestella (Hemitrypa)lata Hall,Trans.Albany Inst.,X, (abstract 1881,p.34) 1883.

Unitrypa spatiosa Hall,(in error) Rep.State Geol.N.Y for 1884,pl.2,f12,1885.

Fenestella (Unitrypa) lata,Hall & Simpson,Pal.N.Y., VI,p.136,pl.52,f.1-10,1887.

Unitrypa cf lata Stewart,Dev. of Mo.,p.225-226,pl.59, f.4,1899;Little Saline Creek,l.s.,Ste Genevieve,Co Mo.

Unitrypa scalaris Hall

Unitrypa scalaris.Hall,6th.Ann.Rep.N.Y.State Geol.p. 60,1886.-Buffalo Soc.Nat.Sci.,Bull.6,p.162,f.51, 1899;Demissa bed,Mo.

Unitrypa scalaris Hall,Report of 1897,pl.11.

Unitrypa subcircularis Stewart

Unitrypa subcircularis Stewart,Dev. of Mo.,p.226,pl. 59,f.5-7,1922;Little Saline Creek,l.s.,Ste Genevieve Co.,Mo.

Genus VERMIPORA Hall?

Vermipora serpuloides Hall

Vermipora serpuloides,Hall & Simpson,Pal.N.Y.,VI,p. 5,pl.2,f.24-31,1887.-Weller,Pal.N.J.,III,p.322-323,pl.41,f.1,1903;Lower Oriskany,N.J.

Vinella (?) panda Fenton and Fenton

Vinella(?) panda Fenton & Fenton,Contr.Mus.Geol.Univ. Mich.,I,p.71-72,pl.17,f.1,1924;Hackberry Stage, Mich.

B R A C H I O P O D A

Genus AMBOCOELIA Hall
(1860.13th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.167)
(1893.Pal.N.Y.,VIII,pt.2,p.54)

Ambocoelia gregaria Hall,see Ambocoelia umbonata(Conrad) var gregaria Hall

Ambocoelia nana Grabau

Ambocoelia umbonata var nana Grabau,Rep.N.Y.State Geol.and Pal. for 1898,1898.

Ambocoelia nana Grabau,Buffalo Soc.Nat.Scil,Bull.6, p.217,f.136,1899;Nautilus bed,Hamilton sh.N.Y.

Ambocoelia praeumbonata Hall

Orthis praeumbonata Hall,10th.Rep.N.Y.State Cab.Nat. Hist.,p.167,k857.

Ambocoelia praeumbonata.Hall,13th.Rep.N.Y.State Cab. Nat.Hist.,p.71,1860;Pal.N.Y.,IV,p.262,pl.44,f.1-6,1867.-Schuchert,U.S.G.S.,Bull.87,p.141,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.218,f.127, 1899;Moscow sh.-Clarke,N.Y.State Mus.,Bull.65,p. 188,1903.-Grabau and Shimer,N.Am.Index Foss.,I, p.342,f.438a,b,1909.-Prosser and Kindle,Md.Geol. Surv.,Mid. & Up.Dev.,p.204-206,pl.20,f.7,8,1913; Romney Form.,Hamilton Member.Ernstville,Md.

Ambocoelia spinosa Clarke

Ambocoelia spinosa.Clarke,13th.Ann.Rep.N.Y.State Geol.,I,p.177,pl.4.-Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.218,f.128,1899;Moscow sh;Hamilton sh. N.Y.

Ambocoelia umbonata (Conrad)

Orthis umbonata Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.264,pl.14,f.4,1842.

Ambocoelia umbonata.Hall,13th.Rep.N.Y.State Cab.Nat. Hist.,p.71,1860;Pal.N.Y.,IV,p.259,pl.44,f.7-18, 1867.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29, 1891.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,pl.29, f.17,pl.39,f.4-9,1893.-Schuchert,U.S.G.S.,Bull. 87,p.141,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.217,f.125,1899;Marcellus sh.Bay View Cliff.-Kindle,25th.Ann.Rep.Ind.Geol.Surv.,p.590-591,pl. 10,f.7,7a,1901.-Weller,Pal.N.J.,III,p.383,not fig. 1903.Monroe sh.near Greenwood Lake,N.J.,*Grabau

and Shimer,N.Am.Index Foss.,I,p.343,f.438c,d,1909. Schuchert,Md.Geol.Surv.,L.Dev.,p.421-422,not fig., 1913;Helderberg Form.,New Scotland Member. 21st. Bridge,Cumberland,Md.-Clarke and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.602-603,pl.59,f.3-7,1913; Jennings Form.,Chemung Member.Ellerslie,Penn;Hancock,Md.Woodmont Member,Naples Fauna.Allegany Grove.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up. Dev.,p.200-202,pl.20,f.1,2,1913;Romney Form.,Onondaga Member.S.E.Cumberland,Md.;Hanging Rock,W.Va. Hamilton Member.S.E.Cumberland,Md.N.Romney,W.Va.

Ambocoelia umbonata (Conrad) var gregaria Hall

Orthis umbonata Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.264,pl.14,f.4,1842.

Ambocoelia umbonata.Hall,13th.Rep.N.Y.State Cab.Nat. Hist.,p.71,1860;Pal.N.Y.,IV,p.259,pl.44,f.7-18, 1867.

Orthis unguiculus Hall (Non Phillips), Geol.N.Y.,Rep. 4th.Dist.,p.267,f.5,1843.

Ambocoelia gregaria Hall,13th.Rep.N.Y.State Cab.Nat. Hist.,p.81,1860.

Ambocoelia umbonata var gregaria.Hall,Pal.N.Y.,IV,p. 261,pl.44,f.19-25,1867.-Prosser,Geol.Surv.,Ohio, 4th.ser.,Bull.15,p.539-540,pl.31,f.6-9,1912;Chagrin Form.N. of Trumbull Center;Brandywine Creek; Cherry Valley Township,Ohio.

Ambocoelia umbonata var nana Grabau,see Ambocoelia nana Grabau.

Ambocoelia umbonata var cf nana Kindle,See Ambocoelia virginiana Prosser and Kindle.

Ambocoelia virginiana Prosser and Kindle

Cf Ambocoelia umbonata var cf nana Kindle,U.S.G.S., Bull.508,p.83,pl.5,f.20-23,1912.

Ambocoelia virginia Prosser and Kindle,Md.Geol.Surv., Mid. & Up.Dev.,p.202-204,pl.20,f.3-6,1913;Romney Form.,Marcellus Member. E. of Oldtown,Md; S. of Green Spring,W.Va.Hamilton Member.E.bank Evitts Creek below Wolfe Mill,near Cumberland,Md.

Amphicoelia ulrichi Maynard

Amphicoelia ulrichi Maynard,Md.Geol.Surv.,L.Dev.,p. 453-454,pl.75,f.8-10,1913;Helderberg Form.,Keyser Member.Keyser,W.Va.

Amphigenia elongata(Vanuxem)

Amphigenia elongata.Hall,Pal.N.Y.,IV,pt383,pl.58 A, f.21-24,pl.59,f.1-11,1867.-Weller,Pal.N.J.,III,p. 374-375,pl.52,f.6-7,1903;Newfoundland Grit.Greenwood,N.J.

Genus ANASTROPHIA Hall

Anastrophia verneuili (Hall)

Atrypa lacunosa Vanuxem (not Sowerby),Geol.N.Y.,Repl 3d.Dist.,p.117,f.3,and p.119,1842.

Pentamerus verneuili.Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.104,f.1,2,1857;Pal.N.Y.,III,p.260,pl. 48,f.1a-i,k-p,r-v,x,y,1861;L.Helderberg group.Helderberg Mountains;Schoharie and other places.N.Y. Billings Geol.Canada,p.957,f.453,1863.

Anastrophia verneuili.Miller,N.Am.Geol.Pal.,p.334, 1889.-Hall,and Clarke,Pal.N.Y.,VIII,pt.2,p.224-225,pl.63,f.31-38,pl.84,f.43,44,1894.-Girty,U.S. G.S.19th.Ann.Rep.pt.3,p.565,1899.-Dumbar,Tenn. Geol.Surv.,Bull.21,pl.2,f.14,1919.-Tansey,The Dev. of Mo.,p.190-191,pl.47,f.17-21,pl.48,f.1-9,1922; Bailey l.s.Little Saline Creek,Ste Genevieve Co., Mo.

Anomia retiuclaris Linneaus,See Atrypa reticularis (Linne)

Anomia terebratulites striatulus Schlotheim,See Schizophoria striatula(Schlotheim)

Anomites reticularis Wahlenb.,See Atrypa reticularis (Linne)

Anomites rhomboidalis Wahlenberg,See Leptaena rhomboidalis (Wilckens)

Genus ANOPLIA Hall and Clarke
(1892.Pal.N.Y.,VIII,pt.1,p.309)

Anoplia helderbergiae Rowe

Anoplia helderbergiae Rowe,Md.Geol.Surv.,L.Dev.,p. 340,pl.61,f.21,1913;Helderberg Form,New Scotland Member.21st.Bridge,Cumberland,Md.

Anoplia nucleata (Hall)

Leptaena nucleata Hall,10th.Ann.Rep.N.Y.State Cab.Nat Hist.,p.47,1857.

Leptaena ? nucleata Hall,Pal.N.Y.,III,p.419,pl.94, f.1a-d,1861;Oriskany s.s.Albany Co.,N.Y.

Anoplia nucleata.Weller,Pal.N.J.,III,p.325,pl.41,f. 9;p.349,pl.46,f.8-10,1903;Oriskany Form.N.J.- Hall,and Clarke,Pal.N.Y.,VIII,pt.1,p.309,pl.15a, f.17,18,pl.20,f.14-17,1892.-Clarke,N.Y.,State Mus. Mem.IX,pt.1,p.211,pl.41,f.15-17,1908.-Kindle,U.S.G S.Bull.508,p.73,pl.5,f.8-11,1912;Md.Geol.Surv., Mid. & Up.Dev.,p.159-160,pl.13,f.10-13,1913;Romney Form.,Onondaga Member.Tonoloway,Md.;Sof.Berkeley Springs,W.Va.-Schuchert,Md.Geol.Surv.,L. Dev.,p.340,pl.61,f.22-24,1913.-Stewart,The Dev. of Mo.,p.236-237,pl.63,f.5,1922;Little Saline l.s.Ste Genevieve Co.,Mo.

Genus ANOPLOTHECA Sandberger

Anoplotheca (Coelospira) acutiplicata (Conrad)

Atrypa acutiplicata.Conrad,5th.Ann.Rep.N.Y.,Geol. Surv.,p.54,1841.-Hall,15th.Rep.N.Y.State Cab.Nat. Hist.,pl.11,f.17,1862.

Leptocoelia acutiplicata Hall,Pal.N.Y.,IV,p.365,pl.57 f.30-39,1867.

Coelospira acutiplicata Clarke,N.Y.State Mus.,Bull.65 p.214,1903.

Anoplotheca (Coelospira) acutiplicata.Hall and Clarke Pal.N.Y.,VIII,pt.2,p.136,pl.53,f.32-39,1893.-Schuchert,U.S.G.S.,Bull.87,p.144.-Kindle,U.S.G.S.,Bull 508,p.84,pl.6,f.1-15,1912.-Prpsser and Kindle,Md. Geol.Surv.,Mid.& Up.Dev.,p.207-209,pl.20,f.16-23, 1913;Romney Form.,Onondaga Member.B.& O.R.R.cut 21st.Bridge.Hamilton Member.E. bank Evitts Creek below Wolfe Mill,near Cumb.,Md.-Weller,Pal.N.J., III,p.270,pl.51,f.14-17,p.377,383,pl.53,f.3,1903; Onondaga l.s.;Newfoundland Grit;Monroe sh.near Greenwood Lake N.J.

Anoplotheca camilla (Hall)

Coelospira concava Hall,(non Hall 1863),Pal.N.Y.,IV, p.329,1867.

Coelospira camilla Hall,Pal.N.Y.,IV,pl.52,f.13-19, 1867.

Anoplotheca camilla Kindle,U.S.G.S.,Bull.508,p.85, 1912;Md.Geol.Surv.,Mid. & Up.Dev.,p.209,pl.20,f. 24,1913;Romney Form.,Onondaga Member.S.E.Cumberland,Md.

Anoplotheca concava (Hall)

Leptocoelia concava Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.107,1857;Pal.N.Y.III,p.245,pl.38,f. 1-7,1861;L.Helderberg group.Helderberg mountains; Catskill,Hudson,Schoharie, and other places in N.Y.

Coelospira concava Clarke,N.Y.State Mus.,Mem.III,No. 3,p.42,pl.5,f.23-26,1900.

Anoplotheca concava.Weller,Pal.N.J.,III,p.316,pl.37, f.11-15;p.371,1903;New Scotland beds.Also Onondaga l.s.N.J.-Schuchert,Md.Geol.Surv.,L.Dev.,p.434,pl. 73,f.18,19,1913;Helderberg Form.,New Scotland Member.Corriganville,Dawson,Md;Cherry Run,W.Va;Warren Point,Penn.Becraft Member.Warren Point,Penn.

Anoplotheca concava var tonolowayensis Swartz

Anoplotheca concava var tonolowayensis Swartz,Md.Geol Surv.,L.Dev.,p.434-435,pl.73,f.20,21,1913;Heldgrberg Form.,Keyser Member.Tonoloway,Md.

Anoplotheca dochotoma(Hall)

Leptocoelia dichotoma.Hall,Pal.N.Y.,III,p.452,pl.103b f.3a-c,1859;Oriskany s.s.Cumb.,Md;-Hall and Clarke Pal.N.Y.,VIII,pt.2,p.137,1893.

Coelospira dochotoma Clarke,N.Y.State Mus.,Mem.III,No 3,p.42,pl.5,f.27-32,1900.

Anoplotheca dichotoma.Schuchert,U.S.G.S.,Bull.87,p. 144,1897.-Weller,Pal.N.J.,III,p.358,pl.49,f.3-6, 1903;Oriskany Form.M.J.-Schuchert,Md.Geol.Surv.,L. Dev.,p.435,pl.73,f.24-26,1913;Oriskany Form.,Ridgely Member.North Branch,Md.-Stewart,The Dev. of Mo.,p.251,pl.66,f.22-25,1922;Little Saline l.s. Ste Genevieve Co.,Mo.

Anoplotheca equistriata Schuchert

Anoplotheca equistriata Schuchert,Md.Geol.Surv.,L.Dev p.435,pl.73,f.22,23,1913;Oriskany Form.,Ridgely Member.Cumberland,Md.

Anoplotheca (Leptocoelia) fimbriata (Hall)

Leptocoelia fimbriata.Hall,12th.Ann.Rep.N.Y.State Cab Nat.Hist.,text fig.3,p.33,1859;Pal.N.Y.,III,p.450, pl.103b,f.2a-f,1861;Oriskany s.s.Cumberland,Md.- Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.137,pl.53,f. 47-52,54,55,1893.

Anoplotheca (Leptocoelia) fimbriata Schuchert,Md.Geol

Surv.,L.Dev.,p.436-438,pl.73,f.27,28,1913;Oriskany Form.,Ridgely Member.Cumberland,North Branch, Md.

Anoplotheca flabellites(Conrad)

Atrypa flavellites Conrad,5th.Ann.Rep.N.Y.Geol.Surv., p.55,1841.

Leptocoelia flabellitee.Hall,Pal.N.Y.,III,p.449, pl. 106,f.1a-f;pl.103b,f.1a-f,1861;Oriskany s.s.Albany and Schoharie Cos.,N.Y.-Meek and Worthen,Ill. Geol.Surv.,III,p.387,pl.8,f.3a-c,1868;Cherty l.s. age Oriskany s.s.N.Y.seried.Dry fork of Clear Creek Union Co.,Ill.

Leptocoelia proparia Hall,Reg.Rep. of 1856,p.108, 1857;Pal.Foss.,p.68,1857.

Anoplotheca flabellites.Schuchert,U.S.G.S.Bull.87,p. 144,145,1897.-Stewart,The Dev. of Mo.,p.251-252, pl.66,f.26,27,1922;Little Saline l.s.Ste Genevieve Co.,Mo.-Weller,Pal.N.J.,III,p.357-388,pl.49,f.1-2, 1903;Oriskany Form.,N.J.

Anoplotheca (Leptocoelia) flabellites Schuchert,Md. Geol.Surv.,L.Dev.,p.438,pl.73,f.29-33,1913;Helderberg Form.,New Scotland Member.Cherry Run,W.Va. Becraft Member.Oriskany Form.,Shriver Member.Ridgely Member,Common.

Anoplotheca(Leptocoelia)flabellites Schuchert,See Anoplotheca flabellites (Conrad)

Genus ATHYRIS McCoy
(1844.Synopsis Carbon.Foss.Ireland,p.1281)
(1893.Pal.N.Y.,VIII,pt.2,p.83)

Athyris angelica Hall

Athyris angelica.Hall,14th.Rep.N.Y.State Cab.Nat.Hist p.99,1861;15th.Rep.N.Y.State Cab.Nat.Hist.,pl.3,f. 10-13,24,1862;Pal.N.Y.IV,p.292,pl.47,f.9-20,1867; Hall and Clarke,Pal.N.Y.State pt.2,p.90,pl.45,f. 26-30,1893.-Clarke and Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.604-605,pl.59,f.8-10,1913;Jennings Form.,Chemung Member.Allegany Grove.Md.-Shimer, Can.Geol.Surv.,ser.45,p.70-71,1926;Up.Dev. of Minnewanka reg.,Banff.Alberta.

Athyris coloradensis Girty

Athyris vittat var Girty,20th.Ann.Rep.U.S.G.S.,pt.2, p.47,pl.5,f.12,1900.

Athyris coloradensis.Girty,20th.AnnlRep.U.S.G.S,,pt. 2,p.46,pl.5,f.5-11,1900;Ouray l.s.Gunnison;Durango Salida;Glenwood Springs,Colo.-Kindle,U.S.G.S. Bull.391,p.24,pl.6,f.9,1909;Glenwood Springs; Shoshone;Rockwood,Colo;Hillsboro,N.M.

Athyris fultonensis Butts,See Athyris vittata(Hall)

Athyris fultonensis.Cleland,Grabau and Shimer,See Athyris.vittata(Hall)

Athyris fultonensis Kindle,as cited by Branson,See Athyris vittata (Hall)

Athyris fultonensis Schuchert,as cited by Branson,See Athyris vittata.

Athyris fultonensis (Swallow)

Spirigera fultonensis Swallow,Trans.St.Louis Acad. Sci.,I,p.650,1860.

Spririgera minima Swallow,Trans.St.Louis Acad.Sci., I,p.649,1860.

Athyris vittata.Keyes,Geol.Surv.,Mo.,V,pt.2,p.90, pl.41,f.1,1894.-Hall,Pal.N.Y.,IV,p.289,pl.46,f. 1-4,1867.

Athyris fultonensis.Schuchert(as cited by Branson) U.S.G.S.,Bull.87,p.147,1897.-Greger,Am.Jour.Sci., XXVII,p.376-377,1909.-Kindle,25th.Ann.Rep.Ind.Geol Surv.,p.597-598,not fig.,1901;Sellersburg beds and Jeffersonville l.s.Falls of the Ohio and Charlestown,Ind.-Branson,The Dev. of Mo.,p.109-110, pl.17,f.1-4,1922;Snyder Creek shale.Also p.149, Grand Tower l.s.Little Saline Creek.

Athyris minima Greger,Am.Jour.Sci.,XXVII,p.376-377, 1909.

Athyris minima Greger,See Athyris fultonensis (Swallow)

Athyris polita Hall

Athyris polita Hall,Geol.N.Y.,Rep.4th.Dist.,Tables of Organic Remains,No.66,f.5,1843.

Athyris ? polita Hall,Pal.N.Y.,IV,p.293,pl.47,f.21-23,1867.

Athyris polita.Hall and Clarke,Pal.N.Y.,VIII,pt.2, pl.46,f.1-5,1895.-Prosser,Geol.Surv.Ohio.4th.ser., Bull.10,p.540,pl.31,f.10,11,1912;Chagrin Form.,

Chippewa Creek;Just S. Trumbull Center.

Athyris spiriferoides (Eaton)

Not Terebratula concentrica Von Buch

Terebratula spiriferoides Eaton,Am.Jour.Sci.,XXI,p. 137,1831.

Atrypa concentrica.Conrad,Ann.Rep.Geol.Surv.,N.Y., p111,1838.-Hall,Geol.N.Y.,pt.4,p.198,f.5,5,a, 1843.

Spirifera spiriferoides.Hall,10th.Rep.N.Y.State Cab. Nat.Hist.,p.153,f.1,2,1857.-Rogers,Geol.Panna., II,pt.2,p.828,f.667,1858.

Athyris spiriferoides.Hall,13th.Rep.N.Y.State Cab.Nat Hist.,p.93,f.1-4,1860.Pal.N.Y.,IV,p.285,pl.46,f. 5-31,1867.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29, 1891.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.89,f. 60,61;pl.45,f.11-27,1893.-Schuchert,U.S.G.S.,Bull. 87,p.149,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.223,f.133,1899;Moscow sh;Nautilus bed.N.Y.- Kindle,25th.Ann.Rep.Ind.Geol.Surv.,p.596-597,pl. 11,f.6,1901;Sellersburg beds.Charlestown,Ind.- Clarke,N.Y.State Mus.,Bull.65,p.192,1903.-Grabau and Shimer,N.Am.Index Foss.,I,p.353,f.461,1909.- Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p. 211-212,pl.21,f.1,2,1913;Romney Form.,Hamilton Member.E. bankEvitts Creek bleow Wolfe Mill;B.& O.R.R.cut 21st.Bridge Cumberland,Md.

Athyris Vittata (Hall)

Athyris Vittata Hall,13th.Rep.N.Y.State Cab.Nat.Hist. p.89-90,1860.

Athyris fultonensis.Schuchert (as cited by Branson) U.S.G.S.,Bull.87,p.147,1897.-Kindle (as cited by Branson)Ind.Dept.Geol.Nat.Res.,25th.Ann.Rep.,p. 597-598,1901.-Grabau and Shimer,N.Am.Index Foss.,I pl352353,f.460,1909.-Cleland,Wisc.Geol.Nat.Hist., Surv.,Bull.21,p.83-84,pl.14,f.1-4,1911.-Butts,Geol Surv.Kentucky ser.IV,Vol.III,pt.2,pl.45,f.3,4,1915 Branson,The Dev. of Mo.,p.110,pl.17,f.8-10,15,16, 1922;Mineola l.s.,Ralls and Montgomery Cos.,Mo.

Athyris vittata Hall,of 1867,See Athyris fultonensis (Swallow)

Athyris vittata Keyes,See Athyris fultonensis (Swallow)

Athyris vittata var Girty,See Athyris coloradensis Girty

Genus ATRYPA Dalman
(1829.Kongl.Veteuskaps.Akad.Handlingar,p.127)
(1893.Pal.N.Y.,VIII,p.21p.163)

Atrypa sp.Hall,See Camarotoechia litchfieldensis (Schuchert)

Atrypa acutiplicata Conrad,See Anoplotheca (Coelospira) acutiplicata (Conrad)

Atrypa acutiplicata Hall,See Anoplotheca (Coelospira) acutiplicata (Conrad)

Atrypa aequiradiata Conrad,See Rensselaria aequiradiata (Conrad)

Atrypa affinis.Hall,Vanuxem,See Atrypa reticularis (Linneaus)

Atrypa arata Conrad,See Pentamerella (Conrad)

Atrypa asper var hystrix Calvin,See Atrypa rockfordensis Fenton and Fenton

Atrypa aspera Schlotheim

Terebratula asprea Murchisom,Vern. and Keys.,Geol. Russ.,II,p.93,pl.10,f.13,1845.

Terebratulites aspera Schlotheim,Min.Taschenb.,VII,pl I,f.7;Petrefact.,p.263,1813.

Atrypa aspera var occidentalis Hall,Iowa Rep.,I,pt.2, p.515,pl.6,f.3a-d,1858.

Atrypa aspera.Dalman,Vet.Akad.Handl.,pl.4,f.3,1827.-Hoisinger,Leth.Suec.,pl.21,1837.-Phillips,Palaeoz. Foss.,pl.33,f.144,1841.-Davidson,Monogr.Brit.Dev. Brach.,pl.10,f.5-8,1865.-Meek,Trans.Chicago Acad. Sci.,I,p.96,pl.13,f.12,1868.-Meek and Worthen,Ill. Geol.Surv.,III,p.430,pl.13,f.7a-d,1868;Calcareous sh.Rock Island,Ill. and New Buffalo and Independence,Iowa.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.227,f.137,1899;Moscow sh.N.Y.

Atrypa aspera var occidentalis Hall,See Atrypa aspera Schlotheim.

Atrypa ? biconvexa Maynard

Atrypa ? biconvexa Maynard,Md.Geol.Surv.,L.Dev.,p. 393-394,pl.68,f.1-3,1913;Helderberg Form.,Keyser Member.Keyser,W.Va; Cash Valley,Md.

Atrypa bisulcata Vanuxem, See Merista bisulcata (Vanuxem)

Atrypa chemingensis. Conrad, Vanuxem, See Atrypa reticularis (Linneaus)

A trypa comis Owen, See Gypidula comis (Owen)

A trypa concentrica Conrad, See Athyris spiriferoides (Eaton)

Atrypa concentrica Hall, See Athyris spiriferoides (Eaton)

Atrypa concinna Hall, See Nucleospira concinna Hall

Atrypa congregata Conrad, See Camarotoechia congregata (Conrad)

Atrypa contracta Hall, See Camarotoechia contracta (Hall)

Atrypa devoniana Webster

Atrypa reticularis. Hall, as cited by Fenton and Fenton, Pal. N. Y., IV, p. 321, 1867.-Calvin, Iowa Geol. Surv. VII, p. 167, 1897.-C. L. Fenton, Am. Mid. Nat., V, p. 216, 1918; Am. Jour. Sci., 4th. ser., XLVIII, p. 372, 1919.

Atrypa devoniana. Webster, Am. Mid. Nat. p. 19, (not pl. 8, f. 11), 1921.-Fenton and Fenton, Contr. Mus. Univ. Mich. I, p. 134-136, pl. 26, f. 16-24, 1924; Cerro Gordo substage Owen substage. Helderberg Stage. Mason City.

Atrypa devoniana form alta C. L. Fenton

Atrypa reticularis alta C. L. Fenton, Am. Mid. Nat., V, p. 216, pl. 6, f. 1, 2, 1918.

Atrypa devoniana form alta Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 136-137, pl. 26, f. 25, 26, 1924; Spirifer zone. Hackberry Stage.

Atrypa ellipsoida Nettleroth, See Atrypa reticularis var ellipsioda (Nettleroth)

Atrypa elongata Conrad, See Rensselaeria ovoides (Conrad)

Atrypa elongata Vanuxem, See Rensselaeria ovoides (Conrad)

Atrypa eximia Hall, See Camarotoechia eximia (Hall)

Atrypa flabellites Conrad, See Anoplotheca flabellites (Conrad)

Atrypa galeata Castelnau, See Gypidula (Sieberella) coeymanensis Schuchert.

Atrypa galeata Vanuxem, See Cypidula (Sieberella) coeymanensis Schuchert.

Atrypa globuliformis Vanuxem, See Leiorhynchus globuliforme (Vanuxem) as cited by Clarke and Swartz.

Atrypa globuliformis Vanuxem, See Liorhynchus globuliforme Vanuxem var chagrinanum Prosser, as cited by Prosser.

Atrypa gregeri Rowley

Atrypa gregeri. Greger, Am. Jour. Sci., XXVII, p.376, 1909.- Rowley, Am. Geol., XXV, p.264, pl.5, f.9-11, 1900.- Branson, Mo. Bur. Geol. & Mines, XVII, 2d. ser., p.97, pl.18, f.7-9, 1923; Snyder Creek Shale. Callaway Co., Mo.

Atrypa hackberryensis Fenton and Fenton

Atrypa hackberryensis. Webster, MSS. and labels.- Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.137-138, pl. 26, f.12-15, 1934; Cypidula faunule. Hackberry Stage. Rockford.

Atrypa reticularis hackberryensis C.L. Fenton, Am. Jour. Sci., 4th. ser., XLVIII, p.372, 1919.

Atrypa hystrix C.L. Fenton, See Atrypa rockfordensis Fenton and Fenton

Atrypa hystrix Hall

Atrypa hystrix. Hall, Geol. N.Y., Rep. 4th. Dist., p.27, f. 2, 1843; Pal. N.Y., IV, p.326, pl.53a, f.15-17, 1867.- Grabau and Shimer, N. Am. Index Foss., I, p.311, f.392, 1909.- Cleland, Bull. 21, Geol. Surv., Wisc., p.73, pl.13, f.14-16, 1911.- Clarke and Swartz, Md. Geol. Surv., Mid. & Up. Dev., p.589-590, pl.55, f.14-19, 1913; Jennings Form., Chemung Member. National road W. of Frostburg Md., Ellerslie, Penn.

Atrypa hystrix elongata Webster, See Atrypa rockfordensis elongata Webster.

Atrypa hystrix occidentalis Greger, See Atrypa spinosa Hall.

Atrypa hystirx var planosulcata Webster, See Atrypa planosulcata Webster.

Atrypa impressa Shaler, See Atrypa reticularis (Linneaus)

Atrypa laevis Vanuxem, See Merista laevis (Vanuxem)

Atrypa laevis Rogers, See Meristella laevis (Vanuxem)

Atrypa laevis Vanuxem, See Meristella laevis (Vanuxem)

Atrypa lacunosa Vanuxem (not Sowerby,) See Anastrophia verneuili (Hall)

Atrypa lamellata Hall, See Camarotoechia(?) lamellata (Hall)

Atrypa laticostata Hall, See Camarotoechia contracta (Hall)

Atrypa lentiformis. Hall, Vanuxemi, See Atrypa reticularis (Linneaus)

Atrypa limitaris Hall, See Liorhynchus limitare (Vanuxem)

Atrypa limitaris Rogers, See Liorhynchus limitare (Vanuxem)

Atrypa medialis Vanuxem, See Eatonia medialis (Vanuxem)

Atrypa mesacostalis Hall, See Leiorhynchus mesacostale Hall.

Atrypa missouriensis Miller, See Atrypa reticularis (Linneaus)

Atrypa nucleolata Hall, See Whitfieldella(?) nucleolata (Hall)

Atrypa owenensis Webster.

Atrypa owensis. Webster, Am. Mid. Nat., VII, p. 14 (not pl. 8, f. 12-14) 1921.- Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 141, pl. 26, f. 9-11, 1924; Owen substage, Hackberry stage. Owen Grove.

Atrypa peculiaris Conrad, See Eatonia peculiaris (Conrad)

Atrypa planosulcata Webster

Atrypa hystirx var planosulcata Webster, Am. Nat., XXII, p. 1104, 1888.

Atrypa spimosa(?) C. L. Fenton, Am. Jour. Sci., 4th. ser., XLVIII, p. 372, 1919.

Atrypa planoculcata Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 139-140, pl. 27, f. 13-14, 1924; Cerro Gordo substage. Cypidula beds; Hackberry Stage. Rockford.

Atrypa planosulcata minor Fenton and Fenton

Atrypa planosulcata minor Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.140-141, pl.27, f.17-18, 1924; Gypidula faunul w. Hackberry Stage. Rockford.

Atrypa pleiopleura Conrad, See Camarotoechia (Plethorhyncha) pleiopleura (Conrad)

Atrypa polita Hall, See Athyris polita Hall

Atrypa prisca. Hall, Owen, Billings, Vanuxem, See Atrypa reticularis (Linneaus)

Atrypa reticularis Calvin, See Atrypa devoniana Webster

Atrypa reticularis Conrad, See Katonia peculiaris (Conrad)

Atrypa reticularis C.L. Fenton, See Atrypa devoniana Webster.

Atrypa reticularis alta C.L. Fenton, See Atrypa devoniana form alta, C.E. Fenton

Atrypa reticularis hackberryensis C.L. Fenton, See Atrypa hackberryensis Fenton and Fenton

Atrypa reticularis Hall, See Atrypa devoniana Webster as cited by Fenton and Fenton

Atrypa reticularis (Linneaus)

Anomia reticularis Linneaus, Systema Natural, ed. XII, I, p.1132, 1767.

Anomites reticularis Wahlenberg, Act. Soc. Upsalensis, VIII, p.65, 1821.

Terebratulites priscus Schlotheim, Petrefact., I, p.262, II, p.68, 69, t.17, f.3; t.20, f.4, 1820.

Terebratula affinis, Sowerby, Minn. Conch., IV, p.24, pl. 324, f.2, 1823.

Atrypa chemungensis. Conrad, Jour. Acad. Nat. Sci., Phila., VIII, p.265, 1842.-Vanuxem, Geol. N.Y., Rep. 3d. Dist., pl.182, f.4, 1842.

A trypa affinis. Vanuxem, Geol. N.Y., Rep. 3d. Dist., p.88, f.12, 1842.-Hall, Geol. N.Y., Rep. 4th. Dist., p.88, f.12, 1843.

Atrypa prisca. Vanuxem, Geol. N.Y. Rep. 3d. Dist., p.139, f.5, 1842.-Hall, Geol. N.Y. Rep. 4th. Dist., p.175, f.5; p.198, f.4, 1843.-Owen, Geol. Expl. Iowa, Wisc., Ill.,

pl.12,f.2,10,1844.-Billings,Canadian Nat.Geol.,I, p.474,pl.7,f.11,1856.

Atrypa tribulis Hall,Geol.N.Y.Rep.4th.Dist.,p.271, f.3,1843.

Hipparionox consimilaris Vanuxem,Geol.N.Y.Rep.3d. Dist.,p.132,f.2,1842.

Strophomena ithacensis Vanuxem,Geol.N.Y.Rep.3d.Dist., p.174,f.2,1842.(on the authority of Professor Williams)

Atrypa lentiformis.Vanuxem,Geol.N.Y.Rep.3d.Dist.,p. 163,f.3;p.164,1842.-Hall,Geol.N.Y.Rep.4th.Dist., p.215,f.3,1843.

Terebratula prisca Castelmau,Essai Syst.,Sil.l'Amerique Septentrionale.p.40,pl.13,f.8,1843.

Terebratula reticularis.Hall,Pal.N.Y.,II,p.72,pl.23, f.8;p.270,pl.55,f.5,1842;Am.Jour.Sci.,2d.ser.,XX, p.227,1849.-Yandell and Shumard,Cont.Geol.Ky.,p. 10,1847.

Atrypa missouriensis Miller,Ind.Dept.Geol.Nat.Res., 18th.Ann.Rep.p.315,pl.9,f.19-21,1894.

Atrypa reticularis.Dalman,Vet.Akad.Handl.,pl.4,f,2,1827. Hall,Pal.N.Y.,II,p.72,pl.23,f.8;p.270,pl.55,f.5, 1852;Geol.Surv.Iowa,I,pt.2,p.515,1858;Pal.N.Y.,III p.253,pl.42,f.1a-r,1859;L.Helderberg group.Helderberg mountains,Shoharie,Carlisle,etc.;Penn.;Va. Md.;Pal.N.Y..IV,p.316,pl.52,f.1-3,7-12,pl.53,f.3-19;pl.53A,f.23,23,1867.-Billings,Canadian Nat.Geol I,p.137,pl.2,f.10,1856.-Roemer,Sil.Fauna West Tenn p.69,pl.5,f.9,1860.-Billings,Canaidan Jour.,VI, p.264,f.84-87,1861;Geol.Canada,p.318,f.335,p.384, f.418,1863.-Meek,Trans.Chicago Acad.Sci.,I,p.97, pl.13,f.13,1868.-Meek and Worthen,Ill.Geol.Surv., III,p.432,pl.13,f.11,1868;very universally distributed wherever fossiliferous Up.Sil. and Dev. rocks exist.Rock Island,Ill. and New Buffalo and Independence,Iowa.-Nicholson,Rep.Ontario Pal.,p.79,1874.-Meek,Simpson's Rep.Expl.Great Basin Terr.Utah,p. 347,pl.1,f.6,1876.-Meek,King's U.S.G.S.Expl.40th. Paral.,IV,p.38,pl.1ff.7,pl.3,f.6,1877.-Etheridge, Quart.Jour.Geol.Soc.London,XXXIV,p.596,1878.-Hall, 28th.Rep.N.Y.State Mus.Nat.Hist.,p.162,pl.25,f.44-47,1879.-White,2d.Ann.Rep.Ind.Bur.Statistics and Geol.,p.502,pl.5,f.7-9,1880;10th.Ann.Rep.State Geol.Ind.,p.134,pl.5,f.7-9,1881;11th.Ann.Rep.State Geol.Ind.,p.304,pl.25,f.44-47,1882.-Whitfield, Geol.Wisc.,IV,p.333,pl.26,f.6,1882.-Walcott,U.S.G.

S.Mon.,VIII,p.150,pl.14,f.6,1884.-Beecher and Clarke,N.Y.State Mus.,Mem.I,p.51,pl.4,f.12-20, 1889.-Nettleroth,Ky.Foss.Shells,Mem.Ky.Surv.,p. 91,pl.14,f.12-23,pl.15,f.1,1889.-Foerste,Proc. Boston,Soc.Nat.Hist.,XXIV,p.314,1890.-Whiteaves, Contr.Can.Pal.,I,p.289,pl.37,f.8,1892.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.165,f.153,pl.55,f.1-17,1893.-Keyes,Mo.Geol.Surv.,V,p.97,pl.41,f.13a, b,1894.-Herrick,Geol.Ohio,VII,pl.20,f.7,1895.-Schuchert,U.S.G.S.Bull.87,p.154,1897.-Girty,U.S. G.S.19th.Ann.Rep.pt.3,p.565,1899.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.236,f.136,1899;Moscow shales N.Y.-Kindle,Indiana Dept.Geol.Nat.Res.,25th.Ann. Rep.p.598,pl.6,f.10,1901;Sellersburg beds and Jeffersonville l.s. Throughout the Dev.,-Clarke, N.Y.State Mus.,Bull.65,p.195,pl.30,f.11-18,1903.-Weller,Pal.N.J.,III,p.236,286,pl.21,f.35-37,p. 369,pl.51,f.1-4,1903;Coeymans l.s. and Onondaga l. s.N.J.,-Shimer,.N.Y.State Mus.,Bull.80,p.246,1905.-Clarke,N.Y.State Mus.,Mem.IX,pt.1,p.109,1908.N.Y. State Mus.,Mem.IX,pt.2,p.42,81,1909.-Greger,Am. Jour.Sci1,XXVII,p.376,377,1909.-Grabau and Shimer, N.Am.Index Foss.,I,p.310,f.389a,b,1909.-Cleland, Wisc.Geol.Nat.Hist.,Surv.Bull.21,p.74,pl.13,f.12, 13,1911.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up. Dev.,p.586-587,pl.55,f.6-11,1913;Jennings Form., Chemung Member.National Road W. of Frostburg; near Ellerslie,Penn.Parkhead Member.W.Pawpaw.Woodmont Member,Ithaca Fauna.Woodmont;Hancock,Md;Berkeley Springs,W.Va.-Maynard,Md.Geol.Surv.,L.Dev., p.392-393,pl.67,f.26-28,1913;Helderberg Form., Keyser Member.Devil's Backbone.Coeymans Member.Dawson.Oriskany Form.,Ridgely Member.Cumb.Md.-Prosser,and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.183-185,pl.16,f.4-6,1913;Romney Form.,Hamilton Member, E. bank Evitts Creek below Wolfe Mill,near Cumb., Md.,-Butts,Ky.Geol.Surv.,ser.4,III,pt.2,p.115,pl. 39,f.1-3,1915.-Branson,The Dev. of Mo.,p.198,pl. 50,f.30-40,1922;Bailey l.s.Little Saline Creek, Ste Genevieve Co.,Mo.;Mo.Bur.Geol.& Mines,XVII,2d. ser.,p.97,pl.21,f.6,7,pl.23,f.12,13,1922;Callaway Snyder Creek,Mineola and Cooper l.s.Mo.-Branson and Williams,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p. 145,1922;Grand Tower l.s.Besuvias and St.Laurent. Mo.-Stewart,The Dev. of Mo.,p.245,pl.65,f.2,1922; Little Saline l.s. Ste Genevieve Co.,Mo.

Atrypa impressa Shaler (non Hall) Bull.Mus.Comp. Zool.,IV,p.88,1865;A characteristic foss. of the Sil and Dev. throughout the World.

Atrypa reticularis var ellipsoida (Nettleroth)

Atrypa ellipsoida Nettleroth,Ky.Foss.Shells,p.90,

1889.

Atrypa ellipsoida Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.600,not fig.,1901;Jeffersonville l.s. Falls of the Ohio.(Nettleroth)

Atrypa rockfordensis Fenton and Fenton

Atrypa asper var hystrix Calvin,Iowa Geol.Surv.,VII, p.167,1897.

Atrypa hystrix C.L.Fenton,Am.Jour.Sci.,4th.ser., XLVIII,p.272,1919.

Atrypa rockfordensis.C.L.Fenton,Am.Mid.Nat.,V,p.216, 1918.-Fenton and Fenton,Contr.Mus.Univ.Mich.,I, p.142-144,pl.27,f.4-12,1924;Spirifer zone.Hackberry Stage.

Atrypa rockfordensis elongata Webster

Atrypa hystrix elongata Webster,Am.Nat.,XXII,p.1104, 1888.

Atrypa rockfordensis elongata Fenton and Fenton,Contr Mus.Univ.Mich.,I,p.144-145,pl.32,f.5-7,1924;Spirifer zone.Hackberry Stage.Hackberry Grove.

Atrypa semiplicata Conrad,See Rhynchonella semiplicata (Conrad)

Atrypa singularis Vanuxem,See Eatonia singularis(Vanuxem)

Atrypa spinosa(?) C.L.Fenton,See Atrypa planosulcata Webster.

Atrypa spinosa Hall

Atrypa spinosa.Hall,Geol.N.Y.,Rep.4th.Dist.,p.200, f.1,2,1843.-Schuchert,U.S.G.S.,Bull.87,p.156, 1897.-Kindle,Ind.Dept.Geol.Nat.Res.,25th.Ann. Rep.p.599,pl.6,f.11,1901;Sellersburg beds.Falls of the Ohio and Charlestown,Ind.-Grabau and Shimer, N.Am.Index Foss.,I,p.311,f.392d,1909.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.587-589,pl. 55,f.12,13,1913;Jennings Form.,Chemung Member. Oakland-Redhouse Road;Town Creek,Md;Ellerslie,Penn Woodmont Member,Ithaca.Fauna W. of Pawpaw,W.Va.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.98,pl. 20,f.8-11,pl.23,f.8,9,1922;Snyder Creek shale.Also p.145,Grand Tower l.s.Mo.-Grabau ,Buffalo Soc.Nat. Sci.,Bull.6,p.227,f.137,1899;Moscow shale.N.Y.

Atrypa hystrix occidentalis Greger,Am.Jour.Sci.,XXVII

p.378,1909.

Atrypa spinosa var aspera Hall,Pal.N.Y.,IV,p.322,pl. 53a,f.1-14,18,24,25,1867.

Atrypa subhannibalensis Webster

Atrypa subhannibalensis.Webster,Am.Mid.Nat.,VII,p. 18,(not pl.8,f.15,16),1921.-Fenton and Fenton,Cont. Mus.Univ.Mich.,I,p.145-146,pl.27,f.1-3,1924;Spirifer zone.Hackberry Stage.Hackberry Grove.

Atrypa tribulus Hall,See Atrypa reticularis (Linneaus)

Atrypa unguiformis (Conrad),See Hipparionyx proximus Vanuxem

Atrypa unguiformis Rogers,See Hipparionyx proximus Vanuxem.

Atrypina imbricata (Hall)

Leptocoelia imbricata.Hall.10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.108,1857;Pal.N.Y.III,p.246,pl.38, f.8-13,1861;L.Helderberg group.Helderberg mountains,Schoharie and other places.;Billings,Geol. Canada,p.957,f.452,1863.

Trematospira imbricata.Hall,Trans.Albany Inst.,IV, p.146,1863;16th.Ann.Rep.N.Y.State Cab.Nat.Hist., p.60,1863.

Trematospira ? imbricata Meek and Worthen,Ill,Geol. Surv.,III,p.381,pl.7,f.2a-e,1868.

Trematospira imbricata ? Keyes,Mo.Geol.Surv.,V,p. 96,1894.

Atrypina imbricata.Hall and Clarke,Pal.N.Y.,VIII,pt.2 p.162,pl.53,f.5,6,8-10,1894.-Weller,Pal.N.J.,III, p.312,pl.37,f.17-22,1903;New Scotlandbeds,N.J.-Shimer,N.Y.State Mus.,Bull.80,p.246,1905.-Clarke, N.Y.State Mus.,Mem.IX,pt.1,p.109,1908.-Schuchert Md.Geol.Surv. ,L.Dev.,p.334,pl.68,f.4-6,1913;Helderberg Form.,New Scotland Member.Cherry Run,W. Va.,-Dunbar,Tenn.Geol.Surv.,Bull.21,pl.3,f.2,1919. Tansey,The Dev. of Mo.,p.197-198,pl.50,f.27-29, 1922;Bailey l.s.Little Saline Creek,Ste Genevieve Co.,Mo.

Barriosella subspatulata Meek and Worthen

Barriosella subspatulata.Hall and Clarke,Pal.N.Y.,VIII pt.1,p.63,pl.2,f.14-16,1892.-Kindle,25th.Ann.Rep.

Ind.Dept.Geol.Nat.Res.,p.573,not fig.,1901;New Albany sh.Helt's Mill;Jennings Co.;Delphi;Rockford.

SubGenus BEACHIA Hall and Clarke
(1893.Pal.N.Y.,VIII,pt.2,p.260)

Beachia ovalis.(Hall) Stewart,See Rensselaeria(Beachia) ovalis (Hall)

Beachia suessana,(Hall),Stewart,Weller,See Renssaelaria (Beachia) suessana (Hall)

Genus BILOBITES Linneaus

Bilobites varica(Conrad)

Delthyris bilobata Conrad (not Orthis bilobata Sowerby) 2d.Ann.Rep.N.Y.Geol.Surv.,p.112,118,1838.

Delthyris varica Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.262,pl.14,f.20,1842.

Orthis varica Hall,Pal.N.Y.,III,p.179,pl.24,f.1a-i, 1861;L.Helderberg .Helderberg mountains,Schoharie, N.Y.

Orthis (Dicoelosia) varica Hall,Rep.State Geol.N.Y. for 1882.pl.35,f.38-40,1883.

Bilobites varicus.Beecher,Am.Jour.Sci., 3d.ser.,XLII, p.52,pl.1,f.2-27,1891.-Hall and Clarke,Pal.N.Y., VIII,pt.1,p.204,205,224,pl.5b,f.15-19,1892.-Dunbar,Tenn.Geol.Sur.Bull.21,pl.2,f.4,1919.

Bilobites varica.Weller,Pal.N.J.,III,p.306,pl.35,f. 14-18,1903;New Scotland-Becraft Fauna.N.J.-Tansey,The Dev. of Mo.,p.185-186,pl.46,f.18-25,1922; Bailey l.s.Little Saline Creek,Ste Genevieve Co., Mo.

Bilobites varicus Beecher,See Bilobites varica(Conrad)

Bilobites varicus Dunbar,See Bilobites varica(Conrad)

Bilobites varicus Hall and Clarke,See Bilobites varica (Conrad)

Genus BRACHYPRION Shaler

Brachyprion sp. Stewart

Brachyprion sp. Stewart, The Dev. of Mo., p.236, pl.62, f. 8-10, 1922; Little Saline l.s. Ste Genevieve Co., Mo.

Brachyprion majus Clarke

Brachyprion majus. Clarke, N.Y. State Mus., Mem. III, p.54, pl.8, f.8-13, 1900; N.Y. State Mus., Mem. IX, pt.1, p.190, pl.36, f.1-6, 1908.

Brachyprion cf majus Tansey, The Dev. of Mo., p.235-236, pl.62, f.6, 7, 1922; Little Saline l.s. Ste Genevieve.

Strophomena inequiradiata Billings, Pal. Fossils, II, pt. 1, p.24 (not fig., 13), pl.2, f.4, 1874.

Genus CAMARIUM Hall
(1858. Pal. N.Y., III, p.486)

Camarium elongatum Hall, See Merista typa (Hall)

Camarium princeps Hall, See Meristella princeps Hall

Camarium typum Hall, See Merista typa (Hall)

Genus CAMAROPHORIA Hall

Camarophoria eucharis Hall, See Camarospira eucharis Hall

Camarophoria nora Belanski

Camarophoria nora Belanski, Iowa Studies Nat. Hist., n. ser., 148, XII, No.7, p.28, pl.4, f.15-19, 1928; Prismatophyllum zonule. Rudd, Iowa.

Camarophoria paupera Belanski

Camarophoria paupera Belanski, Iowa Studies Nat. Hist., n. ser., 148, XII, No.7, p.27, pl.4, f.6-14, 1928; Mason City substage. Iowa.

Camarophoria perplexa Belanski

Camorpphia perplexa Belanski, Iowa Studies Nat. Hist., n. ser., 148, XII, No.7, p.31, pl.4, f.31-34, 1928; Cerro Gordo substage. Iowa.

Camarophoria planodorsata Belanski

Camarophoria planodorsata Belanski, Iowa studies Nat. Hist., n. ser., 148, XII, No. 7, p. 30, pl. 4, f. 27-30, 1928 Nora substage. Iowa.

Camarophoria prolifica Belanski

Camarophoria prolifica Belanski, Iowa Studies Nat. Hist n. ser., 148, XII, No. 7, p. 32, pl. 4, f. 35-40, 1928; Owen substage. Iowa.

Camarophoria retziaformis Belanski

Camarophoria retziaformis Belanski, Iowa Studies Nat. Hist., n. ser., 148, XIImNo. 7, p. 29, pl. 4, f. 20-26, 1928; Prismatophyllum zonule. Rudd, Iowa.

Camarophoria swallovi (Branson)

Pugnoides swallovi Branson, Dev. of Mo., p. 92, pl. 16, f. 13-15, 1922; Mineola l. s. Mo.

Camarophoria swallovi Belanski, Iowa Studies Nat. Hist. n. ser., 148, XII, No. 7, p. 25, pl. 4, f. 1-5; 1928; "Acervularia profunda beds" Iowa.

Genus CAMAROSPIRA Hall and Clarke

Camarospira eucharis Hall

Camarophoria eucharis Hall, Pal. N. Y., IV, p. 368, pl. 57, f. 40-45, 1867.

Camarospira eucharis Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p. 661, pl. 12, f. 5, 1901; Jeffersonville l. s. Bunker Hill; Pipe Creek Falls; Charlestown, Ind.

Genus CAMAROTOECHIA Hall and Clarke
(1893. Pal. N. Y., VIII, pt. 2, p. 189)

Camarotoechia sp. Prosser and Kindle

Camarotoechia sp. Prosser and Kindle, Md. Geol. Surv., Mid. & Up. Dev., p. 175, pl. 15, f. 5, 1913; Romney Form., Hamilton Member. Flinstone Creek in Gilpin; near Cumberland, Md.

Camarotoechia sp. Shimer.

Camarotoechia sp. Shimer, Can. Geol. Surv., Sec. 45, p. 45, 1926; Up. Dev. Minnewanka Region

Camarotoechia sp.Weller

Camarotoechia sp.Weller,Pal.N.J.,III,p.381,not fig., 1903;Monroe Shales.N.J.

Camarotoechia altiplicata (Hall)

Rhynchonella altiplicata.Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.72,f.1-4;1857;Pal.N.Y.,III,p.231, pl.33,f,2a-k,1859;L.Helderberg group.Albany and Schoharie Cos.,N.Y.-Weller,Pal.N.J.,III,p.382, pl.29,f.24-27,1903;Coeymans l.s.N.J.

Camarotoechia(?) altiplicata Schuchert,Md.Geol.Sur., L.Dev.,p.351,pl.63,f.56,1913.

Camarotoechis banffensis Warren

Camarotoechia benffensis Warren.Can.Geol.Surv.,Dept. Mines sec.134,Mem.153,p.51-52,pl.4,f.7-9,1927;Up Dev.,Minnewanka l.s.Sulphur mountain,Banff Area, Alberta.

Camarotoechia barrandei (Hall)

Camarotoechia barrandei Weller,Pal.N.J.,III,p.351, 1903;Oriskany Form.Near State line,N.J.

Camarotoechia (Plethorhyncha)barrandii (Hall) See Plethorhyncha barrandii (Hall)

Rhynchonella barrandi Hall,10th.Ann.Rep.N.Y.State Cab Nat.Hist.,p.82,f.1-3,p.84,f.4,1857;Pal.N.Y.,III,p. 442,pl.103,f.3-8,1861;Oriskany s.s.Albany and Schoharie Cos.,N.Y.;Palaeoz.Foss.,p.42,1857.

Rhynchonella septata Hall,Pal.N.Y.,III,p.443,pl.103, f.2,1861;Oriskany s.s.Albany Co.,N.Y.

Plethorhyncha barrandi Hall and Clarke,Pal.N.Y.,VIII, pt.2,p.191,1893.

Camarotoechia (Plethorhyncha) barrandii Schuchert,Md. Geol.Surv.,L.Dev.,p.359,pl.64,f.2,3,1913;Oriskany Form.,Ridgely Member.Knobly mountain near Cumb., Md.Warren Point,Penn.

Camarotoechia (Plethorhyncha) barrandii var fitchana (Hall)

Rhynchonella fitchana.Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.85,1857;Pal.N.Y.,III,p.441,pl.103, f.1a,b,1861;Oriskany s.s.Carlisle,Schoharie Co.,N.

Y.

Camarotoechia (plethorhyncha) barrandii var fitchana Schuchert,Md.Geol.Surv.,L.Dev.,p.359-360,pl.64,f. 4,5,1913;Oriskany Form.,Ridgely Member,Cumb.Md.

Camarotoechia (Plethorhyncha) barrandii Schuchert,See Plethorhyncha barrandii (Hall)

Camarotoechia bialveata Dunbar,See Rhynchonella bialveata Hall

Camarotoechia (Plethorhyncha) campbellana (Hall)

Rhynchonella campbellana Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.79,1857;Pal.N.Y.,III,p.239,pl.43, f.2,1859;L.Helderberg group.Helderberg mountains, Albany County,N.Y.

Uncinulus campbellanus Schuchert,U.S.G.S.,Bull.87, p.458,1897.

Camarotoechia (Plethorhynchus) campbellana Schuchert, Md.Geol.Surv.,L.Dev.,p.354-355,pl.63,f.17-19,1913; Helderberg Form.,New Scotland Member.Warren Point, Penn.

Camarotoechia carolina Hall

Rhynchonella (Stenochisma)carolina Hall;Pal.N.Y.,4, p.337,pl.54,f.14-19,1867.

Camarotoechia carolina Kindle,25th.AnnaRep.Ind.Dept. Geol.Nat.Res.,p.585,not fig.,1901;Corniferous (Jeffersonville l.s.Falls of the Ohio.)

Camarotoechia congregata (Conrad)

Atrypa congregata Conrad,5th.Ann.Rep.N.Y.Geol.Surv., p.55,1841.

Rhynchonella (Stenochisma)congregata,Hall,Pal.N.Y., IV,p.341-342,pl.54,f.44-59,1867.

Camarotoechia congregata.Hall and Clarke,Pal.N.Y.,VIII pt.2,p.192,pl.57,f.15-27,1893.-Schuchert,U.S.G.S, Bull.87,p.165,1897.-Kindle,Ind.Dept.Geol.Nat.Res., 25th.Ann.Rep.,p.585,1901;Jeffersonville l.s.Pipe Creek Falls.-Clarke,N.Y.State Mus.,Bull.65,p.303, 1903.-Prosser and Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.171-173,pl.14,f.15-17,1913;Romney Form,, Hamilton Member.B.& O.R.R.Cut 21st.Bridge;S.E. Cumb.Romney-Hanging Rock Road N.Romney,W.Va(?); B.& O.R.R.Cut Hancock Station,W.Va.-Grabau,Buffalo

Soc.Nat.Sci.,Bull.6,p.231,f.141A,1899.Hamilton group.Alden,Erie Co.,N.Y.-Branson and Williams,Dev of Mo.,p.142-143,pl.34,f.7-12,1922.

Camarotoechia congregata var parkheadensis Clarke and Swartz.

Camarotoechia congregata var parkheadensis Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.575-577, pl.53,f.11-16,1913;Jennings Form.,Parkhead Member. Allegany Grove;2 mi.W.Pawpaw,W.Va.,Tonoloway;Hancock,Md.Berkeley Springs, W.Va.

Camarotoechia contracta (Hall)

Atrypa contracta Hall,Geol.N.Y.,IV,Surv.,4th.Dist., Table 66,f.2,3,1843.

Atrypa laticostata Hall (non Phillips) idem.,Table 66,f.1,1843.

Rhynchonella (Stenochisma)contracta Hall,Pal.N.Y., IV,p.351,pl.56,f.26-39,1867.

Rhynchonella contracta Herrick,Bull.Dennison Univ.,III p.39,pl.10,f.9;idem.,IV,p.23,pl.11,f.21,1888.

Camarotoechia contracta.Hall and Clarke,Pal.N.Y., VIII,pt.2,p.192,pl.57,f.28-32,49,1893.-Grabau and Shimer,N.Am.Index Foss.,I,p.288,f.352 d-g,1909.-Kindle,U.S.G.S.Bull.391,p.32,pl.6,f.1-2a,1909; Ouray ls.Glenwood Shoshone;Rockwood,Colo;Hillsboro,N.M.,-Prosser,Geol.Surv.,Ohio,4thser.,Bull. 15,544-545,pl.32,f.14-20,1912;Chagrin Form.Chippewa Creek;Tinkers Creek at Bedford,Mill Creek 2 mi.N.Jefferson,Ohio.-Clarke,and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p1577-578,pl.53,f.18-21,1913; Jennings Form.,Chemung Member.Allegany Grove;National Road on Polish Mountain,Md.

Camarotoechia contracta? Girty,20th.Ann.Rep.U.S.G.S. pt.2,p.57,pl.7,f.2-4,1900;Ouray l.s.Engineer mountain;Gunnison;Durangp;Glenwood Springs,Colo.

Camarotoechia depressa (Kindle)

Rhynchonella depressa Kindle,Ind.Dept.Geol.Nat.Res., 25th.Ann.Rep.p.589-590,pl.7,f.5,5a,5b,1901;Jeffersonville l.s.Pipe Creek Falls;Bunker Hill;Charlestown.

Camarotoechia depressa Branson,Dev. of Mo.,p.90,pl. 24,f.16,1922;Snyder Creek shale.Callaway Co.,Mo.

Camarotoechia dotis Hall

Camarotoechia dotis.Hall,Pal.N.Y.,IV,p.344,pl.54, 1867.Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.231,f. 141,1899;Encrinal l.s.Avery's Creek,Erie Co.,N.Y.

Camarotoechia endlichi Girty,See Camarotoechia(Plethorhyncha) endlichi (Meek)

Camarotoechia (Plethorhyncha) endlichi (Meek)

Rhynchonella endlichi.Meek,Bull.U.S.G.S.Terr.2d.ser. No.1,p.46,1875.-White,13th.Ann.Rep.U.S.Geol.& Geog.Surv.Terr.,p.133,pl.36,f.2;pl.33,f.4,1883.

Camarotoechia endlichi Girty,U.S.G.S.,20th.Ann.Rep. pt.2,p.56,pl.6,f.1-4,pl.7,f.1,1900;Ouray l.s.Engineer mountain.Gunnison;Durango,Colo.

Camarotoechia (plethorhynchus) endlichi,Girty,U.S.G.S pt.2,p.756,f.1-4;pl.9,f.1,1902;-Kindle,U.S.G.S. Bull.391,p.21,pl.7,f.1,2;pl.6,f.10-11a,1909;Ouray l.s.Glenwood;shoshone;Rockwood,Colo;Hillsboro, N.M.

Camarotoechia eximia (Hall)

Atrypa eximia Hall,Geol.N.Y.,4th.Dist.,Tab.66,f.4, 1843.

Rhynchonella (Stenochisma) eximia Hall,Pal.N.Y.,IV, p.348,pl.55,f.1-8,1867.

Camarotoechia eximia.Hall and Clarke,Pal.N.Y.,VIII,pt 2,p.192,pl.57,f.44,45,1893.-Clarke and Swartz,Md. Geol.Surv.,Mid. & Up.Dev.,p.579-580,pl.54,f.1-4, 1913;Jennings Form.,Chemung Member.Allegany Grove; Town Creek;Md. 2 mi.W.Pawpaw,W.Va.Parkhead Member. S.E.Cumberland,Md.

Camarotoechia gregeri Branson

Camarotoechia gregeri Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.91,pl.24,f.5-9,1932;Snyder Creek shale.

Camarotoechia horsfordi (Hall)

Rhynchonella horsfordi Hall,13th.Rep.N.Y.State Cab. Nat.Hist.,p.87,1860.

Rhynchonella (Stenochisma) horsfordi Hall,Pal.N.Y.,IV p.339,pl.54,f.7-9,1867

Camarotoechia horsfordi.Hall and Clarke,Pal.N.Y.,VIII

pt.2,p.192,pl.52,f.7-9,1893;-Grabau,Buffalo Soc. Nat.Sci.,Bull.6,p.229,f.139;1899;Moscow shale,-Grabau and Shimer,N.Am.Index Foss.,I,p1287,f. 354a,b,1909.-Clarke and Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.578,pl.53,f.22-25,1913;Jennings Form., Parkhead Member.W. Pawpaw,W.Va.

Camarotoechia lamellata (Hall)

Atrypa lamellata Hall,Pal.N.Y.,II,p.339,pl.74,f.11a, b,1852.

Rhynchonella(?) lamellata Schuchert,U.S.G.S.,Bull.87, p.359,1897.

Camarotoechia (?) lamellata Maynard,Md.Geol.Surv.,L. Dev.,p.352,pl.63,f.9,10,1913;Helderberg Form., Keyser Member.Pinto;Cash Valley Md.

Camarotoechia litchfieldensis (Schuchert)

Atrypa sp.Hall,Pal.N.Y.,II,p.330,pl.74,f.3,12,1852.

Rhynchonella agglomerata Weller,Pal.N.J.,III,p.234-235,pl.21,f.5-11,1903.

Rhynchonella(?) litchfieldensis Schuchert,Am.Geol. XXI,p.167,f.? 1903.

Camarotoechia litchfieldensis Maynard,Md.Geol.Surv., L.Dev.,p.353,pl.63,f.11-14;1913;Helderberg Form. Keyser Member.At all exposures of the Chonetes jerdeyensis zone.

Camarotoechia nitida Kindle

Camarotoechia nitida Kindle,25th.Ann.Rep.Ind.Geol. Nat.Res.,p.586,pl.7,f.8,8a,1901;Jeffersonville l.s.Pipe Creek Falls.

Camarotoechia oblata Clarke,See Camarotoechia (Plethorhyncha) pleiopleura (Conrad)

Camarotoechia orbicularis (Hall)

Rhynchonella orbicularis Hall,N.Y.State Cab.Nat.Hist. p.88,1860.

Rhynchonella (Stenochisma) orbicularis Hall,Pal.N.Y., IV,p.353,pl.55,f.40-46,1867.

Camarotoechia orbicularis.Hall and Clarke,Pal.N.Y., VIII,pt.2,p.192,pl.57,f.46-48,50,1893.-Prosser, Geol.Surv.Ohio,Bull.15,4th.ser.,p.532,pl.28,f.7,

8,1913;Chagrin Form.Madison-Thompson Road S. of Madison;Cherry Valley Township,Ohio.-Clarke and Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.579,pl.53, f.26,27,1913;Jennings Form.,Chemung Member,Trout Run near Mountain Lake Park;W. of Pawpaw,W.Va.

Camarotoechia oriskania Rowe

Camarotoechia oriskania Rowe,Md.Geol.Surv.,L.Dev.,p. 351-352,pl.63,f.7,8,1913;Oriskany Form.,Ridgely Member.Knobly Mountain near Cumb.,Md.

Camarotoechia (Plethorhyncha) pleiopleura (Conrad)

Atrypa pleiopleura Conrad,5th.Ann.Rep.Geol.Surv.,N.Y. p.55,1841.

Rhynchonella oblata Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.86,1857;Pal.N.Y.,III,p.439,pl.102,f. 1,2a-d,1861;Oriskany s.s.Albany and Schoharie Cos.,N.Y.;Palaeozoic Foss.,p.46,1857.

Rhynchonella pleiopleura Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.86,f.1-4,1857;Pal.N.Y.,III,p.440, pl.102,f.3a-c,4a-c,1859;Oriskany s.s.Helderberg Mountains,N.Y.;Palaeozoic Foss.,p.46,1857.

Rhynchonella multistriata Hall,10th.Ann.Rep.N.Y. State Cab.Nat.Hist.,p.85,1857;Pal.N.Y.,III,p.440, pl.102,f.3(? pl.106,f.3) 1859;Oriskany s.s.Helderberg Mountains,Palaeozoic Foss.,p.45,1857.

Plethorhyncha pliopleura Hall and Clarke,Pal.N.Y., VIII,pt.2,p.191,1893.

Camarotoechia oblata Clarke,N.Y.State Mus.,Mem.III, No.3,p.41,pl.5,f.22,1900.

Camarotoechia (Plethorhyncha) pleiopleura Schuchert, Md.Geol.Surv.,L.Dev.,p.360-361,pl.64,f.6,1913; Oriskany Form.,Ridgely Member.Shriver Hill Ridge; Cumberland;Collier's Run,Md.

Camarotoechia (Plethorhyncha) praespeciosa Schuchert.

Camarotoechia (plethorhyncha) praespeciosa Schuchert, Md.Geol.Surv.,L.Dev.,p.355-356,pl.63,f.20,21,1913; Helderberg Form.,Becraft Member.Ernstville,Md; Covington,Va.

Camarotoechia prolifica Hall

Rhynchonella (Stenochisma) prolifica Hall,Pal.N.Y.,IV p.343,pl.54a,f.1-10,1867.

Stenochisma prolifica Keyes, Johns Hopkins Univ. Circ., XI, p.29, 1891.

Camarotoechia prolifica. Hall and Clarke, Pal. N.Y., VIII pt.2, p.192, pl.57, f.42, 43, 1893.-Schuchert, U.S.G.S. Bull.87, p.168, 1897.-Prosser and Kindle, Md. Geol. Sur., Mid.& Up. Dev., p.173-174, pl.15, f.1-3, 1913; Romeny Form., Onondaga Member. E.& O.R.R. Cut 21st. Bridge, Comb. Md.-Branson and Williams, Dev. of Mo., p 143, pl.34, f.1, 2, 1922; Ste Laurent l.s. Perry Co., Mo.

Camarotoechia sappho Hall

Rhynchonella sappho Hall, 13th. Rep. N.Y. State Cab. Nat. Hist., p.87, 1860.

Rhynchonella (Stenochisma) sappho Hall, Pal. N.Y., IV, p.340-341, pl.54, f.33-43; pl.55, f.47-52, 1867.

Camarotoechia sappho Hall and Clarke, Pal. N.Y., VIII, pt.2, p.193, pl.57, f.10-14, 1894.-Schuchert, U.S.G.S. Bull.87, p.168, 1897.-Grabau, Buffalo Soc. Nat. Sci., Bull.6, p.230, f.140, 1899; Encrinal ls. N.Y.-Kindle, Ind. Dept. Geol. Nat. Res., 25th. Ann. Rep. p.584, pl.7, f. 4, 1901; Jeffersonville ls. and Bellersburg beds. Charlestown and Pipe Creek Falls.-Grabau and Shimer. N. Am. Index Foss., I, p.288, f.354c, d, 1909.- Prosser and Kindle, Md. Geol. Surv., Mid. & Up. Dev., p. 174-175, pl.15, f.4, 1913; Romney Form., Hamilton Member. Western Md. Just N. Romney, W. Va.-Branson and Williams, Dev. of Mo., p.143-144, pl.34, f.15-17, 1922; Grand Tower ls. (?)

Camarotoechia saxatilis (Hall)

Rhynchonella (Stenochisma) contracta var saxatilis Hall, Pal. N.Y., IV, p.417, pl.54A, f.44-51, 1867.

Camarotoechia saxatilis Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.123-124, pl.35, f.13-17, 1924; Spirifer zone. Hackberry Stage.

Camarotoechia shimeri Warren

Camarotoechia shimeri Warren, Can. Geol. Surv., Dept. Mines ser.134, Mem.153, p.52-53, pl.4, f.5, 6, 1927; Up. Dev. of Minnewanka ls. Sulphur mountain, Banff Area, Alberta.

Camarotoechia (Plethorhyncha) speciosa (Hall)

Rhynchonella speciosa. Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.81, 1857; Pal. N.Y., III, p.444, pl. 103 A, f.1-6, 1859; Oriskany ss. Cumb., Md.; Pal. Foss., p.41, 1857.-Meek and Worthen, Ill. Geol. Surv., III, p.

394,pl.8,f.9,1868;Bald Rock,Jackson Co.Cherry ls.same age Oriskany ss.N.Y.series.

Plethorhyncha speciosa Hall and Clarke,Pal.N.Y., VIII,pt.2,p.191,pl.58,f.29-37,1893.

Camarotoechia (Plethorhyncha) speciosa Schuchert,Md. Geol.Surv.,L.Dev.,p.356-357,pl.63,f.22-27,1913; Oriskany Form.,Ridgely Member.Knobly Mountain near Cumb.,Md.Pendleton Co.,W.Va.

Camarotoechia (Plethorhyncha) speciosa var remsayi (Hall)

Rhynchonella ramsayi Hall,Pal.N.Y.,III,p.446,pl. 101a,f.7,8a,b,1859;Oriskany ss.Cumb.,Md.

Camarotoechia(Plethorhyncha) speciosa var ramsayi Schuchert,Md.Geol.Surv.,L.Dev.,p.358,pl.64,f.1, 1913;Oriskany Form.,Ridgely Member.Cumb.,Md.

Camarotoechia tethys(Billings)

Rhynchonella(Stenochisma) tethys Hall,Pal.N.Y.,IV, pl.54,f.1-8,1867.

Camarotoechia tethys Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.586,1901;Sellersburg beds and Jeffersonville ls.Charlestown;Bunker Hill;Pipe Creek Falls.

Camarotoechia walleri Branson and Williams.

Camarotoechia waller Branson and Williams,Dev. of Mo. p.144,pl.34,f.3-6,1922;Grand Tower ls.Little Saline Creek,Ste Genevieve Co.,Mo.

Genus CENTRONELLA Billings
(1859.Can.Nat.& Geol.IV,p.131)
(1893.Pal.N.Y.,VIII,pt.2,p.265)

Centronella glansfagea (Hall)

Rhynchonella glansfagea Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.125,f.1-6,1857.

Centronella glansfagea.Hall,Pal.N.Y.,IV,p.399,pl.61a f.1-21,25,26,1867.-Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.631-632,pl.11,f.1,1a,b,1901;Sellersburg beds.Charlestown and Falls of the Ohio.-Clarke,N.Y.State Mus.,Mem.IX,pt.1,p.163,pl.25,f. 1-4,1908.-Stewart,Dev. of Mo.,p.242,pl.64,f.4-7, 1922;Little Saline ls.Ste Genevieve Co.,Mo.

Centronella impressa Hall

Centronella impressa.Hall,Pal.N.Y.,IV,p.402,pl.61, 1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.234,f. 146,1899;Encrinal ls.Eighteen Mile Creek,Erie Co., N.Y.

Centronella navicella C.L.Fenton,See Cranaenella navicella (Hall)

Centronella (?) navicella Hall and Clarke,See Cranaenella navicella (Hall)

Centronella ovata Hall

Centronella ovata.Hall,Pal.N.Y.,IV,p.419,pl.61A,f. 47-49,1867.-cf ovata,Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.179,pl.16,f.1-3,1913;Romney Form.,Onondaga Member,E. of Oldtown,near Cumb.,Md.

Centronella ? subrhomboidea Weller

Centronella ? subrhomboidea Weller,Pal.N.J.,III,p. 311-312,pl.37,f.7-10,1903;New Scotland-Becraft Faunas.

Genus CHONETES Fischer de Waldheim
(1838.Oryctographie du Gouv.de Moscow,pt.2,p.134)
(1892.Pal.N.Y.,VIII,pt.1,p.303-309)

Chonetes sp.Girty

Chonetes sp.Girty.U.S.G.S,20th.Ann.Rept.pt.2,p.41, 1900;Ouray ls.Gunnison,Colo.

Chonetes sp.Weller

Chonetes sp.Weller,Pal.N.J.,III,p.381,1903;Monroe sh.

Chonetes sp.Weller

Chonetes sp.Weller,Pal.N.J.,III,p.380-381,pl.53,f.4, 1903;Monroe sh.Greenwood Lake,N.J.

Chonetes acutiradiatus Hall

Chonetes acutiradiatus.Hall,Pal.N.Y.,IV,p.120,pl.20, f.5,1867.-Kindle, 25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.603-604,1901;Jeffersonville ls.Falls of the Ohio.

Chonetes arcuata Hall,See Chonetes arcuatus Hall

Chonetes arcuatus Hall

Chonetes arcuata Hall,Pal.N.Y.,IV,p.119,pl.20,f.7a-f, 1867.

Chonetes arcuatus.Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res..p.601-602,pl.4,f.6,6a,1901;Jeffersonville ls.Paris Crossing.-Weller,Pal.N.J.,III,p.367-368, pl.51,f.18,21,1903;Newfoundland Grit.N.J.

Chonetes carinatus Clarke,See Chonetes coronatus(Conrad)

Chonetes complanata Hall,See Chonostrophia complanata (Hall)

Chonetes coronata Hall,See Chonetes coronatus (Conrad)

Chonetes coronata Hall and Clarke,See C.coronata(Conrad)

Chonetes coronatus (Conrad)

Strophomena carinata Conrad,Jour.Acad.Nat.Sci.,Phila. VIII,p.257,pl.14,f.13,1842.

Strophomena syrtalis Conrad,Jour.Acad.Nat.Sci.,Phila. VIII,p.253,pl.14,f.1,1842.

Chonetes littoni Norwood and Pratten,Jour.Acad.Nat. Sci.,Phila.,III,p.25,pl.2,f.4,1854.

Chonetes coronata Hall,10th.Rep.N.Y.State Cab.Nat. Hist.,p.146,f.1,2,1857;Pal.N.Y.,IV,p.133-137,pl. 21,f.9-12,-Keyes,Johns Hopkins Univ.Circ.,XI,p. 29,1891.-Hall and Clarke,Pal.N.Y.,VIII,pt.1,pl116, f.10,11,24,26,33,39,41,43,1892.

Chonetes coronatus.Schuchert,U.S.G.S.Bull.87,p.173, 1897.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res., p.602-603,pl.4,f.7,1901;Sellersburg beds and Jeffersonville ls.Lexington;Charlestown and Deputy Weller,Pal.N.J.,III,p.380,pl.53,f.6,1903;Monroe shale.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.203, f.110,1899;Encrinal ls. and Demissa beds.N.Y.- Grabau and Shimer,N.Am.Index Foss.,1,p.236,f.288, 1909.-Prosser and Kindle,Md.Geol.Surv.,Mid. & Up. Dev.,p.148-150,pl.11,f.18-21,1913;Romney Form., Hamilton Member,Cumb.,Md.;B.& O.R.R.Cut Hancock Station,W. Va.-Branson and Williams,Dev. of Mo., p.138-139,pl.32,f.1-3,1922;St.Laureht ls.

Chonetes carinatus Clarke,N.Y.State Mus.,Bull.65,p. 209,1903.

Chonetes deflecta Hall,See Chonetes vicinus(Castelnau)

Chonetes deflecta Hall and Clarke, See Chonetes vicinus (Castelnau)

Chonetes hudsonica Clarke, See Chonetes hudsonicus (Clarke

Chonetes hudsonica Weller, See Chonetes hudsonicus Clarke

Chonetes hudsonicus Clarke

Chonetes hudsonica. Clarke, N.Y. State Mus., Mem. III, No. 3, p.49, pl.7, f.1-6.-Weller, Pal. N.J., III, p.347, pl. 46, f.11, 1903; Oriskany. N.J.

Chonetes hudsonicus Schuchert, Md. Geol. Surv., L.Dev., p.337-338, pl.61, f.15, 1913; Helderberg Form., Becraft Member. Ernstville. Oriskany Form., Ridgely Member. Cash Valley; Winchester Road near Cumb., Shriver Member. Williams Road near Cumb; Monster Rock near Keyser, W.Va.

Chonetes(?) iowensis Owen, See Pholidostrophia iowaensis (Owen)

Chonetes jerseyensis Weller

Chonetes jerseyensis. Weller, Ann. Rep. Geol. N.J., for 1899, p.8, 1900; Pal. N.J. III, p.230, pl.20, f.11-16, 1903.-Maynard, Geol. Surv. Maryland, L.Dev., p.338-339, pl.61, f.17-19, 1913; Helderberg Form., Keyser Member. Dawson; Cookerly; Cash Valley; Hancock; Tonoloway, Md; Keyser, W.Va.

Chonetes jerseyensis var spinosus Maynard

Chonetes jerseyensis var spinosus Maynard, Md. Geol. Surv., L.Dev., p.339, pl.61, f.20, 1913; Helderberg Form., Keyser Member. Hancock, Md.

Chonetes laticosta Hall, See Chonetes mucronatus Hall

Chonetes lepida Hall, See Chonetes lepidus Hall

Chonetes lepidiformis Clarke and Swartz

Chonetes lepidoformis Clarke and Swartz, Md. Geol. Sur. Mid1& Up. Dev., p.561-562, pl.50, f.6-10, 1913; Jennings Form., Parkhead Member. National Road E. of Millstone; Polish mountain E. of Gilpin.

Chonetes lepidus Hall

Chonetes lepida Hall, 10th. Ann. Rep. N.Y, State Cab. Nat. Hist., p.158, 1857.

Chonetes lepidus,Hall Pal.N.Y.,IV,p.132,142,pl.21, p.5a-e,pl.22,f.12,13,1867.-Schuchert,U.S.G.S.Bull. 87,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.203, f.109,1899;Goniatite beds of Naples sh;Hamilton sh. On theLake Shore.-Clarke,N.Y.State Mus.,Bull. 65,p.211,1903.-Grabau and Shimer,N.Am.Index Foss., II,p.237,f.289e,1907.-Prosser and Kindle,Md.Geol. Surv.,Mid.& Up.Dev.,pl153-155,pl.12,f.9-13,1913; Romney Form.,Onondaga Member.B.& O.R.R.Cut 21st. Bridge,Cumb.,Md;Just N.Romney,W.Va.;B.& O.R.R.cut Hancock Station,W.Va.-Kindle,25th.Ann.Rep.Ind.Dept Geol.Nat.Res.,p.572,pl.1,f.7,1901;New Albany sh. Helt's Mill and Scipio,Jennings Co.,New Albany, Lexington and Bartholomew Co.

Chonetes littoni Norwood and Pratten,See Chonetes coronatus (Conrad)

Chonetes manitobiensis Whiteaves

Chonetes manitobiensis.Whiteaves,Contr.Can.Pal.,I,p. 281,pl.37,f.1,2,1892.-Kindle,25th.Ann.Rep.Ind.Dept Geol.Nat.Res.,p.600-601,pl.4,f.10,1901;Sellersburg beds.Little Rock Creek,Cass Co.,Ind.

Chonetes marylandicus Prosser and Kindle

Chonetes marylandicus Prosser and Kindle,Md.Geol.Sur. Mid.& Up.Dev.,p.157-158,pl.13,f.1-6,1913;Romney Form.,Hamilton Member.B.& O.R.R.Cut 21st.Bridge, Cumb.,Md.

Chonetes minutus Prosser

Chonetes minutus Prosser,Geol.Sur.,Ohio.4th.ser.,Bull 15,p.540-541,pl.32,f.1-5,1912;Chagrin Form.,S.of Monroe Center,Ashtabula County,Ohio.

Chonetes mucronata Hall,See Chonetes mucronatus Hall.

Chonetes mucronata Hall and Clarke,See Chonetes mucronatus.Hall.

Chonetes mucronatus Hall

Strophomena mucronata Hall,Geol.N.Y.,Rep.4th.Dist.,p. 181,f.3,on page 180,1843.

Chonetes laticosta Hall,10th.Rep.N.Y.State Cab.Nat. Hist.,p.119,1857.

Chonetes mucronata.Hall,Pal.N.Y.,IV,p.124-126,pl.20, f.1,2;pl.21,f.1,1867.-Hall and Clarke,Pal.N.Y.VIII pt.1,pl.16,f.6,7,1892.

Chonetes mucronatus. Schuchert, U.S.G.S., Bull.87, p.176, 1897.-Grabau, Buffalo Soc. Nat. Sci., Bull.6, p.201, f. 105, 1899; Moscow sh.; Encrinal ls.; Marcellus sh.; in Athol Springs and Bay View Cliffs.-Kindle, Ind. Dept. Geol. Nat. Res., 25th. Ann. Rep., p.606, pl.4, f.11, 1901; Sellersburg beds and Jeffersonville ls. Charlestown; Falls of the Ohio; Sellersburg.-Clarke, N.Y. State Mus., Bull.65, p.211, 1903.-Grabau and Shimer, N. Am. Index Foss., I, p.235, f.286, 1909.-Kindle, U.S.G.S., Bull.508, p.71, pl.3, f.13, 1912.-Prosser and Kindle, Md. Geol. Surv., Mid.& Up. Dev., p.146-148, pl.11 f.11-17, 1913; One of the most abundant species of the Onondaga Fauna found nearly everywhere in it from N.Y. to S.W.Va.-Branson and Williams, Dev. of Mo., p.139, pl135, f.13, 14, 1922; Grand Tower ls. Little Saline Creek, Perry Co., Mo.

Chonetes muricata Hall, See Strophalosia muricata (Hall)

Chonetes oaklandensis Clarke and Swartz

Chonetes oaklandensis Clarke and Swartz, Md. Geol. Sur., Mid.& Up. Dev., p.562-563, pl.50, f.14-18, 1913; Jennings Form., Chemung Member. Oakland-Altamont Road; Allegany Grove; Cherry Creek.

Chonetes rowei Schuchert

Chonetes rowei. Schuchert, Md. Geol. Surv., L. Dev., p.336, pl.61, f.14, 1913; Oriskany Form., Ridgely Member. Miller's Spring near Cumb., Md; Pendleton Co., W. Va.-Clarke and Swartz, Md. Geol. Surv., Mid.& Up. Dev., p. 563-564, pl.50, f.19, 1913; Jennings Form., Parkhead Member. Millstone,

Chonetes rugosus Kindle

Chonetes rugosus Kindle, U.S.G.S., Bull.508, p.72, pl.4, f.5-7, 1912; Md. Geol. Surv., Mid.& Up. Dev., p.158-159, pl.13, f.7-9, 1913; Romney Form., Onondaga Member, Williams Road S.E. Cumb., Md.

Chonetes scitula Hall, See Chonetes scitulus Hall

Chonetes scitula Hall and Clarke, See Chonetes scitulus Hall.

Chonetes scitulus Hall

Chonetes scitula. Hall, 10th. Rep. N.Y. State Cab. Nat. Hist p.147, 1857; Pal. N.Y., IV, p.130-131, pl.21, f.4, 1867.-Hall and Clarke, Pal. N.Y., VIII, pt.1, pl.16, f.3, 4, 27, 32, 40, 44, 1892.

Chonetes scitulus. Schuchert, U.S.G.S., Bull. 87, p. 178, 1897.-Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p. 202, f. 108, 1899; Moscow sh; Encrinal ls; Hamilton sh., N.Y. -Clarke, N.Y. State Mus., Bull. 65, p. 212, 1903.-Grabau and Shimer, N. Am. Index Foss., I, p. 237, f. 289a, b, 1909.- Prosser, Geol. Surv., Ohio, ser. 4, Bull. 15, p. 541-542, pl. 32, f. 6, 1912.-Prosser and Kindle, Md. Geol. Surv., Mid. & Up. Dev., p. 150-152, pl. 12, f. 1-8; pl. 50, f. 11-13, 1913; Romney Form., Hamilton Mem. B.& O.R.R. Cut 21st. Bridge(?) B.& O.R.R. Cut opp. Hancock, W. Va.-Clarke and Swartz, Md. Geol. Surv., Mid.& Up. Dev., p. 563, pl. 50, f. 11-13, 1913; Jennings Form., Chemung Mem. Allegany Grove; Town Creek; Hancock. Parkhead Mem. Rocky Run; Williams Road E. Cumb.-Branson and Williams, Dev. of Mo., p. 139-140, pl. 32, f. 8, 9, 1922; St. Laurent ls. Little Saline Creek, Ste Genevieve Co., Mo.

Chonetes setigerus (Hall)

Chonetes setigerus. Hall, Pal. N.Y., IV, p. 129, pl. 21, 1867.-Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p. 203, f. 107, 1899; Hamilton sh; Marcellus sh., in Lake Shore Cliffs.

Chonetes subacutiradiatus Schuchert

Chonetes subacutiradiatus Schuchert, Md. Geol. Surv., L. Dev., p. 335-336, pl. 61, f. 16, 1913; Helderberg Form., New Scotland Mem. Miller's Spring near Cumb., Md.

Chonetes subquadratus Nettleroth

Chonetes subquadratus. Nettleroth, Ky. Foss. Shells, p. 67, 1889.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p. 604-605, 1901; Jeffersonville ls. Falls of the Ohio

Chonetes vicina DeKininck, See Chonetes vicinus (Castelnau)

Chonetes vicinus (Castelnau)

Leptaena vicina Castelnau, Syst. Sil. l'Amerique septentrionale, p. 39, pl. 15, f. 9, 1843.

Chonetes deflecta Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p. 149, 1857; Pal. N.Y., IV, p. 126-128, pl. 21, f. 7, 8, 1867.

Chonetes vicina DeKoninck, Recher, Animaux Foss., pt. 1, p. 203, 1847.

Chonetes deflecta. Hall and Clarke, Pal. N.Y., VIII, pt. 1, pl. 16, f. 28, 1892.

Chonetes vicinus. Schuchert, U.S.G.S., Bull.87, p.180, 1897.-Grabau, Buffalo Soc. Nat. Sci., Bull.6, p.201, f. 106, 1899; Moscow sh; Encrinal ls.-Grabau and Shimer, N. Am. Index Foss., I, p.236, f.287, 1907.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.606-608, 1901; Jeffersonville ls. Newbern.-Prosser and Kindle, Md. Geol. Surv., Mid.& Up. Dev., p.155-157, pl.12, f.14-21, 1913; Romney Form., Hamilton Mem. E. bank Evitts Creek below Wolfe Mill, near Cumb., Md.; Road bet. Hanging Rock and Romney, W. Va.-Tansey, Dev. of Mo., p.140-141, pl.32, f.4, 5, 1922.

Chonetes yandellana Hall, See Chonetes yandellanus Hall

Chonetes yandellanus Hall

Chonetes yandellana Hall, Pal. N.Y., IV, p.123, pl.20, f. 4, 1867.

Chonetes yandellanus Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.605, pl.4, f.8, 8a, 1901; Sellersburg beds. Charlestown; Watson; Falls of the Ohio.

Genus CHONOSTROPHIA Hall and Clarke

Chonostrophia complanata (Hall)

Chonetes complanata Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.56, 1857; Pal. N.Y., III, p.418, pl.93, f. 1a-d, 1859; Oriskany ss. Albany and Schoharie Cos., N.Y.

Chonostrophia complanata. Hall and Clarke, Pal. N.Y., VIII pt.1, p.311, pl.16, f.13-29, 1892.-Clarke, N.Y. State Mus. Mem. III, No.3, p.50, pl.7, f.1-13, 1900; N.Y. State Mus., Mem. IX, pt.1, p.210, pl.46, f.6-13, 1908.-Weller, Pal. N.J. III, p.348, pl.46, f.12, 1903; Oriskany. N.J.,-Schuchert, Md. Geol. Surv., L. Dev., p.341, pl.62, f.1, 2, 1913; Oriskany Form., Ridgely Mem. Miller's Spring; Devil's Backbone, Md; Warren Point, Penn.-Stewart, Dev. of Mo., p.237, pl.63, f.6, 7, 1922; Little. Saline ls. Ste Genevieve Co., Mo.

Chonostrophia helderbergia Hall and Clarke

Chonostrophia helderbergia. Hall and Clarke, Pal. N.Y. VIII, pt.1, p.353, pl.15b, f.14, 1892.-Swartz, Md. Geol. Surv., L. Dev., p.342, pl.62, f.3, 1913; Helderberg Form. New Scotland Mem. Dawson; Devil's Backbone, Md.

Chonostrophia jervensis Schuchert

Chonostrophia jervensis. Schuchert, Am. Geol., XXVII, p. 250, f. c-d, 1901; Weller, Pal. N.J., III, p. 326, pl. 42, f. 1, 2, 1903; Lower Oriskany. M.J.

Genus COELOSPIRA Hall

Coelospira acutiplicata Clark, See Anoplohteca (Coelospira) acutiplicata (Conrad)

Coelospira camilla Hall, See Anoplotheca camilla(Hall)

Coelospira concava Clarke, See Anoplotheca concava(Hall)

Coelospira concava Hall(non Hall 1863), See Anoplotheca camilla(Hall)

Coelospira dichotoma Clarke, See Anoplotheca dichotoma (Hall)

Genus CONCHIDIUM Linneaus

Conchidium knighti (Nettleroth)

Pentamerus knighti Nettleroth, Ky. Foss. Shells, p. 57, pl. 29, f. 1, 2, 17, 1889.

Conchidium knighti Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p. 608, 1901; Corniferous rocks. Near Louisville, Ky.

Conchita rhomboidalis Wilckens, See Leptaena rhomboidalis (Wilckens)

Conchites rhomboidalis Wilckens, See Leptaena rhomboidalis (Wilckens)

Conchyliolithus (Anomites) pugnus Martin, See Pugnax pugnus Martin.

Genus CRANAENA Hall and Clarke

Cranaena calvini C.L. Fenton, See Cranaenalla calvini (Hall and Whitfield)

Cranaena calvini (Hall and Whitfield)

Cryptonella Eudora Hall and Whitfield(non Hall, 1867) 23rd. Rep. N.Y. State Cab. Nat. Hist., p. 225, 1873.

Cryptonella calvini. Hall and Whitfield, Ibidem. p. 239, 1873.-Whiteaves, Contr. Can. Pal., I, p. 235-236, 1891.

Dielasma calvini.Hall and Clarke,Pal.N.Y.,VIII,pt.2, p.294-296,pl.80,f.20-22,1894.-Schuchert,U.S.G.S. Bull.87,p.212,1897.

Cranaena morsii Greger,Am.Jour.Sci,XXV,p.313-314,f. 1-7,1908;Am.Jour.Sci.,XXVII,p.376,1909.

Cranaena calvini Branson,Mo.Bur.Geol.& Mines,XVII, 2d.ser.,p.94,pl.16,f.3-5,1922;Snyder Creek sh.

Cranaena iowensis (Calvin)

Terebratula(Cryptonella)iowensis Calvin,Bull.Lab.Nat. Hist.,Univ.Iowa,I,p.174,pl.3,f.4,1890.

Cranaena iowensis.Hall and Clarke,Pal.N.Y.,VIII,pt.2, p.297,pl.80,f.36-39,pl.83,f.4,1894.-Schuchert,U.S. G.S.,Bull.87,p.188,1897.-Cleland,Wisc.Geol.Nat. Hist.,Surv.,Bull.31,p.72,pl.13,f.8-11,1911.-Weller Mississippian Brachiopoda,p.249,f.a-j,1914.-Branson Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.95,pl.20,f.20-22,1922;Callaway ls.

Cranaena morsii Greger,See Cranaena calvini (Hall and Whitf.)

Cranaena romingeri (Hall)

Terebratula,romingeri.Hall,16th.Rep.N.Y.State Cab. Nat.Hist.,p.48,f.22,23,1863;Pal.N.Y.,IV,pt.1,p. 389,pl.60,f.17-25,66,67,1867.-Nettleroth,Ky.Foss., Shells,Mon.Ky.Geol.Surv.,p.155-156,pl.16,f.20-22,1889.

Dielasma romingeri Grabau and Shimer,N.Am.Index Foss. I,p.302,f.376a-c,1909.

Cranaena romingeri.Hall and Clarke,Pal.N.Y.,VIII,pt. 2,p.297,f.215;pl.80,f.13-19,1894.-Schuchert,U.S. G.S.,Bull.87,p.188,1897.-Kindle,Indiana Dept.Geol. Nat.Res.,35th.Ann.Rep.,p.660-661,pl.12,f.4,4a, 1901;Jeffersonville ls.Bunker Hill;Pipe Creek Falls Falls of the Ohio.-Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.96,pl.20,f.17-19,1922;Mineola ls.

Genus CRANAENELLA Fenton and Fenton
(1924.Contr.Mus.Univ.Mich.,I,p.129-130)

Cranaenella calvini (Hall and Whitfield)

Cryptonella eudora Hall and Whitfield,23d.Ann.Rep.N. Y.State Cab.Nat.Hist.,p.325,1873.

Cryptonella calvini Hall and Whitfield,op.cit.,p.239, 1875.

(?) Dielasma calvini Hall and Clarke,Pal .N.Y.,VIII, pt.2,p.296,1893.

Cranaena calvini C.L.Fenton,Am.Jour.Sci.,4th.ser,., XLVIII,p.372,1919.

Cranaenella calvini Fenton and Fenton,Contr.Mus. Geol.Univ.Mich.,I,p.132-133,pl.25,f.23-25,1924; Spirifer zone.Hackberry Stage.

Cranaenella navicella (Hall)

Terebratula navicella Hall,Pal.N.Y.,IV,p.391,pl.60, f.38-44,1867.

Centronella(?) navicella Hall and Clarke,Pal.N.Y., VIII,pt.2,p.79,f.40-42,1895.

Centronella navicella C.L.Fenton,Am.Jour.Scil,4th. ser.,XLVIII,p.372,1919.

Cranaenella navicella Fenton and Fenton,Contr.Mus. Univ.Mich.,I,p.130-132,pl.25,f.18-22,1924;Spirifer zone.Hackberry Stage.Rockford and Bird Hill.

Genus CRANIA Retzius
(1781.Schriften der Berliner Gesellschaft)
(Naturforschender Freunde,II,p.72)
(1882.Pal.N.Y.,VIII,pt.1,p.145)

Crania sp Branson and Williams

Crania sp.Branson and Williams,Dev. of Mo.,p.132,1922; Beauvias ss.Little Saline Creek,Ste Genevieve Co.

Crania sp.Clarke and Swartz

Crania sp.Clarke and Swartz,Md.Geol.Surv.,Mid.& Up. Dev.,p.550-551,1913;Jennings Form.,Chemung ? Mem. West slope Polish Mountain on National Road.

Crania sp.Kindle

Crania sp.Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res., p.582,pl.3,f.8,1901;Sellersburg beds.Charlestown.

Crania alsopi Tansey

Crania alsopi Tansey,Dev. of Mo.,p.182,pl.44,f.9-11, 1922;Bailey ls.Little Saline Creek,Ste Genevieve

Co.,Mo.

Crania bordeni Hall,See Crania sheldoni White.

Crania crenistriata Hall

Crania crenistriata.Hall,Pal.N.Y.,IV,p.28,pl.3,f.13-16,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.185, f.86,1899;Hamilton group.Eighteen Mile Creek.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.581, pl.3,f.1,1901;Jeffersonville ls.Falls of the Ohio.

Crania depressa "n.sp.,(Rowley)" Greene

Crania depressa Greene,Contr.Pal.Ind.,I,pt.8,p.69,pl. 33,f.28,29,1901;Up.Helderberg group.Falls of the Ohio.

Crania famelica Hall and Whitfield

Crania famelica.Hall and Whitfield,Descrip.New Species Fossils,p.17,pl.11,1872.-Hall,23 Rep.N.Y.State Cab.Nat.Hist.,p.236,pl.11,f,6,7,1873.-Schuchert, U.S.G.S.,Bull.87,p.190,1897.-Fenton and Fenton, Contr.Mus.Univ.Mich.,I,p.80-81,pl.19,f.1-3,1924; Spirifer zone.Hackberry Stage.-Branson,Mo.Bur.Geol & Mines,XVII,2d.ser.,p.72,pl.11,f1,2,1922;Snyder Creek sh.also Callaway ls.

Philhedra famelica Greger,Am.Jour.Sci.,XXVII,p.376, 1909.

Crania granosa Hall and Clarke

Crania granosa.Hall and Clarke,Pal.N.Y.,VIII,pt.1,p. 180,pl.44,f.19,20,1892.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.581,pl.3,f.3,1901;Jeffersonville ls.Falls of the Ohio.

Crania greeni Miller

Crania greeni.Miller,18th.Rep.Ind.Geol.Surv.,p.310, pl.9,f.7,1894.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.582,1901;Up.Helderberg.Falls of the Ohio.

Crania cf hamiltonia Hall,See Craniella hamiltoniae (Hall)

Crania hamiltoniae Hall,See Craniella hamiltoniea(Hall)

Crania liosoma Fenton and Fenton

Crania liosoma Fenton and Fenton,Contr.Mus.Univ.Mich.

I,p.81-82,pl.19,f.4,1924;Spirifer zone.Hackberry Stage.

Crania ourayensis Kindle

Crania ourayensis Kindle,U.S.G.S.Bull.391,p.15,pl.1, f.3,3a,1909;Ouray ls.Rockwood,Colo.

Crania sheldoni White

Crania bordeni Hall,24th.Rep.N.Y.Cab.Nat.Hist.,p.187, 1872.

Crania sheldoni Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat Res.,p.581,pl.3,f.2,1901;Sellersburg beds.Charlestown.

Crania stewarti Fenton and Fenton

Crania stewarti Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.82,pl.17,f.3,1924;Spirifer zone.Hackberry Stage.

Genus CRANIELLA Oehlert
(1888.Bull.de la Soc.d'Etudes Scientif.d'Angers,p.37)
(1892.Pal.N.Y.,VIII,pt.1,p.153,170)

Craniella sp Clarke and Swartz

Craniella sp Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.550,1913;Jennings Form.,Chemung Mem., Ellerslie,Penn.

Craniella hamiltoniae (Hall)

Crania hamiltonia Hall,13th.Rep.N.Y.State Cab.Nat. Hist.,p.77,f.4,5,on p.76,1860.

Crania hamiltoniae Hall,Pal.N.Y.,IV,p.27-28,pl.3, f.17-23,1867.

Craniella hamiltoniae.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.148-153,pl.4,f.3-16,1892.-Schuchert,U.S.G. S.,Bull.87,p.193,1897.-Kindle,25th.Ann.Rep.Ind. Dept.,Geol.Nat.Res.,p.582-583,pl.3,f.5,1901;Jeffersonville ls.Falls of the Ohio;Pipe Creek Falls; Bunker Hill.-Clarke,N.Y.State Mus.Bull.65,p.219, 1903.-Grabau and Shimer,N.Am.Index Foss.,I,p.208, f.244,1909.-Cleland,Wisc.Geol.Nat.Hist.,Surv.,Bull 21,p.86-87,pl.12,f.7,8,1911.-Prosser and Kindle, Md.Geol.Surv.,Mid.& Up.Dev.,p.131-132,pl.9,f.1-7,1913;Jennings Form.,Parkhead Mem.Polish Mountain Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.

549-550,pl.47,f.11-13,1913;Romney Form.,Onondaga Mem.S.Berkeley Springs,W.Va.,Hamilton Mem.E.bank Evitts Creek below Wolfe Mill near Cumb.,Md.-Branson and Williams,Dev. of Mo.,p.133,pl.35,f.5,1922; Grand Tower ls.Little Saline Creek,Ste Genevieve Co.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.186,f.87, 1899.

Genus CRYPTONELLA Hall
(1861.14th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.103)
(1893.Pal.N.Y.,VIII,pt.2,p.284)

Cryptonella eudora Hall and Whitfield,See Cranaenella calvini (Hall and Whitfield)

Cryptonella calvini Hall and Whitfield,See Cranaena calvini (Hall and Whitfield)

Cryptonella calvini Whiteaves,See Cranaena calvini(Hall and Whitfield)

Cryptonella eudora Hall

Cryptonella eudora Hall,Pal.N.Y.,IV,p.398,pl.61,f. 34-41,1867.

Cryptonella cf eudora Clarke and Swartz,Md.Geol.Surv. Mid.& Up.Dev.,p.584,pl.54,f.23,1913;Jennings Form. Chemung Mem.Williams Road Polish Mountain.

Cryptonella Eudroa Hall and Whitfield,See Cranaena calvini (Hall and Whitfield)

Cryptonella lens Hall

Cerebratula lens Hall,Pal.N.Y.,IV,p.386,pl.60,f.1-4, 1867.

Cryptonella lens Kindle,35th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.658-659,pl.11,f.9,1901;Jeffersonville ls.Bunker Hill;Pipe Creek Falls;Falls of the Ohio.

Cryptonella lincklaeni Hall,See Eunella lincklaeni (Hall)

Cryptonella ovalis Miller

Cryptonella ovalis.Miller,Advance Sheets 17th.Rep.Geol Surv.,Ind.,p.76,pl.13,f.1,2,1891.-Kindle,25th.Ann. Rep.Ind.Dept.Geol.Nat.Res.,p.659,pl.11,f.8,8a,1901; Jeffersonville ls.Bunker Hill;Falls of the Ohio.

Cryptonella planirostris Hall

Cryptonella planirostris.Hall,Pal.N.Y.,IV,p.395,pl.61 1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.336,f. 147,1899;Encrinal ls.

Cryptonella rectirostris Hall

Cryptonella rectirostirs.Hall,Pal.N.Y.,IV,p.394,pl. 61,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 336,f.148,1899;Pleurodictyum beds.Avery's Creek.

Cyclorhina nobilis Hall

Cyclorhina nobilis.Hall and Clarke,Pal.N.Y.,VIII,pt.2 p.207,pl.61,f.1-13,1893.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.583-584,pl.7,f.3,1901;Jeffersonville ls.Falls of the Ohio;Pipe Creek Falls.

Genus CYRTIA Hall

Cyrita alta Hall

Spirifera alta Hall,Proc.Am.Philos.Soc.,X,p.246,1866; Pal.N.Y.,IV,p.248,pl.43,f.1-8,1867.

Cyrtia alta.Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.42, pl.36,f.1-5;pl.39,f.37,38,1893.-Prosser,Geol.Surv. Ohio,4th.ser.,p.536-537,pl.30,f.1-4,1912;Chagrin Form.Chippewa Creek;S.Madison

Cyrtia crytiniformis Hall and Clarke,See Platyrachella cyrtinaformis (Hall and Whitfield)

Cyrtia cyrtiniformis Shimer,See Cyrtia standleyensis Shimer.

Cyrtia dalmani Hall,See Cyrtina dalmani (Hall)

Cyrtia hamiltonensis.Billings,Hall,See Cyrtina hamiltonensis Hall.

Cyrtia missouriensis Swallow,See Cyrtina missouriensis (Swallow)

Cyrtia occidentalis.Greger,Swallow,SeeSyringothyris occidentalis (Swallow)

Cyrtia rostrata Hall,See Cyrtina rostrata Hall

Cyrtia standleyensis Shimer.

Cyrtia cyrtiniformis Shimer,Bull.Geol.Soc.Am.,XXIV, p.336,1913;Transition beds from lower Banff sh. to lower Banff ls.Minnewanka Reg.Banff,Alberta.

Cyrtina standeleyensis Shimer,Can.Geol.Surv.,ser.45, p.62-63,1926;Up.Dev.,Minnewanka Reg.,Banff,Alberta

Cyrtia triquetra Hall,See Cyrtina triquetra(Hall)

Genus CYRTINA Davidson
(1858.Monogr.Brit.Carbonif.Brachiopoda,p.66)
(1893.Pal.N.Y.,VIII,pt.2,p.43)

Cyrtina sp.Weller

Cyrtina sp.Weller,Pal.N.J.,III,p.289,pl.30,f.9,10, 1903;Coeymans ls.Near Hainesville,N.J.

Cyrtina alpenaensis Grabau and Shimer,See Cyrtina alpenensis Hall and Clarke.

Cyrtina alpenensis Hall and Clarke

Cyrtina umbonata var Alpenensis Hall and Clarke,Pal. N.Y.,VIII,pt.2,p.362,pl.38,f.16-20,1894.

Cyrtina umbonata alpenaensis Schuchert,U.S.G.S.,Bull. 87,p.199,1897.

Cyrtina alpenaensis Grabau and Shimer,N.Am.Index Foss I,p.313,f.393d,e,1909.

Cyrtina alpenensis Branson and Williams,Dev. of Mo.,p 148-149,pl.35,f.6,7,8,1922;St.Laurent ls.Little Saline Creek,Ste Genevieve Co.,Mo.

Cyrtina crassa Hall

Cyrtina crassa.Pal.N.Y.,IV,pl.27,f.11,12,1867.-Kindle 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.581,1901; Jeffersonville ls.Falls of the Ohio;Utica.

Cyrtina dalmani (Hall)

Cyrtia dalmani.Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.64,1857;Pal.N.Y.,III,p.206,pl.24,f.2a-y, 1859;L.Helderberg group.Helderberg Mountains; Schoharie;Carlisle;Catskill;etc.

Cyrtina dalmani.Meek and Worthe,Ill.Geol.Surv.,III, p.383,pl.7,f.3a,b,1868.-Hall and Clarke,Pal.N.Y. VIII,pt.2,p.46,1893.-Tansey,Dev. of Mo.,p.200-201,pl.51,f.30,31,pl.52,f.1-4,1922;Bailey ls. Little Saline Creek.Ste Genevieve Co.,Mo.

Cyrtina hamiltonensis Hall

Cyrtia hamiltonensis.Hall,10th.Ann.Rep.N.Y.State

Cab.Nat.Hist.,p.166,1857.-Billings,Canadian Jour. VI,p.262,f.80-82,1861.

Cyrtina hamiltonensis,Billings,Geol.Canada,p.384,f. 415,1863.-Hall,Pal.N.Y.,IV,pt.1,p.268,pl.27,f.1-4,pl.44,f.26-33,38-52,1867.-Meek and Worthen,Trans. Chicago Acad.Sci.,I,pt.1,p.99-100,pl.14,f.5,7?, 10,1868.-Miller,N.Am.Geol.Pal.,p.343,f.558,1889.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29,1891.-Whiteaves,Contr.Can.Pal.,I,pt.3,p.226-227,pt.4,p. 288,1891,1892.-Hall and Clarke,Pal.N.Y.,VIII,pt. 2,p.46,pl.28,f.23-23,43,45,46,53,1893.-Kindle, Bull.Amer.Pal.,VI,p.35,1896:25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.591-592,1901;Sellersburg beds and Jeffersonville ls.Little Rock Creek;Pipe Creek Falls,Charlestown;Scipio;Falls of the Ohio.-Schuchert,U.S.G.S.,Bull.87,p.198,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.219,f.129,1899;Moscow sh(?) Demissa beds.Avery's Creek.-Clarke,N.Y.State Mus., Bull.65,p.224,1903.-Weller,Pal.N.J.,III,p.377,pl. 52,f.5,1903;Newfoundland Grit.,-Grabau and Shimer, N.Am.Index Foss.,I,p.313,f.393a-c,1909.-Cleland, Wisc.,Geol.Nat.Hist.Surv.,Bull.21,p.75,pl.15,f. 7-10,1911.-Kindle,U.S.G.S.,Bull.508,p.81,pl.5,f. 4,1912;Prosser and Kindle,Md.Geol.Surv.,Mid.& Up. Dev.,p.185-187,pl.17,f.1-9,1913;Romney Form.,Onondaga Mem.Hanging Rock W.Va.Hamilton Mem.E.bank Evitts Creek below Wolfe Mill;E.Cumb.Md;B.& O.R.R. Cut Hancock Station,W.Va.Hanging Rock N.Romney,W. Va.- Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev. p.591-592,f.1-3,1913;Jennings Form.,Chemung Mem. Allegany Grove;Rocky Run.Woodmont Mem,,Ithaca Fauna.W.Pawpaw,W.Va;Woodmont;Hancock;Millstone; Berkeley Springs,W.Va.Yellow Springs,W.Va.-Branson,Dev. of Mo.,p.106-108,pl.19,f.5-8,1922;Mineola of Callaway,Montgomery and Warren Cos.,-Branson and Williams,Dev. of Mo.,p.149,1922;St.Laurent ls.

Cyrtina hamiltoniae Nettleroth,Ky.Foss.Shells,Mon,Ky. Geol.Surv.,p.96,pl.13,f.4-12,1889.

Cyrtina hamiltonensis Hall(part) See Cyrtina iowaensis Fenton and Fenton

Cyrtina hamiltonensis var recta Hall

Cyrtina hamiltonensis var recta.Hall,Pal.N.Y.,IV,p. 270,pl.44,f.34-37,1867.-Grabau,Buffalo Soc.Nat. Sci.,Bull.6,p.220,f.130,1899;Upper Pleurodictyum bed.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res., p.592-593,1901;Sellersburg beds and Jeffersonville ls.Little Rock Creek,Cass.Co.;Falls of the Ohio.

Cyrtina iowaensis Fenton and Fenton

Cyrtina hamiltonensis Hall,Pal.N.Y.,IV,p.268(part) 1867.

Cyrtina iowaensis Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.169-171,pl.30,f.1-5,1924;Spirifer zone. Hackberry Stage.Bird Hill.

Cyrtina missouriensis (Swallow)

Cyrtia missouriensis Swallow,Trans.St.Louis Acad.Sci. I,p.647-648,1860.

Cyrtina Missouriensis.Miller,N.Am.Geol.Pal.,p.343, 1889.-Schuchert,U.S.G.S,Bull.87,p.198,1897.-Greger Am.Jour.Sci.,XXVII,p.378,1909.-Branson,Dev. of Mo. p.108,pl.16,f.9;pl.19,f.1-4,1922;Callaway ls.Callaway Montgomery and Warren Cos.

Cyrtina umbonata Keyes,Mo.Geol.Surv.,V,p.90,1894.

Cyrtina occidentalis Miller,See Syringothyris occidentalis (Swallow)

Cyrtina ? occidentalis Schuchert,See Syringothyris occidentalis (Swallow)

Cyrtina rostrata Hall

Cyrtina rostrata.Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.64,1857;Pal.N.Y.,III,p.429,pl.96,f.1-6; pl.98,f.8a,b,1859;Oriskany ss.Albany Co.,N.Y., Cumb.Md.-Weller,Pal.N.J.,III,p.330,pl.42,f.23-25, 1903;L.Oriskany.-Clarke,N.Y.State Mus.,Mem.IX,pt. 1,p.183,pl.31,f.25-28,1908.-Hall and Clarke,Pal. N.Y.,VIII,pt.2,pl.25,f.1-8;pl.28,f.6,1893.-Schuchert,Md.Geol.Surv.,L.Dev.,p.423,pl.71,f.10-16, 1913;Helderberg Form.,Becraft Mem.Cherry Run,W.Va. Oriskany Form.,Ridgely Mem.Knobly Mountain near Cumb.,Md.-Stewart,Dev. of Mo.,p.247,pl.65,f.13, 1922;Little Saline ls.Ste Genevieve Co.

Cyrtina triquetra (Hall)

Cyrtia triquetra Hall,Geol.Surv.,Iowa,I,pt.2,p.513-514,1858.

Cyrtina triquetra.Meek,Trans.Chicago Acad.Sci.,I,p. 99,1868.-Meek and Worthen,Geol.Surv.,Ill,III,p.436, pl.13,f.4,1868.-Hall and Clarke,Pal.N.Y.,VIII,pt.2 pl.28,f.34,35,1894.-Schuchert,U.S.G.S.,Bull.87,p. 199,1897.-Greger,Am.Jour.Sci.,XXVII,p.376,1909.-Branson,Dev. of Mo.,p.108-109,pl.19,f.9-13,1922; Snyder Creek shl.

Cyrtina umbonata alpenaensis Schuchert, See Cyrtina Alpenensis Hall and Clarke.

Cyrtina umbonata var Alpenensis Hall and Clarke, See Cyrtina Alpenensis Hall and Clarke.

Cyrtina umbonata Keyes, See Cyrtina missouriensis (Swallow)

Cyrtina varia Clarke

Cyrtina varia. Clarke, N.Y. State Mus. Nat. Hist., III, Mem. 3, p.49, pl.6, f.15-22, 1900.-Weller, Pal. N.J., III, p. 355, pl.48, f.13-16, 1903; Mid.& Up. Oriskany.

Genus DALMANELLA Hall and Clarke

Dalmanella sp. Clarke and Swartz

Dalmanella sp. Clarke and Swartz, Md. Geol. Surv., Mid. & Up. Dev., p.572, pl.52, f.6, 1913; Jennings Form., Polish Mountain E. of Gilpin.

Dalmanella carinata (Hall)

Orthis carinata Hall, Geol. N.Y. Rep. 4th. Dist., p.267, f.1, 1843; Pal. N.Y., IV, p.58, pl.8, f.30-31, 1867.

Schizophoria carinata Hall and Clarke, Pal. N.Y., VIII, pt.1, p.213, 226, pl.6, f.22, 1892.

Dalmanella carinata. Williams, Proc. U.S. Nat. Mus., XXXIV, p.57, pl.4, f.12, 4, 6, 1908.-Clarke and Swartz, Md. Geol. Surv., Mid.& Up. Dev., p.570-571, pl.52, f.5, 1913; Jennings Form., Chemung Mem. Near Ellerslie, Penn.

Dalmanella clarki Schuchert

Dalmanella clarki Schuchert, Md. Geol. Surv., L. Dev., p. 300-301, pl.54, f.7-10, 1913; Helderberg Form., Keyser Mem. Cash Valley, Md.

Dalmanella concinna (Hall)

Orthis concinna Hall, Pal. N.Y., III, p.172, pl.10A, f.1-3, 1859; L. Helderberg group. Cumb., Md.

Dalmanella concinna. Hall and Clarke, Pal. N.Y., VIII, pt.1, p.207, 224, 1892.-Maynard, Md. Geol. Surv., L. Dev., p.301-302, pl.54, f.11-13, 1913; Helderberg Form., Keyser Mem. Keyser, W.Va., Cash Valley, Cumb. Md; Hyndman, Penn.

Dalmanella eminens (Hall)

Orthis eminens Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.42,text fig.1,2,1857;(part) Pal.N .Y.III, p.167,pl.11,f.7-14,1859;L.Helderberg group.Helderberg mountains,Schoharie and Carlisle.

Rhipidomella eminens.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.210,225,1892.-Weller,Pal.N.J.,III,p.304, pl.34,f.9,1903.

Dalmanella eminens Schuchert,Md.Geol.Surv.,L.Dev.,p. 299-300,pl.54,f.24-26,1913;Helderberg Form.,New Scotland Mem.Corriganville,near Cumb.,21st.Bridge; near Cherry Run,W.Va.

Dalmanella lenticularis (Vanuxem)

Orthis lenticularis.Vanuxem(not Wahlenberg),Geol.Rep. N.Y.,4th.Dist.,p.139,f.4,1842.-Hall,Pal.N.Y.,IV, p.35,pl.5,f.1,2,1867;Geol.N.Y.,Rep.4th.Dist.,p.17, f.4,1843.

Orthis lentiformis Hall,Geol.N.Y.,4th.Dist.,p.17, f.4,1843.

Orthis eboracenis Miller,N.Am.Geol.Pal.,p.357,1889.

Dalmanella lenticularis.Hall and Clarke,Pal.N.Y.,VIII pt.1,p.207,224,pl.5c,f.36-41,1892.-Kindle,U.S.G.S. Bull.508,p.79,pl.5,f.12-16,1912;Md.Geol.Surv.,Mid. & Up.Dev.,p.164,pl.13,f.22-25,pl.14,f.11,12,1913; Romney Form.,Onondaga Mem.Williams Road N.E.Cumb., Md.-Stewart,Dev. of Mo.,p.329,pl.61,f.9-11,1928; Little Saline Creek ls.Ste Genevieve Co.,Mo.

Dalmanella oriskania Stewart

Dalmanella oriskania Stewart,Dev. of Mo.,p.229-230, pl.61,f.12-14,1922;Little Saline ls.Ste Genevieve Co.

Dalamnella perlegans (Hall)

Orthis perlegans Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.44f.1,1857;Pal.N.Y.,III,p.171,pl.13,f.4-12,1859;L.Helderberg group.Helderberg Mountains; Rep.State Geol.N.Y.,for 1882.pl.35,f.32,33,1883.

Dalmanella perlegans.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.207,224,pl.5C,f.34,35,1892.-Clarke,N.Y. State Mus.,Mem.III,p.57,1900.-Shimer,N.Y.State Mus.,Bull.80,p.243,1905.-Schuchert,Md.Geol.Surv., L.Dev.,p.298,pl.54,f.14-23,1913;Helderberg Form.,

Coeymans Mem. Devil's Backbone; Corriganville, Md. New Scotland Mem. Keyser, W. Va; Dawson; Corriganville, Md.-Dunbar, Tenn. Geol. Surv., Bull. 21, pl. 2, f. 9, 1919.-Tansey, Dev. of Mo., p. 183, pl. 44, f. 18-26, 1922; Bailey ls. Little Saline Creek, Ste Genevieve Co.-Weller, Pal. N.J., III, p. 305, 327, pl. 35, f. 5-8, 1903; New Scotland-Becraft Fauna; Lower Oriskany. N.J.

Dalmanella planoconvexa Schuchert

Orthis planoconvexa Hall, Pal. N.Y., III, p. 168, pl. 12, f. 1-6, 1859; L. Helderberg group. Helderberg mountains Albany Co., Oriskany ss. Cumb., Md.

Dalmanella planoconvexa. Hall and Clarke, Pal. N.Y., VIII, pt. 1p. 207, 224, 1892.-Clarke, N.Y. State Mus., Mem. IX, pt. 2, p. 145, 1909.-Tansey, Dev. of Mo. p. 182-183, pl. 44, f. 12-17, 1922; Bailey ls. Little Saline Creek, Ste Genevieve Co.

Dalmanella planiconvexa Schuchert, Md. Geol. Surv., L. Dev., p. 298, pl. 54, f. 1-6, 1913; Helderberg Form., New Scotland Mem. Corriganville, Md.; Keyser, W. Va. Oriskany Form., Ridgely Mem. Knobly mountain, near Cumb., Md

Dalmanella planiconvexa Schuchert, See Dalmanella planoconvexa (Hall)

Dalmanella quadrans (Hall)

Orthis quadrans Hall, Pal. N.Y., III, p. 170, pl. 12, f. 9-12, 1859; L. Helderberg group. Helderberg mountains.

Dalmanella quadrans. Hall and Clarke, Pal. N.Y., VIII, pt. 1, p. 224, 1892.-Stewart, Dev. of Mo., p. 183, pl. 44, f. 27-31, 1922; Bailey ls. Little Saline Creek, Ste Genevieve Co.

Dalmanella subcarinata (Hall)

Orthis subcarinata Hall, Pal. N.Y., III, p. 169, pl. 12, f. 7-21, 1859; L. Helderberg group. Helderberg mountains.

Dalmanella subcarinata Weller, Pal. N.J., III, p. 306, pl. 34, f. 10-13, p. 326-327, pl. 42, f. 3, 4, 1903; New Scotland Becraft Fauna, L. Oriskany.

Dalmanella tioga (Hall)

Orthis interlineata Hall (non Sowerby), Geol. N.Y., Rep. 4th. Dist., p. 267, f. 3, 4, 1843.

Orthis tioga Hall, Pal. N.Y., IV, p. 59, pl. 8, f. 20-29, 1867.

Schizophoria tioga.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.212,226,pl.6,f.17,18,1892.-Grabau and Shimer,N.Am.Index Foss.,I,p.268,f.321,1909.

Dalmanella elmira H.S.Williams,Proc.U.S.Nat.Mus., XXXIV,p.56,pl.3,f.6,8,11,1908.

Dalmanella tioga.Williams,Proc.U.S.Nat.Mus.,XXXIV, p.55,pl.3,f.1-7,9,10,12,1908.-Clarke and Swartz, Md.Geol.Surv.,Mid.& Up.Dev.,p.569-570,pl.52,f. 1-4,1913;Jennings Form.,Chemung Mem.Ellerslie,Penn

Dalmanella tioga(Hall) Williams var elmira Williams, Prosser,Geol.Surv.Ohio,Bull.15,p.530-532,pl.28,f. 1-6,1912;Chagrin Form.Chippewa Creek;Bedford Glen.

Genus DELTHYRIS Menke

Delthyris acanthota Hall,See Spirifer disjunctus Sowerby

Delthyris acuminata Conrad,See Spirifer acuminata(Conrad)

Delthyris arenosus Conrad,See Spirifer arenosus(Conrad)

Delthyris audaculs Conrad,See Spirifer audaculus (Conrad)

Delthyris bilobata Conrad,See Bilobites varica(Conrad)

Delthyris chemungensis Conrad,See Spirifer disjunctus Sowerby

Delthyris congesta,Hall,Rogers,See Spirifer granulosus (Conrad)

Delthyris consobrina Schuchert,See Spirifer consobrinus (D'Orbigny)

Delthyris cuspidata Hall (not Martin),See Spirifer disjunctus Sowerby

Delthyris disjuncta ? Phillips,See Spirifer disjunctus Sowerby

Delthyris euruteines Owen,See Spirifer euryteines Owen

Delthyris fimbriatus Conrad,See Spirifer (Reticularia) fimbriatus (Conrad)

Delthyris fimbriatus Conrad,See Reticularis fimbriata (Conrad)

Delthyris granulifera Hall,See Spirifer granulosus (Conrad)

Delthyris granulosa Conrad, See Spirifer granulosus(Conrad)

Delthyris inermis Hall, See Spirifer disjunctus Sowerby

Delthyris laevis Hall, See Reticularia laevis(Hall)

Delthyris macropleura. Conrad, Vanuxem, Mather, See Spirifer macropleurus (Conrad)

Delthyris macropleura Rogers, (Not Conrad) See Delthyris perlamellosus(Hall)

Delthyris medialis Hall, See Spirifer audaculus(Conrad)

Delthyris medialis Rogers, See Spirifer audaculus(Conrad)

Delthyris missouriensis Tansey

Delthyris missouriensis Tansey, Dev. of Mo., p.199, pl. 51, f.1-11, 1922; Bailey ls. Little Saline Creek, Ste Genevieve Co.

Delthyris mucronata Hall, See Spirifer mucronatus var posterus Hall and Clarke.

Delthyris octocostatus (Hall)

Delthyris perlamellosus (Hall)

Spirifer perlamellosus Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.57, f.1-5, 1857; Pal. N.Y. III, p.201, pl.26, f.1a-i, k-p, r-t, 2a-g, 1859; L. Helderberg group, Helderberg mountains, Schoharie, Catskill, Carlisle, etc.

Delthyris macropleura Rogers(not Conrad), Geol. Penn., II, pt.2, p.825, f.643, 1858.

Delthyris perlamellosus Tansey, Dev. of Mo., p.199, pl. 50, f.41-49, 1922; Bailey ls. Little Saline Creek, Ste Genevieve Co.

Delthyris perlata Conrad, See Spirifer disjunctus Sowerby

Delthyris raricosta Conrad

Spirifer raricosta Hall, Pal. N.Y., IV, p.192, pl.27, f. 30-34; pl.30, f.1-9, 1867.

Delthyris raricosta Kindle, 25th. Ann. Rep. Ind. Dept. Geol Nat. Res., p.609-610, pl.9, f.9, 1901; Sellersburg beds

and Jeffersonville ls.Charlestown;Falls of the Ohio.

Delthyris sculptilis.Hall,Kindle,See Spirifer (Delthyris) sculptilis (Hall)

Delthyris varica Conrad,See Bilobites varica (Conrad)

Delthyris zigzac Hall(non Roemer),See Spirifer consobrinus (D'Orbigny)

Genus DIELASMA King
(1859.Proc.Dublin Univ.Bot.ZoolAssoc.I,p.260)
(1893.Pal.N.Y.,VIII,pt.2,p.293)

Dielasma Calvini Hall and Clarke,See Cranaena Calvini (Hall and Whitfield)

(?) Dielasma calvini Hall and Clarke,See Cranaenella calvini (Hall and Whitfield)

Dielasma calvini Schuchert,See Cranaena calvini(Hall and Whitfield)

Dielasma romingeri Grabau and Shimer,See Cranaena romingeri (Hall)

Dielasma (Cranaena) romingeri Hall

Dielasma (Cranaena) romingeri.Hall,Pal.N.Y.,IV,p.389, pl.60,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 237,f.149,1899;Pleurodictyum and Calcareous beds. On the Lake Shore and Avery's Ravine.

Genus DISCINA (Lamarck)
(1819.Lamarck,Hist.Nat.des Animaus sons vertebres)
(Orbicula of Authors,not of Cuvier and Lamarck)

Discina conradi Hall

Discina conradi Hall,Pal.N.Y.,III,p.161,pl.9,f.16,17, 17a,pl.10A,f.2a,b,1859;L.Helderberg group.Helderberg mountains and Becraft Mountain near Hudson.

Cf Discina(orbicula) verneuili Davidson,Bull/Soc.Geol de France,Deuxieme Serie,V,p.334,pl.3,f.48,

Discina discus Hall

Discina discus Hall,Pal.N.Y.,III,p.159,pl.9,f.13-15, 1859;L.Helderberg group.Becraft's mountain near

Hudson.

Discina doria Hall, See Orbiculoidea doria Hall

Discina grandis Hall, See Orbiculoidea ampla(Hall) as cited by Schuchert.

Discina grandis Hall, See Roemerella grandis (Vanuxem) as cited by Kindle

Discina grandis Hall and Whitfield, See Roemerella grandis (Vanuxem)

Discina jervensis Barrett, See Orbiculoidea jervensis Barrett.

Discina lodensis Hall, See Orbiculoidea lodiensis var media (Hall)

Discina lodiensis Hall, See Orbiculoidea lodiensis (Vanuxem)

Discina media Hall, See Orbiculoidea lodiensis var media (Hall)

Discina media Walcott, See Orbiculoidea lodiensis var media (Hall)

Discina truncata Hall, See Schizoblastus truncatus Hall, as cited Grabau.

Discina truncata Hall, See Schizobolus concentricus(Vanuxem) as cited by Kindle.

Discina vanuxemi Hall

Discina vanuxemi Hall, Pal.N.Y., III, p.162, pl.8, f.1a, b, 1859; Up.Waterline group. Quarry N.W. of Manlius square.

Discina (Orbicula)verneuili, Davidson, See, Discina conradi Hall

Genus DOUVILLINA Oehlert

Douvillina arcuata (Hall)

Strophodonta arcuata. Hall, Geol. Iowa, I, pt.2, p.492, pl. 3, f.1a-c, 2a, b, e, f, 1858.-Calvin, Bull. U.S. Geol.& Geog. Surv., IV, p.728, 1878.

(?) Strompodonta arcuata Whiteaves, Contr. Can. Pal., I,

p.285,1892.

(??)Strophodonta arcuata Walcott,Mon.U.S.G.S.,VIII, p.121,1884.

Douvillina arcuata.Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.87-89,pl.20,f.6-10,1924;Gypidula faunule and Spirifer zone.Hackberry Stage.-C.L.Fenton,Am. Mid.Nat.,V,p.213,215,1918.-Clarke and Swartz,Md. Geol.Surv.,Mid.& Up.Dev.,p.557,pl.49,f.14-17, 1913;Jennings Form.,Chemung Mem.Garrett Co.,S.Oakland;near Redhouse;W.Frostburg.

Stropheodonta arcuata.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.289,pl.15B,f.1-3,1892.-Schuchert,U.S.G.S., Bull.87,p.419,1897.

Douvillina arcuata maxima C.L.Fenton,See Douvillina maxima C.L.Fenton

Douvillina cayuta (Hall)

Strophodonta cayuta Hall,Pal.N.Y.,IV,p.110,pl.19,f. 1-5,1867.

Douvillina cayuta.Hall,and Clarke,Pal.N.Y.,VIII,pt.1, pl.15,f.18,19,1892.-Clarke and Swartz,Md.Geol.Surv Mid.& Up.Dev.,p.555-558,pl.48,f.8-17,pl.49,f.1,2, 1913;Jennings Form.,Chemung Mem.National Road W. Frostburg;Deer Creek;Ellerslie,Penn.

Douvillina cayuta var graciliora Clarke and Swartz

Douvillina cayuta var graciliora Clarke and Swartz, Md.Geol.Surv.,Mid.& Up.Dev.,p.556,pl.49,f.3-13, 1913;Jennings Form.,Chemung Member,Oakland-Altamont Road;Redhouse;Deer Park;W.Frostburg.

Douvillina delicata Fenton and Fenton

Douvillina delicata Fenton and Fenton,Contr.Mus.,Univ Mich.,I,p.91,pl.20,f.17-20,1924;Spirifer zone,Hackberry Stage.Bird Hill.

Douvillina inaequistriata Clarke,See Stropheodonta inaequistriata (Conrad)

Douvillina maxima C.L.Fenton

Douvillina arcuata maxima C.L.Fenton.Am.Mid.Nat.,V, p.215,pl.6,f.23-25,1918.

Douvillina maxima Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.89-90,pl.20,f.11-16,1924;Gypidula fau-

nule, Spirifer zone. Hackberry Stage. Rockford.

Genus EATONIA (Hall 1856)
(1859. Pal. N.Y., III, p.241, 432-435)
(1857. Regents State Cab. Nat. Hist., for 1856 p.90)

Eatonia eminens Hall

Eatonia eminens Hall, Pal. N.Y., III, p.242, pl.37, f.2a, b, c, 1859; Same age as L. Helderberg group. Tenn.

Eatonia hartleyi Schuchert

Eatonia hartleyi Schuchert, Md. Geol. Surv., L. Dev., p.376, pl.66, f.2, 3, 1913; Oriskany Form., Ridgely Mem. Martin mountain, Allegany Co., Md.

Eatonia medialis (Vanuxem)

Atrypa medialis Vanuxem, Geol. Rep. 3d. Dist., p.121, 122, f.4, 1842.

Eatonia medialis. Hall, Pal. N.Y., III, p.241, pl.37, f.1a-y, 1859; L. Helderberg group. Helderberg mountains; Schoharie, Hudson, etc.-Weller, Pal. N.J., III, p.319, pl.36, f.16-23, 1903; New Scotland-Becraft Fauna.-Schuchert, Md. Geol. Surv., L. Dev., p.374-375, pl.65, f.31-35, 1913; Helderberg Form., New Scotland Mem. Dawson, Md.; Cherry Run, W.Va.; Warren Point, Penn. Becraft Mem. Cherry Run, W.Va. Oriskany Form., Shirver Mem. North Branch. Ridgely Mem., Knobly mountain, near Cumb., Md.

Eatonia peculiaris (Conrad)

Atrypa peculiaris. Conrad, Ann. Rep. Pal. N.Y., p.56, 1841-Vanuxem, Geol. Rep. 3d. Dist. N.Y., p.123, f.3, 1842.-Hall Geol. Rep. 4th. Dist. N.Y., p.148, 1843.

Eatonia peculiaris. Hall, 12th. Ann. Rep. Regents Univ. N.Y., p.37, f.1-7, 1859; Pal. N.Y., III, p.244, 436, pl.38, f.21-26; pl.101, f.2a-g; pl.101A, f.1a-h, 1859; Oriskany s.s. Albany and Greene Cos. N.Y.: Cumb., Md.-Meek and Worthen, Ill. Geol. Surv., III, p.395, pl.8, f.2a-d, 1868; Bald Rock, Jackson Co., Ill. Cherty ls. same age as Oriskany ss of N.Y. series.-Weller, Pal. N.J., III, p.351-352, pl.47, f.1-4, 1903; Oriskany Form. Schuchert, Md. Geol. Surv., L. Dev., p.372-373, pl.65, f.23-28, 1913; Helderberg Form., New Scotland Mem. Miller's Spring near Cumb., Md; Warren Point, Penn. Oriskany Form., Ridgely Mem. Cumb., Hancock, Md; Keyser W.Va.-Stewart, Dev. of Mo., p.237-238, pl.62, f.12-16,

1922;Little Saline Creek ls.Ste Genevieve Co.

Eatonia pecularis.Billings,Pal.Fossils,I,pt.2,p.40, pl.3a,f2a-c,1874.-Hall and Clarke,Pal.N.Y.,VIII, pt.2,pl.61,f.17-26,1894.-Clarke,N.Y.State Mus.,Mem IX,pt.1,p.172,pl.29,f.1-13,1908.-Schuchert,Md. Geol.Surv.,L.Dev.,p.372,pl.65,f.23-28,1913 as cited by Stewart.

Eatonia pecularis.Billings,Clarke,Hall and Clarke,Schuchert,See Eatonia peculiaris (Conrad)

Eatonia plicata Stewart

Eatonia plicata Stewart,Dev. of Mo.,p.238,239,pl.63, f.1-4,1932;Little Saline ls.Ste Genevieve Co.,Mo.

Eatonia pumila Hall

Eatonia pumila Hall,Pal.N.Y.,III,p.437,pl.101,f.1,1859 Oriskany ss.Albany Co.

Eatonia singularis (Vanuxem)

Atrypa singularis Vanuxem,Geol.N.Y.,Rep.3d.Dist.,p.120 f.3,1843.

Eatonia singularis.Hall,Pal.N.Y.,III,p.243,pl.38,f.14 15a,b,16a-c,17a-d,18,19a,b,20,1859;L.Helderberg group.Helderberg mountains and Schoharie.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.206,pl.61,f.13-16, 1893.-Weller,Pal.N.J.,III,p.311,pl.36,f.24-27,1903; New Scotland-Becraft Fauna.-Shimer,N.Y.State Mus., Bull.80,p.245,1905.-Schuchert,Md.Geol.Surv.,L.Dev. p.371,pl.65,f.21,22,1913;Helderberg Form.,New Scotland Mem.Corriganville,Md.;Keyser,W.Va.Becraft Mem.Warren Point,Penn.-Tansey,Dev. of Mo.,p.192-193,pl.49,f.1,2,1922;Bailey ls.Little Saline Creek Ste Genevieve Co.

Eatonia sinuata Hall

Eatonia sinuata.Hall,Pal.N.Y.,III,p.438,pl.101A,f.3-6,1859;Oriskany ss.Cumb.,Md.-Regent's Rep. of 1856, p.91,1857;Paheoz.Foss.,p.51,1867.-Hall and Clarke, Pal.N.Y.,VIII,pt.2,p.206,pl.51,f.36-38,1893.-Schuchert ,Md.Geol.Surv.,L.Dev.,p.375-376,pl.65,f.36-38;pl.66,f.1,1913;Oriskany Form.,Ridgely Mem.Knobly mountain,near Cumb.;Colliers Run.,Md.

Eatonia whitfieldi Hall

Eatonia whitfieldi,Hall,Pal.N.Y.,III,p.437,pl.101A, f.2a,b,1859;Oriskany ss.Cumb.,Md.-Schuchert,Md.

Geol. Surv., L. Dev., p.373, pl.65, f.29,30, 1913; Oriskany Form., Ridgely Mem. Knobly mountain, near Cumb., Md.

Genus EUNELLA Hall and Clarke

Eunella sp. Kindle

Eunella sp. Kindle, U.S.G.S, Bull.391, p.22, pl.9, f.6, 6a, 1909; Ouray ls. Gelnwood; Shoshone; Rockwood, Colo.; Hillsboro, N.M.

Eunella harmonia Hall

Terebratula harmonia Hall, Pal. N.Y., IV, p.388, pl.60, f. 11-16, 1867.

Eunella harmonia Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.657, pl.12, f.2, 1901; Jeffersonville ls. Bunker Hill; Pipe Creek Falls; Falls of the Ohio.

Eunella lincklaeni (Hall)

Terebratula lincklaeni. Hall, 13th. Rep. N.Y., State Cab. Nat. Hist., p.88, 1860; Pal. N.Y., IV, Corrigenda, 1867.

Cryptonella lincklaeni Hall, 14th. Rep. N.Y. State Cab. Nat. Hist., p.101, 1861.

Cryptonella(?) lincklaeni Hall, Pal. N.Y., IV, pt.1, p. 397, pl.60, f.49-65, 1867.

Eunella lincklaeni. Hall and Clarke, Pal. N.Y., VIII, pt. 2, p.290, pl.80, f.28-32, 1893.-Schuchert, U.S.G.S. Bull 87, p.223, 1897.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.658, pl.12, f.3, 3a, 1901; Jeffersonville ls. Pipe Creek Falls; Bunker Hill; Falls of the Ohio; Grabau and Shimer, N. Am. Index Foss., I, p.303, f.378, 1909.-Cleland, Wisc. Geol. & Nat. Hist., Surv., Bull. 21, p.72, 1911.-Prosser and Kindle, Md. Geol. Surv., Mid. & Up. Dev., p.179-181, pl.15, f.18-23, 1913; Romney Form Hamilton Mem. N.E. Oldtown; Pine Hill.-Branson, Dev. of Mo., p.93, pl.20, f.12-16, 1922; Mineola ls.-Branson and Williams, Dev. of Mo., p.144, 1922; St. Laurent ls. Little Saline Creek, Ste Genevieve Co.

Eunella sullivanti Hall

Terebratula sullivanti Hall, Pal. N.Y., IV, p.387, pl.60, f.5-10, 1867.

Eunella sullivanti Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.656-657, pl.12, f.1, 1901; Jeffersonville ls. Pipe Creek Falls; Bunker Hill; Little, Rock Creek

Cass Co.

Genus GLOSSINA Phillips

Glossina spatiosa (Hall)

Lingula spatiosa Hall, Pal. N.Y., III, p.158, pl.9, f.10, 10a, 1859; L. Helderberg group. Becraft's mountain near Hudson.

Glossina spatiosa ? Weller, Pal. N.J., III, p.300, pl.33, f.6, 1903; New Scotland beds, near Hainesville, N.J.

Glossina triangulata Nettleroth

Lingula triangulata Nettleroth, Ky. Foss. Shells, p.34, pl.26, f.1, 1889.

Glossina triangulata Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.583, 1901; Sellersburg beds. Falls of the Ohio.

Genus GYPIDULA Hall

Gypidula angulata Weller

Gypidula angulata Weller, Pal. N.J., III, p.280-281, pl. 28, f.13-21, 1903; Coeymans ls. N.J.

Gypidula (Sieberella) coeymanensis Schuchert

Atrypa galeata, Vanuxem, (not Dalman), Geol. N.Y., Rep. 3d. Dist., p.117, f.1, 1842.-Castelanu, Essai Syst. l'Amer. septent., p.39, pl.14, f.4, 1843.

Pentamerus galeatus. Hall, (not Dalman), 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.105, f.1-3, 1857; Pal. N.Y. III, p.257, pl.46, f.1, pl.47, f.1, 1859; L. Pentamerus ls of L. Helderberg group. Helderberg mountains. Schoharie, Carlisle; Herkimer Co., Catskill, Hudson and numerous places in N.Y., Cumb., Md.; Decatur Co., Tenn.-Rogers, Geol. Penn., II, pt.2, p.825, f.646, 1858.

Sieberella galeatus Hall and Clarke, Pal. N.Y., VIII, pt. 2, p.246, f.175; pl.72, f.7-13, 1893.

Gypidula galeata. Schuchert, U.S.G.S., Bull.87, p.226, 1897.-Weller, Pal. N.J., III, p.379, pl.28, f.1-8, 1903. Coeymans ls. N.J.

Gypidula (Sieberella) coeymans Schuchert, Md. Geol. Surv. L.Dev., p.342-344, pl.62, f.4-7, 1913; Helderberg Form. Coeymans Mem. Keyser, W.Va.; Dawson, Corriganville, Devil's Backbone, Tonoloway, Md.

Gypidula(Lieberella) coeymans var corriganensis Maynard

Gypidula(Lieberella) coeymanensis var corriganensis Maynard,Md.Geol.Surv.,L.Dev.,p.345-346,pl.62,f. 12-18,1913;Helderberg Form.,Keyser Mem.Devil's Backbone,Md;Keyser,W.Va.

Gypidula (Sieberella' coeymanensis var prognostica Maynard

Gypidula(Sieberella)coeymanensis var prognostica Maynard,Md.Geol.Surv.,L.Dev.,p.344-345,pl.62,f.9-11, 1913;Helderberg Form.,Keyser Mem.Pinto,Devil's Backbone,Cumberland,Md1;Keyser,W.Va.;Hyndman,Penn.

Gypidula comis munda C.L.Fenton,See Gypidula cornuta Fenton and Fenton

Gypidula comis n.var.C.L.Fenton,See Gypidula cornuta Fenton and Fenton

Gypidula comis Hall and Clarke,See Gypidula comis(owen) as cited by Belanski.

Gypidula comis Hall and Clarke,See Gypidula cornuta Fenton and Fentonm as cited by Belanski,

Gypidula comis Hall and Clarke,See Gypidula occidentalis Hall, as cited by Belanski.

Gypidula comis Hall and Clarke,See Gypidula parva Fenton and Fenton, as cited by Belanski.

Gypidula comis (Owen)

Atrypa comis Owen,Rep.Geol.Surv.,Wisc.Iowa and Minn., p.583,Tab.3a,f.4,1852.

Pentamerus (N.S.) Owen,ibid.Tab.3a,f.11,1852.

Pentamerus galeatiformis Meek and Worthen,Geol.Sur., Ill.,I‡,p.325,(footnote),1866.

Pentamerus comis.Meek and Worthen,Geol.Surv.,Ill.,III p.428,pl.13,f.6a-c,1868.-Walcott,U.S.G.S.,Mon.VIII p.159-161,pl.3,f.4,Not pl.3,f.3;nor pl.14,f.15a,b, 1884.

? Pentamerus comis Whiteaves,Contr.Can.Pal.,I,pt.4,p. 290,1892.

Pentamerus occidentalis Hall(part) Iowa Rep.I,pt.2,p. 514,pl.6,f.2,a-c,1858.

Gypidula comis.Hall and Clarke,Pal.N.Y.,VIII,pt.2,p. 248.Not text fig.,177,nor pl.72,f.15-24,1893.- Schuchert,U.S.G.S.,Bull.87,p.226(part) 1897?-Belanski,Iowa Studies Nat.Hist.,n.ser.148,XII,No.7, p.9,pl.1,f.1-11,1928;Upper beds Davenport substage

Gypidula comis Schuchert,See Gypidula comis(Owen) and Gypidula occidentalis Hall, as cited by Belanski.

Gypidula cornuta Fenton and Fenton

Gypidula comis Hall and Clarke,(part) Pal.N.Y.,VIII, pt.2,pl.72,f.15-17,21,1894.

Gypidula comis munda C.L.Fenton,Am.Jour.Sci.,4th.ser. XLVIII,p.372,1919.

Gypidula comis n.var.C.L.Fenton,Loc.Cit.

Gypidula cornuta.Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.121-122,pl.25,f.26-31,1924.-Belanski,Iowa Studies Nat.Hist.,n.ser.148,XII,No.7,p.14,pl.1,f. 12-24,pl.2,f.14,1928;Cerro Gordo substage of Hackberry.

Gypidula cornuta parva Fenton and Fenton,See Gypidula parva Fenton and Fenton

Gypidula cornuta parva Fenton and Fenton

Gypidula cornuta parva Fenton and Fenton,Contr.Mus. Univ.Mich.,I,p.123,pl.25,f.32-35,1924;Spirifer zone.Strophonella faunule.Hackberry Stage.Bird Hill

Gypidula galeata Schuchert,See Gypidula(Sieberella) coeymanensis Schuchert.

Gypidula galeata Weller,See Gypidula (Sieberella)coeymanensis Schuchert.

Gypidula galeata (Dal) var Weller

Gypidula galeata (Dal) var Weller,Pal.N.J.,III,p.280, pl.28,f.9-12,1903;Coeymans ls.near Hainesville, N.J.

? Gypidula laeviuscula Hall and Clarke,See Gypidula parva Fenton and Fenton

Gypidula marionensis Greger

Gypidula marionensis.Greger,Am.Jour.Sci.,L.p.24,1920. -Bransonn,Mo.Bur. Geol.& Mines,XVII,2d.ser.,p.89,pl 16,f.17-20,1922;Cooper ls.Monroe Co.

Gypidula mineolaensis Branson

Gypidula mineolaensis Branson, Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.90,pl.23,f.6,10,11,1922;Mineola ls. Ralls Co.,Mo.

Gypidula multicostata Dunbar

Gypidula multicostata.Dunbar,Tenn.Geol.Surv.,Bull.21, pl.2,f.22,1919;Trans.Conn.Acad.Arts and Sciences, XXIII,p.131,pl.3,f.12,13,1920;-Tansey,Dev. of Mo., p.191,pl.48,f.10-19,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Gypidula nucleolata Belanski

Gypidula nucleolata Belanski,Iowa Studies Nat.Hist., n.ser.148,XII,No.7,p.19,pl.3,f.12-19,1928;Top Owen Substage.

Gypidula occidentalis Hall

Pentamerus occidentalis Hall,Geol. of Iowa,I,p.514, pl.6,f.2a,b,c,1858.

Not Pentamerus occidentalis Hall,Pal.N.Y.,II,p.341, 1852.

Gypidula comis.Hall and Clarke(part),Pal.N.Y.,VIII, pt.2,p.247-248,pl.72,f.18-20,22,23,1894.-Schuchert (part) U.S.G.S.,Bull.87,p.225-226,1897.

Gypidula occidentalis.Hall,Pal.N.Y.,IV,p.380,pl.58A, f.1-8,1867.-Belanski,Iowa Studies Nat.Hist.,n. ser.,148,XII,No,7,p.8,pl.2,f.1-8,1928;Davenport substage.Cedar Valley.

Gypidula papyracea Belanski

Gypidula papyracea Belanski,Iowa Studies Nat.Hist., n.ser.148,XII,No.7,p.12,pl.2,f.9-13;pl.3,f.20-24, 1928;Top Mason City substage.Shellrock.

Gypidula parva Fenton and Fenton

Gypidula comis Hall and Clarke(part) Pal.N.Y.,VIII,pt. 2,p.247,text fig.177,1894.

? Gypidula laeviuscula Hall and Clarke,ibid.pl.72, f.25,26,1894.

Gypidula cornuta parva Fenton and Fenton,Contr.Mus. Univ.Mich.,I,p.123,pl.25,f.32-35,1924.

Gypidula parva Belanski, Iowa Studies Nat.Hist., n. ser.148, XII, No.7, p.16, pl.3, f.1-11, 1928; Near Cerro Gordo substage.

Gypidula romingeri var indianensis Kindle

Gypidula romingeri var indianensis Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.653-654, pl.6, f.12, 12a, 1901; Jeffersonville ls. Falls of the Ohio.

Gypidula rostrata Belanski

Gypidula rostrata Belanski, Iowa Studies Nat.Hist., n. ser., 148, XII, No.7, p.13, pl.2, f.15-19, 1928; Loxonema zonule of the Rock Grove substage.

Gypidula subglobosa Maynard

Gypidula subglobosa Maynard, Md. Geol. Surv., L. Dev., p. 346-347, pl.62, f.20-22, 1913; Helderberg Form., Keyser Mem. Cash Valley, Md.

Genus HIPPARIONYX Vanuxem
(1892. See Hall and Clarke, Pal. N.Y., VIII, pt.1, p.258)

Hipparionyx consimilaris Vanuxem, See Atrypa reticularis (Linneaus)

Hipparionyx proximus Vanuxem

Hipparionyx proximus. Vanuxem, Geol. N.Y., Rep. 3d. Dist., p.134, f.29, No.4, 1842.-Hall and Clarke, Pal. N.Y., VIII, pt.1, p.257, pl.9, f.33-36, pl.15A, f.9-11, 1892.-Schuchert, U.S.G.S. Bull.87, p.230, 1897.-Weller, Pal. N.J., III, p.346-347, pl.45, f.12, 1903; Mid.& Up. Oriskany.-Schubhert, Md. Geol Surv., L. Dev., p.333-334, pl 61, f.10-13, 1913; Oriskany Form., Ridgely Mem. Devil's Backbone, Md; Pendleton Co., Penn.

Atrypa unguiformis. (Conrad) Hall, Geol. N.Y., Rept. 4th. Dist., p.149, f.4, 1843.-Rogers, Geol. Penna., II, pt.2, p.826, f.651, 1858.

Orthis conradi Castelnau, Essai Syst. Sil. l'Amerique Septentrionale, p.37, pl.15, f.4, 1843.

Orthis hipparionyx Hall, Pal. N.Y., III, p.407, pl.89, f. 1-4, pl.90, f.1-7, pl.91, f.4, 5, pl.94, f.4, 1859; Oriskany ss. Albany and Schohmire Cos.

Orthis cumberlandia. Hall, Pal. N.Y. III, p.481, pl.95, f. 20, 21, 1859; Oriskany ss. Cumb., Md.-Whitfield and Hovey, Bull. Am. Mus. Nat. Hist., XI, p.323 (H. proximus) 1900.

Orthis unguiformis. Castelmau, Essai Syst. Sil. l'Amerique Septentrionale, p.37, pl.15, f.3, 1843.-Emmons, Mam. Geol. p.129, f.115, 1860.

Strophodonta intermedia Hall, Pal. N.Y., III, p.482, pl.95A, f.13, 14, 1859; Oriskany ss. Cumb., Md.

Streptorhynchus hipparionyx Hall, 2d. Ann. Rep. N.Y. State Geol., pl.39, f.33-36, 1883.

Loc. Schoharie and Albany Counties, N.Y.; Frankstown, Penn.; Cumberland, Md.; Cayuga, Ontario.
Obs. This species does not occur in Germany according to Kayser.

Hypothyris gregeri Branson

Hypothyris gregeri Branson, Mo. Bur. Geol. & Mines, XVII, 2d. ser. p.91, pl, 17, f.5-7, 11-14, 1923; Callaway ls.

Leaptaena punctulifera Conrad, See Strophonella punctulifera (Conrad)

Genus LEIORHYNCHUS Hall
(1860. 13th. Ann. Rep. N.Y., State Cab. Nat. Hist., p.75)
(1893. Pal. N.Y., VIII, pt. 2, p.193)

Leiorhynchus cascadense Warren

Leiorhynchus cascadense Warren, Can. Geol. Surv., Dept. Mines, ser. 134, Mem. 153, p.53-54, pl.4, f.10-12, 1927; Up. Dev. beds Minnewanka ls. Cascade Mountains. Banff Area. Alberta.

Leiorhynchus dubium Hall

Leiorhynchus dubium. Hall, Pal. N.Y., IV, p.364, pl.57, 1867.-Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p.233, f.145, 1899; Just below Encrinal ls.

Leiorhynchus globuliforme Schuchert, See Liorhynchus globuliforme Vanuxem var Chagrinanum Prosser.

Leiorhynchus globuliforme (Vanuxem)

Atrypa globuliformis Vanuxem, Geol. N.Y., Rep. 3d. Dist., p.182, f.2, 1842.

Leiorhynchus globuliformis. Hall, Pal. N.Y., IV, p.364, pl.57, f.26-29, 1867.-Hall and Clarke, Pal. N.Y., VIII, pt.2, pl.59, f.23-27, 1894.

Leiorhynchus globuliforme Clarke and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.582-583,pl.54,f.10-16,1913; Jennings Form.,Woodmont Mem.,Ithaca Fauna.W.Pawpaw,W.Va.,Woodmont;Hancock,Millstone,Berkeley Springs,W.Va.

Leiorhynchus globuliforme Schuchert,See Liorhunchus globuliforme Vanuxem var chagrinanum Prosser.

Leiorhynchus globuliformis Hall,See Leiorhynchus globuliforme (Vanuxem) as cited by Clarke and Swartz.

Leiorhynchus globuliformis Hall,See Liorhynchus globuliforme Vanuxem var chagrinanum Prosser, as cited by Prosser.

Leiorhynchus globuliformis Hall and Clarke,See Leiorhynchus globuliforme (Vanuxem)

Leiorhynchus iris Hall

Leiorhynchus iris.Hall,Pal.N.Y.,IV,p.360,pl.56,f.41-43,1867.-Fenton and Fenton Contr.Mus.,Geol.Univ., Mich.,I,p.124-125,pl.26,f.27,1924;Cypidula fuanule and Spirifer zone.Hackberry Stage.

Leiorhynchus laura Grabau and Shimer,See Liorhynchus laura (Billings)

Leiorhynchus laura Schuchert,Shimer and Grabau,See Liorhynchus laura (Billings)

Leiorhynchus limitaris Hall,See Liorhynchus limitare (Vanuxem)

Leiorhynchus limitare Grabau and Shimer,See Liorhynchus limitare (Vanuxem)

Leiorhynchus limitare Schuchert,See Liorhynchus limitare (Vanuxem)

Leiorhynchus limitare(Vanuxem)

Leiorhynchus limitare,Hall,Pal.N.Y:,IV,p.356,pl.56,1867 Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.233,f.144,1899. Up.Marcellus sh.Bay View Cliff.-Kindle,25th.Ann.Rep Ind.Dept.Geol.Nat.Res.,p.571-572,1901

Leiorhynchus mesacostale Hall

Atrypa mesacostalis Hall,Geol.N.Y.Rep.4th.Dist.,p.64, f.a,b,1843.

Leiorhynchus mesacostalis Hall,Pal.N.Y.,IV,p.362,pl. 57,f.18-25,1867.

Leiorhynchus mesacostale Clarke and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.581,pl.54,f.5-8,1913;Jennings Form.,Parkhead Mem.Allegany Grove;S.E.Cumb.,Md

Leiorhynchus mesacostalis Hall,See Leiorhynchus mesacostale Hall

Leiorhynchus multicosta Hall,See Leiorhynchus multicostum Hall, as cited by Clarke and Swartz

Leiorhynchus multicosta Hall,See Liorhynchus laura(Billings)

Leiorhynchus multicostum Hall,See Leiorhynchus multicostum Hall, as cited by Clarke and Swartz.

Leiorhynchus multicosta Hall,See Liorhynchus laura (Billings)

Leiorhynchus multicostum Hall

Leiorhynchus multicosta Hall,13th,Ann.Rep.N.Y.State Cab.Nat.Hist,p.85,1860;Pal .N.Y.,IV,p.358,pl.56, f.26-40,1867.

Leiorhynchus cf multicostum Clarke and Swartz,Md.Geol Surv.,Mid.& Up.Dev,,p.581-582,pl154,f.9,1913;Jennings Form.,Parkhead Mem.W.Piney Grove,Garrett Co.

Leiorhynchus multicostus Hall

Leiorhynchus multicostus.Hall,Pal.N.Y.,IV,p.358,pl. 56,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.232, f.142,1899;Moscow sh.

Leiorhynchus mysia Hall,See Liorhynchus mysia Hall

Leiorhynchus newberryi Hall,See Liorhynchus newberryi Hall.

Leiorhynchus quadricostatum(Vanuxem)

Leiorhynchus quadricostatum.Hall,Pal.N.Y.,IV,p.357,pl 56,f.44-49,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.233,f.143,1899;Moscow sh.-Kindle,25th.Ann.Rep. Ind.Dept.Geol.Nat.Res.,p.571,pl.1,f.5,5a,1901;New Albany sh.Lexington;Falls of the Ohio and Helt's Mill,Jennings Co.

Genus LEPTAENA Dalman
(1827.Uppstalln. af Terebr)

Leptaena bipartita Hall,See Stropheodonta(Leptostrophia) bipartita (Hall)

Leptaena concava Hall

Leptaena concava Hall, Pal. N. Y., III, p. 197, pl. 18, f. 2, 1859; L. Helderberg group. Helderberg mountains Albany Co.

Leptaena depressa Dalman, See Strophomena rugosa Hall

Leptaena depressa DeKininck, See Strophomena rugosa Hall, as cited by Hall

Leptaena depressa KeKoninck, See Strophomena rhomboidalis Wahlenberg, as cited by Meek and Worthen.

Leptaena depressa DeVerneuil, See Strophomena rugosa Hall

Leptaena depressa Hall of 1847, See Strophomena rugosa Hall.

Leptaena depressa Hall of 1852, See Leptaena rhomboidalis (Wilckens)

Leptaena depressa Hisinger, See Strophomena rugosa Hall

Leptaena depressa Rogers, See Leptaena rhomboidalis (Wilckens)

Leptaena depressa G. B. Sowerby, See Strophomena rugosa Hall

Leptaena depressa J. Sowerby, See Strophomena rugosa Hall

Leptaena distorta J. Sowerby, See Strophomena rhomboidalis Wahlenburg.

Leptaena sp? Fischer, See Strophomena rugosa Hall

Leptaena indenta Conrad, See Strophomena indenta (Conrad)

Leptaena indenta (?) Conrad, See Strophodonta varistriata (Conrad)

Leptaena laticosta DeVerneuil, See Tropidoleptus carinatus Conrad.

Leptaena nodulosa Phillips, See Strophomena rhomboidalis Wahlenberg.

Leptaena ? nucleata Hall, See Anoplia nucleata (Hall)

Leptaena quadrilatera Shaler, See Leptaena rhomboidalis (Wilckens)

Leptaena (Strophomena) rhomboidalis Beecher, See Laptaena rhomboidalis (Wilckens)

Leptaena rhomboidalis (Wilckens)

Conchita rhomboidalis Wilckens, Nachricht von Selten Versteinerungen, p.77, pl.8, f.43, 44, 1769.

Strophomena undulosa Conrad, 5th. Ann. Rep. Geol. Surv. N.Y p.54, 1841.

Strophomena depressa. Vanuxem, Geol. N.Y., Rep. 3d. Dist., p 79, f.5, 1842.-Hall, Geol. N.Y., Rep. 4th. Dist., p.77, f.5 p.104, f.2, 1843.-Billings, Canadian Nat. Geol. I, p.59, pl.1, f.5, 1856.-Roemer, Sil. Fauna W. Tenn., p.65, pl. 5, f.2, 1860.

Strophomena undulatus Vanuxem, Geol. N.Y., Rep. 3d, Dist., p.139, f.3, 1842.

Strophomena undulata. Hall, Geol. N.Y., 4th. Dist., p.175, f.3, 1843.-Yandell and Shumard, Contr. Geol. Ky., p.11, 1874.

Productus ?sulcatus Castelnau, Essai Syst. Sil. l'Amerique septentrionale, p.39, pl.1%, f.7, 1843.

Productus sulcifer DeVerneuil, ididem. p.39, 1843.

Leptaena tenuistriata. Hall, Pal. N.Y., I, p.108, pl.31A, f.4, 1847.-Hall and Clarke, Pal. N.Y., VIII, pt.1, pl. 8, f.12-16, 1892.

Leptaena depressa. Hall, Pal. N.Y., II, p.62, pl.21, f.8; p. 257, pl.53, f.6, 1852.-Rogers, Geol. Penna., II, pt.2, p. 823, f.630, 1858.

Strophomena rugosa Hall, Pal. N.Y., III, p.195, pl.19, f. 1a-y, 1859; L. Helderberg group. Helderberg mountains; Schoharie, Carlisle, Catskill, Hudson, etc.

Strophomena rhomboidalis. Billings, Canadian Jour. VI, p.336, f.111, 112, 1861; Geol. Canada, p.311, f.314, p. 367, f.373, 1863; Proc. Portland Soc. Nat. Hist., p.107, pl.3, f.1, 1863.-Hall, Pal. N.Y., IV, p.76, pl.12, f.16-18, p.414, pl.15, f.15, 16, 1867.-Meek and Worthen, Geol Surv. Ill. III, p.426, pl.10, f.7, 1868.-Meek, Pal. Ohio. I, p.75, pl.5, f.6, 1873.-Billings, Pal. Foss., II, p.27, 1874.-White, Wheeler's Expl. Surv. West 100th. Meridian. IV, p.85, pl.5, f.5, 1875.-Hall and Whitfield, King's U.S. Geol. Expl. 40th. Paral., IV, p.253, pl.4, f.4 1877.-Hall, 28th. Rep. N.Y. State Mus. Nat. Hist., p.151, pl.22, f.4-10, 1879.-Miller, Jour. Cincinnati Soc. Nat. Hist., IV, p.1, 1881.-Hall, 11th. Rep. State Geol. Ind. p.288, pl.22, f.4-10, 1882; 2nd. Ann. Rep. N.Y. State Geol pl.38, f.17-31, 1883.-Walcott, U.S.G.S., Mon. VIII, p. 118, 1884.-Beecher and Clarke, Mem. N.Y. State Mus., I, p.18, pl.2, f.1-13, 1889.-Nettleroth, Ky. Foss. Shells,

Mem.Ky.Geol.Surv.,p.150,pl.18,f.1-3,1889.-Foerste, Proc.Bost.Soc.Nat.Hist.,XXIV,p.298,1890.-Beecher, Am.Jour.Sci.,3d.ser.,XLI,p.357,pl.17,f.18-21,1891. Herrick,Geol.Ohio,VII,pl.20,f.6,1895.

Strophomena analoga.Davidson,Quart.Jour.Geol.Soc.London,XIX,p.173,pl.9,f.18,1863.-Dawson,Acadian Geol. 3d.ed.,p.295,f.95,1878.

Leptaena quadrilatera Shaler,Bull.Mus.Comp.Zool.,IV. p.65,1865.

Strophomena gibbosa James,Cincinnati Quart.Jour.Sci., I,p.333,1874.

Strophomena tenuistriata.Miller,ibidem,II,p.55,1875. -Hall,2d.Ann.Rep.N.Y.State Geol.,p.38,f.12-16, 1883.

Leptaena rhomboidalis.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.279,pl.8,f.17-31;pl.15A,f.40-42,pl.20,f.21-24,1892.-Foerste,Geol.Ohio,VII,p.566,1895.-Schuchert,U.S.G.S.Bull.87,p.240,1897.-Girty,U.S.G.S., 19th.Ann.Rep.pt.3,p.563,1899.-Clarke,N.Y.State Mus.,Mem.III,p.57,1900.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.593,pl.4,f.5,1901;Sellersburg beds and Jeffersonville ls.Deputy;Sellersburg;Charlestown.-Clarke,N.Y.State Mus.,Bull.65, p.239,1903.-Weller,Pal.N.J.,III,p.278,302,pl.27, f.9;pl.33,f.10,1903;Coeymans ls;New Scotland-Becraft Fauna;L.Oriskany;Onondaga ls.-Shimer,N.Y. State Mus.,Bull.80,p.240,1905.-Grabau and Shimer, N.Am.Index Foss.II,p.226,f.273a,b,1907.-Clarke, N.Y.State Mus.,Mem.IX,pt.1,p.111,116,183,pl.34,f. 1-3,1908;N.Y.State Mus.Mem.IX,pt.2,p.45,122,pl. 10,f.1-6,1909.-Kindle,U.S.G.S.,Bull.381,p.16,pl. 1,f.3,1909.Ouray ls.Hillsboro,N.Mex.-Maynard,Md. Geol.Surv.,L.Dev.,p.308,pl.56,f.13-17,1913;Helderberg Form.,Keyser Mem.Cash Valley,Md.;Hyndman, Penn.Coeymans Mem.Dawson,New Scotland Mem.Dawson, Cherry Run,W.Va.Becraft Mem.Warren Point,Penn. Oriskany Form.,Ridgley Mem.Miller's Springs near Cumb.,Md.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.14-143,pl.10,f.10,11,1913;Romney Form., Hamilton Mem.Ernstville,Penn.-Dunbar,Tenn.Geol.Sur Bull.21,pl.2,f.17,1919.-Tansey,Dev. of Mo.,p.186-187,pl.46,f.26-32,1923;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Leptaena(Strophomena)rhomboidalis Beecher,Am.Jour. Sci.,3d.ser.,XLIV,p.150,pl.1,f.7-9,1892.

Plectambonites rhomboidalis Keyes,Geol.Sur.Mo.,p.70, f.6,1895.

Loc. Generally distributed in the above given formations throughout Europe and America.

Leptaena rhomboidalis var ventricosa Clarke, See Leptaena ventricosa (Hall)

Leptaena rhomboidalis (Wilckens) var ventricosa Hall

Strophomena depressa var ventricosa Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.55, 1857.

Strophomena rugosa var ventricosa Hall, Pal. N.Y., III, p. 417, pl.94, f.2e, f.3, 1859; Oriskany ss. Albany and Schoharie counties, N.Y. and Cumberland, Md.

Leptaena rhomboidalis var ventricosa. Hall and Clarke, Pal. N.Y., VIII, pt.1 pl.15A, f.43, 1892.-Weller, Pal. N.J. III, p.346, pl.46, f.1, 1903; Oriskany Form., N.Y., State Mus., Mem. IX, pt.2, p.87, pl.21, f.21, f.87, 1908.-Schuchert Md. Geol. Surv.. L.Dev., p.309-310, pl.56, f.18, pl.57, f.1, 1913; Oriskany Form., Ridgely Mem. Cumb., Md. Warren Point, Penn.

Leptaena ventricosa Stewart, Dev. of Mo., p.231-232, pl. 61, f.15-17, 1922; Little Saline Creek. l.s. Ste Genevieve Co.

Leptaena rugosa Dalman, See:
Strophomena rugosa Hall
Strophomena rhomboidalis Wahlenberg.

Leptaena rugosa Hisinger, See Strophomena rugosa Hall

Leptaena rugosa. Phillips, J. Sowerby See Strophomena rugosa Hall

Leptaena tenuistriata. Hall, Hall and Clarke, See Leptaena rhomboidalis (Wilckens)

Leptaena tenuistriata (?) J. Sowerby, See Strophomena rugosa Hall

Leptaena tenuistriata Sowerby, See Strophomena rhomboidalis Wahlenberg.

Leptaena ventricosa Stewart, Dev. of Mo., p.231-232, pl. 61, f.15-17, 1922; Little Saline Ls. Ste Genevieve Co.

Leptaena vicina Castelnau, See Chonetes vicinus (Castelnau)

Genus LEPTAENISCA Beecher

Leptaenisca australis Kindle

Leptaenisca australis Kindle,U.S.G.S.,Bull.508,p.78, pl.4,f.8-12,1912;Md.Geol.Surv.,Mid.& Up.Dev.,p. 143-144,pl.11,f.1-5,1913;Romney Form.,Onondaga Mem.Tonoloway;Berkeley Springs.

Leptaenisca concava (Hall)

Leptaena concava Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.47,1857;Pal.N.Y.,III,p.197,pl.18,f.2a-f,1859;L.Helderberg group.Helderberg mountains Albany Co.

Leptaena ? (Subgenus) concaba Hall,Rep.State Geol.N. Y.for 1882.pl.46,f.30,31,1883.

Leptaenisca concava.Beecher,Am.Jour.Sci.,3d.ser.,XL, p.238,pl.9,f.1-5,1890.-Hall and Clarke,Pal.N.Y., VIII,pt.1,p.300,pl.15,f.30,31,pl.15A,f.19-21,1892. Clarke,N.Y.State Mus.Mem.IX,pt.2,p.46,pl.10,f.7-11,1909.-Schuchert,Md.Geol.Surv.,L.Dev.,p.310, pl.57,f.2-5,1913;Helderberg Form.,Coeymans Mem. Dawson,New Scotland Mem.Miller's Spring near Cumb. Md.-Tansey,Dev.of Mo.,p.189-190,pl.47,f.7-16,1922; Bailey ls.LittleSaline Creek,Ste Genevieve Co.

Leptagonia multirugata McCoy,See Strophomena rhomboidalis Wahlenberg.

Leptagonia rugosa McCoy,See Strophomena rhomboidalis Wahlenberg.

Genus LEPTOCOELIA Hall
(1857.Hall,Regents Rpe.State Cab.Nat.Hist.,for 1856,p.107)

Leptocoelia acutiplicata Hall,See Anoplotheca (Coelospira) acutiplicata (Conrad)

Leptocoelia concava Hall,See Anoplotheca concava (Hall)

Leptocoelia dichotoma Hall,See Anoplotheca dichotoma (Hall)

Leptocoelia dichotoma Hall and Clarke,See Anoplotheca dichotoma (Hall)

Leptocoelia fimbriata Hall,See Anoplotheca (Leptocoelia) fimbriata (Hall)

Leptocoelia fimbriata Hall and Clarke, See Anoplotheca (Leptocoelia) fimbriata (Hall)

Leptocoelia flabellites. (Conrad), Hall, See Anoplotheca flabellites (Conrad)

Leptocoelia imbricata Billings, See Atrypina imbricata (Hall)

Leptocoelia imbricata Hall

Leptocoelia imbricata Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., pl08, 1857; Pal. N.Y., III, p.246, pl. 38, f.8-13, 1859; L. Helderberg group. Helderberg mountains, Schoharie, etc.

Leptocoelia proparia Hall, See Anoplotheca flabellites (Conrad)

Genus LEPTOSTROPHIA Hall and Clarke
(1892. Pal. N.Y., VIII, pt.1p.187-388)
(1894. 11th. Ann, Rep. N.Y. State Geol., p.281)

Leptostrophia camerata Fenton and Fenton

Strophecdonta calvini Calvin, Iowa Geol. Surv., VII, p. 167, 1897.

Leptostrophia camerata Fenton and Fenton, Contr. Mus. Univ. Mic., I, p.96-97, pl.21, f.8-13, 1924; Spirifer zone. Leptostrophia faunule. Hackberry Stage.

Leptostrophia canace (Hall and Whitfield)

Strophodonta canace Hall and Whitfield, 23d. Ann. Rep. N.Y. State Cab. Nat. Hist., p.236, pl.11, f.8-11, 1873.

Leptostrophia canace Fenton and Fenton, Contr. Mus. Univ Mich., I, p.95-96, pl.21, f.1, 2, 1924; Spirifer zone. Hackberry Stage.

Leptostrophia interstrialis (Vanuxem)

Strophomena interstrialis Vanuxem (non Phillips), Geol N.Y., 3d. Dist., p.174, f.1, 1842.

Strophecdonta mucronata Hall (non Conrad) Pal. N.Y., IV, p.111, pl.15, f.13, 14, 1867.

Strophecdonta interstrialis Schuchert, U.S.G.S., Bull. 87, p.423, 1897.

Leptostrophia interstrialis Clarke and Swartz, Md. Geol

Surv.,Mid.& Up.Dev.,p.554,pl.48,f.7,1913;Jennings Form.,Woodmont Mem.,Ithaca Fauna.Hancock-Harrisonville Road;Millstone.

Leptostrophia junia Hall,See Strophcodonta (Leptostrophia)junia Hall

Leptostrophia magnifica.Clarke,Hall,Stewart,See Strophcodtona(Leptostrophia)magnifica Hall

Leptostrophia magniventra Stewart,See Strophcodonta (Leptostrophia) magniventra Hall

Leptostrophia perplana.Clarke,Branson and Williams,See Strophcodonta (Leptostrophia)perplana (Conrad)

Leptostrophia perplana nervosa C.L.Fenton,See Leptostrophia rockfordensis Fenton and Fenton

Leptostrophia perplana var alternata Clarke and Swartz.

Leptostrophia perplana var alternata Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.553,pl.48,f.5,6,1913;Jennings Form.,Chemung Mem.W.Frostburg;Polish mountain;Town Creek.

Leptostrophia perplana var nerva (Hall)

Strophomena nervosa Hall,Geol.N.Y.,Rep.4th.Dist.,p.366,f.1,1843.

Strophcodonta perplana var nervosa Hall,Pal.N.Y.,IV,p.13,pl.13,f.13-16,1867.

Leptostrophia perplana var nervosa.Hall and Clarke,Pal.N.Y.,VIII,pt.1,p.15,f.14,15,17,1892.-Clarke,and SwartzMd.Geol.Surv.,Mid. & Up.Dev.,p.552-553,pl.48,f.1-4,1913;Jennings Form.,Chemung Mem.W. Tonoloway Ridge;Oakland;Cherry Run.

Leptostrophia rockfordensis Fenton and Fenton

Strophcodonta perplana nervosa Calvin,Iowa Geol.Surv. VII,p.167,1897.

Leptostrophia perplana nervosa C.L.Fenton,Am.Jour. Sci.,4th.ser.,XLVIII,p.371,1919.

Leptostrophia rockfordensis Fenton and Fenton,Contr. Mus.Univ.Mich.,I,p.93-35,pl.21,f.3-7,1924;Spirifer zone.Hackberry Stage.Bird Hill.

Genus LINGULA Bouguiere
(1792.Encyc.Meth.I,tab.,250)
(1879.Hist.Natur.des Vers Testaces)
(1892.Pal.N.Y.,VIII,pt.1,p.2)

Lingula sp.Clarke and Swartz

Lingula sp.Clarke and Swartz,Md.Geol.Surv.,Mid.& Up. Dev.,p.548,1913;Jennings Form.,Woodmont Mem., Naples Fauna.Polish Mountain.

Lingula ? sp.Weller

Lingula sp.Weller,Pal.N.J.III,p.324,1903;Oriskany.

Lingula sp.Weller.

Lingula sp.Weller,Pal.N.J.,III,p.365,1903;Onondaga ls.

Lingula centrilineata Hall

Lingula centrilineata Hall,Pal.N.Y.,III,p.155,pl.9,f 1,2,1859;L.Helderberg group.Helderberg Mountains, Albany Co.,N.Y.

Lingula clarki Prosser and Kindle

Lingula clarki Prosser and Kindle,Md.Geol.Surv.,Mid. & Up.Dev.,p.128-129,pl.8,f.12,13,1913;Romney Form Hamilton Mem.B.& O.R.R.Cut 21st.Bridge,Cumb.Md.

Lingula compta Hall and Clarke

Lingula compta.Hall and Clarke,Pal.N.Y.,VIII,pt.1, p.171,pl.1f,16,1892.-Schuchert,U.S.G.S.,Bull.87, p.246,1897.-Clarke,N.Y.State Mus.,Bull.65,p.246, 1903.

Lingula cf compta Prosser and Kindle,Md.Geol.Surv., Mid.& Up.Dev.,p.128,pl.8,f.11,1913;Romney Form., Hamilton Mem.E.bank Evitts Creek below Wolfe Mill near Cumb.,Md.

Lingula delia Hall

Lingula delia.Hall,Pal.N.Y.,IV,p.12,pl.2,1867;16th. Rep.N.Y.State Cab.Nat.Hist.,p.22,1863.-Hall and Clarke,Pal.N.Y.,VIII,pt.1,p.15,pl.1,f.29,1892.- Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.182,f.80, 1899;Demissa bed,Just below Encrinal ls.Idlewood Ravine.-Clarke,N.Y.State Mus.,Bull.65,p.247,1903. Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.

125-126,pl.8,f.5,1913;Romney Form.,Hamilton Mem. E. bank Evitts Creek below Wolfe Mill near Cumb., Md.

Lingula (Glossina) leana Hall

Lingula (Glossina)leana.Hall,Pal.N.Y.,IV,p.9,pl.2, f867.-Grabau, Buffalo Soc.Nat.Sci.,Bull.6,p.182,f 79,1899;Below Encrinal ls.

Lingula ligea Hall

Lingula ligea.Hall,13th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.76,1860;Pal.N.Y.,IV,p.7,pl.1,f.2,1867.- Grabau and Shimer,N.Am.Index Foss.,I,p.197,f.229, 1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up. Dev.,p.126-127,pl.8,f.6,1913;Romney Form.,Hamilton Mem.E. bank Evitts Creek below Wolfe Mill;B. & O.R.R.Cut 21st.Bridge Cumb.,Md.-Clarke,and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.547-548,pl.47,f. 6,7,1913;Jennings Form.,Ithaca Fauna.Hancock,Md.

Lingula ligea var Hall,Pal.N.Y.,IV,p.8,pl.2,f.8,1867.

Lingula nuda Hall

Lingula nuda.Hall,16th.Rep.N.Y.State Cab.Nat.Hist.,p 22,1863;Pal.N.Y.,IV,p.10,pl.2,f.4-6,1867.-Schuchert,U.S.G.S.Bull.87,p.251,1897.-Clarke,N.Y.State Mus.,Bull.65,p.247,1903.

Lingula cf nuda Prosser and Kindle,Md.Geol.Surv.,Mid & Up.Dev.,p.127-128,pl.8,f.7,8,1913;Romney Form., Onondaga Mem.Near Cumb.

Lingula oherni Clarke and Swartz

Lingula oherni Clarke and Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.546-547,pl.47,f.1-5,1913;Jennings Form Parkhead Mem.E. Cumb.;Rocky Run,W.Va.

Lingula palaeformis Hall,See Lingulella(?) paliformis (Hall)

Lingula paliformis Hall,See Lingulella(?) paliformis Hall

Lingula perlata Hall

Lingula perlata Hall,Pal.N.Y.,III,p.156,pl.9,f.3-5, 1859;L.Helderberg group.Albany and Schoharie Cos. N.Y.

Lingula rectilatera Hall

Lingula rectilatera Hall,Pal.N.Y.,III,p.156,pl.9,f. 6,8,1859;L.Helderberg group.Helderberg,Schoharie, Hudson,etc.

Lingula apathata Hall

Lingula spathata Hall,Pal.N.Y.,III,p.157,pl.9,f.7,9, 11,1859;L.Helderberg group.Helderberg mts.,and Schoharie.

Lingula spatiosa Hall,See Glossina spatiosa (Hall) ?

Lingula spatulata Vanuxem

Lingula spatulata.Vanuxem,Geol.N.Y.,Rep.3d.Dist.,p. 168,f.3,1842.-Hall,Pal.N.Y.,IV,p.13,pl.1,f.1,1867 Grabau and Shimer,N.Am.Index Foss.,I,p.197,f. 231,1909.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 182,f.81,1899;Up.Naples(Gardeau)sh.Lake Shore;Genesse sh.-Clarke,and Swartz,Md.Geol.Surv.,Mid.& Up Dev.,p.548,pl.46,f.8,1913;Jennings Form.,Woodmont Mem.Ithaca Fauna.Hancock;Berkeley Springs,W.Va.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.572, pl.1,f.1,1901;New Albany sh.Crothersville;Lexington;Falls of the Ohio.

Lingula subspatulata Meek and Worthen

Lingula subspatulata Meek and Worthen,Ill.Geol.Surv. III,p.437,pl.13,f.1,1868;Near Jonesboro,Union Co. Ill."Black-Slate" top Hamilton Div.Dev.Series.

Lingulae triangulata Nettleroth,See Glossina trinagulata Nettleroth.

Genus LINGULAPHOLIS Schuchert
(1913.Md.Geol.Surv.,L.Dev.,p.295-296)

Lingulapholis terminalis (Hall)

Pholidops terminalis.Hall,Pal.N.Y.,III,p.490,pl. 103B,f.8a-d,1859;Oriskany ss.Cumb.,Md.-Hall and Clarke,Pal.N.Y.VIII,pt.1,p.157,1892.-Clarke, N.Y. State Mus.,Mem.,III,No.3,p.59,pl.8,f.23-25,1900.

Pholidops arenaria Hall,Pal.N.Y.,IV,p.32,413,pl.3,f. 3,(fide Clarek) 1867.

Pholidops arenaria ? Weller,Pal.N.J.,III,p.344,pl. 45,f.6,1903;Mid.& Up.Oriskany.

Lingulapholis terminalis Schuchert,Md.Geol.Surv.,L. Dev.,p.296,pl.53,f.14-19,1913;Oriskany Form.,Rid-

gely Mem. Cumberland, North Branch, Md. Warren Point Penn.

Genus LINGULELLA Salter

Lingulella(?) paliformis Hall

Lingula paliformis Hall, 13th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.76, f.1, 1860, Pal. N.Y., IV, p.8, pl.1, f.7, 1867.

Lingullela(?) paliformis. Hall and Clarke, Pal. N.Y., VIII, pt.1, p.59, 64, pl.2, f.6-8, 1892.-Schuchert, US. G.S., Bull.87, p.258, 1897.-Clarke, N.Y. State Mus., Bull.65, p.250, 1903.-Prosser and Kindle, Md. Geol. Surv., Mid.& Up. Dev., p.124-125, pl.8, f.1-4, 1913; Romney Form., Hamilton Mem. S.E. Cumb.; Evitts Creek below Wofle Mill, near Cumb.

Liorhynchus ashtabulense Prosser

Liorhynchus ashtabulense Prosser, Geol. Surv., Ohio, 4th ser., Bull.15, p.546, pl.33, f.5-8, 1913; Chagrin Form. S. Monroe Center.

Liorhynchus clarkei Prosser

Liorhynchus clarkei Prosser, Geol. Surv., Ohio, 4th. ser. Bull.15, p.545-546, pl.32, f.21-23, f.1-4, 1912; Chagrin Form. N. Jefferson and below r.r. bridge.

Liorhynchus globuliforme Vanuxem var Chagrinanum Prosser

Atrypa globuliformis Vanuxem, Geol. N.Y., Rep. 3d. Dist., p.182, f,2, 1842.

Leiorhynchus globuliformis Hall, Pal. N.Y., IV, p.364, pl 57, f.26-29, 1867.

Liorhynchus globuliformis Hall, and Clarke, Pal. N.Y., VIII, pt.2, p.194, pl.59, f.23-27, 1893.

Leiorhynchus globuliforme Schuchert, U.S.G.S. Bull.87, p.236, 1897.

Liorhynchus globuliforme var chagrinanum Prosser, Geol. Surv. Ohio, 4th. ser., Bull.15, p.533-534, pl.28, f.14, 15, pl.29, f.1, 2, 1912; Chagrin Form., Madison-Thompson Road, S. Madiso n.

Liorhynchus globuliformis Hall and Clarke, See Liorhynchus globuliformis Vanuxem var chagrinanum Prosser.

Liorhynchus larua (Billings)

Rhynchonella(?) laura Billings,Canadian Jour.V,p. 273,f.26-28,1860/

Leiorhynchus multicosta Hall,16th.Rep.N.Y.State Cab. Nat.Hist.p.85,f.14,15,on page 94,1860.Pal.N.Y.IV. p.358,pl.56,f.26-40,1867.

Liorhynchus multicosta Hall and Clarke,Pal.N.Y.,VIII pt.2,p.194,pl.59,f.8-10,13-17,1893.

Liorhynchus laura.Hall and Clarke,Pal.N.Y.,VIII,pt.2 p.194,pl.59,f.8-10,13-17,1893.-Prosser and Kindle Md.Geol.Surv.,Mid.& Up.Dev.,p.177-178,pl.15,f.9-13,1913;Romney Form.,Hamilton Mem.S.E.Cumb.E.bank Evitts Creek below Wolfe Mill,near Cumb.,Md.

Leiorhynchus laura.Schuchert,U.S.G.S.Bull.87,p.237, 1897.-Shimer and Grabau,Bull.Geol.Soc.AmeriXIII, p.168-170,1902.-Grabau and Shimer,N.Am.Index Foss I,p.289,f.357c,1909.

Lirohynchus multicostum Clarke,N.Y.State Mus.,Bull.65 p.253,1903.

Liorhynchus limitaris Hall and Clarke,See Liorhynchus limitare (Vanuxem)

Liorhynchus limitare (Vanuxem)

Orthis limitaris Vanuxem,Geol.N.Y.,pt.3,p.146,f.3, 1842.

Atrypa limitaris.Hall,Geol.N.U.,IV,p.182,f.11,1843.-Rogers,Geol.Penna.,II,pt.2,p 826,f.652,1858.

Leiorhynchus limitaris Hall,13th.Ann,Rep N.Y.State C Cab.Nat.Hist.,p.85,1860.Pal.N.Y.,IV,p.356,f.6-21, 1867.

Liorhynchus limitaris Hall and Clarke,Pal.N.Y.,VIII, pt.2,p.194,pl.59,f.1-5,1893.

Leiorhynchus limitare.Schuchert,U.S.G.S.Bull.87,p.237 1897.-Grabau and Shimer,N.Am.Index Foss.,I,p.289, f.357a,b,1909.

Liorhynchus limitare.-Clarke,N.Y.State Mus.,Bull.65, p.253,1903.-Prosser and Kindle,Md.Geol.Surv.,Mid. & Up.Dev.,p.175-177,pl.15,f.5,1913;Romney Form., Marcellus Mem.B.& O.R.R.Cut,21st.Bridge,Cumb.;W. Va.Cent.R.R.Cut.21st.Bridge;S.E.Cumb.,Md.

Liorhynchus multicosta Hall and Clarke, See Liorhynchus laura (Billings)

Liorhynchus multicostum Clarke, See Liorhynchus laura (Billings)

Liorhynchus mysia Hall

Leiorhynchus mysia Hall, Pal. N.Y., IV, p.357, pl.56, f. 1-5, 1867.

Liorhynchus of mysia Kindle, Md. Geol. Surv., Mid. & Up. Dev., p.178-179, pl.15, f.13-17, 1913; Romney Form., Marcellus Mem. S.E. Cumb., Md.

Liorhynchus newberryi Hall

Leiorhynchus newberryi Hall, 33d. Ann. Rep. N.Y. State Cab Nat. Hist., p.240, pl.11, f.25-27, 1873.

Liorhynchus newberryi Prosser, Geol. Surv., Ohio, 4th. ser., Bull.15, p.546-547, pl.33, f.9, 10, 1912; Chagrin Form., S. Monroe Center; Mill Creek at Eagleville.

Liorhynchus ohioense Prosser

Liorhynchus ohioense Prosser, Geol. Surv. Ohio. 4th. ser. Bull.15, p.532-533, pl.28, f.9-13, 1912; Chagrin Form. N. Gates Mill; Trumbull Creek S. Trumbull Center; Mill Creek at Eagleville; Mill Creek E. Jefferson

Genus MARTINIA McCoy

Martinia halli Branson

Martinia halli Branson, Mo. Bur. Geol. & Mines, XVII, 2d. ser. p.106, pl.16, f.6-8, 1922; Mineola ls.

Martinia subumbonus Grabau, See Spirifer (Martinia) subumbona Hall

Martinia williamsi Kindle

Martinia williamsi Kindle, 25th. Ann. Rep. Ind. Dept. Geol Nat. Res., p.627, pl.11, f.5, 5a, b, 1901; Geneva ls. Hope.

Megalanterus ovalis. Clarke, Hall and Clarke, See Rensselaeria (Beachia) ovalis (Hall)

Meganteris cumberlandiae Hall, See Rensselaeria (Beachia) cumberlandiae (Hall)

Meganteris elongatus Hall, See Stricklandinia elongata var curta Billings.

Meganteris mutabilis Hall, See Rensselaeria mutabilis (Hall)

Meganteris ovalis Hall, See Rensselaeria(Beachia) ovalis (Hall)

Meganteris ovoides Hall, See Rensselaeria ovoides(Hall)

Cf Meganteris ovoides Hall, See Rensselaeria condoni McChesney)

Meganteris suessana Hall, See Rensselaeria (Beachia)suessana (Hall)

Genus MERISTA Suess 1851.

Merista sp.Hall

Merista sp.Hall, Pal.N.Y., III, p.252, pl.45, f.1a-d, 1859; Pentamerus ls.L.Helderberg group.

Merista arcuata Hall, See Meristella arcuata (Hall)

Merista bella Hall, See Meristella bella Hall

Merista bisulcata (Vanuxem)

Atrypa bisulcata Vanuxem, Geol.Rep.N.Y., 3d.Dist., p.112 1843.

Merista bisulcata Hall, Pal.N.Y., III, p.253, 1859.

Merista laevis Hall, See Meristella laevis (Vanuxem)

? Merista laevis ? Meek and Worthen, See Meristella arcuata (Hall)

Merista lata Hall, See Meristella lata (Hall)

Merista meeki Hall

Merista meeni Hall, Pal.N.Y., III, p.252, pl.44, f.6a-d, 1859; ls.age of L.Helderberg group.Tenn.

Merista nucleolata Hall, See Whitfieldella ? nucleolata (Hall)

Merista princeps Hall, See Meristella princeps Hall

Merista subquardata Hall.

Merista subquadrata Hall,Pal.N.Y.,III,p.249,pl.40,f. 3a-d,1859;L.Helderberg group.Schoharie and Carlisle.

Merista typa (Hall)

Camarium typum Hall,Pal.N.Y.,III,p.487,pl.95A,f.2a, 3,5,6,1859;L.Helderberg group;Cumb.,Md.

Camarium elongatum Hall,Pal.N.Y.,III,p.488,pl.95A,f. 4,1859;Same as preceeding.

Merista typum Hall,13th,Ann.Rep.N.Y.State Cab.Nat. Hist.,p.93,f.19-13,1860.

Merista typa.Hall and Clarke,Pal.N.Y.,VIII,pt.2,pl. 42,f.7-12.-Schuchert,Md.Geol.Surv.,L.Dev,,p.449, pl.74,f.20-24,1913;Helderberg Form.,Keyser Mem., Devil's Backbone;Cash Valley;Cumberland.

Merista typum Hall,See Merista typa Hall

Genus MERISTELLA Hall
(1860.13th1Ann.Rep.N.Y.,State Cab.Nat.Hist.,p.74)
(1893.Pal.N.Y.,VIII,pt.2,p.73)

Meristella (?) sp.Prosser and Kindle

Meristella (?) sp.Prosser and Kindle,Md.Geol.Surv., Mid.& Up.Dev,,p.213,pl.21,f.3,4,1913;Romney Form. Marcellus Mem.W.Va.Cent.R.R.Cut,21st.Bridge,Cumb. Hamilton Mem.N.E.Oldtown(?)

Meristella ampla Stewart

Meristella ampla Stewart,Dev. of Mo.,p.249,pl.86,f. 9-11,1922;Little Saline Creek ls.Ste Genevieve Co

Meristella arcuata (Hall)

Merista arcuata Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.95,f.1-4,1857;Pal.N.Y.,III,p.249,pl.51,f. 1a-f,1859;L.Helderberg group;Helderberg mountains; Schoharie,Carlisle,Catskill,Hudson, and other places.

? Merista leavis ? Meek and Worthen,Geol.Surv.,Ill., III,p.376,pl.7,f.8a-c,1868.

Meristella arcuata.Hall and Clarke,Pal.N.Y.,VIII,pt. 2,pl.43,f.1,2;pl.44,f.5,1893.-Hall,Pal.N.Y.,IV,p. 298,text fig.,1,2,1867.-Schuchert,Md.Geol.Surv.,L Dev.,p.444-445,pl.74,f.5-8,1913;Helderberg Form., New Scotland,Mem.,Devil's Backbone;Md;Cherry Run,

W,Va.,Warren Point,Penn.Becraft Mem.Warren Point, Penn.

Meristella atoka Girty

Meristella arcuata var Atoka Girty,U.S.G.S.,19th. Ann.Rep.,pt.3,p.567,pl.71,f.1a-f,1899.

Meristella atoka.Dunbar,Tenn.Geol.Surv.,Bull.21,pl.1 f.11;pl.2,f3&1919.-Tansey,Dev. of Mo.,p.204,pl.53 f.7-20,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Meristella barrisi Hall

Meristella barrisi.Hall,13th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.84,1860.;Pal.N.Y.,IV,p.304,pl.69,f. 5-22,1867.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,pl. 43,f.25,26,pl.44,f.27-30,1895.-Grabau,Buffalo Soc Nat.Sci.,Bull.6,p.226,f.135A,1899;Hamilton group; Erie Co..N.Y.-Kindle,35th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.655,656,pl.12,f.6,1901;Jeffersonville ls.Falls of the Ohio.

Meristella barrisi? Tschernyschew,Mem.Comiti Geol. St.Petersbourg,III,p.55,pl.9,f.12,15;pl.13,f.1, 2,1887.

Meristella barrisi ? Kindle,U.S.G.S.Bull.391,p.30, pl.3,f.7-9a,1909;Ouray ls.Hillsboro,N.Mex.

Meristella bella Hall

Merista bella Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.92,f.1,3-7,1857;Pal.N.Y.,III,p3248,pl.40. f.1a-i,k-p,Merista (Meristella) bella,1859;L. Heldgerberg group.Helderberg mountains;Schoharie, Carlisle, and other places.

Meristella bella.Whitfield,Ann.N.Y.Acad Sci.,V,p.510 pl.5,f.8-10,1891;-Hall and Clarke,Pal.N.Y.,VIII,pt 2,pl.43,f.7-9,pl.44,f.1-3,1894.-Whitfeild,Geol. Ohio,VII,p.413,pl.1,f.8-10,1895.-Tansey,Dev. of Mo.,p.203,pl.53,f.306,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Meristella carinata Stewart

Meristella carinata Stewart,Dev. of Mo.,p.350,pl.66, f.13-21,1922;Little Saline Creek,ls.Ste Genevieve Co.

Meristella elliptica Stewart

Meristella elliptica Stewart,Dev. ofMo.,p.350,pl.66, f.4,5,1922;Little Saline Creek ls.Ste Genevieve Co.

Meristella haskinsi Hall

Meristella haskinsi.Hall,Pal.N.Y.,IV,p.306,pl.49, 1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.225, f.134,1899;Encrinal ls.

Meristella humilis Clarke and Swartz

Meristella humilis Clarke and Swartz,Md.Geol.Surv., Mid.& Up.Dev..p.605,1913;Jennings Form.,Woodmont Mem.,Ithaca Fauna.Millstone;Yellow Springs,W.Va.

Meristella laevis Sherzer,See Whitfieldella(?) prosseri Grabau.

Meristella laevis (Vanuxem)

Atrypa laevis Vanuxem,Geol.N.Y.,Rep.3d.Dist.,p.120, f.2,p.1843.

Merista laevis Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.94,f.1-6,1857;Pal.N.Y.,III,p.247,pl.39,f. 3,4,1859;L.Helderberg group.Albany,Schoharie and Herkimer Cos.

Atrypa laevis Rogers,Geol.Penna.,II,pt.2,p.835,f. 642,1858.

Meristella laevis.Whitfield(part) Ann.N.Y.Acad.Sci., V,p.510,pl.5,f.6,7,1891-Hall and Clarke,Pal.N.Y. VIII,pt.2,p.75-78,pl.43,f.3-6,pl.44,f.4,1894.- Keyes,Mo.Geol.Surv.,V,p.104,1894.-Whitfield,Geol. Ohio.,VII,p.411,pl.1,f.6,7,1895.-Weller,Pal.N.J. III,p.390,317,pl.31,f.5-8,pl.38,f.11-18,1903; Coeymans ls.Near Hainesville;New Scotland-Becraft Fauna.-Shimer,N.Y.State Mus.,Bull.80,p.255,1905.- Clarke,N.Y.,State Mus.,Mem.IX,pt.1,p.110,1908.- Tansey,Mo.Dev.,p.202-203,pl.52,f.34-44,pl.53,f.1, 3,1932;Bailey ls.Little Saline Creek ls.Ste Genevieve Co.

Meristella laevis Whitfield,See

Meristella laevis (Vanuxem)
Whitfieldella (?) prosseri Grabau.

Meristella lata (Hall)

Merista lata Hall,Pal.N.Y.,III,p.431,pl.101,f.3a-m, 1858;Oriskany ss.Albany and Schoharie Cos.,N.Y.,

Cumb.,Md.

Meristella lata.Hall and Clarke,Pal.N.Y.,VIII,pt.2, p.78,pl.44,f.12,1893.-Schuchert,Md.Geol.Surv.,L. Dev.,p.445-446,pl.74,f.9-11,1913;Helderberg Form. Becraft Mem.Cherry Run.,W.Va.,Oriskany Form.,Ridgely Mem.Cumberland,Md; Warren Point,Penn.-Weller Pal.N.J.,III,p.359,pl.47,f.15-20,1903;Oriskany Form.

Meristella lentiformis Clarke

Meristella lentiformis.Clarke,N.Y.State Mus.,III,No. 3,p.44,pl.6,f.5-11,1900.-Schuchert,Md.Geol.Surv., L.Dev.,p.446-447,pl.74,f.12,13,1913;Oriskany Form.,Shriver Mem.North Branch,near Cumb.Ridgely Mem.near Cumberland,Md.

Meristella nasuta (Conrad)

Meristella nasuta.Hall,Pal.N.Y.,IV,pt.299,pl.48,f.1-25,1867.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.654-655,pl.12,f.7,1901;Jeffersonville ls. Falls of the Ohio.

Meristella nucleolata Whitfield,See Whitfieldella(?) nucleolata (Hall)

Meristella ovalis Stewart

Meristella ovalis Stewart,Dev. of Mo.,p.250-251,pl. 66,f.6-8,1922;Little Saline Creek ls.Ste Genevieve Co.

Meristella praenuntia Schuchert

Meristella praenuntia Schuchert,Md.Geol.Surv.,L.Dev. p.443-444,pl.73,f.43-46,pl.74,f.1-4,1913;Helderberg Form.,Keyser Mem.Keyser,W.Va;Dawson,Corriganville,Tonoloway,Md.

Meristella princeps Hall

Merista princeps Hall,10th.Ann.Rep.N.Y.,State Cab.Nat Hist.,p.93,f.5-7,1857;Pal.N.Y.,III,p.251,pl.44,f. 1a,b,2a,b,3a-c,4a-h,5a-d,Merista(Meristella?) princeps,1859;L.Helderberg group.Helderberg mountains;Schoharie and Carlisle.

Camarium princeps Hall,Pal.N.Y.,III,p.486,1859.

Meristella princeps.Hall and Clarke,Pal.N.Y.,VIII, pt.2,pl.43,f.10-13,1894.-Shimer,N.Y.State Mus., Bull.80,p.255,1905.-Clarke,N.Y.State Mus.,Mem.IX,

pt.2,p.41,1909.-Weller,Pal.N.J.,III,p.331-332,pl. 42,f.27,28,1903;Lower Oriskany.-Hall,13th.Ann.Rep. N.Y.State Cab.Nat.Hist.,p193,f.5-7,1860.-Tansey, Dev. of Mo.,p.203-204,pl.44,f.9-11,1923;Bailey ls. Little Saline Creek,ls.Ste Genevieve Co.

Meristella rostellata Schuchert

Meristella rostellata Schuchert,Md.Geol.Surv.,L.Dev., p.447-448, pl.74,f.14,15,1913;Oriskany Form.,Ridgely Mem.Cumberland,Md.

Meristella rostrata Hall

Meristella rostrata.Hall,Pal.N.Y.,IV,p.307,pl.50,f3, 1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.225,f. 135,1899;Encrinal ls.

Meristella symmetrica Schuchert

Meristella symmetrica Schuchert,Md.Geol.Surv.,L.Dev., p.448,pl.74,f.16-19,1913;Oriskany Form.,Ridgely Mem.Cumberland,Md.

Meristella (Pentagonia) unisulcata,See Pentagonia unisulcata (Conrad)

Genus METAPLASIA Hall and Clarke
(1893.Pal.N.Y.,VIII,pt.2,p.56)

Metaplasia plicata Weller

Metaplasia plicata Weller,Pal.N.J.,III,p.356-357,pl. 48,f.7-12,1903;Mid.& Up.Oriskany,Near Montague, N.J.

Metaplasia pyxidatu(Hall)

Spirifer pyxidatus Hall,Pal.N.Y.,III,p.438,pl.100,f. 9-12,1859;Oriskany ss.Albany and Schoharie Cos., N.Y.,Cumberland,Md.

Metaplasia pyxidata.Hall and Clarke,Pal.N.Y.,VIII,pt. 2,p.56,pl.39,f.19-22,1893.-Schuchert,Md.Geol.Surv., L.Dev.,p.422,pl.72,f.11,12,1913:Oriskany Form.,Ridgely Mem.Knobley Mountain near Cumb;Collier's Run., Md.-Weller,Pal.N.J.,III,p.355-356,pl.48,f.6,1903; Mid.& Up.Oriskany.-Stewart,Dev. of Mo.,p.247,pl. 65,f.14,1923;Little Saline Creek ls.Ste Genevieve Co.

Genus NEWBERRIA Hall

Newberria missouriensis Swallow

Newberria missouriensis.(Swallow MS.)Hall,10th.Ann. Rep.N.Y.State Geol.p.7,extract,pl.5,f.10-12,1891 Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.263,pl.78,f. 21-23,1894.-Branson,Mo.Bur.Geol.& Mines,XVII,2d. ser.p193,pl.18,f.1-4,1922;Callaway ls.

Newberrya missouriensis Schuchert,U.S.G.S.Bull.87pp. 272,1897.

Newberrya missouriensis Schuchert,See Newberria missouriensis Swallow.

Genus NUCLEOSPIRA Hall
(1859.12th.Rep.N.Y.State Cab.Nat.Hist.,p.24)
(1893.Pal.N.Y.,VIII,pt.2,p.143)

Nucleospira concentrica Hall

Nucleospira concentrica Hall,Pal.N.Y.,III,p.223,pl. 28B,f.15-19,1859;L.Helderberg group.Decatur Co., Tenn.

Nucleospira concinna Hall

Atrypa concinna Hall,Geol.N.Y.,pt.4,p.200,f.3,1843.

Nucleospira concinna.Hall,12th.Rep.N.Y.State Cab.Nat Hist.,p.25-26,1859;Pal.N.Y.,IV,p.279,pl.45,f.35-37,1867.-Keyes,Johns Hopkins Univ.,Circ.,XI,p.29, 1891.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.145,f. 131;pl.48,f.12-17,19-34;ol.84,f.38,1893;-Schuchert U.S.G.S.Bull.87,p.273,1879.-Grabau.Buffalo,Soc. Nat.Sci.,p.223,f.132,1899;Moscow sh;Demissa bed. On the Lake Shore.-Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.628-629,pl.11,f.7,1901;Jefferson-ville ls.Charlestown;Falls of the Ohio.Clarke,N.Y State Mus.,Bull.65,p.263,1903.-Grabau and Shimer, N.Am.Index Foss.,I,p.349,f.454,1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.206-207,pl.20 f.12-15,1913;Romney Form.,Onondaga Mem.S.E.Cumb., Tonoloway.Hamilton Mem.Ernstville.

Nucleospira elegans Hall

Nucleospira elegans.Hall,Pal.N.Y.,III,p.222,pl.28B,f 10,11,13(? 12c,12d,not 14-N.Ventricosa),1859;L. Helderberg group.Helderberg mountain;Cherry Valley N.Y.;Cumberland,Md.-Schuchert,Md.Geol.Surv.,L.Dev p.431-432,pl.73,f.13,14,1913;Helderberg Form.,Keyser Mem.Devil's Backbone:Cash Valley.New Scotland Mem.Cumb.,Md.;Cherry Run,W.Va.,Becraft Mem.Cherry

Run,W.Va.Oriskany Form.,Ridgely Mem.Cumberland,Md

Nucleospira swartzi Maynard

Nucleospira swartzi Maynard,Md.Geol.Surv.,L.Dev.,p. 432,pl.73,f.15-17,1913;Helderberg Form.,Keyser Mem.Cookerly;Devil&s Backbone;Cash Valley,Md;Keyser,W.Va.

Nucleospira ventricosa Hall

Spirifer ventricosa Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.57,1857;

Nucleospira ventricosa.Hall,Pal.N.Y.,III,p.220,pl.14 f.1a-h,pl.28B,f.2-9,14,1859;L.Helderberg group.Helderberg mountains,Schoharie,Cherryville in N.Y.; Cumb.,Md.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p. 145,f.128-130;pl.48,f.2-6,18ppl.84,f.39,40,1893. Weller Pal.N.J.,III,p.290,316,pl.30,f.19-20,pl. 37,f.16,1903;Coeymans ls.Near Hainesville,N.J.; New Scotland,beds.-Shimer,N.Y.State Mus.,Bull.80, p.255,1905.-Clarke N.Y.State Mus.,Mem.IX,pt.1,p. 110,1908.-Shcuhcert,Md.Geol.Surv.,L.Dev.,p.430, pl.73,f.10-12,1913;Helderberg Form.,Keyser Mem. Moorefield,Va.-Coeymans Mem.Devil's Backbone.New Scotland Mem.Cumb.,Md.;Cherry Run,W.Va.-Stewart, Dev.of Mo.,p.249,pl.66,f.1-3,1922;Little Saline Creek ls. Ste Genevieve Co.-Tansey,Dev. of Mo.,p. 202,pl.52,f.21-33,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Orbicula lodensis Hall,See Orbiculoidea lodiensis var media (Hall)

Orbicula lodensis Vanuxem.See Orbiculoides lodiensis var media (Hall)

Genus ORBICULOIDEA D'Orbigny
(1850.Prodr.de Paleont.,I,p.44)
(1892.Pal.N.Y.,VIII,pt.1,p.120)

Orbiculoidea sp.Branson

Orbiculoidea sp.Branson,Mo.Bur.Geol.& Mines,XVII, 2d.ser.,p.71,1922;Snyder Creek shale.

Orbiculoidea sp.Swartz.

Orbiculoidea sp.Swartz,Md.Geol.Surv.,L.Dev.,p.292, 1913;Helderberg Form.,New Scotland Mem.Devil's Backbone,Md.

Orbiculoidea ampla (Hall)

Discina grandis emand.ampla Hall,Pal.N.Y.,III,p.406, pl.92,f.1,1859;Oriskany ss.Helderberg mountains, Albany Co.,N.Y.

Orbiculoidea ampla.Weller,Pal.N.J.,III,p.324,pl.41, f.2,3,1903;Oriskany.-Schuchert,Md.Geol.Surv.,L. Dev.,p.291,pl.53,f.3-5,1913;Oriskany Form.,Ridgely Mem.Miller's Spring;Md.Ridgely,W.Va.

Orbiculoidea doria Hall

Discina doria Hall,Pal.N.Y.,IV,p.19,pl.2,f.19-22,31, 1867.

Orbiculoidea doria.Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.183,f.83,1899.-Kindle,35th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.579-580,pl.3,f.7,1901;Sellersburg beds.Clark Co.

Orbiculoidea jervensis (Barrett)

Discina jervensis Barrett,Ann.N.Y.Acad.Sci.,I,p.121, 1878.

Orbiculoidea jervensis Weller,Pal.N.J.,III,p.343-344 pl.45,f.7,8,1903;Mid.&Up.Oriskany.

Orbiculoidea lodensis Hall and Clarke,See Orbiculoidea lodiensis var media (Hall)

Orbiculoidea lodiensis (Vanuxem)

Discina lodiensis Hall,Pal.N.Y.,IV,p.22,pl.1,f.14, pl.2,f.35,1867.

Orbiculoidea lodinesis.Grabau,Buffalo Soc.Nat.Sci.,Bull 6,p.184,f.84,1899;Demissa bed.Nautilus bed.Avery's Creek.

Orbiculoidea lodiensis ? Kindle,35th,Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.573-574,pl.1,f.4,1901;New Albany sh.Falls of the Ohio.

Orbiculoidea lodinesis var media (Hall)

Orbicula ldoensis.Vanuxem,Geol.N.Y.,pt.3,p.168,f.1, 1842.-Hall,Geol.N.Y.,pt.4,p.223,f.1,1843.

Discinamedia Hall,16th.Ann.Rep.N.Y.State Cab.Nat.Hist p.27,1863;Pal.N.Y.,p.20,pl.2,f.25-29,1867.-Walcott U.S.G.S.Mon.VIII,p.113,1884.

Discinallodensis Hall,Pal.N.Y.,IV,p.22,pl.1,f.14; pl.2,f.35,1867.

Orbiculoidealodensis Hall and Clarke,Pal.N.Y.,VIII, pt.1,pl.4,f.21,1892.

Orbiduloidea media.Hall and Clarke,Pal.N.Y.,VIII,pt. 1,pl.4E.f.15-17,1892.-Clarke,N.Y.State Mus.,Bull. 65,p.268,1903.

Orbiculoidea lodinesis.Schuchert,U.S.G.S.Bull.87,p. 279,1897.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev,,p.129-130,pl.8,f.14-17,1913;Romney Form., Onondaga Mem.E.Cumberland,Md.Hamilton Mem.E.bank Evitts Creek below Wolfe Mill,near Cumb.

Orbiculoidea media.Clarke, Hall and Clarke,See Orbiculoidea lodiensis var media (Hall)

Orbiculoidea media (Hall)

Discina media Hall,16th.Rep.N.Y.State Cab.Nat.Hist., p.27,1863;Pal.N.Y.,IV,p.20,pl.2,f.25-29,1867.

Orbiduloidea media.Hall and Clarke,Pal.N.Y.,VIII,pt. 1,pl.4,f.15-17,1892.-Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.183,f.82,1899;Up.Moscow sh.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.549,pl.47,f. 9,10,1913;Jennings Form.,Parkhead Mem.E.Bumb., PolishMtn.Woodmont Mem.Ithaca Fauna.Fifteent Mile Creek.

Orbiculoidea doederi Schuchert

Orbiculoidea roederi Schuchert,Md.Geol.Surv.,L.Dev,, p.290-291,pl.53,f.1,2,1913;Oriskany Form.,Ridgely Mem.Cash Valley,Md.

Orbiculoidea schucherti Swartz

Orbiculoidea schucherti Swartz,Md.Geol.Surv.,L.Dev., p.292,pl.53,f.6,7,1913;Helderberg Form.,Keyser Mem.Dawson.

Genus ORISKANIA Hall and Clarke
(1893.Pal.N.Y.,VIII,pt.2,p.269)

Oriskania lucerna Schuchert

Oriskania lucerna Schuchert,Md.Geol.Surv.,L.Dev.,p. 390,pl.67,f.20-24,1913;Oriskany Form.,Ridgely Mem Ridgely,W.Va.

Genus ORTHIS Dalman
(1828.Uppstalln.,p.110)

Orthis sp.Meek and Worthen

Orthis sp.Meek and Worthe,Ill.Geol.Surv.,III,p.410, pl.9,f.4,1868;Corniferous group.W.Jonesboro,Union Co.

Orthis sp.Girty

Orthis sp.Girty,U.S.G.S.,20th.Ann.Rep.pt.2,p.39,1900 Ouray ls.Gunnison,Colo.

Orthis assimilis Hall,See Rhipidomella assimilis(Hall)

Orthis bicostatus Vanuxem,See Reticularis bicostata (Vanuxem)

Orthis carinata Hall,See Dalmanella carinata (Hall)

Orthis carinata Hall,See Dalmanella concinna (Hall)

Orthis conradi Castelnau,See Hipparionyx proximus Conrad

Orthis cumberlandia Hall,See Hipparionyx proximus Vanuxem.

Orthis cumberlandia Whitfield and Hovey,See Hipparionyx proximus Vanuxem.

Orthis cyclas Hall,See Rhipidomella cyclas Hall

Orthis deformis Hall,See Schuchertella deformis (Hall)

Orthis discus Hall,See Rhipidomella discus(Hall)

Orthis eboracensis Miller,See Dalmanella lenticularis (Vanuxem)

Orthis eminens Hall,See;

Dalmanella eminens(Hall)
Rhipidomella eminens(Hall)
Vanuxem.

Orthis hipparionyx See Hipparionyx proximus Vanuxem.

Orthis hipparionyx(?) Schnur,See Hipparionyx proximus Vanuxem.

Orthis (Schizophoria)impressa Calvin,See Schizophoria iowaensis (Hall)

Orthis impressa Hall,Walcott,Whitfield,See Schizophoria striatula(Schlotheim)

Orthis insignis Hall,See Scenidium insigne (Hall)

Orthis interlineata Hall(non Sowerby) See Dalmanella tioga (Hall)

Orthis iowaensis White,See Schizophoria striatula(Schloth)

Orthis iownesis,Billings,Keyes,Kindle,Meek,White,See, Schizophoria striatula (Schlotheim)

Orthis Iowensis Hall,See:

Schizophoria iowaensis (Hall)
Schizophoria striatula(Schlotheim)

Orthis iownesis var furnarius Meek and Worthem,See Schizophoria striatula (Schlotheim)

Orthis lenticularis Hall,See Dalmanella lenticularis (Vanuxem)

Orthis lenticularis Vanuxem (Not Wahlenberg)See Dalmanella lenticularis (Vanuxem)

Orthis lentiformis Hall,See Dalmanella lenticularis(Vanuxem)

Orthis lentiformis Owen(non Hall)See Schizophoria striatula (Schlotheim)

Orthis leucosia Hall,Keyes,See Rhipidomella leucosia Hall

Orthis limitaris Vanuxem,See Liorhynchus limitare (Vanuxem)

Orthis livia Billings,See Rhipidomella livia (Billings)

Orthis McFarlanei Meek

Orthis McFarlanei.Meek,Trans.Chicago Acad.Sci.,I,p.88 pl.12,f.1,1868,-Meek and Worthen,Ill.Geol.Surv., III,p.423,pl.13,f.10a-d,1868; Hamilton group Div. Independence,Iowa.

Orthis multistriata Hall,See Schizophoria multistriata (Hall)

Orthis musculosa Hall,See Rhipidomella musculosa Hall

Orthis oblata Hall,See Rhipidomella oblata (Hall)

Orthis oblata var emarginata Hall,See Rhipidomella emarginata(Hall)

Orthis oblata Whitfield,See Rhipidomella oblata (Hall)

Orthis peduncularis Hall

Orthis peduncularis Hall,Pal.N.Y.,III,p.174,pl.13,f. 16a-c,1859;L.Helderberg group.Helderberg Mtns.,

Orthis penelope Hall,See Rhipidomella penelope Hall

Orthis perlegans Hall,See Dalmanella perlegans(Hall)

Orthis planoconvexa Hall,See Dalmanella planoconvexa (Hall)

Orthis plicata Vanuxem,See Spirifer vanuxemi Hall

Orthis praeumbonata Hall,See Ambocoelia praeumbonata Hall

Orthis prava Hall,See Schuchertella prava (Hall)

Orthis propingua Hall,See Schizophoria propinqua (Hall)

Orthis propinqua Nettleroth,See Schizophoria striatula (Schlotheim)

Orthis quardans Hall,See Dalmanella quadrans (Hall)

Orthis rugosa D'Archiac et DeVerneuil,See Strophomena Hall.

Orthis rugosa Eichwald,See Strophomena rugosa Hall

Orthis rugosa F.C.Roemer,See Strophomena rugosa Hall

Orthis rugosa Von Buch,See

Strophomena rugosa Hall
Strophomena rhomboidalis Wahlenberg

Orthis striatula Davidson,Whiteaves,Williams,See Schizophoria striatula(Schlotheim)

Orthis strophomenoides.Hall,See Orthostrophia strophomenoides (Hall)

Orthis subcarinata Hall,See Dalmanella subcarinata(Hall)

Orthis tioga Hall,See Dalmanella tioga (Hall)

Orthis tublostriata Hall

Orthis tubulostirata Hall,Pal.N.Y.,III,p.166,pl.11,f 1-6,1859;L.Helderberg group.Helderberg Mtns., Albany Co.

Orthis umbonata Conrad, See Ambocoelia umbonata Conrad

Orthis unguiculus Hall (non Phillips) See Ambocoelia umbonata (Conrad) var gregaria.

Orthis unguiformis, Castelnau, Emmons, See Hipparionyx proximus Vanuxem.

Orthis vanuxemi. Hall, Keyes, See Rhipidomella vanuxemi Hall

Orthis varica Hall, See Bilobites varica (Conrad)

Orthis (Dicoelosia) varica Hall, See Bilobites varica (Conrad)

Genus ORTHOSTROPHIA Hall
(1892. See Hall and Clarke, Pal. N.Y., VIII, pt.1, p.199, 223, 253)

Orthostrophia strophomenoides (Hall)

Orthis strophomenoides, Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.46, 1857; Pal. N.Y., III, p.177, pl.14, f.2, 1859; L. Helderberg group. Helderberg Mtns., and Hudson.

Orthostrophia strophoemnoides. Weller, Pal. N.J., III, p. 303, pl.34, f.6-8, 1903; New Scotland beds.-Schuchert, Md. Geol. Surv., L. Dev., p.397, pl.53, f.20-23, 1913; Helderberg Form., New Scotland Mem. Corriganville; near Cumb., Dawson, Md.

Genus ORTHOTHETES Fischer de Waldheim
(1830. Bull. Soc. Imp. Natural. d. Moscow, I, p.375)

Orthothetes sp. Weller.

Orthothetes sp. Weller, Pal. N.J., III, p.347, pl.45, f.9, 1903; Mid. & Up. Oriskany.

Orthothetes arctostriatus Hall

Orthothetes arctostriatus. Hall, Pal. N.Y., IV, p.71, pl.9, 1867.-Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p.193, f. 98, 1899; Moscow sh. and Demissa beds.

Orthothetes becraftensis Clarke, See Schuchertella becraftensis (Clarke)

Orthothetes chemungensis Girty, Schuchertella chemungensis (Conrad)

Orthothetes chemungensis ?Girty, See Schuchertella coloradensis Kindle.

Orthothetes chemungensis var Girty, See Schuchertella girtyi Shimer.

Orthothetes chemungensis Schuchert, See Schuchertella chemungensis pectinocea (Hall)

Orthothetes chemungensis arctistriatus. Kindle, Schuchert, See Schuchertella arctistriata (Hall)

Orthothetes chemungensis var pandora Hall and Clarke, See Schuchertella pandora (Billings)

Orthothetes deckerensis Weller, See Schuchertella deckerensis (Weller)

Orthothetes deformis Schuchert, See Schuchertella deformis (Hall)

Orthothetes deformis var sinuata Hall and Clarke, See Schuchertella sinuata (Hall and Clarke)

Orthothetes pandora. Schuchert, Weller, See Schuchertella pandora (Billings)

Orthothetes perversus Hall

Orthothetes perversus. Hall, Pal. N.Y., IV, p.72, pl.9, f867.- Grabau, Buffelo Soc. Nat. Sci., Bull. 6, p.193, f.97, 1899; Demissa beds. Avery's Ravine.

Orthothetes prava Hall and Clarke, See Schuchertella prava. (Hall)

Orthothetes pravus Schuchert, See Schuchertella prava (Hall)

Orthothetes woolworthana (Hall)

Strophomena woolworthana Hall, Pal. N.Y., III, p 192, pl. 17, f. 1a-t, 2a-c, 1859; L. Helderberg group. Helderberg Mtns., Schoharie, Carlisle, Hudson and Catskill.

Orthothetes woolworthana Weller, Pal. N.J., III, p.278, pl.37, f.5; p.303, pl134, f.4, 5; 1903; Coeymans ls., near Scotland beds.

Orthothetes woolworthanus Hall and Clarks, See Schuchertella woolworthana (Hall)

Genus PARAZYGA Hall and Clarke
(1893. Pal. N.Y., VIII, pt.2, p.127)

Parazyga deweyi Hall, and Clarke, See Trematospira deweyi (Hall)

Parazyga hirsuta Hall

Trematospira hirsuta Hall,Pal.N.Y.,IV,p.274,pl.45,f. 16-32,1867.

Parazygahirsuta Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 221,f.131,1899;Eighteen Mile Creek,Hamilton shales Kindle,Pal.25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p. 594-595,pl.11,f.4,4a,1901;Sellersburg beds and Jeffersonville ls.Charlestown;Falls of the Ohio; Bunker Hill.

Pentagonia unisulcata(Conrad)

Meristella (Pentagonia)unisulcata Hall,Pal.N.Y.,IV, p.309,pl.50,f.18-35,1867.

Pentagoniaunisulcata Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.610-612,pl.10,f.5,6a-d,1901;Sellersburg beds and Jeffersonville ls.Charlestown; Falls of the Ohio;Newbern.

Genus PENTAMERELLA Hall

Pentamerella arata(Conrad)

Atrypa arata Conrad,5th.Ann.Rep.Geol.Surv,N.Y.,p. 55,1841.

Pentamerella arata.Hall,Pal.N.Y.,IV,p.375,pl.58,f. 1-21,1867.-Schuhcert,U.S.G.S.,Bull.87,p.302,1897.-Kindle,25th.Rep.Ind.Dept.Geol.Nat.Res.,p.615,pl. 7,f.2,1901;Jeffersonville ls.Bunker Hill,Cass Co. Falls of the Ohio.-Grabau and Shimer,N.Am.Index Foss.,I,p.277,f.337,1909.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser,p.87,pl.16,f.16,pl.17,f.17,1922; Mineola and Grnad Tower ls.

Pentameralla fultonensis Branson

Pentamerella fultonensis Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.88,pl.16,f.21-23,f.10-12,1922;Callaway ls.

Pentamerella missouriensis Branson

Pentamerella missouriensis Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.88,pl.24,f.1-4,pl.23,f.5, 1922;Snyder Creek shale.

Pentamerella lavilionensis Hall

Pentamerella pavilionensis.Hall,Pal.N.Y.,IV,p.277, pl.58,f.28-39,1867.-Kindle,25th.Ann.Rep.Ind.Dept.

Geol.Nat.Res.,p.612-613,pl.7,f.1,1a,1901;Sellersburg beds and Jeffersonville ls.Charlestown; Falls of the Ohio.

Pentamerella thusnelda Nettleroth

Pentamerella thusnelda.Nettleroth,Ky.Foss.Shells,p. 51,pl.31,f.26-28,1889.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.614,1901;Jeffersonville ls. Falls of the Ohio.

Genus PENTAMERUS Sowerby
(1813.Min.Conch.,tab.38)

Pentamerus (N.S.) Owen,See Gypidula comis (Owen)

Pentamerus comis Meek and Worthen,See Gypidula comis (Owen)

Pentamerus comis Owen,See Gypidula comis(Owen)

Pentamerus comis Walcott,See Gypidula comis(Owen)

? Pentamerus comis Whiteaves,See Gypidula comis(Owen)

Pentamerus elongatus Vanuxem,See Stricklandinia elongata var curta Billings.

Pentamerus galeatiformis Meek and Worthen,See Gypidula comis(Owen)

Pentamerus galeatus Hall,See Gypidula (Sieberella)coeymanensis Schuchert

Pentamerus galeatus Rogers,See Gypidula (Sieberella)coeymanensis Schuchert.

Pentamerus knighti Nettleroth,See Conchidium knighti (Nettleroth)

Pentamerus occidentalis Hall,See Gypidula occidentalis Hall.

Pentamerus pseudogaleatus Hall

Pentamerus pseudogaleatus Hall,Pal.N.Y.,III,p.359, pl.46,f.2a-d,1859;L.Helderberg group.Helderberg Mtn Schoharie,Carlisle.

Pentamerus subglobosus Meek and Worthen

Pentamerus subglobosus Meek and Worthen,Ill,Geol.Sur. III,p.429,pl.13,f.5a-c,1868.Hamilton group.Rock-Island,Ill.

Pentamerus verneuili.Billings,Hall,See Anastrophia verneuili (Hall)

Philhedra famelica Greger,See Crania famelica Hall and Whitfield.

Genus PHOLIDOPS Hall
(1859.Pal.N.Y.,III,p.489)
(1892.Pal.N.Y.,VIII,pt.1,p.155)

Pholidops sp.Kindle

Pholidops sp.Kindle,25th.Ann,Rep.Ind.Dept.Geol.Nat. Res.,p.580,pl.3,f.4,1901;Jeffersonville ls.Bunker Hill.

Pholidops arenaria Hall,See Lingulapholis terminalis (Hall)

Pholidopa arenaria ? Weller,See Lingulaphalis terminalis (Hall)

Pholidops areolata (Hall)

cf Pholidopa areolata Hall,16th.Rep.N.Y.State Cab.Nat Hist.,p.31,1863;Pal.N.Y.,IV,p.31,pl.3,f.4,5,1867.

Pholidops cf areolata Kindle,U.S.G.S,Bull.508,p.70, pl.2,f.7,8,1918;Md.Geol.Surv.,Mid.& Up.Dev.,p.133-134,pl.9,f.9,10,1913;Romney Form.,Onondaga Mem.E. Cumberland,Md.

Pholidops hamiltoniae Hall

Pholidops Hamiltoniae.Hall,13th.Rep.N.Y.State Cab.Nat Hist.,p.92,1860;Pal.N.Y.IV,p.32,f.6-9,1867.-Hall and Clarke,Pal.N.Y.,VIII,pt.1,p.157,pl.41,f.31-34,1892.-Schuchert,U.S.G.S.,Bull.87,p.306,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p .187,f.88, 1899;Hamilton sh.;Moscow sh.-Clarke,N.Y.State Mus. Bull,65,p.383,1903;-Grabau and Shimer,N.Am.Index Foss.,II,p.209,f.245,1907.-Prosser and Kindle,Md. Geol.Surv.,Mid.& Up.Dev.,p.132-133,pl.9,f.8,1913; Romney Form.,Onondaga Mem.S.E.Cumb.,Md.

Pholidops linguloides Hall

Pholidops linguloides.Hall,Pal.N.Y.,IV,p.414,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.187,f.89, 1899;Encrinal ls. and Demissa bed.

Pholidopsmultilamellosa Schuchert

Pholidops multilamellosa Schuchert,Md.Geol.Surv.,L. Dev.,p.293,pl.53,f.8,9,1913;Oriskany Form.,Shriver Mem.Cash Valley;21st.Bridge,Cumb.,Md.

Pholidops oblata Hall

Pholidops oblata.Hall,Pal.N.Y.,IV,p.414,pl,3,f.10, 1867.-Schuchert,U.S.G.S,Bull.87,p.307,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.187,f.90.

Pholidops cf oblata Branson and Williams,Dev. of Mo., p.133,pl.35,f.9,1922;St.Laurent ss.Perry Co.

Pholidops ovata Hall

Pholidops ovatus Hall,Pal.N.Y.,III,p.490,pl.103B f.7a,b,1858;L.Helderberg group.Albany Co.

Pholidops ovata.Weller,Pal.N.J.,III,p.226,pl.20,f.27-29,p.300,345,1903;New Scotland beds;Mid.& Up.Oriskany.-Schubhert,Md.Geol.Surv.,L.Dev.,p.294,pl.53,f. 10-12,1913;Helderberg Form.,Keyser Mem.Keyser,W.Va Tonoloway,Md.-Stewart,Dev. of Mo.,p.228,pl.61,f.1, 2,1922;Little Saline Creek ls.Ste Genevieve Co.

Pholidops terminalis.Clarke,Hall,Hall and Clarke,See Lingulapholis terminalis (Hall)

Pholidops tumida Schuchert

Pholidops tumida Schuchert,Md.Geol.Surv..L.Dev.,p.294 pl.53,f.17,1913;Oriskany Form.,Shriver Mem.near Cumberland,Md.

Genus PHOLIDOSTROPHIA Hall and Clarke

Pholidostrophia iowaensis (Owen)

Chometes (?) iowensis Owen,Geol.Surv.,Wisc.,Iowa and Minn.,p.584,pl.3a,f.7,1852.

Stropdodonta nacrea Hall,Pal.N.Y.,IV,pt.1,p.104,pl. 18,f.1,1867.

Pholidostrophia iowawnsis.Schuchert,U.S.G.S.,Bull.87, p.308,1897.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.590,pl.6,f.7,8,1901;Sellersberg beds and Jeffersonville ls.Little Rock Creek,Cass Co.,Charlestown;Falls of the Ohio.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.82,pl.11,f.9,1922;Mineola ls. Grand Tower ls.Little Saline Creek.

Pholidostrophia nacrea Hall,See Pholidostrophia iowaen-

sis (Owen)

Pholidostrophia pennsylvanica Kindle

Pholidostrophia pennsylvanicus Kindle,U.S.G.S.,Bull. 508,p.74,pl.5,f.1,2,1912.

Pholidostrophia pennsylvanica Kindle,Md.Geol.Surv.,Mid & Up.Dev.,p.141,pl.10,f.8,9,1913;Romney Form.,Onondaga Mem.S.E.Cumberland,Md.

Pholidostrophia pennsylvanicus Kindle,See Pholidostrophia pennsylvanica Kindle.

Genus PLATYRACHELLA Fenton and Fenton

Platyrachella alta Fenton and Fenton

Platyrachella alta Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.165-166,pl.29,f.11-13,1924;Spirifer zone.Hackberry Stage.

Platyrachella alta latimarginata Fenton and Fenton

Platyrachella alta latimarginata Fenton and Fenton, Contr.Mus.,Univ.Mich.,I,p.166-167,pl.29,f.14-19, 1924;Spirifer zone.Hackberry Stage.Bird Hill and Hackberry Grove.

Platyrachella cyrtinaformis (Hall and Whitfield)

Spirifera cyrtinaformis Hall and Whitfield,23rd.Ann. Rep.N.Y.State Cab.Nat.Hist.,p.238,pl.11f.21-24, 1872.

?? Spirifera cyrtinaeformis Whiteaves,Contr.Can.Pal., I,p.282,1891.

Cyrtia cyrtiniformis Hall and Clarke,Pal.N.Y.,VIII,pt 2,p.42,pl.35,f.26-32,1893.

Spirifer cyrtinaformis Calvin,Iowa Geol.Surv.,VII, p.167,1897.

Platyrachella cyrtinaformis Fenton and Fenton,Contr. Mus.,Univ.Mich.,I,p.162-164,pl.29,f.1-7,1924;Spirifer zone.Hackberry Stage.

Platyrachella cyrtinaformis helenae C.L.Fenton

Spirifer cyrtiniformis helenae C.L.Fenton,Am.Mid.Nat. Vmp.316,pl.6,f.11-17,1918.

Platyrachella cyrtinaformis helenae Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 164-165, pl. 29, f. 8-10, 1924; Spirifer zone. Hackberry Stage.

Platyrachella macbridei (Calvin)

Spirifera Macbridei Calvin, Am. Jour. Soil, 3d. ser, XXV, p. 433, 1883.

Spirifer macbridei Calvin, Bull. Lab. Nat. Hist., State Univ. Iowa, II, p. 166, pl. 13, f. 3, 1892.

Spirifer macbridii, Hall & Clarke, Pal. N.Y., VIII, pt. 2, p. 29, 31, 39, f. 9-16, (not fig., 17-19), 1893.-Fenton & Fenton, Contr. Mus., Univ. Mich., I, p. 158-159, 1924.

Platyrachella macbridei Fenton and Fenton, Contr. Mus. Mich., I, p. 159-161, pl. 29, f. 23-30, pl. 32, f. 8-16, 1924; Spirifer zone. Hackberry Stage. Rockford.

Platyrachella pulchra Fenton and Fenton

Platyrachella pulchra Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 161-162, pl. 29, f. 30-33, 1924; Spirifer zone. Hackberry Stage.

Plectambonites rhomboidalis Keyes, See Leptaena rhomboidalis (Wilckens)

Genus PLETHORHYNCHA Hall and Clarke

Plethorhyncha barrandi Hall and Clarke, See Camarotoechia (Plethorhyncha) barrandii (Hall)

Camarotoechia (Plethorhyncha) barrandii Schuchert, Md. Geol. Surv., L. Dev., p. 539, pl. 64, f. 2, 3, 1913.

Plethorhyncha pliopleura Hall and Clarke, See Camarotoechia (Plethorhyncha) pleiopleura (Conrad)

Plethorhyncha principalis (Hall)

Rhynchonella principalis Hall, Regents, Rep. p. 84, Pal. Foss., p. 84, 1857; Pal. N.Y., III, p. 443, pl. 106, f. 4, 1859; Oriskanyss. Auburn, Cayuga Co.

Plethorhyncha principalis Stewart, Dev. of Mo., p. 241, pl. 64, f. 1-3, 1922; Little Saline Creek ls. Ste Genevieve Co.

Plethorhyncha speciosa Hall and Clarke, See Camarotoechia (Plethorhyncha) speciosa (Hall)

Producta analoga Phillips, See Strophomena rhomboidalis Wahlenberg

Producta depressa. Phillips, Heisinger, Sowerby, See Strophomena rugosa Hall

Genus PRODUCTELLA Hall
(1867. Pal. N.Y., IV, p.153)
(1892. Pal. N.Y., VIII, pt.1, p.328)

Productella sp Girty

Productella sp. Girty. U.S.G.S., 20th. Ann. Rep. pt.2, p.45-46, 1900; Ouray ls. Engineer Mountain; Durango, Colo.

Productella callawayensis (Swallow)

Productus callawayensis (Swallow) Trans. St. Louis Acad Sci., I, p.640, 1860.

Productella marquessi. Rowley, Am. Geol. XIII, p.153, f.7, 8, 1894.- Schuchert, U.S.G.S., Bull. 87, p.316, 1897.- Greger, Am. Jour. Sci., XXVII, p.376, 1909.

Productella subalata Keyes, Geol. Surv., Mo., V, p.52, 1894.

Productella callawayensis. Greger, Am. Jour. Sci., XXVII, p 376, 1909.- Branson, Mo. Bur. Geol. & Mines, XVII, 2d. ser. p.85, pl.11, f.10, 16; pl.15, f.10, 11, 13, 14, 1922; Snyder Creek shale.

Productella coloradensis Kindle

Productella semiglobosa Girty, 20th. Ann. Rep. U.S.G.S., pt.2, p.42, pl.3, f.7-10, 1900; Ouray ls. Gunnison; Durango; Salida; Glenwood Springs, Colo.

Productella coloradensis Kindle, U.S.G.S., Bull. 391, p. 17-18, pl.4, f.2-8, 1909; Ouray ls. Glenwood; Shoshone; Rockwood; Gunnison, Colo.; Canadian Geol. Surv., sec. 45, p.38, 1926; Up. Dev., Minnewanka Region, Alberta.

Productella coloradensis var plicatus Kindle

Productella coloradensis var plicatus Kindle, U.S.G.S. Bull. 391, p.18, pl.4, f.9-12, 1909; Ouray ls. Shoshone and Rockwood Colo.; Hillsboro, N.Mex.

Productella depressa Kindle

Productella depressa Kindle, U.S.G.S., Bull. 391, p.20, pl.5, f.5, 5a, 1909; Ouray ls. Shoshone, Colo.

Productella hallana Walcott

Productus (Productella) hallanus Walcott(part),U.S. G.S.,Mon.VIII,p.130,pl.13,f.17,1884.

Productella hallana Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.121,pl.26,f.8,1924;Hackberry Stage.

Productella hillsboroensis Kindle

Productella hillsboroensis Kindle,U.S.G.S.,Bull.391, p.19-20,pl.5,f.6,1909;Ouray ls.Hillsboro,N.Mex.

Productella hirsuta Hall

Strophomenamembranacea Vanuxem(non Von Buch),Geol.N.Y Rep.3d.Dist.,p.181,f.4,5,on p.179,1842.

Productus hirsuta Hall,10th.Rep.N.Y.State Cab.Nat.Hist p.175,f.1-3,1875.

Productella hirsuta Hall,Pal.N.Y.,IV,p.166,pl.24,f.17-29,1867.-Hall and Clarke,Pal.N.Y.,VIII,pt.1,pl.17, f.28,39,45,1892.-Prosser, Geol.Surv.,Ohiol,4th.ser Bull.15,p.547-548,pl.32,f.7-9,1912;Chagrin Form., Tinkers Creek at Bedford;Chippewa Creek.

Productella hirsutaHall var rectispina Hall

Productella hirsuta Hall var rectispina.Hall,Pal.N.Y. IV,p.168,pl.24,f.30-37,1867.-Hall and Clarke,Pal.N Y.VIII,pt.1pl.17,f.37,1892.-Prosser,Geol.Surv., Ohio,4th.ser.,p.548-549,pl.33,f.11-13,1912;Chagrin Form.,Brandywine Creek below the Falls.

Productella hystricula Hall

Productella hystricula.Hall,Pal.N.Y.,IV,p.178,pl.26, f.1-8,1867.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.567,pl.51,f.10-19,1913;Jennings Form., Chemung Mem.S.Oakland.

Productella lachrymosa (Conrad)

Strophomena lachrymosa Conrad,Jour.Acad.Nat.Sci.,Phila.,VIII,p.256,pl.11,f.9,1842.

Productella lachrymosa.Hall,Pal.N.Y.,IV,p.172,pl.25, f.23-28,1867.-Clarke and Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.564-565,pl.50,f.20-22,pl.51,f.1-3,1913 Jennings Form.,Chemung Mem.Polish Mountain.Parkhead Mem.Allegany Grove;W.Pawpaw,W.Va.

Productella lachrymosa var Clarke and Swartz

Productella lachrymosa var Clarke and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.565-566,pl.51,f.10-12,1913; Jennings Form.,Chemung Mem.W.Frostburg;Polish Mountain;Ellerslie,Penn.

Productella lachrymosa var marylandica Clarke and Swartz

Productella lachrymosa var marylandica Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.565,pl.51,f.4-9, 1913;Jennings Form.,Chemung Mem.Polish Mountain; Sadeling Hill Creek on Penn.-Md.-State line.

Productella laminatus Kindle

Productella laminatus Kindle,U.S.G.S.Bull.391,p.18, pl.4,f.13,14,1909;Ouray ls.Shoshone,Colo.

Productella cf laminatus Shimer,Can.Geol.Surv.,ser. 45,p.37,Up.Dev.,Minnewanka Region,Banff,Alberta.

Productella lata Warren

Productella lata Warren,Can,Geol.Surv.,Dept.Mines,ser 134,Mem.153,p.51,pl.4,f.1,1927;Up.Dev.,Minnewanka ls.Sulphur Mountain,Banff,Alberta.

Productella marquessi.Greger,Rowley,Schuchert,See Productella callawayensis (Swallow)

Productella navicella Hall

Productella navicella.Hall,Pal.N.Y.,IV,p.156,pl.23, 1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.204,f. 111,1899;Encrinal ls.

Productella navicelliformis Clarke and Swartz

Productella navicelliformis Clarke and Swartz,Md.Geol Surv.,Mid.& Up.Dev.,p.567-568,pl.51,f.20,1913;Jennings Form.,Parkhead Mem.E.Cumb.,N.Rocky Run ?

,Productella pyxidata Hall

Productus pyxidatus Hall,Geol.Iowa,I,pt.2,p.498,pl.3, f.8a-e,1858.

Productus shumardianus Hall,Geol.Iowa,,I,pt.2,p.499, pl.3,f.9(not pl.7,f.2),1858.

Productella pyxidata.Hall and Clarke,Intr. to Study Brach.,pt.1,pl.21,f.20,23,1892;Pal.N.Y.,VIII,pt.1 pl.17,f.34;pl.17A,f.14,1892.-Hall,Rep.N.Y.State Geol.for 1882,pl.(17) 48,f.34,1883.-Shimer,Can.Geol Surv.,sec.45,p.37,1926;Up.Dev.Minnewanka Region,

Banff, Alberta.-Keyes, Mo.Geol.Surv., V, p.52, pl.38, f.4a-d, 1894.-Rowley, Mo.Bur.Geol.& Mines, VIII, 2d. ser., p.77, pl.17, f.5, 30-36, 1908.-Weller, Ill.Geol. Surv., Mon.I, p.100, pl.19, f.1-21, 1914.

Productella pyxidatus Hall, See Productella pyxidata Hall

Productella(?) schucherti Prosser and Kindle

Productella(?) schucherti Prosser and Kindle, Md.Geol. Surv., Mid.& Up.Dev. p.163-164, pl.15, f.21, 1913; Romney Form., Hamilton Mem. Ernstville, Penn.

Productella semiglobosa Girty, See Productella coloradensis Kindle.

Productella semiglobosa Nettleroth

Productella soinulicosta? Hall, Pal.N.Y., IV, p.160, pl. 23, f.6-8, 1867.

Productus subaculeatus ? Meek, Simpson's Rep.Expl. Great Basin Terr.Utah, p.345, pl.1, f.3a-c, 1876; King's U.S.Geol.Expl.40th.Paral., IV, p.36, pl.3, f. 7-7c, 1877.

Productella semiglobosa. Nettleroth, Ky.Foss.Shells, p. 70, pl.26, f.7, 1889.-Girty, U.S.G.S., 20th.Ann.Rep.p. 42-44, pl.3, f.7-10, 1900; Ouray ls.Gunnison; Durango, Colo.-Kindle, 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res., p.630-631, 1901; Jeffersonville ls.Falls of the Ohio

Productella spinulicosta Whiteaves, Contr.Can, Pal., I, p.217, pl.29, f.3, 3a, pl.31, f.1, 1891.

Productella subaculeata Whiteaves, Contr.Can.Pal., I, p. 283, 1892.

Productella Shumardiana Hall, See Productella spinulicosta Hall

Productella speciosa Hall

Productus speciosus Hall, 10th.Rep.N.Y.State Cab.Nat. Hist., p.176, 1857.

Productella speciosa. Hall, Pal.N.Y., IV, p.175, pl.25, f. 1-11, 1867.-Grabau and Shimer, N.Am.Index Foss., I, p. 242, f.294, 1909.-Clarke and Swartz, Md.Geol.Surv., Mid.& Up.Dev., p.566-567, pl.51, f.13-15, 1913; Jennings Form., Woodmont Mem., Ithaca Fauna. W.Tonoloway; Berkeley Springs, W.Va; Thompson Township, Fulton Co., Penn.

Productella spinulicosta Hall

Productus subaculaetus Norwood and Pratten(non Murchison) Jour.Acad.Nat.Sci.,Phila.,III,p.21,1854.

Productus spinulicostae Hall,10th.Rep.N.Y.State Cab. Nat.Hist.,p.173,1857.

Productella spinulicosta.Hall,Pal.N.Y.,IV,pt.1,p.160, pl.23,f.6-8,25-34,1867.-Hall and Clarke,Pal.N.Y. VIII,pt.1,pl.17,f.3-6,1892.-Schuchert,U.S.G.S.,Bull 87,p.318,1897.-Kindle,25th.Rep.Ind.Dept.Geol.Nat. Res.,p.629-630,pl.6,f.9,9a,1901;Jeffersonville ls. and Sellersburg beds.Bunker Hill;Pipe Creek Falls; Little Rock Creek,Cass Co.;Falls of the Ohio.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.205,f.112,1899; Moscow sh.and Demissa beds;Marcellus sh.Lake Shore Clarke,N.Y.State Mus.,Bull.65,p.292,1903.-Grabau and Shimer,N,Am.Index Foss.,I,p.241,f.293c,d,1909.

Productella cf spinulicosta Prosser and Kindle,Md. Geol.Surv.,Mid.& Up.Dev.,p.162-165,pl.13,f.17-21, 1913;Romney Form.,Hamilton Mem.Near Cumb.,Md.

Productella shumardiana Hall,p.157,et seq.,IV,occuring in Marcellus and Hamilton beds on the Lake Shore is probably identical with P. spinulicosta.

Productella spinulicosta Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser,,p.86,1922;Mineola ls.-Branson and Williams,Dev. of Mo.,p.141,pl.35,f.10,11,12,1922; Grand Tower ls.Ste Genevieve Co.

Productella spinulicosta ? Hall,See Productella semiglobosa Nettleroth.

Productella spinulicosta Whiteaves,See Productella semiglobosa Nettleroth.

Productella springera Kindle

Productella springera Kindle,U.S.G.S.Bull.391,p.19, pl.5,f.1-4,1909;Ouray ls.Hillsboro,N.Mex.

Productella subaculeata Whiteaves,See Productella semiglobosa Nettleroth

Productella subalta Keys,See Productella callawayensis (Swallow)

Productella subalta var Girty

Productella subalta var Girty,20th.Ann.Rep.U.S.G.S., pt.2,p.45,1900;Ouray ls.Salida,Colo.

Productella subalta Hall

Productus (Productella) subaculeatus Walcott,U.S. G.S.,Mon.VIII,p.128,pl.7,f.2;pl.13,f.19,19a,20, 20a,1884.

Productus subalta ? Girty,U.S.G.S,29th.Ann.Rep.pt. 2,p.44-45,1900;Ouray ls.Engineer Mountains;Durango;Salida;Glenwood Springs,Colo.

Productella truncata Hall,See Strophalosia truncata (Hall)

Productella (Strophalosia?) truncata Whiteaves,See Strophalosia truncata (Hall)

Productella walcotti Fenton and Fenton

Productus dissimilis Hall(part) Geol.Iowa,I,pt.2, p.497,pl.3,f.7,1858.

Productus (Productella) hallanus Walcott,U.S.G.S. Mon.VIII,p.130(part) not pl.13,f.17,1884.

Productella walcotti Fenton and Fenton,Contr.Mus., UnivlMich.,I,p.119-120,pl.26,f.1-7,1924;Gypidula faunule,Strophalosia zone.Hackberry Stage.

Genus PRODUCTUS Sowerby
(1814.Min.Conch.,I,p.153)

Productus callawayensis (Swallow) See Productella callawayensis(Swallow)

Productus depressus.DeFranc,Deshayes,See Strophomena rugosa Hall

Productus depressus Sowerby,See Strophomena rhomboidalis Wahlenberg.

Productus dissilimilis Hall,See:

Productella walcotti Fenton and Fenton

Productus (Marginifera) hallanus Walcott

Productus (Marginifera?) dissimilis Hall and Clarke, See Productus (Marginifera) hallanus Walcott.

Productus elegans Steininger,See Strophomena rhomboidalis Wahlenberg.

Productus exanthematus Hall

Productus exanthematus Hall,10th.Ann.Rep.N.Y.State

Cab.Nat.Hist.,p.174,1857.

Productus exanthematus? Meek and Worthen,Ill.Geol. Surv.,III,p.412,pl.10,f.3a-c,1868;Corniferous Group,W.Jonesboro,Union Co.Larger specimens occur in Hamilton beds.at the "Bake-oven",on the Mississippi,Jackson Co.

Productus (Marginifera) hallanus Walcott

Productus dissimilis Hall,Geol.Iowa,I,pt.2,p.497,pl. 3,f.7,1858.

Productus (Productella) hallanus Walcott(part),Paleont of the Eureka Dist.,p.130,pl.13,f.17,1885.

Productus (Marginifera?) dissimilis Hall and Clarke, Pal.N.Y.,VIII,pt.1,pl.17a,f.11,12,1892.

Productus (Marginifera) ahllanus Clarke and Swartz,Md. Geol.Surv.,Mid.& Up.Dev.,p.568-569,pl.51,f,21-23, 1913;Jennings Form.,Chemung Mem.M.E.Mountain Lake Park;S.Oakland.

Productus (Productella)hallanus Walcott,See: Productella hallane Walcott Productella walcotti Fenton and Fenton Productus (Marginifera) hallanus Walcott.

Productus hirsuta Hall,See Productella hirsuta Hall

Productus pyxidatus Hall,See Productella pyxidatus Hall

Productus quadrangularis Steininger,See Strophomena rhomboidalis Wahlenberg

Productus shumarlianus Hall,See Productella pyxidata Hall

Productus speciosus Hall,See Productella speciosa Hall

Productus spinulicostae Hall,See Productella spinulicosta Hall.

Productus subaculeatus? Meek,See Productella simiglobosa Nettleroth.

Productus subaculeatus Norwood and Pratten,See Productella spinulicosta Hall

Productus (Productella) subaculeatus Walcott,See Productella subalta Hall

Productus? sulcatus Castelnau,See Leptaena rhomboidalis (Wilckens)

Productus sulcifer DeVerneuil, See Leptaena rhomboidalis (Wilckens)

Productus truncatus Hall, See Strophomena truncata(Hall)

Genus PUGNAX Hall and Clarke

Pugnax altus Greger, See Pugnoides altus(Calvin)

Pugnax altus Hall and Clarke, See:

Pugnax pugnus var altus (Calvin)
Pugnoides altus (Calvin)
Pugnoides calvini nom.nov. Fenton and Fenton
Pugnoides solon Thomas and Steinbrook

Pugnus minutus Warren

Pugnus minutus Warren, Can. Geol. Surv., Dept. Mines, ser., 134, Mem. 153, pl. 55, pl. 4, f. 2-4, 1927; Up. Dev. Minnewanka ls. N. end Sulphur Mountain, Banff Area, Alberta

Pugnax pugnus Martin

Conchyliolithus (Anomites) pugnus Martin, Petrefacta Derbiensia, Tab. 22, f. 4, 5, 1809.

Terebratula pugnus Sowerby, Min. Conchology, pl. 425, f. 1-6, 1825.

Rhynchonella pugnus. Davidson, Mon. British Carb. Brach. Pal. Soc., p. 97, pl. 32, f. 1-15, 1860.-Williams, Am. Jour. Sci., 3d. ser, XXV, p. 99, 1883.-Walcott, U. S. G. S., Mon. VIII, p. 155, pl. 14, f. 7, 1884.-Clarke, U. S. G. S., Bull. 16, p. 73, 1885.-Whiteaves, Contr. Can. Pal., I, p. 230, 290, 1891

? Rhynchonella pugnus Dawson, Acadian Geol., 3d. ed., p. 295, 1878.

Pygnax pugnus. Hall and Clarke, Pal. N. Y., VIII, pt. 2, p. 203, pl. 60, f. 6-10, 1893.-Kindle, U. S. G. S., Bull. 391, p. 22-24, pl. 6, f. 3-8a, 1909; Ouray ls. Hillsboro and Lake Valley, N. Mex.

Pugnax pugnus alta Schuchert, See Pugnoides altus(Calvin)

Pygnax pugnus var altus (Calvin)

Rhynchonella alta Calvin(part) circa, privately distri-

buted paper with figures,1875.(Bull.Soc.Am.,XXIII, p.6,1812)

Pugnax pugnus var alta Williams,Bull.Geol.Soc.Amer,, I,pl.12,f.5-7,1890.

Pugnax altus Hall and Clarke,(part) Pal.N.Y.,VIII,pt. 2,p.203,pl.60,f1-5,1893.

Pugnax pugnus var altus Clarke and Clarke,Md.Geol. Surv.,Mid.& Up.Dev.,p.583-584,pl.54,f.17-22,1913; Jennings Form.,Woodmont Mem.,Ithaca Fauna.W.Paw-paw,W.Va.;Woodmont;Berkeley Springs,W.Va.

Pugnax pugnus var altus Clarke and Swartz,See Pugnoides altus (Calvin)

Pugnoides altus (Calvin)

Rhynchonella alta Calvin(part) paper read before Iowa Acad.Sci., and a named photographic plate distributed.

Rhynchonella pugnus var alta Williams,Bull.Geol.Soc. Am.,I,p.12,f.5-7,1890.

Pugnax pugnus alta Schuchert,U.S.G.S,,Bull.87,p.335, 1897.

Pugnax altus.Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.203, pl.60,f.1-5,1894.-Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.92,pl.16,f.10-12,1922;Snycer Creek shale.-Greger,Am.Jour.Scil,XXVII,p.376,1909.

Pugnax pugnus var altus Clarke and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.583-584,pl.54,f.17-22,1913.

Pugnoides altus Thomas and Stainbrook,See Pugnoides calcini nom.nov.Fenton and Fenton

Pugnoides calvini nom.nov.Fenton and Fenton

Rhynchonella alta Calvin(part) paper read before the Iowa Acad.Scil, and photographic plate distributed but not published,1876.

Pugnax altus Hall and Clarke,Pal.N.Y.,VIII,pt.2,pl. 60,f.4,5,(not fig.1-3) 1894.

Pugnoides altus Thomas and Stainbrook,Proc.Iowa Acad. Scil,XXIX,p.95,pl.1,f.1-16,1924.

Pugnoides calvini Fenton and Fenton,Contr.Mus.Univ.

Mich.,I,p.125-128,pl.25,f.1-8,1924;Spirifer zone. Hackberry Stage.

Pugnoides solon Thomas and Stainbrook

Rhynchonella pugnus var altus Williams,G.S.A.,Bull., I,pl.12,f.5-7,1890.

Pugnax altus Hall and Clarke,Pal.N.Y.,VIII,pt.2,pl. 60,f.1-3,(not 4-5) 1893.

Pugnoides solon.Thomas and Stainbrook,Science,n.ser., LIV,p.308,1921;Proc.Iowa Acad.Sci.,XXIX,p.97,pl.1, f.17-32,1924;Fenton and Fenton,Contr.Mus.Univ.Mich I,p.129,pl.25,f.9-12,1924;State Quarry Form.,Solon Johnson Co.,Iowa;Up.Dev.,Mo.Hackberry Stage.

Pugnoides swallowi Branson

Pugnoides swallowi Branson,Mo.Bur.Geol.& Mines,XVII, 2d.ser.,p.92,pl.16,f.13-15,1922;Mineola ls.

See Camarophoria swallowi(Branson)

Genus RENSSELAERIA Hall
(1859.Pal.N.Y.,III,p.254,454-456)

Rensselaeria aequiradiata(Conrad)

Atrypa aequiradiata Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.266,pl.16,f.17.

Rensselaeria aequiradiata Hall,Pal.N.Y.,III,p.255,pl. 45,f.3a-g,1859;L.Helderberg group.Schoharie,Carlisle.

Rensselaeria circularis Schuchert

Rensselaeria circularis Schuchert,Md.Geol.Surv.,L.Dev p.381-382,pl.66,f.15-17,1913;Oriskany Form.,Ridgely Mem.near Cumb.,Md.

Rensselaeria conconi McChesney

Rensselaeria condoni.McChesney,Palaeoz.Foss.,p.85, 1861;Explanations of pl.7,Palaeoz.Foss.,(f.2)1865; Trans.Chicago Acad.Sci.,I,p.36,pl.7,f.2,1867.-Meek and Worthen,Ill.Geol.Surv.,III,p.401,pl.8,f.4a,b, 1868.Cherty ls.age of Oriskany ss.N.Y.ser.,Clear Creek and localities W. Jonesboro,Union.Co.

Of Meganteris ovalis Hall,Regents Rep.for 1856,p.101; R. ovalis, of same,Third vol.Paleont.N.Y.,pl.107, f.2a-l,1859.

Rensselaeria cumberlandiae Hall, See Rensselaeria(Beachia) cumberlandiae (Hall)

Rensselaeria (Beachia) cumberlandiae (Hall)

Meganteris cumberlandiae Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.101, 1857; Palaeozoic Foss., p.61, 1857.

Rensselaeria cumberlandiae. Hall, Pal. N.Y., III, p.464, pl.108, f.1a-f, 1859; Oriskany ss. Cumb., Md.-Hall and Clarke, Pal. N.Y., VIII, pt.2, p.258, pl.77, f.23-25, 1893

Rensselaeria (Beachia) cumberlandiae Schuchert, Md. Geol. Surv. L.Dev., p.386-387, pl.77, f.4-6, 1913; Oriskany Form., Ridgely Mem. Cumb., Md.

Rensselaeria cumberlandiae Hall and Clarke, See Rensselaeria (Beachia) cumberlandiae (Hall)

Rensselaeria elliptica Hall

Rensselaeria elliptica Hall, Pal. N.Y., III, p.256, pl.45, f.4a-c, 1859; L. Helderberg group. Schoharie Co.

Rensselaeria elongata Hall, See Stricklandinia elongata var curta Billings.

Rensselaeria intermedia Hall, See Rensselaeria marylandica Hall

Rensselaeria intermedia Hall and Clarke, See Rensselaeria marylandica Hall

Rensselaeria keyserensis Swartz

Rensselaeria keyserensis Swartz, Md. Geol. Surv., L.Dev. p.384-385, pl.66, f.26-28, 1913; Helderberg Form., Keyser Mem. B.& O.R.R. Cut S.W. Rawlings, Md.

Rensselaeria laevis Hall

Rensselaeria laevis Hall, Pal. N.Y., III, p.256, pl.40, f. 2a, b, 1859; L. Helderberg group. Albany Co.

Rensselaeria marylandica Hall

Rensselaeria intermedia. Hall, Pal. N.Y., III, p.463, pl. 103, f.2a-c, 1859; Oriskany ss. Cumb., Md.-Hall and Clarke, Pal. N.Y., VIII, pt.2, pl.77, f.26-28, 1893.

Rensselaeria marylandica. Hall, Pal. N.Y., III, p.461, pl. 108, f.3a-m, 1859; Oriskany ss. Cumb., Md.-Hall and

Clarke,Pal.N.Y.,VIII,pt.2S8,pl.76,f.8-20,1893.-Schuchert,Md.Geol.Surv.,L.Dev.,p.382-384,pl.66,f.18-24,1913;Oriskany Form.,Ridgely Mem.Near Cumb.,Hancock,Md.;Warren Point,W.Va.

Rensselaeria marylandica var symmetrica Schuchert

Rensselaeria marylandica var symmetrida Schuchert,Md.Geol.Surv.,L.Dev.,p.384,pl.66,f.25,1913;Oriskany Form.,Ridgely Mem.Cumb.,Md.

Rensselaeria medioplicata Dunbar

Rensselaeria medioplicata.Dunbar,Am.Jour.Sci.,XLIII,p.466,469,pl.2,f.1-9,12-18,1917;Tenn.Geol.Surv.,Bull.21,pl.2,f.12,13,1919.-Tansey,Dev. of Mo.,p.196-197,pl.50,f.25,26,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rensselaeria medioplicata var latior Dunbar.

Rensselaeria medioplicata var latior Dunbar,Am.Jour.Sci.,XLIII,p.469,pl.2,f.10,11,1917.

Rensselaeria medioplicata var latior ?Tansey,Dev. of Mo.,p.53,pl.53,f.21-24,pl.54,f.1-4,1922;Bailey ls.Little Saline Creek Ste Genevieve Co.

Rensselaeria mutabilis(Hall)

Meganteris mutabilis Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.97,1857.

Rensselaeria mutabilis Hall,Pal.N.Y.,III,p.254,pl.45,f.2a-p,1861;L.Helderberg group.Albany and Columbia Cos.,-Schuchert,Md.Geol.Surv.,L.Dev.p.378-379,pl.66,f.5,6,1913;Helderberg Form.,Keyser Mem.Keyser,W.Va;Miller's Spring near Cumb.New Scotland Mem.Cherry Run,W.Va.

Rensselaeria (Beachia) ovalis (Hall)

Meganteris ovalis Hall,10th.Ann.Repl N,Y.State Cab.Nat.Hist.,p.101,1857.

Rensselaeria ovalis.Hall,Pal.N.Y.,III,p.458,pl.106,f.2a-l,1859;Oriskany ss.Schoharie and Albany Cos.

Megalanteris ovalis.Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.280,pl.70,f.12-22,1893.-Clarke,N.Y.State Mus.,Mem.III,No.3,p.40,pl.5,f.13-16,1900.

Rensselaeria (Beachia) ovalis Schuchert,Md.Geol.Surv.L.Dev.,p.389,pl.67,f.17-19,1913;Oriskany Form.,

Ridgely Mem. Cumberland;Knobly Mountain,Md.;Warren Point,Penn.

Beachia ovalis Stewart,Dev. of Mo.,p.244-245,pl.65,f. 1,1922;Little Saline Creek ls.Ste Genevieve Co.

Rensselaeria ovoides (Eaton)

Terebratula ovoides Eaton,Geol.Textbook,p.45(not Sowerby 1812)

Terebratula perovalis Eaton,ibid (not Sowerby,1825)

Atrypa elongata Conrad,Ann.Rep.Pal.N.Y:,p.65,1839.

Atrypa elongata Vanuxem,Mather and Hall,Geol.Reps., 1843.

Not Pentamerus elongatus Vanuxem,Geol.Rep.p.132,f.1, 1843;Onondaga ls.

Meganteris ovoides Hall,Regents Rep.for 1856,p.102; Paleoz.Foss.,p.62,1857.

Rensselaeria ovoides.Hall,Pal.N.Y.,III,p.456,pl.104, f.1-4;pl.105,f.1-6,1859;Oriskany ss.Albany,Greene, Ulster,Schoharie Otsego,Herkimer Cayuga Cos;in Canada East and West;Penn.;Md.;Va;.-Clarke,N.Y. State Mus.,Mem.III,No.3,p.39,pl.5,f.17-19,1900.- Stewart,Dev. of Mo.,p.242-243,pl.64,f.8-12,1922; Little Saline Creek ls.Ste Genevieve Co.

Rensselaeria (Beachia) prosvita Schuchert

Rensselaeria (Beachia) prosvita Schuchert,Md.Geol. Surv.,L.Dev.,p.385-386,pl.67,f.1-3,1913;Helderberg Form.,Keyser Mem.Pintp,Md.;New Bloomfield,Penn.

Rensselaeria stewarti Clarke

Rensselaeria stewarti Clarke,N.Y.State Mus.,Mem.No. 107,p.239,1907;N.Y.State Mus.,Mem.IX,pt.2,p.38,pl. 7,f.10-20,1908.

Rensselaeria of stewarti Stewart,Dev. of Mo.,p.243, pl.64,f.13-15,1922;Little Saline Creek ls.Ste Genevieve Co.

Rensselaeria subglobosa Weller

Rensselaeria subglobosus Weller,Pal.N.J.,III,p.329, pl.42,f.11-18,1903;L.Oriskany Form.,

Rensselaeria subglobosa Schuchert,Md,Geol.Surv.,L.

Dev.,p.279-380,pl.66,f.10-12,1913;Helderberg Form. Becraft Mem.Ernstville,Penn;Cherry Run,W.Va;Warren Point,Penn.

Rensselaeria subglobosa var avus Schuchert

Rensselaeria subglobosa var avus Schuchert,Md.Geol. Surv.,L.Dev.,p.380,pl.66,f.13,1913;Helderberg Form Becraft Mem.Ernstville,Penn;Cherry Run,W.Va.;Warren Point,Penn.

Rensselaeria subglobosa var crassa Schuchert

Rensselaeria subglobosa var crassa Schuchert,Md.Geol. Surv.,L Dev.,p.381,pl.66,f.14,1913;Helderberg Form.,Becraft Mem.Warren Point,Penn.

Rensselaeria subglobosus Weller,See Rensselaeria subglobosa Weller.

Rensselaeria suessana Hall,See Rensselaeria (Beachia) suessana (Hall)

Rensselaeria (Beachia) suessana(Hall)

Meganteris suessana Hall,10th.Ann.Rep.N,Y.State Cab. Nat.Hist.,p.100,1857.

Rensselaeria suessana Hall,Pal.N.Y.,III,p.459,pl.107, f.1-15,1859;Oriskany ss.Cumb.,Md.

Beachia suessana.Weller,Pal.N.J.,III,p.352,pl.47,f. 5-14,1903;Mid.& Up.Oriskany.-Stewart,Dev. of Mo., p.244,pl.64,f.16,17,1922;Little Saline Creek ls. Ste Genevieve Co.

Rensselaeria (Beachia) suessana.Hall and Clarke,Pal. N.Y.,VIII,pt.2,p.260,pl.77,f.1-11,1893;-Schuchert Md.Geol.Surv..L.Dev.,p.387-388,pl.67,f.7-15,1913; Oriskany Form.,Ridgely Mem.Knobly Mtn.,near Cumb., Pendelton Co.,W.Va.

Rensselaeria (Beachia) suessana var immatura Schuchert

Rensselaeria (Beachia) suessana var immatura Schuchert,Md.Geol.Surv.,L.Dev.,p.388,pl.67,f.16,1913; Oriskany Form.,Shriver Mem.Cash Valley;Pinto,Md.

Genus RETICULARIA McCoy

Reticularia n.sp.C.L.Fenton,See Reticularia inconsueta Fenton and Fenton

Reticularia bicostata (Vanuxem)

Orthis bicostatus vanuxem,Geol.N.Y.,3d.Dist.,p.91-94,1842.

Spirifer bicostatus Hall,Pal.N.Y.,II,p.263,pl.54,f.4, 1852.

Spirifera bicostata Hall,2d.Ann.Rep.N.Y.State Geol.pl 61,f.7,1883.

Spirifera bicostatus Hall and Clarke,Pal.N.Y.,VIII, pt.2,p.19,37,pl.36,f.7,1893.

Reticularia bicostata Maynard,Md.Geol.Surv.,L.Dev., p.420-421,pl.72,f.8-10,1913;Helderberg Form.,Keyser Mem.Round top(?) Tonoloway.

Reticularia fimbriata (Conrad)

Delthyris fimbriatus Conrad,Jour.Acad.Nat.Sci.,Phila. VIII,p.263,1842.

Spirifera fimbriata Hall,Pal.N.Y.,IV,p.214,pl.33,f.1-21,1867.

Reticularia fimbriata.Schuchert,U.S.G.S.,Bull.87,p. 342,1897.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.p.651-652,pl.7,f.11,1901;Sellersburg beds and Jeffersonville ls.Bunker Hill;Charlestown.-Weller, Pal1N.J.,III,p.369-370,pl.51,f.8-11,1903;Onondaga ls.-Grabau and Shimer,N.Am.Index Foss.,I,p.338,f. 431a,b,1909.-Cleland,Wisc,Geol.Nat.Hist.,Surv.,Bull 21,p.82,pl.17,f.1,2,1911.-Branson,Dev. of Mo.,p.105 -106,pl.16,f.1,3,1922;Mineola ls.Montgomery and Warren Cos.

Reticularia cf fimbriata Kindle,U.S.G.S.,Bull.508,p. p.82,1912.

Spirifer fimbriatus Clarke, N.Y.State Mus.,Bull.65, p.316,1903.

Spirifer (Reticularis) fimbriatus.Hall,Geol.Surv., Iowa I,pt.2,p.505,pl.4,f,5,1858.-Hall and Clarke, Pal.N.Y.,VIII,pt.2,p.17,20,21,33,37,pl.36,f.17-22,pl.38,f.9,10,1893.-Grabau,Buffalo Soc.Nat.Sci. Bull.6,p.215,f.123,1899/Encrinal ls. and Demissa bed-Prosser and Kindle,Md.Geol.Surv.,L.Dev.,p.197-198,pl.19,f.10-12,1913;Romney Form.,Onondaga Mem S.E.Cumb.Hamilton Mem.E.bank Evitts Creek near Cumb.,Md.

Spirifera conradana.Miller,Am.Pal.Foss.,2d.ed.,p. 372,1883.-Keyes,Johns Hopkins Univ.Circ.,XI,p. 29,1891.

Reticularia inconsueta Fenton and Fenton

Reticularia n.sp.C.L.Fenton,Am.Jour.Soil,4th.ser., XLVIII,p.372,1919.

Reticularia inconsueta Fenton and Fenton,Contr.Mus. Univ.Mich.,I,p.167-169,pl.30,f.6-9,1924;Spirifer zone.Hackberry Stage.Bird Hill.

Reticularia knappianum Nettleroth

Spirifer knappianum Nettleroth,Ky.Foss.Shells,p.122, pl.7,f.14,1889.

Reticularia knappianum Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.652-653,1901;"Corniferous". Falls of the Ohio.

Reticularia laevis(Hall)

Delthyris leavis Hall,Geol.N.Y.,Rep.4th.Dist.,p.245, f.1,1843.

Spirifer leavis Hall,Pal.N.Y.,IV,p.239,pl.34,f.1-12, 1867.

Reticularia laevis.Schuchert,U.S.G.S.,Bull.87,p.343, 1897.-Grabau and Shimer,N.Am.Index Foss.,I,p.339, f.432,1909.-Clarke and Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.592-593,pl.56,f.4-6,1913;Jennings Form.,Woodmont Mem.,Ithaca Fauna.Hancock.Berkeley Springs,W.Va.

Reticularia praematura (Hall)

Spirifer praematura Hall,Proc.Am.Philos.Soc.,X,p. 246,1866;Pal.N.Y.,IV,p.250,pl.33,f.31-35,1867.

Reticularia praematura.Schuchert,U.S.G.S,Bull.87,p. 344,1897.-Prosser,Geol.Surv.,Ohio.4th.ser.,Bull.15 p.536-537,pl.29,f.7,8,1912;Chagrin Form.,Brandywine Creek;E.Trumbull Center,S.Madison.

Reticularia spinosa Kindle

Reticularia spinosa Kindle,U.S.G.S.,Bull.391,p.27-28, pl.9,f.4,5,1909;Hillsboro,N.Mex.

Reticularia wabashensis Kindle

Reticularia wabashensis Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.653,pl.10,f.5,5a,b,1901;Jeffersonville ls.Pipe Creek Falls;Bunker Hill.

Retzia formosa.Miller,Whitfield,See Rhynchospira formosa Hall.

Retzia multistriata Billings,See Trematospira multistriata (Hall)

Genus RHIPIDOMELLA Oehlert
(1891.Journal de Conchyliologie,p.272)
(1892.Pal.N.Y.,VIII,pt,1.p.209)

Rhipidomella assimilis (Hall)

Orthis assimilis Hall,Pal.N.Y.,III,p.175,pl.15,f.1a-e,1859;L.Helderberg group.Helderberg mountains, Schoharie.

Rhipidomella assimilis.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.224,1892.-Schuchert,Md.Geol.Surv.,L.Dev.,p. 304-305,pl.55,f.17-19,1913;Helderberg Form.,Becraft Mem.Cherry Run.,W.Va.

Rhipidomella cyclas Hall

Orthis cyclas Hall,13th.Rep.N.Y.,State Cab.Nat.Hist., p.78,1860;Pal.N.Y.,IV,p.52,pl.7,f.2,3,1867.

Rhipidomella cyclas.Hall and Clarke,Pal.N.Y.,VIII,pt.1 p.225,1892.-Schuchert,U.S.G.S.,Bull.87,p.348,1897/-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.192,f.95,1899; Hamilton sh.Avery's Creek.

? Rhipidomella cyclas Prosser and Kindle,Md.Geol.Surv Mid.& Up.Dev.,p.169-170,pl.14,f.10,1913;Romney Form Onondaga Mem(?) Hanging Rock,W.Va.Hamilton Mem.S.E Cumb.;Ernstville,Warren Point,Penn.

Rhipidomella discus(Hall)

Orthis discus Hall,Pal.N.Y.,III,p.165,pl.10A,f.7-12, 1859;L.Helderberg group.Helderberg mountains;Catskill,Hudson.

Rhipidomella discus.Hall and Clarke,Pal.N.Y.,VIII,pt.1 p.210,225,1892.-Tansey,Dev. of Mo.,p.184-185,pl. 45,f.9-16,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rhipidomella ellsworthi Tansey

Rhipidomella ellsworthi Tansey,Dev. of Mo.,p.185,pl. 45,f.17-39,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rhipidomella emarginata(Hall)

Orthis oblata var emarginata Hall,Pal.N.Y.,III,p.164, pl.10A,f.4-6,1859;L.Helderberg group.Cumb.,Md.

Rhipidomella emarginata.Maynard,Md.Geol.Surv.,L.Dev., p.302,pl.55,f.1-8,1913;Helderberg Form.,Keyser Mem.Broomfield,W.Va.;Cash Valley,Md.-Stewart,Dev. of Mo.,p.230,pl.61,f.3-5,1922;Little Saline Creek ls.Ste Genevieve Co.

Rhipidomella eminens(Hall)

Orthis eminens Hall(part) Pal.N.Y.,III,p.167,pl.11, f.7-14,1859;L.Helderberg group.Helderberg mountains;Schoharie and Carlisle.

Rhipidomella eminens Weller(part) Pal.N.J.,III,p.304-305,pl.34,f.9,1903;New Scotland-Becraft Fauna.

Rhipidomella eminens.Hall and Clarke,Weller,(part),See Dalmanella eminens(Hall)

Rhipidomella goodwini Nettleroth

Rhipidomella goodwini.Nettleroth,Ky.Foss.Shells,p.39, pl.17,f.30-31,1889.-Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.625-626,1901;"Hamilton".Falls of the Ohio.

Rhipidomella idonea Hall

Rhipidomella idonea.Hall,Pal.N.Y.,IV,p.53,pl.63,1867. Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.191,f.94,1899; Moscow sh.;Encrinal ls.

Rhipidomella leucosia (Hall)

Orthis leucosia.Hall,16th.Rep.N.Y.State Cab.Nat.Hist. p.80,1860;Pal.N.Y.,IV,p.48,63,pl.7,f.4a-i,pl.8,f. 9,10,1867.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29, 1891.

Rhipidomella leucosia.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.225,pl.6,f.16;pl.6A,f.9,1892.-Schuchert, U.S.G.S.,Bull.87,p.349,1897.-Grabau,Buffalo Soc. Nat.Sci.,Bull.6,p.189,f.92,1899;Encrinal ls.-Kindle 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.624,pl.3,f. 12,13,13a,1901;Sellersburg beds.Charlestown;-Clarke N.Y.State Mus.,Bull.65,p.298,1903.-Grabau and Shi-

mer,N.Am.Index Foss.,I,p.265,f.320 d,e,1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev., p.166-167,pl.14,f.1-5,1913;Romney Form.,Hamilton Mem.Cumb.,Md.

Rhipidomella livia (Billings)

Orthis livia Billings,Can.Jour.Industry Sci.,and Art, No.37,p.269,1860.

Rhipidomella livia Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.624-625,pl.4,f.4,1901;Sellersburg beds. Clark Co.

Rhipidomella marylandica Schuchert

Rhipidomella marylandica Schuchert,Md.Geol.Surv.,L. Dev.,p.306-307,pl.55,f.23,1913;Oriskany Form.,Ridgely Mem.Near Cumb.,Md.

Rhipidomella melvillei Tansey

Rhipidomella melvillei Tansey,Dev. of Mo.,p.185,pl.46 f.1-17,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rhipidomella musculosa (Hall)

Orthis musculosa Hall,10th.Ann.Rep.N.Y.State Nab.Nat. Hist.,p.46,1857;Palaeozoic Foss.,p.6,1857;Pal.N.Y. III,p.409,pl.91,f.1-3;pl.95,f.1-7,1859;Oriskany ss Albany and Schoharie Cos.,N.Y.;Cumb.,Md.

Rhipidomella musculosa.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.190,210,225,pl.6A,f.5,1892.-Clarke,N.Y. State Mus.,Mem.IX,pt.1,p.201,pl.42,f.1-5;pl.43,f. 14,17,19,22,1908;-Schuchert,Md.Geol.Surv.,L.Dev., p.305,pl.55,f.20;pl.56,f.1-4,1913;Oriskany Form., Ridgely Mem.Knobly Mountain;Colliers Run,Near Cumb Md.;Pendleton Co.,W.Va.-Stewart,Dev. of Mo.,p.230-231,pl.61,f.6-8,1922;Little Saline Creek ls.Ste Genevieve Co.

Rhipidomella sp. cf musculosa(Hall) Weller,Pal.N.J., III,p.349,1903;Mid.& Up.Oriskany.Near Layton,N.J.

Rhipidomella musculosa var arctisinuata Schuchert

Rhipidomella musculosa var arctisinuata Schuchert,Md. Geol.Surv.,L.Dev.,p.306,pl.55,f.21;22,1913;Oriskany Form.,Ridgely Mem.Cumb.,Md.

Rhipidomella oblata (Hall)

Orthis oblata.Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.41,f.1-5,1857;Pal.N.Y.,III,p.162,pl.10,f. 1-17,19-22,1859;L.Helderberg.Helderberg mountains; Schoharie,Carlisle,Cherryvalley,Catskill,Hudson, etc.,-Whitfield,Geol.Wisc.,IV,p.320,pl.25,f.1,2, 1882.

Rhipidomella oblata.Hall and Clarke,Pal.N.Y.,VIII,pt. 1,p.210,225,pl.6A,f.3,4,1892.-Girty,U.S.G.S.,19th. Ann.Rep.pt.3,p.562,pl.70,f.3a,1899.-Clarke,N.Y. State Mus.,III,p.58,pl.8,f.14,15,1900.-Weller,Pal. N.J.,III,p.304,350,pl.35,f.9-13,pl.46,f.5-7,1903; New Scotland-Becraft Fauna;Mid.Oriskany.-Shimer, N.Y.State Mus.,Bull.80,p.244,1905.-Schuhbert,Md. Geol.Surv.,L.Dev.,p.303,pl.55,f.9-16,1913;Helder- berg Form.,Goeymans Mem.Dawson.New Scotland,Mem. Dawson;Millers Spring,Md.;Cherry Run,W.Va.-Dunbar, Tenn.Geol.Surv.,Bull.21,pl.1,f.1,1919.-Tansey,Dev. of Mo.,p.184,pl.44,f.32,33,pl.45,f.1-8,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rhipidomella penelope (Hall)

Orthis penelope Hall,13th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.79,f.1,2,1860;Pal.N.Y.,IV,p.50,pl.6,f.2a- m,1867.

Rhipidomella penelope.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.211,225,pl.6,f.6-13,pl.6A,f.10(?11),1892.- Schuchert,U.S.G.S.,Bull.87,p.351,1897.-Grabau,Buf- falo Soc.Nat.Sci.,Bull.6,p.190,f.93,1899;Encrinal ls.and Demissa beds.Avery's Creek.-Clarke,N.Y. State Mus.,Bull.65,p.298,1903.-Grabau and Shimer, N.Am.Index Foss.,I,p.365,f.320f,g,1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.167-168, pl.14,f.6-9,1913;Romney Form.,Hamilton Mem.E.bank Evitts Creek below Wolfe Mill,near Cumb.

Rhipidomella vanuxemi(Hall)

Orthis vanuxemi.Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.135,f.1-7,1857;Pal.N.Y.IV,p.40,47,pl.5,f. 6;pl.6,f.3a-r,1867.-Keyes,Johns Hopkins Univ.Cir., XI,p.29,1891.

Rhipidomella vanuxemi.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.225,pl.6,f.14,15;pl.6A,f.7,8,1892.-Schuchert U.S.G.S.,Bull.87,p.352,1897.-Grabau,Buffalo Soc. Nat.Sci.,Bull.6,p.188,f.91,1899;Moscow sh.;Encrinal ls.;Demissa beds.Avery's Creek.-Kindle,25th.Ann. Rep.Ind.Dept.Geol.Nat.Res.,p.622-623,pl.3,f.14;pl. 4,f.1,1a,2,3,3a,1901;Sellersburg beds and Jeffer- sonville ls.Bunker Hill;Charlestown.-Clarke,N.Y. State Mus.,Bull.65,p.299,1903.-Weller,Pal.N.J.,

III,p.368,pl.51,f.5-7,1903;Onondaga ls.-Grabau and Shimer,N.Am.Index Foss.,I,p.265,f.320a-c,1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p. 165-166,pl.13,f.26-29,1913;Romney Form.,Onondaga Mem.Tonoloway.Hamilton Mem.E.bank Evitts Creek below Wolfe Mill;Cumb.,-Ernstville.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.572,pl.5w,f. 7-13,1913;Jennings Form.,Chemung Mem.S.W.Round W.Va.Pahkhead Mem.E.Cumb.,Rocky Run;Polish Mountain.

Genus RHYNCHONELLA Fischer
(1809.Mem.Soc.Imp.Mosc.II)

Rhynchonella abrupta Hall,See Uncinulus abruptus(Hall)

Rhynchonella aequivalvis Hall

Rhynchonella aequivalvis Hall,Pal.N.Y.,III,p.224,pl. 29,f.3a-i,3a-c,1859;L.Helderberg group.Helderberg mountains,Albany Co.

Rhynchonella agglomerata Weller,See Camarotoechia litchfieldensis (Schuchert)

Rhynchonella alta Calvin,See:

Pugnax pugnus var altus(Calvin)

Pugnoides calvini nom.nov.Fenton and Fenton

Pugnoides altus (Calvin)

Rhynchonella altiplicata.Hall,Weller,See Camarotoechia(?) altiplicata (Hall)

Rhynchonella barrandi Hall,See Camarotoechia(Plethorhyncha) barrandii (Hall)

Rhynchonella bialveata Hall

Rhynchonella bialveata.Hall,10th.Ann.Rep.N.Y.State Cab Nat.Hist.,p.73,1857;Pal.N.Y.,III,p.233,pl.34,f.1-4, 1859;L.Helderberg Group.Albany Co.-Schuchert,U. S. G.S.,Bull.87,p.355,1897.-Weller,Pal.N.J.,III,p.327 pl.42,f.9,10,1903;L.Oriskany.-Tansey,Dev. of Mo., p.195-196,pl.50,f.21-24,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rhynchonella(?) bialveata Schuchert,Md.Geol.Surv.,L. Dev.,p.377,pl.66,f.4,1913;Helderberg Form.,New Scotland Mem.Corriganville,Md.

Camarotoechia bialveata Dunbar,Tenn.Geol.Sur.v,Bull.

21,pl.2,f.6,1919.

Rhynchonella breviplicata Weller

Rhynchonella breviplicata Weller,Pal.N.J.,III,p.350-351,pl.46,f.2-4,1903;Mid.& Up.Oriskany.

Rhynchonella campbellana Hall,See Camarotoechia (Plethorhyncha) campbellana (Hall)

Rhynchonella (Stenochisma)carolina,Hall,See Camarotoechia carolina Hall

Rhynchonella (Stenochisma) congregata Hall,See Camarotoechia congregata (Conrad)

Rhynchonella (Stenochisma)contracta Hall,See Camarotoechia contracta (Hall)

Rhynchonella (Stenochisma) contracta var saxatilis Hall, See Camarotoechia saxatilis (Hall)

Rhynchonella contracta Herrick,See Camarotoechia contracta (Hall)

Rhynchonella deckerensis Weller,See Stenochisma deckerensis (Weller)

Rhynchonella depressa Kindle,See Camarotoechia depressa (Kindle)

Rhynchonella eminens Hall

Rhynchonella eminens Hall,Pal.N.Y.,III,p.237,pl.37,f.3,4,1859;L.Helderberg group.Helderberg mountains, Albany Co.

Rhynchonella endlichi.Meek,White,See Camarotoechia(Plethorhyncha) endlichi (Meek)

Rhynchonella (Stenochisma) eximia Hall,See Camarotoechia eximia (Hall)

Rhynchonella fitchana Hall,See Camarotoechia(Plethorhyncha)barrandii var fitchana(Hall)

Rhynchonella formosa Hall,See Rhynchotrema formosa (Hall)

Rhynchonella gainesi Nettleroth

Rhycnhonella gainesi.Nettleroth,Ky.Foss.,Shells,p.76, pl.31,f.6-9,1889.-Kindle,25h.Ann.Rep.Ind.Dept.Geol Nat.Res.,p.587-588,pl.7,f.9,9a,b,1901;Sellersburg beds and Jeffersonville ls.Charlestown;Pipe Creek

Falls;Bunker Hill

Rhynchonella gainesi var cassensis Kindle

Rhynchonella gainesi var cassensis Kindle,25th.Ann. Rep.Ind.Dept.Geol.Nat.Res.,p.588,pl.7,f.10,10a, 1901;Jeffersonville ls.Bunker Hill.

Rhynchonella glansfagea Hall,See Centronella glansfagea (Hall)

Rhynchonella horsfordi Hall,See Camarotoechia horsfordi (Hall)

Rhynchonella inutilis Hall

Rhynchonella inutilis Hall,Pal.N.Y.,III,p.233,pl.34, f.7,8,1859;L.Helderberg group.Albany Co.

Rhynchonella(?) lamellata Schuchert,See Camarotoechia (?) lamellata (Hall)

Rhynchonella(?) laura Billings,See Liorhynchus laura (Billings)

Rhynchonella(?) litchfieldensis Schuchert,See Camarotoechia (Schuchert)

Rhynchonella louisvillensis Nettleroth

Rhynchonella louisvillensis.Nettleroth,Ky.Foss.Shells p.77,pl.31,f.1-4,1889.-Kindle,25th.Ann.Rep.Ind.Dept Geol.Nat.Res.,p.587,pl.7,f.6,1901;Sellersburg beds Charlestown and Falls of the Ohio.

Rhynchonella multistriata Hall,See Camarotoechia(Plethorhyncha) pleiopleura (Conrad)

Rhynchonella mutabilis Hall,See Uncinulus mutabilis (Hall)

Rhynchonella nobilis Hall

Rhynchonella nobilis Hall,Pal.N.Y.,III,p.249,pl.43,f. 3a,b,1859;Up.Pentamerus ls.Albany and Schoharie Cos.

Rhynchonella nucleolata Billings,See Uncinulus nucleolatus (Hall)

Rhynchonella nucleolata Hall,See: Uncinulus globulus Schuchert Uncinulus nucleotatus (Hall)

Rhynchonella oblata hall,See Camarotoechia(Plethorhyncha) pleiopleura (Conrad)

Rhynchonella orbicularis Hall,See Camarotoechia orbicularis (Hall)

Rhynchonella planoconvexa Hall

Rhynchonella planoconvexa Hall,Pal.N.Y.,III,p.235,pl. 34,f.22,1859;L.Helderberg group.Albany Co.

Rhynchonella pleiopleura Hall,See Camarotoechia(Plethorhyncha) pleiopleura (Conrad)

Rhynchonella principalis Hall,See Plethorhyncha principalis (Hall)

Rhynchonella (Stenochisma)prolifica Hall,See Camarotoechia prolifica Hall

Rhynchonella pugnus.Clarke,Davidson,Walcott,Whiteaves, Williams,See Pugnax pugnus Martin

? Rhynchonella pugnus Dawson,See Pugnax Martin

Rhynchonella pugnus var alta Williams,See:

Pugnax pugnus var altus (Calvin)
Pugnoides altus (Calvin)
Pugnoides solon Thomas and Stainbrook

Rhynchonella pyramidata Hall,See Uncinulus pyramidatus (Hall)

Rhynchonella ramsayi Hall,See Camarotoechia(Plethorhyncha) speciosa var ransayi (Hall)

Rhynchonella rudis Hall

Rhynchonella rudis Hall,Pal.N.Y.,III,p.235,pl.34,f.20, 21,1859;L.Helderberg group.Hudson.

Rhynchonella sappho Hall,See Camarotoechia sappho Hall

Rhynchonella semiplicata (Conrad)

Atrypa semiplicata Conrad,Ann.Rep.Pal.N.Y.,p.56,1841

Rhynchonella semiplicata.Hall,Pal.N.Y.,III,p.224,pl. 24,f.1a-o,1859;L.Helderberg group.Helderberg mountains,Schoharie,Carlisle,etc.-Weller,Pal.N.J. III,p.281-282,pl.29,f.18-19,1903;Coeymans ls.

Rhynchonella septata Hall,See Camarotoechia(Plethorhy-

ncha) barrandii (Hall)

Rhynchonella speciosa Hall, See Camarotoechia (Plethorhyncha) speciosa (Hall)

Rhynchonella sulcoplicata Hall

Rhynchonella sulcoplicata Hall, Pal. N.Y., III, p.236, pl. 35, f.1a-c, 1859; L. Helderberg group/Albany Co.

Rhynchonella (Stenochisma) tethys Hall, See Camarotoechia tethys (Billings)

Rhynchonella tenuistriata Nettleroth

Rhynchonella tenusitriata. Nettleroth, Ky. Foss., Shells, p.83, p.17, f.27-29, 1889.-Kindle, 35th/Ann. Rep. Ind. Dept. Geol. Nat. Res., p.588-589, pl.7, f.7, 1901; Sellersburg beds and Jeffersonville ls. Charlestown and Falls of the Ohio.

Rhynchonella transversa Hall

Rhynchonella transversa. Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.74, f.5, 6, 1857; Pal. N.Y., III, p.234, pl.34, f.9-16, 1859; L. Helderberg group. Helderberg mountains, Albany Co., -Weller, Pal. N.J., III, p.283, pl.29, f.28-31, 1903; Coeymans ls.-Tansey, Dev. of Mo. p.195, pl.50, f.5-20, 1922; Bailey ls. Little Saline Creek, Ste Genevieve Co.

Rhynchonella vellicata Hall, See Uncinulus vellicatus (Hall)

Rhynchonella ventricosa Hall

Rhynchonella ventricosa Hall, Pal. N.Y., III, p.238, pl.43 f.1a-m, 1859; L. Helderberg group. Schoharie, Carlisle and Cherry valley.

Genus RHYNCHOSPIRA (Hall)
(1859. Hall, Pal. N.Y., III, p.484-485)
(1893. Pal. N.Y., VIII, pt.2, p.108)
Terebratula and Rhynchonella of authors
Waldheimia: Hall 1856.
Trematospira, subgenus Rhynchospira: Hall 1857.
Rhynchospira: Hall 1858.

Rhynchospira attenuata Stewart

Rhynchospira attenuata Stewart, Dev. of Mo., p.248, pl. 65, f.3, 1922; Little Saline Creek ls. Ste Genevieve Co

Rhynchospira formosa Hall

Waldheimia formosa Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.88,1857.

Trematospira formosa Hall,Pal.N.Y.,III,p.215,pl.36, f.2a-i,k-p,r-u,1859;L.Helderberg group.Helderberg mountains,Albany Co.

Retzia formosa.Miller,N.Am.Geol.Pal.,p.366,1889.-Whitfield,Ann.N.Y.Acad.Sci.,p.513,pl.5,f.15,16,1891; Geol.Ohio,VII,p.413,pl.1,f.15,16,1895.

Rhynchospira formosa.Hall,Pal.N.Y.,III,p.485,pl.95A f.7-11,1859;Pal.N.Y.,IV,pt.1,p.278,f.1-6,1867.-Hall,and Clarke,Pal.N.Y.,VIII,tp.2,p.109,f.101; pl.50,f.21-25,1894.-Girty,U.S.G.S.,19th.Ann.Rep. pt.3,p.566,1899.-Weller,Pal.N.J.,III,p.289,pl.31, f.9-11,1903;Coeymans ls.-Clarke,N.Y.State Mus., Mem.IX,pt.1,p.109,1908.-Maynard,Md.Geol.Surv.,L. Dev.,p.246,pl.72,f.26-30,1913;Helderberg Form., Keyser Mem.Cash Valley,Tonoloway,E.Rush,Md. Keyser W.Va.-Tansey,Dev. of Mo.,p.201,pl.52,f.5-18,1922; Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rhynchospira globosa (Hall)

Waldheimia globosa Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.87,1857.

Trematospira (Rhynchospira) globosa Hall,Pal.N.Y., III,p.215,pl.36,f.1a-p,1859;L.Helderberg gfoup. Helderberg mountains,Albany Co.

Rhynchospira blobosa Schuchert,Md.Geol.Surv.,L.Dev., p.425-426,pl.72,f.16-25,1913;Helderberg Form., Keyser Mem.Cumberland,Tonoloway,Md.New Scotland Mem.Devil's Backbone,Corriganville,Md.;Keyser, W.Va.

Rhynchospira rectirostra Hall

Waldhemia rectirostra Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.89,1857.

Trematospira (Rhynchospira) rectirostra Hall,Pal.N.Y. III,p.217kpl.95A,f.1,1859;Oriskany ss.Md.

Rhynchospira rectirostra.Hall,Pal.N.Y.,III,p.485,pl. 95A,f.1a-c,1859;Schuchert,Md.Geol.Surv.,L.Dev.,p. 434-435,pl.72,f.13-15,1913;Oriskany Form.,Ridgely Mem.Cumb.,Md.

Genus RHYMCHOTREMA Hall

Rhynchotrema formosa (Hall)

Rhynchonella formosa Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.76,f.1-5,1857;Pal.N.Y.,III,p. 236,pl.35,f.6a-i,k-p,r-u,x,y;1859;L.Helderberg group.Helderberg mountains,Schoharie,Hudson,Catskill,etc.

Stenochisma formosa.Hall,Pal.N.Y.,IV,pt.1,p.334,1867.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.187-189,pl. 56,f.41-45,1894.-Shimer,N.Y.State Mus.,Bull.80,p. 245,1905.-Maynard,Md.Geol.Surv.,L.Dev.,p.349,pl. 62,f.25-29,1913.

Rhynchotrema formosa.Schuchert,U.S.G.S,Bull.87,p. 369,-Tansey,Dev. of Mo.p.192,pl.48,f.20-22,1922; Bailey ls.Little Saline Creek,Ste Genevieve Co.

Rhynchotrema formosa? Weller,Pal.N.J.,III,p.309-310,pl.36,f.12-15;p.328,pl.42,f.5-8,1903;New Scotland-Becraft Fauna;L.Oriskany.

Rhynchotrema formosum Schuchert,See Stenochisma formosa (Hall)

Genus RHYNCHOTRETA Hall

Rhynchotreta cumberlandica Rowe

Rhynchotreta cumberlandica Rowe,Md.Geol.Surv.,L.Dev., p.347-348,pl.62,f.23,24,1913;Oriskany Form.,Ridgely Mem.Knobly Mountain,near Cumb.;Queen's Point, opp.Keyser,W.Va.;Warren Point,Penn.

Rhynchotreta transversa Weller

Rhynchotreta transversa Weller,Pal.N.J.,III,p.286,pl. 29,f.33-39,1903;Coeymans ls.Near Hainesville,N.J.

Genus OREMERELLA Hall and Clarke

Roemerella grandis (Vanuxem)

Discina grandis.Hall,Pal.N.Y.,IV,p.18,pl.1,f.18;pl.2, f.32,33,1867.-Hall and Whitfield,27th.Rep.N.Y.State Cab.Nat.Hist.,p.9,f.33-35,1875.

Roemerella grandis Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.580,1901;Sellersburg beds,Charlestown.

Genus SCENIDIUM Hall

Scenidium insigne (Hall)

Orthis insignis Hall,Pal.N.Y.,III,p.173,pl.13,f.13-16,1859;L.Helderberg group.Helderberg mountains.

Scenidium insigne Weller Pal.N.J.,III,p.398,pl.36, f.1-4,1903;New Scotland beds.

Genus SCHIZOBLASTUS Etheridge and Carpenter

Schizoblastus truncatus (Hall)

Discina truncata Hall,Pal.N.Y.,IV,p.23,pl.1,2,1867.

Schizoblastus truncatus Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.184,f.85.

Genus SCHIZOBOLUS Ulrich
(1886.Contr.Am.Pal.,I,p.25)

Schizobolus concentricus(Vanuxem)

Discina truncata Hall,Pal.N.Y.,IV,p.23,pl.1,f.15; pl.2,f.36,37,1867.

Schizobolus concentricus Kindle,25th.Ann.Rep.Ind.Dept Geol.Nat.Res.,p.573,pl.1,f.2,3,1901;New Albany sh. Falls of the Ohio.

Genus SCHIZOCRANIA Hall and Whitfield

Schizocrania sp.Schuchert

Schizocrania sp.Schuchert,Md.Geol.Surv.,L.Dev.,p.292-293,1913;Helderberg Form.,New Scotland Mem.Devil's Backbone.

Schizocrania superincreta Barrett

Trematis (Schizocrania) superincreta Barrett,Ann.Rep. N.Y.Acad.Sci.,p.122,1878.

Schizocrania superincreta Weller,Pal.N.J.,III,p.323, pl.41,f.4,1903;L.Oriskany.Peter's Valley,N.J.

Genus SCHIZOPHORIA King
(1892.See Hall and Clarke,Pal.N.Y.,VIII,pt.1,p.211)

Schizophoria bisinuata Weller

Schizophoria bisinuata Weller,Pal1N.J.,III,p.278-279, pl.31,f.12-14,1903;Coeymans ls.

Schizophoria carinata Hall and Clarke, See Dalmanella carinata (Hall)

Schizophoria impressa Hall and Clarke, See Schizophoria striatula (Schlotheim)

Schizophoria iowaensis (Hall)

Orthis iowensis Hall (part), Geol. Iowa, I, pt. 2, p. 488, pl. 2, f. 4, 1858.

Orthis (Schizophoria) impressa Calvin, Iowa Geol. Surv. VII, p. 167, 1897.

Schizophoria iowaensis Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 83-85, pl. 19, f. 5-11, 1914; Spirifer zone. Hackberry Stage.

Schizophoria iowaensis form magma Fenton and Fenton

Schizophoria iowaensis form magna Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 85-86, pl. 19, f. 12-18, 1924; Spirifer zone. Hackberry Stage.

Schizophoria iowensis Greger, Hall and Clarke, See Schizophoria striatula (Schlotheim)

Schizophoria macfarlani Greger, See Schizophoria striatula (Schlotheim)

Schizophoria multistriata (Hall)

Orthis multistriata Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p. 45, f. 1, 2, 1857; Pal. N.Y., III, p. 176, pl. 15 f. 2a-t, 1859; L. Helderberg group. Helderberg mountains Schoharie, Carlisle, etc.

Schizophoria multistriata. Hall and Clarke, Pal. N.Y., VIII, pt. 1, p. 212, 226, pl. 6A, f. 25, 1892.-Weller, Pal. N. J. III, p. 307, pl. 35, f. 1-4, 1903; Becraft ls.-Schuchert Md. Geol. Surv., L. Dev., p. 307, pl. 56, f. 598, 1913; Helderberg Form., New Scotland Mem. Devil's Backbone.

Schizophoria oriskania Schuchert

Schizophoria oriskania Schuchert, Md. Geol. Surv., L. Dev. p. 307-308, pl. 56, f. 9-12, 1913; Oriskany Form., Ridgely Mem. Cumberland (Knobly)

Schizophoria propinqua (Hall)

Orthis propinqua Hall, 10th. Rep. N.Y. State Cab. Nat. Hist p. 110, 1857; Pal. N.Y., IV, p. 43, pl. 5, f. 3, 1867; 2d. Ann. Rep. N.Y., State Geol., pl136, f. 30, 31, 1883.

Schizophoria propinqua.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.212,226,pl.6,f.30,1892.-Schuchert,U.S.G.S., Bull.87,p.674,1897.-Grabau and Shimer,N.Am.Index Foss.,I,p.288,1899.

Schizophoria cf propinqua Branson,Mo.Bur.Geol.& Mines XVII,2d.ser.,p.74,pl.11,f.4,1922;Mineola ls.Montgomery and Warren Cos.

Schizophoria striatula Girty(part) See Schizophoria striatula var australis Kindle,

Schizophoria striatula(Schlotheim)

Anomia terebratulites striatulus Schlotheim,Min.Taschenbuch,VIII,pl.1f,6,1813.

Orthis impressa.Hall,Geol.N.Y.,Rep.4th.Dist.,p.267, 268,f.2,1843;Pal.N.Y.,IV,pt.1,p.60,pl.8,f.11-19, 1867.-Whitfield,Geol.Wisc.,IV,p.326,pl.25,f.13-15,1882.-Walcott,U.S.G.S,Mon.VIII,p.115,pl.13,f. 13,1884.-Kindle,BullAmer.Pal.,VI,p.36,1896.

Orthis iowaensis White,10th.Ann.Rep.State Geol.Ind. p.133,pl.5,f.1-102,1881.

Orthis iowensis.Hall(part) Geol.Surv.,Iowa,I,pt.2, p.488-489,pl.2,f.4,1858.-Billings,Hind's Rep.Expl. Assiniboine and Saskatch.,p.187,f.1,1859.-Meek, Trans.Chicago Acad.Sci.,I,pt.1,p.90,pl.12,f2, 1867.-White,2d.Ann.Rep.Ind.Bur.Statistics & Geol., p.501-502,pl.5,f.10-12,1880.-Keyes,Geol.Surv.,Mo., V,pt.2,p.62,pl.38,f.6,1895.

Orthis iowensis var furnariusl Hall,Geol.Surv.,Iowa, I,pt.2,p.489-490,pl.2,f.5,1858.-Meek and Worthen Geol.Surv.,Ill.III,p.424,pl.13,f.9,1868;Calcareous sh.same age as Hamilton of N.Y.ser.,Rock-Island,Ill.:New Buffalo and Independence Iowa.

Orthis lentiformis Owen(non Hall) Geol.Surv.,Wisc., Iowa and Minn.pl.3,f.10,10a,1852.

Orthis propinqua Nettleroth(non Hall) Ky.Foss.,Shells p.43,pl.16,f.1-3,7-11,1889.

Orthis striatula.Davidson,Brit.Devonian Brach.,Pal. Soc.,p.87,pl.17,f.4-7,1865.-Williams,Am.Geol.,III, p.232,1889.-Whiteaves,(non Schlotheim) Contr.,Can. Pal.,I,p.218,283,1891.

Schizophoria impressa Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.212-216,pl.6,f.31;pl.6A,f.26,27,1892.

Schizophoria iowensis.Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.212-216,pl.6A,f.29,1892.-Greger,Am.Jour. Sci,XXVII,p.376-377,1909.

Schizophoria macfarlani Greger,Am.Jour.Sci.,XVII,p. 376-377,1909.

Schizophoria striatula.Schuchert,U.S.G.S,Bull.87,1897 -Girty,U.S.G.S,20th.Ann.Rep.,pt.2,p.39,1900. Ouray ls.Gunnison;Durango;Slaida;Glenwood Springs, Colo.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res., p.626,pl.3,f.11,11a,1901;Sellersburg beds and Jeffersonville ls.Lexington;Sellersburg;Charlestown; Falls of the Ohio.-Grabau and Shimer,N.Am.Index Foss.,I,p.268,f.321d-f,1909.-Cleland,Wisc.,Geol. Surv.,Bull.21,p.93-94,pl.19,f.1-6,1911.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.170-171, pl.14,f.14,14,1913;Romney Form.,Hamilton Mem.Ernstville.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up. Dev.,p.572-574,pl.52,f.14-18,pl.53,f.1,19,1913; Jennings Form.,Chemung Mem.Fllerslie,Penn.,Polish Mountain,Md.Parkhead Mem.Rocky Run;Polish Mountain Woodmont Mem.,Ithaca Fuana.W.Pawpaw,W.Va.;Woodmont Md.;Berkeley Springs,W.Va.;Yellow Springs,W.Va.-Branson,Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.72,pl. 15,f.1-7,1922;Snyder Creek shale.Callaway and Montgomery Cos.;Grand,Tower,ls.Little Saline Creek,Ste Genevieve Co.Shimer,Can.Geol.Surv.,sec.45,1926;Up. Dev.,Minnewanka Region.Banff Area,Alberta.

Schizophoria sp.cf striatula(Schl.) Weller,Pal.N.J., III,p.374,pl.52,f.9,10,1903;Newfoundland Grit.

Schizophoria striatula var australis Kindle

Schizophoria striatula Girty(part) 20th.Ann.Rep.U.S. G.S.,pt.2,p.39,1900.

Schizophoria struatula var australis Kindle,U.S.G.S., Bull.391,pl.1f,4-8,pl.2,f.1-5a,pl.3,f.1,1909;Ouray ls.Hillsboro,N.Mex.

Schizophoria striatula var marylandica Clarke and Swartz

Schizophoria striatula var marylandica Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.574-575,pl.53,f. 2-9,1913;Jennings Form.,Chemung Mem.W.Frostburg;Allegany Grove;Town Creek.

Schizophoria tioga.Grabau and Shimer,Hall and Clarke,See Dalmanella tioga (Hall)

Genus SCHUCHERTELLA Girty
(Orthothetes of Authors)
(1892.Hall and Clarke,Pal.N.Y.,VIII,pt.1,p.253)
(1904.Proc.U.S.Nat.Mus.,XXVII,p.734)

Schuchertella sp.Stewart

Schuchertella sp.Stewart,Dev. of Mo.,p.236,pl.62,f. 11,1922;Little Saline Creek ls.Ste Genevieve Co.

Schuchertella arctostriata (Hall)

Strophomena arctostriata Hall,Geol.N.Y.,Rep.4th.Dist. p.266,f.3,1843.

Streptorhynchus chemungensis var arctostriata Hall,Pal N.Y.,IV,p.71,pl.9,f.1-12,1867.

Orthothetes chemungensis arctistriatus.Schuchert,U.S. G.S.,Bull.87,p.296,1897.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.593-594,pl.6,f.4,1901;Jeffersonville ls.Falls of the Ohio;Lancaster;Kent;Newbern.

Schuchertella chemungensis arctistriata Cleland,Wisc. Geol.Surv.,Bull.21,p.91,pl.16,f.15,1911.

Schuchertella arctostriata.Grabau and Shimer,N.Am. Index Foss.,I,p.229-230,f.280a,b,1909.-Branson, Mo.Bur.Geol.& Mines,XVII,2d.ser.,p.83,pl.15,f.8,9, 12;pl.24,f.18-23,1922;Snyder Creek shale.Ste Genevieve Co.

Schuchertella becraftensis (Clarke)

Orthothetes becraftensis Clarke,N.Y.State Mus.,Mem. III,No.3,p.51,pl.7,f.15-28,1900.

Schuchertella becraftensis Schuchert Md.Geol.Surv., L.Dev.,p.329,pl.60.f.10-12,1913;Oriskany Form., Shriver Mem.North Branch.Ridgely Mem.Near Cumb.

Schuchertella chemungensis arctistriata Cleland,See Schuchertella arctostriata.

Schuchertella chemungensis (Conrad)

Orthothetes chemungensis Girty,20th.Ann.Repl U.S.G.S. pt.2,p.40,pl.3,f.1-2,1900;Ouray ls.Durango;Salida; Colo.

Orthothetes chemungensis var Girty,20th.Ann.Rep.U.S. G.S.,pt.2,p.40,pl.3,f.4,5,1900.-Geol.same as above.

Streptorhynchus chemungensis Hall,Pal.N.Y.,p.67,pl.4, 9,10,1867.

Orthothetes chemungensis Hall and Clarke,Pal.N.Y., VIII,pt.1,pl.10,11,1892.

Schuchertella chemungensis.Kindle,(part) U.S.G.S,Bull 391,p.16,pl.3,f.2-4a,1909;Ouray ls.Glenwood;Rockwood;S.W.Mount Ealus,Colo.-Grabau and Shimer,N.Am. Index Foss.,I,p.230,f.281,1909.-Clarke and Swartz, Md.Geol.Surv.,Mid.& Up.Dev.,p.559,pl.49,f.19-22; pl.50,f.1-3,1913;Jennings Form.,Chemung Mem.W. Frostburg;Cherry Creek;Allegany Grove;Ellerslie,Pa W.Pawpaw,W.Va.Parkhead Mem.Allegany Grove.

Schuchertella chemungensis Kindle,See Schuchertella girtyi Shimer.

Schuchertella chemungensis pectinacea(Hall)

Streptorhynchus chemungensis pectinaea Hall,Pal.N.Y., IV,p.73-75,pl.10,1867.

Orthothetes chemungensis Schuchert,U.S.G.S,Bull.87, p.295-296,1897.

Schuchertella chemungensis pectinacea Branson and Williams,Dev. of Mo.,p.137-138,pl.32,f.6,7,1922; Grand Tower ls.Little Saline Creek,Ste Genevieve Co.

Schuchertella coloradensis Kindle

Orthothetes chemungensis? Girty,20th.Ann.Rep.U.S.G.S. pt.2,pl.3,f.3,1900.

Schuchertella coloradensis Kindle,U.S.G.S.,Bull.391,p 16-17,pl.3,f.5-6a;pl.4,f.1,1909;Ouray ls.Rockwood, Colo.

Schuchertella deckerensis (Weller)

Orthothetes deckerensisWeller,Pal.N.J.,III,p.289,pl. 20,f.6,7,1903.

Schuchertella deckerensis Maynard,Md.Geol.Surv.,L. Dev.,p.329-330,pl.50,f.13-16,1913;Helderberg Form.,Keyser Mem.Keyser,W.Va.;Pinto;Devil's Backbone,Md.

Schuchertella deformis (Hall)

Orthis deformis Hall,10th.Ann.Rep.N.Y.State Cab.Nat. p.44,1857;Pal.N.Y.,III,p.174,pl.10A,f.13,14,1859;

pl.15,f.3,1859;L.Helderberg.Helderberg Mountains.

Orthothetes deformis Schychert,U.S.G.S,Bull87,p.296-297,1897.

Schuchertella deformis Maynard,Md.Geol.Surv.,L.Dev., p.331,pl.61,f.1,2,1913;Helderberg Form.,Keyser Mem.Devil's Backbone,Cash Walley,Md.

Schuchertella elliptica Clarke and Swartz

Schuchertella elliptica Clarke and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.560,pl.50,f.4,1913;Jennings Form.,Chemung Mem.Town Creek.

Schuchertella girtyi Shimer

Orthothetes chemungensis var Girty(part)U.S.G.S.,20th Ann.Rep.pt.2,p.40,pl.3,f.4-6,1900.

Schuchertella chemungensis Kindle(part) U.S.G.S.,Bull 391,p.16,pl.3,f.2-4a,1909.

Schuchertella girtyi Shimer,Can.Geol. Surv.,ser.45,p. 34,pl.1,f.1a-c,1926;Minnewanka Region,Alberta.Up. Dev.,

Schuchertella marylandica Maynard

Schuchertella marylandica Maynard,Md.Geol.Surv.,L. Dev.,p.332-333,pl.61,f.5-9,1913;Helderberg Form., Keyser Mem.Cumb.,Md.;Keyser,W.Va.

Schuchertella pandora (Billings)

Streptorhynchus pandora.Billings,Can.Jour.V,p.226,f. 12,13,1860;Geol.Canada,p.369,f.384,1863.-Hall,Pal. N.Y.,IV,p.68-70,pl.4,f.11-19,pl.9,f.18-25,27,1867.-Nicholson,Pal.Prov.Ontario,p.70,1874.

Streptorhynchus chemungensis var pandora Hall,Pal. N.Y.,IV,p.68-70,pl.4,f.11-19;pl.9,f.18-25,27,1867; 2d.Ann.Rep,N.Y.,State Geol.,pl.40,f.1-6,1883.

Orthothetes pandora.Schuchert,U.S.G.S.,Bull.87,p.298, 1897.-Weller,Pal.N.J.,III,p.373,380,pl.52,f.8;pl. 53,f.6,1903;Onondaga ls.;Newfoundland Grit;Monroe shale and Bellvale flags.

Orthothetes chemungensis var pandora Hall and Clarke, Pal.N.Y.,VIII,pt.1,p.255,pl.9,f.30;pl.10,f.1-6,1892

Schuchertella pandora.Grabau and Shimer,N.Am.Index Foss.,I,p.329,f.279,1909.-Kindle,U.S.G.S,Bull.

508,p.76,113,f.7,8,1912.-Branson,Dev. of Mo.,p.84, pl.11,f.5,14,1932;Mincola ls.-Branson and Williams Dev. of Mo.,p.138,1922;Grand Tower ls.Little Saline Creek,Ste Genevieve Co.

Schuchertella parva Fenton,See Schuchertella prava(Hall)

Schuchertella ? ponderosa Clarke and Swartz

Schuchertella ? ponderosa Clarke and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.560-561,pl.50,f.5,1913;Jennings Form.,Chemung Mem.Millstone.

Schuchertella prava (Hall)

Orthis prava Hall,Geol Iowa,I,pt.2,p.490,1858.

Orthothetes prava Hall and Clarke,Pal.N.Y.,VIII,pt.1, p.255,pl.11A,f.13,1892.

Orthothetes pravus Schuchert,U.S.G.S.,Bull.87,p.298, 1897.

Schuchertella parva(misprint for prava) Fenton,Am. Jour.Sci.,4th.ser.,p.371,1919.

Schuchertella prava Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.117-119,pl.20,f.21-28,1924;Spirifer zone Hackberry Stage.Bird Hill and Hackberry Grove.

Schuchertella prolifica Schuchert

Schuchertella prolifica Schuchert,Md.Geol.Surv.,L. Dev.,p.327,pl.60,f.1-3,1913;Helderberg Form.,Keyser,Mem.Keyser,W.Va.;Dawson,Devil's Backbone, Corriganville,Md.

Schuchertella sinuata (Hall and Clarke)

Orthothetes deformis var sinuatus Hall and Clarke,Pal N.Y.,VIII,pt.1,pl.20,f.8,9,1892.

Schuchertella sinuata Maynard,Md.Geol.Surv.,L.Dev.,p. 331-332,pl.61,f.3,4,1913;Helderberg Form.,Keyser Mem.Devil's Backbone.

Schuchertella variabilis Prosser and Kindle

Schuchertella variabilis Prosser and Kindle,Md.Geol. Surv.,Mid.& Up.Dev.,p.144-146,pl.11,f.6-10,1913; Romney Form.,Onondaga Mem.Near Cumb.,Hamilton Mem. Near Cumb.

Schuchertella woolworthana (Hall)

Strophomena woolworthana Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.48,f.1,2,1857;Pal.N.Y.,III,p.192, pl.17,f.1a-f,2a-c,1859;L.Helderberg.Helderberg mountains;Schoharie,Catskill,Hudson,etc.

Orthis woolworthanus Hall and Clarke,Pal.N.Y.,VIII,pt 1,p.255,pl.9,f.25-31,1892.

Schuchertella woolworthana Schuchert,Md.Geol.Surv.,L. Dev.,p.328,pl.60,f.4-9,1913;Helderberg Form.,Keyser Mem.Keyser,W.Va.;Devil's Backbone,Md.New Scotland Mem.Dawson,Corriganville,Md.;Cherry Run,W.Va. Becraft Mem.Near Cumb.,Md.;Cherry Run,W.Va.;Warran Point,Penn.

See also Orhtothetes woolworthana (Hall)

Genus SIEBERELLA Oehlert

Sieberella emarginata Belanski

Sieberella emarginata Belanski,Iowa Studies Nat.Hist. n.ser.148,XII,No.7,p121,pl.3,f.25-31,1928;Mason City substage.

Sieberella galeatus Hall and Clarke,See Cypiudla (Sieberella) coeymanensis Schuchert

Sieberella insolita Belanski

Sieberella insolita Belanski,Iowa Studies Nat.Hist., n.ser.,148,XII,No.7,p.22,pl.3,f.32-36,1928;Nora substage.

Genus SPIRIFER Sowerby
(Mineral Conchology,II,p.42)

Spirifer sp.Kindle

Spirifer sp.Kindle,U.S.G.S.,Bull.39,p.27,1909;Ouray ls.N.Rockwood,Colo.

Spirifer sp.Weller

Spirifer sp.Weller,Pal.N.J.,III,p.369,1903;Onondaga ls.N.J.

Spirifer sp.Weller

Spirifer sp.Weller,Pal.N.J.,III,p.376,pl.52,f.4,1903; Newfoundland Grit.N.J.

Spirifer acuminata Hall, See Spirifer acuminatus (Conrad)

Spirifer acuminatus (Conrad)

Delthyris acuminata Conrad, 3d. Ann. Rep. N.Y., Geol. Surv. p.65, 1839.

Spirifer acuminata Hall, 10th. Rep. N.Y. State Cab. Nat. Hist., p.135, 1857.

Spirifera acuninata. Hall, Pal. N.Y., IV, p.198, 234, pl. 39, f.9-18, pl.35, f.24, 1867.-Keyes, Johns Hopkins Univ. Circ., XI, p.29, 1891.

Spirifer acuminatus. Hall and Clarke, Pal. N.Y., VIII, pt.2, p.31, 39, f.39-42, 1893.-Schuchert, U.S.G.S., Bull.87, p.380, f.13, 1897.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.635-636, pl.9, f.1, 1901; Jeffersonville ls. Throughout the Dev. area-Clarke, N.Y., State Mus., Bull.65, p.308, 1903.-Grabau and Shimer, N. Am. Index Foss., I, p.326, f.414, 1909.-Prosser and Kindle, Md. Geol. Surv., Mid.& Up. Dev., p. 193-194, pl.18, f.10, 1913; Romney Form., Hamilton Mem. McCoy's Ferry

Spirifer amarus. Greger, Schuchert, Swallow, See Spirifer annae Swallow.

Spirifer angularis Schuchert

Spirifer angularis Schuchert, Md. Geol. Surv., L. Dev., p.409, pl.69, f.15, 16, 1913; Oriskany Form., Ridgely Mem. Ridgely, Miller's Springs, W. Va.

Spirifer angusta Hall, See Spirifer angustus Hall

Spirifer angustus Hall

Spirifer angusta Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.164, fig. in text 1857.

Spirifera angusta. Hall, Pal. N.Y., IV, p.230, pl.38A, f. 23-32, 1867.-Keyes, Johns Hopkins Univ. Circ., XI, p. 29, 1891.

Spirifer angustus. Hall and Clarke, Pal. N.Y., VIII, pt.2, p.31, 39, pl.24, f.14-17, 1893.-Schuchert, U.S.G.S., Bull 87, p.381, 1897.-Grabau, Buffalo Soc. Nat. Sci., Bull.6, p.218, f.120, 1899; Demissa bed.-Clarke, N.Y. State Mus., Bull.65, p.308, 1903.-Grabau and Shimer, N. Am. Index Foss., I, p.330, f.420b, 1909.-Prosser and Kindle Md. Geol. Surv., Mid.& Up. Dev., p.196-197, pl.19, f.8, 9, 1913; Romney Form., Hamilton Mem. E. bank Evitts Creek below Wolfe Mill, near Cumb.; B.&.O.R.R. cut 21st.

Bridge.

Spirifer annae Swallow

Spirifer amarus. Swallow, Trans. St. Louis Acad. Sci., I, p.642, 1860.-Schuchert, U.S.G.S., Bull. 87, p.381, 1897.-Greger, Am. Jour. Sci., XXVII, p.377, 1909.

Spirifer annae. Swallow. Trans. St. Louis Acad. Sci., I, p. 641, 1860.-Schychert, U.S.G.S, Bull. 87, p.381, 1897.-Branson, Dev. of Mo., p.99, pl.19, f.13, 15, 17, pl.24, f. 17, 1922; Snyder Creek shale. Montgomery and Callaway Cos.

Spirifer arata Hall, See Spirifer granulosus (Conrad)

Spirifer arctisegmenta Hall, See Spirifer arctisegmentum Hall

Spirifer arctisegmentum Hall

Spirifer arctisegmenta Hall, Pal. N.Y., IV, p.208, pl.31, f.9, 10, 1867.

Spirifer arctisegmentum Kindle, 25th. Ann. Rep. Ind. Dept. Nat. Res., p.646, 1901; Sellersburg beds. Kent and Falls of the Ohio.

Spirifer arenosus (Conrad)

Delthyris arenosus Conrad, 3d. Ann. Rep. N.Y. Geol Surv., p.65, 1839.

Spirifera arenosa Hall, 2d. Ann. Rep. N.Y. State Geol., pl. 55, f.3-7, 1883.

Spirifer arenosus. Hall, Pal. N.Y., III, p.425, pl.98, f.1-8, pl.99, f.1-10; pl.100, f.1-8, 1859; Everywhere in the Oriskany ss. in N.Y.; being one of the most constant if not the most persistent fossil of the rock. In the same rock in Md., Va., and elsewhere.-Hall and Clarke, Pal N.Y., VIII, pt.2, p.24, 27, 37, pl.29, f.1-4; pl.30, f.3-8, 1893.-Clarke, N.Y. State Mus., Mem. III, No.3, p.46, 1900.-Weller, Pal. N.J., III, p.353-354, pl.48 f.5, 1903; Mid.& Up. Oriskany.-Clarke, N.Y. State Mus., Mem. IX, pt.1, p.179, pl.33, f.1-10, 1908.-Schuchert, Md. Geol. Surv., L.Dev., p.415-417, pl.71, f.1-9, pl.72, f.1, 1913; Oriskany Form., Shriver Mem. North Branch, Ridgely Mem. Allegany and Washington Cos., Md.; Keyser and Moorefield, W.Va.; Rock Enon Springs, Alexandria, Va.-Stewart, Dev. of Mo., p.245-246, pl.65, f.6-8, 1922 Little Saline Creek ls. Ste Genevieve Co.

Spirifer arrectus Hall, See Spirifer murchisoni Castelnau.

Spirifer asper Hall

Spirifer aspera.Hall,Geol.Surv.Iowa,I,pt.2,p.508-509, pl.4,f.7,1858.

Spirifer (Cyrtina) aspera Whitfield,Geol.Wisc.,IV,p. 331-332,pl.26,f.1,2,1882.

Spirifer asper.Hall and Clarke,Pal.N.Y.,VIII,pt.2,p. 29,31,32,39,pl.25,f.20-25,1894.-Schuchert,U.S.G. S.,Bull.87,p.382,1897.-Grabau,Buffalo Soc.Nat.Sci. Bull.6,p.214,f.122,1899;Demissa bed.-Grabau and Shimer,N.Am.Index Foss.,I,p.331,1909,-Greger,Am. Jour.Sci.,XXVII,p.377,1909.-Cleland,Wisc.Geol.& Nat.Hist.Surv.,Bull.21,p.76-77,pl.16,f.1-5,1911.- Branson,Dev. of Mo.,p.100,pl.19,f.19-23,pl.23,f.4, 1922;Snyder Creek shale,and Callaway ls.Callaway Co.

Spirifer aspera Hall,See Spirifer asper Hall

Spirifer (Cyrtina) aspera Whitfield,See Spirifer asper Hall

Spirifer audaculus(Conrad)

Delthyris audacula Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.262,1842.

Delthyris medialis.Hall,Geol.N.Y.,pt.4,p.208,f.8,1843 Rogers,Geol.Panna.,I[1],p.828,f.669,1858.

Spirifer eatoni Hall,10th.Rep.N.Y.State Cab.Nat.Hist. p.157,1857.

Spirifer medialis.Hall,10th.Ann.Rep.N.Y.State Cab.Nat Hist.,p.157,1857.-Keyes,Johns Hopkins Univ.Circ., XI,p.29,1891.

Spirifera audacula Whitfield,Geol.Wisc.,IV,p.329,pl. 25,f.25,26,1882.

Spirifera medialis Hall,Pal.N.Y.,IV,p.227,229,pl.38, f.1-25,1867.

Spirifer audaculus.Hall and Clarke,Pal.N.Y.,VIII,pt.2 p.29-31,pl.24,f.1-3;pl.29,f.5,1893.-Schuchert,U.S. G.S.,Bull.87,p.382,1897.-Grabau,Buffalo Soc.Nat. Sci.,Bull.6,p.211,f.119,1899;Moscow sh.;Encrinal ls.;Pleurodictyum beds in Avery's Creek.-Kindle, 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.646,pl.8,f. 4,1901;Sellersburg beds.Watson.-Clarke,N.Y.State Mus.,Bull.65,p.309,1903.-Grabau and Shimer,N.Am. Index Foss.,I,p.329,f.420A,1909.-Prosser and Kindle

Md.Geol.Surv.,Mid.& Up.Dev.,p.192-193,pl.18,f.7-9, 1913;Romney Form.,Hamilton Mem.N.Hancock;B.& O. R.R.cut Hancock Station,W.Va.

Spirifer audaculus?Weller,Pal.N.Y.,III,p.382,pl.53, f.1,1903;Monroe shale.Oak Ridge reservoir,N.J.

Spirifer audaculus var eatoni Hall

Spirifer audaculus var eatoni.Hall,Pal.N.Y.,IV,p.229, pl.38,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 212,f.119A,1899;Moscow shale.

Spirifer bicostatus Hall,See Reticularia bicostata(Vanuxem)

Spirifer bimesialis Girty,See Spirifer natabilis Kindle

Spirifer byrnesi Nettleroth

Spirifer byrnesi.Nettleroth,Ky.Foss.Shells,p.109,pl. 10,f.1-5,31-34,36-39,1889.-Kindle,25th.Ann.Rep. Ind.Dept.Geol.Nat.Res.,p.644-645,pl.9,f.6,6a,1901; Sellersburg beds and Jeffersonville ls.Throughout the Dev.

Spirifer capax Hall,See Spirifer euryteines Owen.

Spirifer carteri Meek,See Syringothyris texta(Hall) var chemungensis Cushing.

Spirifer clintoni Hall,See Spirifer granulosus(Conrad)

Spirifer clio Hall,See Spirifer consobrinus (D'Orbigny)

Spirifer concinna Hall,See Spirifer concinnus Hall

Spirifer concinnoideus Schuchert

Spirifer connoinnoideus Schuchert,Md.Geol.Surv.,L. Dev.,p.419,pl.72,f.4,1913;Oriskany Form.,Ridgely Mem.Near Cumb.,Md.;N.fork of S. branch of Potomac River,Pendleton Co.,W.Va.

Spirifer concinnus Hall

Spirifer concinna Hall,10th.Ann.Rep.N.Y.State Cab.Nat Hist.,p.60,f.1-3,on p.61,1857.

Spirifer concinnus.Hall,Pal.N.Y.,III,p.200,pl.25,f. 2a-i;pl.28,f.7a,b,1859;L.Helderberg group.Helderberg mountains and Hudson.Pentamerus ls.Schoharie and Helderberg mountains.-Weller,Pal.N.J.,III,p. 289,pl.30,f.3,1903;Coeymans ls.Near Hainesville,

N.J.-Schuchert,Md.Geol.Surv.,L.Dev.,p.417-418,pl. 72,f.2,3,1913;Helderberg Form.,Becraft Mem.Warren Point,Penn.;NorthMountain,Md.;Cherry Run,W.Va.

Spirifer coniculus Girty

Spirifer coniculus.Girty,20th.Ann.Rep.U.S.G.S.,pt.2,p 47,pl.5,f.1-4,1900;Ouray ls.Engineer Mountain,Colo Kindle,U.S.G.S.,Bull.391,p.27,pl.7,f.7,1909;Ouray ls.Rockwood and 4 mi.to the S.W.;MountaTolus,Colo.

Spirifer consobrinus (D'Orbigny)

Delthyris ziczac Hall(non Roemer) Geol.N.Y.,IV,p.200-201,f.5,1843.

Delthyris consobrina Schuchert,U.S.G.S.,Bull.87,p.206 1897.

Spirifer clio Hall,Pal.N.Y.,IV,pl.35,f.13,14,1867.

Spirifera consobrina D'Orbigny,Prodrome Pal.,I,p.98, 1850.

Spirifera zigzac Hall,Pal.N.Y.,IV,p.222,pl.35,f.15-23,1867.

Spirifer (Delthyris) consobrinus.Grabau,Buffalo Soc. Nat.Sci.,Bull.6,p.209,f.117,1899;Moscow sh.-Grabau and Shimer,N.Am.Index Foss.,I,p.331,pl.422a, b,1909.

Spirifer consobrinus Hall and Clarke,Pal.N.Y.,VIII,pt 2,p.16,36,pl.34,f.9,18;pl.37,f.9,10,1893.

Spirifer cf consobrinus Prosser and Kindle,Md.Geol. Surv.,Mid.& Up.Dev.,p.198-199,pl.19,f.13,1913;Romney Form.,Hamilton Mem.Town Creek N.Oldtown.

Spirifer cumberlandiae Hall

Spirifer submucronatus.Hall,10th.Ann.Rep.N.Y.State Cab Nat.Hist.,p.62,1857;Pal.N.Y.,III,p.419,pl.96,f.7a-f,1859;Oriskany ss.Cumb.Md.-Hall and Clarke,Pal. N.Y.,VIII,pt.2,p.17,36,pl.33,f.5-7,1893.

Spirifer submucronata Hall,2d.Ann.Rep.N.Y.State Geol. pl.58,f.5-7,1883.

Spirifera cumberlandiae Hall,2d.Ann.Rep.N.Y.State Geol p.58,f.16-23,1883.

Spirifer cumberlandia Hall and Clarke,Pal.N.Y.,VIII, pt.2,p.17,36,pl.33,f.16-23,1893.

Spirifer cumberlandiae.10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.63,1857;Palaeoz.Foss.,p.23,1857,Pall N.Y.III,p.421,pl.96,f.9a-g,1859;Oriskany ss.Cumb. Md.-Schuchert,Md.Geol.Surv.,L.Dev.,p.398-399,pl. 68,f.9-16,1913;Oriskany Form.,Ridgely Mem.Cumb., Devil's Backbone,Nicholas mountain,Md.

Spirifer cycloptera Hall,See Spirifer cyclopterus Hall

Spirifer cyclopterus Hall

Spirifer cycloptera Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.58,f.1-5(wrongly labelled S.perlamellosa) 1857.

Spirifera cycloptera.Billings,Geol.Canada,p.957,f.457 1863;Pal.Foss.,II,p.48,pl.3a,f.4,1874.-Hall,2d. Ann.Rep.N.Y.State Geol.,p.61,f.12,13,1883.

Spirifer cyclopterus.Hall,Pal.N.Y.,III,pl199,pl.25,f. 1a-z,1859;L.Helderberg group.Helderberg mountains, Schoharie,-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p. 36,pl.36,f.12,15,1893.-Girty,U.S.G.S.,19th.Ann. Rept.pt.3,p.565,1899.-Weller,Pal.N.J.,III,p.287, 314,pl.30,f.2,pl.38,f.1-6,1903;New Scotland-Becraft Mem.-Clarke,N.Y.State Mus.,Mem.,IX,pt.1,p. 178,pl.32,f.14-21,1908;N.Y.State Mus.,IX,pt.2,p. 84,1909.-Schuchert,Md.Geol.Surv.,L.Dev.,p.406, pl.69,f.8-10,1913;Helderberg Form.,New Scotland, Mem.Allegany and Washington Cos.Becraft Mem.Wash. Co.-Tansey,Dev. of Mo.,p.200,pl,51,f12-27,1922; Bailey ls.Little Saline Creek,Ste Genevieve Co.

Spirifer cyrtinaformis Calvin,See Platyrachella cyrtinaformis (Hall and Whitfield)

Spirifer cyrtinaformis helenae C.L.Fenton,See Platyrachella cyrtinaflormis helenae C.L.Fenton.

Spirifer davisi Nettleroth

Spirifer davisi.Nettleroth,Ky.Foss.Shells,p.112,pl. 12,f.1-4,1889.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.639,pl.9,f.8,8a,1901;Jeffersonville ls. Lancaster;Falls of the Ohio.

Spirifer disjunctus Sowerby

Spirifera disjuncta.Sowerby,Trans.Geol.Soc.,2d.ser., V,pl.53,f.8;pl.54,f.12,13,1840.-Davidson,Mon.British Dev.Brach.Pal.Soc.,p.23,pl.5,f.1-12;pl16,f.1-5,1864.-Hall,Pal.N.Y.,IV,p.243,pl.41,f.1-19;pl. 42,f.1-20,1867;3d.Ann.Rep.N.Y.,State Geol.,pl.55, f.14-17,1883.-Walcott Mon.U.S.G.S.,VIII,p.134,

1884.-Whiteaves,Cont.Canadian Pall,I,p.221,pl.29, f.4,1891.

Delthyris perlatus Conrad,5th.Ann.Rep.N.Y.Geol.Surv., p.54,1841.

Delthyris chemungensis Conrad,Jour.Acad.Nat.Sci.Phila. VIII,p.263,1842.

Delthyris prolata Vanuxem,Geol.N.Y.,Rep.3d.Dist.,p. 179,f.3,1842.

Delthyris cuspidata Hall (non Martin) Geol.N.Y.,Rep. 4th.Dist.,p.270,f.1,1843.-Rogers,Geol.Penna.,II,pt 2,p.829,f.683,1858.

Delthyris disjuncta? Hall,Geol.N.Y.,Rep.4th.Dist.,p. 269,f.3,1843.

Delthyris acanthota Hall,Ibidem,p.270,f.2,1843.

Delthyris inermis Hall,Ibidem,p.270,f.4,1843.

Spirifer disjunctus.Hall and Clarke,Pal.N.Y.,VIII,pt 2,p.21,24,27,37,49,pl.30,f.14,15,17,1893.-Herrick Geol.Ohio,VII,pl.23,f.11,1895.-Schuchert,U.S.G.S. Bull.87,p.387,1897.-Prosser,Geol.Surv.,Ohio,4th. ser.,Bull.15,p.534-535,pl.29,f.3-6,1912;Chagrin Form.,Chippewa Creek;Bedford Glen;E.Jefferson;E. TrumbullCenter.-Clarke and Swarrz,Md.Geol.Surv., Mid.& Up.Dev.,p.593-596,pl.58,f.7-14;pl177,f.1, 1913;Jennings Form.,Chemung Mem.Allegany Grove; Ellerslie,Penn.;W.Pawpaw,W.Va.;Willis Creek Sta., Penn.

Spirifer disjunctus var animasensis Girty,See Spirifer Whitneyi var animasensis (Girty)

Spirifer divaricata Hall,See Spirifer divaricatus Hall

Spirifer divaricatus Hall

Spirifer divaricata Hall,Pal.N.Y.,IV,p.213,pl.32,f.1-6,1867.

Spirifer divaricatus Kindle,25th.Ann.Rep.Ind.Dept.Geol Nat.Res.,p.634-635,pl.8,f.5,5a,1901;Sellersburg beds and Jeffersonville ls.Pipe Creek Falls;Bunker Hill.

Spirifer duodenaria Hall,See Spirifer duodenarius(Hall)

Spirifer duodenarius(Hall)

Spirifer duodenaria Hall,Pal.N.Y.,IV,p.189,pl.27,f. 13-16;pl.28,f.21-23‡1867.

Spirifer duodenarius Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.647,pl.9,f.10,1901;Sellersburg beds.Charlestown and Falls of the Ohio.

Spirifer eatoni Hall,See Spirifer audaculus(Conrad)

Spirifer engelmanni Meek and Worthen

Spirifer engelmanni Meek and Worthen,Ill.Geol.Surv., III,p.398,pl.8,f.5a-d,1868;Cherty ls.age of Oriskany ss. of N.Y.ser.,T.12,R.2,Union Co.,Ill.

Spirifer eriensis Grabau

Spirifer eriensis.Grabau,Bull.Geol.Soc.Amer,XI,p. 366-367,pl.21,f.2a,b,1900.-Maynard,Md.Geol.Surv., L.Dev.,p.404-406,pl.69,f.7,1913;Helderberg Form., Keyser,Mem.,Cash Valley,Md.

Spirifer euruteines Hall,See Spirifer fornacula Hall

Spirifer euruteines Owen,See Spirifer euryteines Owen

Spirifer euryteines Owen

Delthyris euryteines Owen,Rep.Geol.Expl.Iowa,Wisc., and Ill,p.69,pl.12,f.9,1884.

Spirifer euruteines Owen,Geol.Surv.,Wisc.,Iowa, and Minn.,p.586,pl.3,f.2,6,1852.

Spirifer parryana.Hall,Geol.Surv.,Iowa,I,pt.2,p. 509,pl.4,f.8,1858.-Keyes,Geol.Surv.Mo.,V,p.77,pl. 40,f.4,1895.

Spirifer capax Hall,Geol.Surv.,Iowa,I,pt.2,p.520,pl. 7,f.7,1858.

Spirifera parryana.Billings,Canadian Jour.VI,p.261,f. 77,78,1861;Geol.Canada,p.386,f.422,1863.-Hall, 2d.Ann.Rep.N.Y.State Geol1,pl.52,f.8,9,1883.-Calvin Bull.Lab.State Univ.Iowa,p.19,1888.

Spirifera fornacula Meek and Worthe,(non Hall)Geol. Surv.,Ill.,III,p.433,pl.13,f.8,a-c,1868;Beds age of N.Y.Dev. Ser."Bake-oven" Jackson Co.

Spirifera capax Hall,2d.Ann.Rep.N.Y.State Geol.pl.52, f.15-17,1883.

? Spirifera parryana Walcott,Mon.U.S.G.S.,VIII,p.137,

pl.14,f.10,1893.

Spirifer parryanus Hall and Clarke,Pal.N.Y.,VIII,pt. 2,p.29,31,39,pl.22,f.8,9,15-17,1893.

Spirifer euryteines.Schuchert,U.S.G.S.,Bull.87,p. 389,1897.-Grabau and Shimer,N.Am.Index Foss.,I,p. 326-327,1909.-Greger,Am.Jour.Sci.,XXVII,p.377,1909 Branson,Dev. of Mo.,p.100-101,pl.22,f.1-12;pl.23, f.2,3,1922;Snyder Creek shale.Callaway and Montgomery Cos.Callaway ls.Montgomery,Callaway and Boone Cos.,Mineola ls.Ralls and Warren Cos.

Spirifer euryteines var milwaukeensis Cleland,Wisc., Geol. and Nat.Hist.,Surv.,Bull.21,p.77-78,pl.15, f.1-6,1911.

Spirifer euryteines var milwaukeensis Cleland,See Spirifer eutyteines Owen.

Spirifer fimbriatus Clarke,See Reticularis fimbriata(Conrad)

Spirifer (Reticularia) fimbriatus(Conrad) See Reticularia fimbriata (Conrad)

Spirifer (Reticularia) fimbriatus Prosser and Kindle,See Reticularia fimbriata (Conrad)

Spirifer fornacula Hall

Spirifer fornacula.Hall,Rep.Regents Univ.N.Y.for year 1856.p.154,1857.-Kindle,25th.Ann.Rep.Ind.Dept.Geol Nat.Res.,p.641-642,1901;Sellersburg beds and Jeffersonville ls.Falls of the Ohio;Charlestown;Lexington;Lancaster;Sellersburg;Kent.

Spirifer euruteines Hall(non Owen) Pal.N.Y.,IV,p.209, pl.31,f.14-19,1867.

Spirifer gordoni Schuchert.

Spirifer gordoni Schuchert,Md.Geol.Surv.,L.Dev.,p. 420,pl.72,f.5-7,1913;Oriskany Form.,Ridgely Mem., Knobly mountain,near Cumb.

Spirifer granulifera Hall,See Spirifer granulosus(Conrad)

Spirifer granulosus(Conrad)

Delthyris granulosa Conrad,3d.Ann.Rep.Geol.Surv.,N.Y. p.65,1839.

Delthyris granulifera Hall,Geol.N.Y.,Rep.4th.Dist.,p 206,f.1,1843.

Delthyris congesta.Hall,Ibidem,p.206,f.2,1843.-Rogers Geol.Penna.,II,pt.2,p.828,f.670,673,1858.

Spirifer huroniensis Castelnau,Essai Syst.,Sil.l'Amerique Septentrionale,p.41,pl.12,f.6,1843.

Spirifer osteolatus Yandell and Shumard,Contr.Geol.Ky p.14,1847.

Spirifer granulifera Hall,10th.Rep.N.Y.,State Cab.Nat Hist.,p.163,1857.

Spirifer arata Hall,10th.Rep.N.Y.State Cab.Nat.Hist., p.161,1857.

Spirifer clintoni Hall,Ibidem,p.157,1857.

Spirifer oweni.Hall,Ibidem,p.129,1857.-Hall and Clarke Pal.N.Y.,VIII,pt.2,pl.22,f.1-7,1895.

Spirifera oweni.Hall,Pal.N.Y.,IV,p.197,pl.29,f.1-8; Nettleroth,Ky.Foss.Shells,p.126,pl.7,f.1-10,1889.

Spirifera granulifera.Hall,Pal.N.Y.,IV,p.223-225,pl. f.1-13;pl.37,f.1-4,1867;2d.Ann.Rep.N.Y.State Geol. pl.53,f.1-5,1883.-Keyes,Johns Hopkins Yniv.Circ., XI,p.29,1891.

Spirifera arata Hall,Pal.N.Y.,IV,p.235,1867.

Spirifer granulosus.Hall and Clarke,Pal.N.Y.,VIII,pt. 2,p.29,30,31,pl.23,f.1-51;pl.29,f.9-12;1893.- Schuchert,U.S.G.S.,Bull.87,p.391,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.210,f.118,1899;Encrinal ls.;Demissa beds-Kindle,25th.Ann.Rep.Ind.Dept.Geol Nat.Res.,p.640-641,pl19,f.2,2a,b,1901;Sellersburg beds.Sellersburg;Watson;Charlestown;Utica;Falls of the Ohio.-Clarke,N.Y.State Mus.,Bull.65,p.317,1903 Grabau and Shimer,N.Am.Index Foss.,I,p.328,f.417, 1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up. Dev.,p.190-192,pl.18,f.1-6,1913;Romney Form.,Hamilton Mem.E.bank Evitts Creek below Wolfe Mill, Near Cumb.;B.& O.R.R.Cut Hancock W.Va.;N.Romney, W.Va.-Branson and Williams,Dev. of Mo.,p.146-147, pl.33,f.1,2,10,1922.

Spirifer granulosus var clintoni Hall

Spirifer granulosus var clintoni.Hall,Pal.N.Y.,IV,p. 225,pl.37,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.211,f.118A,1899;Encrinal ls.

Spirifer gregaria Hall, See Spirifer gregarius Clapp ?

Spirifer gregarius Clapp?

Spirifer gregaria Hall, Pal. N.Y., p.195, pl.28, f.1-11, 1867.

Spirifer gragarius Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.636-637, pl.10, f.3, 1901; Sellersburg beds and Jeffersonville ls. Falls of the Ohio; Charlestown.

Spirifer gregarius var greeni Kindle

Spirifer gregarius var greeni Kindle, 25th. Ann. Rep. Ind Dept. Geol. Nat. Res., p.637-638, pl.10, f.4, 4a, 1901; Jeffersonville ls. Falls of the Ohio.

Spirifer grieri Hall

Spirifera grieri Hall, Pal. N. Y, IV, p.194-195, pl.27, f.29; pl.28, f.17-23, 1867.

Spirifer grieri. Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.127, 1857.-Schuchert, U.S.G.S., Bull. 87, p. 392, 1897.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat Res., p.638-639, pl.8, f.6, 1901; Jeffersonville ls. Falls of the Ohio.-Grabau and Shimer, N. Am. Index Foss., I, p.324-325, f.412a-c, 1909.-Branson and Williams, Dev. of Mo., p.147, pl.33, f.6, 7, 8, 1922; Grand Tower ls. Little Saline Creek, Ste Genevieve Co.

Spirifer hartleyi Schuchert

Spirifer hartleyi Schuchert, Md. Geol. Surv., L. Dev., p. 413, pl.70, f.8-10, 1913; Oriskany Form., Ridgely Mem. Cumb.

Spirifer hemicyclus Meek and Worthen

Spirifer henicyclus Meek and Worthen, Ill. Geol. Surv., III, p.399, pl.8, f.6a-d, 7a, b(?) 1868; Cherty ls. Age of Oriskany ss. of N.Y. ser., Union and Alexander Cos.

Spirifer hobbi Nettleroth, See Spirifer varicosa var hobbi (Nettleroth)

Spirifer huroniensis Castelnau, See Spirifer granulosus (Conrad)

Spirifer intermedius Hall (non Schlotheim)

Spirifer intermedius. Hall, Pal. N.Y., III, p.424, 430, 1859;

Oriskany ss. Cumb.,Md.-Schuchert,Md.Geol.Surv.,L. Dev.,p.409-410,pl.69,f.17-21,1913;Oriskany Form., Ridgely Mem.Allegany and Washington Cos.,Md.;Keyser,W.Va.;N.W.Winchester,Va.

Spirifer iowensis Owen

Spirifer pennata Hall,Geol.Surv.Iowa,Ipt.2,p.5-10,pl 5,f.1,1858.

Spirifer iowensis Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.647-648,1901;Sellersburg beds.Watson, Falls of the Ohio.

Spirifer knappianum Nettleroth,See Reticularia knappianum Nettleroth.

Spirifer laevis Hall,See Reticularia laevis(Hall)

Spirifer macbridei Fenton and Fenton,See Platyrachella macbridei(Calvin)

Spirifer macbridei Calvin,Hall and Clarke,See Platyrachella macbridei(Calvin)

Spirifer macconathei Nettleroth

Spirifer macconathei.Nettleroth,Ky.Foss.Shells,p.123, pl.11,f.1-5,1889.-Kindle,25th.Ann.Rep.Ind.Dept.Geol Nat.Res.,p.648-649,1901;Sellersburg beds.Falls of the Ohio.

Spirifer macronatus Hall

Spirifer macronatus.Hall,Pal.N.Y.,IV,p.231,pl.38A, 1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.214, f.121,1899;Encrinal ls.Demissa beds.Avery's Ravine.

Spirifer macropleurus Hall

Delthyris macropleura.Conrad,Ann.Rep.Pal.N.Y.,p.217, 1840.-Vanuxem,Rep.Geol.N.Y.,3d.Dist.,p.120,f.1, 1843.-Mather,Rep.Geol.1st.Dist.,N.Y.,p.343,f.1, 1843.

Spirifer macropleurus.Hall,Pal.N.Y.,III,p.202,pl.27, f.1a-p;pl.28,f.8a-d,1859;L.Helderberg group.Helderberg mountains;Schoharie,Carlisle,Catskill Hudson,etc.-Weller,Pal.N.J.,III,p.288,pl.30,f.1; p.313,pl.37,f.1-3,1903;Coeymans ls.;New Scotland beds.-Schuchert, Md.Geol.Surv.,L.Dev.,p.396,pl. 68,f.7,8,1913;Helderberg Form.,New Scotland Mem. Corriganville,Md.;Keyser,W.Va.;Cherry Run,W.Va.; Warren Point,Penn.

Spirifer macrothyris Hall

Spirifer macrothyris.Hall,Pal.N.Y.,IV,p.202,pl.30, f.16-20,1867.-Weller,Pal.N.J.,III,p.375-376,pl.52, f.1-3,1903;Newfoundland Grit.N.J.

Spirifer macra Hall,See Spirifer macrus Hall

Spirifer macrus Hall

Spirifer macra Hall,Pal.N.Y.,IV,p.190,pl.27,f.17,18, 1867.

Spirifer macrus Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.650-651,pl.8,f.3,3a-c,1901;Sellersburg beds.Charlestown.

Spirifer manni Hall

Spirifer manni.Hall,Pal.N.Y.,IV,p.211,pl.31,f.20-30,1867.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.642-643,pl.10,f.1,1a,1901;Jeffersonville ls.Falls of the Ohio.

Spirifer marcyi var superstes Clarke and Swartz.

Spirifer marcyi var superstes Clarke and Swartz,Md. Geol.Surv.,Mid.& Up.Dev.,p.597-599,pl.57,f.6-11, 1913;Jennings Form.,Chemung Mem.S.Round,W.Va.; Glenn Ridge.Parkhead Mem.E.Cumb.;Rocky Run,;W. Pawpaw,W.Va.

Spirifer medialis Hall,See Spirifer audaculus(Conrad)

Spirifer (Delthyris) mesacostalis Hall

Spirifer mesacostalis.Hall,Pal.N.Y.,IV,p.240,pl.40. f.1-13,1867.-Grabau and Shimer,N.Am.Index Foss.,I, p.332,f.424a,1909.

Spirifer (Delthyris) mesacostalis Clarke and Swartz Md.Geol.Surv.,Mid.& Up.Dev.,p.601-602,pl.68,f.11-23,pl.59,f.1,2,1913;Jennings Form.,Chemung Mem.W. Frostburg;Allegany Grove;Ellerslie,Penn.;W.Pawpaw, W.Va.Parkhead Mem.Rocky Run.;E.Cumb.;W.Pawpaw,W. Va.

Spirifer mesastrialis Hall

Spirifer mesatrialis.Hall,Pal.N.Y.,IV,p.242,pl.40, 1867.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,pl.37, f.4,5,1894.-Grabau and Shimer,N.Am.Index Foss.,I, p.332,f.432,1909.-Clarke and Swartz,Md.Geol.Surv., Mid.& Up.Dev.,p.596-597,pl.57,f.2-5,1913;Jennings

Form.,Chemung Mem.W.Frostburg;Ellerslie,Penn; W.Pawpaw,W.Va.Parkhead Mem.W.Pawpaw,W.Va.Woodmont Mem.,Ithaca Fauna.Hancock;Yellow Springs,W.Va.

Spirifer modestus Hall

Spirifer modestus.Hall,Pal.N.Y.,III,p.203,pl.28,f.1a-e,1859.-Maynard,Md.Geol.Surv.,L.Dev.,p.399-400,pl. 68,f.17-22,1913;Helderberg Form.,Keyser Mem.Cumberland,Pinto,Devil's Backbone,Md1;Hyndman,Penn.;Cedar Cliff,Knobly mountain;Keyser,W.Va.

Spirifer modestus var plicatus Maynard

Spirifer modestus var plicatus Maynard Md.Geol.Surv., L Dev.,p.400-401,pl.68,f.23,24,1913;Helderberg Form Keyser Mem.Keyser,W.Va.

Spirifer mucronata.Billings,Rogers,See Spirifer pennatus (Atwater)

Spirifer mucronatus.Clarke,Cleland,Conrad,Grabau,Grabau and Shimer,Hall and Clarke,Prosser and Kindle,See Spirifer pennatus (Atwater)

Spirifer mucronatus var posterus Hall and Clarke

Delthyris mucronata Hall (in part) Geol.N.Y.Rep.4th. Dist.,p.270,f.3,1843.

Spirifer mucronata var posterus.Hall and Clarke,Pal. N.Y.,VIII,pt.2,p.361,pl.34,f.27-31,1893.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.599-601, pl.58,f.1-10,1913;Jennings Form.,Chemung Mem.W. Green Ridge,Parkhead Mem.W.Town Creek.Woodmont Mem. Ithaca Fauna.W.Pawpaw,W.Va.;Berkeley Springs,W.Va.

Spirifer multistriata Hall,See Trematospira multistriata (Hall)

Spirifer murchisoni Castelnau

Spirifer mucrhisoni.Castelnau,Essai Syst.,Sil.l'Amerique Septentrionale,p.41,pl.12,f.1,2,1843.-Schuchert U.S.G.S.,Bull.87,p.398,1897,-Clarke,N.Y.State Mus., Mem.III,No.3,p.46,pl.6,f.26-30,1900.-Weller,Pal.N.J. III,p.329,354,pl.42,f.26;pl.48,f.1-4,1903;L.Oriskany.-Clarke,N.Y.State Mus.,Mem.IX.pt.1,p.177,pl.32, f.1-10,1908.-Schuchert,Md.Geol.Surv.,L.Dev.,p.411,pl 70,f.1-5,1913;Oriskany Form.,Ridgely Mem.Cumb.-Stewart Dev. of Mo.,p.246,pl.65,f.9-11,1932;Little Saline Creek ls.Ste Genevieve Co.

Spirifer arrectus Hall,Pal.N.Y.,III,p.422,pl.97,f.1a-h

2a-i,p.430,1859;Oriskany ss.Every where in N.Y. State and Maryland.

Spirifer mucrhisoni var marylandicus Schuchert

Spirifer murchisoni var marylandicus Schuchert,Md.Geol Surv.,L.Dev.,p.413,pl.70,f.6,7,1913;Oriskany Form. Ridgely Mem.Cumb.;Md.Abundant.

Spirifer nearpassi Weller

Spirifer nearpassi Weller,Pal.N.J.,III,p.330,pl.42, f.19-22,1903;L.Oriskany.

Spirifer notabilis Kindle

Spirifer binesialis Girty,20th Ann.Rep.U.S.G.S,,pt.2, p.55,1900;Ouray ls.Glenwood Springs,Colo.

Spirifer notabilis Kindle,U.S.G.S.,Bull1391,p.26,pl. 7,f.3-6c,1909;Glenwood Springs,Colo.;Kingston,N. Mex.

Spirifer octocostatus Hall

Spirifer octocostatus.Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.62,1857;Pal.N.Y.,III,p.205,pl.28, f.4a-e,1859;L.Helderberg group.Cumb.-Weller,Pal. N.J.,III,p.288,pl.30,f.5-8,1903;Coeymans ls.,near Hainesville.-Maynard,Md.Geol.Surv.,L.Dev.,p.401, pl.68,f.25-29,1913;Helderberg Form.,Keyser Mem. Cash Valley,Cumb.;Hyndman,Penn.;Keyser,W.Va.-Tansey,Dev. of Mo.,p.199-200,pl.51,f.28,29,1922; Bailey ls.Little Saline Creek,Ste Genevieve Co.

Spirifer osteolatus Yandell and Shumard,See Spirifer granu losus(Conrad)

Spirifer oweni Hall,See spirifer granulosus(Conrad)

Spirifer oweni Hall and Clarke,See Spirifer granulosus (Conrad)

Spirifer paradoxus(Schlotheim)

Terebratulites paradoxa SchlotheimPetrefactenkunde, VII,p.249,tab.2,f.6,1813.

Spirifer paradoxus.Quenst.,Handb.Petref.,p.478,tab. 38,f.18,1852.-Schnur.Palaentographea III,p.198, tab.32B,f.1a-c,1854.

Spirifer paradoxus? Davidson,Mon.Brit.Dev.Brach.,pl. 8,f.11,13,1864.

Spirifer paradoxus ?? Meek and Worthen, Ill.Geol.Surv. III, p.415, pl.10, f.2, 1868; W.Jonesboro, Union Co. Believed to be of age of Corniferous or Onondaga of N.Y.series.

Spirifer parryana Hall, See Spirifer euryteines Owen

Spirifer parryanus Hall and Clarke, See Spirifer eutyteines. Owen.

Spirifer paucicostatus Schuchert

Spirifer paucicostatus Schuchert, Md.Geol.Surv., L.Dev. p.402, pl, 68, f.30, 31, 1913; Oriskany Form., Shriver Mem. Cash Valley, Devil's Backbone, Cumb.

Spirifer pennata Hall, See Spirifer lowensis Owen

Spirifer pennatus (Atwater)

Terebratula pennata Atwater, Am.Jour.Sci., Arts, II, p. 244, pl.1, f.2, 3, 1820.

Delthyris mucronata Conrad, 5th.Ann.Rep.Geol.Surv., N.Y p.54, 1841.

Spirifer mucronata. Billings, Canadian Nat.Geol. I, p.474 pl.7, f.9, 10, 1856.-Rogers, Geol.Penna., II, pt.2, p.828 f.668, 1858.

Spirifera mucronata. Hall, Pal.N.Y., IV, p.216-218, pl.34, f.1-23, 1867.-Billings, Billings, Can.Jour.n.ser., VI, p.254, f.59-62, 1861.

Spirifera pennata Keyes, Johns Hopkins Univ.Circ., XI, p.29, 1891.

Spirifer mucronatus. Hall and Clarke, Pal.N.Y., VIII, pt. 2, p.14, 17, 36, pl.29, f.8; pl.34, f.12-22, 1893.-Grabau, Buffalo Soc.Nat.Sci., Bull.6, p.207, f.114, 1899; Moscow sh.-Clarke, N.Y.State Mus., Bull.65, p.321, 1903.-Grabau and Shimer, N.Am.Index Foss., I, p.330, f.421, 1 1909.-Cleland, Wisc.Geol.Nat.Hist., Surv., Bull.21, p.80-81, pl.16, f.12-14, 1911.-Prosser and Kindle, Md. Geol.Surv., Mid.& UplDev., p.187-190, pl.17, f.10-18, 1913; Romney Form., Hamilton Mem.B.& O.R.R.Cut 21st. Bridge, Cumb.; E. bank Evitts Creek below Wolfe Mill near Cumb.; N.Romney, W.Va.; B.& O.R.R.Cut Hancock Stateion, W.Va.

Spirifer pennatus. Schuchert, U.S.G.S., Bull.87, p.401, 1897.-Kindle, 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res., p.649-650, pl.8, f.1, 2, 2a, 1901; Sellersburg beds. Norway; Delphi; Little Rock Creek, Cass Co.-Stauffer,

Geol.Surv.,Ohio,4th.ser.,Bull.10,p.189-190,1909.-Branson and Williams,p.147-148,pl.33,f.9,1922;St. Laurent ls. also St. Laurent ss.

Spirifer perdewi Schuchert

Spirifer perdewi Schuchert,Md.Geol.Surv.,L.Dev.,p.414 pl.70,f.11-13,1913;Oriskany Form.,Ridgely Mem. Knobly mountain near Cumb.;Pendleton Co.,W.Va.

Spirifer perextensus Meek and Worthen

Spirifer peretextensus Meek and Worthen,Ill,Geol.Surv III,p.414,pl.10,f.1a-d,1868;W.Jonesboro,Union Co., Believed to be of age of Conniferous or Onondaga of N.Y.Series.

Spirifer perforata Hall,See Trematospira multistriata(Hall)

Spirifer (?) perforatus Hall,See Trematospira perforata (Hall)

Spirifer perlamellosa Hall,See Delthyris perlamellosus Hall

Spirifer perlamellosus Hall,See Delthyris perlamellosus (Hall)

Spirifer preamatura Hall,See Raticularia preamatura(Hall)

Spirifer proavitus Schuchert

Spirifer proavitus Schuchert,Md.Geol.Surv.,L.Dev.,p. 418-419,pl.71,f.17,1913;Helderberg Form.,Becraft Mem.Warren Point,Penn.

Spirifer pyxidatus Hall,See Metaplasia pyxidata (Hall)

Spirifer paricosta Hall,See Delthyris paricosta Conrad

Spirifer rarus Webster

Spirifera rara Webster,Contr.Pal.Hackberry Group,p. 4,pl.2,f.13-15,1906.

Spirifer rarus Fenton and Fenton,Contr.Mus.,Univ. Mich.,I,p.156,pl.30,f.23-26;pl.31,f.13-15,1924; Mis.& Up.Spirifer zone.Hackberry Stage.

Spirifer raymondi Haynes

Spirifer raymondi.Haynes,Annals Carnegie Mus.,X,p. 31,pl.5,f.1,2;pl.6,f.12,13,1916.-Shimer,Canadian Geol.Surv.,sec.45,p.49,1926;Up.Dev.,Minnewanka

region. Banff Area. Alberta. Up. Dev., Montana.

Spirifer robustus Webster

Spirifera robusta Webster, Contr. Pal. Hackberry Group. p.9, pl.2, f.9-11, 1906.

Spirifer robustus Fenton and Fenton, Contr. Mus. Univ. Mich., I, p.157, pl.31, f.9-11, 1924; Spirifer zone. Hackberry Stage. Hackberry Grove.

Spirifer rugosa Hall, See Delthyris perlamellosus (Hall)

Spirifer saffordi Hall

Spirifer saffordi Hall, Pal. N.Y., III, p.203, pl.28, f. 2a-f, 1859; L. Helderberg group. Becrafts mountain, near Hudson; Decatur Co., Tenn.

Spirifer (Delthyris) sculptilis (Hall)

Delthyris sculptilis Hall, Pal. N.Y., IV, p.221, pl.35, f.10-14, 1867.

Spirifer (Delthyris) sculptilis. Grabau, Buffalo Soc. Nat. Sci., Bull. 6, p.208, f.116, 1899; Encrinal ls.- Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.608-609, pl.10, f.2, 1901; Sellersburg beds. Charlestown; Falls of the Ohio.

Spirifer sculptilis var marylandicus Prosser and Kindle

Spirifer sculptilis var marylandicus Prosser and Kindle, Md. Geol. Surv., Mid. & Up. Dev., p.200, pl.19, f.14-16 1913; Romney Form., Hamilton Mem. E. side Warrior Mt., E. Rush.

Spirifer segmenta Hall, See Spirifer segmentum Hall

Spirifer segmentum Hall

Spirifer segmenta Hall, Pal. N.Y., IV, p.207, pl.31, f.14-19, 1867.

Spirifer segmentum Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.643-644, pl.9, f.7, 7a, 1901; Sellersburg beds and Jeffersonville ls. Falls of the Ohio; Charlestown; Sellersburg; Lexington.

Spirifer submucronatus. Hall, Hall and Clarke, See Spirifer cumberlandiae Hall

Spirifer suborestes Webster

Spirifer suborestes.Webster,Contr.Pal.Hackberry Group p.8,pl.2,f.16-18,1906.-Fenton and Fenton,Contr. Mus.Univ.Mich.,I,p.158,pl.31,f.5-8,1914;Hackberry Group.

Spirifer subumbona (Hall)

Spirifer subumbona.Hall,Pal.N.Y.,IV,p.234,pl.32,f. 28-30,1867.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.627-628,pl.11,f.3,3a,1901;Sellersburg beds. Little RockCreek,Cass Co.

Spirifer (Martinia) subumbonus Grabau,Buffalo Soc. Nat.Sci.,Bull.6,p.216,f.134,1899;Moscow sh;Hamilton sh.Avery's Creek.

Spirifer subundiferus Meek and Worthen

Spirifer subundiferus Meek and Worthen,Ill.Geol.Surv. III,p.434,pl.10,f.5a-e,1868;Hamilton Div.Dev.Series Rock-Island,Ill.

Spirifer subvaricosus Hall and Whitfield

Spirifera subvaricosa Hall and Whitfield,23d.Ann.Rep. N.Y.,State Cab.Nat.Hist.,p.237,pl.11,f.12-15,1873.

Spirifer subvaricosus Schuchert,U.S.G.S.,Bull.87,p. 406,1897.-Cleland,Wisc.Geol.Nat.Hist.,Bull.21,p. 81-82,pl.16,f.6-11,1911.-Branson.Dev. of Mo.,p.101-102,pl.20,f.6,7;pl.24,f.13,1922;Mineola ls.Ralls Co

Spirifer tenusitriatus Hall

Spirifer tenuistriatus Hall,Pal.N.Y.,III,p.204,pl.28, f.3a-d,1859;L.Helderberg group.Decatur Co.,Tenn.

Spirifer textus Hall,See Syringothyris texta(Hall)var chemungensis Cushing.

Spirifer tribuarius Schuchert

Spirifer tribuarius Schuchert,Md.Geol.Surv.,L.Dev.,p. 414-415,pl.70,f.14-16,1913;Oriskany Form.,Shriver Mem.Cash Valley,Nicholas Mountain;near Cumb.

Spirifer tribulis Hall

Spirifer tribulis.Hall,Pal.N.Y.,III,p.420,pl.96,f.8a-e,1859;Oriskany ss.Cumb.,Md;2d.Ann.Rep.N.Y.State Geol.pl.58,f.1-4,1883.-Hall and Clarke,Pal.N.Y., VIII,pt.2,p.19,37,pl.33,f.1-4,1893.-Schuchert,Md. Geol.Surv.,L.Dev.,p.407-408,pl.69,f.11-14,1913; Oriskany Form.,Shriver Mem.Cash Valley;Cumb.Ridgely Mem.Up.Oriskany beds.Cumb.,Md.

Spirifer tullius Hall

Spirifera tullia Hall,Pal.N.Y.,IV,p.318,pl.35,f.1-9, 1867.

Spirifer tullius.Hall,and Clarke,Pal.N.Y.,VIII,pt.2, p.14,35,pl.22,f.18;pl.37,f.6,7,1893.-Schuchert,U.S G.S.Bull.87,p.408,1897.-Grabau,Buffalo Soc.Nat. Sci.,Bull.6,p.208,f.115,1899;Moscow shale.-Clarke, N.Y.,State Mus.,Bull.65,p.326,1903;-Grabau and Shimer,N.Am.Index Foss.,I,p.332,f.432e,1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.195-196, pl.19,f.1-7,1913;Romney Form.,Hamilton Mem.N.Hancock;Flintstone Creek in Gilpin;B.& O.R.R.Cut,Hancock,Stateion.W.Va.

Spirifer vanuxemi Hall

Orthis plicata vanuxem,Geol.Rep.3d.Dist.,N.Y.,p.112, f.1,1843.

Not Spirifer plicatus. of Sowerby, of Horn, or of Steininger.

Spirifer vanuxemi.Hall,N.Y.,Pal.,III,p.198,pl.8,f.17-23,1859;L.Helderberg group.Helderberg mountains, Albany Co.;Schoharie,Carlisle,Litchfield,Herkimer, Co.-Maynard,Md.Geol.Surv.,L.Dev.,p.403,pl68,f.32, 33,1913;Helderberg Form.,Keyser Mem.Devil's Backbone;Roundtop.

Spirifer vanuxemi var prognosticus Schuchert

Spirifer vanuxemi var prognosticus Schuchert,Md.Geol. Surv.,L.Dev.,p.403-404,pl.68,f.34,35;pl.69,f.1-3, 1913;Helderberg Form.,Keyser Mem.Pinto;B.& O.R.R. Cut,W.Rawlings;Tonoloway,Md.

Spirifer varicosa Hall,See Spirifer varicosus Hall

Spirifer cf varicosa Stewart,See Spirifer varicosus Hall

Spirifer varicosa var Hobbsi (Nettleroth)

Spirifer hobbsi Nettleroth,Ky.Foss.Shells,p.121,pl. 10,f.21,22,26-30,35-40,1889.

Spirifer varicosa var hobbsi Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.645-646,1901;Sellersburg beds Falls of the Ohio.

Spirifer varicosus Hall

Spirifer varicosa Hall,10th.Rep.N.Y.State Cab.Nat.Hist

p.130,1857.

Spirifer cf varicosa Stewart,Dev. of Mo.,p.246,pl.65, f.12,1922;Little Saline Creek ls.Ste Genevieve Co.

Spirifera varicosa Billings,Canadian Jour.,VI,p.255, f.63,64,1861;Geol.Canada,p.960,f.467,1863.-Hall, Pal.N.Y.,IV,p.205-206,pl.31,f.1-4,1867;2d.Rep.N.Y. State Geol.,pl.59,f.4-8,1883.-Walcott,U.S.G.S.,Mon VIII,p.136,1884.-Nettleroth,Ky.Foss.Shells,p.134, pl.10,f.11-20,23-25,1889.

Spirifer varicosus.Hall and Clarke,Pal.N.Y.,VIII,pt.2, p.17,36,pl.34,f.4-8,1894.-Schuchert,U.S.G.S.,Bull. 87,p.408,1897.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.644,pl.9,f.3,1901;Sellersburg beds and Jeffersonville ls.Throughout the Dev.,Area.-Grabau and Shimer,N.Am.Index Foss.,I,p.325,f.413a-c,1909. Kindle,U.S.G.S.,Bull.508,p.82,pl.6,f.16,1912.- Branson,Dev. of Mo.,p.102,pl.19,f.18;pl.21,f.4,5, pl.24,f.14,15,1922;Mineola ls.Montgomery and Warren Cos.,-Branson and Williams,ibidem,p.148,1922;Grand Tower ls.Ste Genevieve Co.

Spirifer ventricosa Hall,See Mucleospira ventricosa Hall

Spirifer whitneyi Hall

Spirifera whitneyi.Hall,Pal.N.Y.,IV,p.234,417,1867;2d Ann.Rep.N.Y.State Geol.,pl.55,f.18,19,1883;Tschernyschew,Mem.Comite Geol.St.Petersbourg,III,p.60, 1887.-Whiteaves,Contr.Can.Pal.,I,p.222,1891.

Spirifer whitneyi,Hall and Clarke,Pal.N.Y.,VIII,pt.2, p.24,57,pl.30,f.18,19,1893.-Hall,Geol.Surv.,Iowa I,pt.2,p.502,pl.4,f.2,1858.-Kindle,U.S.G.S.,Bull. 391,p.24-25,pl.8,f.2-5a,1909;Ouray ls.Hillsboro,N. Mex.,Shoshone and Glenwood Springs,Colo.-Haynes, Annals Carnegie Mus.,X,p133,pl.5,f.5;pl.6,f.8-11, 1916.-Fenton and Fenton,Contr.Mus.Univ.Mich.,I,p. 146-149,pl.28,f.1-9;pl.30,f.14-19,1914;Spirifer zone.Hackberry Stage.-Shimer,Canadian Geol.Surv., ser.,45,p.48,1926;Up.Dev. Minnewahka Region.Banff, Alberta.

Cf Spirifer whitneyi Kindle,See Spirifer whitneyi monticola Haynes.

Spirifer whitneyi var animasensis (Girty)

Spirifer disjunctus var animasensis Girty,20th.Ann. Rep.U.S.G.S.,pt.2,p.48-55,pl.4,f.1-10,1900;Ouray ls.Ouray;Engineer Mountain;Gunnison;Durango;Glenwood Springs,Colo.

Spirifer whitheyi var animasensis Kindle,U.S.G.S., Bull.391,p.35-36,pl.9,f.1-3a,1909;Hillsboro,N.Mex. Rockwood,Colo.

Spirifer whitneyi gallatinensis Haynes

Spirifer whitneyi gallatinensis Haynes,Annals Carnegie Mus.,X,p.35,pl.5,f.3,4,1916.

Spirifer whitneyi cf gallatiensis Shimer,Can.Geol.Surv Ser.45,p.49,1916;Up.Dev. Minnewanka.Banff,Alberta; Up.Dev.,Mont.

Spirifer whtineyi gradatus C.L.Fenton

Spirifer whitneyi gradatus.C.L.Fenton,Am.Mid.Nat.,V, p.219,pl.6,f.8-10,1918.-Contr.Mus.Univ.Mich.,I, p.149-151,pl.28,f.10-13,1924;Spirifer zone and Owen substage.Hackberry Stage.Rockford;Hackberry and Owen Grove.

Spirifer whitneyi monticola Haynes.

Of Spirifer whitneyi Kindle,U.S.G.S.,Bull.391,p.24, pl.8,f.2-5a,1909.

Spirifer whitneyi monticola Haynes.Annals Carnegie Mus.,X,p.36,pl.6,f.1-7,1916.-Shimer,Can.Geol. Surv.,Sec.45,p.48-49,1926;Up.Dev. Minnewanka Region,Banff,Alberta.

Spirifer whitneyi owenensis Webster and Fenton

Spirifer whitneyi owenensis Webster and Fenton,Contr. Mus.Univ.Mich.,I,p.154-155,pl.30,f.20-22,1924; Owen substage.Owens Grove;Brachiopod faunule.Hackberry Grove.Hackberry Stage.

Spirifer cf whitneyi owenensis Fenton and Fenton

Spirifer cf whitneyi ownenesis Fenton and Fenton,Cont Mus.Univ.Mich.,I,p.155,1924.

Spirifer whitneyi prôductus C.L.Fenton

Spirifera whitneyi var disparilis Webster,Contr.Pal. Hackberry Group,p.3,pl.2,f.5-8,1906.

Spirifer whitneyi productus.C.L.Fenton,Am.Mid.Nat.,V p.220,pl.6,f.5,6,1918.-Fenton and Fenton Contr. Mus.Univ.Mich.,I,p.153-154,pl.28,f.17-22;pl.31, f.1-4,1924;Spirifer zone.Hackberry Stage.

Spirifer whitneyi rockfordénsis C.L.Fenton

Spirifer whitneyi rockfordensis. C. L. Fenton, Am. Mid. Nat. V, p. 219, pl. 6, f. 3, 4, 1918.-Fenton and Fenton, Contr. Mus. Univ. Mich., I, p. 151-152, pl. 28, f. 14-16, 1924; Spirifer Zone. Hackberry Stage. Rockford.

Spirifer whitneyi subsidus Fenton and Fenton

Spirifer whitneyi subsidus Fenton and Fenton, Contr. Mus. Univ. Mich, I, p 152-153, pl. 30, f. 10-13, 1924; Spirifer zone. Hackberry Stage. Rockford and Hackberry Grove.

Spirifera acuminata. Hall, Keyes, see Spirifer acuminatus (Conrad)

Spirifera alta Hall, see Cyrtia alta Hall

Spirifera angusta. Hall, Keyes, see Spirifer angustus Hall

Spirifera arata Hall, see Spirifer granulosus (Conrad)

Spirifera arenosa Hall, see Spirifer arenosus (Conrad)

Spirifera audacula whitfield, see Spirifer audaculus (Conrad)

Spirifera bicostata Hall, see Reticularia bicostata (Vanuxem)

Spirifera bicostatus Hall and Clarke, see Reticularia bicostata (Vanuxem)

Spirifera capox Hall, see Spirifer euryteines Owen.

Spirifera conradana. Keyes, Miller see Spirifer (Reticularia) fimbriatus (Conrad)

Spirifera consobrina d'Orbigny, see Spirifer consobrinus (d'Orbigny)

Spirifera cumberlandiae Hall, see Spirifer cumberlandiae Hall

Spirifera cycloptera. Billings, Hall, see Spirifer cycloptera Hall

Spirifera cyrtinaformis Hall and Whitfield, see Platyrochella cyrtinaformis (Hall & Whitfield)

(??) Spirifera cyrtinaeformis Whiteaves, see Platyrachella cyrtinaformis (Hall & Whitfield)

Spirifera disjuncta. Hall, Sowerby, see Spirifer disjunctus Sowerby

Spirifera fimbriata Hall,see Reticularia fimbriata(Conrad)

Spirifera formacula Meek & Worthe,see Spirifer eurytei-nes Owen.

Spirifera granulifera Hall,Keyes,see Spirifer granulosus (Conrad)

Spirifera griera Hall,see Spirifer grieri Hall

Spirifera Macbridei Calvin,see Platyrachella macbridei (Calvin)

Spirifera medialis.Hall,Keyes see Spirifer audaculus (Conrad)

Spirifera mucronata.Billings,Hall,see Spirifer pennatus (Atwater)

Spirifera oweni.Hall,Nettleroth,see Spirifer granulosus (Confad)

Spirifera parryana.Billings,Calvin,see Spirifer eurytei-nes Owen.

? Spirifera parryana Walcott,see Spirifer eurytteines Owen.

Spirifera pennata Keyes,see Spirifer pennatus(Atwater)

Spirifera rara Webster,see Spirifer rarus Webster.

Spirifera robusta Webster,see Spirifer robustus Webster

Spirifera spiriferoides.Hall,Rogers,see Athyris spirif-eroides(Eaton)

Spirifera submucronata Hall,see Spirifer cumberlandiae Hall

Spirifera suborestes Webster,see Spirifer suborestes Webster

Spirifera subvaricosa Hall & Whitfield,see Spirifer sub-varicosus(Hall & Whitfield)

Spirifera tullia Hall,see Spirifer tullius Hall

Spirifera varicosa.Billings,Hall,Nettleroth,Walcott,see Spirifer varicosus Hall

Spirifera Whitneyi.Hall,Whiteaves,see Spirifer Whitneyi Hall

Spirifera Whitneyi var dispariles Webster, see Spirifer Whitneyi productus C.L. Fenton

Spirifera ziczac Hall, see Spirifer consobrinus (d'Orbigny)

Genus SPIRIGERA D'Orbigny

Spirigera fultonensis Swallow, see Athyris fultonensis (Swallow)

Spirigera minima Swallow. see Sthyris fultonensis (Swallow)

Genus STENOCHISMA Conrad
(1893. Pal. N.Y., VIII, pt. 2, p. 187)

Stenochisma deckerensis (Weller)

Rhynchonella deckerensis Weller, Pal. N.J., III, p. 234, pl. 21, f. 1-4, 1903.

Stenochisma deckerensis Maynard, Md. Geol. Surv., L. Dev., p. 349-350, pl. 63, f. 1-4, 1913; Helderberg Form., Keyser Member. Corriganville, Mdl; Keyser, W. Va; Hyndam, Penn.

Stenochisma formosa Hall, see Rhynchotrema formosa (Hall)

Stenochisma formosa. Hall & Clarke, Maynard, Shimer, see Rhynchotrema formosa (Hall)

Stenochisma prolifica Keyes, see Camarotoechia prolifica Hall

Streptorhynchus chemungensis var arctostriata Hall, see Schuchertella arctostriata (Hall)

Streptorhynchus chemungensis var pandora Hall, see Schuchertella pandora (Billings)

Streptorhynchus chemungensis pectinacea Hall, see Schuchertella chemungensis pectinacea (Hall)

Streptorhynchus hipparionyx Hall, See Hipparionyx proximus Vanuxem.

Streptorhynchus pandora. Billings, Hall, Nicholson, see Schuchertella pandora (Billings)

Genus STRICKLANDINIA Billings
(1863. Canada Nat., VIII, p.370)

Stricklandia elongata Billings, see Stricklandinia elongata var curta Billings.

Stricklandinia elongata var curta Billings

Pentarmerus elongatus. Vanuxem, Geol1Rept. 3d. Dist., N.Y. p.133, f.1, 1842.-Hall, Geol. Rept. 4th. Dist. N.Y., no. 34, f.4, 1843.

Meganteris elongatus Hall, 10th. Ann. Rep. Regents Univ. N.Y., p.133, 1837.

Rensselaeria elongata Hall, 12th. Ann. Rept. Regents Univ N,Y., p.38, 1859

Stricklandia elongata Billings, Dev. Foss., Canada, p. 58, f.91, 92, 1861

Stricklandinia elongata Billings, see Davidson's monograph Brit. Sil. Brach. (1867), pt.7, no.2, p.157, 1863.

Stricklandinia elongata var curta Meek & Worthen, Ill. Geol. Sur., III, p.402, pl.8, f.1a-c, pl.9, f.5(?) 1868; Cherty ls. age Orisk. s.s. N.Y. series. Union Co., N.Y.

Genus STROPHALOSIA King
(1848. Annals & Magazine of Nat. Hist., XIV, p.313)
(1892. Pal. N.Y., VIII, pt.1, p.314)

Strophalosia muricata (Hall) Beecher

Chonetes muricata Hall, Pal. N.Y., IV, p.143, pl.22, f.29-43, 1867.

Strophalosia ? Muricata Beecher, Am. Jour. Sci., 3d. ser., XL, p.241, 1890.

Strophalosia muricata. Hall & Swartz, Pal. N.Y., VIII, pt. 1, p.316, pl.16, f.12, 16, 30, 38, 42, 1892.-Prosser, Ohio Geol. Sur., 4th. Ser. Bull. 15, p.542-544, pl.32, f.10, 11(?) 12(?) 12, 1912; Chagrin Form., Crooked Creek, Hartsgrove township; S. of Pennline, Pa.; Mill Creek.

Strophalosia truncata (Hall)

Strophomena pustulosa Hall, Geol. N.Y., Rep. 4th. Dist., p. 181, f.4, 1843.

Productus truncatus Hall,10th.Rep.N.Y.,State Cab.Nat. Hist.,p.171,1857.

Productella truncata Hall,Pal.N.Y.,IV,p.160-162,pl.23 f.12-24,1867.

Productella (Strophalosia?) truncata Whiteaves,Cont. Canadian Pal.I,p.112,pl.16,f.1,2,1889.

Strophalosia truncata.Beecher,Am.Jour.Sci.,3d.ser., XL,p.241,1890.-Hall & Clarke,Pal.N.Y.,VIII,pt.1,p. 116,pl.15B,f.24-26,pl.17,f.10-15,1892.-Schuchert,U S.G.S.,Bull.87,p.419,1897.-Grabau,Buffalo Soc.Nat. Sci.,Bull.6,p.206,f.113,1899;Marcellus sh.Bayview Cliff.-Clarke,N.Y.State Mus.,Bull.65,p.330,1903.- Grabau & Shiner,N.Am.Index Foss.,I,p.240,f.292, 1909.-Kindle,U.S.G.S.,Bull.508,p.77,pl.5,f.5-7,1912 Prosser & Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p. 160-162,pl.13,f.14-16,1913;Romney Form.,Onon.member,W.Va.Cent.R.R.Cut at 21st.Bridge-Marcellus member.S.E.Cumb.Hamilton member.E.bank Evitts Cr.below Wolfe Mill;Queen City Hotel,Cumb.Md.-Branson & Williams,Dev. of Mo.,p.141-142,pl.35,f.1,2,3,4, 1922.

Genus STROPHEODONTA Hall
(1852.Pal.N.Y.,II,p.63)
(1892.Pal.N.Y.,VIII,pt.1,p.284)

Stropheodonta sp.Kindle

Stropheodonta sp.Kindle,25th.Ann.Rep.Ind.State Geol. p.574,pl.1,f,6,1901;New Albany shale.Delphi.

Stropheodonta sp.Swartz

Stropheodonta sp.Swartz,Md.Geol.Surv.,L.Dev.,p.321, not fig.,1913;Helderberg Form.,Keyser member.Pinto, Md.

Stropheodonta sp.Weller

Stropheodonta sp.Weller,Pal.N.J.,III,p.301,not fig., 1903;New Scotland-Becraft fauna,

Stropheodonta sp.Weller

Stropheodonta sp.Weller,Pal.N.J.,III,p.325,pl.41,f.7, 8,1903;Oriskany

Stropheodonta aequicostata Schuchert,See Stropheodonta equicostata Swallow.

Stropheodonta altidorsata Schuchert,see Stropheodonta

cymbiformis Swallow

Stropheodonta arata(Hall)

Strophodonta varistriata var.arata Hall,Pal.N.Y.,III, p.183,pl.18,f.1a-i,1859;L.Helderberg group.Becraft's mt.,Hudson;Rept.Geol.,N.Y.,for 1882,pl. 44,f.17,18,1883.

Stropheodonta varistriata var.arata.Hall and Clarke, Pal.N.Y.,VIII,pt.1,pl.13,f.17,18,1892.-Weller,Pal. N.J.,III,p.275,pl.27,f.3,1903;Coeymans l.s.-Shimer N.Y.State Mus.Bull.80,p.214,1905.

Stropheodonta arata Schuchert,Md.Geol.Surv.,L.Dev.,p. 311,pl.57,f.7-10,1913;Helderberg Form.,Coeymans member.Dawson,Devil's Backbone.New Scotland member Dawson,Devil's Backbone.-Tansey,Dev. of Mo.,p.187, pl.46,f.33-35,1922;Bailey ls.Little Saline Creek Ste Genevieve Co.

Stropheodonta (Leptostrophia) arctimuscula Schuchert

Stropheodonta (Leptostrophia) artimuscula Schuchert Md.Geol.Surv.,L.Dev.,p.317-318,pl.58,f.1,1913; Orisk.Form.,Shriver member.21st.Bridge;North Branch near Cumb.,Md.

Stropheodonta arcuata Hall & Clarke,Schuchert,see Douvillina arcuata (Hall)

Stropheodonta beckei Hall

Strophodonta beckii Hall,Pal.N.Y.,III,p.191,pl.22,f. 1a-t,1859;L.Helderberg group.Helderberg mountains/ Schoharie,Carlisle,Catskill,Hudson,etc.

Stropheodonta beckei Weller,Pal.N.J.,III,p.300-301, p.33,f.7,8,1903;New Scotland-Becraft fauna.

Stropheodonta(Leptostrophia) becki Hall and Clarke,see Stropheodonta(Leptostrophia) beckii (Hall)

Stropheodonta (Leptostrophia) beckii Hall

Stropheodonta beckii Hall(part) Pal.N.Y.,III,p.191,pl 22,f.1a-t,1859;L.Helderberg group.Helderberg mountains,Schoharie,Carlisle,Catskill,Hudson,etc.

Stropheodonta(Leptostrophia) becki Hall and Clarke, Pal.N.Y.,VIII,pt.1,p.288,pl.13,f.23,24,1892.

Stropheodonta (Leptostrophia) bekcii Schuchert,Md.Geol Surv.,L.Dev.,p.314-315,pl.57,f.12,13,1913;Helder-

berg Form.,New Scotland Mem.Cedar Cliff.W.Va., 21st.Bridge,Cumb.,Warren Point,Penn.Oriskany Form. Ridgley Mem.Knobly mountains,near Cumb.

Stropheodonta (Leptostrophia) bipartita (Hall)

Leptaena bipartita Hall,Pal.N.Y.,II,p.326,pl.74,f.4, 5,1858.

Strophomena ? bipartita Schuchert,U.S.G.S.,Bull187,p. 429,1897.

Stropheodonta nearpassi Schuchert,U.S.G.S.,Bull.87, p.427,1897.

Stropheodonta textilis Schuchert,U.S.G.S.,Bull.87,p. 427,1897.

Stropheodonta bipartita.Weller,Pal.N.J.,III,p.226, pl.20,f.1-5,1903.-Maynard,Md.Geol.Surv.,L.Dev., p.316-317,pl.57,f.17,18,1913;Helderberg Form.,Keyser Mem.Devil's Backbone;Pinto,Md.;Hyndman,Penn.

Stropheodonta boonensis Swallow

Stropheodonta navilis boonensis Schuchert,U.S.G.S., Bull.87,p.425,1897.

Stropheodonta boonensis.Swallow.St.Louis Acad.Sci., I,p.638,1860.-Branson,Geol.Mo.,p.101,f.1,1918; Dev.,of Mo.,p.75,pl.11,f.11;pl.13,f.6-12,pl.14,f.9 1922;Snyder Creek shale.Callaway and Montgomery Co.

Stropheodonta callawayensis Schuchert,See:

Stropheodonta callawayensis Swallow.
Stropheodonta equicostata Swallow

Stropheodonta callawayensis Swallow

Strophodonta callawayensis Swallow.(part) Trans.St. Louis Acad.Sci.,I,p.638,1860.

Strophodonta aequicostata Swallow,ibidem.

Strophodanta quadrata Swallow,(part) ibidem.

Stropheodonta callawayensis.Schuchert,U.S.G.S.,Bull. 87,p.420,1897.-Branson.Dev. of Mo.,p.75,pl.13,f. 1-5,1922;Snyder Creek shale.Callaway and Montgomery Cos.

Stropheodonta calvini Calvin,See Leptostrophia camerata Fenton and Fenton

Stropheodonta coeymansis Swartz

Stropheodonta coeymanensis Swartz,Md.Geol Surv.,L. Dev.,p.313,pl.57,f.6,1913;Helderberg Form.,Coeymens Mem.Devil's Backbone.

Stropheodonta concava Hall

Strophomena (Stropheodonta) concava Hall,10th.Rep.N. Y.State Cab.Nat.Hist.,p.115,140,f.1,1857.

Stropheodonta concava.Hall,Pal.N.Y.,IV,p.96,pl.16,f. 1a-h,1867.-Hall and Clarke,Pal.N.Y.,VIII,pt.1,pl. 14,f.16-23,1892.-Schuchert,U.S.G.S.,Bull.86,p. 420,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.195 f.99,1899;Encrinal ls.Lake Shore.-Kindle,25th.Ann Rep.Ind.Dept.Geol.Nat.Res.,p.619-620,pl.5,f.1,1a, 2,pl.6,f.1,1901;Sellersburg beds and Jeffersonville ls.Pipe Creek Falls;Charlestown;Sellersburg; Falls of the Ohio.-Clarke,N.Y.State Mus.Bull.65,p.331, 1903.-Grabau and Shimer,N.Am.Index Foss.,I,p.216,f 261,1909,-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.139-140,pl.101,f.6,7,1913;Romney Form., Hamilton Mem.E.bank Evitts Creek,below Wolfe Mill (?) W.Hancock.-Branson and Williams,Dev. of Mo.p. 134-135,pl.33,f.12,1922;Grand Tower ls.Little Saline Creek,Ste Genevieve Co.

Stropheodonta cymbiformis Swallow,See Stropheodonta navalis Swallow.

Stropheodonta demissa (Conrad)

Strophomena demissa.Conrad,Jour.Acad.Nat.Sci.,Phila; VIII,p.258,pl.14,f.14,1842.-Rogers,Geol.Penna.,II p.827,f.666,1858.-Billings,Canadian Jour.Sci.,Arts 2d.ser.,VI,p.341,f.116-118,1861;Geol.Canada,p. 367,f.377a-d,1863.

Strophodonta dimosa(?) Owen,Geol.Surv.Wisc.,Iowa and Minn.,tab.3A,f.14,1852.(See speicimens in U.S.Nat. Mus.,Cat.Invert.Foss.,1791)

Strophomena (Strophodonta) demissa Hall,10th.Rep.N.Y. State Cab.Nat.Hist.,p.137,f.1,1857.-Meek,Trans. Chicago Acad.Sci.,I,p187,f.6a-c,1868.

Strophomena (Strophodonta) subdemissa Hall,10th.Rep. N.Y.State Cab.Nat.Hist.,p.145,1857.-Meek(non Hall) Trans.Chicago Acad.Sci.,I,p.88,pl.13,f.7,1868

Strophodonta demissa.Hall,Geol.Surv.,Iowa,I,pt.1,p. 495,pl.3,f.5,1858;Pal.N.Y.,IV,p.81,pl.11,f.14-17, pl.12,f.1-5,1867.-Nicholson,Pal.Prov.Ontario,p.65,

1873.-White,2d.Ann.Rep.Ind.Bur.Statistics and Geol p.500,pl.4,f.6,7,1880;10th.Rep.Ind.State Geol.p. 132,pl.4,f.6,7,1881.-Whitfield,Geol/Wisc.,IV,p. 327,pl.25,f.18,1883.-Hall,2d.Ann.Rep.State Geol. pl.45,f.7-12,1883.-Walcott,U.S.G.S.,Mon.VIII,p.118, pl.2,f.9,1884.-Nettleroth,Ky.Foss.Shells,p.143,pl. 18,f.10-16,pl.33,f.22,1889.-Whiteaves,Contr.Canadian Pal.,I,p.219,1891.-Keyes,Geol.Surv.Mo.,V,p. 70,pl.39,f.7,1895.;Johns Hopkins Univ.Circ.,XI,p. 29,1891.

Stropheodonta demissa.Hall and Clarke,Pal.N.Y.,VIII, p.1,pl.14,f.7-12,1892.-Schuchert,U.S.G.S.,Bull.87 p.421,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 194f.98,1899;Encrinal ls.;Demissa bed.-Kindle,25th Ann.Rep.Ind.Dept.Geol.Nat.Res..p.616-618,1901; Sellersburg beds and Jeffersonville ls.Throughout theDev.,area.-Clarke,N.Y.State Mus.,Bull.65,p.333, 1903.-Grabau and Shimer,N.Am.Index Foss.,I,p.217, f.263,1909.-Schuchert,Md.Geol.Surv.,L.Dev.,p.313, pl.57,f.11,1913;Oriskany Form.,Ridgely Mem.PendletonCo.,W.Va.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.136-137,pl.10,f.1,1913;Romney Form.,Hamilton Mem.E.bank Evitts Creek below Wolfe Mill; Jennings Run.W.Corriganville;N.Hancock.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.551,pl.47,f. 14,1913;Jennings Form.,Chemung Mem.Oakland-Altamont Road.Woodmont Mem.,Ithaca Fauna.W.Pawpaw,W. Va.;Berkeley Springs and Yellow Springs,W.Va.-Branson,Dev. of Mo.,p.77,pl.11,f.3,8,;pl.14,f.1-8, 1922;Mineola and Callaway ls.;Shyder Creek sh.; Beauvias ss.-Stewart,Dev. of Mo.,p.232-233,pl.61, f.18,1922;Little Saline Creek ls.Ste Genevieve Co.

Stropheodonta equicostata Swallow

Strophodonta aequicostata Swallow,(part) Trans.St. Louis Acad.Sci.,I,p.639,1860.

Strophodonta quadrata Swallow,ibidem,p.639,1860.

Stropheodonta callawayensis ,quadrata,and aequicostata Schuchert,U.S.G.S.,Bull.,87,p.420,425,1897.

Stropheodonta hemispherica Hall

Stropheodonta hemispherica Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nar.Res.,p.620,1901.

Stropheodonta inaequiradiata Grabau and Shimer,Hall & Clarke,Schuchert,See Stropheodonta inequiradiata Hall

Stropheodonta inaequiradiata Hall

Strophomena (Strophodonta) inaequiradiata Hall,10th. Rep.N.Y.State Cab.Nat.Hist.,p.113-114,f.1-3,1857.

Strophomena inaequistriata Billings,Canadian Jour.Sci Arts.VI,p.338,f.113,1861;Geol.Canada,p.367,f.375, 1863.Pal.Foss.,II,p.24,f.13;pl.2,f.4;p.240,1874.

Strophodonta inaequiradiata.Hall,Pal.N.Y.,IV,p.87, pl.11,f.24-31,pl.12,f.12;pl.13,f.6-11,1867;2d.Ann. RepNN.Y.State Geol.pl.45,f.13,14,1883.-Walcott,U.S G.S.,Mon.VIII,p.120,pl.11,f.11,1884.

Stropheodonta inaequiradiata.Hall and Clarke,Pal.N.Y. VIII,pt.1pl.14,f.13,14,1892.-Schuchert,U.S.G.S.,Bull. 87,p.422,1897.-Weller,Pal.N.J.,III,p.372,pl.51,f. 22,1903;Newfoundland Grit.,-Grabau and Shimer,N. Am.Index Foss.,I,p.216,f.269,1909.

Stropheodonta inequiradiata.Branson,Dev. of Mo.,p. 80,pl.11,f.15,pl.14,f.10,11,1922;Mineola ls.-Stewart,Dev. of Mo.,p.233,pl.61,f.19,20,1922;Little Saline Creek ls.Ste Genevieve Co.

Stropheodonta inaequistriata (Conrad)

Strophomena inaequistriata Conrad,Jour.Acad.Nat.Sci., Phila.,VIII,p.254,pl.14,f.2,1842.-Hall,Geol1N.Y. Rep.4th.Dist.,p.200,f.4,1843.-Billings,Canadian Jour.Sci.Arts,VI,p.338,f.113,114,1861;Geol.Canada, p.367,f.375,1863.

Strophomena (Strophodonta) inaequistriata Hall,10th. Rep.N.Y.State Cab.Nat.Hist.,p.142,1857.

Strophodonta inaequistriata.Hall,Pal.N.Y.,IV,p.93,pl. 12,f.6-8,1867;2d.Ann.Rep.N.Y.State Geol.pl.45,f.1-6,1883.-Nettleroth,Ky.Foss.,Shells,p.145,pl.17, f.10,11,1889.

Stropheodonta (Douvillina) inaequistriata.Hall and Clarke,Pal.N.Y.,VIII,pt.1,p.289,pl.14,f.1-6,pl.15B f.9,1892.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.198 f.101,1899;Moscoa sh.;Encrinal ls.;Demissa beds.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.621-632,pl.4,f.12,13,1901;Sellersburg beds and Jeffersonville ls.Bunker Hill;Pipe Creek Falls;Charlestown Falls of the Ohio.-Prosser and Kindle,Md.Geol.Surv Mid.& Up.Dev.,p.138-139,pl.10,f.2-5,1913; Romney Form.,Hamilton Mem.F.bank Evitts Creek below Wolfe Mill;B.& O.RR.Cut 21st.Bridge(?)

Stropheodonta inaequistriata.Schuchert,U.S.G.S.,Bull. 87,p.422,1897.-Grabau and Shimer,N.Am.Index Foss.,

I,p.217,f.262,1909.

Bouvillina inaequistriata Clarke,N.Y.State Mus.,Bull. 65,p.231,1903.

Stropheodonta indenta (Conrad)

Leptaena indenta Conrad,2d.Ann.Rep.N.Y.Geol.Surv.,p.112, 117,1838.

Strophomena indenta Billings,Proc.Portland,Soc.Nat. Hist.,p.109,pl.3,f.3,1863.

Strophodonta indenta Miller,American Pal.Foss.,p.135, 1877.

Stropheodonta indenta Weller,Pal.N.J.,III,p.276-277, pl.26,f.12,1903;Coeymans ls.

Stropheodonta inflex Branson. See Stropheodonta navalis boonensis Swallow

Stropheodonta interstrialis Schuchert, See Leptostrophia interstrialis (Vanuxem)

Stropheodonta (Leptostrophia) junia Hall

Strophodonta textilis Hall,Pal.N.Y.,IV,p.108,pl.18, f.3,4,1867.

Stropheodonta (Leptostrophia) junia Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.199,f.103,1899;Demissa bed.

Stropheodonta licklaeni Clarke, See Stropheodonta(Leptostrophia) magniventra Hall

Stropheodonta (Leptostrophia) magnifica (Hall)

Strophodonta magnifica Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.54,1857;Pal.N.Y.,III,p.414,482, pl.93,f.4;pl.94,f.2a-d,pl.95,f.8;pl.95A,f.15-19, 1859;Oriskany ss.Albany and Schoharia Cos.,N.Y.; Cumb.,Md;2d.Amm.Rep.N.Y.State Geol.,pl.44,f.27, 28,1883.

Strophomena magnifica Billings,CanaJour.Sci.Arts,VI, p.348,1861;Geol.Canada,p.961,f.468,1863.

Strophodonta vascularia Hall(part) Pal.N.Y.,III,p. 413,pl.92,f.4;pl.95,f.10(not pl.93,f.2b,2c-? S. magniventra),1859;Oriskany ss.Helderberg mountains Albany Co.

Leptostrophia magnifica.Clarke,N.Y.State Mus.,Mem.,

III,No.3,p.53,pl.7,f.36,1900;N.Y.State Mus.,Mem. IX,pt.1,p.190-181,pl.38,f.1,2,pl.39,f.9,10,1908.-Stewart,Dev. of Mo.,p.233-234,pl.62,f.1-3,1922; Little Saline Creek ls.Ste Genevieve Co.

Stropheodonta magnifica Weller,Pal.N.J.,III,p.324, 345,pl.41,f.5,6ppl.45,f.10,11,1903;Oriskany.

Stropheodonta (Leptostrophia)magnifica.Hall and Clarke,Pal.N.Y.,VIII,pt.1,p.288,pl.13,f.27,28, 1892.-Schuchert,Md.Geol.Surv.,L.Dev.,p.318-319, pl.58,f.2-5,1913;Oriskany Form.,Ridgely Mem.Knobly Mtn.;Devil's Backbone.;Warrne Point,Penn.;Pendleton Co.,W.Va.

Stropheodonta (Leptostrophia) Magniventra Hall

Strophodonta magniventra Hall,10th.Rep.N.Y.State Cab. Nat.Hist.,p.54,1857;Pal.N.Y.,III,p.411,pl.92,f.2a-c,3;pl.95,f.9,1859. Oriskany ss.Albany and Schoharie Cos.,N.Y.Cumb.,Md.;2d.Ann.Rep.N.Y.State Geol., pl.44,f.35,36,1883.

Strophomena magniventra Billings,Canadian Jour.Sci., Arts,VI,p.349,1861;Geol.Canada,p.961,f.469,1863; Pal.Foss.,II,p.22,f.10-12,pl.3,f,2,2a,1874.

? Strophodnnta lincklaeni Hall,Pal.N.Y.,III,pl.93,f. 2a,(not f.3a,b,-S.lincklaeni)

Strophodonta vascularia Hall(part) pal.N.Y.,III,pl.93 f.2b,c,(not pl.92,f.4;pl.95,f.10-S.magnivica)1859.

? Stropheodonta lincklaeni Clarke,N.Y.State Mus.,III, No.3,p152,pl.7,f.37,1900.

Leptostrophia magniventra Stewart,Dev. of Mo;,p.234-235,pl.62,f.4,5,1922;Little Saline Creek ls.Ste Genevieve Co.

Stropheodonta (Leptostrophia) magniventra.Hall and Clarke,Pal.N.Y.VIII,pt.1,p.288,pl.13,f.25,26,1892.-Schuchert,Md.Geol.Surv.,L.Dev.,p.319-320,pl.58,f. 6-8,1913;Oriskany Form.,Ridgley Mem,,Cumberland Martin Mountain;Millers Spring,near Cumb.

Stropheodonta maynardi Clarke and Swartz

Stropheodonta maynardi Clarke,and Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.551-552,pl147,f.15-18,1913; Jennings Form.,Chemung Mem.Town Creek.

Stropheodonta mineolansis Branson

Stropheodonta mineolansis Branson,Mo.Bur.Geol.& Mines XVII,2d.ser.,p.81,pl.13,f.18-21,1922;Mineola ls. Ralls Co.

Stropheodonta missouriensis Stewart

Stropheodonta missouriensis Stewart,Dev. of Mo.,p.232, pl.61,f.21,22,1922;Little Saline Creek ls.Ste Genevieve Co.

Stropheodonta mucronata Hall (non Conrad) See Leptostrophia interstrialis (Vanuxem)

Stropheodonta (Pholidostrophia) nacrea (Hall)

Strophodonta nacrea Hall,Pal.N.Y.IV,p.194,pl.18,f.1½ 1867;3d.Ann.Rep.N.Y.State Geol.,pl.46,f.20-24,1883. -Nettleroth,Ky.Foss.Shells,p.146,1889.

Stropheodonta (Pholidostrophia) nacrea.Hall and Clarke, Pal.N.Y.,VIII,pt.1,p.287,pl.15,f.20-24,1892;pt.2, pl.24,f.11,1895.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.199,f.102,1899;Encrinal ls.Avery's Creek.

Refer to Pholidostrophia iowaensis(Owen) U.S.G.S.,Bull 87,p.308,1897.

Stropheodonta navalis Swallow

Strophodonta navalis Swallow,Trans.St.Louis Acad.Sci., I,½.635,636,737,1860.

Stropheodontanavalis.Schuchert,U.S.G.S.,Bull.87,p.424-425,1897.-Branson,Dev. of Mo.,p.82,pl.11,f.7;pl.12, f.4-8,pl.14,f.12,1922;Snyder Creek shale.

Stropheodonta navalis boonensis Swallow

Strophodontainflexa Swallow,Trans.St.Louis Acad.Sci., I,p.637,1860.

Stropheodonta navalis boonensis Schuchert,U.S.G.S.,Bull 87,p.425,1897.

Stropheodonta inflexa Branson,Mo.Bur.Geol.& Mines, XVII,2d.ser.,p.81,pl.13,f.13-17,1922;Snyder Creek shale.

Stropheodonta nearpassi Schuchert,SeeStropheodonta(Leptostrophia) bipartita(Hall)

Stropheodonta patersoni Hall

Strophomena (Strophodonta) patersoni Hall,10th.Ann. Rep.N.Y.State Cab.Nat.Hist.,p.114,f.1-5,1857.

Strophomena ? patersoni Billings, Canadian Jour. Sci., Arts, VI, p.340, f.115, 1861.

Strophomena patersoni Billings, Geol. Canada, p.367, f. 374, 1863.-Nicholson, Pal. Prov. Ontario, p.67, 1873.

Strophodontapatersoni. Hall, Pal. N.Y., IV, p.89, pl.12, f. 9-11, pl.13, f.1-5, 1867. 2d. Ann. Rep. N.Y. State Geol. pl. 45, f.15, 1883.-Walcott, U.S.G.S., Mon. VIII, p.119, 1884.

Stropheodonta patersoni. Hall and Clarke, Pal. N.Y., VIII, pt.1, pl.14, f.15, 1892.-Schuchert, U.S.G.S., Bull.87, p. 425, 1897.-Grabau and Shimer, N.Am. Index Foss., I, p. 215-216, f.258, 1909.-Kindle, U.S.G.S., Bull.508, p.75, pl.3, f.5, 6, 1912.-Branson and Williams, Dev. of Mo., p.135, pl.32, f.10, 11, 1922; Grand Tower ls. Little Saline Creek.

Stropheodonta perplana Cleland, See Stropheodonta (Leptostrophia) perplana (Conrad)

Stropheodonta (Leptostrophia) perplana (Conrad)

Strophomena perplana. Conrad, Jour/Acad. Nat. Sci., Phila. VIII, p.257, pl.14, f.11, 1843.-Rogers, Geol. Penn. II, pt.2, p.827, f.665, 1858.-Billings, Canadian Jour. Sci., Arts, 2d. ser., VI, p.343, 1861.-Proc. Portland Soc. Nat. Hist., p.109, 1863.-Nicholson, Pal. Prov. Ontario, p.64, 1873.

Strophomena delthyris Conrad, Jour. Acad. Nat. Sci., Phila VIII, p.258, pl.14, f.19, 1842.

Strophomena pluristriata Conrad, Ibidem, p.259, 1842.

Strophomena crenistriata Hall, Geol. N.Y., 4th. Dist., p.171, f.4, 1843.

Strophomena (Strophodonta) crenistriata Hall, 10th. Rep. N. Y. State Cab. Nat. Hist., p.111, 1857.

Strophomena (Strophodonta) fragilis Hall, Ibidem, p.143, 1857.

Strophodonta fragilis Hall, Geol. Iowa, I, pt.2, p.496, pl.3, f.6, 1858.

Strophodonta perplana. Hall, Pal. N.Y., IV, p.92, 98, pl.11, f. 22; pl.12, f.13-15, pl.17, f.1, 1867.-Rathburn, Proc. Boston Soc. Nat. Hist., XX, p.35, 1879.-Hall, 2d. Ann. Rep. N.Y. State Geol. pl.46, f.2-15, 1883.-Walcott, U.S.G.S., Mon. VIII, p.120, pl.13, f.11, 1884.-Nettleroth, Ky. Foss. Shells, p.147, pl.18, f.17, 1889.-Beecher, Am. Jour. Sci., 3d. ser., XLV, p.357, pl.17, f.17, 1891.-Keyes, Johns Hop-

kins Univ. Circ., XI, p.29, 1891.-Whiteaves, Contr. Can. Pal., I, p.220, 1891.

Leptostrophia perplana. Clarke, N.Y. State Mus., Bull.65, p.243, 1903.-Branson and Williams, Dev. of Mo., p. 135-136, pl.35, f.15, 16, 1922; St. Laurent ss.

Stropheodonta perplana. Schuchert, U.S.G.S., Bull.87, p. 425, 1897.-Weller, Pal. N.J., III, p.366, pl.51, f.12, 13, 1903; Onondaga ls.-Cleland, Wisc. Geol. Nat. Hist., Surv. Bull.21, p.89, pl.18, f.1-4, 1911.

Stropheodonta (Leptostrophia) perplana. Hall and Clarke, Pal. N.Y., VIII, pt.1, p.288, pl.15, f.2-13, 1892.-Grabau, Buffalo Soc. Nat. Sci., Bull.6, p.196, f.100, 1899; Moscow sh.; Encrinal ls. Lake Shore and Avery's Ravine.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.618-619 pl.5, f.3-7, 1901; Sellersburg beds and Jeffersonville ls. Little Rock Creek, Cass Co; From Shelly Co. to the Ohio in Indiana.-Grabau and Shimer, N. Am. Index Foss. I, p.217, f.264, 1909.-Prosser and Kindle, Md. Geol. Surv Mid.& Up. Dev., p.134-136, pl.9, f.11-17, 1913; Romney Form., Hamilton Mem. S.E. Cumb.; Jennings Run, W. Corriganville; N. Hancock; McCoy's Ferry; B.& O.R.R. Cut Hancock Station, W. Va.

Stropheodonta perplana. Cleland, Schuchert, Weller, See Stropheodonta (Leptostrophia) perplana (Conrad)

Stropheodonta perplana nervosa Calvin, See Leptostrophia rockfordensis Fentonand Fenton

Stropheodonta perplana var nervosa Hall, See Leptostrophis perplana var nervosa (Hall)

Stropheodonta (Leptostrophia) planulata (Hall)

Strophodonta planulata. Hall, Pal. N.Y., III, p.184, pl.16, f.9-13, 1859; L. Helderberg group. Helderberg mtns.,-Schuchert, U.S.G.S., Bull.87, p.426, 1897.-Weller, Pal. N.J., III, p.278, pl.37, f.1, 2, 1903; Coeymans ls.-Schuchert, Md. Geol. Surv., L. Dev., p.315, pl.57, f.14-16, 1913 Helderberg Form., Coeymans Mem. Dawson. New Scotland Mem. Dawson; Devil's Backbone. Becraft Mem. Wash., Co., Md.; Warren Point, Penn.-Tansey, Dev. of Mo., p.187-188, pl.46, f.1, 2, 1922; Bailey ls. Little Saline Creek, Ste. Genevieve Co.

Stropheodonta planulata Schuchert, Weller, See Stropheodonta (Leptostrophia) planulata (Hall)

Stropheodonta plicata Hall

Strophodonta plicata. Hall, 13th. Rep. N.Y., State Cab. Nat.

Hist.,p.90,1860;Pal.N.Y.,IV,p.114,1867.-Nettleroth, Ky.Foss.,Shells,p.149,1889.

Stropheodonta plicata.Schuchert,U.S.G.S.,Bull.87,p. 426,1897.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.200, f.104,1899;Demissa bed.

Stropheodonta quadrata Schuchert,See Stropheodonta equicostata Swallow

Stropheodonta subcymbiformis Schuchert,See Strophedonta navalis Swallow.

Strophéodonta textilis Schuchert,See Stropheodonta (Leptostrophia) bipartita (Hall)

Stropheodonta thomasi Fenton and Fenton

Stropheodonta thomasi Fenton and Fenton,Contr.Mus.Univ Mich.,I,p.86-87,pl.20,f.1-5,1924;Spirifer zone.Hackberry Stage.

Stropheodonta varistriata (Conrad)

Strophomena varistriata Conrad,Jour.Acad.Nat.Sci.,Phila VIII,p.255,pl.14,f.6,1842.-Billings,Pal.Fossils,II, p.26,pl.2,f.3,1874.

Strophodonta varistriata Hall,Pal.N.Y.,III,p.180,pl.8, f.1-16pl.16,f.1-8,1859;Tentaculite and Pentamerus ls.Helderberg mountains;Hudson,Catskill,Schohatie, Carlisle,etc.;2d.Ann.Rep.N.Y.State Geol.,pl.44,f. 6-16,(?f.21,22,)1883.

Strophomena rectilateris Conrad,Jour.Acad.Nat.Sci.,Phila.,VIII,p.255,pl.14,f.7,1842.

Strophomena impressa Conrad,Ibidem,p.255,1842.

Stropheodonta (Brachyprion) varistriata Hall and Clarke Pal.N.Y.,VIII,pt.1,pl.13,f.6-16,21,22,1892.

Stropheodonta varistriata.Schuchert,U.S.G.S.,Bull.87,p 427,1897.-Weller,Pal.N.J.,III,p.274-275,pl.27,f.4, 1903;Coeymans ls.-Maynard,Md.Geol.Surv.,L.Dev.,p. 312-313,pl.59,f.1,2,1913;Helderberg Form.,Keyser Mem.Cash Valley,Md.;Hyndman,Penn.

Stropheodonta varistriata var arata Hall and Clarke,See Stropheodonta arata (Hall)

Stropheodontavaristriata var arata Shimer,See Stropheodonta arata (Hall)

Strophodonta varistriata var arata Weller, See Strophodonta arata (Hall)

Strophodonta aequicostata Swallow, See Stropheodonta equicostata Swallow (part) and Stropheodonta callawayensis Swallow (part)

Strophodonta altidorsata Swallow, see Stropheodonta navalis Swallow

Strophodonta arcuata. Calvin, Hall, Walcott, see Douvillina arcuata (Hall)

? Strophodonta arcuata Whiteaves, see Douvillina arcuata (Hall)

Strophodonta beckii Hall, see Stropheodonta (Leplostrophia) beckii Hall

Strophodonta callawayensis, see Stropheodonta callawayensis Swallow.

Strophodonta cancace Hall & Whitfield, see Leptostrophia canace (Hall & Whitfield)

Strophodonta cavumbona Hall, see Strophonella punctulifera (Conrad)

Strophodonta cayuta Hall, see Douvillina cayuta (Hall)

Strophodonta demissa. Hall, Keyes, Nettleroth, Nicholson, Walcott, White, Whiteaves, Whitfield, see Stropheodonta demissa (Conrad)

Strophodonta dèmosa(?) Owen, See Stropheodonta demissa (Conrad)

Strophodonta fragilis Hall, See Stropheodonta (Leptostrophia) perplana (Conrad)

Strophodonta geniculata (Hall) see Strophonella geniculata (Hall)

Strophodonta headleyana Hall, See Strophonella headleyana (Hall)

Strophodonta hybrida Hall & Whitfield, See Strophonella hybrida (Hall & Whitfield)

Strophodonta inaequiradiata. Hall, Walcott, See Stropheodonta Hall

Strophodonta inaequiradiata. Hall, Walcott, See Stropheodonta inaequiradiata Hall

Strophodonta inaequistriata.Hall,Nettleroth,See Strophe-odonta inaequistriata (Conrad)

Strophodonta indenta Miller,See Stropheodonta indenta (Conrad)

Strophodonta inflexa Swallow,See Stropheodonta navalis boonensis Swallow.

Strophodonta intermedia Hall,See Hipparionyx proximus Vanuxem.

Strophodonta kemperi Swallow,See Stropheodonta navalis Swallow

Strophodonta leavenworthana Hall,See Strophonella leavenworthana (Hall)

Strophodonta lincklaeni Hall,See Stropheodonta (Leptostrophia) magniventra (Hall)

Strophodonta magnifica Hall,See Stropheodonta (Leptostrophia) magnifica (Hall)

Strophodonta magniventra Hall,See Stropheodonta(Leptostrophia) magniventra Hall

Stropheodonta nacrea Hall(part) see Pholidostrophia iowaensis (Owen)

Strophodonta nacrea.Hall(part),Nettleroth,See Stropheodonta (Pholidostrophia) nacrea(Hall)

Strophodonta navalis Swallow,See Stropheodonta navalis Swallow.

Strophodonta patersoni.Hall,Walcott,See Stropheodonta patersoni Hall

Strophodonta perplana.Beecher,Hall,Keyes,Nettleroth, Rathburn,Walcott, and Whiteaves,See Stropheodonta (Leptostrophia) perplana (Conrad)

Stropheodonta planulata Hall,See Stropheodonta (Leptostrophia)planulata (Hall)

Strophodonta plicata.Hall,Nettleroth,See Stropheodonta plicata Hall.

Strophodonta punctulifera.Hall,Walcott,See Strpphonella punctulifera (Conrad)

Strophodonta quadrata Swallow,See Stropheodonta callo wayensis Swallow(part) and Stropheodonta equicosta-

ta Swallow (part)

Strophodonta reversa Hall, See Strophonellareversa Hall

Strophodonta reversa Schuchert, See Strophonella hybrida (Hall & Whitfield)

Strophodonta subcymbiformis Swallow, See Stropheodonta cymbiformis Swallow

Strophodonta navalis Swallow, See Stropheodonta navalis Swallow.

Strophodonta textilis Hall, See Stropheodonta(Leptostrophia) junica (Hall)

Strophodonta varistriata Hall, See Stropheodonta varistriata (Conrad)

Strophodonta varistriata var.arata Hall, See Stropheodonta arata (Hall)

Strophodonta vacularia Hall, See Stropheodonta (Leptostrophia) magniventra (Hall)

Genus STROPHOMENA Rafinesque
(1820. Strophomenes. Rof.-Strophomena, Blainv. (1825), Malac. p.513)

Strophomena (Strophodonta) sp.? Meek & Worthen

Strophomena (Strophodonta sp? Meek & Worthen, Ill.Geol. Surv., III, p.411, pl.9, f.9, (7a?) 1868.; Carniferous group. Yellowish s.s. horizon Onon. N.Y., series. Union Co., Ill.

Strophomena (Strophodonta) sp. Meek & Worthen,

Strophomena (Strophodonta) sp. M.& W. Ill. Geol. Surv., III, p.412, pl.6, f.6a, b, 1868; carniferous group. Yellowish s.s. Onon. N.Y. Series, Union, Co., Ill.

Strophomena arctosbriata Hall, See Schuchertella arctostriata (Hall)

Strophomena (?) bipartita Schuchert, See Stropheodonta (Leptostrophia) bipartita (Hall)

Strophomena carinata Conrad 1838, See Tropidoleptus carniatus Conrad.

Strophomena carinata Conrad 1842(non 1838) See Chonetes

coronatus (Conrad)

Strophomena (Strophedonta) concava Hall, See Strophedonta concava Hall

Strophomena conradi Hall

Strophomena conradi Hall, Pal. N.Y., III, p.194, pl.16, f. 13,14,1859; L. Helderberg Group. Schoharie.

Strophomena delthyris conrad, See Strophedonta (Leptostrophia) perplana (Conrad)

Strophomena demissa. Billings, Conrad, Rogers, see Strophedonta demissa (Conrad)

Strophomena (Strophodonta) demissa. Hall, Meek, Stropheodonta demissa (Conrad)

Strophomena depressa Hall, see Strophomena rugosa Hall

Strophomena depressa var. ventricosa Hall, see Leptaena rhomboidalis var. ventricosa (Hall)

Strophomena depressa Vanuxem, See Leptaena rhomboidalis (Wilckens)

Strophomena englypha. Conrad, Etheridge, Roemer, see Strophonella punctulifera (Conrad)

Strophomena (Strophodonta) fragilis Hall, see Stropheodonta (Leptostrophia) perplana (Conrad)

Strophomena impressa Hall, see Stropheodonta varistriata (Conrad)

Strophomena inequiradiata Billings, see Brachyprion majus Clarke.

Strophomena inaequiradiata Billings, See Stropheodonta inaequiradiata Hall

Strophomena (Strophodonta) inaequiradiata Hall, Stropheodonta inaequiradiata Hall

Strophomena crenistriata Hall, See Stropheodonta (Leptostrophia) perplana (Conrad)

Strophomena (Strophodonta) crenistriata Hall, See Stropheodonta (Leptostrophia) perplana (Conrad)

Strophomena inaequistriata. Billings, Conrad, Hall, See Stropheodonta inaequistriata (Conrad)

Strophomena (Strophodonta) inaequistriata Hall, See Stro- inaequistriata (Conrad)

Strophomena indenta Billings, See Stropheodonta indenta (Conrad)

Strophomena interstrialis Vanuxem, (non Phillips) See Leptostrophia interstrialis (Vanuxem)

Strophomena ithacensis Vanuxem, See Atrypa reticularis (Linne)

Strophomena lachoymosa Conrad, See Productella lachoymosa (Conrad)

Strophomena laticosta Sandberger, See Tropidoleptus carinatus (Conrad)

Strophomena (Strophodonta) leavenworthana, See Strophonella leavenworthana (Hall)

Strophomena magnifica Billings, See Stropheodonta (Leptostrophia) magnifica (Hall)

Strophomena magniventra Billings, See Stropheodonta (Leptostrophia) magniventra Hall

Strophomena membranacea Vanuxem, See Productella hirsuta Hall

Strophomena mucronata Hall, See Chonetes mucronatus Hall

Strophomena nervosa Hall, See Leptostrophia perplana var. nervosa (Hall)

Strophomena (Strophodonta) patersoni Hall, See Stropheodonta patersoni Hall

Strophomena ? patersoni Billings, See Stropheodonta patersoni Hall

Strophomena patersoni. Billings, Nicholson, See Stropheodonta patersoni Hall

Strophomena perplana. Billings, Conrad, Nicholson, Rogers, see Stropheodonta (Leptostrophia) perplana (Conrad)

Strophomena pileopsis Dumont, see Leptaena rhomboidalis, Wahlenberg

Strophomena pluristriata Conrad, See Strophodonta (Leptostrophia) perplana (Conrad)

Strophomena punctulifera Billings, See Strophonella punctulifera (Conrad)

Strophomena punctulifera. Conrad, Rogers, Vanuxem, See Strophonella punctulifera (Conrad)

Strophomena (Strophodonta) punctulifera Hall, See Strophonella punctulifera (Conrad)

Strophomena pustulosa Hall, see Strophalosia truncata (Hall)

Strophomena radiata Vanuxem, see Strophonella radiata (Vanuxem)

Strophomena rectilateris Conrad, see Stropheodonta varistriata (Conrad)

Strophomena rhomboidalis. Billings, Davidson, Hall, see Leptaena rhomboidalis (Wilckens)

Strophomenarugosa Hall, See Leptaena rhomboidalis (Wilckens) (See list of probable synonyms in Pal.N,Y. III, p.195, 1859)

Strophomenarugosa var ventricosa Hall, See Leptaena ventricosa (Hall)

Strophomena (Strophodonta) subsemissa. Hall, Meek, See Stropheodonta demissa (Conrad)

Strophomena syrtalis Conrad, See Chonetes Coronatus (Conrad)

Strophomena undulatus Vanuxem, See Leptaena rhomboidalis (Wilckens)

Strophomena undulosa. Conrad, See Leptaena rhomboidalis (Wilckens)

Strophomena varistriata. Billings, Conrad, See Stropheodonta varistriata (Conrad)

Strophomena woolworthana Hall, See:
Schuchertella woolworthana (Hall)
Orthothetes woolworthana (Hall)

Genus STROPHONELLA Hall
(1892. Pal. N.Y., VIII, pt. 1, p. 290-293)

Strophonella sp. Clarke and Swartz

Strophonella sp. Clarke and Swartz, Md. Geol. Surv., Mid. & Up. Dev., p. 558, 1913; Jennings Form., Chemung Mem. W. Tonoloway, Md.

Strophonella cavumbona Hall and Clarke, See Strophonella punctulifera(Conrad)

Strophonella crassa Rowley

Strophonella crassa. Rowley, Am. Geol. XIII, p.153, f.4-6, 1894.-Schuchert, U.S.G.S., Bull. 87, p.438, 1897.-Greger Am. Jour. Sci., XXVII, p.377, 1909.-Branson, Mo. Bur. Geol. & Mines, XVII, 2d. ser., p.83, pl.11, f.12-14, 1922; Snyder Creek sh.

Strophonella geniculat(Hall)

Strophononta geniculata Hall, Pal. N.Y., III, p.483, pl. 23, f.6a-c, 1859; ls. L. Helderberg group. Cumb., Md.

Strophonella geniculata Maynard, Md. Geol. Surv., L. Dev., p.321-322, pl.59, f.3-5, 1913; Helderberg Form., Keyser Mem. Devil's Backbone; Cash Valley, Tonoloway, Md. Keyser, W. Va.

Strophonella headleyana(Hall)

Strophodonta headleyana Hall, Pal. N.Y., III, p.185, pl.20. f.1-3, 1859; L. Helderberg group. Helderberg mountains. Schoharie, Hudson, etc.

Strophonella headleyana Schuchert, Md. Geol. Surv., L. Dev. p.325-326, pl.59, f.12, 1913; Helderberg Form., New Scotland Mem. Corriganville.

Strophonella hybrida(Hall and Whitfield)

Strophodonta hybrida Hall and Whitfield, 23d. Ann. Rep. N. Y. State Cab. Nat. Hist., p.239, 1873.

Strophodonta reversa Schuchert, U.S.G., S, Bull. 87, p.439, 1897.

Strophonella reversa C.L. Fenton, Am. Jour. Sci., 4th. ser., XLVIII, p.371, 1919.

Strophonella hybrida. Calvin, Iowa Geol. Surv., VII, p.167, 1897.-Fenton and Fenton, Contr., Mus. Univ., Mich. I, p. 111-113, pl.23, f.12-15, pl.24, f.1-10, 1924; Spirifer zone. Hackberry Stage.

Strophonella hybrida ponderosa Fenton and Fenton

Strophonella reversa Hall and Clarke, (part) Pal. N.Y., VIII, pt.1, pl.12, f.19, 1892.

Strophonella hybrida ponderosa Fenton and Fenton, Contr Mus. Univ. Mich., I, p.114-117, pl.24, f.11-15, 1924; Spir-

ifer zone.Hackberry Stage.Rockford and Hackberry Grove.

Strophonella hybrida form quadrata Fenton and Fenton

Strophonella hybrida form quadrataFenton and Fenton, Contr.Mus.Univ.Mich.,I,p.114,pl.23,f.16-18,1924; Spirifer zone.Hackberry Stage.Rockford.

Strophonella keyserensis Swartz

Strophonella keyserensis Swartz,Md.Geol.Surv.,L.Dev., p.324-325,pl.59,f.11,1913;Helderberg Form.,Keyser Mem.Tonoloway,Md.

Strophonella leavenworthana (Hall)

Strophomema(Strophodonta) leavenworthana Hall,10th.Ann Rep.N.Y.State Cab.Nat.Hist.,p.53,1857.

Strophodonta leavenworthana Hall,Pal.N.Y.,III,p.189, pl.21f,5-7,pl.23,f.1,2,1859;L.Helderberg group. Helderberg mountains.

Strophonella leavenworthana.Hall and Clarke,Pal.N.Y., VIII,pt.1,p.292,pl.12,f.6-9,1893.-Weller,Pal.N.J. III,p.302,pl.34,f.1-3,1903;New Scotland Mem.-Schuchert ,Md.Geol.Surv.,L.Dev.,p.322-323,pl.59,f.6,7, 1913;Helderberg Form.,Coeymans Mem.Keyser,W.Va; Dawson;Devil's Backbone;Md.New Scotland Mem.Dawson; Devil's Backbone;near Cumb.

Strophonella obesa Fenton and Fenton

Strophonella obesa Fenton and Fenton,Contr.Mus.Univ. Mich.,I,p.108-109,pl.23,f.4-7,1924;Spirifer zone. Hackberry Stage.Rockford and Hackberry Grove.

Strophonella obesa plicatella Fenton and Fenton

Strophonella obesa plicatella Fenton and Fenton,Contr. Mus.Univ.Mich.,I,p.110,pl.23,f.8,1924;Strophonella faunule.Hackberry Stage.Bird Hill.

Strophonella punctulifera(Conrad)

Leptaena punctulifera Conrad,2d.Rep.N.Y.,Geol.Surv., p.112,117,1838.

Strophomena euglypha Conrad,5th.Rep.N.Y.,Geol.Surv., p.36,1841.-Roemer,Sil.Fauna,d.West Tenn.,p,66,pl. 5,f.3,1860.-Etheridge,Quart.Jour.Geol.Soc.London, XXXIV,p.597,1878.

Strophomena punctulifera.Vanuxem.Geol.N.Y.,Rep.3d.Dist p.122,f.5,1842.-Rogers,Geol.Penna.II,pt.2,p.826, f.648,1858.-Billings,Proc.Portland Soc.Nat.Hist., p.108,pl.3,f.2,1863;Geol.Canada,p.957,f.448,1863 Pal.Foss.,II,p.31,pl.3,f.2,1874.

Strophomena (Strophodonta) punctulifera Hall,10th.Rep. N.Y.State Cab.Nat.Hist..p.50,f.1,1857.

Strophodonta punctulifera.Hall,Pal.N.Y.,III,p.188,pl. 21,f.4;pl.23,f.4-7,1859;L.Helderberg group.Helderberg mountains;Schoharie,Carlisle,Hudson,Catskill; Columbia,Herkimer Co,etc.-Walcott,U.S.G.S.Mon,VIII, p.p.121,pl.13,f.10,1884.

Strophonella punctulifera.Hall,28th.Rep.N.Y.State Mus. Nat.Hist.,p.154,1879;2d.Ann.Rep.N.Y.State Geol.,pl. 43,f.10-12,1883.-Hall and Clarke,Pal.N.Y.,VIII,pt.1 p.292,pl.12,f.10-12,1892.-Schuchert,U.S.G.S.,Bull. 87,p.439,1897.-Weller,Pal.N.J.,III,p.277,301,pl.27, f.6-8,pl.33,f.9,1903;Coeymans ls.;Becraft- New Scotland fauna.-Shimer,N.Y.State Mus.,Bull.80,p.242 1905.-Clarke,N.Y.State Mus.Mem.,IX,pt.1,p.111,pl. 37,f.10,11,1908;Clarke,N.Y.State Mus.,Mem.IX,pt.2, p.45,pl.9,f.16-18,1909.-Schuchert,Md.Geol.Surv.,L. Dev.,p.323,pl.59,f.8-10,1913;Helderberg Form.,Coeymans Mem.Dawson;Devil's Backbone.New Scotland Mem. Dawson;Corriganville,Md.;Warren Point,Penn.-Tansey, Dev. of Mo.,p.188-189,pl.47,f.3-6,1923;Bailey ls. Little Saline Creek,Ste.Genevieve Co.

Strophodonta cavumbona Hall,10th.Ann.Rep.N.Y.State Cab Nat.Hist.,p.51,1857;Pal.N.Y.,III,p.187,pl.21,f.1-3,1859;L.Helderberg group.Helderberg mountains. Schoharie,Catskill,etc.

Strophonella cavumbona Hall and Clarke,Pal.N.Y.,VIII, pt.1,p.291-292,1892.

Strophonella reversa C.L.Fenton,See Strophonella hybrida (Hall and Whitfield)

Strophonella reversa Hall

Strophodonta reversa Hall,Geol.Surv.,Iowa,I,pt.2,p. 494,pl.3,f.4,1858.

Strophonella reversa.Hall,28th.Ann.Rep.N.Y.,State Cab. Nat.Hist.,p.154,1879.-Hall and Clarke,(part) Pal. N.Y.,VIII,pt.1,p.293,pl.12,f.16-20,(See remarks) 1892.-Grabau and Shimer,M.Am.Index Foss.,I,p.222, f.270,1909.-Fenton and Fenton,Contr.Mus.Univ.Mich., I,p.98-102,pl.22,f.1-17,1924;Spirifer zone.Hackberry Stage.Rockford;Hackberry Grove;Bird Hill.

Strophonella cf reversa Clarke and Swartz,Md.Geol. Surv.,Mid.&Up.Dev.,p.557-558,pl.49,f.18,1913;Jennings Form.,Chemung Mem.S.Oakland.

Strophonella reversa Hall and Clarke,See:
Strophonella hybrida ponderosa Fenton and Fenton
Strophonella reversa Hall

Strophonella reversa form alta Fenton and Fenton

Strophonellareversa form alta Fenton and Fenton,Contr. Mus.Univ.,Mich.,I,p.103,pl.22,f.20-22,1924;Spirifer zone.Hackberry Stage.Rockford;Hackberry Grove.

Strophonella reversa of most authors.

Strophonella reversa gravis C.L.Fenton,Am.Mid.Nat.,V,p. 314,pl.6,f.18-22,1918.-Fenton and Fenton,Contr.Mus. Univ.Mich.,I,p.105-107,pl.22,f.23-30,1924;Spirifer zone.Hackberry Stage.Bird Hill.

Strophonella reversa form lata Fenton and Fenton

Strophonella reversa form lata Fenton and Fenton,Contr Mus.Univ.Mich.,I,p.104-105,pl.22,f.18,19,1924;Spirifer zone.Hackberry Stage.Hackberry and Bird Hill.

Strophonella reversa of most identifications;S.hybrida of some.

Strophonella reversa miscellaneous minor variations Fenton and Fenton,Contr.Mus.Univ.Mich.,I,p.105,pl.22,f.16-17,1924/

Strophonella reversa triangularis Fenton and Fenton

Strophonella reversa triangularis Fenton and Fenton,Contr.,Mus.Univ.Mich.,I,p.108,pl.23,f.9-11,1924;Hackberry Grove.

Strophonella undaplicata Swartz

Strophonella undaplicata Swartz,Md.Geol.Surv.,L.Dev., p.326,pl.59,f.13,14,1913;Helderberg Form.,New Scotland Mem.Dawson;Corriganville.

Genus SYRINGOSPIRA Kindle
(1909.U.S.G.S.,Bull.391,p.28-29)

Springospira prima Kindle

Syringospira prima Kindle,U.S.G.S.,Bull.391,p.29-30,pl 7,f.8-8d;pl.8,f.1,1a,1909;Ouray ls.Hillsboro,N.Mex.

Genus SYRINGOTHYRIS Winchell

Syringothyris sp.Branson

Syringothyris sp.Branson,Mo.Bur.Geol.&Mines,XVII,2d. ser.,p.104,pl.20,f.1,2,1922;Mineola ls.

Syringothyris occidentalis (Swallow)

Cyrtia occidentalis Swallow,Trans.St.Louis Acad.Sci., I,p.648-649,1860.Greger,Am.Jour.Sci.,XXVII,p.378, 1909.

Cyrtina occidentalis Miller,N.Am.Geol.& Pal.p.343,1889

Cyrtina ? occidentalis Schuchert,U.S.G.S.,Bull.87,p. 199,1897.

Syringothyris occidentalis.Keyes,Mo.Geol.Surv.,V,p. 86,1894.-Schuchert,Am.Jour.Sci.,XXX,p.323-324,1910 Branson,Geol.Mo.,p.100-101,f.7,1918,Greger,Am.Jour. Sci.,L,p.23,1920.-Branson,Dev. of Mo.,p.103,pl. 20,f.3-5,pl.21,f.1-3,pl.23,f.1,1922;Callaway ls.

Syringothyris texta (Hall) Schuchert var chemungensis Cushing

Spirifer textus Hall,10th.Rep.N.Y.State Cab.Nat.Hist., p.169,1857.

Spirifer carteri Meek,Geol.Surv.,Ohio,Pal.II,pl.14,f. 7,1875.

Syringothyris texta Schuchert,9th.Ann.Rep.N.Y.Btate Geol.p.34,1890.

Syringothyris texta (Hall) Schuchert var Chemungensis Prosser,Geol.Surv.Ohio,4th.ser.Bull.15,p.537-539, pl.21,f.1-5,1912;Chagrin Form.,Mill Creek just N. Jefferson.

Syringothyris texta Schuchert,See Syringothyris texta (Hall) var chemungensis Cushing.

Genus TEREBRATULA Klein

Terebratula affinis Sowerby,See Atrypa reticularis (Linnaeus)

Terebratula aspera.Murch.,Vern.,Keys.,SeeAtrypa aspera Schlotheim

Terebratula concentrica Von Buch, See Athyris spiriferoides (Eaton)

Terebratula harmonia Hall, See Eunella harmonia Hall

Terebratula(Cryptonella) iowensis Calvin, See Cranaena iowensis (Calvin)

Terbratulajucunda Hall

Terebratula jucunda. Hall, Pal. N.Y., IV, p.390, pl.60, f. 29-31, 1867.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.660, pl.11, f.19, 10a, 1901; Jeffersonvillels. Pipe Creek Falls; Bunker Hill; Falls of the Ohio.

Terebratula lens Hall, See Cryptonella lens Hall

Terebratula lincklaeni Hall, See Eunella lincklaeni (Hall)

Terebbratula navicella Hall, See Cranaenella navicella(Hall)

Terebratula ovoides Eaton, See Rensselaeria ovoides(Eaton)

Terebratula pennata Atwater, See Spirifer pennatus (Atwater)

Terebratula perovalis Eaton, See Rensselaeria ovoides(Eaton)

Terebratula prisca Castelnau, See Atryparetricularí(Linne)

Terebratula pugnus Sowerby, See Pugnax pugnus Martin

Terebratula reticularis. Hall, Yandell and Shumard, See Atrypa reticularis (Linne)

Terebratula romingeri Hall, Nettleroth, See Cranaena romingeri (Hall)

Terebratula spiriferoides Eaton, See Athyris spiriferoides (Eaton)

Terebratula sullivanti Hall, See Eunella sullivanti Hall

Terebratulites aspera Schlotheim, See Atrypa aspera Schlotheim.

Terebratulites paradoxa Schlotheim, See Spirifer paradoxus Schlotheim

Terebratulites priscus Schlotheim, See Atrypa reticularis (Linneaus)

Trematis(Schizocrania) superincreta Barrett, See Schizocrania superincreta Barrett

Genus TREMATOSPIRA Hall
(Pal.N.Y.,III,p.207)

Trematospira costata Hall

Trematospira costata Hall,Pal.N.Y.,III,p.210,pl.28A, f.4a-e,1859;L.Helderberg group.Helderberg mtns.

Trematospira deweyi(Hall)

Waldhemia deweyi Hall,10th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.99,1857.

Trematospira (Rhynchospira) deweyi Hall,Pal.N.Y.,III, p.216,pl.36,f.3a-h,1859;L.Helderberg group.Helderberg mountains,Albany Co.

Parazyga dewyi Hall and Clarke,Pal.N.Y.,VIII,pt.2, p.138,f.112;pl.49,f.40,41,1893.

Trematospira deweyi Schuchert,Md.Geol.Surv.,L.Dev.,p. 429-430,pl.73,f.5-7,1913;Helderberg Form.,New Scotland.Mem.,Dawson;Corriganville;Cumberland.

Trematospira equistriata Hall and Clarke

Trematospira equistriata.Hall and Clarke,Pal.N.Y.,VIII pt.2,pl.49,f.47,1893.-Schuchert,Md.Geol.Surv.,L. Dev.p.430,pl.73,f.8,9,1913;Helderberg Form.,New Scotland Me.Corriganville,Md.,Keyser;Cherry Run; W.Va.-Tansey,Dev. of Mo.,p.201-202,pl.52,f.19,20, 1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Trematospira formosa Hall,See Rhynchospira formosa Hall

Trematospira gibbosa Hall

Trematospira gibbosa.Hall,18th.Rep.N.Y.,State Cab.Nat. Hist.,p.82,1860;Pal.N.Y.,IV,p.273,pl.45,f.7-15, 1867.-Hall,and Clarke,Pal.N.Y.,VIII,pt.2,pl.49,f. 23-27,1895.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 221,f.131A,1899;Hamilton group.Eighteen Mile Creek.

Trematospira globosa Hall,See Rhynchospira globosa(Hall)

Trematospira hirsuta Hall,See Parazyga hirsuta Hall

Trematospira imbricata Hall,See Atrypina imbricata (Hall)

Trematospira imbricata ? Keyes,See Atrypina imbricata (Hall)

Trematospira ? imoricata Meek and Worthen, See Atrypina imbricata (Hall)

Trematospira multistriata Hall

Spirifer multistriata Hall, 10th. Rep. N.Y. State Cab. Nat. Hist., p.59, f.1-6, 1857.

Spirifer perforata Hall, 10th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.60, 1857.

Trematospira perforata. Hall, Pal. N.Y., III, p.208, pl.28A, f.3i-k, 1859; L. Helderberg group. Helderberg mountains Becraft mountains, Hudson, Pal. N Y., IV, p.276, 1867.- Hall and Clarke, Pal. N.Y., VIII, pt.2, pl.49, f.5, 6, 1893

Retzia multistriata Billings, Geol. Canada, p.958, f.458, 1863.

Trematospira multistriata. Hall, Pal. N.Y., III, p.209, pl. 24, f.3a-t; pl.28A, f.5a-f; L. Helderberg group. Helderberg mountains, Schoharie, etc; Ibidem, IV, p 276, f.1-3, 1867.- Hall and Clarke, Pal. N.Y., VIII, pt.2, p.126, f. 110, pl.49, f.9-14, 1893.- Clarke, N.Y. State Mus., Mem. III, No.3, p.43, pl.6, f.1-4, 1900; Weller, Pal. N.J., III, p.315, pl.38, f.8-10, 1903; New Scotland beds. Schuchert Md. Geol. Surv., L.Dev., p.428, pl.83, f.3, 4, 1913; Helderberg Form., New Scotland Me., Corriganville, Md; Keyser, W.Va., - Stewart, Dev. of Mo., p.248, pl.65, f.4, 5, 1932; Little Saline Creek ls. Ste Genevieve Co.

Trematospira (Rhynchospira) rectirostra Hall, See Rhynchospira rectirostra (Hall)

Trematospira simplex Hall

Trematospira simplex. Hall, Pal. N.Y., III, p.211, pl.28A, f.2a-f, 1859; L. Helderberg group. Decatur Co., Tenn. - Hall and Clarke, Pal. N.Y., VIII, pt.2, pl.49, f.17, 18, 1893.- Schuchert, U.S.G.S., Bull. 87, p.454, 1897.- Schuchert, Md. Geol. Surv., L.Dev., p.427, pl.73, f.1, 2, 1913; Helderberg Form., New Scotland, Mem. Devil's Backbone.

Trematospira simplex var Hall

Trematospira simplex var Hall, Pal. N.Y., III, p.211, pl. 28, (?) f.2a-f, 1859; L. Helderberg group age. Decatur Co., Tenn.

Genus TRIGERIA Bayle
(1875. Explic. Carte Geol. de France, Atlas)
(1893. Pal. N.Y., VIII, pt.2, p.272)

Trigeria (?) lepida Hall

Trigeria(?) lepida.Hall,Pal.N.Y.,IV,p.276,pl.45,1867.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.235,f.146A, 1899.

Genus TRIPLESIA Hall
(1859.Pal.N.Y.,III,Supplement,p.523)

Triplesia extans Hall

?Triplesia extans Hall,Pal.N.Y.,III,p.522-523,f.1-3, 1859.

Genus TROPIDOLEPTUS Hall
(1857.10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.151)
(1893.Pal.N.Y.,VIII,pt.2,p.302)

Tropidoleptus carinatus(Conrad)

Strophoemna carinata Conrad,3d.Ann.Rep.N.Y.State Geol. Surv.,p.64,1839.

Leptaena laticosta (Hall) De Verneuil,Bull Soc.Geol. France,2d.ser.,IV,p.703,1847.

Tropidoleptus carinatus.Hall,10th.Rep.N.Y.State Cab. Nat.Hist.,p.31,f.1-4,1857.-Rogers,Geol.Penna.,II, pt.2,p.838,f.672,1858.-Hall,Pal.N Y.,IV,p.407-408, pl.62,f.2,3,1867.-Meek and Worthen,Ill.Geol.Surv., III,p.427,pl.13,f.2,1868;"Bake-oven" on Mo.River, Jackson Co. Hamilton group.-Hall,12th.Ann.Rep.N.Y. State Cab.Nat.Hist.,p131,f.1-4,1859; Rathburn,Buffalo Soc.Nat.Sci.,Bull.1,p.254,pl.9,f.1,9,10,26,1874.-Derby,Bull.Mus.Comp.Zool.,III,p.282,1876.-Rathburn, Proc.Boston Soc.Nat.Hist.,XX,p.35,1879.-Nettleroth, Ky.Foss.Shells,p.146,pl.17,f.14,15,1889.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29,1891.-A.Ulrich,N.Jahrb.f Mineral.,Beilageband,VIII,p.70,pl.4,f.32-34,1892.-Hall and Clarke,Pal.N.Y.,VIII,pt.2,p.304,f.227,228, pl.82,f.26-36,1893.Schuchert,U.S.G.S.,Bull.87,p.457, 1897.-Grabau,Buffalo Soc.Nat.Scil,Bull.6,p.238,f. 150,1899;Enorinal ls.-Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.595-596,pl.6,f.4,5,1901;Sellersburg beds.Norwa;N.Vernon;Deputy;Charlestown;Lexington.-Clarke,N.Y.State Mus.,Bull.65,p.344,1903;-Weller, Pal.N.J.,III,p.381-382,pl.53,f.2,1903;Monroe sh.-Grabau and Shimer,N.Am.IndexFoss.,I,p.305,f.382, 1909.-Clarke and Swartz,Md.Geol.Surv.,Mid.& Up.Dev. p.585-586,pl.55,f.1-5,1913;Jennings Form.,Chemung Mem.S.W.Round,W.Va.-Mann,Penn.Parkhead Mem.E.Bumb., W.Pawpaw,W.Va;Berkeley Springs,W.Va.,Hancock,-Prosser and Kindle,Ibidem,p.181-183.pl.16,f.7-14,1913; Romney Form.,Hamilton Mem.B.& O.R.R.Cut Md.;N.Romney W.Va.;R.R.Cut Hancock,W.Va.-Schuchert,Md.Geol.Surv.

L.Dev.,p.390-392,pl.67,f.25,1913;Oriksany Form., Ridgely Mem.Shriver's Ridge,Cumb.,Md.-Branson,and Williams,Dev.of Mo.,p.137,pl.33,f.11,12,1922;St.Laurent ls.Little Saline Creek,Ste Genevieve Co.

Leptaenalaticosta Schnur,Palaeontographica,III,p.220,pl. 40,f.2,1853.

Strophomena laticosta Sandberger,Die Brachiop.des Rheinischen Schicht.Syst.Nassau,p.66,pl.34,f.8,1855.

Genus UNCINULUS Bayle
(1893.See Pal.N.Y.,VIII,pt.2,p.197)

Uncinulus abruptus (Hall)

Rhynchonella abrupta Hall,10th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.68,f.1,1857;Pal.N.Y.,III,p.288,pl.31,f. 3,1859;L.Helderberg group.Albany and Schoharie Cos.

Uncinulus Abruptus.Hall and Clarke,Pal.N.Y.,VIII,pt.2, p.199,pl.63,f.15-21,1893.-Schuchert,U.S.G.S.,Bull.87 p.458,1897.-Schuchert,Md.Geol.Surv.,L.Dev.,p.363, pl.64,f.11,12,1913;Helderberg Form.,New Scotland Mem.Devil's Backbone,Md.;Cleor Cliff,W.Va.Becraft Mem.North Mountain.

Uncinulus campbellanus Schuchert,See Camarotoechia(Plethorhyncha)campbellana (Hall)

Uncinulus convexorus Maynard

Uncinulus convexorus Maynard,Md.Geol.Surv.,L.Dev.,p. 368-369,pl.65,f.9-14,1913;Helderberg Form.,Keyser Mem.Tonoloway;Cash Valley;Pinto Md.;near Cherry Run Keyser,W.Va.;Hyndman,Penn.

Uncinulus globulus Schuchert

Rhynchonella nucleolata Hall(in part),10th.Ann.Rep. N.Y.,State Cab.Nat.Hist.,p.68,1857;(in part) Pal. N.Y.,III,p.237,pl.31,f.1a-c,(not the many others figured which are U.nucleolata) 1859;L.Helderberg group.Helderberg mountains;Schoharie,Carlisle,etc.

Uncinulus globulus Schuchert,Md.Geol.Surv.,L.Dev.,p. 364,pl.64,f.13-15,1913;Helderberg Form.,New Scotland Mem.Corriganville;Devil's Backbone.

Uncinulus gordoni Maynard

Uncinulus gordoni Maynard,Md.Geol.Surv.,L.Dev.,p.367-368,pl.65,f.1-6,1913;Helderberg Form.,Keyser Mem. Cash Valley.

Uncinulus keyserensis Schuchert

Uncinulus keyserensis Schuchert,Md.Geol.Surv.,L.Dev.,p 388,pl.65,f.7,8,1913;HelderbergForm.,Keyser Mem., Millers Spring and Mullens Quarry,Cumb;Dawson;Tonoloway,Md;Keyser,W.Va.

Uncinulus mutabilis(Hall)

Rhynchonella mutabilis Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.66,f.1-7,1857;Pal.N.Y.III,p.225, pl.29,f.4a-p;pl.30,f.1a-e,2a-i,k-p,r,s,1859; Helderberg group.Helderberg mountains;Schoharie,Carlisle,etc.

Uncinulus mutabilis.Hall and Clarke,Pal.N.Y.,VIII,pt. 2,p.199,pl.58,f.22-25,1893.-Schuchert,U.S.G.S.,Bull 87.p.458,1897.-Weller,Pal.N.J.,III,p.283,pl.29,f.1-5,1903;Coeymans ls.-Clarke,N.Y.State Mus.,Mem.IX, pt.1,p.171,pl.28,f.3-8,1908.-Tansey,Dev. of Mo.,p. 193194,pl.49,f.17-22,1932;Baileyls.Little Saline Creek,SteGenevieve Co.

Uncinulus nucleolata Hall and Clarke,See Uncinulus nucleolatus (Hall)

Uncinulus nucleolatus (Hall)

Rhynchonella nucleolata Hall(in part) 10th.Ann.Rep, N.Y.,State Cab.Nat.Hist..p.68,1857;(in part) Pal. N.Y.,III,p.227,pl.31,f.2f-i,k-p,r-u,x,y (not f.1a-c-U.globulus,1d-f,2a-e,-U.globulus) 1859;L.Helderberg group.Helderberg mountains;Schoharie,Carlisle, etc.-Billings,Proc.Portland Soc.Nat.Hist.,p.110, pl.3,f.5,1863.

Uncinulus nucleolata Hall and Clarke,Pal.N.Y.,VIII,pt. 2,p.199,1893.

Uncinulus nucleolatus.Schuchert,U.S.G.S.,Bull.87,p. 458-459,1897.-Girty.U.S.G.S.,19th.Ann.Rep.pt.3, p.564,1899.-Weller,Pal.N.J.,III,p.284,pl.29,f.6-9, 1903;Coeymans ls.-Shimer,N.Y.State Mus.,Bull.80, p.245,1905.-Schuchert,Md.Geol.Surv.,L.Dev.,p.365, pl.64,f.16,17,1913;Helderberg Form.,Keyser Mem. Keyser,W.Va.Coeymans Mem.Corriganville;Tonoloway, Md.-Tansey,Dev. of Mo.,p.193,pl.49,f.3-16,1932; Bailey ls.Little Saline Creek,Ste Genevieve Co.

Uncinulus nucleolatus var angulatus Maynard

Uncinulus nucleolatus var angulatus Maynard,Md.Geol. Surv.,L.Dev.,p.366-367,pl.64,f.18-20,1913;Helderberg Form.(?) Keyser Mem.(?) Cumb.,Md.

Uncinulus parvus Stewart

Uncinulus parvus Stewart,Dev. of Mo.,p.239,pl.63,f. 11,13,1922;Little Saline Creek ls.Ste Genevieve Co.

Uncinulus pyramidatus (Hall)

Rhynchonella pyramidata Hall,Pal.N.Y.,III,p.229,pl. 32,f.1a-z,2a-d,1859;L.Helderberg group.Albany Co., 10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.70,1857.

Uncinulus pyramidatus.Hall and Clarke,Pal.N.Y.,VIII,pt 2,pl.58,f.27,28,1893.-Schuchert,U.S.G.S.,Bull87.p. 459,1897.-Weller,Pal.N.J.,III,p.285,pl.29,f.10,11, p.309,pl.36,f.8-11,1903;Coeymans ls.Near Hainesville.NewScotland beds.

Uncinulus salinesis Stewart

Uncinulus salinesis Stewart,Dev. of Mo,,p.239-240,pl. 63,f.8-10,1922;Little Saline Creek ls.Ste Genevieve co.

Uncinulus subpyramicatus Tansey

Uncinulus subpyramidatus Tansey,Dev. of Mo.,p.194,pl 49,f.23,24,1922;Baileyls.Little Saline Creek,Ste Genevieve Co.

Uncinulus vellicata Hall and Clarke,See Uncinulus vellicatus (Hall)

Uncinulus vellicatus (Hall)

Rhynchonella vellicata Hall,10th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.69,71,f.3,3,1857;Pal.N.Y.III,p.230, pl.33,f.1a-p,1859;L.Helderberg group.Albany and Schoharie Cos.

Uncinulus vellicata.Hall and Clarke,Pal.N.Y.,VIII,pt.2 p.199,1893.

Uncinulus vellicatus.Schuchert,U.S.G.S.,Bull.87,p.459, 1897.-Weller,Pal.N.J.,III,p.308-309,f.5-7,1903; New Scotland-Becraft Fauna.-Schuchert,Md.Geol. Surv.,L.Dev.,p.362-363,pl.64,f.7-10,1913;Helderberg Form.,New Scotland Mem.Corriganville,Md;Keyser, W.Va.Becraft Mem.Ernstville;North Mountain,Md; Cherry Run,W.Va.

Uncinulus welleri Stewart

Uncinulus welleri Stewart,Dev. of Mo.,p.240,pl.63,f. 13,14,1922;Little Saline Creek ls.Ste Genevieve Co.

Genus VITULINA Hall
(1860.13th.Rep.N.Y.State Cab.Nat.Hist.,p.72)

Vitulina pustulosa Hall

Vitulina pustulosa.Hall,13th.Rep.N.Y.State Cab.Nat. Hist.,p182,1860,Pal.N.Y.,IV,p.410,pl.62,f.1,1867.-Rathburn,Buffalo Soc.Nat.Sci.,Bull.I,p.255,pl.9,f. 2,6-8,11-13,15,20,21,27,32,1874.-Derby,Bull.Mus. Comp.Zool.III,p.282,1876.-Rathburn,Proc.Boston Soc. Nat.Hist.,XX,p.36,1879.-A.Ulrich,M.Jahrb. f.Mineral Beilageband,VIII,p.273,1891.OIbidem,Beilagebamd, VIII,p.71,pl.4,f.26-29 ,1892.-Hall and Clarke,Pal. N.Y.,VIII,pt.2,p.139,317,pl.82,f.18-25,1893.-Prosser.U.S.G.S.,Bull.120,p121,1894.-Schuchert,U.S.G.S. Bull.87,p.459,1897.-Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.228,f.138,1899;Encrinal ls.-Kindle,25th.Ann Rep.Ind.Dept.Geol.Nat.Res.,p.632-633,pl.11,f.2,2a, b,1901;Sellersburg beds.Charlestown.-Clarke,N.Y. State Mus.,Bull.65,p.345,1903;Grabau and Shimer,N. Am.Index Foss.,I,p.351,f.458,1909.-Prosser and Kindle,Md.Geol.Surv.,Mid.& Up Dev.,p.210-211,pl.20,f. 25,26,1913;Romney Form.,Hamilton Mem.E.bank Evitts Creek below Wolfe Mill;Between Romney and Hanging Rock,W.Va;N.Romney W.Va.

Genus WALDHEIMIA

Waldheimia dewyi Hall,See Trematospira deweyi (Hall)

Waldheimia formosa Hall,See Rhynchospira formosa Hall

Waldheimia globosa Hall,See Rhunchospira globosa(Hall)

Waldheimia rectrirostra Hall,See Rhynchospira rectrirostra (Hall)

Genus WHITFIELDELLA Hall and Clarke

Whitfieldella of laevis Grabau,See Whitfieldella(?) Prosseri Grabau.

Whitfieldeall(?) minuta Maynard

Whitfeildeala(?) minuta Maynarc,Md.Geol.Surv.,L.Dev., p.442,pl.73,f.41,42,1913;Helderberg Form.,Keyser Mem.Devil's Backbone;Roundtop,Md.

Whitfieldella(?) nucleolata (Hall)

Atrypa nucleolata Hall,Pal.N.Y.,II,p.328,pl.74,f.10, 1852.

Merista nucleolata.Hall,12th.Ann.Rep.N.Y.State Cab. Nat.Hist.,p.78,1859.

Meristella nucleolata Whitfield,Geol.Wisc.,IV,p.321,pl 25,f.5,1883.

Whitfieldella(?) nucleolata.Schuchert,U.S.G.S.,Bull.87 p.461,1897.-Maynard,Md.Geol.Surv.,L.Dev.,p.441,pl. 73,f.37-40,1913;Helderberg Form.,Keyser Mem.Keyser, W.Va.

Whitfieldella(?) prosseri Grabau

Meristella laevis.Whitfield,Ann.N.Y.Acad.Sci.,V,p.510, pl.5,f.6,7,1891;(in part) Ohio Pal.,VII,p.411,pl.1, f.6,7,1895.-Sherzer,Geol.Surv.Mich VII,p.223,pl.17, f.6,7,1900.

Whitfieldella cf laevis Grabau,Bull.Geol.Soc.Amer.,XI, p.369,pl.22,f.4a-d,1900.

Whitfieldella(?) prosseriGrabau Mich.Geol.Surv.,Publication II,Geol.Sec.I,p.152,pl.21,f.3,8,9,12,13;pl. 30,f.6,7,1910.-Maynard,Md.Geol.Surv.,L.Dev.,p.439-441,pl.73,f.34-36,1913;Helderberg Form.,Keyser Mem. Cherry Run,W.Va.

Genus WILSONIA Kayser

Wilsonia globosa Weller

Wilsonia globosa.Weller,Pal.N.J.,III,p.235,pl.21,f.12-22,1903.-Maynard,Md.Geol.Surv..L.Dev.,p.369-370,pl. 65,f.15-17,1913;Helderberg Form.,Keyser Mem.Cumberland,Cash Valley,Md.

Wilsonia globosa Weller

Wilsonia cf globosa Maynard,Md.Geol.Surv.,L.Dev.,p.370 -371,pl.65,f.18-20,1913;Helderberg Form.? Keyser Mem.?Tonoloway,Md.

Wilsonia wadei Dunbar

Wilsonia wadei.Dunbar,Tenn.Geol.Surv.,Bull.21,pl.2,f. 8,1919;Trans.Conn.Acad.Arts and Sci.,XXIII,p.133,pl 3,f.3,4,1920.-Tansey,Dev. of Mo.,p.195,pl.49,f.35-48;pl.50,f.1-4,1922;Bailey ls.Little Saline Creek, Ste Genevieve Co.

M O L L U S C A

Genus ACLISMA

Aclisma barnetti Kindle

Aclisma barnetti Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.717,pl.23,f.3,1901;Jeffersonville l.s. Pipe Creek Falls;Bunker Hill.

Aclisma barnetti var.elongata Kindle

Aclisma barnetti var. elongata Kindle,25th.Ann.Rep. Ind.Dept.Geol.Nat.Res.,p.717,pl.23,f.4,1901;Jeffersonville l.s. Keesport,Cass Co.,Ind.

Acroculia erecta Hall, see Platyceras erectum Hall.

Actinodesma erectum Grabau & Shimer, see Glyptodesma erectum(conrad).

Genus ACTINOPTERIA Hall
(1884.Pal.N.Y.,V,,pt.1,p.12)

Actinopteria? ap. Stewart

Actinopteria? sp. Stewart,The Dev. of Mo.,p.253,pl. 67,f.3,4,1923;Little Saline Creek l.s. Ste.Genevieve Co.,Mo.

Actinoptera sp. Prosser & Kindle

Actinopteria sp. Prosser & Kindle,Md.Geol.Surv.,Mid. and Up.Dev.,p.260-261,pl.30,f.11,1913;Romney Form., Hamilton Member,N.E.Odl Town,Md.

Actinopteria sp. Weller

Actinopteria sp. Weller,Pal.N.J.,III,p.318, not figured,1903;New Scotland-Becraft Fauna ,N.J.

Actinopteria sp. Weller

Actinopteria sp. Weller,Pal.N.J.,III,p.384,not figured,1903;Monroe sh.N.J.

Actinopteria boydi(conrad)

Avicula boydii Conrad,Jour.Acad.Nat.Sci.,Phila;VIII,p. 237,pl.12,f.4,1842.

Avicula quadrula conrad,ibidem.,p.243,pl.13,f.5,1842.

Actinopteria boydi.Hall,Pal.N.Y.,V,pt.1,Lamellibranchiata,l.p.113-116,pl.19,f.2-24,26-30;pl.84,f.16, 17,1884.-Nettleroth,Ky.Foss.Shells,p.229-230,pl. 3,f.2,1889.-Kindle,25th.Ann.Rept.Ind.Dept.Geol.Nat, Res.,p.667-668,pl.13,f.2,1901;Jeffersonville l.s. Pipe Creek Falls;Lancaster; Falls of the Ohio.-Grabau & Shimer,N.Am.Index Foss.,I,pt.449,f.592,1909.-Cleland,Wis.Geol.Nat.Hist.Surv.,Bull.21,p.109-110, pl.22,f.7,8,1911.-Clarke & Swartz,Md.Geol.Surv.,Mid & Upper Dev. p.642-644,p.64,f.2,1913;Jennings Form. Woodmont Mem; Ithaca Fauna,Woodmont,Md.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.246,f.161,1899;Pleurodictyum beds.N.Y.,-Branson & Williams,The Devonian of Missouri,p.152-153,pl.36,f.6,1922;Grand Tower l. s.Little Saline Creek;St.Laurent s.s.,Little Saline Creek,Mo.

Actinopteria boydi var. givvosa Prosser & Kindle

Actinopteria boydi var. gibbosa Prosser & Kindle,Md. Geol.Sur.,M id.& Up.Dev.,p.259-260,pl.30,f.9,10, 1913.,Romney Form.,Hamilton Member,Town Creek N.E. Oldtown,Md.

Actinopteria communis (Hall)

Avicula communis Hall,Pal.N.Y.,III,p.286,pl.52,f.1-7, pl.53,f.1,4,6,1861;L.Helderberg group.Helderberg mountains,Albany Co., and other places.

Actinopteria communis Clarke,N.Y.State Mus.,Mem.,III, No.3,p.34,pl.4,f.1,2,1900.

Actinopteria communis Weller,Pal.N.J.,III,p.292,pl.31, f.21,1903;Coeymans l.s.N.J.-Ohern,Md.Geol.Surv.,L. Dev.,p.455-456,pl.76,f.2-4,1913;Held.Form.,Keyser Member Cumberland,Md.Coeymans Member.Dawson;Corriganville.New Scotland Member.Dawson,Md.;Miller's Spring,W.Va.

Actinopteria communis (Hall)Var.Ohern

Actinopteria communis(Hall)Var.Ohern,Md.Geol.Surv.,L. Dev.,p.456,not figured,1913;Oriskany Form.,Ridgely Member,Winchester Road and Miller's Spring near Cumberland.

Actinopteria decussata Hall

Avicula decussata Hall,Pal.N.Y.,pt.4,p.203,f.1,2,1843

Actinopteria decussata.Hall,N.Y.,Pal.V,pt.1,Lamellibr. I,p.17,f.24,28;pl.18,f.1-15;pl.20,f.19;pl.84,f.4, 1884.-Grabau,Buffalo Soc.Nat.Scil,6,p.246,f.160,

1899; Encrinal l.s. Avery's Ravine,N.Y.,-Keyes, Johns Hopkins Univ.Circ.,XI,p.29,1891.-Clarke,N. Y.State Mus.,Bull.65,p.351,1903;-Weller,Pal.N.J., 3,p.378-379,pl.52,f.11,1903;Newfoundland Grit., Greenwood Lake,N.J.-Grabau & Shimer,N.Sm.Index Fossils,I,p.449,f.591C,1909.-Prosser & Kindle,Md. Geol.Surv.,Mid. & Up.Dev.,p.258-259,pl.30,f.5-8, 1913;Romney Form.,Hamilton Mem.B.& O.R.R. cut 21st. Bridge(?)Cumberland,Md.

Actinopteria epsilon Hall.

Actinopteria epsilon.Hall,Pal.N.Y.,V,pt.1,p.122,pl. 23,f.4-6,8,1884.

Actinopteria cf epsilon Clarek & Swartz,Md.Geol.Surv., Mid. & Up.Dev.,p.642,pl.64,f.1,1913;Jennings Form. Chemung Member W.Frostbury,Allegany Co.

Actinopteria insignis Clarke

Actinopteria insignis.Clarke,N.Y.State Mus.,Mem.III, No.3,p.35,pl.4,f.10-13,1900.-Stewart,The Dev.of Mo. p.252,pl.67,f.1,2,1922;Little Saline Creek l.s.Ste Genevieve Co.

Actinopteria insignis ? Weller,Pal.N.J.,III,p.359-360, pl.50,f.2,1903;Mid. & Up. Oriskany N.J.

Actinopteria reticulata Weller

Actinopteria reticulata.Weller,Pal.N.J.,III,p.245,pl. 22,f.3,1903.-Maynard,Md.Geol.Surv.,L.Dev., p.459, pl.76,f.6,1913;Held.Form.,Keyser Member,Keyser,W. Va.

Actinopteria textilis(Hall)

Avicula textilis Hall,Pal.N.Y.,III,p.288;pl.52,f.9,10? pl.53,f.2,3,5,7,10,1861;L.Helderberg Group.Albany and Schoharie Cos.,N.Y.

Actinopteria textilis.Weller,Pal.N.J.,III,p.332,pl. 43,f.13,14,1903;Oriskany Form.,N.J.,*Ohern,Md.Geol Surv.,L.Dev.,p.456-457,pl.76,f.5,1913;Helderberg Form.,New Scotland Mem.Cumb.;Dawson,Md.

Actinopteria textilis(Hall)var.Arenario(Hall)

Avicula textilis var.arenaria.Hall,Pal.N.Y.,III,p.465 pl.109,f.1,2;pl.110,f.2,1861;Oriskany s.s. Albany and Schoharie Cos.,N.Y.; Cumb.,Md.-Weller,Pal.N.J. III,p.360,pl.1,f.1,1903;Mid. & Up.Oriskany,N.J.- Ohern,Md.Geol.Surv.,L.Dev.,p.457-458,pl.77,1913;

Oriskany Form.,Ridgely Member.Warren Point,Penn; West side of Queen's Point opposite Keyser,Miller's Spring,W.Va.

Actinopteria Virginica Ohern.

Actinopteria virginica Ohern Md.Geol.Surv.,L.Dev.,p. 458,pl.78,f.1,2,1913;Oriskany Form.,Ridgely Member W.Keyser,W.Va;Hancock,Md.

Genus AGONIATITES Meek

Agoniatites expansus (Vanuxem)

Agoniatites expansus.Vanuxem,Geol.N.Y.,pt.3,p.146,f. 1,(non von Buch)1842.-Hall,13th.Rep.N.Y.State Cab. Nat.Hist.,p.96,f.1,2,1860.-

Goniatites vanuxemi.Hall,Pal.N.Y.,V,pt.2,p.434,pl.66-68;pl.69,f.3-6;pl.109,f.7,8,1879;Pal.N.Y.,V,pt.2, Supplement,p.39,pl.127,f.3-6,1888.

Agoniatites expansus.Clarke,N.Y.State Mus.,Bull.49,p.124, 125,1901;N.Y.State Mus.Bull.65,p.573,1903.-Grabau & Shimer,N.Am.Index Fossils,II,pt.135,f.1388,1910.-Prosser & Kindle,Md.Geol.Surv.,Mid. & Up.Dev.,p. 321-323,pl.42,f.6,1913;Romney Form.,Onondaga Member,B. and O.R.R. cut 21st.Bridge; W.Va.cent.R.R. cut 21st.Bridge,Cumberland,Md.

Allorisma sp. Girty see Glossites lingualis Hall.

Allorisma sp. Girty

Allorisma sp. Girty,20th.Ann.Rept.,U.S.Geol.Surv.,pt. V,p.59,1900;Ouray l.s.,Durango,Colorado.

Anatina? sinuata Hall

Anatina? sinuata Hall,Pal.N.Y.,III,p.265,pl.49,f.3a-d,1859;Base L.Held.group,Winfield,Herkimer Co.

Apioceras tubiniforme Meek & Worthen,see Gomphoceras turbiniforme M.& W.

Genus AUTODETUS Lindström
(1884 on the Sil.Gast.&Pteropoda of Gotland,p.185)

Autodetus lindstroemi Clarke

Autodetus lindstroemi,Clarke,Am.Geol.XIII,p.334,f. 1,2,3,May,1894.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.149,f.31,1899;Hamilton shales.Hamburgh,N,Y.

Autodetus slocomi Fenton & Fenton

Spirorbis arkenensis C.L.Fenton,Am.Journ.Sci.,4th.Ser. 48,p.371,1919.

Autodetus slocomi Fenton & Fenton,Contrib.Mus.Univ. Mich.,I,p.201-204,pl.41,f.7-8,1924;Spirifer zone. Hackberry Stage.

Genus AVICULA Brug.

Avicula aequiradiata Hall

Avicula aequiradiata,Hall,Pal.N.Y.,III,p.285,pl.51,f. 11,1861;L.Helderberg group.Schoharie Co.,N.Y.

Avicula,bellula Hall

Avicula bellula Hall,Pal.N.Y.,III,p1289,pl.53,f.8,and 9,L.Helderberg group.Helderberg mts. and Schoharie

Avicula boydii Conrad, see Actinopteria boydi(conrad)

Avicula communis Hall, see Actinopteria communis(Hall)

Avicula decussata Hall, see Actinopteria decussata Hall

Avicula equilatera Hall,see Aviculopecten equilatera (Hall)

Avicula equilatera Lincklaen,see Aviculopecten equilatera (Hall)

Avicula equilatera Owen & Hall,see Aviculopecten equilatera (Hall)

Avicula flabella Conrad, see Pterinea flabellum(Conrad)

Avicula flabella Rogers, see Pterinea flabellum(Conrad)

Avicula flabella vanuxem, see Pterinea flabellum(Conrad)

Avicula fragilis Hall, see Pterochaenia fragilis(Hall)

Avicula gebhardi Conrad

Avicula gebhardi,Conrad,Ann.Rep.N.Y.,p.54,1841.-Hall Pal.N.Y.,III,p.466,pl.110,f.1a,b;pl.3,f.2,1859; Oriskany s.s.,Albany and Schoharie Cos.

Avicula longispina Hall, see Lystodesma longispinum Hall

Avicula manticula Conrad

Avicula manticula.Conrad,Jour.Acad.Nat.Sci.,VIII,p. 241,pl.12,f.18,1843.-Hall,Pal.N.Y.,III,p.284,pl.51

f.7 & 8,1859;Pentamenis l.s.,L.Helderberg group; Schoharie Co.

Avicula naviformis Conrad

Avicula naviformis.Conrad,Jour.Acad.Nat.Sci.,VIII,p. 310,pl.12,f.11,1842.-Hall,Pal.N.Y.,III,p.279,pl. 49 A.f.9a,b,1861;L.Helderberg group.Schoharie Co., N.Y.

Avicula obliquata Hall

Avicula obliquata,Hall,Pal.N.Y.,III,p.285,pl.51,f.9-10,1859;pentamems l.s.L.Held.group. Schoharie Co.

Avicula obscura Hall

Avicula obscura Hall,Pal.N.Y.,III,p.280,pl.49,f.6, 1859;Tentaculite L.Held.group,l.s.Schoharie Co.

Avicula pauciradiata Hall

Avicula pauciradiata Hall,Pal.N.Y.,III,p.287,pl.52,f. 8,1859;Shaly l.s. L.Held.group.Schoharie

Avicula parilis Conrad, see aviculopecten princeps(Conrad)

Avicula quadrula Conrad, see Actinopteria boydi(Conrad)

Avicula recticosta Hall

Avicula recticosta Hall,Pal.N.Y.,III,p.466,pl.109,f. 3,1861;Oriskany S.S.Helderberg Mtns.N.Y.

Avicula recticosta? Ohern,Md.Geol.Surv.,L.Dev.,p.460, pl.76,f.7,1913;Oriskany form,locality unknown.

Avicula schohariae Hall

Avicula schohariae Hall,Pal.N.Y.,III,p.283,pl.51,f.5 and 5a,1859;Shaly l.s.L.Held. group.Schoharie Co.

Avicula securiformis Hall, see Pterinea halli Clarke

Avicula spinulifera Hall,Pal.N.Y.,III,p.282,pl.51,f.3 & 4,1859;Shaly l.s.,;L.Held.group.Helderberg Mtns., Albany Co.

Avicula subequilatera Hall

Avicula subequilatera Hall,Pal.N.Y.,III,p.281,pl.49A f.6,1859;uppentamems l.s.Held. group. Schoharie Co.

Avicula tenuilamellata Hall, see Aviculopecten tenuilamellata(Hall)

Avicula textilis Hall, see Actinopteria textilis(Hall)

Avicula textilis var.arenaria Hall, see Actinopteria textilis var. Arenaria(Hall)

Avicula textilis var. Arenaria Weller,see Actinopteria textilis var Arenaria(Hall)

Avicula tricostata Vanuxem,see Lyriopecten tricostatus (Vanuxem)

Avicula umbonata Hall, see Aviculopecten? umbonata(Hall)

Aviculata erecta Conrad,see Glyptodesma erectum(Conrad)

Genus AVICULOPECTEN McCoy
(1851,Annals & Magazine Nat.Hist.,2nd.Ser.,VII,p.171)

Aviculopecten sp. Stewart

Aviculopecten sp. Stewart,The Dev. of Mo.,p.253,pl.67, f.5,1922;Little Saline Cr.l.s.,Ste.Genevieve Co.

Aviculopecten? sp. Clarke & Swartz

Aviculopecten? sp.Clarke & Swartz,Md.Geol.Surv.,Mid. & Up.Dev.,p.649,not figured,1913;Jennings Form,, Chemung Member,Allegany Grove.

Aviculopecten sp. C.L.Fenton, see Pterinea husseyi Fenton & Fenton,

Aviculopecten sp. Kindle

Aviculopecten sp.Kindle,U.S.G.S,Bull.391,p.33,1909; Ouray l.s.Rockwood and s.w. of Mount Eolus,Colo.

Aviculopecten sp.Prosser & Kindle

Aviculopecten sp. Prosser & Kindle,Md.Geol.Surv.,Mid. & Up.Dev.,p.266,pl.31,f.13,1913;Romney Form.,Hamilton Member,Hancock.

Aviculopecten cancellatus Hall

Pecten cancellatus Hall,Geol.N.Y.,Rep.4th.Dist.,p. 265,1843.

Aviculopecten cancellatus Hall,Pal.N.Y.,V,pt.1,p. 18,pl.7,f.12,14-19,1884.

Aviculopecten cy cancellatus Clarke & Swartz,Md.Geol. Sur.Mid.& Up.Dev.,p.648-649,not figured,1913;Jennings Form.,Parkhead Member,Polish Mt.

Aviculopecten crassicostata Hall & Whitfield

Aviculopecten crassicostata.Hall & Whitfield,24th. Rept.N.Y.State Mus.Nat.Hist.,p.188.-Kindle,25th. Ann.Rept.Ind.Dept.Geol.Nat.Res.,p.664,not figured, 1901;Upper Helderberg group.Falls of the Ohio. Hydraulic l.s.(Sellersburg beds).

Aviculopecten (?) Cumberlandensis Ohern

Aviculopecten(?) Cumberlandensis Ohern,Md.Geol.Surv., L.Dev.,p.460-461,pl.78,f.3,1913;Helderberg Form., locality unknown.

Aviculopecten equilatera (Hall)

Aviculopecten equilatera.Hall,Nat.Hist.N.Y.,Geol.,IV, p.180,text fig.7;p.181,table illus.39,f.7,1843.- Owen & Hall,Amer.Jour.Sci.,2d.ser.,III,p.59,f.7, text,1847.-Lincklaen,14th.Rep.N.Y.State Cab.Nat. Hist.,pl.12,f.7,1861.

Aviculopecten equilatera.Hall,12th.Rep.N.Y.State Cab. Nat.Hist.,p.89,1859.-Kindle,U.S.G.S.,Bull.508,p.93, pl.8,f.2,3,1912.

Aviculopecten? equilatera Whitfield,Annals N.Y.Acad. Sci.V,p.551,pl.11,f.16,1891;Geol.Sur.Ohio,Pal.,VII, p.445,f.16,1893.

Aviculopecten equilaterus Lesley,Geol.Sur.Penn.Rep. P.4,p.74,text fig.1,1889.

Aviculopecten equilatera Kindle,Md.Geol.Sur.,Mid. & Up.Dev,,p.265-266,pl.32,f.3,4,1913;Romney Form., Onondaga member,Ridgeville,W.Va. and Blair Co., Penn.

Aviculopecten equilaterus Lesley, see Aviculopecten equilatera(Hall)

Aviculopecten exacutus Hall

Aviculopecten exacutus.Hall,Pal.N.Y:V,pt.1,p.8,pl.3, f.18-22,1884.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.241,f.153,1899;Stictopora and Demissa beds;Shale below Encrinal l.s.,"Hamburg,Erie Co.,N.Y."(Hall).- Kindle,25th.Ann.Rept.Ind.Dept.Geol.Nat.Res.,p. 662-663,pl.12,f.11,1901;Jeffersonville l.s.Pipe Creek Falls.

Aviculopecten fasciculatus Hall.

Aviculopecten fasciculatus.Hall,Pal.N.Y.,V,pt.1,p.11, pl.5,f.7-19;pl.81,f.1-4,1884.-Nettleroth,Ky.Foss. Shells,p.224,pl.3,f.4,1889.-Kindle,25th.Ann.Rept. Ind.Dept.Geol.Nat.Res.;p.663,not fig.1901;"Coomferus limestone "Falls of the Ohio.

Aviculopecten insignis Hall

Aviculopecten insignis Hall,N.Y.,Pal.V,pt.1,p.34,pls. 1,3,91,1884;-Grabau,Buffalo Soc.Nat.Sci,Bull.6, p.242,f.154,1899;Hamburg,Erie Co.,N.Y.(Hall)

Aviculopecten princeps(Conrad)

Monotis princeps Conrad,Ann.Rep.N.Y.Geol.Surv.,p.117, 1838.

Avicula parilis Conrad,Proc.Acad.Nat.Sci.,Phila.,VIII, p.239,pl.112,f.9,1842.-

Aviculopecten princeps.Hall,Pal.N.Y.,V,pt.1,Lamellebr. 1,p.1,pl.1,f.10,11;pl.5,f.18,19,23,24;pl.6,f.1-9; pl.24,f.7;pl.81,f.13-17,1884.-Grabau,Buffalo Soc. Nat.Sci.,Bull.6,p.240,f.152,1899;Encrinal l.s., Avery's Creek.-Keyes,Johns Hopkins Univ.Circ.,XI, p.29,1891.-Clarke,N.Y.State Mus.,Bull,65,p.365, 1903.-Grabau & Shimer,N.Am.Index Foss.,1,p.487,f. 650b,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.263-265,pl.31,f.10,11,pl.32,f.1,2,1913; Romney Form.,Hamilton Member.B.O.R.R.cut.21st.St. Bridge(?)McCoy's Ferry;N.Hancock.-Kindle,25th.Ann. Rep.Ind.Dept.Geol.Nat.Res.,p.662,pl.12,f.10,1901; Jeffersonville ls.Keesport,Cass Co.,Ind.;Falls of the Ohio.

Aviculopecten tenuilamellatus(Hall)

Avicula tenuilamellata Hall,Pal.N.Y.,III,p.281,pl.51, f.1 & 2,1861;L.Held.group.Helderberg Mtns.,Albany & Schoharie Cos.

Aviculopecten tenuilamellatus Maynard,Md.Geol.Sur.,L. Dev.,p.461-42,pl.78,f.4,1913;Held.Form.,Keyser Member Keyser,W.Va.

Aviculopecten(Pterinopecten?) terminalis Hall

Aviculopecten(Pterinopecten?) terminalis.Hall,Pal. N.Y.,V,pt.1,p.32,pl.1,f.3,1884.-Kindle,25th.Ann. Rep.Ind.Dept.Geol.Nat.Res.,p.663-664,pl.12,f.12, 13;pl.13,f.1,1901;Jeffersonville l.s.Bunker Hill, Pipe Creek Falls.

Aviculopecten Umbonata (Hall)

Avicula umbonata Hall,Pal.N.Y.,III,p.284,pl.51,f.6, 1859;L.Held.group.Schoharie Co.

Aviculopecten? Umbonata,Tansey,The Dev. of Mo.,p.205, pl.54,f.7,8,1922;Bailey ls.Little Saline Creek,Ste Genevieve Co.

Genus BACTRITES Sandberger.
(1841.Leonh.und.,Bronn's Johnbuch,p.240)

Bactrites aciculatus (Hall)

Dentalium aciculatum Hall,13th.Rep.N.Y.State Cab.Nat. Hist.,p.107,1860.

Coleolus (Dentalium(?)) aciculatum Hall,Pal.N.Y.,V,pt. 2,p.190,pl.32a,f.17,18,1879.

Bactrites aciculatus Prosser & Kindle,Md.Geol.Surv., Mid.& Up.Dev.,p.319-320,pl.42,f.4,1913;Romney Form.,Onondaga Member.W.Va.Cent.R.R.cut at 21st. Bridge.

Bactrites aciculum Clarke,see Bactrites aciculus (Hall)

Bactrites aciculum (Hall)

Orthoceras aciculum Hall,N.Y.Geol.Surv.,4th.Dist.,p. 243,1843.

Coleolus aciculum.Hall,N.Y.,V,pt.2,p.187,p.187,pl. 32a,f111,15,(16?) 1879.

Bactrites aciculum.Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.295,f.230,1899;Goniatite l.s.lower Naples shale; lower genesse shale.-Kindle,U.S.G.S.,Bull.508,p. 104,pl.9,f.3,1912;Md.Geol.Sur.Mid.& Up.Dev.,p.320-321,pl.38,f.9;pl.42,f.5,1913;Romney Form.,Onondaga Member,e.Cumb.,Md.

Bactrites acivulus (Hall)

Orthoceras aciculum Hall,Geol.N.Y.,Rept.4th.Dist.,p. 243,f.4,1843.

Coleolus aciculum Hall,Pal.N.Y.,V,pt.2,p.187,pl.32a, f.11-15,1879.

Bactrites aciculum Clarke,16th.Rep.N.Y.State Geol.,p. 128,pl.9,f.17-22,1898.

Bactrites aciculus Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.692-693,pl.71,f.11,1913;Jennings Form., Genesee Member Wms.Road near Cumberland.

Bactrites gracilior Clarke

Bactrites gracilior Clarke,Naples Fauna,p.124,pl.9, 1898.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.295,f. 229,1898;black shale of Styliotina bond.

Genus BELLEROPHON Montfort
(1808 Conch.Syst.I,p.50)

Bellerophon sp.Fenton & Fenton

Bellerophon sp. Fenton & Fenton,Contrib.Mus.Univ. Mich.,I,p.176,pl.33,f.12-13,1924;Spirifer zone Hackberry Stage.

Bellerophon sp. Clarke & Swartz

Bellerophon sp. Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.667,not fig.,1913;Jennings Form.,Chemung Member Sideling Hill Creek.

Bellerophon sp. Girty

Bellerophon sp. Girty, 20th.Ann.Rept.,U.S.G.S.,pt.2, p.62,1900;Ouray l.s.Durango,Colorado.

Bellerophon sp. Branson

Bellerophon sp. Branson,Dev. of Mo.,p.117,pl.27,f.2, 3;pl.30,f.9,1922;Mineola and Snyder Creek l.s.

Bellerophon sp. Kindle

Bellerophon sp.Kindle,25th.Ann.Rept.Ind.Dept.Geol. Nat.Res.,p.694,pl.21,f.3,1901;Sellersburg beds, Charlestown.

Bellerophon auriculatus Hall

Bellerophon auriculatus.Hall,Pal.N.Y.,II,p.334,pl.76, f.7a,b,1852.-Ohern,Md.Geol.Surv.L.Dev,,p.465-466, pl.79,f.1,2,1913;Held.Form.Cumberland,Md.

Bellerophon clarki Clarke & Swartz

Bellerophon clarki Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.666,pl.67,f.17-20,1913;Jennings Form., Chemung member. n. mouth of Town Creek.Parkhead Member. Polish Mt.;Town Creek; s.Pratt; w.Pawpaw, W.Va; above mouth of Sideling Hill Creek.

Bellerophon cf Clarki Clarke & Swartz

Bellerophon cf Clarki Clarke & Swartz,Md.Geol.Sur., Mid. & Up.Dev.,p.666,not fig.,1913;Jennings Form., Woodmont Member,Ithera Fauna.Yellow Springs,W.Va.

Bellerophon curvilineatus Conrad

Bellerophon curvilineatus.Hall,Pal.N.Y.,V,pt.2,p.94-95,pl.22,f.1-6,1879.-Kindle,25th.Ann.Rept.Ind.Dept. Geol.Nat.Res.,p.693-694,pl.21,f.1,1a,1901;Jeffersonville l.s. Newbern & Hope,Bartholomew Co.

Bellerophon helderbergiae Maynard

Bellerophon helderbergiae Maynard,Md. Geol.Surv.,L. Dev.,p.466,pl.79,f.3,4,1913;Held.Form.,Keyser Member Cash Valley,Md.

Bellerophon(Bucanopsis)lida Hall

Bellerophon leda.Hall,Des. of New Sp. of Fossils,p. 30,1861;15th.Rept.N.Y.State Cab.Nat.Hist.,p.58, 1862;27th.Rep.N.Y.State Mus.Nat.Hist.,pl.13,f.1, 1875;Pal.N.Y.,V,pt.2,p.110,pl.23,f.2-16,1879.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.281,f.212,1899. Many places in Erie Co.,N.Y.-Clarke,N.Y.State Mus. Bull.65,p.624,1903.

Bucanopsis leda Ulrich & Schofield,Geol.Minn.III,pt.2, p.854,1897.-Grabau,& Shimer,N.Am.Index Fossils,I, p.623,f.837,1909.

Bellerophon(Bucanopsis)leda.Kindle,25th.Ann.Rept.Ind. Dept.Geol.Nat.Res.,p.691-692,pl.21,f.4,5,1901; Sellersburg beds and Jeffersonville l.s.Falls of the Ohio and Newbern.-Clarke & Mathews,Md.Geol.Sur. VI,pl.17,f.12,1906.-Prosser & Kindle,Md.Geol.Surv., Mid. & Up.Dev.,p.285-286,pl.36,f.1-3,1913;Romney Form.,Hamilton member. East bank Evitts Creek below Wolfe Mill,near Cumberland.

Bellerophon lyra Hall

Bellerophon lyra.Hall,Pal.N.Y.,V,pt.2,pl.23,f.1,17-20,1879.-Kindle,25th.Rept.Ind.Dept.Geol.Nat.Res., p.693,pl.23,f.1,1901;"Hamilton". Falls of the Ohio.

Bellerophon maera Hall, see Bucanopsis maera(conrad)

Bellerophon nactoides Clarke & Swartz

Bellerophon nactoides Clarke & Swartz,Md.Geol.Sur.Mid. & Up.Dev.,p.665,pl.67,f.13-16,1913;Jennings Form.,

Woodmont member, Ithaca fauna. w. of Tonoloway Hill, Allegany Co.

Bellerophon nelens Hall & Whitfield, see Bucanopsis maera (conrad)

Bellerophon (Patellostium) patulus Hall

Bellerophon patulus. Hall, Geol. N.Y., pt.4, p.196, f.1, 1843; 15th. Rept. N.Y. State Cab. Nat. Hist., p.57, 1862; Pal. N.Y., V, pt.2, p.100, pl.22, f.12-30; pl.24, f.3-10; pl.26, f.10-12, 1879.-Keyes, Johns Hopkins Univ. Circ. XI, p.29, 1891.-Clarke, N.Y. State Mus. Bull. 65, p.526, 1903.-Grabau, Buffalo Soc. Nat. Sci., VI, pt280, f.211, 1899; Soft calcareous shales shore Lake Erie at Eighteen Mile Creek

Patellostium patulus, Ulrich & Schofield, Geol. Minn., III, pt.2, p.854, 1897.

Ptomatis patulus Grabau & Shimer, N. Am. Index Foss., I, p.624, f.841, 1909.

Bellerophon (Patellostium) patulus. Prosser & Kindle, Md. Geol. Sur., Mid. & Up. Dev., p.287-288, pl.35, f.14, 1913; Romney Form. Hamilton member, western Md.-Kindle, 25th Ann. Rept. Ind. Dept. Geol. Nat. Res., p.692-693, pl.21, f.7, 1901; Jeffersonville l.s. Hanover; Charlestown; Shelby Co., Falls of the Ohio.

Bellerophon pelops Hall

Bellerophon pelops Hall, Pal. N.Y., V, pt.2, p.95, pl.22, f.7-13, 1879; Jeffersonville l.s. Pipe Creek Falls; Charlestown, Newbern.

Bembexia sulcomarginata Grabau & Shimer, see Pleurotomaria (Bembexia) sulcomarginata conrad.

Bembexia sulcomarginata Ulrich & Schofield, see Pleurotomaria (Bembexia) sulcomarginata conrad.

Genus BUCANIA Hall

Bucania devonica Hall & Whitfield

Bucania devonica. Hall & Whitfield, 24th. Rept. N.Y. State Mus. Nat. Hist., p.191, 1870.-Kindle, 25th. Ann. Rept. Ind. Dept. Geol. Nat. Res., p.701, 1901. Form? Kent; Charlestown; Falls of the Ohio; Bunker Hill.

Bucania profunda Hall

Bucania profunda Hall, Pal. N.Y., III, p.341, pl.68, f.1-3,

1859;Upper pentamerus l.s.L.Held.group.Schoharie & Carlisle,Schoharie Co.

Genus BUCANOPSIS Ulrich

Bucanopsis leda Grabau & Shimer,see Bellerophon (Bucanopsis)leda Hall.

Bucanopsis leda Ulrich & Schofield see Bellerophon(Bucanopsis)leda Hall.

Bucanopsis maera (conrad)

Bellerophon maera.Hall,Illus.Dev. Foss.gastropoda,pl. 22,1876;Pal.N.Y.,V,pt,2,p.119,pl.25,f.9-14;pl.26, f.19-24,1879.

Bellerophon neleus Hall & Whitfield,Illus.Dev. Foss., gastropoda,p.22,1876.

Bucanopsis maera Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.667-668,pl.67,f.21,22,1913;Jennings Form., Chemung member.Town Creek,Parkhead member.Polish Mt.;Town Creek;w.Pawpaw,W.Va.Woodmont member,Ithaca Fauna,Millstone.

Genus BUCHIOLA Barrande

Buchiola conversa Clarke

Buchiola conversa.Clarke,N.Y.State Mus.,member VI, p.300,pl.10,f.22,1904.-Clarke & Swartz,Md.Geol.Sur. Mid. & Up.Dev.,p.615,pl.60,f.4-6,1913;Jennings Form.,Woodmont member,Naples Fauna.Polish Mt. on National Road.E. of Gilpintown.

Buchiola halli Clarke

Glyptocardia speciosa Hall,Pal.N.Y.,V,pt.1,Lamellibranchiata 2,pl.70,f.9;pl.80,f.10,1885.

Buchiola halli.Clarke,N.Y.State Mus.member 6,pt.2, p.301,pl.10,f.15,16,1904.-Prosser & Kindle,Md.Geol. Surv.,Mid. & Up. Dev.,p.225-226,pl.23,f.4,1913; Romney Form.,Hamilton member.E. bank Evitts Cr. below Wolfe Mill,near Cumberland.

Buchiola livoniae Clarke

Buchiola livoniae Clarke,N.Y.State Mus.,Mem.6,p.299, pl.11,f.1,2,1904.

Buchiola(?)livoniae Clarke & Swartz,Md.G.S.,Mid. & Up. Dev.,p.616-617,pl.60,f.9-12,1913;Jennings Form.,

Genesee member. s.w. Burlington, W. Va.; n.e. Cumberland, Md.; Woodmont member; Naples Fauna. Gilpintown, Md.

Buchiola mariae Clarke & Swartz

Buchiola mariae. Clarke, N.Y. State Mus. mem. VI, p. 212, 1904.- Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p. 615-616, pl. 60, f. 7, 8, 1913; Jennings Form., Genesse member, Queen City Hotel, Cumb. Md.

Buchiola retrostriata (von Buch)

Buchiola retorstriata. Kindle, Md. Geol. Sur., Mid. & Up. Dev., p. 226-not fig., 1913; Romney Form., Marcellus member 21st. Bridge, Cumberland, Md.- Clarke & Swartz, Md. Geol. Surl, Mid. & Up. Dev., p. 613-614, pl. 60, f. 1-3, 1913; Jennings Form., Genessemember, Gilpintown; Cumberland, Md. Woodmont member, Naples Fauna, Gilpintown, Md.

Bulimorpha? helderbergiae Weller

Bulimorpha? helderbergiae Weller, Pal. N.J., III, p. 293-294, pl. 32, f. 8, 1903; Coeymans l.s. near Hainesville, N.J.

Byssopteria occidentalis. Fenton & Fenton

Byssopteria occidentalis Fenton & Fenton, Contri. Mus. Univ. Mich., I, p. 171, pl. 33, f. 8-9, 1924; Spirifer zone. Hackberry stage.

Genus CALLONEMA Hall

Callonema bellatula Hall

Callonema bellatula. Hall, Pal. N.Y., V, pl. 2, p. 51, pl. 14, f. 10-15, 1879.- Kindle, 25th. Ann. Rept. Ind. Dept. Geol. Nat. Res., p. 698, 1901; Jeffersonville l.s. Falls of the Ohio; Hope.

Callonema clarki Nettleroth

Callonema clarki, Nettleroth, Ky. Foss. Shells, pl175, pl. 24, f. 2, 4, 5, 1899.- Kindle, 25th. Ann. Rept. Ind. Dept. Geol. Nat. Res., p. 700, 1901; Dev. chert. e. Louisville, Ky.

Callonema comus Kindle

Callonema comus Kindle, 25th. Ann. Rept. Ind. Dept. Geol. Nat Res., p. 699, pl. 33, f. 1, 1a, 1901.

Callonema imitator Hall & Whitfield

Callonema imitator.Hall,Pal.N.Y.,V,pt.2,p.53,pl.14,f. 16,17,1879.-Kindle,25th.Ann.Rept.Ind.Dept.Geol. Nat.Res.,p.699-700,pl.23,f.5,1901;Jeffersonville l.s.Falls of the Ohio;Bunker Hill.

Callonema lichas Hall

Callonema lichas.Hall,Pal.N.Y.,V,pt.2,p.52,1879.- Kindle,25th.Ann.Rept.Ind.Dist.Geol.Nat.Res.,p.699, pl.20,f.11,1901;Jeffersonville l.s.?Jeffersonville Co.

Capulus cassensis Kindle

Capulus cassensis Kindle,25th.Ann.Rept.Ind.Dept.Geol. Nat.Res.,p.719,pl.16,f.11,1901;Jeffersonville l.s. Pipe Creek Falls,Cass Co.

Genus CARDIOLA Broderip
(1884 Trans.Geol.Soc.)

Cardiola? dichotoma Hall see Panenka dichotoma Hall

Cardiola doris Hall see Paracardium doris Hall

Cardiola radians Whitfield see Panenka radians(Hall)

Cardiola retrostriata von Buch.

Cardiola retrostriata Grabau,Buffalo Soc.Nat.Sci.,VI, p.268,f.190,1899;Naples shales and Goniatite layer; also Strophalosia bed, on the Lake Shore.

Glyptocardia speciosa,Hall,N.Y.,Pal.V,pt.1,p.426,pl. 70,80,1884.

Cardiopsis crossierstata Hall & Whitfield

Cardiopsis crossierstata.Hall & Whitfield,24th.Rep. N.Y.,State Mus.Nat. Hist.p.188,1872;27th.Rep.N.Y. State Mus.Nat.Hist.pl.12,f.9,1875.-Kindle,25th.Ann. Rep.Ind.Dept.Geol.Nat.Res.,p.675,not fig.,1901; "Upper l.s.",Louisville,Ky.

Centroceras marcellensis (vanuxem) see Nautilus (Centroceras)Marcellensis (Vanuxem)

Genus CLINOPISTHA Meek and Worthen

Clinopistha antiqua meek

Clinopistha antiqua.Meek,Pal.Ohio,I,p.208,pl.18,f.5a, b,1873.-Kindle,25th.Ann.Rept.Ind.Dept.Geol.Nat.Res. p.689-690,pl.16,f.3,1901;Sellersburg beds,Clark Co.

Clinopistha? rowleyi Branson

Clinopistha? rowleyi Branson,The Dev. of Mo.,p.III,pl. 25,f.7,8,1922;Snyder Creek shale,Calloway Co.

Clinopistha striata Nettleroth

Clinopistha striata.Nettleroth,Ky.Foss.Shells,p.200, pl.4,f.1-3,1889.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.690,1901;Sellersburg bed.Clark Co.

Clinopistha subnasuta Hall & Whitfield

Clinopistha subnasuta,Hall,Pal.N.Y.,V,pt.1,p.512,pl. 51,f.32,33,pl.95,f.31,1884.-Kindle,25th.Ann.Rep. Ind.Dept.Geol.Nat.Res.,p.688-689,1901;Sellersburg beds & Jeffersonville l.s. Watson,Lancaster,Pipe Creek Falls.

Genus COLEOLUS Hall

(1879.Pal.N.Y.,V,pt.2,p.184)

Coleolus sp.Kindle

Coleolus sp.Kindle,U.S.G.S.,Bull.391,p.35,pl.10,f.13, 1909;Ouray l.s,s.w.Mt.Eolus,Colo.

Coleolus(Dentalium(?))aciculatum(Hall) see Bactrites aciculatus(Hall)

Coleolus aciculum Hall,see Bactrites aciculus(Hall)

Coleolus gracilis Hall

Coleolus gracilis.Hall,N.Y.,Pal.V,pt.2,p.190,pl.32A, 1879.-Grabau,Buffalo Soc.Nat.Scil,VI,p.284,f.218, 1899;Demissa bed.

Coleolus tenuicinctum Hall

Coleolus tenuicinctum.Hall,Pal.N.Y.,V,pt.2,pl.32,f.5-9;pl.32A,f.6-10,1897.-Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat. Res.,p.735,pl.23,f.6,7,1901;Jeffersonville l.s. & Sellersburg beds.Falls of the Ohio;Charlestown,Lexington.

Coleolus tenuicinctus Hall

Coleoprion tenuicinctum.Hall,Ill. of Dev. Foss.,Pteropoda pl.27,f.1-4,1876;Pal.N.Y.,V,pt.2,p.185,pl.32, f.5-9,pl.32 A,f.6-10,1879.-Grabau,Buffalo Soc.Nat. Sci.,VI,p.284,f.217,1899.-Kindle,25th.Ann.Rep.Dep. Geol. & Nat.Res.Ind.,p.735,pl.23,f.6,7,1901.

Coleolus tenuicinctus.Grabau & Shimer,N.Am.Index Foss. II,p.9,f.1219 b,1910-Prosser & Kindle,Md.Geol.Sur. Mid. & Up. Dev.,p.305-306,pl.38,f.5-8,1913;Romney Form.,Hamilton member. e. bank Evitts Creek below Wolfe Mill;w. of Lock no.56,at Great Cacapon.-Clarke & Swartz,Md. Geol.Sur.,Mid, & Up.Dev.,p.687-688,pl.71,f.4-6,1913;Jennings Form.,Chemung member n. of Town Creek,Parkhead member.Polish Mt.,n.mouth Town Creek;w.Pawpaw,W.Va.,Little Orleans.

Genus CONOCARDIUM Bronn
(1835.Lethaea Geognostica,I,p.92)

Conocardium sp. Tansey

Conocardium sp.Tansey, The Dev. of Mo.,p.205,pl.54, f.6,19 22;Bailey l.s.Little Saline Creek,Ste.Genevieve Co.

Conocardium splWeller

Conocardium sp. Weller,Pal.N.J.,III,p.293,pl.31,f.19-20,1903;Coeymans l.s, near Peter's Valley,N.J.

Conocardium crassifrons (conrad)

Conocardium crassifrons Grabau,Buffalo Soc.Nat.Sci.,VI, p.263,f.182A,1889;Hamilton group,Eighteen Mile Creek.

Pleurorhynchus crassifrons,Conrad.Jour.Acad.Nat.Sci., Phila.,vol.VIII,pt.1,p.252,pl.XIII,1839.

Conocardium cumberlandiae Swartz.

Conocardium cumberlandiae Swartz,Md.Geol.Sur.,Mid.& Up. Dev.,p.257-258,pl.30,f.3,4,1913;Romney Form., Hamilton member.Little Run,e. of Hancock; s.e.Cumberland.

Conocardium cuneus Hall

Conocardium cuneus.Hall,Pal.N.Y.,V,pt.1,p.409,pl.67, f.1-32;pl.68,f.1,4-16;pl.94,f.11-12,1884.-Kindle, 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.687-688,pl. 15,f.4,5,1901;Jeffersonville l.s. Falls of the Ohio; Hanover,Bartholomew Co.;Bunker Hill.

Conocardium eboraceum Hall

Conocardium eboraceum.Hall,Pal.N.Y.VII,p.412,pl.68, 1888;-Grabau,Buffalo Soc.Nat.Sci.,VI,p.262,f.182, 1899;encrinal l.s.

Conocardium inceptum Hall

Conocardium inceptum Hall,Pal.N.Y.,III,p.491;L.Held. gr. Albany Co.

Conocardium normale Hall

Conocardium normale.Hall,Pal.N.Y.,V,pt.1,pl.68,f.17-19,1884;Pal.N.Y.,V,pt.1,2,p.411,pl.68,f.17-19,1885.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.262,f.181,1899. Encrinal l.s.-Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.257,pl.30,f.1-2,1913;Romney Form.,Hamilton member.near Cumberland,Md.

Conocardium ohioense meek

Conocardium ohioense.Meek,Geol.Sur.Ohio,I,pt.2,Pal., p.203-206,pl.18,f.2-3,1873;-Hall,Pal.N.Y.,V,pt.1, Lamellibranchiata II,p.411,pl.68,f.2-3,1885.-Kindle, 25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.686-687,pl. 15,f.7,1901;Jeffersonville l.s.Bukker Hill.-Grabau & Shimer,N.Am.Index Foss.,I,p.438,f.575,1909.-Branson,Dev. of Mo.,p.112-113,pl.26,f.1-7,1922;Mineola l.s.,Montgomery and Ralls Cos.-Branson and Williams Dev. of Mo.,p.152,1922;Grand Tower l.s.,Little Saline Creek.

Conocardium ohioensis? Cleland.Wis.Geol.Nat.Hist.Sur., Bull,21,p.109,pl.21,f.7,8,1911.

Conocardium ohioensis? Cleland see Conocardium ohioense meek.

Genus CONULARIA Miller
(1821.Sowerby's Mineral Conchology,III,p.107)

Conularia ? Hall

Conularia ? Hall,Pal.N.Y.,III,p.480,1859.

Conularia sp. Kindle.

Conularia sp.Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res. p.737,pl.23,f.8,1901;Selinsgrove beds.Delphi

Conularia huntiana Hall

Conularia huntiana Hall,Pal.N.Y.,III,p.348,pl.62A, f.2,a,b,1859;L.Held.gr.Schoharie Co.

Conularia lata Hall

Conularia lata Hall,Pal.N.Y.,III,p.479,pl.111,f.1;pl. 70A,f.3a,b,1859;Oriskany s.s.Schoharie & the Helderberg.

Conularia pyramidalis Hall

Conularia pyramidalis Hall,N.Y.,Geol.Surv.,Pal.III,p. 347,pl.62,f.1a-d,1859;shaly l.s.L.Held.gr.Albany & Schoharie Cos.

Conularia undulata conrad

Conularia undulata.conrad,5th.Ann.Rep.Pal. of N.Y.,p.57 1841.-Hall,Des.of New species of Foss.,etc,,p.34, 1861;15th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.62,1862; Illus. of Dev. Foss.;Pteropoda,pl.5,1876;N.Y.,Pal., V,pt.2,p.208,pls.33,34,1879.-Grabau,Buffalo Soc.Nat. Sci.,VI,p.284,f.219,1899;just below Encrinal l.s.

Conularia cf undulata Kindle,Md.Geol.Sur.Mid.& Up.Dev., p.304-305,pl.38,f.4,1913;Romney Form.,Onandoga member. s.e.Cumberland.

Cornellites flabella H.S.Williams,see Pterinea flabellum (conrad)

Cranoceras? ellipticum "n.sp.(Rowley)" Greene cranoceras? ellipticum"n.sp.(Rowley)" Greene,Pal.Ind.,I,pt.7, p.59,pl.21,f.15-16,1901;Hamilton group.near Charlestown,Ind.

Genus CYCLONEMA Hall

Cyclonema cancellata Hall?

Cyclonema cancellata Hall? 27th.Ann.Rep.N.Y.State Mus. Nat.Hist.,pl.13,f.6-7,1875;Jeffersonville l.s.(?) Falls of the Ohio.

Cyclonema concinna Hall,see Cyclonema concinnum Hall

Cyclonema concinnum Hall

Cyclonema concinna Hall,Illus.of Dev. Foss.;Gastropoda,pl.12,1876;Pal.N.Y.,V,pt.2,p.38,pl.12,f.38-40,1879.

Cyclonema concinnum Clarke & Swartz.Md.Geol.Sur.,Mid. & Up.Dev. p.670-671,pl.67,f.27-29,1913;Jennings Form.,Chemung member.Town Creek.Parkhead member. Polish Mt.,W. of Pawpaw,W.Va.;Sideling Hill Creek.

Cyclonmma crenulata Meek

Cyclonema crenulata.Meek,Pal.Ohio,I,p.213,pl.19,f. 3a-d,1873.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.716-717,pl.21,f.10,11,1901;Jeffersonville

l.s.Bunker Hill;Pipe Creek Falls.

Cyclonema hamiltoniae Hall

Cyclonema hamiltoniae.Hall,Des. of new species of Foss.,etc.p.19,1861;15th.Rep.N.Y.State Cab.Nat.Hist. p.47,pl.5,f.16,(not 15),1862;Pal.N.Y.,V,pt.2,p.37, pl.12,f.34-36,1879.-(?)Prosser & Kindle,Md.Geol.Sur. Mid. & Up.Dev.,p.289-290,not fig.,1913;Romeny Form., Hamilton member. e. side Warrior Mt.e. of Rusk; n. Hancock; W. Va. side Potomac River s. Cumberland.

Cyclonema lirata Hall see Trochonema (Gyronema)liratum (Hall)

Cyclonema liratum var grabaui Prosser & Kindle

Cyclonema liratum var grabaui Prosser & Kindle,Md.Geol Sur.,Mid. & Up.Dev.,p.290-292,pl.36,f.8,9,1913;Romney Form.,Hamilton member.s.e.Cumberland and near top of the Hamilton

Cyclonema(?) Marylandense Prosser & Kindle

Cyclonema (?) Marylandense Prosser & Kindle,Md. Geol.Sur. Mid. & Up.Dev.,p.292-293,pl.36,f.10,1913;Romney Form Hamilton member. W. Va.bank of Potomac River,below Cumberland.

Cyclonema (?) perstrialis Fenton & Fenton

Cyclonema(?) perstrialis Fenton & Fenton,Contr.Mus. Univ. Mich.,I,p.179-180,pl.41,f.4,1924;Spirifer zone Hackberry Stage.

Genus CYCLONEMINA Perner

Cyclonemina crenulistriata Clarke & Swartz

Cyclonemina crenulistriata Clarke & Swartz,Md.Geol. Sur.,Mid. & Up.Dev.,p.671-672,pl.68,f.1-4,1913; Jennings Form.,Chemung member.Town cr.

Cyclonemina crenulistriata var. obsolescens Clarke & Swartz.

Cyclonemina crenulistriata var. obsolescens Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.672,pl.68,f.5, 1913;Jennings Form.,Chemung member.Town Creek.

Cyclonemina multitriata Clarke & Swartz.

Cyclonemina multitriata Clarke & Swartz,Md.Geol.Sur., Mid. & Up.Dev.,p.672-673,pl.68,f.6-10,1913;Jennings

Form.,Chemung member.n.mouth Town Cr.,W.Pawpaw, W.Va.,Parkhead Member.Rocky Run.-Polish Mt.,W. Pawpaw;Berkeley Springs,W.Va.

Genus CYPRICARDELLA Hall
(1856.Trans.Albany Inst.,IV)

Cypricardella ? sp.Clarke & Swartz

Cypricardella ? sp.Clarke,& Swartz,Md.Geol.Surv.,Mid.& Up.Dev.,p.658,not fig.,1913;Jennings Form.,Chemung member.w. of Frostburg.

Cypricardella bellistriata (conrad)

Cypricardella bellistriatus.Hall,Pal.N.Y.,V,pt.1,Lamellibr.II,p.308,pl.42,f.17-20;pl.73,f.7-22;pl.74,f. 5-10,1885.-Grabau,Buffalo Soc.Nat.Scil,VI,p.252,f. 169,1899;Encrinal ls.Avery's Creek and on the Lake Shore.

Microdon bellistriata.Conrad,Jour.Acad.Nat.Sci.,Phila. VIII,p.247,pl.13,f.12,1842.-Hall,Geol.N.Y.,pt.4,p. 196,f.2,1843.-Rogers,Geol.Penn.II,p.827,f.660,1858.

Microdon (cypricardella)bellistriatus Clarke,N.Y.State Mus.,Bull.65,p.439,1903.

Cypricardella bellistriata.Cockerell,Am.Geol.XXXVI,p. 330,1905.-Grabau & Shimer,N.Am.Ind.Foss.,I,p.535, f.727c,d,1909.-Prosser & Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p.273-275,pl.34,f.1-4,1913;Romney Form.; Hamilton member.e.bank Evitts Cr.below Wolfe Mill; e.Queen City Hotel,Cumb.,B.& O.R.R.cut 21st.Bridge, Flintstone cr.in Gilpin.-Clarke & Swartz,Md.Geol. Surv.,Mid.& Up.Dev.,p.653,pl.65,f.8-10,1913;Jennings Form.,Parkhead member.s.Round,W.Va.;n.mouth of Tower Creek.

Cypricardella bellistriatus Grabau see Cypricardella bellistriata (conrad)

Cypricardella crassa Clarke & Swartz

Cypricardella crassa Clarke & Swartz,Md.Geol.Surv.,Mid & Up.Dev.,p.657-658,pl.66,f.14-20,1913;Jennings Form Chemung mem.Polish mt.,Town Cr.Millstone.

Cypricardella cumberlandiae Clarke & Swartz

Cypricardella cumberlandiae Clarke & Swartz,Md.Geol.Sur Mid.& Up.Dev.,p.657,pl.66,f.13,1913;Jennings Form., Chemung member.Allegany Grove.

Cypricardella gregaria (Hall)

Microdon gregarius Hall, Prelim.notice Lamellibr., pt.2, p.32, 1870.

Microdon (cypricardella) gregarius Hall, Pal.N.Y., V, pt. 1, p.309, pl.73, f.1-6; pl.84, f.1-4, 1884.

Cypricardella gregaria. Grabau & Shimer, N.Amer.Ind.Foss. I, p.535, 1909.-Clarke & Swartz, Md. Geol.Sur.Mid. & Up Dev., p.654-655, pl.65, f.16-18, 1913; Jennings Form., Parkhead? mem.w.Piney Cr. on w. side Green Ridge, Allegany Co.

Cypricardella gregaria(Hall) var.Clarke & Swartz.

Cypricardella gregaria (Hall) var.Clarke & Swartz, Md. Geol.Sur., Mid. & Up.Dev., p.655, not fig., 1913; Jennings Form., Chemung member, Allegany Grove. Parkhead member. Polish Mt., n. mouth Town Cr., w. Pawpaw, W.Va., Berkeley Springs, W.Va.

Cypricardella Marylandica Clarke & Swartz.

Cypricardella Marylandica Clarke & Swartz, Md. Geol. Sur. Mid. & Up. Dev., p.654, pl.65, f.1-15, 1913; Jennings Form Chemung member. near Deer Park, w. of Frostburg; Town Cr.

Cypricardella nitidula Clarke & Swartz.

Cypricardella nitidula Clarke & Swartz, Md. Geol. Sur. Mid. & Up. Dev., p.656-657, pl.66, f.6-12, 1913; Jennings Form., Chemung member. Road n. of Deer Park Station, Garret Co., w. Frostburg.

Cypricardella tenuistriata (Hall)

Microdon tenuistriata Hall, Prelim.notice Lamellibr. II, p.32, 1870.

Microdon (cypricardella) tenuistriatus Hall, Pal.N.Y., V, pt.1, Lamellibr. II, p.310, pl.42, f.16; pl.73, f.23-30; pl.74, f.20, 21, 1885.

Microdon tenuistriatus Clarke, N.Y.State Mus., Bull.65, p.443, 1903.

Cypricardella tenuistriata. Grabau & Shimer, N.Am.Ind. Foss.I, p.534, f.727a, b, 1909.-Prosser & Kindle, Md. Geol.Sur., Mid. & Up.Dev., p.275, pl.34, f.5, 1913; Romney Form., Hamilton member. e.Queen City Hotel, Cumb., n.Hancock.-Clarke & Swartz, Md.Geol.Sur.Mid. & Up.Dev p.656, pl.66, f.1-5, 1913; Jennings Form., Chemung member Town Cr. Parkhead member. n. mouth of Town Cr., Side-

ling Hill Cr.,Woodmont.

Cypricardia contractus Hall,see Sphenotus contractus Hall

Genus CYPRICARDINIA Hall
(1859.Pal.N.Y.,III,p.266)

Cypricardinia cataracta Conrad

Cypricardinia cataracta Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat. Res.,p.686,1901;"Corniferous l.s." Falls of the Ohio(nettleroth)

Cypricardinia concentrica Hall

Cypricardinia concentrica Hall,Pal.N.Y.,III,p.268,pl.50 f.2,1859;L.Held.gr.,Schoharie Co.

Cypricardinia crassa Hall

Cypricardinia crassa Hall,Pal.N.Y.,III,p.268,pl.50,f. 3,L.Held.gr.,Schoharie Co.

Cypricardinia cylindrica Hall & Whitfield

Cypricardinia cylindrica Hall & Whitfield,24th.Reg. Rep.N.Y.,p.190,1870;27th.Reg.Rep.N.Y.pl.2,f.5,6, 1875.

Cypricardinia? cylindrica Kindle,25th.Ann.Rep.Ind.Dep. Geol.Nat. Res.,p.686,1901;Sellersburg beds.Clark Co.

Cypricardinic distincta Billings

Cypricardinia distincta.Hall,Pal.Fossils,II,pt.1,p.56, f.26,27m1874.-Clarke,N.Y.State Mus.,Mem.IX,pt.1,p. 157,1908.

Cypricardinia distincta? Tansey,Dev. of Mo.,pl206,pl. 54,f.9,1922;Bailey l.s. Little Saline Creek,Ste Genevieve Co.,

Cypricardinia dorsata Hall

Cypricardinia dorsata Hall,Pal.N.Y.,III,p.267,pl.49A,f 2,1861;L.Held.gr.Helderberg Mts.,Albany Co.

Cypricardinia elegans Clarke & Swartz.

Cypricardinia elegans Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.659,pl.6,f.21,1913;Jennings Form.,Chemung member.Belle Grove.

Cypricardinia elegans var.angusta Clarke & Swartz.

Cypricardinia elegans var angusta Clarke & Swartz,Md. Geol.Sur.,Mid.& Up.Dev.,p.659-670,pl.66,f.22-24, 1913;Jennings Form.,Chemung member.Town Creek.

Cypricardinia indenta (Conrad)

Cypricardites indenta conrad,Jour.Acad.Nat.Scil,Phila.; VIII,p.244,pl.12,f.12,1842.

Cypricardinia indenta.Hall,Prelim.not Lamellibr.II, p.33(in part),1870;N.Y.Pal.,V,pt.1,Lamellier.II, p.485,pl.79,f.6-16,23;pl.96,f.2,1885.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29,1891.-Grabau,Buffalo Soc.,Nat.Sci.,Bull.6,p.268,f.191,1899;Moscow shale; Demissa bed.-Kindle,25th.Ann.Rept.Ind.Dep.Geol.Nat. Res.,p.685-686,pl.15,f.8,8a,1901;Jeffersonville,l.s. Pipe Creek Falls;Bunker Hill;Falls of the Ohio.- Clarke,N,Y.State Mus.Bull.65,p.378,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.536,f.729c,1909.-Prosser & Kindle,Md.Geol.Sur.Mid.& Up.Dev.,p.276-277,pl. 34,f.6-10,1913;Romney Form.,Hamilton member. e.bank Evitts Creek below Wolfe Mill;B.& O.R.R.cut 21st. St.Bridge,Cumb.

Cypricardinia lamellosa Hall

Cypricardinia lamellosa Hall,Pal.N.Y.,III,p.266,pl. 49A,f.1a,b,c,1861;L.Held.gr.associated with Spirifer Rhynchonella & Atrypa.Albany Co.

Cypricardinia cf. lamellosa Maynard,Md.Geol.Sur.,L.Dev. p.463,pl.78,f.6,7,1913;Held.Form;Keyser member.Keyser,W.Va.

Cypricardinia sublamellosa Hall

Cypricardinia sublamellosa.Hall,Pal.N.Y.,III,p.267,pl. 1,f.1,1861;L.Held.gr.Helderberg Mtns.,Albany Co.- Ohern,Md.Geol.Sur.,L.Dev.,p.463-464,pl.78,f.8,1913; Held.Form.,New Scotland mem.Devil's Backbone,Md.- Weller,Pal.N.J.,III,p.317,not fig.,New Scotland beds near Hainesville,N.J.

Cypricardites bisulcata Conrad, see Grammysia bisulcata (Conrad)

Cypricardites concentrica Conrad,see Modiomorpha concentrica (Conrad)

Cypricardites indenta Conrad, see Cypricardenia indenta (Conrad)

Cypricardites mytiloides Conrad,see Modiomorpha mytilocides (Conrad)

Cypricardites sectifrons Conrad, see Phthomia sectifrons (Conrad)

Cypricardites subalata Conrad, see Modiomorpha subalata (Conrad)

Genus CYRTOCERAS Goldfus.
(1832. In Dechen's Germ. transl. de la Bache, p.536)

Cyrtoceras? sp. Branson

Cyrtoceras? sp. Branson, Dev. of Mo., p.124, pl.29, f.4, 1922; Snyder Cr. shale, Callaway Co.

Cyrtoceras sp. Kindle

Cyrtoceras sp. Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res., p.743, pl.25, f.2, 1901; Sellersburg beds(?) Jefferson Co.

Cyrtoceras(?) dubium Swartz

Cyrtoceras(?) dubium Swartz, Md. Geol. Sur., L. Dev., p.488-489, pl.88, f.6, 1913; Held. Form., Coeyman's member. Devil's Backbone, Md.

Cyrtoceras expansum Kindle

Cyrtoceras expansum Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.743, pl.26, f.1, 1901; Jeffersonville l.s. Bunker Hill

Cyrtoceras sacculum Meek & Worthen

Gomphoceras sacculum Meek & Worthen, Proceed. Acad. Nat. Sci., Phila; p.258, 1866.

Cyrtoceras sacculum Meek & Worthen, Ill. Geol. Sur., III, p.445, pl.12, f.3a, b, c, 1868; White Sulphur Springs, Del. Co., Ohio; Hamilton gr. Dev. Series.

Cyrtoceras subrectum Hall

Cyrtoceras subrectum Hall, Pal. III, N.Y. p.342, pl.64, f. 3a-d, 1859; L. Held. gr. Herkimer Co.

Cyrtolites expansus Hall

Cyrtolites? expansus. Hall, Pal. III, N.Y. p.479, pl.114, f. 4 & 5, 1859; Oriskany s.s. Albany & Schoharie Cos.- Clarke, N.Y. State Mus., mem. III, no.3, p.38, pl.3, f. 20-23, 1900.- Ohern, Md. Geol. Sur., L. Dev., p.466-467, pl. 79, f.5, 6, 1913; Orisk. Form., Ridgely member. near Cumb., Md.

Cyrtolites(Cyrtonella)mitella Hall

Cyrtolites(?)mitella Hall,Des. of new species of Foss., p.33,1861;15th.Rep.N.Y.State Cab.Nat.Hist.,p.61, 1862;Illus. of Dev. Foss.Gastropoda,pl.25,f.16-18, 1876; As cited by Prosser & Kindle,Pal.N.Y.,V,pt. 2,p.123,pl.25,f.23-28,1879.

Cyrtolites (Cyrtonella)mitella Prosser & Kindle,Md.Geol Sur.,Mid.& Up.Dev.,p.288-289,pl.36,f.4-7,1913;Romney Form.,Hamilton member.B.& O.R.R.cut 21st.Bridge, Cumb.,Md.

Cyrtonella mitella Hall

Cyrtolites(Cyrtonella)mitella Hall,as cited by Weller, Pal.N.Y.,V,pt.2,p.123,pl.25,f.23-28,1879.

Cyrtonella mitella Weller,Pal.N.J.,III,p.386,pl.53, f.12,1903;Monroe shale,near Newfoundland,N.J.

Cytherodon(schizodus) quadrangularis Hall,see Schizodus Chemungensis var. quadrangularis Hall.

Dentalium aciculatum Hall,see Bactrites aciculatus(Hall)

Genus DIAPHOROSTOMA Fisher

Diaphorostoma sp. Tansey

Diaphorostoma sp. Tansey,The Dev. of Mo.,p.207,pl.54, f.25,26,1922;Bailey ls.Little Saline Cr.,Ste Genevieve Co.

Diaphorostoma antiquum (Webster)

Platyostoma antiquis Webster,Iowa Naturalist,I,p.59, 1905.

Diaphorostoma antiquum Fenton & Fenton,Cont.Mus.Univ. Mich.,I,p.191-192,pl.44,f.6-7,1924;Spirifer zone. Hackberry Stage.

Diaphorostoma depressum (Hall)

Platyostoma depressa Hall,Pal.N.Y.,III,p.301,pl.55, f.4a,b,1859;L.Held.Gr.Schoharie Catskill & Becraft Mt.-Ohern,Md. Geol.Sur.,L.Dev.,p.482-483,pl.86,f. 11,12,1913;Orisk.Form.,Ridgely mem.S. end.Nicholas Mt.(?) Held.Form.,New Scotland mem.Corriganville, Md.

Diaphorostoma desmatum Clarke

Platyostoma desmatum Weller, Pal. N.J. III, p.262, pl.49, f.12, 1903; Oriskany Form., N.J.

Diaphorostoma desmatum. Clarke, N.Y. State Mus., III, no.3, p.29, pl.3, f.13-19, 1900.-Ohern, Md. Geol. Sur. L. Dev., p. 483, pl.86, f.13, 14, 1913; Oriskany Form., Shriver mem. 2lst. Brdige, Cumb., Md.

Diaphorostoma genevievensis Branson & Williams.

Diaphorostoma genevievensis Branson & Williams, The Dev. of Mo., p.150, pl.39, f.7, 8, 9, 1922; Grand Tower l.s. Little Saline Cr.

Diaphorostoma insolitum (Webster)

Platyostoma insolita Webster, Iowa Nat., II, p.4, 1906.

Naticopsis gigantea var. depressa Webster, Ia. Nat., II, p.3. 1906.

Diaphorostoma insolitum Fenton & Fenton, Contr. Mus. Univ. Mich., I, p.191, pl.35, f.3, 1924; Cerro Gordo substage, Spirifer zone, Hackberry Stage.

Diaphorostoma irrasum Fenton & Fenton

Diaphorostoma irrasum Fenton & Fenton, Contr. Mus. Univ. Mich., I, p.193, pl.38, f.8-9, 1924; Spirifer zone. Hackberry Stage. Bird Hill.

Diaphorostoma lineatum (Conrad)

Platyostoma lineata. Conrad, Jour. Acad. Nat. Sci., Phila., VIII, p.276, pl.17, f.7, 1842.-Hall, Illus. Dev. Foss., Gastropoda, pl.9, 1876; Pal. N.Y., V, pt.2, p.21, pl.10, f. 1-21; 1879.-Kindle, 25th. Ann. Rept. Ind. Dept. Geol. Nat. Res., p.695-696, pl.20, f.1, 2, 2a, 3, 7, 1901; Sellersburg beds. Charlestown,

Diaphorostoma lineatum. Clarke, N.Y. State Mus., Bull.49, p.131, 1901; N.Y. State Mus., Bull.65, p.533, 1903.-Grabau & Shimer, N. Am. Index Foss., I, p.680, f.953, 1909.-Prosser & Kindle, Md. Geol. Sur., Mid.& Up. Dev., p.298-299, pl.37, f.7-12, 1913; Romney Form., Hamilton mem. Ernstville; Evitts Creek below Wolfe Mill(?) Capacon.-Clarke & Swartz, Md. Geol. Sur., Mid., & Up. Dev., p.684-685, pl.70, f.17-19, 1913; Jennings Form., Chemung mem. near Penn. Md. state line. W. Green Ridge.

Diaphorostoma modestum(Webster)

Platyostoma(?)modesta Webster, Ia. Nat., II, p.2, 1906.

Diaphorostoma modestum Fenton & Fenton, Contr. Mus. Univ. Mich., I, p.192, pl.37, f.1-3, 1934.

Diaphorostoma snyderensis Branson

Diaphorostoma snyderensis Branson, Dev. of Mo., p.123, pl.27, f.1,8,9, 1922; Snyder Cr. shales.

Diaphorostoma ventricosum (Conrad)

Platyostoma ventricosa. Conrad, Jour. Acad. Sci., Phila., VIII, p.275, pl.17, f.5, 1842.-Hall, Pal. N.Y., III, p. 300, pl.55, f.9a,b,c, pl.69, pl.112, f.1-10; pl.113, f. 7,8; pl.115, f.8, p.475, pl.118, f.3-9, L. Held. gr. Catskill & Becraft Mt.,-Nicholson, Rept. Pal. Prov. Ont., p.117, pl.2, f.4, 1874.-Weller, Pal. N.J., III, p.361, pl.49, f.3-11, 1903; Mid. & Up. Orisk. N.J.

Diaphorostoma ventricosum. Clarke, N.Y., State Mus., Mem. III, no.3, p.30, pl.3, f.25-28, 1900.-Ohern, Md. Geol. Sur., L. Dev., p.482, pl.87, f.1,2, 1913.-Stewart, Dev., of Mo., p.261, pl.70, f.6-8, 1922; Little Saline Cr. e.s. Ste. Genevieve Co.-Ohern, Md. Geol. Sur., L. Dev., p.482, pl.87, f.1,2, 1913; Orisk. Form., Ridgely member. Cumb., Md. Warren Point, Penn.; Knobley Mt., W. Va.

Genus ECCYLIOMPHALUS Portlock
(1843. Geol. Rept. London, p.411)

Ecculiomphalus comes Hall, see Phonerotinus laxus (Hall)

Eccyliomphalus laxus, Hall

Eccyliomphalus laxus Hall, N.Y., Pal. V, pt.2, p.60, pl. 16, 1899.-Grabau, Buffalo Soc. Nat. Sci., VI, p.276, f. 205, 1899. Encrinal l.s.; Marcellus beds on Lake Shore.

Echinus gyracanthus Eaton, see Tentaculites gyracanthus (Eaton)

Ectenodesma birostratum Hall

Ectenodesma brostratum. Clarke, Pal. N.Y., V, pt.1, sec. 1, p.242, pl.23, f.27-30; pl.84, f.20, 1904.-Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p.633-634, pl. 62, f.8,9, 1913; Jennings Form., Woodmont mem., Ithaca Fauna. w. Pawpaw, W. Va., Little Orleans; Woodmont; Yellow Springs, W. Va.

Ectomaria ecclesiae Clarke & Swartz

Ectomaria ecclesiae Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p.664-665, pl.67, f.9-12, 1913; Jenn. Form.,

Chem.mem.,near Deer Park Station;S.Oakland,Parkhead member.w.slope Polish Mt.

Ectomaria Marylandica Clarke & Swartz.

Ectomaria Marylandica Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.663-664,pl.67,f.5-8,1913;Jenn.Form.,Chem mem.Town Creek.Parkhead mem.on Polish Mt.;w. of Pawpaw,W.Va.,above mouth of Sideling Hill Cr.

Edmondia undata Hall,see Grammysia undata Hall

Genus ELYMELLA Hall
(1885,Pal.N.Y.,V,pt.1,p.50)

Elymella nuculoides Hall

Elymella nuculoides Hall,N.Y.Pal.V,pt.1,p.503,pl.40, 1884.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.269,f.192, 1899;Hamilton shales at Hamburg-on-the-Lake,Erie Co. N.Y.,"(Hall,type)

Enchostoma? sp.Kindle

Enchostoma? sp.Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.305, not fig.,1913;Romney Form.,Onondaga mem.,s.e.Cumb., Md.

Genus EUOMPHALUS Sowerby
(1922.Dev. of Mo.,p.156,St.Laurent 1.s.3 mi.s. of St.Mary's)

Euomphalus clymenioides Hall,see Stroparollus Clymeniodes Hall.

Euomphalus(Stroparollus)clymenioides Hall,see Stroparollus clymenioides Hall

Euomphalus conradi Hall,see Pleuronotos Decewi(Billings) (Hall.

Euomphalus cyclostomus Hall,see Stroporallus cyclostomus (Hall)

Euomphalus Decewi Billings,see Pleuronatos Decewi(Billings) & Hall)

Euomphalus Decewi Hall,see Pleuronatos Decewi(Billings & Hall)

Euomphalus Decewi Meek,see Pleuronatos Decewi(Billings) Hall

Euomphalus disjunctus Hall

Euomphalus disjunctus Hall, Pal. N.Y., III, p.340, pl.65, f.8; pl.67, f.4a,b; 1859; L.Held.gr. Carlisle & Schoharie, Schoharie Co.

Euomphalus eurekensis Walcott

Euomphalus eurekensis. Walcott, U.S.G.S., Mon.8, p.185, pl.16, f.2, 2a, 1884.-Kindle, U.S.G.S., Bull.391, p.34, pl.10, f.11, 1909; Ouray l.s. Shoshone, Colo.

Euomphalus (Straparollus) exiguus Kindle

Euomphalus (Straparollus) exiguus Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res., p.718, pl.21, f.8, 1901; Jeffersonville l.s. Hope & Newborn.

Euomphalus hecale Hall

Euomphalus hecale. Hall, Illus. Dev., Foss., Gastropods, pt.16, f.10-14, 1876; Nat. Hist. N.Y. Pal., V, pt.2, p.59, pl.16, f.10-14, 1879.

Euomphalus cf hecale Branson, Dev. of Mo., p.120, pl.38, f.6, 7, 1922; Snyder Creek Shale.

Euomphalus laxus Hall, see Pahnerotinus laxus (Hall)

Euomphalus (ecculiomphalus?) laxus Hall, see Phanerotinus laxus (Hall)

Euomphalus planoidiscus Hall

Euomphalus planodiscus. Hall, Pal. N.Y., V, pt.2, p.57, pl. 16, f.1-4, 1879.-Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res., p.718, not fig., 1901; Jeffersonville l.s. Bunker Hill

Euomphalus? rotundus Hall, see Euryzone lucina (Hall)

Euomphalus sampsoni Nettleroth

Euomphalus sampsoni. Nettleroth, Ky. Foss. Shells, p.182, pl.21, f.3-4, 1889.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.718-719, not fig., 1901; Sellersburg beds. Watson.

Euomphalus sinuatus Hall

Euomphalus sinuatus Hall, Pal. N.Y., III, p.340, pl.69, f.1a,b, 1859; L.Held.gr. Herkimer Co.

Euomphalus tioga Hall

Euomphalus tioga. Hall, Pal. N.Y., V, pt.2, p.56, pl.27, f.

8,1879.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev. p.670,not fig.,1913;Jenn.Form.,Chem.member,near Little Orleans.

Euryzone ityx Grabau & Shimer,see Pleurotomaria(Euryzone) ityx Hall.

Euryzone lucina (Hall)

Euomphalus? rotundus Hall,Geol.N.Y.,pt.4,Sur.4th. Geol.Dis.,p.172,f.4,1843.

Pleurotomaria lucina.Hall,Des.new sp.Foss.,etc.,p. 14,1861;15th.Rep.N.Y.,State Cab.Nat.Hist.,p.42,pl. 5,f.12,1862;Nat.Hist.N.Y.,Pal.V,pt.2,p.67-68,pl. 18,f.1-11,1879.Illus.Dev.Foss;Gastiopoda,p.118, 1876.-Grabau,Buffalo Soc.Nat.Sci.,Bull,6,p.273, f.207,1899;Encrinal.ls.-Kindle,25th.Ann.Rep.Ind. Dep.Geol.Nat.Res.,p.710-711,1901;Sellersburg(?) bed and Jeffersonville ls.Falls of the Ohio

Pleurotomaria rotunda Hall,Illus.Dev.Foss.,Gastropoda, pl.18,1876.

Euryzone lucina.Grabau & Shiner,N.Am.Index Foss.,I,p. 645,f.8790,1909.-Branson,Dev. of Mo.,p.119,pl.26, f.14,1922;Mineola ls.Ralls Co.

Euryzone mineolaensis Branson

Euryzone mineolaensis Branson,Dev.of Mo.,p.118-119, pl.26,f.18;pl.28,f.8,9,1922;Mineola of Ralls Co.

Euthydesma sp.Kindle

Euthydesma sp.Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.221-222,not fig.,1913;Rom.Form.,Onan.member.s.e.Cumb., Md.

Genus FLOYDIA Webster

(Floyda 1905,Webster,Ia.Naturalist)

Floydia concentrica Webster

Floyda concentrica.Webster,Iowa Nat.,I,p.39,1905.

Floydia concentrica.C.L.Fenton,Am.Mid.Nat.,V,p.221,pl. 7,f.4-5,1918.-Fenton and Fenton,Cont.Mus.Geol.Univ. Mich,,I,p.182,1924;base of spirifer to top of Owen. Hackberry stage.

Floydia concentrica multisinuata C.L.Fenton

Floydia concentrica multisinuata.C.L.Fenton,Am.Mid. Nat.,V,p.223,pl.7,f.4,1918.-Fenton & Fenton,Cont.

Mus.Geol.Univ.Mich.,I,p.186,pl.34,f.7,pl.38,f.15, 1924;Spirifer zone.Hack.stage.

Floydia gigantea (Hall & Whitfield)

Naticopsis gigantea.Hall & Whitfield,23d.Ann.Rep.N.Y. State Cab.Nat.His.,p.238,pl.12,f.8-10,1873.-Webster Ia.Nat.,II,p.45,pl.9,f.1-11,1909.-C.L.Fenton,Am. Mid.Nat.,V,p.222,pl.7,f.1-3,1918.

Naticopsis Magnifica Webster,Iowa Nat.,I,p.58,1905.

Floydia gigantea Fenton & Fenton,Contr.Mus.,Univ.Mich. I,p.182-183,pl.34,f.5;pl.35,f.1-10;pl.36,f.1,pl.37, f.10,1924;Spirifer zone & Owen substage.Hackberry stage.

Floydia gigantea hackberryensis (Webster)

Naticopsis hackberryensis Webster,Iowa,Nat.,2,p.3, 1906;Iowa Nat.,II,p.46,pl.9,f.14-15,1909.

Naticopsis gigantea hackberryensis C.L.Fenton,Am.Jour. Sci.,4th.ser.,48,p.373,1919.

Floydia gigantes hackberryensis Fenton & Fenton,Contr. Mus.Univ.Mich.,I,p.184,pl.32,f.3-4,pl.40,f.16,1924; Spirifer zone;Idiostroma zone;Upper Owen,Hack,stage

Gephyroceras holzapfeli Clarke,see Goniatites(Gaphyroceras) holzapfeli Clarke.

Glossites lingualis Hall

Not.Sanguinolites amygdalinus Winchell,Proc.Acad.Nat. Sci.,Phila.,p.13,1863.

In part,modiomorpha? amygdalina(Winchell) Hall,Pal.N.Y V,pt.1,pl.40,f.12-20,1883.Prel.not Lamellibr.2,p. 78,1870.

Glossites lingualis.Hall,Pal.N.Y.,I,pt.5,II,p.497,pl.40, f.16,19;pl.96,f.9-11,1885.-Kindle,U.S.G.S.,Bull. 391,p.31,pl.10,f.1,1909;Ouray ls.Durango quadrangle Colorado.

Glyptocardia speciosa Hall,See Cardiola retrostriata von Buch.

Glyptocardia speciosa Hall,see Buchiola halli Clarke.

Glyptodesma cancellata Nettleroth

Glyptodesma cancellata.Nettleroth,Ky.Foss.Shells,p. 227,pl.5,f.1,1889.-Kindle,25th.Ann.Rep.Ind.Dept.

Geol.Nat.Res.,p.670,not fig.,1901;"Corineferous l.s" Falls of the Ohio.

Glyptodesma erectum(conrad)

Aviculata erecta conrad,Jour.Acad.Nat.Sci.,Phila.,p. 238,pl.12,f.5,1842.

Glyptodesma erectum.Hall,Pal.N.Y.,V,pt.1,Lamellibr.,I, p.153-155,pl.11,f.1-10;pl.12,f.1-9;pl.87,f.1-3,1884. -Kindle,25thlAnn.Rep.Ind.Dep.Geol.Nat.Res.,p.670, not fig.,1901;Jeffersonville l.s.Scipio;Lancaster; Falls of the Ohio.-Branson & Williams Dev. of Mo.,p. 150-151,pl.36,f.7,1923;St.Laurent l.s.,s.St.Mary's

Glyptodesma occidentale Hall

Glyptodesma occidentale.Hall,Pal.N.Y.,V,pt.1,p.157,pl. 15,f.12;pl.86,f.9,1884.-Kindle,25th.Ann.Rep.Ind.Dept Geol.Nat.Res.,p.669-670,pl.13,f.4,5;pl.14,f.1,1901; Sell.beds.Charlestown,Falls of the Ohio;Scipio. Paris crossing;Lancaster;Hanover.

Genus GOMPHOCERAS Sowerby.
(1839.Murch.Sil.Syst;p.620)

Gomphoceras sp.Branson

Gomphoceras sp.Branson,Dev. of Mo.,p.125,pl.29,f.7, 1923;Mineola,Ralls Co.

Gomphoceras sp. Fenton & Fenton

Gomphoceras sp.Fenton & Fenton,Cont.Mus.Univ.Mich.,I, p.195,pl.38,f.11,1924;Stromatoporella faunule Hackberry Grove.Hack.Stage.

Gomphoceras sp.Kindle.

Gomphoceras sp.Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.741,pl.29,f.1,1901;Jeffersonville ls.Falls of the Ohio.

Gomphoceras bellatum "n-sp.(Rowley)" Greene

Gomphoceras bellatum "n.sp.(Rowley)" Greene,Contr.Pal. Ind.I,pt.7,p.58,pl.21,f.5-8,1901;Hamilton gr.,Charlestown,Indl

Gomphoceras facetum "n-sp(Rowley)"Greene

Gomphoceras facetum"n-sp.(Rowley)" Greene,Contr.Pal. Ind.,I,pt.7,p.58-59,pl.21,f.9-12,1901;Hamilton gr. Charlestown,Ind.

Gomphoceras floydensis Fenton & Fenton

Gomphoceras floydensis Fenton & Fenton,Contr.Mus. Univ.Mich.,I,p.195,pl.38,f.10,1924;Spirifer zone. Rockford,Hackberry stage.

Gomphoceras grandtowerensis Branson & Williams

Gomphoceras grandtowerensis Branson & Williams,Dev.of Mo.,p.158,pl.37,f.6& 7,1922;Grand Tower,l.s.Little Saline Creek.

Gomphoceras hyatti Whitfield

Gomphoceras hyatti Whitfield,N.Y.Acad.Sci.,2nd.Ann. Rep.,p.206,1882;Ohio Geol.Sur.,7,p.427-428,pl.4, f.1;pl.5,f.1-2,1893.-Branson and Williams,Dev. of Mo, p.158-159,pl.38,f.1,1922;Grand Tower l.s. S.St.Mary's

Poteriocerас hyatti Grabau & Shimer,N.Am.Index Foss., II,p.128,f.1374a,b,1910.

Gomphoceras impar Hall

Gomphoceras impar Hall,Pal.N.Y.,V,pt.2,p.332,1879;Pal. N.Y.,V,pt.2,p.332,1879;Pal.N.Y.,Sup.to 5,pt.2,VII, pl.120,f.4;pl.131a,f.1,1888.-Branson and Williams, Dev. of Mo.,p.159-160,pl.37,f.1,1922;Grand Tower l.s.Little Saline Cr.

Gomphoceras lunatum Hall

Gomphoceras lunatum Hall,N.Y.,Pal.,V,pt.2,p.341,pl.95, 1879.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.292,f.227, 1899;Hamilton gr.Hamburg,Erie Co.N.Y.

Gomphoceras manes Hall

Gomphoceras manes Hall,N.Y.Pal.,V,pt.2,p.339,pl.123, Sup.1879;Grabau,Buffalo Soc.Nat.Sci.,VI,p.291,f. 226,1899;Carbonacerous beds of Genesse slate.S. Alden,Erie Co.,N.Y.

Gomphoceras minum Hall

Gomphoceras minum.Hall,Pal.N.Y.,7,p.3,pl.122,f.4,1888.- Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.740,pl. 25,f.3,1901;Sell.beds,Charlestown & Falls of the Ohio.

Gomphoceras missouriensis Branson & Williams.

Gomphoceras missouriensis Branson & Williams,The Dev. of Mo.,p.160,pl.37,f.2,3,45,1922;Grand Tower l.s.

Little Saline Cr.

Gomphoceras oviforme "Hall sp.Rowley" Greene

Gomphoceras oviforme"Hall sp.Rowley"-Hall,Pal.N.Y.,V, pt.2,p.344,pl.45,f.1-4;pl.46,f.6,7;pl.94,f.6,7,1879 -Kindle,35th.Ann.Rep.Ind.Dep.Geol.Nat.Res.p.740-741 not fig;1901.-Greene,Contr.Pal.Ind.I,pt.7,p.59,61. 21,f.13-14,1901.

Cf.Gomphoceras pingue Hall

Gomphoceras pingue.Hall,Pal.N.Y.,V,p.346,pl.94,f.9; pl.95,f.6,1879.-Clarke,N.Y.State Mus.,Bull.65,p. 593,1903.-Prosser & Kindle,Md.Geol.Sur.,p.318-319, pl.42,f.1,2,1913;Romney Form.,Ham.mem.w.Md.

Gomphoceras plenum Hall

Gomphoceras plenum.Hall,Fifth Ann.Rep.State Geol.Expl. (121a)6,f.3,4,1886;-Beecher,Pal.N.Y.,Supplement to V,pt.2,in VII,p.33-34,pl.121A,f.3,4,1888.

Gomphoceras plenum? Branson and Williams,Dev. of Mo., p.160-161,pl.38,f.3,1922;Grand Tower l.s.Little Saline Creek.

Gomphoceras raphanus Hall

Gomphoceras raphanus Hall,Pal.N.Y.,V,pt.2,p.347,pl. 94,f.2-5,10,1879.

Gomphoceras raphanus?Kindle,35th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.741,1901;Sell.beds Charlestown,; Lexington.

Gomphoceras sacculum M.& W.,see Cyrtoceras M.& W.

Gomphoceras striatum"n.sp.(Rowley)" Greene

Gomphoceras striatum"n.sp.(Rowley)" Greene,Contr.Pal. Ind.,I,pt.7,p.58,pl.21,f.1-4,1901;Ham.dev.,Charles- town,Ind.

Gomphoceras turbiniforme,Meek & Worthen

Gomphoceras (apioceras)turbiniforme,M.& W.,Pro.Acad. Nat.Sci.,Phila;p.258,1866.

Gomphoceras turbiniforme.M.&W.,see Geol.Sur.III,p.444, pl.12,f.2a,b,1868;Charlestown,Ind;Dev.-Kindle,35th. Ann.Rep.Ind.Dep.Geol.Nat.Res.p.739-740,not fig., 1901;Sell.beds;Charlestown;Lexington

Genus GONIATITES De Haan
(1825,Monographiae Ammoniteorum et Goniatiteorum,p.159,1825)

Goniatites(Tornoceras)bicostatus Hall

Goniatites(Tornoceras)bicostatus Clarke,N.Y.,Pal.,V, pt.2,p1450,pl.72,74,1879;Naples Fauna,p.118;Naples shales of Big Sister & Farnum Crs.;on Lake Shore, near Angola.

Goniatites chemungensis Hall,see Sandbergeroceras chemungensis (Vanuxem)

Goniatites chemungensis vanuxem,see Sandbergeroceras Chemungensis (Vanuxem)

Goniatites complanatus Hall

Goniatites complanatus Hall,N.Y.,Pal.,V,pt.2,p.455,pl. 455,pl.70,1879.Grabau,Buffalo Soc.Nat.Sci.,VI,p. 298,f.234,1899.

Goniatites delphiensis Kindle.

Goniatites delphiensis Kindle,25th.Ann.Rep.Ind.Geol. Sur.,p1577-578,pl.2,f.1,1a,2,3,1901;New Albany shale.Delphi

Goniatites discoideus Hall,see Tornoceras uniangulare (conrad)

Goniatites discoideus var.Ohioensis Hall

Goniatites discoidens var.Ohioensis.Hall,27th.Rep.N.Y. State Mus.Nat.His.,p.13,f.18.19,1874.-Kindle,25th. Rep.Ind.,Dept.Geol.Nat.Res.,p.744,not fig.,1901; Sell.beds,Lex. & Falls of the Ohio.

Goniatites expansus Hall,see Agoniatites expansus (Vanuxem)

Goniatites expansus vanuxem,see Agoniatited expansus (Vanuxem)

Goniatites(Cephyroceras)holzapfeli Clarke,Naples Fauna, 16th.Ann.Rep.N.Y.State Geol.,p.87,pl.7.-Grabau, Buffalo Soc.Nat.Sci.,VI,p.302,f.241,1899;Eighteen Mile Cr.,probably from lower Naples shales.

Goniatites (Manticoceras)instumescens Beyrich

Goniatites patersoni Hall

Goniatites (Manticoceras)intumescens Clarke,N.Y.,Pal.V

pt.2,p.464,pl.72,74,1879;Naples Fauna p.42.-Grabau, Buffalo Soc.Nat.Sci.,VI,p.299,f.235,236, 1899; Naples shale.

Goniatites(Probeloceras)lutheri Clarke

Goniatites(Probeloceras)lutheri Clarke(part)Bull.16th. U.S.Geol.Sur.,p.50,pl.2,Naples Fauna,p.90-102.- Grabau,Buffalo Soc.Nat.Sci.,VI,p.298,f.233,1899. Naples shale.

Goniatites patersoni Hall,see Goniatites(Manticoceras) intumescens Beyrich.

Goniatites patersoni Hall,see Manticoceras patersoni(Hall)

Goniatites(Manticoceras)rhynchostoma Clarke

Goniatites(Manticoceras)rhynchostoma Clarke,Naples Fauna,16th.Ann.Rep.N.Y.,State Geol.,1899,p.65,69, pls.4,5,-Grabau,Buffalo Soc.Nat.Sci.,VI,p.301,fs. 237,238,1899;Naples sh.Big Sister Cr.,near Angola, N.Y.

Goniatites(Manticoceras)sororium Clarke

Goniatites(Manticoceras)sororium Clarke,Nap.Fauna, 16th.Ann.Rep.N.Y.,State Geol.1898,p.75,76,pl.4.- Grabau,Buffalo Soc.Nat.Sci.,VI,pl301,f.239,240, 1899;Angola,on Lake Erie shore,along Big Sis.,& Farnham Crs.,Erie Co.,occurs in Naples shales.

Goniatites uniangulare Conrad,see Tornoceras uniangulare (Conrad)

Goniatites uniangularis Hall,see Tornoceras uniangulare (Conrad)

Goniatites(Tornoceras)uniangularis Conrad

Goniatites(Tornoceras)uniangularis Clarke,N.Y.,Pal., V,pt.2,p.444,pl.71,72,74,1879;Naples Fauna,p.111, et.seq.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.296,f. 231,1899;Pleurodictyum beds.Wanakah Cliff.

Goniatites uniangularis var.compressum Clarke

Goniatites uniangularis var.compressum Clarke,see Beecher,Am.Jour.Sci,vol.40,p.71-75,pl.1,1890; Nap.Fauna,p.116.-Grabau,Buffalo Soc.Nat.Sci.,VI, p.297,1899;Hamilton sh.Wende Sta.,Erie Co.

Goniatites uniangularis var obesum Clarke

Goniatites obesum Clarke,see C.E.Beecher,AmlJour.

Sci.,vol.40,p.71-75,pl.1,1890.

Goniatites uniangularis var obesum Grabau,Buffalo Soc. Nat.Sci.,VI,p.397,nof fig.,1899;Lake Shore, at Wande Sta.,Erie Co.

Goniatites vanuxemi Hall,see agoniatites expansus(vanuxemi)

Goniatites wabashensis Kindle

Goniatites wabashensis Kindle,25th.Ann.Rep.Ind.Geoll Sur.,p.577,pl.2,f.4,4a,1900.New Albany shale,Delphi.

Genus GONIOPHORA Phillips
(1848.Memoirs Geol.Sur.St.Britain,II,pt.1,p.264)

Goniophora?sp.Weller

Goniophora?sp.Weller,Pal.N.J.,III,p.334,not fig.,1903; L.Orisk.N.J.

Goniophora glauca Hall

Sanguinolites glaucus Hall,Prelim.notice Lamellibr., pt.2,p.38,1840.

Goniophora glaucus Hall,Pal.N.Y.,V,pt.1,sec.2,p.299, pl.43,f.16;pl.44,f.10-17,1885.

Goniophora glauca Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.652-653,pl.65,f.7,1913;Jenn.Form.,Parkhead member. s.e. Pratt on White Sulphur Branch.

Goniophora hamiltonensis Hall

Sanguinolites hamiltonensis Hall,Prelim.Not.Lamellibr. II,p.36,1870.

Goniophora hamiltonensis.S.A.Miller,Cat.Amer.Pal. Foss,,p.192,1877.-Hall,Pal.N.Y.,V,pt.1,Lamellibr. II,p.296-297,pl.43,f.8-15,17-21,1885.-Kindle,Ind. Dept.Geol.Nat.Res.,25th.Ann.Rep.,p.684-685,pl.16, f.4,5,1901.-Clarke,N.Y.State Mus.,Bull.65,p.390, 1903.-Grabau & Shimer,N.Am.Index Fossl,I,p.519,f. 699c,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.271-272,pl.33,f.11-13,1913;Romney Form., Hamilton mem.N.Hancock.-Clarke & Swartz,Md.Geol. Sur.,Mid. & Up.Dev.,p.651,pl.65,f.3,1913;Jenn. Form.,Parkhead member.w.mouth of Town Cr.;w.Pawpaw, W.Va.,Woodmont member,Ithaca Fauna.w.Pawpaw,W.Va.; Branson,Dev. of Mo.,p.114-115,pl.25,f.1,2,1922; Snyder Cr.Shale,Calloway Co.

Goniophora modiomorphoides Grabau

Goniophora modiomorphoides Grabau,Rept.N.Y.State Geol. 1896.;Faun.Ham.gr.,p.254,1898;Buffalo Soc.Nat.Sci., VI,p.253,f.168;Encrinal l.s.

Goniophora truncata Hall

Goniophora truncata.Hall,Pal.N.Y.,V,pt.1,sec.2,p.298, pl.43,f.9.10;pl.44,f.1-5,1885.-Grabau & Shimer,N. Am.Index Foss.,I,p.519,f.699,1909.-Clarke & Swartz Md.Geol.Sur.,Mid.& Up.,Dev.,p.651-652,pl.65,f.4-6, 1913;Jenn.Form.,Parkhead member.Polish Mt.;Sideling Hill Creek.-Kindle,35th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.685,1901;"Corniferous l.s." Falls of the Ohio(Nettleroth)

Genus GOSSELETTIA Barrois
(1881.Ann.Soc.Geol.du Nord.VIII,p.176)

Gosselletia sp.Clarke & Swartz

Gosselletia sp.Clarke & Swartz,Md.Geol.Sur.,Mid.& Up. Dev.,p.641-642,pl.63,f.21,1913;Jenn.Form.,Chemung member.Polish Mt.

Gosselletia retusa Hall

Gosselletia retusa Hall,N.Y.,Pal.V,pt.1,p.249,f.164, 1899;Hamilton gr.,at Eighteen mi.cr.,Erie Co.,N.Y.

Genus GRAMMYSIA De Vernenil
(1847.Bull.Soc.Geo.France,2d.Sec.,Tome IV,p.696)

Grammysia sp.Kindle

Grammysia sp.Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.220, not fig.,1913;Rom.Form.,Onondaga member.s.e.Cumb.

Grammysia sp.Maynard

Grammysia sp.Maynard,Md.Geol.Sur.,L.Dev.,p.450,pl. 75,f.1,1913;Held.Form.,Keyser member.Keyser,W.Va.

Grammysia sp.Weller

Grammysia sp.Weller,Pal.N.J.,III,p.385,pl.53,f.8-9, 1903;Monroe shale,outlet Oak Ridge reservoir,near Newfoundland,N.J.

Grammysia arcuata(Conrad)

Posidonia(?)arcuata Conrad,Geol.Sur.,N.Y.,Ann.Rep., p.53,1841

Grammysia arcuata Hall,Prelim.notice Lamellibr.2,p.56; N.Y.Pal.V,pt.1,373,pls.61,f.1-9;pl.63,f.66?pl.93,f. 27,1885.-Grabau,Buf.Soc.Nat.Sci.,VI,p.260,f.179,1899; Below Encrinal l.s.,Ham.gr.-Keyes,Johns Hopkins Univ. Circ.,II,p.29,1891.-Kindle,35th.Ann.Rep.Ind.Dep.Geol. Nat.Res.,p.684,not fig.,1901;chert above "Cornifer- ous l.s." Falls of the Ohio.-Clarke,N.Y.State Mus., Bull.65,p.396,1903.-Clarke & Mathews,Md.Geol.Sur.,VI, pl.17,f.10,1906.-Grabau & Shimer,N.Am.Index Foss.,I, p.383,f.486e,f.1,1909.-Prosser & Kindle,Md.Geol.Sur. Mid. & Up.Dev.,p.219-220,pl.22,f.4-10,1913;Romney Form.,Hamilton member.Town Cr.N.Oldtown;Pine Hill; McCoy's Ferry;s.e.Cumb.

Grammysia bisulcata (conrad)

Pterinea bisculata Conrad,Geol.Sur.,N.Y.,Ann.Rep.,p. 116,1838

Cypricardites bisulcata Conrad,Geol.Sur.,N.Y.Ann.Rep. p.52,1841.

Grammysia hamiltonensis de verneuil,Bull,Soc.Geol., France,2d.ser.,IV,p.696,1847

Grammysia bisculata.Hall,Prelim,notice Lamellibr.2, p.49,1870;Pal.N.Y.,V,pt.1,Lamellibr.II,p.359,pl. 54,f.1-16,1885.-Keyes,Johns Hopkins Univ.Circ., 11,p.29,1891.-Clarke,N.Y.State Mus.,Bull.65,p.397, 1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.381 f.485b,1909.-Prosser and Kindle,Md.Geol.Sur.Mid.& Up.Dev.,p.218-219,pl.22,f.3,1913;Romney Form., Hamilton mem.,McCoys Ferry;n.e.Cumb.

Grammysia circularis Hall

Grammysia circularis.Hall,Prelim.Lamellibr.II,p.51, 1870;Pal.N.Y.,V,pt.1,Lamellibr.II,p.364,pl.57,f. 3-6;pl.58,f.13,1885.-Clarke,N.Y.State Mus.,Bull.65, p.398,1903.-Grabau & Shimer,N.Am.Index Foss.I,p. 383,f.486g.1909.-Prosser & Kindle? Md.Geol.Sur., Mid. & Up.Dev.,p.220-221,pl.23,f.1-3,1913;Romney Form.,Hamilton member,B.& O.R.R.cut 21st.Bridge. n.Hancock.

Grammysia communis Hall

Grammysia communis.Hall,Pal.N.Y.,V,pt.1,2,p.378,pl.61, f.24-28;pl.93,f.20,1885.-Grabau & Shimer,N.Am.Index Foss.,I,p.383,f.27,1909.-Clarke & Swartz,Md.Geol. Sur.,Mid.& Up.Dev.,p.607-608,pl.59,f.14,15,1913; Jenn.Form.,Woodmont member,Ithaca Fauna.Yellow Springs,W.Va.

Grammysia(?)dubia Fenton & Fenton

Grammysia(?)dubia Fenton & Fenton,Contr.Mus.Univ.Mich. I,pl174-175,pl.33f.10,1924;Spirifer zone,Hackberry stage.

Grammysia elliptica Hall

Grammysia elliptica.Hall,notice Lamellibr.II,p.53,1870; Pa..N.Y.,V,pt.1,p.365-366,pl.58,f.1-12,1884.-Branson Dev. of Mo.,p.111,pl.25,f.15,16,1922.Snyder Cr. shales Calloway Co.-Clarke & Swartz,Md.Geol.Sur., Mid.& Up. Dev.,p.606,pl.59,f.11-13,1913;Jenn.Form., Chemung member.c.Banelville,Allegany Grove;Parkhead member.Town cr.,w.Pawpaw,W.Va.

Grammysia hamiltonensis de Verneuil,see Grammysia bisculcata(Conrad)

Grammysia? rhomboidalis Meek & Worthen

Grammysia?rhomboidalis M.& W.,Ill.Geol.Sur.,III,p.439, pl.11,f.5a,b,1868;"Bake-oven"Jackson Co.,Ill.Ham. gr.Dev. Ser.

Grammysia rhomboidalis M.& W.,Proc.Acad.Nat.Sci.,Phila. p.248,1865.

Grammysia,secunda var.gibbosa Hall & Whitfield

Grammysia secunda var.gibbosa.Hall & Whitfield,24th. Rep.N.Y.State Mus.Nat.Hist.,p.199,1872; 37th.Rep. N.Y.State Mus.Nat.Hist.,pl.13,f.7,8,-Kindle,35th. Ann.Repl Ind.Dep.Geol.Nat.Res.,p.684,1901;"Hydraulic l.s." Falls of the Ohio.

Grammysia subarcuata Hall

Grammysia subarcuata.Hall,Prel.noticeLamellibr.,II,p.61 1870;Pal.N.Y.,V,pt.1,2,p.375,pl.61,f.10-12;pl.93, f.26,1885.-Clarke & Swartz,Md.Geol.Sur.,Mid. & Up. Dev.,p.606-607,pl.59,f.13,1913;Jenn.Form.,Chem. member.Polish Mt.Parkhead member.Allegany Grove.

Grammysia subarcuata? Kindle,Ann.Rep.Ind.Dep.Geol.Nat. Res.,p.684,pl.15,f.3,1901;Sellersburg beds.Charlestown.

Grammysia undata Hall

Edmondia undata,Hall,Pal.N.Y.,V,pt.2,plates & explanations,pl.64,f.30,1883.

Grammysia undata.Hall,Pal.N.Y.,V,pt.1,2,p.379,pl.61,

f.23;pl.64,f.30;pl.93,f.21,1885.-Grabau & Shimer,N. Am.Index Foss.,I,p.383,f.38,1909.-Clarke & Swartz, Md.Geol.Sur.,Mid.& Up.Dev.,p.608-609,pl.? 1913; Jenn.Form.,Chem.member,Town Creek.

Genus GYROCERAS de Koninck
(1844.Terr.Howell,530)

Gyroceras(?)sp.Fenton & Fenton

Gyroceras(?)sp.Fenton & Fenton,Cont.Mus.Univ.Mich.,I, p.197-198,pl.39,f.4,1924;Owen substage,Hackberry stage.

Gyroceras? constrictum Meek & Worthem

Gyroceras? constrictum M.& W.,Ill.Geol.Sur.,III,p. 446,pl.12,f.1a,b,1868;"Bake-oven",Jackson Co.,Ill,, Ham.gr.Dev. series.

Gyroceras indianense Kindle

Gyroceras indianense Kindle,35th,Ann.Rep.Ind.Dep.Geol. Nat.Res.,p.738,pl.24,f.1;pl.25,f.1,1a,1901;Jeffersonville l.s.(?)Jefferson Co.

Gyroceras inelegans Meek

Gyroceras (nautilis)inelegans Meek,Pal.Ohio,I,pl332,pl. 21,1873.

Gyroceras inelegans? Kindle,35th.Ann.Rep.Ind.Dep.Geol. Nat.Res.,p.739,pl.28,f.1,1901;Jeffersonville l.s. Falls of the Ohio.

Gyroceras jason Hall

Gyroceras jason.Hall,Pal.N.Y.,V,pt.2,p.381,pl.50,f.1-2,1879.-Kindle,35th.Ann.Rep.Ind.Dept.Geol.Nat.Res., p.737-738,pl.27,f.1,1901.Jeffersonville l.s.Lexington.

Gyroma capillaria Grabau & Shimer,see Pleurotomaria (Gyroma)Capillaria Conrad.

Gyroma capillaria Perner,see Pleurotomaria (Gyroma)capillaria Conred.

Non Gyronema liratum Ulrich,see Trochonema(Gyronema) liratum(Hall)

Genus HOLOPEA Hall

Halopea(?)iowaensis Webster,see Holopea(?) iowaensis Web-

ster.

Holopea? sp. Clarke & Swartz

Holopea? sp. Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p. 681, not fig. 1913; Jenn. Form., Chem. member, Town Creek

Holopea sp. Ohern

Holopea sp. Ohern, Md. Geol. Sur., L. Dev., p. 468, not fig., p. 468-469, pl. 79, f. 9. 1913; Held. Form., Cumb., Md.

Holopea antiqua var. pervetusta Conrad

Holopea antiqua var. pervetusta Conrad, N.Y., C.S., Pal. III, p. 295, pl. 59, f. 4, 5, 1859; L. Held. gr.

Holopea antiqua (vanuxem)

Littorina antiqua vanuxem, Geol. Rep. 3d. Dist., N.Y., p. 112, f. 4, 1843.

Holopea antiqua Hall, Pal. N.Y., III, p. 294, pl. 54, f. 2a, b, 3a b, 1859; L. Heldberg group. Helderberg Mtns., Schoharie, Herkimer Co.

Holopea danai Hall

Holopea danai Hall, Pal. N.Y., III, p. 295, pl. 54, f. 14, 1859; Held. gr. Chittenango Falls

Holopea (Isonema) depressa Meek & Worthen, see Isonema depressa M. & W.

Holopea? elongata Hall

Holopea? elongata Hall, Pal. N.Y., III, p. 295, pl. 54, f. 6-7, 1859; L. Held. gr. Held. Mt., Schoharie, Carlisle, Manlius, etc.

Holopea humilis Clarke & Swartz

Holopea humilis Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p. 680-681, pl. 69, f. 21, 1913; Jenn. Form., Parkhead member. n. mouth of Town Creek.

Holopea(?) iowaensis Webster

Holopea(?) iowaensis. Webster, Iowa Nat., II, p. 3, 1906; Iowa Nat., II, p. 46, pl. 9, f. 12, 13, 1909.-Fenton & Fenton, Cont Mus. Univ. Mich., I, p. 190, pl. 32, f. 1, 2; pl. 38, f. 6, 1924; Spirifer beds.-Hackberry stage.

Holopea marylandica Clarke & Swartz

Holopea marylandica Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.680,pl.69,f.19,20,1913;Jenn.Form.,Chem. member,Polish Mt.

Holopea rowei Clarke & Swartz

Holopea rowei Clarke & Swartz,Md.Geol.Sur.,Mid.& Up. Dev.,p.679-680,pl.69,f.17,18,1913;Jenn.Form.,Chem. member,Polish Mt.Parkhead member.Rocky Run.Town Cr.,Sideling Hill Creek.

Holopea subconica Hall

Holopea subconica Hall,Pal.N.Y.,III,p.294,pl.54,f.1a, b,1899;L.Held.gr.near Auburn,Cayuga Co.

Hormotoma bistriata Clarke & Swartz

Hormotoma bistriata Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.663,pl.67,f.4,1913;Jenn.Form.,Parkhead member.Sideling Hill Creek.

Genus HYOLITHES Nicholson

Hyolithes aclis Hall

Hyolithes aclis.Hall,Illus. of Dev.,Foss.,Pteropoda, pl.27,f.5,7,10.11,1876;Pal.N.Y.,V,pt.2,p.197,pl. 32,f.22-30;pl.32a,f.23-25,1879.-Cleland,Bull.21, Geol.Sur.Wis.,p.132,pl.26,f.8,1911.-Clarke & Swartz Md.Geol.Sur.,Mid.& Up.Dev.,p.688-689,pl.71,f.7-9, 1913;Jenn.Form.,Parkhead member.Sideling Hill Creek

Hyolithes centennialis Barrett

Hyolithes centennialis.Barrett,Ann.Lyc.Nat.His.N.Y., 11,p.299,1877.-Hall,Pal.N.Y.,V,pt.2,Supp.,p.6,pl. 114,f.21-23(Supp.to Pal.N.Y.,VII)1888.-Weller,Pal. N.J.,III,p.336,pl.43,f.15,1903;Lower Orisk.N.J.

Hyolithes oxys Clarke

Hyolithes oxys Clarke,N.Y.State Mus.,member IX,pt.1, p.143,pl.12,f.10-13,1908.

Hyolithes of oxys Stewart,Dev. of Mo.,p.261-262,pl. 69,f.17,1922;Little Saline creek l.s.Ste.Genevieve Co.

Ilionia sinuata(Hall)

Ilionia sinuata Ohern,Md.Geol.Sur.,L.Dev.,p.464,pl.78,

f.9,10,1913;Held.Form.,E. of Madin Mt.,Allegany Co.

Inoceramus oviformis Conrad,see Mytilarca(Plethomytilus) oviformis(Conrad)

Genus ISONEMA Meek & Worthen
(Holopea,sub genus Isonema,M.& W)
(Proceed.Acad.Nat.Sci.,Phila.,p.251)

Isonema depressa,Meek & Worthen

Holopea (Isonema)depressa M.& W,Proceed.Acad.Nat.Sci., Phila.,p.251,1865.

Isonema depressa,M.& W.,Ill.Geol.Sur.,III,p.443,pl.11, f.6a,b, and annexed cuts,1868;Del.Co.,Ohio;Dev. of about age of Ham.gr.N.Y.Ser.

Isonema humilis? Kindle,see naticopsis?(Isonema)humilis Meek.

Isonema humilis Meek,see Naticopsis?(Isonema)humilis Meek.

Genus LEDA Shumard.

Leda diversa Hall

Leda(nuculana)diversa.Hall,Pal.N.Y.,V,pt.1,pl.& explan. pl.47,f.31-37,1883;Hall,Pal.N.Y.,V,pt.1,Lamellibr. 2,p.329,pl.47,f.31-37,1885.-Clarke,N.Y.State Mus. Bull.65,p.406,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.401,f.511c,1909.-Prosser & Kindle,Md.Geol Sur.,Mid.& Up.Dev.,p.247,pl.28,f.3,4,1913;Romney Form.,Ham.member.McCoy's Ferry.

Leda rostellata(Conrad)

Leda(?)rostellata.Conrad,Geol.Sur.N.Y.,Ann.Rep.,p.50, 1870.-Hall,Pal.N.Y.,V,pt.1,Lamellibr.2,p.330,pl.47, f.42-47,1885.-Clarke,N.Y.State Mus.,Bull.65,p.407, 1903.-Grabau & Shimer,N.Am.Index Foss.,1,p.401,f. 511d,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.247-248,pl.28,f.5-7,1913;Rom.Form.,Ham.member B.& O.R.R.cut 21st.Bridge;Jenn.Run w. Corriganville (?)w. Tonoloway Ridge.

Nuculites rostellata Conrad,Geol.Sur.N.Y.,Ann.Rep.,p.50

Genus LEIOPTERIA Ronault
(1884.Pal.N.Y.,V,pt.1,p.13)
(1885.Bull.Soc.Geol.France,2d.Ser.T,VIII,p.377)

Leiopteria conradi Hall

Leiopteria conradi.Hall,N.Y.Pal.V,pt.1,Lamellibr. a,1,p.159,pl.20,f.1,2,4,pl.88,f.1-4,1884;Pal.N.Y. V,pt.1,pl.& explan.,pl.20,f.1,2,4,1883.-Grabau, Buff.Soc.Nat.Sci.,VI,p.247,f.162a,1899.-Ham.gr. West Ham;Erie Co.,N.Y.-Prosser & Kindle,Md.Geol. Sur.,Mid.& Up.Dev.,p.252-253,pl.28,f.13,1913;Romn. Form.,Ham.member.W. iron bridge,n.e.Oldtown.

Liopteria conradi Clarke,N.Y.State Mus.,Bull.65,p. 426,1903.

Leiopteria dekayi Hall

Leiopteria dekayi.Hall,Pal.N.Y.,V,pt.1,Lamellibr.,1, p.165-166,pl.19,f.1,pl.20,f.16-18;pl.88,f.5-10, 1884.-Grabau & Shimer,N.Am.Index Foss.,I,p.425,f. 555 d,1909.

Leiopteria cf dekayi Branson & Williams,Dev. of Mo., p.153-154,pl.36,f.8 & 9;Grand Tower ls.Little Saline Creek,Ste Genevieve Co.

Leiopteria laevis Hall

Leiopteria laevis.Hall,Nat.His.,N.Y.,Pal.V,pt.1,Lamellibr.(adv.copy),p.17,f.5-11,1883;Nat.His.N.Y. Pal.V,pt.1,Lamellibr.,1,p.158,pl.17,f.5-11,pl.20, f.5,1884;35th.Rep.N.Y.State Mus.,Nat.His.,p.334, 1884.-Cleland,U.S.G.S.,Bull.206,p.67,1903.-Kindle, U.S.G.S.,Bull.508,p.95,pl.8,f.5,1912;Md.Geol,Sur., Mid.& Up.Dev.,p.253-254,pl.29,f.6,1913;Rom.Form., Onondaga member.S.E.Cumb.,Md.

Leiopteria rafinesqui Hall

Leiopteria rafinesqui Hall,Pal.N.Y.,V,pt.1,p.161,pl. 15,20,88,1884.-Grabau,Buffalo Soc.Nat.Sci.,VI,p. 247,f.162,1899;Demissa bed.

Genus LEPTODESMA Hall

Leptodesma?sp.Ohern

Leptodesma? sp.Ohern,Md.Geol.Sur.,L.Dev.,p.451,pl.75, f.2,1913;Orisk.Form.,Ridgely mem.Rock Enon Springs, Va.

Leptodesma acutirostrum Hall

Leptodesma acutirostrum.Hall,Pal.N.Y.,V,pt.1,p.234, pl.91,f.21,1884.-Kindle,U.S.G.S.,Bull.391,p.31,pl. 10,f.2,1909;Ouray l.s.,Rockwood,Colo.

Leptodesma agassizi Hall

Letpodesma agassizi,Hall,Pal.N.Y.,V,pt.1,p.182,pl.89, f.17-19,1884.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.637-638,pl.63,f.9,10,1913;Jenn.Form.,Chem. member.N.Deer Park Sta.;Allegany Grove.

Leptodesma elongatum Clarke & Swartz

Leptodesma elongatum C.&S.,Md.Geoll Sur.,Mid.& Up.Dev., p.640-641,pl.63,f.20,1913;Jenn.Form.,Chem.member, W.Keyser,Cumb.

Leptodesma eolus Kindle

Leptodesma eolus Kindle,U.S.G.S.,Bull.391,p.32,pl.10, f.3,1909;Ouray l.s.,S.W.Eolus,Colo.

Leptodesma lichas Hall

Leptodesma lichas.Hall,Pal.N.Y.,V,pt.1,p.232,pl.21,f. 35-39;pl.91,f.19,20,1884.-Clarke & Swartz,Md.Geol. Sur.,Mid.& Up.Dev.,p.640,pl.63,f.18,19,1913;Jenn. Form.,Chem.member,Deer Park;w. of Frostburg;Oakland-Redhouse Road;.

Leptodesma longispinum Hall

Avicula longispina Hall,Geol.Sur.,N.Y.,4th.Dis.,p. 262,f.3,1843.

Leptodesma longispinum.Hall,Pal.N.Y.,V,pt.1,p.179,pl. 21,f.14,17-19;pl.89,f.2-4,1884.-Clarke & Swartz, Md.Geol.Sur.,Mid.& Up.Dev.,p.637,pl.63,f.4-8,1913; Jenn.Form.,Chem.member.near Deer Park;w.Frostburg; Ellerslie,Penn.

Leptodesma medon Hall

Leptodesma medon.Hall,Pal.N.Y.,V,pt.1,sec.1,p.197,pl. 90,f.1-4,1884.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.638-639,pl.63,f.11-15,1913;Jenn.Form., Chem.member;w. of Frostburg;Allegany Gr.

Leptodesma naviforme Hall

Leptodesma naviforme.Hall,Pal.N.Y.,V,pt.1,sec.1,p. 200,pl.22,f.15;pl.23,f.1,1884.-Clarke & Swartz, Md.Geol.Sur.,Mid.& Up.Dev.,p.639-640,pl.63,f.16, 17,1913;Jenn.Form.,Parkhead member.N.Rocky Run; E. of Cumb.;W. Tonolway Ridge.

Leptodesma rogersi Hall

Leptodesma rogersi.Hall,Pal.N.Y.,V,pt.1,plates & ex-plan.,pl.21,f.1-9,1883;Pal.N.Y.,V,pt.1,Lamellibr.,k,

p.176-177,pl.21,f.1-9,1884.-Kindle,25th.Ann.Rept. Ind.Dept.Geol.Nat.Res.,p.671,pl.13,f.3,3a,b,1901; Jeff.l.s.Pipe Creek Falls.-Clarke,N.Y.State Mus., Bull.65,p.419,1903.-Grabau & Shimer,N.Am.Index Foss. 1,p.426,f.556b,1909.-Prosser & Kindle,Md.Geol.Sur., Mid.& Up.Dev.,p.254-255,pl.29,f.7-10,1913;Romney Form.,Hamilton mem.E.bank Evitts Creek below Wolfe Mill.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p. 636-637,pl.63,f.3,1913;Jennings Form.,Chemung. member.S.Oakland,Garrett Co.,Md.-Branson and Williams,Dev. of Mo.,p.151-152,pl.36,f.5,1922;St.Laurent l.s.

Lima macroptera Conrad,see Limoptera macroptera?(Conrad)

Genus LIMOPTERA Hall

Limoptera cancellata Hall

Limoptera cancellata.Hall,Pal.N.Y.,V,pt.1,p.244,pl. 26,f.1-4;pl.92,f.1-3,1884.-Kindle,25th.Ann.Rept. Ind.Dept.Geol.Nat.Res.,p.664-665,pl.13,f.6,1901; Jeff.l.s.Falls of the Ohio.Watson.

Limoptera macroptera? (Conrad)

Lima macroptera Conrad,Ann.Rep.N.Y.,Geol.Sur.,p.117, 1838.

Limoptera macroptera.Hall,Pal.N.Y.,V,pt.1,Lamellibr., 1,p.246-248,pl.24,f.14,pl.26,f.6-9;pl.27,f.1-10, pl.28,f.4,5,pl.29,f.1-4;pl.92,f.4-9,1884.-Grabau & Shimer,N.Am.Index Foss.,1,p.422,f.553d,1909.- Branson and Williams,Dev. of Mo.,p.154-155,pl.36, f.3,4,1922;s.s.member St.Laurent Form.,Little Saline Creek.

Genus LIOPTERIA Hall

Liopteria auriculata Clarke & Swartz

Liopteria auriculata C.&S.,Md.Geol.Sur.,Mid.& Up. Dev.,p.636,pl.63,f.1,1913;Jenn.Form.Woodmont member, Ithaca Fauna.Mellstone

Liopteria bigsbyi Hall

Liopteria bigsbyi.Hall,Pal.N.Y.,V,pt.1,p.165,pl.20, f.3,11,13,15;pl.88,f.23,1884.-Clarke & Swartz,Md. Geol.Sur.,Mid.& Up.Dev.,p.634-635,pl.62,f.10,11, 1913;Jenn.Form.,Chem.member.Town Creek.Parkhead member.s.e.Cumb.;w.Pawpaw,W.Va.

Liopteria bigsbyi Hall

Liopteria cf bigsbyi Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.,p.635,pl.62,f.12,1913;Jenn.Form., Chem.member;Polish Mt.

Liopteria conradi Clarke,see Leiopteria conradi Hall

Liopteria marylandica Clarke & Swartz

Liopteria marylandica Clarke &Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.635,pl.62,f.13,14,1913;Jenn.Form.; Chemung member.Town Creek.

Littorina antiqua vanuxem,see Holopea antiqua vanuxem.

Genus LOXONEMA Phillips
(1841.Pal.Foss.Cornwall etc.,p.98)

Loxonema sp.Kindle

Loxonema sp.Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.702,1901;Dev. chert (Jeff.l.s.?)Newbern.

Loxonema sp.Maynard

Loxonema sp.Maynard,Md.Geol.Sur.,L.Dev.,p.468,pl.79, f.8,1913;Held.Form.,Keyser member,Cash Valley,Md.

Loxonema?sp.Weller

Loxonema?sp.Weller,Pal.N.J.,III,p.294,pl.32,f.9-10, 1903;Caeymous l.s.,Hainesville,N.J.

Loxonema sp.Weller

Loxonema sp.Weller,Pal.N.J.,III,p.371,pl.51,f.20,1903; Onondaga l.s.

Loxonema attenuata Hall

Loxonema attenuata.Hall,Pal.N.Y.,III,p.296,pl.54,f.8, pl.67,f.3,1859;L.Held.gr.,Herkimer Co.,Carlisle, Schoharie Co.-Weller,Pal.N.J.III,p.319,pl.39,f.5-6,1903;New Scotland beds.N.J.

Loxonema breviculum Hall

Loxonema breviculum Hall,N.Y.,Pal.,V,pt.2,p.132,pl. 28,1879.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.276,f. 204,1899;"Calcareous concretions in shales Ham.gr. Hamburg,Shore of Lake Erie".(Hall,type)

Loxonema(?) coapta Hall

Loxonema(?) coapta Hall,N.Y.,Pal.V,pt.2,p.44,pl.13,

1879.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.276,f.203, 1899;"Encrinal l.s. Ham.gr.Eighteen mile Cr.,Erie Co.,N.J." (Hall,type)

Loxonema? compacta Hall

Loxonema? compacta Hall,Pal.N.Y.,III,p.297,pl.54,f. 12,1859;L.Held.gr.Schoharie Co.

Loxonema delphicola Hall

Loxonema delphicola Hall,N.Y.,Pal.,V,pt.2,p.47,pl.13, 14,1879.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.275,f. 202,1899;strophalosia bed in Avery's Cr.

Loxonema fitchi Hall

Loxonema fitchi.Hall,Pal.,N.Y.,III,p.296,pl.54,f.9, 11a,11b,1861;L.Held.gr.Carlisle,Schoharie Co.,Held. Mts.,Albany Co.-Ohern,Md.Geol.Sur.,L.Dev.,p.467,pl. 79,f.7,1913;Held.Form.,Tonoloway Md.

Loxonema gigantea Webster,see Westernia gigantea Webster.

Loxonema? glabrum Clarke & Swartz

Loxonema? glabrum Clarke & Swartz,Md.Geol.Mid.& Up. Dev.,p.677-678,pl.69,f.11-14;1913;Jenn.Form., Chem.member.N. of mouth of Town Creek.Parkhead member.Polish Mt.;w.Pawpaw,W.Va.

Loxonema hamiltoniae Hall

Loxonema nexilis Hall,Geol.N.Y.,Pt.4,p.201(not Phillips)1843.

Loxonema hamiltoniae.Hall,N.Y.,Pal.V,pt.2,p.45,pl.13, f.15-17,1879;Des. of New Sp. of Foss.,etc.,p.25, 1861;15th.Rep.N.Y.State Cab.Nat.Hist.,p.53,pl.4, f.8,1862.-Grabau,Buffalo Soc.Nat.Scil,VI,p.275,f. 201,1899.Eighteen Mile Creek.Strophalosia bed.- Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Hes.p.703, 1901;Sellers,beds and Jeff.l.s? Watson;Burnsville; Falls of the Ohio.-Clarke,N.Y.,State Mus.,Bull.65, p.539,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p. 693,f.989,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.294-295,pl.36,f.16-19,1913;Rom.Form., Onan.member,s.e.Cumb.Ham.member.n.e.Old Town;Evitts Cr. below Wolfe Mill;near Hanging Rock,W.Va.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.676,pl.69, f.1,2,1913;Jenn.Form.,Parkhead member,Polish Mt.

Loxonema hydraulica Hall

Loxonema hydraulica.Hall,Pal.N.Y.,V,pt.2,p.44,pl.13, f.14,1879.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.702-703;pl.16,f.12,1901;Sell.beds.Charlestown;Kent;Lexington;Falls of the Ohio.

Loxonema jerseyensis Weller

Loxonema jerseyensis Weller,Pal.N.J.,III,p.335-336,pl. 43,f.8-10,1903;"Trilobite bed" in Nearpass sec.N.J.

Loxonema laevinsculum Hall

Loxonema laevinsulum.Hall,Pal.N.Y.,V,pt.2,p.131,pl.28, f.10-11,1879.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat Res.,p.702,1901;Sell.beds.Falls of the Ohio.

Loxonema nexilis Hall,see Loxonema hamiltoniae Hall

Loxonema? obtusa Hall

Loxonēma? obtusa Hall,Pal.N.Y.,III,p.297,pl.54,f.10, 1859;L.Held.gr.,Schoharie Co.

Loxonema owenensis Webster,see Westernia gigantea owensis Webster.

Loxonema planogyrata Hall

Loxonema planogyrata Hall,Pal.N.Y.,III,p.298,pl.54, f.13,1859;L.Held.gr.,Schoharie Co.

Loxonema rectistriatum Hall

Loxonema rectistriatum.Hall,Pal.N.Y.,V,pt.2,p.130,pl. 28,f.9,1879.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.703-704,1901;Sells.beds & Jeffersonville l.s.Burnsville;Falls of the Ohio.

Loxonema Styliola Hall,see Loxonema styliolum Hall.

Loxonema styliolum Hall

Loxonema styliola.Hall,Illus.Dev.Foss.Gastropoda,p.14, 1876.-Pal.N.Y.,V,pt.2,p.48,pl.14,f.8,9,1879.

Loxonema styliolum Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.676-677,pl.69,f.8-10,1913;Jenn.Form., Chem.member.Town Cr.

Loxonema terebra.Grabau & Shimer,Hall,see Loxonema terebrum Hall

Loxonema terebrum Hall

Loxonema terebra.Hall,Pal.N.Y.,V,pt.2,p.48,pl.14,f.6, 7,1879.-Grabau & Shimer,N.Am.Index Foss.,I,p.694,f. 992,1909.

Loxonema terebrum Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.676,pl.69,f.3-7,1913;Jennings Form.,Chemung mem.near Green Glade Run;w.Frostburg,Md.

Loxonema teres Hall

Loxonema teres Hall,Pal.N.Y.,V,pt.2,p.42,pl.13,f.10, 1879.

Loxonema? teres Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.704,1901;Jeffersonville ls.Newburn.

Lucina(Paracyclas)elliptica var occidentalis Hall, see Paracyclas elliptica Hall

Lucina(Paracyclas)lirata,Hall & Whitfield,see Paracyclas lirata(Conrad)

Lucina(Paracyclas)ohioensis Meek,see Paracyclas ohioensis (Meek)

Genus LUNULICARDIUM Munster
(1840.Beitrage zur Petrefactenkunde,3tes.Heft.,S.69)

Lunulicardium curtum Hall

Lunulicardium curtum.Hall,Pal.N.Y.,V,pt.1,p.437,pl. 71,1884.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.264, f.185,1899;Marcellus sh.Alden,Erie Co.,N.Y.,Hamilton sh.Helderberg,N.Y.

Lunulicardium cyrubula Clarke & Swartz

Lunulicardium cyrubula Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.,p.631,pl.62,f.4,1913;Jenn.Form.,Gen. mem.,near Corriganville,

Lunulicardium encrinitum Clarke

Lunulicardium encrinitum.Clarke,N.Y.State Mus.,mem.6, p.239,pl.2,f.20,1904.-Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.,p.630-631,pl.62,f.1-3,1913;Jenn.Form., Genesse member.near Wolfe Mill,Gilpintown.

Lunulicardium fragile Clarke,see Pterochaenia fragilis (Hall)

Lunulicardium fragile Hall,see Pterochaenis fragilis (Hall)

Lunulicardium fragile Williams, see Pterochaenis fragilis (Hall)

Lunulicardium ornatum Hall

Lunulicardium ornatum. Hall, Pal. N.Y., V, pt. 1, p. 437, pl. 71, 1884.-Grabau, Buffalo Soc. Nat. Sci., VI, p. 864, f. 184, 1899; Found? lower Genesse sh.

Genus LYRIOPECTEN Hall
(1884. Pal. N.Y., V, pt. 1, p. 12)

Lyriopecten orbiculatus Hall

Lyriopecten orbiculatus Hall, N.Y., Pal,, V, pt. 1, p. 42, pl. 4, 82, 1879.-Grabau, Buffalo Soc. Nat. Scil, Bull. 6, p. 242, f. 155, 1899; Encrinal l.s. Along Lake Erie shore; Eighteen Mile Creek, Erie Co., N.Y. (Hall)

Lyriopecten tricostatus (Vanuxem)

Avicula tricostata Vanuxem. Geol. N.Y., Rep. 3d. Dis., p. 179 f. 1, 1842.

Lyriopecten tricostatus. Hall, Pal. N.Y., V, pt. 1, p. 48, pl. 4, f. 11; pl. 7, f. 26; pl. 10, f. 6-13, 1884.-Clarke & Swartz Md. Geol. Sur., Mid. & Up. Dev., p. 649, pl. 65, f. 1, 1913; Jenn. Form., Chem. member. Oakland. Altamont Road, Oakland-Redhouse Road; w. Frostburg; w. Pawpaw, W. Va.

Genus MACROCHILINA Bayle

Macrochilina? sp. Kindle

Macrochilina? sp. Kindle, 25th. Ann. Rep., Ind. Geol. Sur., p. 576, pl. 1, f. 10, 1900; New Albany shale, Delphi.

Macrocheilina carinatus Nettleroth

Macrocheilus carinatus Nettleroth, Ky. Foss., Shells, p. 180, pl. 30, f. 23-23, 1889.

Macrocheilus carinatus Nettleroth, Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p. 705, 1901; Sells. beds & "Corniferous l.s." Falls of the Ohio; Lexington.

Macrocheilina hebe Hall

Macrocheilina hebe. Hall, Pal. N.Y., V, pt. 2, p. 32, pl. 12, f. 4-7, 1879.-Kindle, 25th. Ann. Rep. Ind., Geol. Nat. Res., p. 704-705, pl. 23, f. 2, 1901; Jeff. l.s., Bunker Hill; Newbern.

Macrochilina pulchella Clarke & Swartz

Macrochilina pulchella Clarke & Swartz,Md.Geol.Surv., Mid.& Up.Dev.,p.675,pl.68,f.14,15,1913;Jenn.Form., Chem.member.Polish Mountains.

Macrocheilus carinatus Nettleroth,see Mcrocheilina carinatus Nettleroth

Macrochilus hamiltoniae Hall

Macrochilus hamiltoniae.Hall,Desc.New Spec.,of Foss., etc.,p.21,1861;15th.Rep.N.Y.State Cab.Nat.Hist.,p. 49,pl.4,f.2,1862;Pal.N.Y.,V,pt.2,p.33,pl.12,f.8-14,1879.-Prosser & Kindle,Md.Geol.Surv.,Mid.& Up. Dev.,p.293-294,pl.36,f.12-15,1913;Rom.Form.,Ham. member.Western,Md.

Genus MACRODON Lycett
(1845.Murch.Geol.Chelt.)

Macrodon chemungensis Hall

Macrodon chemungensis.Hall,Prelim.notice Lamellibr., pt.2,p.14,1870.Pal.N.Y.,V,pt.1,sec.2,p.350,pl.51, f.11-16,1885.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.627-628,pl.61,f.18,1913;Jenn.Form.,Parkhead member.S.E.Pratt on White Sulphur Branch.

Macrodon hamiltoniae Clarke,see Parallelodon hamiltoniae (Hall)

Macrodon hamiltoniae Hall,see Parallelodon hamiltoniae (Hall)

Macrodon hamiltoniae Hall

Macrodon hamiltoniae Hall,Pal.N.Y.,V.pt.1,p.349,pl. 51,1884.-Grabau,Buffalo Soc.Nat.Sci.,VI,p259,f. 178,1899;Below Encrinal l.s.

Genus MANTICOCERAS Hyatt

Manticoceras intumescens Beyrich,see Goniatites(manticoceras) intumescens Beyrich.

Manticoceras patersoni Clarke,see Manticoceras regulare Fenton & Fenton

Manticoceras pattersoni C.L.Fenton,see Manticoceras regulare Fenton & Fenton

Manticoceras patersoni (Hall)

Goniatites patersoni Hall,13th.Rep.N.Y.State Cab.Nat. Hist.,p.99,f.9,10,1860.27th.Rep.N.Y.State Cab.

Nat.Hist.,p.136,1876;Pal.N.Y.,V,pt.2,p.464,pl.72, f.1-5;pl.74,f.15,1879.

Manticoceras patersoni.Clarke,Rep.N.Y.State Geol.for 1896,p.45,pl.1,f.1-12;pl.2,f.1-4,f;pl.4,f.14-18, 1907;-Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev., p.693-695,pl.72,f.1-3,1913;Jenn.Form.,Chem.member. Polish Mt.Woodmont member,Naples Fauna.Woodmont.

Manticoceras regulare Fenton & Fenton

Manticoceras patersoni Clarke,Rep.N.Y.State Geol.for 1896,p.45,1907.

Manticoceras pattersoni C.L.Fenton,Am.Jour.Sci.,4th. ser.,48,p.373,1919

Manticoceras regulare Fenton & Fenton,Contr.Mus.Univ. Mich.,I,p.196-197,pl.39,f.1-3,1924;Mid.& Up.Spirifer zone.Rockford & Hackberry Grove.Hackberry stage.

Manticoceras rhynchostoma Clarke,see Goniatites(manticoceras)rhynchostoma Clarke.

Manticoceras sororium Clarke,see Goniatites (manticoceras) sororium Clark.

Genus MEGAMBONIA Hall
(1859.Pal.N.Y.,III,p.273)

Megambonia? sp.Weller

Megambonia? sp.Weller,Pal.N.J.,III,p.333-334,not fig. 1903;L.Orisk.N.J.

Megambonia aviculoidea Hall

Megambonia aviculoidea Hall,Pal.III,N.Y.,p.274,pl. 49,f.7,a,b,& 8;pl.49a,f.8,1859;L.Held.gr.Held.Mts., Albany Co.;Schoharie;Winfield,Herkimer Co.

Megambonia bellistriata Hall

Megambonia bellistriata.Hall,Pal.N.Y.,III,p.467,pl. 109,f.4,1859;Orisk.s.s.Albany & Schoharie Co.- Weller,Pal.N.J.,III,p.360-361,pl.50,f.3,1903; Mid.& Up.Orisk.N.J.

Megambonia cordiformis Hall,see Mytilarca cordiformis (Hall)

Megambonia lamellosa Hall

Megambonia lamellosa.Hall,Pal.N.Y.,III,p.467,pl.109,f 5,6,1861;Orisk.s.s.Albany & Schoharie Co.,Orisk. Falls,Oneida Co.,N.Y.-Ohern,Md.Geol.Sur.,L.Dev.,p. 462,pl.78,f.5,1912;Orisk.Form.,Ridgely member. Queen's Pt.opp.Keyser;Miller's Spring;Knobly Mt., W.Va.;near Cumb.,Hancock,Md.

Megambonia lata Hall

Megambonia lata Hall,Pal.N.Y.,III,p.277,pl.50,f.4, 1859;L.Held.gr.Schoharie Co.

Megambonia mytiloidea Hall

Megambonia mytiloidea Hall,Pal.N.Y.,III,p.276,pl.49a, f.3a,b,1859;L.Held.gr.,Helder.Mts.

Megambonia oblonga Hall

Megambonia oblonga Hall,Pal.N.Y.,III,p.277,pl.50,f. 51,1859;L.Held.gr.Schoharie Co.

Megambonia obscura Hall

Megambonia obscura Hall,Pal.N.Y.,III,p.277,pl.49a, f.7,1859;L.Held.gr.,Schoharie Co.

Megambonia ovata Hall

Megambonia ovata Hall,Pal.N.Y.,III,p.279,pl.50,f.7, 1859;L.Held.gr.,Held.Mts.,Albany Co.

Megambonia ovoidea Hall

Megambonia ovoidea Hall,Pal.N.Y.,III,p.276,pl.49a, f.4a,b,1859;L.Held.gr.Schoharie Co.

Megambonia parva Weller

Megambonia parva Weller,Pal.N.J.,III,p.333,pl.43,f. 12,1903;L.Orisk,beds,N.J.

Megambonia rhomboidea Hall

Megambonia rhomboidea Hall,Pal.N.Y.,III,p.275,pl.49, fig.9,1859;L.Held.gr.near Carlisle,Schoharie Co.

Megambonia spinneri Hall

Megambonia spinneri Hall,Pal.N.Y.,III,p.274,pl.49, f.5a,b,c,1859;L.Held.gr.near Mohawk,Herkimer Co.

Megambonia suborbicularis Hall

Megambonia suborbicularis Hall,Pal.N.Y.,III,p.273,

pl.49,f.4a,4b,5b,pl.49a,f.5,1859;L.Held.gr.near Carlisle,SchoharieCo.

Microdon bellastriata.Conrad,Hall,Rogers,See Cypricardella bellistriata(Conrad)

Microdon(Cypricardella)bellistriatus.Clarke,Hall,See Cypricardella bellistriata(Conrad)

Microdon gregarius Hall, see Cypricardella gregaria (Hall)

Microdon(Cypricardella) gregarius Hall,see Cypricardella gregaria(Hall)

Microdon tenuistriata Hall,see Cypricardella tenuistriata (Hall)

Microdon tenuistriatus Clarke,See Cypricardella tenuistriata (Hall)

Microdon (Cypricardella)tenuistriatus Hall,See Cypricardella tenuistriata (Hall)

Genus MODIELLA Hall
(1884.Pal.N.Y.,V,pt.1,p.54)

Modiella pygmaea (Conrad)

Pterinea pygmaea Conrad,Jour.Acad.Nat.Sci.,Phil.,8, p.251,pl.13,f.15,1842.

Modiella pygmaea.Hall,Pal.N.Y.,V,pt.1,Lamellibr.2, p.514,pl.76,f.9-20,1885.-Grabau,Buf.Soc.Nat.Sci., VI,p.276,f.193,1899;below encrinal l.s., in Idlewood Ravine;Strophalosia on Lake Shore.-Clarke, N.Y.State Mus.Bull.65,p.443,1903.-Grabau & Shimer, N.Am.Index Foss.,I,p.456,f.606d,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.261-262,pl.31 f.1-5,1913;Romn.Form.,Ham.member.S.E.Cumb. w.bank Evitts Cr. below Wolfe Mill,near Cumb.

Modiola concentrica Hall, see modimorpha concentrica (Conrad)

Genus MODIOLOPSIS Hall
(1847.Palaeont.N.Y.,I,p.157)

Modiolopsis? dubius Hall

Modiolopsis ? dubius Hall,Pal.N.Y.,III,p.264,pl.49, f.2a-e,1859;Tentac.l.s.Winfield,Herkimer Co.

Modiolopsis? perovata Meek & Worthen

Modiolopsis pervata M.& W.,Proceed.Acad.Nat.Sci., Phila.,p.246,1865,Ill.Geol.Sur.,III,p.438,pl.11, f.2,1868;White Sulph.Springs,Del.Co.,Ohio;Ham. gr.Dev.Series.

Genus MODIOMORPHA Hall
(1870.Prelim,Notice Lamellibr.,II,p.72)

Modiomorpha(?)Girty

Modiomorpha(?) Girty,20th.Ann.Rep.,U.S.G.S.pt.2,p. 58-59,p.17,f.6,1900;Ouray l.s.Durango,Colo.

Modiomorpha affinis Hall

Modiomorpha affinis Kindle,25th.Rep.Ind.Geol.Nat.Res. p.681,pl.14,f.9,1901;Sell.bed,Clark Co.

Modiomorpha alta (Conrad)

Modiomorpha alta.Hall,N.Y.,Pal.,V,pt.1,p.278,pl.37, f.1,2,(4-6?) 7-12,15,16;pl.80,f.7,1885.-Grabau, Buf.Soc.Nat.Sci.,VI,p.251,f.167,1899;Mid. Pleurodictyum bed in Avery's Ravine.-Kindle,25th.Ann.Rep. Ind.Dept.Geol.Nat.Res.,p.682,pl.14,f.8,1901;Sell. beds;Watson;Charlestown;Falls of the Ohio.

Modiomorpha? Amygdalina(Winchell) Hall,See Glossites lingualis Hall

Modiomorpha charlestownensis Nettleroth

Modiomorpha charlestownensis.Nettleroth,Ky.Foss., shells,p.218,pl.5,f.7,8,9,1889.-Kindle,25thlAnn. Rept.Ind.Dep.Geol.Nat.Res.,p.681,1901;"Hydraulic l.s." (Sell.beds)Clark Co.

Modiomorpha concentrica (Conrad)

Pterinea concentrica Conrad,Geol.Sur.,N.Y.AnnlRep., p.116,1838.

Cypricardites concentrica Conrad,Geol.Sur.,N.Y.An. Rep.p.52,1841

Modiola concentrica Hall,Geol.Sur.,N.Y.,pt.4,p.196, f.9,1843.

Modiomorpha concentrica.Hall,N.Y.,Pal.,V,pt.1,Lamellibr.2,p.275,pl.34,f.9,10;pl.35,f.1-16,(17,18?), 1885.-Grabau,Buf.Soc.Nat.Sci.,VI,p.250,f.165,1889; Encrinal l.s.Pleurodictyum beds on Lake Shore.-Keyes,Johns Hopkins Univ.Circ.,11,p.29,1891.-Kindle 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.680-681,pl.

14,f.10,11,1901;Sell.beds,Watson,Charlestown;Lexington;Falls of the Ohio.-Clarke,N.Y.State Mus.Bull 65,p.448,1903.-Grabau & Shimer,N.Am.Index Foss.,I, p.515,f.692d,694d,1909.-Prosser & Kindle,Md.Geol. Sur.,Mid.& Up.Dev.,p.266-268,pl.32,f.5-9,1913;Rom. Form.,Ham.member.E.bank Evitts Cr.below WolfeMill; S.E.Cumb(?)N.Romney,W.Va.

Modiomorpha missouriensis Branson

Modiomorpha missouriensis Branson,Dev. of Mo.,p.114, pl.25,f.3-6,10,11,1922;Snyder Creek Shale.Calloway Co.

Modiomorpha mytiloides (Conrad)

Cypricardites mytiloides Conrad,Geol.Sur.,N.Y.5th.Ann. Rep.p.52,1841.

Modiomorpha planulata Hall,Prelim.notice Lamellibr.2, p.74,1870.

Modiomorpha mytiloides.Hall,Pal.N.Y.,V,pt.1,Lamellibr. 2,p.277,pl.37,f.3;pl.38,f.1-16,1885.-Kindle,25th. Ann.Rep.Ind.Dep.Geol.Nat.Res.,p.681,1901;Sell.beds Watson;Clark Co.,-Clarke,N.Y.State Mus.,Bull.65,p. 450,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.514, f.691 b,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.269-270,pl.33,f.7,1913;Rom.Form.,Ham.member,E.bank Evitts Cr. below Wolfe Mill;N.Hancock.

Modiomorpha planulata Hall,see Modiomorpha mytiloides (Conrad)

Modiomorpha recta Hall

Modiomorpha recta.Hall,Pal.N.Y.,V,pt.1,p.286,pl.35, f.9,1885.-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat. Res.,p.683,1901;Ham.gr.(Sell.beds) Clark Co.

Modiomorpha subalata(Conrad)

Cypricardites subalata Conrad,Geol.Sur.N.Y.,Ann.Rep. p.83,1841.

Modiomorpha subalata.Hall,N.Y.,Pal.V,pt.1,Lamellibr. 2,p.283,pl.35,f.6,7;pl.3,9,f.1-14,16,1885;Prelim. notice Lamellibr.2,p.77,1870.-Grabau,Buf. Soc.Nat. Sci.,VI,p.250,f.166,1899;in many horizons.Erie Co. Clarke,N.Y.State Mus.,Bull,65,p.453,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.515,f.692b,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.268-269, pl.33,f.1-6,1913;Rom.Form.,Onan.member S.E.Cumb.(?) Ham.member,E.bank Evitts Cr.below Wolfe Mill,near

Cumb.

Modiomorpha subangulata Hall

Modiomorpha subangulata.Hall,Pal.N.Y.,V,pt.1,sec.2, p.287,pl.35,f.10,11,1885.-Clarke & Swartz,Md.Geol. Sur.,Mid.& Up.Dev.,p.650,pl.65,f.2,1913;Jenn.Form., Chem.member.Polish Mt.

Monotis Princeps Conrad,see Aviculopecten princeps(Conrad)

Genus MURCHISONIA D'Arch and Vern.

Murchisonia? sp.Clarke & Swartz

Murchisonia? sp.Clarke & Swartz,Md.Geol.Sur.,Mid.& Up Dev.,p.662-663,not fig.1913;Jenn.Form.,Chem.member. Oakland near Mt.Lake Park.,Green Glade Run, in Garret Co., w.Frostburg

Murchisonia bilirata Hall

Murchisonia bilirata Hall,Pal.N.Y.,III,p.299,pl.55,f. 2,1859;L.Held.gr.Albany Co.

Murchisonia desiderata Hall

Murchisonia desiderata.Hall,Pal.N.Y.,V,pt.2,p.89,pl. 2y,f.1-3,1879.-Kindle,25th.Ann.Rep.Ind.Dep.Geol. Nat.Res.,p.705-706,pl.16,f.8,1901;Jeff. l.s.Burnsville;Falls of the Ohio.

Murchisonia extenuata Hall

Murchisonia extenuata Hall,Pal.N.Y.,III,p.298,pl.54, f.15,16,1859;L.Held.Gr.Schoharie & Onondaga Cos.

Murchisonia minuta Hall

Murchisonia minuta Hall,Pal.N.Y.,III,p.298,pl.54,f. 17,1859;L.Held.Gr.,Fayetteville,Onondaga Co.

Genus MYTILARCA Hall

Mytilarca? sp.Girty

Mytilarca? sp.Girty,20th.Ann.RepIU.S.G.S.pt.2,p.59-60,pl.7,f.5,1900;Ouray l.s.Durango,Colo.

Mytilarca sp. A.Kindle

Mytilarca sp.A.Kindle,U.S.G.S.,Bull.391,p.32,pl.10, f.4,1909;Ouray l.s.Rockwood,Colo.

Mytilarca sp.B.Kindle

Mytilarca sp.B.Kindle,U.S.G.S.,Bull.391,p.32-33,pl. 10,f.5,1909;Ouray 1.s.Rockwood,Colo.

Mytilarca ?sp.Weller

Mytilarca ? sp.Weller,Pal.N.J.,III,p.318,pl.39,f.4, 1903;New Scot.beds.Hainesville,N.J.

Mytilarca cordiformis (Hall)

Megambonia cordiformis Hall,Pal.N.Y.,III,p.278,pl.1 f.6a,b,1859;L.Helderberg group.Schoharie Co.

Mytilarca cordiformis? Ohern,Md.Geol.Sur.,L.Dev.,p. 452,pl.75,f.5,6,1913;Held.Form.,Cumb.,Md.

Mytilarca marylandica Ohern

Mytilarca marylandica Ohern,Md.Geol.Sur.,L.Dev.,p. 452,pl.75,f.3,4,1913;Held.Form.,Cumb.,Md.

Mytilarca(Puthomytilus)oviformis(Conrad)

Inoceramus oviformis Conrad,Jour.Acad.Nat.Sci.,Phila. VIII,p.1246,pl.13,f.7,1842.

Mytilarca oviformis.Hall,Prelim.notice Lamellibr.2, p.21,1870.-Clarke,N.Y.State Mus.,Bull.65,p.457, 1903.

Plethomytilus oviformis Grabau &Shimer,N.Am.Index Foss.,I,p.434,f.567d,e,1909.

Mytilarca(Plethomytilus)oviformis.Hall,Pal.N.Y.,V, pt.1,Lamellibr.,1,p.255,pl.31,f.1-8;pl.87,f.8, 1884.-Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev. p.255,256,pl.29,f.11-13,1913;Romn.Form.,Ham.member E.bank Evitts Creek below Wolfe Mill near Cumb., Md.

Mytilarca (Plethomytilus)rowei Ohern

Mytilarca (Plethomytilus)rowei Ohern,Md.Geol.Sur.,L. Dev.,p.453,pl.75,f.7,1913;Orisk.Form.,Ridgely member.Hancock,Md.

Genus NATICOPSIS M'Coy.

Naticopsis sp.Kindle

Naticopsis sp.Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.706,pl.16,f.10,1901;Jeff.l.s.Pipe Creek Falls

Naticopsis sp.Prosser & Kindle

Naticopsis sp.Kindle,U.S.G.S.,Bull.508,p.98,pl.8, f.11,1912.

Naticopsis sp.Prosser & Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.293,pl.36,f.11,1913.Rom.Form.,Onon.member. E.Cumb.

Naticopsis gigantea C.L.Fenton,see Floydia gigantea (Hall & Whitfield)

Naticopsis gigantea Hall & Whitfield

Naticopsis gigantea.H.& W.,23rd.Ann.Rep.N.Y.State Cab.Nat.Hist.p.238,pl.12,f.8-10,1873.-Girty,20th. Ann.Rep.U.S.G.S,pt.2,p.60,1900.-Kindle,U.S.G.S., Bull.391,p.35,1909;Ouray 1.s.Engineer Mountain and Durango,Colo.

Naticopsis gigantea.Hall & Whitfield,see Floydia gigantea (H.& W.)

Naticopsis gigantea Webster,see Floydia gigantea.

Naticopsis gigantea hackberryensis C.L.Fenton,see Floydia gigantea hackberryensis (Webster)

Naticopsis gigantea var depressa Webster,see Diaphorostoma insolitum(Webster)

Naticopsis hackberryensis Webster,see Floydia gigantea hackberryensis (Webster)

Naticopsis? (Isonema)humilis Meek

Isonema humilis Meek,Proc.Acad.Nat.Sci.,Phil.,p.79, 1871.

? Naticopsis laevis Hall & Whitfield,Desc.new species Foss;pl.12,f.3-5,1872;(not N.laevis Meek,1871) 23rd.Ann.Rep.N.Y.State Cab.Nat.His.,pl.12,f.3-5, 1873;(not N.laevis Meek)

Naticopsis ? (Isonema)humilis.Meek,Ohio Geol.Sur., Pal.I,p.214,pl.19,f.1a-c,1873.-Girty,U.S.G.S., 20th.Ann.Rep.pt.2,p.60,pl.7,f.9-11,1900.-Kindle, U.S.G.S.,Bull.391,p.35,pl.10,f.9,1909;Ouray 1s. S.W.Mt.Eolus and Lime Mesa,Colo.

Isonema humilis Kindle,25th.Ann.Rep.Ind.Dep.Geol. Nat.Res.,p.700-701,1901;Sell.beds.Charlestown; Lexington.

Naticopsis laevis Hall & Whitfield, see Naticopsis?(Isonema)humilis Meek.

Naticopsis levis Meek

Naticopsis levis. Meek, Pal. Ohio, I, p.215, pl.19, f.4a, b, 1873.-Kindle, 25th. Ann. Rep. Ind. Dpe. Geol. Nat. Res., p.706-707, 1901; Jeff. l.s.(?) Falls of the Ohio.

Naticopsis magnifica Webster, see Floydia gigantea(Hall & Whitfield)

Genus NAUTILUS Breynius
(1732. Dissert. Polyth., p.11)

Nautilus? lawsii? Swallow

Nautilus? lawsii? Swallow, Trans. St. Louis, Acad. Sci., I, p.658, 1860.-Branson, Dev. of Mo., p.124, No pl. named 1922; Probably from Snyder Creek, Calloway Co.

Nautilus magister Hall

Nautilus magister Hall, Pal. N.Y., V, pt.2, p.422, pl.62, 107, 108, 1879.-Grabau, Buffalo Soc. Nat. Sci., VI, p. 292, pl.28, 1899; Ham. gr. Avery's Creek and Erie Cliff

Nautilus(Centroceras)marcellensis (Vanuxem)

Nautilus (Centroceras)marcellensis (Vanuxem), N.Y., Pal. V, pt.2, p.428, pl.65, 109, 1879.-Grabau, Buffalo Soc. Nat. Sci., VI, p.294, f.228, 1899; marcellus & Trans. shales. Erie Cliff.

Nautilus maximus(Conrad)

Nautilus maximus. Nettleroth, Ky. Foss., Shells, p.196, pl.24, f.1, 1889.-Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res., p.739, 1901. Sell. beds, Falls of the Ohio.

Nephritieras sp.? Branson and Williams

Nephritieras sp.? Branson and Williams, Dev. of Mo., pl. 37, p.158, pl.37, f.8, 9, pl.38, f.4, 1922; Grand Tower l.s.

Genus NUCULA Lamarck
(1801. Syst. An. Sans. Vert., p.87)

Nucula bellastriata Hall, see Mucula bellistriata(Conrad)

Nucula bellatula Hall, see Palaeoneiloconstricta (Conrad)

Nucula bellistriata (Conrad)

Nuculites bellastriata Conrad,Geol.Sur.,N.Y.,Ann.Rep., p.40,1841

Nucula bellastriata Hall,Prelim.not Lamellibr.,2,p.2, 1870.

Nucula bellistriatus Clarke,N.Y.,State Mus.,Bull.65,p. 459,1903.

Nucula bellistriata.Hall,Pal.N.Y.,V,pt.1,Lamellibr.2,p. 318,pl.46,f.1-9,1885.-Grabau & Shimer,N.Am.Index Foss.,I,p.395,f.503e,1909.-Prosser & Kindle,Md.Geol. Sur.,Mid.& Up.Dev.,p.227-228,pl.25,f.1-5,1913;Rom. Form.,Ham.member B.& O.R.R.cut,21st.Bridge(?)E. Cumb.,N.Romney,W.Va.

Nucula bellistriatus Clarke, See Nucula bellistriata(Conrad)

Nucula corbuliformis Hall

Nucula corbuliformis? Kindle,25th,Ann.Rep.Ind.Dep.Geol. Nat.Res.,p.677,pl.14,f.5,1901;Sell.l.s.Charlestown.

Nucula corbuliformis.Hall,N.Y.,Pal.V,pt.1,p.319,pl.46, f.(10,11?),24-34(35-37?),1885.,Prelim. not Lamellibr. 2,p.2,1870.-Grabau,Buf.Soc.Nat.Scil,VI,p.253,f.169A, 1899;Ham.Gr.,on shore Lake Erie.-Clarke,N.Y.State Mus.Bull.65,p.460,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.396,f.503,1909.-Prosser & Kindle,Md.Geol. Sur.,Mid.& Up.Dev.,p.226-227,pl.23,f.6-10,1913;Rom. Form.,Ham.memberB.& O.R.R.cut 21st.Bridge;W.Va.S.E. Cumb.,E. bank Evitts Creek,near Cumb.-Clarke & Swartz Md.Geol.Sur.,Mid.& Up.Dev.,p.619,pl.60,f.19-23,1913; Jenn.Form.,Chem.member,Oakland-Altamont Road,Woodmong member,Ithaca Fauna.W. of Tonoloway Ridge;Hancock;Yellow Springs,W.Va.

Nucula hanoverensis Kindle

Nucula hanoverensis Kindle,25th.Ann.Rep.Ind.Dep,Geol. Nat.Res.,p.676,pl.14,f.3,1901;Jeff.l.s.Jeffersonville Co.

Nucula herzeri Nettleroth

Nucula herzeri Nettleroth,Ky.Foss.Shells,p.221,1889.- Kindle,25thlAnn. Rep.1nd.Dep.Geol.Nat. Res.,p.676-677,not fig.,1901;Sell.l.s.Falls of the Ohio.

Nucula lamellata Hall

Nucula lamellata.Hall,Pal.N.Y.,V,pt.1,p.320,pl.51,f.18-25;pl.45,f.13(?)pl.93,f.7,1885.-Kindle,25th.Ann. Rep.Ind.Dep.Geol.Nat.Res.,p.679,pl.14,f.2,1901;

Jeff. l.s.;Chert beds at Burnsville.

Nucula lirata (Conrad)

Nuculites lirata Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.250,pl.15,f.7,1842.

Nucula lirata.Hall,Prelim.not Lamellibr.,2,p.3,1870; Pal.N.Y.,V,pt.1,Lamellibr.II,p.316,pl.45,f.5,11,15, 17-22,24,25;pl.93,f.5,1885.-Kindle,25th.Ann.Rep. Dep.Geol.Nat.Res.,p.678,not fig.,1901;Corniferous gr.Shelby Co.-Clarke,N.Y.State Mus.Bull.65,p.462, 1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.395,f.503d 1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev., p.229-230,pl.25,f.6-8,9,10(?)1913;Rom.Form.,Ham. member.E.Bank Evitts Cr.below Wofle Mill.

Nucula cf.lirata Branson,Dev. of Mo.,p.112,pl.25,f.13, 14,1922;Snyder Cr.shale.Cow Creek,Callaway Co.

Nucula neda Hall

Nucula neda.Hall,Pal.N.Y.,V,pt.1,p.314,pl.45,f.3,4,1885.- Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.678, pl.14,f.4,1901;Sell.beds;Charlestown;Falls of the Ohio.

Nucula niotica Hall

Nucula niotica.Hall,Pal.N.Y.,V,pt.1,p.313,pl.45,f.1,2, 1885.-Kindle,25th.Ann.Rep.Ind.Dep.Nat.Res.,p.678- 679,pl.14,f.6,7,1901;Sell.beds.Clark Co.

Nucula snyderensis Branson

Nucula snyderensis Branson,Dev. of Mo.,p.112,pl.25,f.17, 18,1922;Snyder Cr.shale.Cow Creek,Callaway Co.

Nucula varicosa Hall

Nucula varicosa.Hall,Prelim.not Lamellibr.II,p.2,1870; Pal.N.Y.,V,pt.1,Lamellibr.II,p.319,pl.46,f.12-23, pl.93,f.4,1885.-Clarke,N.Y.State Mus.,Bull.65,p. 463,1903.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.230-231,pl.25,f.11-16,1913;Rom.Form.,Ham. member. E. bank Evitts Cr. below Wolfe Mill;N.Romney,W. Va.

Genus NUCULITES Conrad

(1841.Geol.Sur.N.Y.Ann.Rept.p.49)

Nuculites sp? Clarke & Swartz

Nuculites sp.? Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.620,not fig.,1913;Jenn.Form.,Chem,member,W. slope Polish Mt.,Allegany Co.

Nuculites bellastriata Conrad,see Nucula bellistriata (Conrad)

Nuculites Chemungensis Conrad,see Schizodus Chemungensis (Conrad)

Nuculites constricta Conrad,see Palaeoneilo constricta (Conrad)

Nuculites emarginata Conrad,see Palaeoneilo emarginata (Conrad)

Nuculites filosa Conrad,see Palaeoneilofilosa (Conrad)

Nuculites grabaui Prosser & Kindle

Nuculites grabaui Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.234,pl.26,f.6,1913;Rom.Form.,Ham.member.McCoy's Ferry;S.W.McCoy's Ferry.

Nuculites lirata Conrad,see Nucula lirata (Conrad)

Nuculites maxima Conrad,see Palaeoneilo maxima (Conrad)

Nuculites modulatus Kindle

Nuculites modulatus Kindle,U.S.G.S.Bull.508,p.89, pl.7,f.13,14,1912;Md.Geol.Sur.,Mid.& Up.Dev.,p. 234-235,pl.26,f.7,8,1913;Rom.Form.,Onon.member. S.E.Cumb.

Nuculites nyssa Hall

Nuculites nyssa Hall,N.Y.Pal.V,pt.1,p.328,pl.47, 1884.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.255,f.171, 1899;Ham.gr.Shore Lake Erie.

Nuculites oblongatus Conrad

Nuculites oblongatus.Conrad,GeollSur.N.Y.,Ann.Rep., p.50,pl.f.8,1841.-Hall,Prelim.notice Lamellibr.2 p.4,1870.-N.Y.,Pal.,V,pt.1,p.324,pl.47,f.1-12, 1885.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29,1891 Grabau,Buf.Soc.Nat.Sci.,VI,p.254,f.170,1899;Strophelosia bed.Lake Shore.-Clarke,N.Y.State Mus. Bull.65,p.465,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.398,f.509a-c,1909.-Prosser & Kindle,Md Geol.Sur.,Mid.& Up.,Dev.,p.231-232,pl.25,f.17-20, 1913;Rom.Form.,Ham.member.E.bank Evitts Cr.

below Wolfe Mill;W. Tonoloway Ridge.

Nuculites radiata Conrad,see Pholadella radiata (Conrad)

Nuculites rostellata Conrad,see Leda rostellata(Conrad)

Nuculites subemarginata Conrad,see Tellinopsis subemarginata (Conrad)

Nuculites triqueter Conrad

Nuculites triqueter.Conrad,Geol.Sur.,N.Y.Ann.Rep.,p 50,1841;-Hall,Prelim.notice Lamellibr.II,p.4,1870 N.Y.Pal.,V,pt.1,p.326,pl.47,f.17-28;pl.93,f.8-10, 1885.-Grabau,Buf.Soc.Nat.Sci.,VI,p.255,f.172,1899 Trans.sh. & Up.Marcellus sh.Lake Shore.-Clarke, N.Y.,State Mus.,Bull.65,p.466,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.398,f.509d-f,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.232-233,pl.26,f.1-5,1913;Rom.Form.,Ham.mem.E. bank Evitts Cr. below Wolfe Mill;W.Va.,Cent.R.R.cut 21st.Bridge;B.& O.R.R.21st.Bridge;S.Cumb.

Nyassa arguta Hall

Nyassa arguta.Hall,Prelim.notice Lamellibr.II,p.28, 1870;Pal.N.Y.,V,pt.1,Lamellibr,II,p.354,pl.53, f.7-20,1885.-Clarke,N.Y.State Mus.,Bull.65,p.467, 1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.478, f.639,1909.-Prosser & Kindle,(?)Md.Geol.Sur.,Mid. & Up.Dev.,p.262-263,pl.31,f.6,1913;Rom.Form.,Ham. member.E.side Warrior Mt.,E. of Rush.

Oncoceras ovoides Hall

Oncoceras ovoides Hall,Pal.N.Y.,III,p.342,pl.6a,f. 2a,b,1859;L.Held.gr.Herkimer Co.

Genus ORTHOCERAS Breynius
(1732.Dissertatis Physica de Polythalamus)

Orthoceras sp.Branson

Orthoceras sp.Branson,Dev. of Mo.,p.123,pl.29,f.1, 2,3,5,7,1922;Snyder Cr.shale.Callaway Co.

Orthoceras sp.Branson

Orthoceras sp.Branson,Dev. of Mo.,p.123,pl.30,f.4, 5,1922;Snyder Cr.shale.Callaway Co.

Orthoceras sp.Fenton & Fenton

Orthoceras sp. 1, Fenton & Fenton, Cont. Mus. Geol. Univ. Mich., I, p.194, pl.38, f.17, 1924; Spirifer zone. Hack. stage.

Orthoceras sp. 2 Fenton & Fenton

Orthoceras sp. 2 Fenton & Fenton, Cont. Mus. Geol. Univ. Mich., I, p.194, pl.38, f.1-3, 1924; Spirifer zone. Hack. stage.

Orthoceras sp. A. Girty

Orthoceras sp. A. Girty, 20th. Ann. Rep., pt.2, U.S.G.S., p.62, 1900; Ouray l.s. Durango; Salida.

Orthoceras sp. b. Girty

Orthoceras sp. b. Girty, 20th. Ann. Rep. pt.2, U.S.G.S., p.62-63, 1900; Ouray l.s. Durango

Orthoceras sp. c. Girty, see Orthoceras (Spyroceras) crotalium Hall

Orthoceras sp. Hall

Orthoceras sp. Hall, Pal. N.Y., V, pl.87.-Grabau, Buf. Soc. Nat. Sci., VI, p/291, f.225, B, 1899; Eighteen Mile Creek; Lake Erie Shore.

Orthoceras sp. Hall

Orthoceras sp. Hall, N.Y. Pal. III, p.345, pl.71, f.3, 1859; L. Held. gr. Schoharie Co.

Orthoceras sp. Kindle

Orthoceras sp. Kindle, 25th. Ann. Rep. Ind. Geol. Sur., p. 578, pl.2, f.8, 1901; new Albany shale. Delphi.

Orthoceras sp. Weller

Orthoceras sp. Weller, Pal. N.J., III, p.319, not fig., 1903 new Scotland beds. N.J.

Orthoceras sp. Weller

Orthoceras sp. Weller, Pal. N.J., III, p.337, pl.43, f.16-17, 1903; L. Orisk. N.J.

Orthoceras sp. Weller

Orthoceras sp. Weller, Pal. N.J., III, p.364, not fig., 1903; Mid.& Up. Orisk. N.J.

Orthoceras aciculum Hall, see Bactrites aciculum Hall and

Bactrites aciculus (Hall)

Orthoceras arenosum Hall

Orthoceras arenosum Hall, Pal. N.Y., III, p.480, 1859; Orisk. s.s. Schoharie Co.

Orthoceras atreus Hall

Orthoceras atreus Hall, N.Y., Pal., V, pt.2, p.305, pl.88, f.1; pl.89, f.10, 11, 1879.

Orthoceras cf atreus Branson, Dev. of Mo., p.124, pl.30, f.3, 1922; Snyder Creek shale. Callaway Co.

Orthoceras aulax Hall

Orthoceras aulax. Hall, N.Y., Pal., V, pt.2, p.293, pl.84, f.18, 1879.-Grabau, Buf. Soc. Nat. Sci., VI, p.289, f. 224, 1899; shales Ham. group. Hamburg, Erie Co., N.Y.-Clarke N.Y. State Mus., Bull. 65, p.618, 1903.-Prosser & Kindle, Md. Geol. Sur., Mid. & Up. Dev., p.313-314, pl.40, f.8, 1913; Rom. Forml, Ham. member, N. Old Town.

Orthoceras bebryx Hall

Orthoceras bebryx. Hall, Ill. Dev. Foss. Cephalopoda. Explan. pl.39, f.1, 2, 1876; Pal. N.Y., V, pt.2, p.275, pl.38, f.10, pl.39, f.2; pl.83, f.14; pl.84, f.11, 12, 1879.-Clarke, N.Y. State Mus. Bull. 65, p.618, 1903.-Prosser & Kindle, Md. Geol. Sur., Mid. & Up. Dev., p.307-308, pl. 38, f.10, 11, 1913; Rom. Form; Ham. member. near Cumb. E. of Old Town.

Orthoceras caldwellensis Miller & Gurley

Orthoceras caldwellensis, Miller & Gurley, Bull. Ill. State Mus. Nat. Hist., no.11, p.31, pl.4, f.1-2, 18?.-Kindle, 25th. Ann. Rep. Ind. Dep. Geol Nat. Res. p.742-743, not fig; 1901; "Up. Held. gr". Clarke Co.

Orthoceras clavatum Hall

Orthoceras clavatum Hall, N.Y., Pal, III, p.345, pl.71, f.4, 1859; L. Held. gr. Schoharie Co.

Orthoceras consortale Hall

Orthoceras consortale. Hall, 5th. Ann. Rep. N.Y. State Geol pl.2, f.3-5, 1886.-Pal. N.Y., VII, supplem. p.29, pl.108, f.3-5, 1888.-Clarke & Swartz, Md. Geol. Surl, Mid. & Up. Dev., p.690-691, pl.71, f.16-18, 1913; Jenn. Form., Chem. member, Polish Mt.

Orthoceras constrictum vanuxem

Orthoceras constrictum.Vanuxem,Geol.N.Y.,pt.3,p.152, f.1,1842.-Hall,15th.Rep.N.Y.State Cab.Nat.Hist.,p. 77,1862;N.Y.Pal.,V,pt.2,p.288,pl.84,f.13,14,16;pl. 85,f.5,10,11,13,1879.-Keyes,Johns Hopkins Univ. Circ.XI,p.29,1891.-Grabau,Buf.Soc.Nat.Sci.,VI,p. 291,f.225C,1899;Ham.Gr.Eighteen Mile Creek.-Clarke, N.Y.State Mus.,Bull.65,p.621,1903.-Clarke & Mathews,Md.Geol.Sur.,VI,pl.17,f.14,1906.-Grabau & Shimer,N.Am.Index Foss.,II,p.51,f.1251,1910.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p309-310,pl.39, f.5-8,1913;Rom.Form.,Ham.member.near Cumb.,N.Romney,W.Va.(?)

Orthoceras (Spyroceras) Crotalum Clarke,see Spyroceras crotalum (Hall)

Orthoceras crotalum Hall,see Spyroceras crotalum (Hall)

Orthoceras (Spyroceras?) crotalum Hall

Orthoceras sp. C. Girty,20th.Ann.Rep.U.S.G.S.,pt.2, p.63,1900;Ouray l.s.Durango,Colo.

Orthoceras (Spyroceras?) cf Crotalum Kindle,U.S.G.S., Bull.391,p.36,pl.10,f.12,1909;Ouray l.s.Durango quadrangle & Rockwood,Colo.

Orthoceras demus Hall,see Orthoceras demum Hall

Orthoceras demum Hall

Orthoceras demus Hall,Pal.N.Y.,V,pt.2,p.311,pl.90, f.1,4,5,1879.

Orthoceras cf demum Hall,Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.,p.691,pl.71,f.14,15,1913;Jenn.Form., Chem.member.Town Creek;Hancock.

Orthoceras emaceratum Hall(?)

Orthoceras emaceratum.Hall,N.Y.,Pal.,V,pt.2,p.292; pl.39,f.4;pl.85,f.16,1879;15th.Rep.N.Y.State Cab. Nat.Hist.,p.170,pl.8,f.7,1862.-Grabau,Buf.Soc.Nat. Sci.,VI,p.290,f.225A,1899;Ham.shales.Shore Lake Erie.-Clarke,N.Y.State Mus.,Bull.65,p.624,1903.- Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.313, pl.40,f.7,1913;Rom.Form.,Ham.member.S.Cumb.

Orthoceras eriense Hall

Orthoceras eriense Hall,N.Y.Pal.,V,pt.2,p.274,pl.40, 1879.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.286,f.220,

1899;Ham.gr.Lake Erie Shore

Orthoceras exile Hall

Orthoceras wf exile Grabau,Buf.Soc.Nat.Scil,VI,p.288, f.222,1899.Ham.gr.Shore Lake Erie.

Orthoceras exile.Hall,N.Y.,Pal.V,pt.2,p.290,pl.39,f. 3,pl.84,f.3;pl.85,f.1,2,14,15,1879;Descr.new species Foss.,etc.,p.50,1861;15th,Rep.N.Y.State Cab.Nat Hist.p.78,pl.8,f.5,1862.-Keyes,Johns Hopkins Univ. Circ.XI,p.29,1891-Clarke,N.Y.State Mus.,Bull.65, p.625,1903.-Grabau & Shimer,N.Am.Index Foss.,II,p. 52,f.1252a,1910.

Orthoceras cf exile Prosser & Kindle,Md.Geol.Sur.Mid. & Up.Dev.,p.310-311,pl.39,f.9,1913;Rom.Form.,Ham. member.W.Bank Evitts Creek below Wolfe Mill,near Cumb.

Orthoceras filosum Clarke

Orthoceras filosum,Clarke,U.S.G.S.Bull.16,p.52,pl.2, f.12-14,1885.-Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.691-692,pl.71,f.12,13,1913;Jenn.Form., Genesse member.Burlington,W.Va.Woodmont member, Naples Fauna,Polish Mt.

Orthoceras helderbergiae Hall

Orthoceras helderbergiae Hall,Pal.N.Y.,III,p.345,pl. 72,f.2,1859;L.Held.gr.Carlisle & Schoharie,Schoharie Co.

Orthoceras longicameratum Hall

Orthoceras longicameratum.Hall,N.Y.,Pal.III,p.343,pl. 70,f.1;pl.71,f.195,1859;L.Held.Gr.Albany & Schoharie Ohern,Md.Geol.Sur.,L.Dev.,p.487,pl.88,f.1-3, 1913;Held.Form.,Cumb.,Md.

Orthoceras(Spyroceras)nuntium,Clarke see Spyroceras nuntium Hall

Orthoceras nuntium.Grabau,Hall,See Spyroceras nuntium Hall

Orthoceras pauciseptum Hall

Orthoceras pauciseptum Hall,N.Y.,Pal.III,p.346,pl.72, f.5a,b,1859;L.Held.gr. Schoharie Co.

Orthoceras perstriatum Hall

Orthoceras perstriatum Hall,N.Y.,Pal.III,p.346,pl.72,

f.3,1859;L.Held.gr.Schoharie Co.

Orthoceras rigidum Hall

Orthoceras rigidum.Hall,Pal.N.Y,III,p.344,pl.70,f.3a-d,1859;L.Held.gr.Herkimer Co.-Maynard,Md.Geol.Sur. L.Dev.,p.488,pl.88,f.5,1913;Held.Form.,Meyser member.Devil's Backbone,Md.

Orthoceras rudis Hall

Orthoceras rudis Hall,Pal.N.Y.,III,p.346,pl.72,f.4a, b,1859;L.Held.gr.Schoharie

Orthoceras schucherti Maynard

Orthoceras schucherti Maynard,Md.Geol.Sur.,L.Dev.,p. 487-488,pl.88,f.4,1913;Held.Form.Keyser member.Cumb Md.

Orthoceras subtextile Hall

Orthoceras subtextile Hall,Pal.N.Y.,III,p.344,pl.71, f.2,1859;L.Held.gr.Schoharie.

Orthoceras (Geisonoceras) subulatum see Orthoceras sublatum Hall

Orthoceras sublatum Hall

Orthoceras subulatum.Hall,Geol.N.Y.,Rept.4th.Dist.,p. 180,f.1,1843;Des. of new sp. of Foss.,etc.p.49, 1861;15th.Rept.N.Y.State Cab.Nat.Hist.,p.77,1862.-Pal.N.Y.,V,pt.2,p.283-284,pl.38,f.3;pl.84,f.1,2, 4,6,-10;pl.86,f.1,2,1879.-Rogers,Geol.Penn.II,p. 826,f.654,1858.-Grabau,Buf.Soc.Nat.Sci.,Bull.6,p. 288,f.321,1899;Up.Moscow shale;encrinal l.s.-Clarke N.Y.State Mus.,Bull.65,p.641,1903.-Branson & Williams,Dev. of Mo.p.157,pl.37,f.10,1922;Grand Tower l.s.Little Saline Creek.- Prosser & Kindle,Md.Geol Sur.,Mid.& Upl Dev.,p.308-309,pl.39,f.1,2,1913;Rom. Form.,Onon.member.s.e.Cumb.Ham.member.W.Va.;S. Cumb.

Orthoceras(Geisonoceras)subulatum Grabau & Shimer,N. Am.Index Foss.II,p.52-53,f.1252b,1910.

Orthoceras cf.subulatum Kindle,U.S.G.S.Bull.508,p.106 1912.

Orthoceras telamon Hall

Orthoceras telamon.Hall,N.Y.Pal.,V,pt.2,p.291,pl.85, f.3,4,12,1879.-Grabau,Buf.Soc.Nat.Sci.,V,p.289,f.

223 on p.288,1899;Enorinal l.s.-Clarke,N.Y.,State Mus.Bull,65,p.642,1903.-Prosser & Kindle,Md.Geol. Sur.,Mid.& Up.Dev.,p.311-312,pl.40,f.1-4,1913; Rom.Form.;Ham.member.s.Patterson Depot,W.Va.

Orthoceras tenuiannulatum Hall

Orthoceras tenuiannulatum Hall,N.Y.Pal.III,p.345,pl. 72,f.1,1859;Held.gr.Albany Co.

Orthoceras thoas Hall

Orthoceras thoas Hall.Pal.N.Y.,V,pt.2,p.261,pl.41,f. 1-9,pl.78b,f.5;pl.79,f.13;pl.80,f.7,8,10,11;pl. 112,f.7-8,1879.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.741-742,not fig.,1901;Jeff.l.s.Bunker Hill.

Genus ORTHONOTA Conrad
(1841.Ann.Rep.Geol.Sur.N.Y.,p.50)

Orthonota sp.Kindle

Orthonota sp.Kindle,U.S.G.S.,Bull.391,p.30,pl.10,f. 6,1909;Ouray l.s.Rockwood & s.w.of Mt.Eolus,Colo.

Orthonota parvula Hall

Orthonota(?)parvula Hall,N.Y.,Pal.V,pt.2,p.482,pl.65, f.2,3,pl.18,f.29-32,1879.-Grabau,Buffalo Soc.Nat. Sci.,VI,p.267,f.189,1899;shale between nautilus & Strophalosia beds.Avery's Cr.

Orthonata parvula.Hall,Prelim.notice Lamellibr.2,p. 88,1870.-Clarke,N.Y.State Mus.Bull.65,p.468,1903; Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p. 217-218,pl.22f.1,2,1913;Rom.Form.,Ham.member,E. bank of Evitts Creek,near Cumb.

Orthonota undulata Conrad

Orthonota undulata.Conrad,Geol.Sur.,N.Y.An.Rep.p. 51,f.6,1841.-Vanuxem,Geol.N.Y.pt.3,p.150,f,3, 1842.-Rogers,Geol.Penn.,II,pt.2,p.827,f.661,1858.- Hall,Prelim.notice Lamellibr.II,p.87,1870.,Pal. N.Y.V,pt.1,Lamellibr.II,p.478,pl.78,f.37-42,1885.- Clarke,N.Y.State Mus.,Bull.65,p.469,1903.-Grabau & Shimer,N.Am.Index Foss.I,p.378,f.480,1909.-Prosser & Kindle,Md.Geol.Surl,Mid. & Up.Dev.,p.216-217,pl.21,f.11-13,1913;Rom.Form.,Ham.member,B.& O. R.R.cut Hancock Sta.,W.Va.

Genus ORTHONYCHIA Hall

Orthonychia sp. Clarke & Swartz

Orthonychia sp. Clarke & Swartz, Md. Geol. Surv., Mid. & Up. Dev., p.682, pl.70, f.10,11, 1913; Jenn. Form., Parkhead member. Sideling Hill Creek.

Orthonychia attenuatum Hall, See Platyceras (orthonychia) attenuatum Hall

Orthonychia belli Clarke

Platyceras (orthonychia) belli Clarke, N.Y. State Mus., Mem., IX, pt.1, p.147, pl.14, f.20,21, 1908.

Orthonychia belli Stewart, Dev. of Mo., p.254, pl.67, f.6, 1922; Little Saline Cr. l.s. Ste Genevieve Co.

Orthonychia praeconium Stewart

Orthonychia praeconium Stewart, Dev. of Mo., p.254, pl. 68, f.1,2, 1922; Little Saline Cr. l.s. Ste Genevieve Co.

Orthonychia prosseri Clarke & Swartz

Orthonychia prosseri Clarke & Swartz, Md. Geol. Surv., Mid & Up. Dev., p.681, pl.70, f.4-6, 1913; Jennings Form., Chem., member. Oakland-Altamont Road; W. Frostburg.

Orthonychia tortuosa (Hall)

Platyceras tortuosum. Hall (part) N.Y., Pal., III, p.472, pl.113, f.1-5, 1861; Oriskany s.s. Albany and Schoharie Cos., -Clarke, N.Y., State Mus., Mem. IX, pt.1, p. 146, pl.14, f.22-25, 1908.-Weller, Pal. N.J., III, p.362, pl.49, f.13-17, 1903; Mid. & Up. Orisk.

Orthonychia tortuosa. Clarke, N.Y. State Mus., Mem. III, po.3, p.30, 1900.-Ohern, Md. Geol. Surv., L. Dev., p.469, pl.79, f.10-12, 1913; Orisk. Form., Ridgely Member. Knobly Mt., near Cumb., Md.-Stewart Dev. of Mo., p. 254, 255, pl.67, f.7-10, 1922; Little Saline Cr. l.s. Ste Genevieve Co.

Orthonychia unguiculata Clarke & Swartz

Orthomychia unguiculata Clarke & Swartz, Md. Geol. Surv., Mid. & Up. Dev. p.628, pl.70f.7-9, 1913; Jenn. Form., Parkhead member. Polish Mt., Sideling Hill Creek.

Palaeanatina angusta Hall

Palaeanatina angusta. Hall, Pal. N.Y., V, pt.1, 2, p.490, pl 79, f.29-34, 1885.-Clarke & Swartz, Md. Geol. Surv., Mid. & Up. Dev., p.609-610, pl.59, f.16,17, 1913; Jenn. Form., Chem. member. Town Cr., W. Pawpaw, W. Va.,

Genus PALAEONEILO Hall
(1870.Prelim.notice Lamellibr.,II,p.6)

Palaeoneila maxima Hall,see Palaeoneilo maxima(Conrad)

Palaeoneilo sp.Kindle

Palaeoneilo sp.Kindle,25th.Ann.Rep.Ind.State Geol., p.574,pl.1,f.8,8,a,1901;New Albany shale,Delphi.

Palaeoneilo angusta Hall

Palaeoneilo angusta.Hall,Pal.N.Y.,V,pt.1,sec.II,p. 344,pl.93,f.11,1885.-Clarke & Swartz,Md.Geol.Sur., Mid.& Up. Dev.,p.624,pl.61,f.13,1913;Jenn.Form., Chem.mamber.Oakland-Redhouse Road.

Palaeoneilo brevis Hall

Palaeoneilo brevis.Hall,Prelim.notice Lamellibr.,pt. 2,p.10,1870.-Pal.N.Y.,V,pt.1,sec.II,p.342,pl.50. f.24-33,1885.-Grabau & Shimer,N.Am.Index Foss.,I, p.400,f.510,1909.-Cleland,Bull.21,Geol.Sur.,Wisc., p.101,pl.20,f.6,7,1911.-Clarke & Swartz,Md.Geol. Sur.,Mid.& Up.Dev.,p.622-623,pl.61,f.4-6,1913; Jenn.Form.Polish Mt.,w.Pawpaw,W.Va. Woodmont member.Ithaca Fauna.W.Pawpaw,W.Va.Little Orleans; Berkely Springs & Yellow Springs,W.Va.

Palaeoneilo Clarki Prosser & Kindle

Palaeoneilo Clarki Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev,,p.244,p.27,f.10-13,1913;Rom.Form.,Ham. member,S. Cumb.,W.Va.

Palaeoneilo constricta (Conrad)

Nuculites constricta Conrad,Jour.Acad.Nat.Scil,Phila. VIII,p.249,pl.15,f.8,1842.

Nucula bellatula Hall,Geol.N.Y.,pt.4,p.197,f.7 on p. 196,1843.

Palaeoneilo constricta.Hall,Prelim.notice Lamellibr. II,p.7,1870.N.Y.Pal.V,pt.1,p.333,pl.48,f.1-16;pl. 51,f.17,1885.-Grabau,Buf.Soc.Nat.Sci.,VI,p.256, f.173,1899;Demissa bed; shale below Wncrinal l.s., sh.above Pleurodictyum beds in Avery's Ravine.- Clarke,N.Y.State Mus.,Bull.65,p.474,1903;N.Y.State Mus.,Me.VI,pt.2,p.311,pl.15,f.9-13,1904.-Grabau & Shimer,N.Am.Index Foss.I,p.400,f.510a,b,1909.- Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.235-237,pl.26,f.9-12,1913;Rom.Form.,Onon.member.S.E. Cumb.;Ham.member. s.e.Cumb.,E.bank Evitts Creek;n. Romney,W.Va.-Cleland,Bull.21,Geol.Sur.,Wisc.,p.102,

pl.20,f.9,19-23,1911.-Clarke & Swartz,Md.Geol.Sur. Mid.& Up.Dev.,p.620,pl.61,f.7-10,1913;Jenn.Form., Chem.member,n.w.Deer Park.Woodmont member,Ithaca Fauna,Woodmont.

Palaeoneilo crassa Clarke & Swartz

Palaeoneilo crassa Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.625-626,pl.61,f.14,15,1913;Jenn.Form., Chem.member w.Frostburg;near Penn.-Md.State line.

Palaeoneilo emarginata (Conrad)

Nuculites emarginata Conrad,Geol.Sur.,N.Y.,Ann.Rep., p.50,1841.

Palaeoneilo emarginata.Hall,Prelim.notice Lamellibr., II,p.7,1870.N.Y.,Pal.,V,pt.1,p.338,pl.50,f.1-11, 1885.-Grabau,Buf.Soc.Nat.Sci.,VI,p.258,f.177,1899; L.shales below Encrinal l.s.;shale below nautilus bed in Averyšs Creek.-Clarke,N.Y.State Mus.,Bull. 65,p.475,1903.Weller,Pal.N.J.,III,p.384-385,pl.53, f.10-11,1903;Monroe shale.near Newfoundland,N.J.- Grabau & Shimer ,N.Am.Index Foss.,I,p.400,f.510m-p,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.241-242,pl.27,f.1-6,1913;Rom.Form.,Ham.member.E. bank Evitts Creek;B.& O.R.R.cut 21st.Bridge; McCoyšs Ferry.

Palaeoneilo fecunda Hall

Palaeoneilo fecunda.Hall,Prelim.notice Lamellibr.II, p.8,1870;N.Y.Pal.,V,pt.1,p.336,pl.49,f.13,15-24, 1885.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29, 1891.-Grabau,Buf.Soc.Nat.Scil,VI,p.257,f.175,1890; Moscow shl;Encrinal l.s.-Clarke,N.Y.State Mus.,Bull 65,p.476,1903.-Grabau & Shimer,N.Am.Index Foss.,I, p.399,f.510k.l.,1909.-Prosser & Kindle,Md.Geol. Sur.,Mid.& Up.Dev.,p.239-240,pl.26,f.18-21,1913; Rom.Form.,Ham.member,near Cumb.,Md.

Palaeoneilo filosa (Conrad)

Nuculites filsoa Conrad,Jourl Acad.Nat.Sci.,Phila., VIII,p.250,pl.15,f.7,1848.

Palaeoneilo filosa.Hall,Pal.N.Y.,V,pt.1,p.343,pl.49, f.33-38,1885.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.623,pl.61,f.11,12,1913;Jenn.Form.,Chem. member,near Deer Park;Tiger Valley,Penn.,n.e.Pratt

Palaeoneilo Marylandica Prosser & Kindle

Palaeoneilo Marylandica Prosser & Kindle,Md.Geol.Sur. Mid.& Up.Dev.,p.245,pl.27,f.16,1913; Rom.Form.,Ham

member.n.Hancock.

Palaeoneilo maxima(Conrad)

Nuculites maxima Conrad,Geol.Sur.,N.Y.,Ann.Rept.p.50, 1841.

Tellina(?)ovata Hall,Geol.N.Y.,pt.4,p.196,f.6,1843.

Palaeoneila maxima Hall,Prelim.notice Lamellibr.,II, p.9,1870.

Palaeoneilo maxima.Hall,Pal.N.Y.,V,pt.1,Lamellibr., II,p.335,pl.48,f.29-38,1885.-Prosser & Kindle (?) Md.Geol.Sur.,Mid.& Upd.Dev.p.238-239,pl.26,f.16, 1913;Rom.Form.,Ham.member,Evitts Creek.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.622,pl.60,f. 25,1913;Jenn.Form.,Parkhead member,n.of mouth Town Cr.

Palaeoneilo muta Hall

Palaeoneilo muta Hall,N.Y.,Pal.V,pt.1,p.337,pl.49, 1884.-Grabau,Buffalo Soc.Nat.Sci.,VI,p.258,f.176, 1889.Moscow sh.

Palaeoneilo perplana var Grabaui Prosser & Kindle

Palaeoneilo perplana var grabaui Prosser & Kindle,Md. Geol.Sur.,Mid.& Up. Dev.,p.240-241,pl.26,f.22,23, 1913;Rom.Form.,Ha.member,Evitts Creek below Wolfe Mill,near Cumbl

Palaeoneilo petila Clarke

Palaeoneilo petila.Clarke,N.Y.State Mus.,Mem.VI,p.311 pl.15,f.1-8,1904.-Clarke & Swartz,Md.Geol.Sur.Mid. & Up.Dev.,p.624-625,pl.60,f.24,1913;Jenn/Form., Woodmont member,Naples Fauna.E.Cumb.

Palaeoneilo plana Hall

Palaeoneilo plana.Hall,Prelim.not Lamellibr,II,p.7, 1870.Pal.N.Y.,V,pt.1,Lamellibr,II,p.334,pl.48,f. 21-28,1885.-Clarke,N.Y.State Mus.,Bull.65,p.488, 1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.399,f. 510 f,1909.-Cleland,Bull.21,Geol.Sur.,Wis.p,104, pl.20,f.15-16,1911.-Prosser & Kindle,Md.Geol.Sur., Mid.& Up.Dev.,p.237-238,pl.26,f.13-15,1913;Rom. Form.,Ham.member,E. bank Evitts Cr.,S.Cumb.,Md.- Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev,,p.621, pl.61,f.1-3,1913;Jenn.Form.,Chem.member,W. Frostburg,W.Pawpaw,W.Va.Millstone.Parkhead member.Town Cr.? Woodmont member,Ithaca Fauna.Little Orleans

Palaeoneilo rowei Prosser & Kindle

Palaeoneilo rowei Prosser & Kindle,Md.Geol.Sur.,Mid. & Up. Dev.,p.244-245,pl.27,f.14,15,1913;Rom.Form., Ham.member.McCoy's Ferry,W.Tonoloway Ridge;N.Hancock.

Palaeoneilo tenuistriata Hall

Palaeoneilo tenuistriata.Hall,Prelim.notLamellibr,,II, p.9;N.Y.Pal.V,pt.1,p.336,pl.49,f.1-12,14;pl.93, f.13,1885.-Grabau,Buf.Soc.Nat.Sci.,VI,p.257,f.174, 1899.moscow sh.;Strophalosia bed, on L.Shore.-Keyes,John's Hopkins Univ.Circ.,XI,p.29,1891.-Clarkee,N.Y.State Mus.,Bull.65,p.479,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.399,f.510 c,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.242-243,pl.27,f.7,1913;Rom.Form.,Ham.member.McCoy's Ferry;E. bank Evitts Creek below Wolfe Mill,near Cumb.

Palaeosolen minutas Prosser & Kindle

Palaeosolen minutus Prosser & Kindle,Md.Geol.Sur.,Mid & Up.Dev.,p.279,pl.34,f.18,1913;Rom.Form.,Ham.member,Cumb.,Md.

Palaeotrochus praecursor Clarke,see Trachydomia praecursor(Clarke)

Paleopinna lata Ohern

Paleopinna lata Ohern,Md.Geol.Sur.,L.Dev.,p.454-455, pl.76,f.1,1913;Orisk.Form.,Ridgely member.Hancock, Md.

Genus PANENKA Barrande

Panenka sp.Kindle

Panenka sp.Kindle,25th.Ann.Rep.Ind.Geol.Sur.,p.575,not fig.,1901;New Albany shale,Jennings Co.

Panenka alternata Hall

Panenka alternata.Hall,N.Y.State Geol.Sur.,Pal.V,pt.1, Lamellibr.p.416-417,text fig.462,1885.-Kindle,Md. Geol.Sur.Mid.& Up.Dev.,p.223,pl.24,f.1,1913;Rom. Form.,Onon.member.E. Oldtown.

Panenka dichotoma Hall

Cordiola? dichotoma Hall,Pal.N.Y.,V,pt.1,pl.& explan., pl.70,f.21,1883.

Panenka dichotoma Hall,N.Y.,State Geol.Sur.,Paleo.V, pt.1,Lamellibr.p.416,pl.70,f.21,pl.94,f.13,1885.

Panenka cf dichotoma Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.224,pl.23,f.5,1913;Rom.Form.,Onon.member. E.Oldtown.

Panenka multiradiata Hall

Panenka cf multiradiata Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.225,pl.23,f.11,1913;Rom.Form.,Onon.member, E.Oldtown in cut of W.Md.R.R.

Panenka obsolescens Kindle

Panenka obsolescens Kindle,Md.Geol.Sur.,Mid.& Up.Dev., p.224,pl.24,f.2,3,1913;Rom.Form.,Onon.member,E. Oldtown, in cut of W.Md.R.R.

Panenka radians(Hall)

Cardiola radians Whitfield,6th.Ann.Rep.Ind.Geol.Sur., p.126,1875.

Panenka radians Kindle,25th.Ann.Rep.,Ind.State Geol., p.574-575,not fig.,1901;New Albany sh.Scott Co.

Genus PARACARDIUM Barrande
(1913.Md.Geol.Sur.,Mid.& Up.Dev.,p.617)

Paracardium delicatulum Clarke

Paracardium delicatulum.Clarke,N.Y.State Mus.,MemVI, p.304,pl.11,f.4,1904.-Clarke & Swartz,Md.Geol.Sur. Mid.& Up.Dev.,p.618,pl.60,f.17,18,1913;Jenn.Form., Genesse Member.near Cumb.

Paracardium doris Hall

Cardiola doris,Hall,Pal.N.Y.,V,pt.1,pl.& explan.,p.70, f.10,11,1873.

Paracardium doris.Hall,Pal.N.Y.,V,pt.1,p.428,1885.- Clarke,N.Y.State Mus.,Mem.,VI,p.304,pl.11.f.5-10, 1904.-Clarke & Swartz,Md.Geol.Sur.Mid.& Up.Dev.,p. 617-618,pl.60,f.13-16,1913;Jenn.Form.,Gen.Mem. S.E.Cumb.,near Burlington,W.Va.,Woodmont member, Naples Fauna.E.Gilpintown.

Genus PARACYCLAS Hall
(1843.Geol.Sur.N.Y.,Rep.,4th.Dis.,p.171)

Paracyclas spp.Fenton and Fenton

Paracyclas spp.Fenton and Fenton,Contr.Mus.Univ.Mich.,

I,pl174,pl.34,f.1-2,1924;Owen substage.Hackberry stage.

Paracyclas sp.Girty

Paracyclas sp.Girty,20th.Ann.Rep.,U.S.G.S.,pt.2,p.59, 1900;Ouray ls.,Durango,Colo.

Paracyclas elliptica C.L.Fenton,see Paracyclas parvula Fenton & Fenton

Paracyclas elliptica Hall

Paracyclas elliptica.Hall,Geol.N.Y.,pt.4,Rep.4th.Dist. p.171,t.67,f.2,1843;Pal.N.Y.,V,pt.1,pl.72,f.23-30, 1883;Pal.N.Y.,V,pt.1,Lamellibr.II,p.440,pl.72,f.23-30;pl.95,f.18,1885.-Nettleroth,Ky.Foss.Shells,p. 209-210,pl.2,f.1-3,1889.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.673,1901;Sellersburg beds and Jeffersonville ls.Falls of the Ohio;Watson.Charlestown;Lexington;Pipe Creek Falls;Keysport.-Grabau & Shimer,N.Am.Index Foss.,I,p.554-555,f.760d,1909.-Cleland,Wisc.Geol.Nat.Hist.Surv.,Bull.21,p.117,pl. 25,f.3-5,1911.-Branson,Dev. of Mo.,p.115-116,pl.36, f.1,1922;Callaway ls. and Snyder Creek shale.-Branson and Williams,Dev. of Mo.,p.155,1922;Grand Tower ls.Little Saline Creek,Ste Genevieve Co.

Lucina(Paracyclas)elliptica var occidentalis Hall and Whitfield,24th.Ann.Rep.N.Y.State Mus.Nat.Hist.,p. 189,1872.

Paracyclas elliptica? Weller,Pal.N.J,III,p.385,1903; Monroe Sh.near Newfoundland,N.J.

Paracyclas elliptica var occidentalis Hall, see Paracyclas elliptica Hall

Paracyclas elongata Nettleroth

Paracyclas ellongata.Nettleroth,Ky.Foss.Shells,p.210, pl.2,f.8,1889.-Kindle,25th.Ann.Rep.Ind.,Dept.Geol. Nat.Res.,p.674,1901;Sellersburg beds,Clarke Co.

Paracyclas lirata (Conrad)

Posidonia lirata Conrad,Geol.Sur.N.Y.,Ann.Rep.p.116, pl(unnumbered) f.12,1838.

Lucina (Paracyclas)lirata Halle & Whitfield,24th.Ann. Rep.N.Y.State Mus.Nat.Hist.,p.200,1872.

Paracyclas lirata.Hall,Pal.N.Y.,V,pt.1,Lamellibr.,II, p.441-442,pl.72,f.2-19,pl.95,f.19,1885.-Grabau, Buffalo Soc.Nat.Sci.,Bull.6,p.265,f.186,1899;Mar-

cellusage.-Kindle, Ind. Dep. Geol. Nat. Res., 25th. Ann. Rep. p. 673-674, pl. 15, f. 10, 1901; Sells. beds. Falls of the Ohio; Lexington; Charlestown.-Clarke, N.Y. State Mus. Bull. 65, p. 483, 1903.-Grabau & Shimer, N. Am. Index Foss., I, p. 555, f. 760b, 1909.-Cleland, Wis. Geol. Nat. Hist. Sur., Bull. 21, p. 118, pl. 25, f. 6, 7, 1911.-Prosser & Kindle, Md. Geol. Sur., Mid. & Up. Dev., p. 277-278, pl. 34, f. 11-14, 1913; Rom. Form., Ham. member, E. bank Evitts Cr. N. Hancock; S. Cumb.

Paracycles lirata, Branson, Dev., of Mo., p. 116, pl. 25, f. 9, 12, 1922; Snyder Cr. sh. Callaway Co.

Paracyclas Marylandica Clarke & Swartz

Paracyclas Marylandica Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p. 660, pl. 66, f. 25, 1913; Jenn. Form., Chem member. Town Creek.

Paracyclas octerlonii Nettleroth

Paracyclas octerlonii Kindle, 25th. Ann. Rep. Ind. Dep. Geol Nat. Res., p. 675, 1901.

Paracyclas ohioensis (Meek)

Lucina (Paracyclas) ohioensis Meek, Pal. Ohio, I, p. 199, pl. 18, f. 7, 1873.

Paracyclas ohioensis Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res., p. 625, pl. 15, f. 1, 1a-b, 1901; Sells. beds; Falls of the Ohio; Burnsville, Bartholomew Co.

Paracyclas parvula Fenton & Fenton

Paracyclas elliptica C. L. Fenton, Am. Jour. Sci., 4th. Ser., 48, p. 373, 1919.

Paracyclas parvula Fenton & Fenton, Contr. Mus. Univ. Mich. I, p. 173-174, pl. 33, f. 3, 1924; Spirifer zone. Hackberry stage.

Paracyclas sabini White

Paracyclas sabini. White, Proc. Acad. Nat. Sci., Phila., vol for 1876, p. 31, 1876.-Fenton & Fenton, Contr. Mus. Univ. Mich., I, p. 172, pl. 33, f. 4, 5, 1924; Spirifer zone. Hackberry stage.

Paracyclas tenuis Hall

Paracyclas tenuis. Hall, Pal. N.Y., V, pt. 1, pl. & explan., pl. 72, f. 20-22, 1883; Pal. N.Y., V, pt, 1, Lamellibr. II, p. 443, pl. 72, f. 20-22, pl. 95, f. 25, 1885.-Clarke, N.Y. State

Mus.,Bull.65,p.485,1903.-Prosser & Kindle,Md.Geol. Sur.,Mid.& Up.Dev.,p.278-279,pl.34,f.16,17,1913; Rom.Form.,Ham.member.E. bank Evitts Creek below Wolfe Mill,near Cumb.

Paracyclas validalinea Webster

Paracyclas validalinea.Webster,Am.Nat.XXII,p.1016, 1888.-Fenton & Fenton,Contr.Mus.Univ.Mich.,I,p.173, pl.33,f.1-2,1924;Spirifer zne.Hackberry stage.

Paracycles lirata Branson,see Paracyclas lirata (Conrad)

Parallelodon hamiltoniae (Hall)

Macrodon hamiltoniae.Hall,Prelim.not Lamellibr.,II,p. 13,1870;Pal.N.Y.,V,pt.1,Lamellibr.II,p.349,pl.51, f.1-7,9,10,1885.-Clarke,N.Y.State Mus.,Bull.65,p. 437,1903.

Parallelodon hamiltoniae.Cleland,U.S.G.S.,Bull.206, p.65,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p. 403,f.517,b,c,1909.-Prosser & Kindle,Md.Geol/Sur., Mid.& Up.Dev.,p.248-249,pl.28,f.8-12,1913;Rom.Form. Ham.member,E. bank Evitts Creek below Wolfe Mill; N.Hancock.

Parodiceras discoideum (Conrad)

Goniatites discoideus.Hall,13th,Ann.Rep.N.Y.State Cab Nat.Hist.,p.97,f.4-6,p.98,1860;Pal.N.Y.V,pt.2,p. 441,pl.71,f.1-13;pl.74,f.4-5,1879.

Parodiceras discoideum Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.323-326,pl.42,f.7,8,1913;Rom.Form.,Onon.member S.E.Cumb.

Patellostium patulus Ulrich & Schofield,see Bellerophon (Patellostium)patulus Hall

Pecten cancellatus Hall,see Aviculopecten Cancellatus Hall.

Phanerotinus laxus(Hall)

Euomphalus laxus Hall,Des. of new sp. of Foss.,p.26, 1861;15th.Rep.N.Y.State Cab.Nat.Hist.p.54,pl.6,f.2, 1862;Pal.N.Y.,V,pt.2,p.60;pl.16,f.8,9,16,18,1879.

Euomphalus (Ecculiomphalus?) laxus Hall,Illus.,Dev. Foss.Gastropoda,pl.16,1876.

Ecculiomphalus comes Hall, ibidem,pl.16,1879.

Phanerotinus laxus.Grabau & Shimer,N.Am.Index Foss., I,p.656,f.901,1909.-Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.,p.669,pl.67,f.26,1913;Jenn.Form., Parkhead member.Sideling Hill Creek.

Pharetrella tenebrosa Hall

Pharetrella tenebrosa.Hall,Pal.N.Y.,VII,pt.2,Supplem., p.7,pl.114,f.30,31,1888.-Clarke & Swartz,Md.Geol. Sur.,Mid.& Up.Dev.,p.690,pl.71,f.10,1913;Jenn.Form. Genesse member.W. Corriganville.

Genus PHOLADELLA Hall
(1870.Prelim.not Lamellibr.,II,p.631)

Pholadella radiata (Conrad)

Nuculites radiata Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.248,pl.12,f.16,1842.

Pholadella radiata.Hall,N.Y.,Pal.V,pt.1,Lamellibr.II, p.469,pl.78,f.15-21;pl.96,f.1,1885;Prelim.not Lamellibr.II,p.63,1870.-Grabau,Buf.Soc.Nat.Sci.,VI,p. 266,f.188,1899;below encrinal l.s.;modiomorpha subalata bed, in Idlewood Ravine, & on Lake Shore.-Clarke,N.Y.State Mus.,Bull.65,p.488,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.528,f.716,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.272-273,pl. 33,f.14-16,1913;Rom.Form.,Ham.member,N.Hancock.

Phthonia sectifrons(Conrad)

Cypricardites sectifrons Conrad,Jour.Acad.Nat.Sci., Phila.,VIII,p.245,pl.13,f.8,1842.

Phthonia sectifrons.Hall,Prelim.not Lamellibr.,II,p. 70,1870;Pal.N.Y.,V,pt.1,Lamellibr.,II,p.475,pl.78, f.1-13,1885.-Keyes,Johns Hopkins Univ.Circ.,XI, p.29,1891.-Clarke,N.Y.State Mus.,Bull.65,p.489,1903 Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.214-215,pl.21,f.5-7,1913;Rom.Form.Ham.member,S.E.Cumb.

Genus PLATYCERAS (Conrad,as emended)
(1859.Pal.N.Y.,III,p.309-310)
(1840.AnnaRep.N.Y.,p.205)

Platyceras sp.Hall

Platyceras.sp.Hall,N.Y.,Pal.III,p.473,pl.113,f.6,1859; s.s.at Schoharie.-Tansey,Dev. of Mo.,p.207,pl.54, f.21,22;also Platyceras? sp.p.207,pl.54,f.23,24, 1922;Bailey l.s.Little Saline Creek,Ste Genevieve Co.

Platyceras sp.Clarke & Swartz

Platyceras sp.Clarke & Swartz,Md.Geol.Sur.,Mid.& Up. Dev.,p.684,not fig.,1913;Jenn.Form.,Chem.member. near Penn.-Md.State line.

Platyceras sp.Kindle

Platyceras sp.Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.725,pl.19,f.8,1901;Jeff.l.s.Charlestown.

Platyceras sp.Weller

Platyceras sp.Weller,Pal.N.J.,III,p.335,pl.43,f.5-7, 1903;L.Orisk.N.J.

Platyceras sp.Weller

Platyceras sp.Weller,Pal.N.J.,p.371,not fig.,1903;Onon l.s.N.J.

Platyceras agreste Hall

Platyceras agreste Hall,Pal.N.Y.,III,p.338,pl.65,f.4, 7,1859;L.Held.gr.Schoharie Co.

Platyceras ammon Hall

Platyceras ammon.Hall,Pal.N.Y.,V,pt.2,p.20,pl.8,f.7-10,1879;-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat.Res. p.729,not figl,1901;listed in State Mus.Cat. of Foss.(16th.Ann.Rep.Ind.Dep.Geol.Nat.His.,p.409)

Platyceras angulare Rowe

Platyceras angulare Rowe,Md.Geol.Sur.,L.Dev.,p.476, pl.85,f.3,1913;Orisk.Form.,Ridgely member,Warren Pt.Penn.-Stewart,Dev. of Mo.,p.255,pl.68,f.3,4, 1922;L.Saline Creek,l.s.Ste Genevieve Co.

Platyceras annulatum Branson

Platyceras annulatum Branson,Dev. of Mo.,p.122-123,pl. 26,f.12,13,1922;Crinoid bed mineola l.s.Montgomery Co.

Platyceras arctiostoma Ulrich

Platyceras arctiostoma Ulrich,Cont.Am.Pal.,I,p.30,pl. 3,f.7-7b1886.

Platyceras? arctiostoma Kindle,25th.Ann.Rep.Ind.Dep. Geol.Nat.Res.,p.732,1901."L.Dev."(Jeff.l.s) Falls of the Ohio.

Platyceras arcuatum Hall

Platyceras arcuatum Hall,N.Y.,Pal.,III,p.336,pl.65, f.6,1859;L.Held.gr.Schoharie Co.

Platyceras (Orthonychia)attenuatum Hall

Platyceras (Orthonychia)attenuatum.Hall,N.Y.,Pal.,V, pt.2,p.6,pl.3,f.1-6,1879.-Grabau,Buf.Soc.Nat.Sci., VI,p.273,f.199,1899;Encrinal l.s.,& Stictopora & Demissa beds;Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat. Res.,p.728,pl.19,f.6,1901;Sells.beds.Charlestown.

Platyceras(Orthonychia)belli Clarke,see Orthonychia belli Clarke.

Platyceras billingsi Hall

Platyceras billingsi Hall,N.Y.,Pal.,III,p.315,pl.57, f.1a,b,1859;L.Held.gr.,Becraft's Mt.

Platyceras bisinuatum Hall

Platyceras bisinuatum Hall,N.Y.Pal.III,p.318,pl.58, f.6a,b,1859;L.Held.Gr.associated with Orthis & Spirifer.Albany Co.

Platyceras bisulcatum Hall

Platyceras bisulcatum Hall,N.Y.,Pal.,III,p.327,pl.60, f.6d,e,1859;L.Held.gr.Schoharie Co.

Platyceras blatchleyi Kindle

Platyceras blatchleyi Kindle,25th.Ann.Rep.Ind.Dep.Geol Nat.Res.,p.733,pl.17,f.6,1901;Jeff. l.s. Cass Co.

Platyceras bucculentum Hall

Platyceras bucculentum.Hall,Pal.N.Y.,V,pt.2,p.10,pl. 3,f.7,26-29,1879.-Kindle,25th.Ann,Rep.Ind.Dep. Geol.Nat.Res.,p.725-726;pl.19,f.3,3a,3b,4,4a,1901/ Sells.beds & Jeff.l.s.Charlestown & Kent.-Grabau, Buf.Soc.Nat.Sci.,Bull.VI,p.273,f.197,1899;Encrinal l.s.

Platyceras? callosum Hall

Platyceras?(Platyostoma?)callosum Hall,Pal.N.Y.,III, p.478,pl.120,f.8a,b,1859.

Platyceras? callosum Ohern,Md.Geol.Sur.,L.Dev.,p.474, pl.84,f.3,4,1913;Orisk.Form.,

Platyceras calantica Hall

Platyceras calantica Hall,N.Y.,Pal.III,p.328,pl.62,

f.1-5,1859;L.Held.Gr.Schoharie & Albany Co.-Branson,Dev. of Mo.,p.120-121,pl.26,f.9 & 17,1922; Mineola ls.Montgomery Co.

Platyceras?(Plateoptoma?)callosum Hall

Platyceras?(Platepotoma?)callosum Hall,N.Y.,Pal.III, p.478,pl.130,f.8a,b,1961;Orisk.s.s.Ridgely member, Cumb.Md.

Platyceras carinatum Hall

Platyceras carinatum.Hall,Pal.N.Y.,V,pt.2,p.5,pl.2, f.12-29,1879.-Kindle,Ind.Dept.Geol.Nat.Res.,25th. Ann,Rep.p.721-722,pl.18,f.5-7,1901;Sells.beds & Jeff. l.s.Pipe Creek Falls;Charlestown.-Grabau & Shimer,N.Am.Index Foss.,I,p.683-684,f.933b, 1909.-Branson,Dev. of Mo.,p.121,pl.26,f.10,11,1922; Mineola l.s.Montgomery & Warren Cos.,-Branson & Williams,Buff.Soc.Nat.,Sci.,VI,p.272,f.195,p.156; Encrinal l.s;Demissa bed;Grand Tower ls.

Platyceras clavatum Hall

Platyceras clavatum Hall,N.Y.,PalIII,p.337,pl.65,f. 2,1859;L.Held.Gr.Schoharie Co.

Platyceras compressum Clarke & Swartz

Platyceras compressum Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.,p.683-684,pl.70,f.1-3,1913;Jenn. Form.,Chem.member.near Penn.-Md.State Line.

Platyceras compressum var Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.730-731,pl.19,f.2,2a,1901; Sells.beds.Charlestown,

Platyceras conicum Hall

Platyceras(orthonychia)conicum Hall,Pal.N.Y.,V,pt.2, p.3,pl.1,f.13-23,1879.

Platyceras conicum.Kindle,Ind.Dep.Geol.Nat.Res.,25th. Ann.Rep.,p.721,pl.18,f.2,2a,2b,1901;Sells.beds & Jeff.l.s.Pipe Cr.Falls;Cass Co.,Charlestown;Falls of the Ohio.-Branson,Dev. of Mo.,p.121,pl.26,f. 15-16,1922;Mineola l.s.

Platyceras crassum Hall

Platyceras crassum Hall,Pal.N.Y.,V,pt.2,p.18,pl.7, f.6-10,1879.

Platyceras crassum? Kindle,25th.Ann.Rep.Ind.Dep.Geol. Nat.Res.,p.730,1901;(Bull.Am.Pal.no.12,1899,pl75)

Platyceras curvirostrum Hall

Platyceras curvirostrum Hall,Pal.N.Y.,III,p.338,pl. 65,f.3a,b,1859;L.Held.Gr.Schoharie Co.

Platyceras depressum Stewart

Platyceras depressum Stewart,Dev. of Mo.,p.255-256, pl.69,f.15,16,1922;Little Saline Cr.,l.s.Ste Genevieve Co.

Platyceras dilatatum Hall

Platyceras dilatatum Hall,Pal.N.Y.,III,p.323,pl.59, f.5a-i,& 60,1859;L.Held.Gr.Albany Co.

Platyceras dumosum Conrad

Platyceras dumosum,Hall,3rd.Ann.Rep.Pal.Dep.N.Y., Sur.,p.205,1840;Pal.N.Y.,V,pt.2,p.14,pl.5,f.11-16;pl.6,f.1,1879.-Kindle,25th.Ann.Rep.Ind.Dep.Geol Nat.Res.,p.722,pl.17,f.1,1901;Sells.beds.Falls of the Ohio;Charlestown.-Stewart,Dev. of Mo.,p.256, pl.68,f.5,1922;L.Saline Cr.ls.Ste Genevieve Co.

Platyceras dumosum Hall,see Platyceras nodosum Conrad

Platyceras dumosum var.pileum Kindle

Platyceras dumosum var.pileum Kindle,25th.Ann.Rep.Ind Dep.Geol.Nat.Res.,p.723,pl.17,f.2,1901;Jeff.l.s. Falls of the Ohio.

Platyceras dumosum var.rarispinum,seePlatyceras nodosum Conrad.

Platyceras dumosum rariospinum Kindle,see Platyceras nodosum Conrad

Platyceras echinatum Hall

Platyceras echinatum.Hall,Pal.N.Y.,V,pt.2,pl.5,f.1-4, 1879.-Nettleroth,Ky.Foss.,Shells,p.164,pl.33,f.21, 1889.-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat.Res.,p. 731-732,1901;"Corniferous l.s."(Jeff.l.s.?) Falls of the Ohio.

Platyceras elongatum? var.Hall

Platyceras elongatum? var.Hall,N.Y.,Pal.III,p.335,pl. 65,f.5a,b,1859;L.Held.Gr.Schoharie Co.

Platyceras elongatum Hall

Platyceras elongatum Hall,Pal.N.Y.,III,p.335,pl.64, f.6 & 10,1859;L.Held.Gr.Schoharie Co.

Platyceras elongatum var parvum Stewart

Platyceras elongatum var parvum Stewart,Dev. of Mo.,p 256,pl.68,f.6,1922;Little Saline Creek l.s.Ste. Genevieve Co.

Platyceras erectum Hall

A croculia erecta Hall,Geol.N.Y.,pt.4,p.174,f.6 on p. 172,1843.

Platyceras erectum Hall,Des.new sp. of Foss.,p.4,1861; 15th.Rep.N.Y.State Cab.Nat.His.,p.32,1862;Illus.Dev Foss.,Gastropoda,pl.2,1876;Pal.N.Y.,V,pt.2,p.5, pl.2,f.4-11,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,p. 272,f.194,1899;Demissa beds.-Clarke,N.Y.State Mus. Bull.65,p.549,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.683,f.963a,1909.-Prosser &Kindle,Md.Geol Sur.,Mid.& Up.Dev.,p296-297,pl.37,f.1-3,1913;Rom. Form.,Ham.member.N.Hancock.

Platyceras erectum? Kindle,Ind.Dept.Geol.Nat.Res., 1901;Sells.beds.Charlestown

Platyceras cf erectum Branson,Dev. of Mo.,p.122,pl. 26,f.8;pl.28,f.3,1922.

Platyceras expansus Conrad,see Strophostylus expansus Conrad.

Platyceras(Orthonychia)fluctuosum Ulrich

Platyceras fluctuosum Ulrich,Contr.Am.Pal.,I,p.31, pl.3,f.6-6b,1886.

Platyceras (Orthonychia) fluctuosum Kindle,25th.Ann. Rep.Ind.Dep.Geol.Nat.Res.,p.732,not fig.,p.733, 1901;"Mid.Dev." (Jeff.l.s.) Falls of the Ohio.

Platyceras fornicatum Hall

Platyceras fornicatum,Hall,Pal.N.Y.,V,pt.2,p.11,pl. 4,f.1-5,7-8,18-20;pl.5,f.8,9,(?)1879;24th.Ann. Rep.N.Y.State Mus.Nat.Hist.,p.200,1870;Dev.-Falls of the Ohio.

Platyceras cf gebhardi Clarke,see Platyceras gebhardi Conrad.

Platyceras gebhardi Conrad

Platyceras gebhardi.Conrad,Ann.Rep.p.206,1840;New

Scotland.Becraft Fauna,N.J.-Hall,N.Y.,Pal.III,p. 312,pl.56,f.5a,b,6,7,& 9,pl.55,f.6a,b,1859;Orisk. s.s.-Ohern,Md.Geol.Sur.,L.Dev.,p.470-471,pl.80,f. 2-9,1913;Orisk.Form.,Ridgely member,Knobly Mt. Monster Rock,W.Va.;Hancock,Cumb.,Md;Warren Pt.Penn New Scotland member,Miller Spring,W.Va.-Stewart, Dev.of Mo.,p.256-257,pl.68,f.7-10,1922;Little Saline l.s.St.Genevieve Co.

Platyceras cf gebhardi Clark,N.Y.State Mus.Mem.,III, no.3,pl30,pl.3,f.29,1900.

Strophostylus gebhardi Weller,Pal.N.J.,III,p.318,pl. 39,f.1-3,1903;New Scotland-Becraft Fauna.

Platyceras gebhardi var.ventricosum Conrad

Platyceras ventricosum.Conrad,Ann.Rep.Pal.N.Y.,p. 206,1840.-Hall,Pal.N.Y.,III,p.311,pl.56,f.1-4, pl.57,f.4;p.475,pl.118,f.3-9,1859;Orisk.,s.s. Cumb.,Md;Regents Rep.Univ.N.Y.,p.17,f.1,2,1859.- Meek & Worthen Geol.Sur.,Ill.III,p.441,pl.2,f.4a, b,1868.-Hamilton Group,new Buffalo,Iowa.-Nicholson Rep.Pal.Province Ontario,p.115,pl.2,f.1,1a, 1874.-Nettleroth,Ky.Foss.,shells,p.168,pl.25;f. 10,1889.-Kindle,25thAnn.Rep.Ind.Dept.Geol.Nat. Res.,p.731,1901;Jeffersonville ls.Clark Co.

Platyceras gebhardi var ventricosum.Ohern,Md.Geol. Sur.L.Dev.,p.471-472,pl.81,1913;Orisk.Form.,Ridgely member.Cumberland;Hancock,Md.

Platyceras gibbosum Hall

Platyceras gibbosum,Hall,N.Y.,Pal.III,p.323,pl.59,f. 6d-g,7a,1859.-L.Held.Gr.Albany Co.,-Weller,Pal. N.J.,III,p.294-295,pl.32,f.5-7,1903;Coeymans l.s. near Hainesville,N.J.

Platyceras gracile Ohern

Platyceras gracile Ohern,Md.Geol.Sur.,L.Dev.,p.478, pl.85,f.1-13,1913;Orisk.Form.,Ridgely member.Cumb. Md.;KnoblyMt.,W.Va.,

Platyceras cf gracile Stewart,Dev. of Mo.,p.256,pl.68, f.11-13,1922;Little Saline Creek,l.s. Ste Genevieve Co.

Platyceras incile Hall

Platyceras incile Hall,N.Y.,Pal.III,p.332,pl.63,f. 10,12,13,1859;L.Held.Gr.Schoharie Co.,& Va.

Platyceras indianensis,Miller & Gurley

Platyceras indianensis.Miller & Gurley,Bull.Ill.State Mus.Nat.His.,no.12,p.48,pl.4,f.7-10,1897.-Kindle, 25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.727-728,pl. 19,f.9,9a,1901;Sells.beds & Jeff.l.s.Little Saline Cr.,Cass Co;Charlestown.

Platyceras intermedium Hall

Platyceras intermedium Hall,N.Y.,Pal.III,p.321,pl.58, f.11,1859;L.Held.Schoharie Co.

Platyceras lamellosum Hall

Platyceras lamellosum Hall,N.Y.,Pal.III,p.330,pl.63, f.1,2,3,1859;L.Held.gr.Held.Mts.,Albany Co.

Platyceras lineare Kindle

Platyceras lineare Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.p.734,pl.18,f.3,3a,1901;"Mid.Dev." (Jeff. l.s.)" Falls of the Ohio.

Platyceras magnificum Hall

Platyceras magnificum.Hall,N.Y.,Pal.III,p.476,pl.119, f.1-6,1859;Orisk.s.s.Cumb.,Md.-Ohern,Md.Geol.Sur., L.Dev.,p.472,pl.82,f.1-6,1913;Orisk.Form.,Ridgely member.Nicholas Mt.,Warren Pt.Penn.;Miller's Spring W.Va.-Stewart,Dev. of Mo.,p.257,pl.68,f.14-17,1922;Little Saline Creek l.s.Ste Genevieve Co.

Platyceras marylandicum Clarke & Swartz

Platyceras marylandicum Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.,p.683,pl.70,f.12-16,1914;Jenn.Form. Chem.member,Polish Mt.Parkhead member.Polish Mt., W.Va.

Platyceras Milleri Nettleroth

Platyceras Milleri Nettleroth,Ky.Foss.,Shells,p.165, pl.25,f.1,1889.-Kindle,25th.Ann.Rep.Ind.State Dep. Geol.Nat.Res.,p.724,not fig.,1901;Sells.beds.Charlestown.

Platyceras multisinuatum Hall

Platyceras multisinuatum Hall,N.Y.,Pal.III,p.319,pl. 58,f.8a,b,c,1859;L.Held.gr.Albany & Schoharie Co.-Ohern,Md.Geol.Sur.,L.Dev.,p.477,pl.85,1913;Held. Form.,New Scotland member.Cumb.,Md.-Stewart,Dev. of Mo.,p.257-258,pl.69,f.1,1922;Little Saline Creek. l.s.Ste Genevieve Co.

Platyceras newberryi Hall

Platyceras newberryi Hall,Pal.N.Y.,III,p.333,pl.63, f.14a-e,1859;L.Held.gr.Becraft's Mt.,Columbia Co.-Ohern,Md.Geol.Sur.,L.Dev.,p.479,pl.86,f.4,1913; Orisk.Form.,Ridgely member,Warren Pt.,W.Va.

Orthoceras cf newberryi Stewart,Dev. of Mo.,p.258,pl. 69,f.2,1922;Little Saline Creek l.s.Ste Genevieve Co.

Platyceras nodosum Conrad

Platyceras nodosum.Conrad,5th.Ann.Rep.Pal.N.Y., p.56, 1841.-Hall,Nat.His.,N.Y.Pal.III,p.473,pl.115,f.1-6,pl.116,f.1-4,1859;Oriskany s.s. Schoharie and many located in N.Y.;Nat.His.N.Y.,Pal.V,pt.2,p.17, pl.7,f.4,5,1879.-?Clarke,N.Y.State Mus.,Mem.III, no.3,p.31,1900.-Branson,Dev. of Mo.,p.122,pl.28, f.4,5,1922;Mineola l.s.Montgomery Co.-Stewart,Dev. of Mo.,p.258,pl.69,f.3-6,1922;Little Saline Creek l.s.-Branson & Williams,Dev. of Mo.,p.156,1922; Grand Tower l.s.Ste Genevieve Co.-Ohern,Md.Geol. Surl,L.Dev.,p.469-470,pl.79,f.13,14,1913;Orisk. Form.,Ridgely member.Cumb.,Md.;Warren Pt.,Penn.

Platyceras dumosum.Hall,Illus.Dev. Foss.,Gastropoda, pl.5,7,1876.

Platyceras dumosum var rarispinum.Hall,Illus.Dev. Foss.,;Gastropoda pl.5,7,1876;Pal.N.Y.,V,pt.2,p. 16,pl.5,f.5-7,10,1873.-Kindle,25th.Ann.Rep.Ind. Dep.Geol.Nat.Res.,p.728,pl.17,f.4,1901;Sells.beds (?).Charlestown,Falls of the Ohio.

Platyceras obesum Hall

Platyceras obesum Hall,Pal.N.Y.,III,p.329,pl.62,f.6, 7,1859;Lower Held.gr.Becraft's Mt.,Schoharie Co.

Platyceras patilum Hall

Platyceras patilum.Hall,Pal.N.Y.,III,p.477,pl.119,f. 3,1859;Orisk.sss. Cumb.,Md.-Ohern,Md.Geol.Sur.,L. Dev.,p.473,pl.83,f.4,1913;Orisk.Form.,Ridgely member.Cumb.,Md.

Platyceras pentalobus Hall

Platyceras pentalobus.Hall,Pal.N.Y.,III,p.391,pl.58, f.7a-c,1859;L.Held.gr.Held.Mt.Albany Co.-Tansey, Dev. of Mo.,p.207,pl.54,f.19-20,1922;Bailey l.s. Little Saline Creek,Ste Genevieve Co.

Platyceras peregrinus Stewart

Platyceras peregrinus Stewart,Dev. of Mo.,p.259,pl. 69,f.13-14,1922;Little Saline Creek l.s.Ste Genevieve Co.

Platyceras perlatum Hall

Platyceras perlatum Hall,Pal.N.Y.,III,p.328,pl.61, f.4a,b,1859;L.Held.gr.Schoharie Co.

Platyceras perplicatum Hall

Platyceras perplicatum Hall,N.Y.,Pal.III,p.325,pl.59, f.8,1859;L.Held.gr.Schoharie Co.

Platyceras pileiforme Hall

Platyceras pileiforme Hall,Pal.N.Y.,III,p.327,pl.61, f.3a,b,1859;L.Held.gr.Schoharie Co.

Platyceras planovolis Stewart

Platycerasplanovolis Stewart,Dev. of Mo.,p.259,pl.70, f.5,1922;Little Saline Creek l.s.,Ste Genevieve Co

Platyceras platystomum Hall

Platyceras platystomumHall,Pal.N.Y.,III,p.326,pl.60, f.1a,b,2;pl.61,f.1a-c,1859;L.Held.gr.Albany & Schoharie Co.

Platycerasplatystomum? Ohern,Md.Geol.Sur.,L.Dev.,p. 477-478,pl.85,f.7,1913;Orisk.Form.,Ridgely member. Knobly Mt.,W.Va.

Platyceras platystomum var.alveatum Hall

Platycerasplatystomum var.alveatum Hall,Pal.N.Y.,III, p.326,pl.60,f.3a-c,1859;L.Held,gr.Schoharie Co.

Platyceras plicatile Hall

Platyceras plicatile Hall,Pal.N.Y.,III,p.325,pl.59,f. 10,a,b,1859;L.Held.gr.Albany Co.

Platyceras plicatum Conrad

Platyceras plicatum.Conrad,Ann.Rep.Pal.N.Y.,p.207, 1840.-Hall,Pal.N.Y.,III,p.334,pl.64,f.1-5,1859; L.Held.gr.Albany & Schoharie Cos.

Platyceraspyramidatum Hall

Platyceras pyramidatum Hall,Pal.N.Y.,III,p.336,pl. 64,f.7-9,1859;L.Held,group.Schoharie Co.

Platyceras reflexum Hall

Platyceras reflexum.Hall,Pal.N.Y.,III,p.477,pl.130, f.1-7,1859;Oriskany s.s.Cumb.Md.-Ohern,Md.Geol.Sur. L.Dev.,p.473,pl.83,f.5,6,pl.84,f.1,2,1913;Helderberg Form.,New Scotlandmem. Corriganville.Oriskany Form.,Ridgely mem.Cumb.,Nicholas Mtn.,Md.-Stewart, Dev.,pf Mo.,p.259-260,pl.69kf.7-9,1922;Little Saline Cr. ls.Ste Genevieve Co.

Platyceras retrorsum Hall

Platyceras retrorsum.Hall,N.Y.,Pal.III,p.320,pl.58, f.10a,b,& 6c;pl.59,f.9a,b,1859;L.Held.Gr.Held Mt., Albany & Schoharie Co.-Stewart,Dev. of Mo.,p.260, pl.69,f.10,1932;Little Saline Creek l.s.Ste Genevieve Co.

Platyceras retrorsum var abnormis Hall

Platyceras retrorsum var abnormis Hall,N.Y.,Pal.III, p.321,pl.60,f.4a,b,c,1859;L.Held.gr.Schoharie Co.

Platyceras rictum Hall

Platyceras rictum.Hall,Pal.N.Y.,V,pt.2,p.13,pl.4,f. 6,12-17,1879.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.729,not fig.,1901; "Corniferous l.s." (Jeff. l.s.) Clarke Co.

Platyceras rictum var spinosa Kindle

Platyceras rictum var spinosa Kindle,25th.Ann.Rep. Ind.Dept.Geol.Nat.Res.,p.729,pl.17,f.5,5,a-c,1901; Sells.beds.Charlestown.

Platyceras robustum Hall

Platyceras robustum Hall,Pal.N.Y.,III,p.313,pl.55,f. 10a & 11a,b,1859;L.Held.Gr.Albany & Schoharie Co.

Platyceras sinuatum Hall

Platyceras sinuatum.Hall,N.Y.,Pal.III,p.314,pl.55,f. 5 & 7;pl.57,f.2,1859;L.Held. gr.Held.Mt.,Schoharie Becraft's Mt.,-?Ohern,Md.Geol.Sur.,L.Dev.,p.474-475,pl.84,f.5,6,1913;Orisk.Form.,Ridgelymember.E. side Nicholas Mt.Ind.

Platyceras spirale Hall

Platyceras spirale.Hall,N.Y.,Pal.III,p.331,pl.63,f.

4-9,1859;L.Held.Gr.Albany & Schoharie Co.-Meek & Worthen,Geol.Sur.Ill,III,p.389,pl.7,f.12a,b,c, 1868;Ill.Geol.Sur.,III,p.406,pl.8,f.10,1868;Bald Rock,Jackson Co.,Ill; Chirty light Gray l.s.,Age of Orisk.s.s. of N.Y.series.cf.Platyceras tortuosum Hall,(part) Pal.N.Y.,III,p.472,pl.113.f.1-5, 1859;Oriskany s.s.Albany & Schoharie Cos.

Platyceras subconicum Ohern

Platyceras subconicum Ohern,Md.Geol.Sur.,L.Dev.,p. 479,pl.86,f.1-3,1913;Orisk.Form.,Ridgely member. Cumb.,Md;Knobley Mt.,W.Va.,-Stewart,Dev. of Mo., p.360,pl.63,f.11,1922;Little Saline Creek l.s.Ste Genevieve Co.

Platyceras subfalcatum Ohern

Platyceras subfalcatum Ohern,Md.Geol.Sur.,L.Dev.,p. 472-473,pl.82,f.7,8;pl.83,f.1-3,1913;Orisk.Form., Ridgelymember.Hancock,Md.

Platyceras subnodosum Hall

Platyceras subnodosum Hall,Pal.N.Y.,III,p.474,pl.115, f.7,1859;Orisk.s.s.Schoharie Co?

Platyceras subcirculare Kindle

Platyceras subcirculare Kindle,25th.Ann.Rep.Ind.Dep. Geol.Nat.Res.,p.734-735,pl.19,f.5,1901; "Mid.Dev." (Jeff. l.s.) Falls of theOhio.

Platyceras sulcoplicatum Hall

Platyceras sulcoplicatum Hall,Pal.N.Y.,III,p.324,pl. 59,f.7b,1859;L.Held.Gr.Schoharie Co.

Platyceras symmetricum Hall

Platyceras symmetricum.Hall,N.Y.Pal,V,pt.2,p.9,pl.3, f.17-25,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,p.273,f. 198,1899;Mid.Pleurodictyum bed.Avery's Cr.-Prosser &Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.297-298,pl. 37,f.6,1913;Rom.Form.,Ham.member,E.bank Evitts Creek below Wolfe Mill.-Kindle,25th.Ann.Rep.Ind. Dept.Nat.Res.,p.726-727,not fig.,1901;Sells.beds. Charlestown.

Platyceras tenuiliratum Hall

Platyceras tenuiliratum.Hall,N.Y.,Pal.III,p.317,pl.58 f.1-5;pl.59,f.6a,b,1859;L.Held.Gr.Associated with numerous sp. of Brachiopoda.Albany & Schoharie Co.- Maynard,Md.Geol.Sur.,L.Dev.,p.476,pl.85,f.1,2,1913;

Held.Form.,Keyser ? member.Cash Valley,Md.

Platyceras thetis Hall

Platyceras thetis.Hall,Pal.N.Y.,V,pt.2,p.8,pl.3,f. 11-16,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,p.272,f. 196,1899;Demissa bed;Mid.Pleurodictyum bed.Avery's Cr.-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat.Res.p. 724,pl.18,f.8,8a,9;pl.19,f.1,1a,1901;Sells.beds. Charlestown.

Platyceras tortuosum Clarke,see Orthonychia tortuosa (Hall)

Platyceras tortuosum Hall,see Orthonychia tortuosa (Hall) Platyceras spinale Hall.

Platyceras tortuosum Weller,see Orthonchia tortuosa (Hall)

Platyceras trilobatum Hall

Platyceras trilobatum.Hall,N.Y.Pal.III,p.316,pl.57,f. 5a,b,c,1859;L.Held.Gr.Becraft's Mt. & Schoharie-Ohern,Md.Geol.Sur.,L.Dev.,p.475,pl.84,f.7,8,1913; Held.Form.,new Scotland member,Corriganville,Md.-Stewart,Dev. of Mo.,p.260-261,pl.69,f.12,1922; Little Saline Creek.l.s.Ste Genevieve Co.

Platyceras tubaeforme Hall

Platyceras tubaeforme Hall,N.Y.,Pal.,III,p.332,pl. 63,f.11; L.Held.Gr.Becraft's Mt.,Columbia Co.

Platyceras undulostriatum Hall

Platyceras undulostriatum,Hall.N.Y.,Pal,III,p.336,pl 65,f.1a,b,1859;L.Held.Gr.Becraft's Mt.,Columbia Co.

Platyceras unguiforme Hall

Platyceras unguiforme Hall,N.Y.,Pal.III,p.322,pl.59, f.1-4,1859;L.Held.gr.Albany & Schoharie Co.

Platyceras unisulcatum Hall

Platyceras unisulcatum Hall,N.Y.,Pal.,III,p.316;L. Held.Gr.Becraft's Mt.

Platyceras ventricosum Hall,N.Y.,Pal.,III,p.311,pl.56, f.1-4,& 8;pl.57,f.4,1859;L.Held.Gr.Held.Mts.Schoharie,Catskill,Becraft Mt.

Platyceras ventricosum.Conrad,Hall,Kindle,Meek and Wor-

then,Nettleroth,Nicholson,see Platyceras gebhardi var ventricosum Conrad.

Genus PLATYOSTOMA Conrad
(1842.Journ.Acad.Nat.Scil,VIII,p.275)

Platyostoma sp.Kindle

Platyostoma sp.Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat. Res.,p.695,pl.20,f.8,1901;Sells.beds.Charlestown.

Platyostoma antiquis Webster,see Diaphorostoma antiquum (Webster)

Platyostoma arenosa Conrad

Platyostoma arenosa.Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.276,pl.17,f.6,1842.-Hall,Pal.N.Y.,III,p. 302,pl.57,f.3a,b,1859;L.Held.gr.near Catskill.

Platyostoma desmatum Weller, see Diaphorostoma desmatum Clarke

Platyostoma euomphaloides.Hall,Pal.N.Y.,V,pt.2,p.25,pl. 10,f.27-29,1879.-Kindle,U.S.G.S.,Bull.508,p.97, 1912;Md.Geol.Sur.,Mid. & Up.Dev.,p.299,pl.37,f. 13-15,1913;Rom.Form.,Onon.member S.E.Cumb.

Platyostoma insolita Webster,see Diaphorostoma insolitum (Webster)

Platyostoma lineata Conrad

Platyostoma lineata.Hall,Pal.N.Y.,V,pt.2,p.21,pl.10, 1879;-Grabau,Buf.Soc.Nat.Sci.,VI,p.274,f.200,1899. Encrinal l.s.;Stictopora & Demissa beds.Avery's Cr

Platyostoma lineata var sinuosa Hall,Found Hamburg, on shore L.Erie.

Platyostoma lineata.Conrad,Hall,Kindle,See Diaphorostoma lineatum(Conrad)

Platyostoma lineata,var.emarginata Grabau

Platyostoma lineata,var emarginata.Hall,cf Pal.N.Y., V,pt.2,pl.10,f.7,1879.-Grabau,Buf.Soc.Nat.Sci.,VI, p.274,f.200a,1899;associated with Stictopora & Spirobis, in the Demissa(?) bed.

Platyostoma lineatum var callosum Hall

Platyostoma lineatum var callosum.Hall,Pal.N.Y.,V,pt. 2,p.23,pl.10,f.22,23,1879.-Kindle,25th.Ann.Rep.Ind.

Dep.Geol.Nat.Res.,p.696,pl.20,f.4,4a,1901;Sells.beds. Charlestown.

Platyostoma(?) modesta Webster,see Diaphorostoma modestum (Webster)

Platyostoma nearpassi Weller

Platyostoma nearpassi Weller,Pal.N.J.,III,p.334,pl. 42,f.1-4,1903;L.Orisk.N.J.

Platyostoma niagarense Hall

Platyostoma niagarense.Hall,Pal.N.Y.,II,p.287,pl. 60,f.1a-v,1852.-Maynard,Md.Geol.Sur.,L.Dev.,p. 483-484,pl.87,f.3,4,1913;Held.Form.,Keyser member Cumb.,Md.

Platyostoma pleurotoma Hall

Platyostoma pleurotoma.Hall,Pal.N.Y,V,pt.2,p.30,pl. 9,f.31-35,1879.-Kindle,25th.Ann.Rept.Ind.Dep. Geol.Nat.Sci.,p.694-695,pl.20,f.6,1901;Sells.beds Charlestown.

Platyostoma? subangulata Hall

Platyostoma ? subangulata Hall,N.Y.,Pal.,III,p.301, pl.55,f.3a,b,1859;L.Held.gr.Albany Co.

Platyostoma turbinata Hall

Platyostoma turbinata.Hall,Pal.N.Y.,V,pt.2,p.27,pl. 9,f.12-24,-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat. Res.,p.696-697,1901;"Carniferous l.s." Falls of the Ohio.

Platyostoma turbinata var cochleata Hall

Platyostoma turbinata var cochleata.Hall,Pal.N.Y., V,pt.2,p.28,pl.9,f.1-11,1879.-Kindle,25th.Ann.Rep Ind.Dep.Geol.Nat.Res.,p.697,1901;(Jeffersonville l.s.?) Louisville,Ky.

Platyostoma ventricoas.Conrad,Hall,Nicholson,Weller,see Diaphorostoma ventricosum (Conrad)

Platyschisma(?) McCoyi Webster,see Straparollus circinatus Fenton & Fenton

Genus PLETHOMYTILUS Hall
(1884.Pal.N.Y.,V,pt.1,p.14)

Plethomytilus oviformis(Conrad)

Plethomytilus oviformis,Hall,N.Y.,Pal.,V,pt.1,p.255, pl.31,87,1884.-Grabau,Buf. Soc.Nat.Sci.,VI,p.248, f.163;Encrinal l.s.

Plethomytilus oviformis Grabau & Shimer,see Mytilarea (Plethomytilus)oviformis (Conrad)

Plethospira socialis Girty

Plethospira socialis ? Kindle,25th.Ann.Rep.Ind.Geol. Sur.,p.575,pl.1,f.9,1900;new Albany shale,Delphi

Pleuronotos deceiwi (Billings) Hall

Euomphalus deceiwi.Billings,Can.Jour.p.358,July 1861 Meek,Geol.Sur.Ohio;Pal.,I,p.220,pl.19,f.3a-b;pl. 20,f.1,1873;Illus.Dev. Foss.,Gastropoda,pl.15, 1876;Pal.N.Y.,V,pt.2,p.55,f.1-8,1879.

Pleuronotus Conradi Hall,14th.Ann.Rep.N.Y.,State Cab Nat.His.,p.107,1861.

Pleuronotus decewi Hall,ibidem.,p.137-138,1879.

Pleuronotus decewi (Billings) Girty,20th.Ann.Rep. U.S.G.S.,pt.2,p.61-62,1900;Ouray l.s.Engineer Mt. Colo.-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat.Res.,p 707-708,not fig.,1901;Falls of the Ohio.

Pleurorhynchus crassifrons Conrad,see Conocardium crassifrons (Conrad)

Genus PLEUROTOMARIA De France
(1842.Tableand,Corps Organises Foss.,p. 114,Dis.Soil,Nat.I,41,p.381)

Pleurotomaria sp.Branson

Pleurotomaria sp.Branson,Dev. of Mo.,p.117,pl.28,f. 2,1922;Mineola of Rulls Co.

Pleurotomaria ? sp.Clarke & Swartz

Pleurotomaria ? sp.Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.662,not fig.,1913;Jenn.Form.,Chem. member.Ellerslie,Penn.

Pleurotomaria sp.Kindle

Pleurotomaria sp.Kindle,25th.Ann.Rep.Ind.Geol.Sur.,p 575-576,pl.1,f.11,1900;new Albany shale.Delphi.

Pleurotomaria arata Hall, see Spiroraphe arota (Hall)

Pleurotomaria arbella Nettleroth

Pleurotomaria arbella.Nettleroth,Ky.Foss. shells, p. 171,pl.26,f.12,1889.-Kindle,25th.Ann.Rep.Ind.Dep. Geol.Nat.Res.,p.712,not fig.,1901;"Carniferous l. s". Clarke Co.

Pleurotomaria capillaria Conrad

Pleurotomaria capillaria,Conrad,Jour.Acad.Nat.Sci., Phila.,VIII,p.271,pl.16,f.11,1842.-Hall,Des. of new sp. of Foss.,p.17,1861; 15th.Rep.N.Y.,State Cab.Nat.Hist.,p.45,pl.5,f.2,1862;Illus.Dev. Foss. Gastropoda,p.20,1876;N.Y.,Pal.V,pt.2,p.77,pl.20. f.18-20,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,p.279, f.209,1899;Strophelosia bed, on the L. shore.- Clarke,N.Y.StateMus.,Bull.65,p.555,1903.-Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.282-283,pl.35,f.6-8,1913;Rom.Form.,Ham.member,E bank Evitts Cr.below Wolfe Mill;n.Hancock.B.& O.R.R. cut.Hancock Sta.,W.Va.-Clarke & Swartz,Md.Geol. Sur.,Mid.& Up.Dev.,p.861-862,pl.67,f.1-3,1913; Jenn.Form.,Parkhead member.Rocky Run? Town Cr., W.Pawpaw,W.Va.;above mouth Bideling Hill Cr.

Gyroma capillaria.Perner,Syst.sil.Boheme,4th.,II, p.25,1907.-Grabau & Shimer,N.Am.Index Foss.,I, p.647,f.882,1909.

Pleurotomaria isaacsi Hall & Whitfield

Pleurotomaria isaacsi.Hall & Whitfield,N.Y.State Cab Nat.Hist.,23rd.Ann.Rep.p.238,pl.12,f.6,7,-Branson Dev. of Mo.,p.117,pl.28,f.1,10,11,1922;Snyder Creek shale.

Pleurotomaria (Euryzone) itys Hall

Turbo lineatus Hall,Geol.N.Y,pt.4,p.198,f.1,1843.

Pleurotomaria lineata.Hall,Des. of new sp. of Foss., p.16,1861;15th.Rep.N.Y.State Cab.Nat.His.,p.44, pl.5,f.3,1862.

Pleurotomaria itys.Hall,Illus.of Dev. Foss.,Gastropoda,pl.20,1876;Pal.N.Y.,V,pt.2,p.76,pl.20,f.8-17,1879.-Keyes,Johns Hopkins Univ.Circ.,XI,p.29, 1891.-Grabau,Buf.Soc.Nat.Sci.,VI,p.278,f.208, 1899.Pleurodictyum beds.-Clarke,N.Y.State Mus., Bull.65,p.556,1903.

Euryzone itys Grabau & Shimer,N.Am.Index Foss.,I,p. 645,f.879e,1909.

Pleurotomaria (Euryzone) itys ? Prosser & Kindle, Md.Geol.Sur.,Mid. & Up.Dev.,p.284-285,pl.35,f. 11-12,1913;Rom.Form.,Ham.member.Western Md.;near Cumb. S.Patterson Depot,W.Va.

Pleurotomaria itys var tenuispira Hall

Pleurotomaria itys var tenuispira Grabau,Buf.Soc.Nat Sci.,VI,p.279,not fig.,1899;Ham.gr.Hamburg Shore of L.Erie.

Pleurotomaria labrosa Hall.

Pleurotomaria labrosa.Hall,N.Y.,Pal.,III,p.339,pl. 66,f.1-5;pl.57,f.6a,b,1859;L.Held. gr.Carlisle & Schoharie Co.;Held.Mt.Albany Co.-Ohern,Md.Geol. Sur.,L.Dev.,p.465,pl.80,f.1,1913;Held.Form.,new Scotland member.Cumb.Md.

Pleurotomaria lineata Hall,see Pleurotomaria (Euryzone) itys Hall.

Pleurotomaria lucina Hall,see Euryzone Lucina (Hall)

Pleurotomaria lucina var perfasciata Hall

Pleurotomaria lucina var perfasciata.Hall,Pal.N.Y., V,pt.2,p.83,pl.21,f.19,20,1879.-Grabau,Buf.Soc. Nat.Sci.,VI,p.278,not fig.,1899.-Kindle,25th.Ann Rep.Ind.Dep.Geol.Nat.Res.p.711,not fig.,1901; "Carniferous l.s." Falls of the Ohio.

Pleurotomaria planidorsalis Hall

Pleurotomaria planidorsalis.Hall,N.Y.Pal.,V,pt.2,p. 82,pl.21,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,p.279, f.210,1899.Calcareous shales of Ham.Gr.,at Hamburg, on shore L.Erie.

Pleurotomaria procteri Nettleroth

Pleurotomaria procteri.Nettleroth,Ky.Foss.,shells, p.173,pl.21,f.9,10,13,1389.-Kindle,25th.Annn Rep.Ind.Dep.Geol.Nat.Res.,p.712-713,not fig.,1901; "Carniferous l.s." Clarke Co.

Pleurotomaria providencis Broadhead

Pleurotomaria providencis.Broadhead,Am.Jour.Sci.,4th ser.II,p.237-239,f.1-7,1896.-Branson,Geol. of Mo. p.100-101,pl.3,f.12,1918;Dev. of Mo.,p.118,pl. 26,f.19,20,1922;Cooper ls.Marion Co.

Pleurotomaria (Trepospira) rotalia Hall

Pleurotomaria rotalia Hall,Des. of new sp. Foss.,p. 18,1861;15th.Rep.N.Y.,State Cab.Nat.His.,p.46, pl.5,f.11,1862;Pal.N.Y.,V,pt.2,p.71,pl.19,f.20-25,1879

Trepospira rotalia.Ulrich & Schofield,Geol.Minn.III, pt.2,p.957,1897.-Grabau & Shimer,N.Am.Index Foss., I,p.648,1909.

Pleurotomaria (Trepospira)rotalia ?Prosser & Kindle, Md.Geol.Sur.,Mid. & Up.Dev.,p.283-284,pl.35,f.9, 10,1913;Rom.Form.,Ham.member.McCoy'd Ferry,W.Tonoloway;Ernstville,Md.

Pleurotomaria rotunda Hall, see Euryzne lucina(Hall)

Pleurotomaria rugulata Hall

Pleurotomaria rugulata.Hall,Pal.N.Y.,V,pt.2,p.75,pl. 20,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,p.280,f.210a, 1899;Ham.gr.Eighteen Mile Creek.

Pleurotomaria (Bembexia) sulcomarginata Conrad

Pleurotomaria sulcomarginata.Conrad,Jourl Acad.Nat. Sci.,Phila.,VIII,p.272,pl.16,f.13,1842.-Hall,Rep. N.Y.State Cab.Nat.His.,p.46,pl.5,f.9,10,1862;Pal. N.Y.,V,pt.2,p.69,pl.19,f.8-17,1879.-Kindle,25th. Ann.Rep.Ind.Dep.Geol.Nat.Res.,p.710,pl.20,f.9,10, 1901;Sells.beds & Jeff.l.s.Lexington;Charlestown; Falls of the Ohio.

Bembexia sulcomarginata.Ulrich & Schofield,Geol.Minn III,pt.2,p.955,1897.-Grabau & Shimer,N.Am.Index Foss.,I,p.647,f.883,1909.

Pleurotomaria (Bembexia)sulcomarginata Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.280-281,pl. 35,f.1-5,1913;Rom.Form.,Ham.member,E.side Warrior Mt.E.Rush;N.Hancock.Between Romney & Hanging Rock W.Va.

Pleurotomaria(?) verticillata Webster

Pleurotomaria (?) verticullata.Webster,Iowa Naturalist,II,p.2,1906.-Fenton & Fenton,Cont.Mus.Geol. Univ.Mich.,I,p.177,pl.37,f.11-12,1924;Spir.zone Hack.grove.Hack.state.

Polyhemopsis lovisvillae Hall & Whitfield

Polyhemopsis lovisvillae .Hall & Whitfield,24th.Rep. N.Y.State Mus.Nat.Hist.,p.193,1870.-Nettleroth, Ky.Foss.shells,p.180,pl.20,f.16-19,1889.-Kindle,

25th.Ann.Repl Ind.Dept.Geol.Nat.Res.,p.708,not fig. 1901;Sells.bed & Jeff.l.s.Burnsville;Falls of the Ohio.

Porterioceras hyatti Grabau & Shimer,see Gomphoceras hyatti Whitfield.

Posidonia(?) arcuata Conrad,see Grammysia arcuata(Conrad)

Posidonia lirata Conrad,see Paracyclas lirata (Conrad)

Probeloceras lutheri Clarke,(part) see Goniatites (Probeloceras)lutheri,Clarke.

Probeloceras lutheri Clarke

Probeloceras lutheri.Clarke,16th.Rep.N.Y.State Geol. p.90,pl.7,f.1-10,1898.-? Clarke & Swartz,Md.Geol. Sur.,Mid. & Up.Dev.,p.695-696,pl.72,f.4,5,1913; Jenn.Form.,Gen.member.near Cumb.,& near Wolfe Mill;W.Corriganville;Woodmont member,Naples Fauna. W.Burlington,W.Va.

Prothyris lanceolata Hall

Prothyris lanceolata.Hall,Pal.N.Y.,V,pt.1,pl. & explan. pl.76,f.2-8,1883.Pal.N.Y.,V,pt. Lamellibr. II,p.460,pl.76,f.2-8,1885.-Clarke,N.Y.State Mus., Bull.65,p.492,1903.-Grabau & Shiner,N.Am.Index Foss.,I,p.377,f.477e,1909.-Prosser & Kindle,Md. Geol.Sur.,Mid.& Up.Dev.,p.215-216,pl.21,f.8-10, 1913;Rom.Form.,Ham.member,McCoy's Ferry;Great Cacapon;S.Cumb.

Genus PTERINEA Goldfuss
(1826.Petrefact.Germ.)
(1832.Naturh. Atl.,tab.312)

Pterinea ? sp.Fenton & Fenton

Pterinea ? sp.Fenton & Fenton,Cont.Mus.Geol.Univ. Mich.,I,p.176,pl.33,f.7,1924;Spirifer zone.Rockford.Hackberry stage.

Pterinea sp.Kindle

Pterinea sp.Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.251-252,pl.29,f.5,1913;Rom.Form.,Onon.member.near Cumb.

Pterinea bisulcata Conrad,see Grammysia bisulcata(Conrad)

Pterinea chemungensis (Conrad)

Pterinea chemungensis.Hall,Pal.N.Y.,V,pt.1,p.98,pl. 16,f.3,7,10,pl.84,f.21,1884.-Grabau & Shimer,N. Am.Index Foss.,I,p.421,f.552,1909.-Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.629,pl.61,f.22, 1913;Jenn.Form.,Chem.member.Oakland-Altomont Road;Ellerslie,Pa.Parkhead member.Allegany Grove. Woodmont member,Ithaca Fauna.Little Orleans.

Pterinea concentrica Conrad,see Modiomorpha concentrica (Conrad)

Pterinea flabella(Conrad) Hall

Pterinea flabella (Conrad) Hall,N.Y.,Pal.,V,pt.1,p. 93,pl.14,f.1-21;pl.15,f.1,4-6,8-10,pl.83,f.11-12,1884.-Grabau,Buf.Soc.Nat.Sci.,VI,p.244,f.159, 1899;Stictopora & Demissa beds.shale below Encrinal l.s.Avery's Cr.,"Hamburg & elsewhere on L.Erie Shore".-Weller,Pal.N.J.,III,p.378,pl.52,f.12,1903; Newfoundland Grit.N.J.-Kindle,25th.Ann.Rep.Ind.Dep. Geol.Nat.Res.,p.668,not fig.,1901;Sells.beds.Lancaster;Falls of the Ohio.

Pterinea flabella.Hall,Keyes,Kindle,Weller,see Pterinea flabellum (Conrad)

Pterinea flabellum (Conrad)

Avicula flabella.Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.238,pl.12,f.8,1842.-Vanuxem,Geol.N.Y.,pt. 3,p.152,f.3,1843.-Rogers,Geol.Penna.,II,p.826, f.659,1858.-Kindle,Ind.Dep.Geol.Nat.Res.,25th. Ann.Rep.p.668,1901;-Weller,Geol.Sur.N.J.,III,p. 378,pl.52,f.12,1903.

Pterinea flabella.Hall,Pal.N.Y.,V,pt.1,Lamellibr.,I, p.93-96,pl.14,f.1-21;pl.15,f.1,4-6,8-10;pl.83,f. 11,12,1858.-Keyes,Johns Hopkins Univ.Circ.,XI, p.29,1891.

Pterinea (Cornellites) flabellum Grabau,& Shimer,N. Am.Index Foss.,I,p.421,f.551,1909.

Cornellites flabella H.S.Williams,Proc.U.S.Nat.Mus., XXXIV,p.90,1908.

Pterinea flabellum.Clarke,N.Y.,State Mus.,Bull.65,p. 494,1903.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up. Dev.,p.250-251,pl.29,f.1-4,1913;Rom.Form.,Ham. member.Evitts Creek E. of Rush.Between Romney and Hanging Rock,W.Va.-Branson & Williams,Dev. of Mo., p.149-150,pl.36,f.2,1922;s.s.member St.Laurent.

Little Saline Creek.

Pterinea (Cornellites)flabellum Grabau & Shimer,see Pterinea flabellum (Conrad)

Pterinea grandis Hall

Pterinea grandis Hall,Pal.N.Y.,V,pt.1,p.91,pl.83, f.14,1884.-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat. Res.,p.668-669,not fig.,1901."Up.Held.l.s." Scott Co.

Pterinea halli Clarke

Avicula securiformis Hall,Pal.N.Y.,III,p.290,pl.53, f.11-14,1859;L.Held.gr.Held.Mt.,Hudson,Schoharie

Pterinea halli.Clarke,Bull.N.Y.,State Mus.,V,p.495, 1903.-Ohern,Md.Geol.Sur.,L.Dev.,p.450-451,pl.78, f.11,12,1913;Orisk.Form.,Ridgely member.Cum.b,Md.

Pterinea husseyi Fenton & Fenton

Aviculopecten sp.C.L.Fenton,Am.Jour.Sci.,4th.ser., 48,p,373,1919.

Pterinea husseyi Fenton & Fenton,Contr.Mus.Univ., Mich.,I,p.175,pl.33,f.6,1924;Spirifer zone.Hackberry stage.

Pterinea nodocosta Clarke & Swartz

Pterinea nodocosta Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.628,pl.61,f.19-21,1913;Jenn.Form., Chem.member.Oakland-Altamont Road.;N.E.Mt.Lake Park;Deer Park;S.Oakland.

Pterinea pygmaea Conrad,see Modiella pygmaea(Conrad)

Pterinea? subpapracea Meek & Worthen

Pterinea? subpapracea M.& W.,Proceed.Chicago Acad. Sci.,I,p.21,1866;Ill.Geol.Sur.,III,p.437,pl.11, f.5,1868;Falls of the Ohio.Ham.gr.Dev.

Genus PTERINOPECTEN Hall
(1884.Pal.N.Y.,V,pt.1,p.12)

Pterinopecten conspectus Hall

Pterinopecten conspectus Hall.N.Y.,V,pt.1,p.66,pl.17, 1884.-Grabau,Buf.Soc.Nat.Sci.,VI,p.243,f.156,1899; L.Moscow shale;Dem.beds & below Encrinal l.s. Avery's Ravine.

Pterinopecten hermes Hall

Pterinopecten hermes.Hall,N.Y.,Pal.,V,pt.1,p.64,pl. 17,1884.-Grabau,Buf.Soc.Nat.Sci.,VI,p.243,f.157, 1899;below base Trilobite beds, in Avery's Creek.

Pterinopecten nodosus.Hall

Pterinopecten nodosus.Hall,Pal.N.Y.,V,pt.1,pl.82,f. 13,1884.-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat. Res.,p.667,not figl,1901."Corniferous l.s."Falls of the Ohio.

Pterinopecten reflexus Hall

Pterinopecten reflexus.Hall,Pal.N.Y.,V,pt.1,p.58,pl. 82,f.8,1884.-Kindle,25th.AnnuRep.Ind.Dep.Geol.Nat. Res.,p.666,pl.12,f.8,1901;Jeff.l.s.Bunker Hill, Pipe Creek Falls;Falls of the Ohio.

Pterinopecten undosus Hall

Pterinopecten undosus.Hall,Pal.N.Y.,V,p.72,pl.2,82, 1884.-Grabau,Buf.Soc.Nat.Sci.,VI,p.244,f.158, 1899;Found(?) in Dem.bed(rare).-Kindle,25th.Ann. Rep.Ind.Dep.Geol.Nat.Res.,p.666,pl.12,f.9,1901; Jeff.l.s.Bunker Hill.

Genus PTEROCHAENIA Clarke
(1913.Md.Geol.Sur.,Mid.& Up.Dev.,p.631-632)

Pterochaenia fragilis(Hall)

Avicula fragilis Hall,Geol.N.Y.,Rep.4th.Dis.,p. 222,f.94,(1,2),1843.

Lunulicardium fragile.Hall,Prelim.not Lamellibr.,pt. 2,p.97,1870.Pal.N.Y.,V,pt.1,p.434,pl.71,f.1-14, 1885.-Clarke,U.S.G.S.,Bull.XVI,p.62,1885.-Williams U.S.G.S.,Bull.IV,p.38,pl.3,f.7,1887.

Petrochaenia fragilis.Clarke,N.Y.,State Mus.,Mem.VI, p.249,pl.5,f.1-10,1904;-Clarke & Swartz,Md.Geol. Sur.,Mid.& Up.Dev.,p.632-633,pl.62,f.5-7,1913;Jenn Form.,Genesse member.near Cumb.,Corriganville; near Burlington,W.Va.;Woodmont member,Naples Fauna Polish Mt.W.Tonoloway Ridge.

Pteronitella sp.Tansey

Pteronitella sp.Tansey,Dev. of Mo.,p.205,pl.54,f.5, 1932;Bailey ls. L.Saline Creek,Ste.Genevieve Co.

Ptomatis patulus Grabau & Shimer,see Bellerophon(Patellostium)patulus Hall.

Genus PTYCHODESMA Hall

Ptychodesma sp. Clarke & Swartz

Ptychodesma sp. Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p. 644, not fig., 1913; Jenn. Form., Parkhead member, Cumb., Md.

Ptychodesma knappianum Hall & Whitfield

Ptychodesma knappianum. Hall & Whitfield, 24th. Rep. N.Y. State Mus. Nat. His., p. 192, 1872.-Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res., p. 671-672, pl. 15, f. 2, 2a-c, 1901; Sells. beds. Charlestown; Falls of the Ohio.

Ptychopteria sp. Clarke & Swartz

Ptychopteria sp. Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p. 644, not figl, 1913; Jenn. Form., Woodmont member, Ithaca Fauna. Woodmont.

Pycnomphalus Kindlei Fenton & Fenton

Pycnomphalus Kindlei Fenton & Fenton, Contr. Mus., Univ. Mich., I, p. 181, pl. 38, f. 16, 1924; Spirifer zone. Owen substage. Hackberry stage. Rockford.

Rhombopteria clathratus Weller

Phombopteria clathratus Weller, Pal. N.J., III, p. 291, pl. 31, f. 16-18, 1903; Coeymans l.s. near Hainsville, N.J.

Rhombopteria clathratus var. Weller

Rhombopteria clathratus var. Weller, Pal. N.J., III, p. 292, pl. 31, f. 15, 1903; Coeymans l.s. near Peters Valley, N.J.

Sandbergeroceras chemungensis (Vanuxem)

Goniatites chemungensis. Vanuxem. Geol. Sur., N.Y., Rep. 3d. Dis., p. 182, f. 1, 1842.-Hall, Illus. Dev., Foss., Cephalopoda, pl. 69, f. 9, 1876; Pal. N.Y., V, pt. 2, p. 467, pl. 69, f. 9, pl. 74, f. 5, 1879.

Sandbergeroceras chemungensis. Clarke, Bull. N.Y. State Mus., no. 65, p. 649, 1903.-Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p. 697-699, pl. 72, f. 7, 1913; Jenn. Form Parkhead member. Polish Mt., S.E. Pratt.

Not sanguinolites amygdalinus Winchell, see Glossites lingualis Hall

Sanguinolites glaucus Hall, see Goniophora glauca Hall

Sanguinolites hamiltonensis Hall, see Goniophora hamiltonensis Hall.

Sanguinolites sanduskyensis Meek

Sanguinolites sanduskyensis Meek, Pal. Ohio, I, p.209, pl.18, f.3, 1873.

Sanguinolites? sanduskyensis Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res., p.683, pl.16, f.6, 6a, 1901; Jeff. l. s Burnsville & Newbern, Bartholomew Co.

Genus SCHIZODUS King

(1850. Monogr. of the Permian Foss. of Eng. p.185)

Schizodus appressus (Conrad)

Schizodus appressus. Hall, N.Y., Pal. V, pt.1, p.449, pl. 75, 1884.-Grabau, Buf. Soc. Nat., Sci., VI, p.256, f.172a, 1899; Ham. gr. Eighteen Mile Creek.

Schizodus chemungensis (Conrad)

Nuculites chemungensis Conrad, Jour. Acad. Nat. Sci., Phila., VIII, p.247, pl.13, f.14, 1842.

Schizodus chemungensis. Hall, Pal. N.Y., V, pt.1, Lamellibr sec. 2, p.453-454, pl.75, f.37-40, 41, 45, 1885.-Whiteaves, Contr. Can. Pal. p.241, pl.30, f.5, 5a, 1891.-Grabau & Shimer, N. Am. Index Foss., I, p.482, f.642 b, 1909.-Clarke & Swartz, Md. Geol. Sur., Mid. & Up. Dev., p.644-645, pl.64, f.3-5, 1913; Jenn. Form., Chem. member. Town Creek.-Branson, Dev. of Mo., p.113-114, pl.27, f.4-7, 1922; Snyder Creek shale. Callaway Co.

Schizodus chemungensis var. quadrangularis Hall

Cytherodon (Schizodus) quadrangularis Hall, Prelim. notice Lamellibr. shells, pt.2, p.96, 1870.

Schizodus chemungensis var quadrangularis. Hall, Pal. N.Y., V, pt.1, p.454, pl.75, f.31-34, 36, 1884.-Clarke & Swartz, Md. Geol. Sur., Mid.& Up. Dev., p.645-646, pl.64, f.6, 1913; Jenn. Form., Chemung member. near Deer Park Sta.

Schizodus quadrangularis Grabau & Shimer, N. Am. Index Foss., I, p.482, f.642, 1909.

Schizodus contractus Hall

Schizodus contractus.Hall,Pal.N.Y.,V,pt.1,p.451,pl. 75,f.27,28,1885.-Kindle,25th.Ann.Repl Ind.Geol.Nat. Res.,p.672-673,pl.15,f.9,1901;Jeff.l.s.Newbern; Bartholomew Co.,Lancaster.

Schizodus oherni Clarke & Swartz

Schizodus oherni Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.646-647,pl.64,f.7-14,1913;Jenn.Form., Chem.member.Allegany Grove;Town Creek; W.Tonoloway Ridge;Parkhead member.W.Pawpaw,W.Va.;Millstone

Schizodus quadrangularis Grabau & Shimer,see Schizodus Chemungensis var.quadrangularis Hall

Schizodus trigonalis Clarke & Swartz

Schizodus trigonalis Clarke & Swartz,Md.Geol.Sur., Mid.& Up.Dev.p.647-648,pl.64,f.16-18,1913;Jenn. Form.,Chem.member.Town Creek.Parkhead member.Polish Mt.;Millstonw.

Solemya (Janeia)vetusta Meek

Solemya (Janeia)vetusta.Hall,Pal.N.Y.,V,pt.1,p.46,pl. 47,f.53-55;pl.94,f.10,1885.-Kindle,25th.Ann.Rep. Ind.Dep.Geol.Nat.Res.,p.690-691,pl.16,f.1,1a-b, 2,1901;Sells.beds.Watson & Falls of the Ohio.

Sphaerodoma Lamiltoniae Grabau & Shimer,see Cyclonema hamiltoniae Hall

Genus SPHENOTUS Hall
(1884.Pal.N.Y.,V,pt.1,p.33)

Sphenotus contractus Hall

Cypricardis contractus Hall,Geol.N.Y.,Rep.4th.Dis.p. 292,pl.139,f.4,1843.

Sphenotus contractus.Hall,Pal.N.Y.,V,pt.1,p.399,pl.66 f.1,3-9,11-13,15;pl.94,f.2,1885.-Clarke & Swartz,Md Geol.Sur.,Mid.& Up.Dev.,p.610,pl.59,f.18,19,1913;J Jenn.Form.,Chem.member.W.Sideling Creek;W.Corriganville

Sphenotus truncatus (Conrad)

Sphenotus truncatus.Hall,N.Y.,Pal.,V,pt.1,p.384,pl. 65,1884.-Grabau,Buf.Soc.Nat.Sci.,VI,p.261,f.180, 1899;Demissa bed.

Spiroraphe orata (Hall)

Pleurotomaria orata Hall,Des.new sp.Foss.,etc.,p.14,

1861;15th.Rep.N.Y.State Cab.Nat.Hist.,p.42,pl.5, f.13,1862;Illus.Dev.Foss.,Gastropoda,pl.17,1876; Pal.N.Y.,V,pt.2,p.64,pl.17,f.1-8,1879.

Spiroraphe arata.Grabay & Shimer,N.Am.Index Foss.,I, p.645,f.880,1909.-Branson, Dev. of Mo.,p.119-120, pl.20,f.1,2,1922;Callaway l.s.Callaway & Montgomery Co.

Genus SPYROCERAS Hyatt

Spyroceras clarki Prosser & Kindle

Spyroceras clarki Prosser & Kindle,Md.Geol.Sur.,Mid. & Up.Dev.,p.317-318,pl.41,f.9-11,1913;Rom.Form., Ham.member.Ernstville

Spyroceras crotalum (Hall)

Orthoceras crotalum.Hall,Des.new spec. of Foss.,etc., p.50,1861;15th.Rep.N.Y.State Cab.Nat.Hist.,p.78, 1862;Pal.N.Y.,V,pt.2,p.296,pl.42,f.1-9,11,12;pl. 82,f.1-6;pl.113,f.13,1879.

Spyroceras crotalum.Keyes,Johns Hopkins Univ.Circ., XI,p.29,1891.-Grabau & Shimer,N.Am.Index Foss.,II, p.64,1910.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.314-315,pl.41,f.1-5,1913;Rom/Form.,Ham. member.Western,Md.;Ernstville;S.Cumb.,Romney,W. Va.(?)

Spyroceras(?) falsum Fenton & Fenton

Spyroceras(?) falsum Fenton & Fenton,Contr.Mus.Univ. Michl,I,p.196,pl.40,f.17,1934.Spirifer zone.Hackberry stage.Rockford Brick & Tile Co.

Spyroceras nuntium Hall

Orthoceras nuntium.Hall,Des.new species of Foss.,etc. p.51,1861;15th.Rep.N.Y.State Cab.Nat.Hist.,p.79, pl.8,f.3,4,1862;Pal.N.Y.,V,pt.2,p.299,pl.43,f.4-10,13,14;pl.82,f.14,15,1879.- Grabau,Buf.Soc.Nat. Sci.,VI,p.290,f.225 on p.289,1899;Trilobite beds. L.shore & Avery's Creek.

Orthoceras(spyroceras)numtium Clarke,N.Y.,State Mus. Bull.65,p.633,1903.

Spyroceras nuntium.Grabau & Shimer,N.Am.Index Foss., II,p.64,f.1272,1901.-Prosser & Kindle,Md.Geol.Sur. Mid.& Up.Dev.,p.316-317,pl.41,f.6-8,1913;Rom.Form. Ham.member.W.Va side Potomac River.S.Cumb.

Genus STRAPAROLLUS Montfort
(1810. Conch. Syst., II, p.174)

Straparollus sp. Kindle

Straparollus sp. Kindle, 25th. Ann. Rep. Ind. Geol. Sur., p.576, pl.1, f.12, 1901; New Albany shale. Delphi.

Straparollus argutus Fenton & Fenton

Straparollus argutus Fenton & Fenton, Contr. Mus. Univ. Mich., I, p.178, pl.38, f.12-14, 1924; Spirifer zone. Hackberry stage.

Straparollus circinatus Fenton & Fenton

Platyschisma(?) McCoyi Webster, Contr. Pal. Hackberry gr., p.7, pl.2, f.20.

Straparollus circinatus Fenton & Fenton, Contr. Mus. Geol. Univ. Mich., I, p.179, pl.38, f.4-5; pl.45, f.4-5; 1924; Spirifer zone. Hackberry stage.

Straparollus clymenioides Hall

Euomphalus clymenioides Hall, Des. new sp. Foss., etc., p.26e, 1861; 15th. Ann. Rep. N.Y. State Cab. Nat. Hist., p.54, 1862; Illus. Dev. Foss., Cephalopoda pl.70, f.1-5, idem. Gastropoda, pl.16, f.15, 1876.

Straparollus clymenioides? Girty, 20th. Ann. Rep. U.S.G.S pt.2, p.61, pl., f.7-8, 1900. Ouray l.s. Durango; Salida, Colo.

Straparollus cf clymenioides Kindle, U.S.G.S., Bull. 391, p.33-34, pl.10, f.10, 1909; S.W. Mt. Eolus, Colo.

Straparollus cyclostomus (Hall)

Euomphalus cyclostomus. Hall, Geol. Sur., Iowa, I, pt.2, p. 516, 1858.-Kindle, 25th. Ann. Rep. Ind. Dep. Geol. Nat. Res. p.707, pl.21, f.9, 1901; Lime Creek, Iowa.

Straparollus cyclostoma portlandensis Fenton & Fenton

Straparollus cyclostoma portlandensis Fenton & Fenton Contr. Mus. Univ. Mich., I, p.177-178, pl.40, f.14, 15, 1924. Spirifer zone. Up. beds near Hackberry Grove. Hackberry stage.

Straparollus marylandicus Clarke & Swartz

Straparollus marylandicus C.& S., Md. Geol. Sur., Mdd.& Up. Dev., p.668-669, pl.67, f.23-25, 1913; Jenn. Form.,

Parkhead member. Polish Mt; above mouth Sideling Hill Creek.

Straparollus rudis Hall

Straparollus rudis. Hall, N.Y., Pal., V, pt. 2, p. 58, pl. 16, 1879.-Grabau, Buf. Soc. Nat. Sci., VI, p. 277, f. 206, 1899; Encrinal l.s.

Genus STROPHOSTYLUS Hall
(1859. Pal. N.Y., III, p. 303-304)

Strophostylus ?sp. Weller

Strophostylus ? sp. Weller, Pal. N.J., III, p. 387, pl. 53, f. 13-16, 1903; Monroe shale. N.J.

Strophostylus allani Stewart

Strophostylus allani Stewart, Dev. of Mo., p. 253, pl. 70, f. 9-15, 1922; Little Saline Creek, l.s. Ste Genevieve Co.

Strophostylus andrewsi Hall

Strophostylus andrewsi Hall, Pal. N.Y., III, p. 472, pl. 118, f. 2, 1859; Orisk. s.s. Cumb., Md.-Ohern, Md. Geol. Sur L. Dev., p. 481, pl. 84, f. 10, 1913; Orisk. Form., Ridgely member. Cumb., Md.

Strophostylus ? cancellatus Meek & Worthen

Strophostylus ? cancellatus Meek & Worthen, Ill. Geol. Sur., III, p. 404, pl. 8, f. 12 (and 11a, b, ?) 1868; sub crystalline l.s. Jackson Co., Ill. Orisk. age s.s. N.Y. ser. Union Co., Ill.

Strophostylus depressus Hall

Strophostylus depressus Hall, N.Y., Pal. III, p. 306, 1859; L. Held. gr. Becraft Mt.

Strophostylus elegans Hall

Strophostylus elegans Hall, N.Y., Pal., III, p. 304, pl. 55, f. 1a-d, 1859; L. Held. gr. Held, Mts., Schoharie & Becraft Mt.

Strophostylus expansus Conrad

Platyceras expansus Conrad, Ann. Rep. Pal., N.Y., p. 55, 1841.

Strophostylus expansus Hall, N.Y., Pal., III, p. 470, pl.

114,f.2,3a,b,1859;Orisk s.s.Albany & Schoharie Co.

Strophostylus fitchi Hall

Strophostylus fitchi Hall,N.Y.,Pal,III,p.308,pl.67, f.2a-e,1859;L.Held.Gr.Carlisle,Schoharie Co.

Strophostylus gebhardi Weller,see Platyceras gebhardi Conrad.

Strophostylus globosus Hall

Strophostylus globosus Hall,N.Y.,Pal.,III,p.305,pl. 55,f.8,1859;L.Held.Gr.Becraft Mt. & Catskill.

Strophostylus matheri Hall

Strophostylus matheri.Hall,Pal.N.Y.,III,p.471,pl. 118,f.1a,b,1859;Orisk.s.s.Cumb.,Md.-Ohern,Md.Geol. Sur.,L.Dev.,p.481,pl.86,f.8,9,1913;Orisk.Form., Ridgely member,Cumb.;Nicholas Mt.,Md.

Strophostylus obtusus Hall

Strophostylus obtusus Hall,N.Y.,Pal.III,p.305,pl.67, f.1a,b,1859;L.Held.Gr.Held.Mt.,

Strophostylus ? rotundatus Hall

Strophostylus ? rotundatus Hall,Pal.N. Y,III,p.307, pl.57,f.1c,1859;L.Held.gr.Carlisle,Schoharie Co.

Strophostylus transversus Hall

Strophostylus transversus.Hall,N.Y.,Pal.,III,p.470, pl.114,f.1a,b,c,1859;Orisk.s.s.Cumb.,Md.-Ohern, Md.Geol.Sur.,L.Dev.,p.480,pl.86,f.5-7,1913;Orisk. Form.,Ridgely member.Cumb.,Md.

Strophostylus varians Hall

Strophostylus varians.Hall,Pal.N.Y.,V,pt.2,f.16-31, 1879.-Kindle,25th.Ann.Rep.Ind.Dep.Geol.Nat.Res., p.697-698,pl.20,f.5,5a,1901;"Carniferous", & Sells.beds.Charlestown.Falls of the Ohio.

Styliola (Styliolina) fissurella Clarke,see Styliolina fissurella (Hall)

Styliola fissurella Hall,See Stgliolina fissurella (Hall)

Genus STYOLINA Karpinsky
(1884.Die fossilen Pteropoden am Ostabhange des Urals. Mem.de l'Acad.St.Petersburg,7th.ser.,T XXXII,No.1)

Styliolina fissurella (Hall)

Tentaculites fissurella Hall,Geol.N.Y.,pt.4,p.180, f.9,10,p.232,f.4,1843.

Styliola fissurella.Hall,Pal.N.Y.,V,pt.2,p.178,pl. 31a,f.1-28,1879.-Kindle,25th.Ann.Rep.Ind.Geol. Sur.,p.576-577,pl.2f,9,1901;New Albany shale.Falls of the Ohio;Lexington.

Styliola (Styliolina) fissurella Clarke,U.S.G.S.Bull. 16,p.57,1885.

Styliolina fissurella.Clarke,Am.Geol.VIII,p.88,1891; Am.Jour.Sci.,3d.ser;XLIII,p.58,1892;15th.Ann.Rep. State Geol.(N.Y.) p.54,1898;N.Y.State Mus.,Bull. 65,p.570,1903;N.Y.State Mus.,Mem.VI,pt.2,p.342, 1904.-Grabau,Buf.Soc.Nat.Sci.,VI,p.282,f.214,1899. Everywhere in rocks of this region; abundant in l. Genesee; in Marcellus shale on L.Shore;-Grabau & Shimer,N.Am.Index Foss.,II,p.16,f.1229,1910.- Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p. 300-301,pl.37,f.17-20,1913;Rom.Form.,Onon.member. Tonoloway,Md. B.& O.R.R.cut 21st.Bridge;Hanging Rock,W.Va.Marcellus member.E.Oldtown.Ham.member, E.bank Evitts Cr.below Wolfe Mill.Ernstville,- Clarke & Swartz,Md.Geol.Sur.,Mid.& Up.Dev.,p.685- 686,pl.71,f.1-3,1913;Jenn.Form.,Gen.Mem.Present at all Md. outcrops of these strata.

Styliolina spica Hall

Styliolina spica.Hall,Pal.N.Y.,V,pt.2;Sup.,VII,p.7, pl.114,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,p.282,f. 214a,1899;Ham.shales.Hamburg,Erie Co.

Tancrediopsis Clarki Prosser & Kindle

Tancrediopsis Clarki Prosser & Kindle,Md.Geol.Sur., Mid.& Up.Dev.,p.245-246,pl.28,f.1,2,1913;Rom.Form. Ham.member.Western Md.

Tellina(?) ovata Hall,see Palaeoneilo maxima(Conrad)

Genus TELLINOPSIS Hall
(1880.Prelim.not Lamellibranchiata,II,p.80)

Tellinopsis sub-emarginata (Conrad)

Nuculites subemarginata Conrad,Jour.Acad.Nat.Sci.,

Phila.VIII,p.249,pl.15,f.5,1842.

Tellinopsis subemarginata.Hall,Prelim.notice Lamellibr.II,p.80,1870;N.Y.Pal.,V,pt.1,p.464,pl.76,f. 21-31,1885.-Grabau,Buf.Soc.Nat.Sci.,VI,p.265,f. 187,1899;Strophelosia bed in Avery's Creek.-Clarke N,Y.,State Mus.,Bull.65,p.521,1903.-Grabau & Shimer,N.Am.Index Foss.,I,p.386,f.488d,1909.-Prosser & Kindle,Md.Geol.Sur.,Mid.& Up.Dev.,p.222-223,pl. 23,f.11,12,1913;Rom.Form.,Ham.member.S.E.Cumb.,W. Va.,side Potomca River,S.Cumb.

Genus TENTACULITES Schlotheim
(1820.Schlotheim Petrefactenkunde,p.337)

Tentaculites sp.Branson

Tentaculites sp.Branson,Dev. of Mo.,p.157,pl.39,f. 6,1922;Beauvais s.s.

Tentaculites acula? Weller,see Tentaculites aculus Hall

Tentaculites aculus Hall

Tentaculites aculus.Hall,Pal.N.Y.,VII,p.6,(sup.toV) pl.114,f.15-17,1888.-Ohern,Md.Geol.Sur.,L.Dev.,p. 485,pl.87,f.6,7,1913;Orisk.Form.,Shriver member. 21st.Bridge,Cash Valley,north Branch,Md.

Tentaculites acula ? Weller,Pal.N.J.,III,p.336,pl. 43,f.11,1903;L.Orisk.N.J.

Tentaculites ? acus Clarke

Tentaculites acus.Clarke,N.Y.State Mus.,Mem.III,no. 3,p.28,pl.3,f.1-7,1900.-Ohern,Md.Geol.Sur.,L.Dev., p.484-485,pl.87,f.5,1913;Held.Form.,Becraft member Warren Pt.,Penn.

Tentaculites attenuatus Hall

Tentaculites attenuatus.Hall,Illus.Dev.Foss.,Pteropoda pl.26,f.19,20,1876;Pal.N.Y.,V,pt.2,p.170,pl.31, f.19,20,1879.-Grabau & Shimer,N.Am.Index Foss.,II, p.11,1910.-Prosser & Kindle,Md.Geol.Sur.,Mid. & Up Dev.,p.301-302,pl.37,f.21,1913;Rom.Form.,Ham.member.W.Tonoloway Ridge;McCoy's Ferry.

Tentaculites bellulus Hall

Tentaculites bellulus Hall,Illus.Dev.,Foss.,Pteropoda pl.26,f.15-18,1876.;N.Y.Pal.V,pt.2,p.169,pl.31,f. 15-18;pl.31a,f.48-51,1879.-Grabau,Buf.Soc.Nat.Sci. VI,p.283,f.215,1899;Moscow shales;Stictopora & Demissa beds.-Grabau & Shimer,N.Am.Index Foss.,II,

p.11,f.1222,1910.-Prosser & Kindle,Md.Geol.Sur., Mid.& Up.Dev.,p.302-303,pl.37,f.22-25,1913;Rom. Form.,Ham.member.McCoy's Ferry;Between Romney & Hanging Rock,W.Va.

Tentaculites bellulus var.potomacensis Prosser & Kindle

Tentaculites bellulus var.potomacensis P. & K.,Md.Geol.Sur.,Mid. & Up.Dev.,p.303-304,pl.38,f.1-3, 1913;Rom.Form.,Ham.member.McCoy's Ferry;S.W.McCoy's Ferry.

Tentaculites descissus Clarke & Swartz.

Tentaculited descissus Clarke & Swartz,Md.Geol.Sur., Mid. & Up.Dev.,p.686,pl.70,f.20-23,1913;Jenn.Form. Chem.member.Deer Park,Garrett Co.;Polish Mt.;Allegany Co.

Tentaculites dexithea Hall

Tentaculites dexthea.Hall,Pal.N.Y.,V,pt.2,Sup.,p.6, pl.114,f.18,1888.-Kindle,25th.Ann.Rep.Ind.Dep. Geol.Nat.Res.,p.736,not fig.,1901;Pendleton s.s. Pendleton.

Tentaculites elongatus Hall

Tentaculites elongatus.Hall,N.Y.,Pal.,III,p.136,pl. 6,f.16-21,1859;L.Held.Group.Helderberg Mts.and Schoharie.Pal.N.Y.,VII,p.6(sup),pl.114,f.14,1888; L.Held.Group.Helderberg Mts. and Schoharie .-Clarke,N.Y.State Mus.,Mem.III,no.3,p.27,pl.3,f.8-12,1900.-Weller,Pal.N.J.,III,p.295,pl.32,f.4;p. 319,p.363,pl.50,f.4,5,1903;Coeyman's l.s.N.J. New Scotland beds.N.J.Mid.& Up.Orisk.N.J.-Clarke, N.Y.State Mus.,Mem.IX,pt.1,p.118,pl.12,f.8,9, 1908.-Ohern,Md.Geol.Surv.,L.Dev.,p.485,pl.87,f. 8-10,1913;-Stewart,Dev. of Mo.,p.262,pl.69,f.18, 1922;Little Saline Creek l.s.Ste Genevieve Co.

Tentaculites fissurella Hall,see Styliolina fissurella (Hall)

Tentaculites fragilis Fenton & Fenton

Tentaculites fragilis Fenton & Fenton,Contr.Mus. Univ.Mich.,I,p.193-194,pl.33,f.11,1924;Spirifer zone.Hackberry stage.

Tentaculites gracilistriatus Hall

Tentaculites gracilistriatus.Hall,Pal.N.Y.,V,pt.2, p.173,pl.31,31a,1879.-Grabau,Buf.Soc.Nat.Sci.,VI,

p.283,f.216,1899;Moscoe shale.Lake Shore.

Tentaculites gyracanthus (Eaton)

Echinus gyracanthus Eaton,Geol.Text Book,1832.

Tentaculites ornatus.Vanuxem,Final Rept.Geol.3d.Dist. N.Y.,p.112,f.3,1842.-Mather,Final Rept.Geol.1st. Dist.N.Y.p.349,f.3,1843. Not Tentaculites ornatus Sowerby in Sil.Syst.p.628,pl.12,f.25;Seluria,pl. 16,f.11.

Tentaculites irregularis Hall,Pal.N.Y.,III,p.137,pl. 6,f.22,23,1859;L.Held.Gr.Helderberg Mts.Albany, Schoharie,Carlisle,Cherry Valley,Catskill.

Tentaculites gyracanthus.Hall,Pal.N.Y.,p.5,(Sup.to Vol.V),pl.114,f.7-13,1888.-Weller,Pal.N.J.,III, p.264,pl.24,f.19,20,1903.-Maynard,Md.Geol.Sur., L.Dev.,p.486-487,f.11,1913;Helderberg Form.,Keyser member.Keyser,W.Va.;Tonoloway,Md.

Tentaculites irregularis Hall,see Tentaculites gyracanthus (Eaton)

Tentaculites ornatus.Mather,Vanuxem,see Gyracanthus (Eaton)

Not Tentaculites ornatus Sowerby,see Tentaculites gyracanthus (Eaton)

Tentaculites scalariformis Hall

Tentaculites scalarifromis.Hall,Pal.N.Y.,V,pt.2,p. 167,pl.31,f.3-11,1879.-Kindle,25th.Ann.Rep.Ind. Dep.Geol.Nat.Res.,p.736,pl.23,f.9,1901;Sells.beds & Jeff.l.s.Clarke Co;Bartholomew Co.;Pipe Cr.Falls

Tentaculites spiculus Hall

Tentaculites spiculus.Hall,Illus.Dev. Foss.,Pteropoda,pl.26,f.21-25,1876;Pal.N.Y.,V,pt.2,p.172,pl.31, f.21-25,1879.-Grabau & Shimer,N.Am.Index Foss., II,p.12,1910.-Clarke & Swartz,Md.Geol.Sur.,Mid. & Up.Dev.,p.687,pl.70,f.24,1913;Jenn.Form.,Woodmont member,Ithaca Fauna.Millstone.

Genus TORNOCERAS Hyatt

Tornoceras bicostatus Hall,see Goniatites(Tornoceras) bicostatus,Hall.

Tornoceras uniangulare(Conrad)

Goniatites uniangulare Conrad,Jour.Acad.Nat.Sci.,

Phila.,VIII,p.268,pl.16,f.4,1842.

Goniatites discoideus Hall,Pal.N.Y.,V,pt.2,pl.71, f.1,7,10-13,1879;ibid.,Suppl.(Vol.7),p.127,f. 11,12,1888.

Goniatites uniangularis Hall,Pal.N.Y.,V,pt.2,pl.71, f.14;pl.72,f.6,7,pl.74,f.2,1879.

Tornoceras uniangulare.Clarke,16th.Rep.N.Y.State Geol.,p.111,pl.8,f.15-18,1898.-Clarke & Swartz Md.Geol.Sur.,Mid.& Up.Dev.,p.696-697,pl.72,f. 6,1913;Jenn.Form.,Genesse member.Corriganville; near Cumb.

Tornoceras uniangularis Conrad,see Goniatites (Tornoceras)uniangularis Conrad.

Trachyodomia praecursor rockfordensis Webster

Trochus (Paleotrochus)praecursor var.rockfordensis Webster,Contr.Pal. of Hackberry Group.p.7,1906.

Trochus (Paleotrochus)praecursor Webster;ibid.p.5, pl.2,f.22,23,1906.

Trachyodomia praecursor rockfordensis Fenton & Fenton,Contr.Mus.Univ.Mich.,I,p.189-190,pl.45,f.6, 7,1924;Spirifer zone.& Hackberry.Hackberry Grove and Rockford.

Trepospira rotalia Grabau & Shimer,see Pleurotomaria (Trepospira) rotalia Hall

Trepospira rotalia Ulrich & Schofield,see Pleurotomaria (Trepospira) rotalia Hall

Genus TROCHOMENA Barrande

Trochomena emacerata Hall & Whitfield

Trochomena emacerata.Hall & Whitfield,24th.Rep.N. Y.State Mus.Nat.Hist.,p.193,1824.27th.Rep.N.Y. State Mus.Nat.Hist.,pl.13,f.11,1875.-Kindle,35th. Ann.Repl Ind.Dep.Geol.Nat.Res.,p.715,not fig., 1901;Sells.beds.Louisville.

Trochonema(Gyronema)liratum (Hall)

Cyclonema lirata.Hall,Des. of new sp. of Foss.,p. 19,1861;15th.Rep.N.Y.State Cab.Nat.Hist.,p.47, pl.5,f.15,1862;Illus.Dev. FossilGastropoda,pl.12, 1876;Pal.N.Y.,V,pt.2,p.35,pl.12,f.27-29,1879.

Trochonema(Gyronema)liratum Clarke & Swartz,Md.Geol.

Sur.,Mid.& Up.Dev.,p.674-675,pl.68,f.13,1913; Jenn.Form.,Chem.member.Hancock.

Not Gyronema liratum Ulrich.Pal.Minn.p.1056,

Trochomena Meekanum (Meek)

Trochomena tricarinatum Meek,Pal.Ohio,I,p1218,pl.19, f.4a,b,1873.

Trochomena meekanum Kindle,25th.Ann.Rep.Ind.Dep. Geol.Nat.Res.,p.713-714,pl.16,f.9,1901;Jeff.l.s. Newbern.

Trochomena rectilatera Hall & Whitfield

Trochomena rectilatera.Hall & Whitfield,24th.Rep. N.Y.State Mus.Nat.Hist.,p.193,1872;27th.Rep.N.Y. State Mus.Nat.Hist.,pl.13,f.4,5,1875.-Kindle, 25th.Ann.Rep.Ind.Dep.Geol.Nat.Res.,p.716,not fig., 1901;Sells.beds ? Falls of the Ohio.

Trochomena tricarinatum Meek,see Trochomena meekanum (Meek)

Trochomena yandellana Hall & Whitfield

Trochomena yandellana.Hall & Whitfield, 24th.Rep. N.Y.State Mus.Nat.Hist.,p.194,1872;27th.Rep.N. Y.State Mus.Nat.Hist.,p.13,f.3,1875.-Kindle,25th. Ann.Rep.Ind.Dept.Geol.Nat.Res.p.714-715,not fig. 1901;"Cherty layers of croniferous l.s." Falls of the Ohio.

Trochus (Paleotrochus) praecursor Webster,see Trachy- odomia praecursor rockfordensis (Webster)

Trochus (Paleotrochus)praecursor var rockfordensis Web- ster,see Trachyodonia praecursor rockfordensis (Webster)

Trachydomia praecursor (Clarke)

Palaeotrochus praecursor Clarke,U.S.G.S.,Bull.16, p.55,pl.2,f.6-9,1885.

Trachydomia praecursor Clarke & Swartz,Md.Geol.Sur., Mid. & Up.Dev.,p.678-679,pl.69,f.15,16,1913;Jenn. Form.,Chem.member.near Deer Park Station.

Genus TURBO Linn.

Turbo cornnola Clarke & Swartz

Turbo coronola Clarke & Swartz,Md.Geol.Sur.,Mid. &

Up.Dev.,p.673,674,pl.68,f.11,12,1913;Jenn.Form., Chem.member.W. Frostburg.

Turbo lineatus Hall,see Pleurotomaria(Euryzone) itys Hall

Turbo shumardi de Verneuil.

Turbo shumardi de Verneuil.Hall,Pal.N.Y.,V,pt.2,p. 135,pl.29,f.1-4,1879.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.798-709,pl.22,f.1,1901; Little Rock Cr. Cass Co.,Falls of the Ohio.

Turbo (?) spiculatus Fenton & Fenton

Turbo (?) spiculatus F & F.Contr.Mus.Univ.Mich.,I, p.180-181,pl.33,f.14,15,1924;Spirifer zone. Found only at Hackberry Grove.Hackberry stage.

Genus WESTERNIA Webster
(1924.Cont.Mus.Mus.Geol.Univ.,Mich.,I,p.186-187)

Westernia gigantea Webster

Loxonema gigantea Webster,Am.Nat.,22,p.445,1888.

Westernia gigantea.Webster,Contr.Pal.Hackberry Group,p.2,pl.2,f.1,2;pl.3,f.7,8,1908.-Fenton & Fenton,Contr.Mus.Univ.Michl,I,p.187-188,pl.44,f. 4,5,pl.45,f.1,2,1924;Spirifer zone;Hackberry Grove Rockford.Hackberry stage.

Westernia gigantea owenensis Webster

Loxonema owenensis Webster,Am.Nat.XXII,p.446,1888.

Westernia owenensis.Webster,Contr.Paleo.Hackberry Group.p.2,pl.2,f.3,4,pl.3,f.2,1906.-Fenton & Fenton,Contr.Mus.,Univ.Mich;I,p.188,pl.31,f.16; pl.44,f.1-3,pl.45,f.3,1924;Owen substage.Hackberry stage.

Westernia owenensis Webster,see Westernia gigantea owenensis Webster.

Westernia pulchra Fenton & Fenton

Westernia pulchra Fenton & Fenton,Contr.Mus.Univ. Mich.,I,p.188,189,pl.34,f.4;pl.38,f.7,1924;Spirifer zone,Hackberry Grove.Hackberry stage.

A R T H R O P O D A

Acantholoma spinosa Conrad, See Acidaspis tuberculatus Hall

Genus ACIDASPIS Murchison

Acidaspis sp. Stewart

Acidaspis sp. Stewart, The Dev. of Mo., p.262-263, pl.71, f. 1, 1922; Little Saline Creek l.s., Ste Genevieve Co., Mo.

Acidaspis n.sp.?, See Ceratolichas gryps Hall

Acidaspis hamata Hall

Dicranurus hamatus Conrad, Ann. Rep. Pal. N.Y., Catalogue, p.39, 1841.

Acidaspis hamata Hall, Pal. N.Y., III, p.371, pl.79, f.15-19, 1861; shaly l.s., L. Helderberg Gr., Albany & Schoharie Cos., New York.

Acidaspis tuberculatus Conrad

Acidaspis tuberculatus Conrad, Ann. Rep. Pal. N.Y., p.205, 1840.

Acantholoma spinosa Conrad, Ann. Rep. Pal. N.Y., p.39, 1841.

Acidaspis tuberculatus Hall, Pal. N.Y., III, p.368, pl.79, f. 1-4, 1861; shaly l.s., L. Helderberg Gr., Albany & Schoharie counties, N.Y.

Genus ACROGENIS Hall
(1881. Trans. Albany Inst., X, p.193)

Acrogenis prolifera Hall

Acrogenia prolifera. Hall, Pal. N.Y., VI, p.267, pl.63.-Grabau Buffalo Soc. Nat. Sci., Bull. 6, p.175, f.72, 1899; Hamilton Group, Eighteen Mile Creek, Erie Co., N.Y.

Genus AECHMINA Jones & Holl
(1873. Ann. & Mag. Nat. Hist., sec.4, III, p.217)

Aechmina cuspidata Jones & Holl

Aechmina cuspidata Jones & Holl, Ann. & Mag. Nat. Hist. (4) III, p.218, text fig.2, pl.14, f.8, 1869.

Aechmina cuspidata Jones,Monthly Microscopical Journ.,4, p.185,pl.61,f.6,1870;Ann.& Mag.Nat.Hist.(5),XIX,p. 411,pl.13,f.2-4,9,1887.

Aechmina cuspidata Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.521-522,pl.95,f.19-21,1923;Helderberg Form., New Scotland Member,21st.Bridge,Cumb.,Md.

Aechimina marginata Ulrich

Aechimina marginata.Ulrich,Journ.Cin.Soc.Nat.Hist.,XIII, p.184,pl.16.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 308,f.251,1899;Shales,Hamilton Gr.,Eighteen Mile Creek,N.Y.

Aparchites gordoni Ulrich and Bassler

Aparchites gordoni Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.515,pl.95,f.1-3,1913;Helderberg Form.,Keyser Member,Cumberland,Md.

Asaphus aspectans Conrad,See Dalmanates(Coronura)aspectans Conrad (H & C)

Asaphus hausmanni De La Beche's ,See Dalmania pleuroptyx Hall

Asaphus hausmanni Green?, See Dalmania micrurus Hall

Asaphus laticostatus Green,See Dalmanites (Chasmops)anchiops (Green)

Asaphus micrurus Green,See Dalminites micrurus (Green)

Asaphus nasutus Conrad,See Dalmania nasutus Conrad.

Asaphus pleuroptyx Green,See Dalmanites pleuroptyx(Green)

Genus BAIRDIA McCoy
(1846.Synop.Carb.Foss.,Ireland,p.164)

Bairdia leguminoides Ulrich

Bairdia leguminoides.Ulrich,Jour.Cin.Soc.Nat.Hist., XIII,p.197,pl.18.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.310,f.254,1899;shales,Hamilton Group,Eighteen Mile Creek,Erie Co.,N.Y.

Genus BEYRICHIA (McCoy)
(1844,Synop.Sil.Foss.of Ireland,p.57)
Agnostus and Battus,in part, of Authors.

Beyrichia barretti Weller,See Kloedenia barretti (Weller)

Beyrichia clarkei Jones,See Kloedenella clarkei (Jones)

Beyrichia granulata Hall

Beyrichia granulata Hall,Pal.N.Y.,III,p.377,pl.79,B,f. 1a-d,1861;L.Helderberg Group,Schoharie Co.,N.Y.

Beyrichia hamiltonensis Jones

Beyrichia hamiltonensis.Jones,Quart.Four.Geol.Soc., XLVI,p.19,1890.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.306,f.247,1899;Hamilton Group,Eighteen Mile Creek, N.Y.

Beyrichia kummeli Weller,See Kloedenia kummeli (Weller)

Beyrichia nearpassi Weller,See Kloedenia nearpassi (Weller)

Beyrichia notata Hall

Beyrichia notata Hall,Pal.N.Y.,III,p.379,pl.79B,f.3a-c, 1861;L.Helderberg Group,Herkimer Co.,N.Y.

Beyrichia notata var ventricosa Hall

Beyrichia notata var.ventricosa Hall,Pal.N.Y.,III,p. 380,pl.79B,f.4a-c,1861;L.Helderberg Gr.,Herkimer Co.,N.Y.

Beyrichia oculina Hall

Beyrichia oculina Hall,Pal.N.Y.,III,p.378,pl.79B.f.2a-e,1861;L.Helderberg group,Schoharie Co.,N.Y.

Beyrichia sussexensis Weller,See

Kloedenia sussexensis (Weller)

Beyrichia tricollina Ulrich.

Beyrichia tricollina.Ulrich,Jour.Cin.Soc.Nat.Hist.,XIII, p.189,pl.12.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 306,f.248,1899;sh.,Hamilton Group,Eighteen Mile Creek N.Y.

Beyrichia trisulcata Hall

Beyrichia trisulcata Hall,Pal.N.Y.,III,p.381,pl.79B,f. 5a,b,1861;L.Helderberg Gr.,Herkimer Co.,N.Y.

Genus BOLLIA Jones and Hall

Bollia americana Ulrich and Bassler

Cf.Bollia bicollina Jones & Hall,Ann.& Mag.Nat.Hist.(5) XVII,p.361,pl.12,f.14-16,1886.

Bollia Uniflexa Jones & Hall,ibid.,f.17a,b,1886.

Bollia Americana Ulrich and Bassler,Md.Geol.Surv.,L. Dev.,p.525-526,pl.96,f.13-15,1913;Oriskany Form., Shriver Member.,21st.Bridge,Cash Valley,Md.

Bollia Clarkei Ulrich,See Kleodenella clarkei(Jones)

Bollia curta Ulrich and Bassler

Bollia curata Ulrich & Bassler,Md.Geol.Surv.,L.Dev.,p. 526-527,pl.96,f.16,17,1913;Oriskany Form.,ShriverMember,21st.Bridge,Cumb.,Md.

Bollia irregularis Ulrich & Bassler

Bollia irregularis Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.527,pl.96,f.18,1913;Helderberg Group,New Scotland Member,21st.Bridge,Cumb.,Md.

Bollia jugalis Ulrich & Bassler

Bollia jugalis Ulrich & Bassler,Md.Geol.Surv.,L.Dev., p.527-528,pl.96,f.19.1913;Oriskany Form.,Shriver Member,21st.Bridge,Cumb.,Md.

Bollia obesa Ulrich

Bollia obesa.Ulrich,Jour.Cin.Soc.Nat.Hist.,XIII,p.189, pl.14,f.5a-c,1891.-Kindle,U.S.G.S.,Bull.508,p.114, pl.9,f.8,1912;Md.Geol.Surv.,L.Dev.,p.337-338,pl.44, f.9,1913,Romney Form.,Onondagg Member,Williams Road s.w.Cumberland,,Md.

Bollia ungula Jones

Bollia ungula.Jones,Am.Geol.,XIV.p.338-339,pl.opposite p.242,f.10-13,1889.-Ulrich,Jour.Cin.Soc.Nat.Hist., XIII,p.188,pl.14,f.6a,b,1891.-Kindle,U.S.G.S.Bull. 508,pl.9,f.9,10,1912;Md.Geol.Surv.,Mid.& Up.Devo, p.336-337,pl.44,f.7,8,1913;Romney Form.,Onondaga Member,Williams Road,s.e.Cumberland;Tonolowary,Md. Ulrich & Bassler,Md.Geol.Surv.,L.Dev.,p.528,pl.96, f.20-22,1913;Oriskany Form.,Shriver Member,21st. Bridge,Cumberland,Md.

Bronteus barrandi Hall,See Goldius barrandii Hall

Bronteus barrandi Clarke,See Goldius barrandii Hall

Bronteus canadensis Logan,See Goldius barrandii Hall

Bythocypris punctulata var.arctatum Ulrich & Bassler

Bythocypris punctulata var.arctatum Ulrich & Bassler, Md.Geol.Surv.,L.Dev.,p.540,pl.98,f.22,1913;Helderberg Form.,Keyser Member,Cumberland,Md.Keyser,W. Va.

Genus CALYMENE Milne Edwards.

Calymene anchiops Green,See Dalmanites (Chasmops)anchiops (Green)

Calymene bufo var rana Green,See Phacops rana (Green)

Calymene camerata Conrad

Calymene camerata. Conrad,Jour.Acad.Nat.Sci.,Phila., VIII,p.278,1842.-Hall,Pal.N.Y.,II,p.337,pl.78,f.1a, f.1852.-Maynard,Md.Geol.Surv.,L.Dev.,p.494,pl.89,f. 9,1913;Oriskany Form.,Ridgely Member,Sand Quarry s.w.Hancock,Md.

Calymene platyo Green

Calymene platyo. Hall,Pal.N.Y.,VII,pt.I,pl.1,f.1-19; pl.25,f.1,1888.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.751,1901;Up.Helderberg Falls of the Ohio.

Genus CERATIOCARIS (McCoy)
(1859.Hall,Pal.N.Y.,III,p.420-421)

Ceratiocaris sp? Hall

Ceratiocaris sp? Hall,Pal.N.Y.,III,p.422,pl.84,f.7,1861.

Ceratiocaris aculeatus Hall

Ceratiocaris aculeatus Hall,Pal.N.Y.,III,p.422,pl.80A, f.10,1859; Waterline gr.,Waterville,.N.Y.

Ceratiocaris acuminatus Hall

Ceratiscaris acuminatus Hall,Pal.N.Y.,III,p.422,pl.84, f.6,1861,Waterline gr.,Near Buffalo,N.Y.

Ceratiocaris maccoyanus Hall

Ceratiocaris maccoyanus Hall,Pal.N.Y.,III,p.421,pl.84, f.1-5,1861;Waterline group,Near Buffalo,N.Y.

Ceratolichas gryps Hall

Acidaspis n.sp? Illus.Dev.Foss.,pl.19,f.1(not f.2,3), 1876.

Lichas (Ceratolichas) gryps Hall,Pal.N.Y.,VII,p.84,pl. 19B,f.7-13,1888.

Ceratolichas gryps Stewart,The Dev. of Mo.,p.264,pl.71, f.13-15,1922; Little Saline Creek l.s.,Ste Genevieve Co.,Mo.

Cordania cyclurus(Hall & Clarke)

Phaethonides cyclurus Hall & Clarke,Pal.N.Y.,VII,p.137, pl.24,f.126-28;pl.25,f.11,1888

Cordania cyclurus Ohern,Md.Geol.Surv.,L.Dev.,p.491-492, pl.89,f.5,6,1913; Helderberg Form.,New Scotland(?) Member,Cumberland,Md.

Genus CRATERELLINA Ulrich & Bassler
(1913.Md.Geol.Surv.,L.Dev.,p.539)

Craterellina oblonga Ulrich & Bassler

Craterallina oblonga Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.540,pl.98,f.20.1913; Oriskany Form.,Shriver Member,21st.Bridgel Cash Valley,Md.

Sub Genus CRYPHAEUS Green
(1837.Jour.Acad.Nat.Sci.,VII,p.217)

Cryphaeus Sp- Stewart

Cryphaeus sp. Stewart.The Dev. of Mo.,p.268,pl.71,f.21, 1922;Little Saline Creek,l.s.Ste Genevieve Co.,Mo.

Ceryphaeus boothi Branson & Williams,See Dalmanites (Cryphaeus) boothi (Green)

Cryphaeus boothi Grabau & Shimer,See Dalmanites (cryphaeus) boothi (Green)

Cryphaeus boothi Green,See Dalmanites(cryphaeus)boothi (Green)

Cryphaeus boothi Grabau,See Dalmanites(cryphaeus)boothi (Green)

Cryphaeus boothi var. Calliteles Green

Cryphaeus boothi var.calliteles.Hall,Pal.N.Y.,VII,p.45, pls.16,16A.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 315,f.258,1899;Encrinal.l.s.-N.Y.

Genus CTENOBOLBINA Ulrich
(1890.Jour.Cin.Soc.Nat.Hist.,XIII,p.108)

Cteno bolbina denticula Ulrich & Bassler

Cteno bolbina? denticula Ulrich & Bassler,Md.Geol.Surv., L.Dev.,p.542,pl.96,f.6-9,1913;Helderberg Form., Keyser Member,Cumberland,Md.

Ctenobolbina dubia Ulrich & Bassler.

Ctenobolbina? dubia Ulrich& Bassler,Md.Geol.Surv.,L. Dev.,p.525,pl.96,f.10-12,1913;Helderberg Form., Keyser Member,Cumb.,Md.

Ctenobolbina minima Ulrich

Ctenobolbina minima-Ulrich,Jour.Cin.Soc.Nat.Hist.,XIII, p.188,pl.15.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 309,f.252,1899.Hamilton sh.,Fighteen Mile Creek,Near Buffalo.N.Y.

Cyathaspis australis ohern.

Cyathaspis australis ohern,Md.Geol.Surv.,L.Dev.,p.492-493,pl.89,f.7,8,1913;Helderberg Form,,Cumb.Md.

Genus CYPHASPIS Burmeister
(1843.Burmeister,Organisation der Trilobiten,p.103)

Cyphaspis Ornata (Hall)

Cyphaspis ornata.Hall,Pal,N.Y.,VII,p.145,pls.21,24.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.318,f.263,1899; Hamilton group,Fighteen Mile Creek,N.Y.

Cyphaspis stephanopora Hall

Cyphaspis cf.stephanopora.Hall,Pal.N.Y.,VII,p.142,pl. 24,f.2-6,1888.-Kindle,Md.Geol.Surv.,Mid.& Up.Dev.,p. 326-327,pl.42,f.9,1913;Romeny Form.,Onondaga Member, s.Berkeley Springs.W.Va.

Cytherina alta Conrad,See,Leperditea alta Conrad.

Dalmanatis(Coronura)aspectans Conrad(Hall & Clarke)

Asaphus aspectans Conrad,5th.Ann.Rep.Pal.N.Y.,p.49,f.9, 1841.

Dalmanites ohioensis Meek,Proc.Acad.Sci.,Phila.,p.91, 1871.

Dalmanates (coronura)aspectans.Hall & Clarke,Pal.N.Y., VII,p133,pl.13,f.1-11,13,1888.-Kindle,25th.Ann.Rep. Ind. Dept.Geol.Nat.Res.,p.756,not figured,1901; "Corniferous l.s.",Falls of the Ohio (H.& C.)

Dalmania aegeria Hall, See Dalmanites(Odonocephalus) aegeria Hall? sp.

Dalmania anchiops Hall, See Dalmanites (chasmops) anchiops(Green)

Dalmania boothii Hall, SeeDalmanites(Cryphaeus)boothi (Green)

Dalmania micrurus Hall, See Dalmanites micrurus (Green)

Dalmania nasutus(Conrad)

Asaphus nasutus Conrad, Ann. Rep. Pal. N.Y., p.48, 1841.

Dalmania nasutus Hall, Pa. N.Y., III, p.362, pl.75, f.2; pl. 76, f.1-9, 1859; L. Helderberg Group, Schoharie, N.Y.

Dalmania pleuroptyx (Green), See Dalmanites(Hausmannia) pleuroptyx(Green)

Dalmania pleuroptyx Hall, See Dalmanites(Hauamannia)pleuroptyx(Green)

Dalmania (Hansmannia)plruroptyx Ohern, See Dalmanites (Hausmannia)pleuroptyx (Green)

Dalmania tridens Hall

Dalmania tridens Hall, Pa. N.Y., III, p.361, pl.75, f.3-6, 1859; L. Helderberg group, Schoharie, N.Y.

Genus DALMANITES Barrande
(1837. Jour. Acad. Nat. Sci., VDI, p.217)

Dalmanites sp. Branson & Williams

Dalmanites sp. Branson & Williams, The Dev. of Mo., p.162, 1922; Grand Lower l.s., Little Saline Creek, Mo.

Dalmanites sp. Tansey

Dalmanites sp. Tansey, The Dev. of Mo., p.209, pl.55, f. 2-7; pl.56, f.1, 1922; Bailey l.s., Little Saline Creek, Ste Genevieve Co., Mo.

Dalmanites sp. Stewart

Dalmanites sp. Stewart, The Dev. ofMo., p.267, pl.71, f.18, 1922; Little Saline Creek, l.s., Ste Genevieve Co., Mo.

Dalmanites sp. Weller

Dalmanites sp. Weller, Pal. N.J., III, p.346, pl.50, f.6,

1903;Mid.& Up.Oriskany,N.J.

Dalmanites sp.Nov.A.Var. Clarke? See Dalmanites stemmatus var convergens Clarke

Dalmanites (Odonocephalus)aegeria Hall

Dalmania aegeria Hall,15th.Ann.Rep.Regents N.Y.Univ., p.85,1861.

Dalmanites (Odonocephalus)aegeria.-Meek and Worthen, Ill.Geol.Surv.,III,p.417,pl.10,f.4a-c,1868;Cornif-erous;4 mil.w.Jonesboro,Union Co.,Ill;1 mi.e.Bald Knob,Union Co.Ill.-Kindle,25th.Ann.Rep.Ind.Geol. Nat.Res.,p.757,pl.31,f.5,1901;Jeffersonville l.s., Falls of the Ohio.

Dalmanites (Phasmops)anchiops (Green)

Calymene anchiops Green,Mon. of Trilobites of N.Am.,p.35 1832.

Asaphus Caticostatus Green,ibid.,p.45,1832.

Phacops anchiops Burmeister,Die Organisation der Trilo-biten,p.90,1846.

Dalmania anchiops.Hall,Description of New Species of Foss.,tec.,p.55,1861;15th.Ann.Rep.N.Y.State Cab.Nat. Hist.,p.33,1862.

Dalmanites anchiops Hall,Illus.Dev.Foss.,pl.9,f.1,3-6, 10,12,13;pl.10,f.6-14,1876.

Dalmanites(Chasmops)anchiops. Hall & Clarke,Pal.N.Y., VII,p.59,pl.9,f.1-6,10,12,13;pl.10,f.1-14,1888.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.755,pl. 31,f.2,2a-b,1901;Jeffersonville l.s.,Falls of the Ohio.-Weller,Pal.N.J.,III,p.388,pl.53,f.17,1903; Monroe St.,Greenwood Lake,N.J.-Ohern,Md.Geol.Surv., L.Dev.,p.508-510,pl.93,f.5,1913;Oriskany Form.,Rid-gely Member,Locality unknown.

Dalmanites aspinosus Weller

Dalmanites aspinosa Weller,Pal.N.J.,III,p.252,pl.22,f. 15,1903.

Dalmanites aspinosus Maynard,Md.Geol.Surv.,L.Dev.,p. 499,pl.91,f.16,1913;Helderberg Form.,Keyser Member. Devil's Backbone,Cash Valley,Md.

Dalmanites cf.aspinosus Stewart,The Dev. of Mo.,p.365,

pl.71,f.10,11,1922;Little Saline Creek,l.s.,Ste Genevieve Co.,Mo.

Dalmanites berkleyensis Swartz

Dalmanites berkleyensis Swartz,Md.Geol.Surv.,L.Dev., p.512,pl.94,1913;Oriskany Form.,Ridgely Member, Pennsylvania Sand Quarry,N.Berkley Springs,W.Va.

Dalmanites bisignatus Clarke.

Dalmanites bisignatus Clarke,N.Y.State Mus.,Mem.III, No.3,p.19,pl.2,f.6-8,1903.

Dalmanites cf bisignatus Stewart,The Dev. of Mo.,p.265-266,pl.71,f.12,1922;Little Saline Creek l.s.,Ste Genevieve Co.,Mo.

Dalmanites (Cryphaeus)boothi (Green)

Cryphaeus boothii Green,Am.Jour.Sci.,XXXII,p.343,and figure,1837.

Dalmania boothii Hall,Descripitons New Species of Foss., etc.,p.63,1861;15th.Rep.N.Y.State Cab.Nat. Hist.,p. 91,1862.

Dalmanites boothii Hall,Illus.Dev.Foss.,pl.16,f.1-6,9-11,13,15,16,1876.

Dalmanites(Cryphaeus)boothi Hall & Clarke,Pal.N.Y., VII p.42,pl.16,f.1-4;pl.16A,f.3-8,1888.

Dalmanites boothi Keyes,Johns Hopkins Univ.Circ.,11,p. 29,1891.

Dalmanites(Cryphaeus)boothi Clarke,N.Y.State Mus.,Bull. 65,p.683,1903.

Cryphaeus boothi.Grabau & Shimer,N.Am.Index Foss.II,p.329, f.1648a,b.1910. Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.314,f.257,1899;Moscow St.,Eucrinal l.s,N.Y.-Branson & Williams,The Dev. of Mo.,p.162-163,pl.39,f. 10,1922; s.s.Member St.Laurent,s.Lithium,Perry Co., Mo.

Dalmanites (Cryphaeus) boothi Prosser & Kindle,Md.Geol. Surv.,Mid.& Up.Dev.,p.333-334,pl.44,f.1-4,1913; Romney Form.Hamilton Member,E.bank Evitts Creek below Wolfe Mill;Mid Way between Romney and Hanging Rock,W.Va.

Dalmanites boothii Hall,See Dalmanites(Cryphaeus)boothi (Green)

Dalmanites boothi Keyes, See Dalmanites(Cryphaeus) boothi (Green)

Dalmanites (Cryphaeus) boothi var calliteles Greene (H & C)

Dalmanites (Cryphaeus) calliteles Hall & Clarke, Pal.N. Y.VII, p.45, pl.16, f.5-22, pl.16A, f.9-17, 1888.

Dalmanites (Cryphaeus) boothi var calliteles Kindle, 25 th. Ann. Repl Ind. Dept. Geol. Nat. Res., p.754, pl.31, f.3, 4, 1901; Jeffersonville l.s., Little Rock Creek, Cass Co., Ind.

Dalmanites (Cryphaeus) calliteles Halll& Clarke, See Dalmanites (Cryphaeus) boothi var calliteles Greene (H & C)

Dalmanites (Chosmaps) calypso Hall & Clarke,

Dalmanites (Chosmops) calypso. Hall & Clarke, Pal. N.Y., VII, p.64, pl.11a, f.19-22, 1888.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.755, pl.30, f.3, 1901; Sellers -burg beds, Charlestown, Ind.

Dalmanites carlwegi Tansey

Dalmanites carlwegi Tansey, The Dev. of Mo,, p.209-210, pl.56, f.2, 1922; Bailey l.s., Little Saline Creek, Ste Genevieve Co., Mo.

Dalmanites dentata Barrett, See Dalmanited (Corycephalus) dentatus Barrett.

Dalmanites (Corycephalus) dentatus Barrett

Dalmanites dentata Barrett, Amer. Jour. Sci., 3d. ser., XI, p.200, pl.-1876.; Am. Jour. Sci., 3d. ser., XII, p.70, 1876.

Dalmanites (Corycephalus) dentatus Hall & Clarke, Pal.N Y.VII, p.58, pl.11a, f.4-6, 1888.

Dalmanites dentatus Weller, Pal. N.J., III, p.339, pl.44, f. 1-3, 1903; Lower Oriskany, N.J.

Dalmanites (Corycephalus) dentatus ? Ohern, Md. Geol. Sur L.Dev., p.505-506, pl.93, f.4, 1913; Oriskany Form., Ridgely Member, Evick Gap opposite Franklin, Pendleton Col, W.Va.

Dalmanited griffoni Clarke

Dalmanites griffoni. Clarke, N.Y. State Mus., Mem. IX, pt.1, p.103, pl.7, f.4; pl.9, f.4, 1908;-Tansey, The Dev. of Mo p.209, pl.55, f.1, 1922; Bailey l.s., Little Saline Creek Ste Genevieve Co., Mo.

Dalmanites keyserensis Swartz

Dalmanites keyserensis,Swartz,Md.Geol.Surv.,L.Dev.,p. 499-500,pl.91,f.8,9,1913;Helderberg Form.,Keyser Member,Monoloway,Md.

Dalmanites latus Ohern

Dalmanites latus Ohern,Md.GeolSurv.,L.Dev.,p.502-503, pl.93,f.2,1913;Oriskany Form.,Ridgely Member.Cumberland,Md.

Dalmanites marylandicus Prosser & Kindle

Dalmanites marylandicus Prosser & Kindle,Md.Geol.Surv. Mid.& Up.Dev.,p.334-335,pl.44,f.5,1913;Romney Form. Hamilton Member.Ernstville,Md.

Dalmanites micrurus (Green)

Asaphus micrurus Green,Monograph.Trilobites,N.Am.,p. 56,f.3,1832.

Dalmania micrurus Hall,Pal.N.Y.,III,p.359,pl.74,f.13-20,1861;L.Helderberg group,Albany & Schoharie Cos., N.Y.

Dalmanites micrurus.Clarke,N.Y.State Mus.,Mem.IX,pt.1 p.120,pl.9,f.1-3,1908-Ohern,Md.Geol.Surv.,L.Dev., p.507,pl.91,f.10,11,1913;Helderberg Form.,New Scotland (?) Member.Cumberland,Md;Oriskany Form.,Ridgely Member.Cumberland,Md.

Dalmanites micrurus ? Stewart,The Dev. of Mo.,p.266,pl. 71,f.22,1932;Little Saline Creek l.s.Ste Genevieve Co.,Mo.

Dalmanites multiannulatus Ohern

Dalmanites multiannulatus OhernMd.Geol.Surv.,L.Dev.,p. 500-502,pl.91,f12-15,pl.92;pl.93,f.1,1913;Oriskany Form.,Ridgely Member,Knobly Mtn.,near Cumberland,Md

Dalmanites ohioensis Meek,See Dalminates (Coronura) aspectans Conrad (H & C)

Dalmanites (Cryphaeus) pleione Hall & Clarke

Dalmanites (Crypaheus) pleione.Hall & Clarke,Pal.N.Y., VII,p.41,pl.16A,f.3,1888.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.754,not figured,1901;Sellersburg beds Falls of the Ohio.

Dalmanites (Hausmannis) pleuroptyx (Green)

Asaphus pleuroptyx Green, See Dalmanites (Hausmannia) pleuroptyx(Green)

Dalmania pleuroptyx Hall, Pal. N.Y., III, p.356, pl.74, f. 5? 9? (not fig.1-4, 6-8, 10-12); pl.75, f.1?1861; L. Helderberg group. Schoharie, Becraft's Mt., N.Y.

Dalmanites (Hansmannia) plruroptyx. Hall and Clarke, Pal. N.Y., VII, p.28, pl.11a, f.1-3, 1888.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.756, 1901; Jeffersonville l.s. Falls of the Ohio.-Ohern, Md. Geol. Surv., L. Dev., p.510, pl.93, f.6-10, 1913; Helderberg Form., Coeymens Member. Devil's Backbone; New Scotland Member. Devil's Backbone, Corriganville, Dawson, Md.-Stewart, The Dev. of Mo., p.266, pl.71, f.16, 1922; Little Saline Creek l.s., Ste Genevieve Co., Mo.

Dalmanites pleuroptyx Weller, Pal. N.J., III, p.295, pl.32, f. 1; p.322, pl.39, f.9-10, 1903; Coeymans l.s. N.J., New Scotland beds, N.J.

Dalmanites praenuntia Stewart

Dalmanites praenuntia Stewart, The Dev. of Mo., p.267-268, pl.71, f.19, 1922; Little Saline Creek, l.s. Ste Genevieve Co., Mo.

Dalmanites (Odontocephalus) selenurus (Hall & Clarke)

Dalmanites (Odontocephalus) selenurus. Hall & Clarke, Pal. N.Y., VII, p.49, pl.11B, f.15-21; pl.12, f.1-3, 1888.-Kindle 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.756, 1901; Jeffersonville l.s. Falls of the Ohio.

Dalmanites Slocomi Stewart

Dalmanites Slocomi Stewart, The Dev. of Mo., p.266-267, pl. 71, f.20, 1922; Little Saline Creek l.s. Ste Genevieve Co., Mo.

Dalmanites (Synphoria) Stemmatus Clarke

Dalmanites (Synphoria) Stemmatus. Clarke, N.Y., State Mus., Mem. III, No.3, p.15, pl.1, f.6-16; pl.2, f.1, 2, 1900;-Ohern, Md. Geol. Surv., L. Dev., p.503-505, pl.93, f.3, 1913; Oriskany Form., Ridgely Member. Cumb., Md.

Dalmanites Stennatus var convergens Clarke

Dalmanites Stemmatus var convergens Clarke, N.Y. State Mus., Mem. III, No.3, p.19, pl.2, f.3-5, 1900.-

Dalmanites cf. Stemmatus var convergens Stewart, The Dev. of Mo., p.267, pl.71, f.17, 1922; Little Saline Creek l.s

Ste Genevieve Co.,Mo.

Dalmanites sp.Nov.A. var.,Amer.Jour.Sic.,p.412,1892.

Dicranurus hamatus conrad,See acidaspis hamata Hall

Dipleura dekayi Green,See Homalonotus dekayi (Green)

Dipleura dekayi vanuxem,See Homalonotus dekayi(Green)

Dolichopterus macrocheirus Hall

Dolichopterus macrocheirus Hall,Pal.N.Y.,III,p.414,pl. 83,f.1;pl.83A,f.1,1861;Waterline Group.Near Buffalo

Genus ENTOMIS Jones
(1873.Ann. & Mag.Nat.Hist.,Sec.4,XI,p.413)

Entomis rhomboidea Jones

Entomis rhomboidea.Jones,Quart.Jour.Geol.Soc.,XLVI,p. 10,1890.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.304,f. 244,1899;Eighteen Mile Creek,Lake Erie Shore,N.Y.

Genus EURYPTERUS DeKay

DeKay,Annals of the Lyceum of Nat.Hist. of N.Y.

Harlan,Hibbert,Fischer,Conrad,Vanuxem,

Burmeister,Roemer,Eichwald,Pictet,McCoy,Salter,Huxley and others.

Eidothea:Scouler

Lepidoderma: Reuss
(1859.Hall,Pal.N.Y.,III,p.382-384)

Eurypterus dekayi Hall

Eurypterus dekayi Hall,Pal.N.Y.,III,p.411,pl.82,f.1, 1861;Waterline group.Blackrock,N.Y.

Eyrypterus lacustris Harlan

Eurypterus lacustris Harlan,Trans.Geol.Soc.Penn.,I,p.98, pl.5,1834;Med.& Phys.Researches,p.297.-Hibbert,Trans. Royal Soc.Edinburgh,XIII,pl.12-Hall,Pal.N.Y.,III,p. 407,pl.81,f.1-11;pl.81A,f.1;pl.81B,f.1-5;pl.83B,f. 3,1861;Waterline group.Near Williamsville and Buffalo N.Y.

Eurypterus remipes.Roemer,Dunker and von Meyer,

Palaeontographica,I,p.18,- Picket,Traite de Paleontologic,II,p.29,pl.46,f.14,1853.-Brown,et Roemer, Lethea,3d.ed.,II,p.666,pl.9,f.1,1854.

Not Eurypterus remipes of DeKay.

Not Eurypterus lacustris. Salter,Quart.Jour.Geol.Soc. London,XV,p.235,1859.

Eurypterus lacustris var robustus Hall

Eurypterus lacustris var robustus Hall,Pal.N.Y.,III,p. 410,pl.81 C,f.1,1859;Waterline group.Near Buffalo, N.Y.

Eurypterus microphthalmus Hall

Eurypterus microphthalmus Hall,Pal.N.Y.,III,p.407,pl. 80A,f.7,1859;Waterline group. Near Cazenovia ,N.Y.

Eurypterus pachycheirus Hall

Eurypterus pachycheirus Hall,Pa.N.Y.,III,p.412,pl.82,f. 1-3,1859;Waterline group. Blackrock and 4 mi.e.Buffalo,N.Y.

Eurypterus pustulosus Hall

Eurypterus pustulosus Hall,PalN.Y.,III,p.413,pl.83B,f. 1,1859;Waterline group.Near Buffalo,N.Y.

Eurypterus remipes DeKay

Eurypterus remipes.DeKay,Annals of Lyceum Nat.Hist.,N.Y I,p.375,pl.29,1825.-Harlan,Trans.Geol.Soc.Phila.,I, p.96,pl.5,1832;Medical & Physical Researches.-Milne-Edwards,Hist.Nat.des Crustacees,III,p.432.-Burmeister Organisation der Trilobiten,p.62,1843;Roy.Soc.Pub., p.54,1846.-Bronn,Lethea Geognostica,I,p.109,t.9,f.1-Salter,Quarterly Jour.Geol.Soc.,London,p.235,1859, Also cited by mumerous other authors.-Hall,Pal.N.Y., III,p.404,pl.80,f.1-12;pl.80A,f.1-6;pl.83B,f.2,1859; Waterline group,Westmoreland,Oneida Co.,Wheelock's hill,Litchfield,Herkimer Co.,N.Y.

Not Eurypterus remipes. Eichwald,Bull.Imp.Soc.Nat.Moscow,1851.-Roemer,Palaeontographica,I,t.27,1884; Lethea,Ed.III,t.9,f.1,1854.

Genus GOLDIUS Raymond (BRONTEUS Angelin)

Goldius barrandii Hall

Bronteus barrandi Hall,Pal.N.Y.,III,p.350,pl.73,f.1-4,

1861;L.Helderberg group.Schoharie Co.,N.Y.

Bronteus canadensis Logan,Geol.Canada,p.391,1863.

Bronteus barrandii. Clarke,N.Y.State Mus.,Mem.IX,pt.1, p.104,pl.9,f.12,13,1908.-Tansey,The Dev. of Mo.,p. 208,pl.54,f.27,1922;Bailey l.s.,Little Saline Creek, Ste Genevieve Co.,Mo.

Genus HALLIELLA Ulrich

Halliella?seminulum var longa Ulrich & Bassler

Halliella? seminulum var longa Ulrich & Bassler,Md.Geol. Surv.,L.Dev.,p.520-521,pl.95,f.16,1913;Helderberg Form.,Keyser Member.Cumberland,Md.

Halliella? triplicata Ulrich & Bassler.

Halliella? triplicata Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.521,pl.95,f.17,18,1913;Helderberg Form.,Keyser,Member.Cumberland,Md.

Genus Homalonotus Koenig
(1825.Icones Foss.Sectiles,p.4)

Homalonotus sp. Branson & Williams

Homalonotus sp.Branson & Williams,The Dev.of Mo.,p.162, 1922;St.Laurent l.s. 3 mi.s.St.Marys,Perry Co.,Mo.

Homalonotus dekayi (Green)

Dipleura dekayi. Green,Mon.Trilobites,N.A.,p.79,1832; vanuxem,Geol.N.Y.,pt.3,p.150,f.1,1842.

Homalonotus dekayi,Emmons,Mon.Geol.p.146,f.134,135, 1860.-Hall,15th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p. 113,1862;Pal.N.Y.,VII,p.7,pl.2,f.1-11;pl.3,f.1-5; pl.4,f.1-6;pl.5,f.1-10,1888.-Keyes,Johns Hopkins Univ.Circ.,XI,p.39,1891.-Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.312,f.255,1899;Hamburgh and Eighteen Mile Creek,Erie Co.,N.Y.-Weller,Pal.N.J.,III,p.387,not figured,1903;Monroe St.,Sylvester's Corners,N.J.-Grabau & Shimer,N.Am.Index Foss.,II,p.318,f.1631, 1910.-Prosser & Kindle Md.Geol.Surv.,Mid.& Up.Dev., p.328-329,pl.43,f.1-7,1913;Romney Form.,Hamilton Member,e.Pine Hill 4 mi.n.Oldtown,Md.,Hancock-Harrisonville Road 2 mi.n.Hancock,Md.

Homalonotus (Diplrura)dekayi,Clarke,N.Y.State Mus., Bull,65,p.712,1903.

Homalonotus swartzi ohern

Homalonotus swartzi Ohern,Md.Geol.Surv.,L.Dev.,p.495, pl.83,f.10-12;pl.90,f.1,2,1913;Oriskany Form.,Ridgely Member.Sand Quarry 4 mi.s.w.Hancock,Md; Miller's Spring,W.Va.

Homalonotus vanuxemi Hall.

Homalonotus vanuxemi.Hall,pa.N.Y.,III,p.352,pl.73,f.9-14,1861;L.Helderberg group.Helderberg Mountains, Albany Co. and Herkimer Co.,N.Y.-Hall and Clarke,Pal. N.Y.,VII,p.11,pl.5b,f.1,2,1888.-Weller,Pal.N.J.,III, p.321,pl.39,f.7,8;p.338,pl.44,f.4-7,1903;Berraft l.s. N.J.;Lower Oriskany,pl.89,f.13-15;pl.90,f.3,1913; Oriskany Form.,Ridgely Member.Knobly Mountain,Near Cumberland,Md.

Genus ISOCHILINA Jones
(1858.Can.Org.Remains,Decade III,p.197)

Isochilina fabacea Jones

Isochilina fabocea Jones,Quart.Jour.Geol.Soc.,XLVI, p.22,pl.11.

Isochilina(?) fabacea.Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.307,f.249,1899;Hamilton group.Eighteen Mile Creek Lake Erie Shore,N.Y.

Genus KLOEDENIA Jones & Hall

Kloedenia barretti(Weller)

Beyrichia barretti Weller,Pal.N.J.,III,p.354,pl.23,f. 9,1903.

Kloedenia barretti Ulrich & Bassler,Proc.U.S.Nat.Mus., XXXV,p.301(gen.ref),1908; Md.Geol.Surv.,L.Dev.,p. 532-533,pl.97,f.17,1913;Helderberg Form.,Keyser Member.Tonoloway,Md.

Kloedenia Centricornis Ulrich & Bassler

Kloedenia centricornis Ulrich & Bassler,Proc.U.S.Nat. Mus.,XXXV,pl.38,f.23,1908;Md.Geol.Surv.,L.Dev.,p. 529,pl.97,f.14,1913;Helderberg Form.,Keyser Member. Cumberland,Md.

Kloedenella Clarkei (Jones)

Beyrichia Clarkei,Jones,Quart.Jour.Geol.Soc.London, XLVI,p.17,text fig.2,1890.

Bollia clarkei Ulrich,Geol. and Nat.Hist.Surv.,Minnesota Final Rep.,III,pt.2,p.669,1894.

Kloedenella clarkei Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, p. 319, 1908; Md. Geol. Surv., L. Dev., p. 533-534, pl. 97, f. 21, 1913; Helderberg Form., Keyser Member. Cumberland, Md.

Kloedenella clarkei var paupera Ulrich & Bassler,

Kloedenella clarkei var paupera Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, pl. 43, f. 5, 1908; Md. Geol. Surv., L. Dev., p. 534, pl. 98, f. 1-3, 1913; Helderberg Form., Keyser Member. Cumberland, Md.

Kloedenia fumbriata Ulrich & Bassler

Kloedenia fimbriata Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, pl. 38, f. 22, 1908; Md. Geol. Surv., L. Dev., p. 529-530, pl. 97, f. 5-7, 1913; Helderberg Form., Keyser Member. Cumberland, Md.

Kloedenia kummeli (Weller)

Beyrichia kummeli Weller, Pal. N.J., III, p. 266, pl. 24, f. 21, 1903.

Kloedenia kummeli Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, p. 301 (gen. ref.), 1908; Md. Geol. Surv., L. Dev., p. 531, pl. 97, f. 16, 1913; Helderberg Form., Keyser Member. Tonoloway, Md.

Kloedenia nearpassi (Weller)

Beyrichia nearpassi Weller, Pal. N.J., III, p. 255, pl. 23, f. 7, 8, 1903.

Kloedenia nearpassi Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, p. 301 (gen. ref.) 1908; Md. Geol. Surv., L. Dev., p. 530-531, pl. 97, f. 12, 13, 1913; Helderberg Form., Keyser Member. Tonoloway, Md.

Kloedenella pennsylvanica (Jones)

Kloedenia pennsylvanica Jones (part), Am. Geol., IV, p. 341, pl., f. 5a-d, 6 (not 7a, b, 8, 9), 1889.

Kloedenella pennsylvanica Ulrich and Bassler, Proc. U.S. Nat. Mus., XXXV, p. 304, f. 54; p1318, pl. 43, f. 1-3, 1908; Md. Geol. Surv., L. Dev., p. 533, pl. 97, f. 18-21, 1913; Helderberg Form., Keyser Member Tonoloway, Md.

Kloedenia pennsylvanica Jones, See:

Kloedenella pennsylvanica (Jones)

Kloedenella turgida Ulrich & Bassler.

Kloedenella turgida var ventrosa Ulrich & Bassler

Kloedenia sussexensis (Weller)

Beyrichia sussexensis Weller, Pal. N.J., III, p.253, pl.23, f.3,4, 1903.

Kloedenia sussexensis Ulrich & Bassler, Proc. U.S. Nat. Mus. XXXV, p.301, pl.38, f.19,20, 1908; Md. Geol. Surv., L. Dev., p.532, pl.97, f.14,15, 1913; Helderberg Form., Keyser Member. Tonoloway, Md.

Kloedenella turgida Ulrich and Bassler

Kloedenia pennsylvanica Jones, (part) Am. Geol. IV, p.341, f.8,9 (not 5-7), 1889.

Kloedenella turgida Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, pl318, pl.43, f.6,7, 1908; Md. Geol. Surv., L. Dev., p. 535, pl.98, f.4-6, 1913; Helderberg Form., Keyser Member. Cumberland, Md. Keyser, W. Va.

Kloedenella turgida var ventrosa Ulrich & Bassler

Kloedenia pennsylvanica Jones (part) Am. Geol., IV, p.341, f.7a,b, (not 5,6,8,9), 1889.

Kloedenella turgida var ventrosa Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, pl.43, f.8, 1908; Md. Geol. Surv., L. Dev., p.535-540, pl.98, f.7, 1913; Helderberg Form., Keyser Member. Cumberland, Md.

Genus LEPERDITIA Rouault.

Leperditia alta (Conrad)

Cytherina alta conrad, vanuxem Geol. Rep. 4th. Dist. p.113, f.6, 1843.

Leperditia alta Hall, Pal N.Y., III, p.373, pl.84 A, f.6a-e, 1859; L. Helderberg gr. Numerous localities in N.Y.

Leperditia (Cytherina) alta? See Leperditia Jonesi Hall

Leperditia altoides Weller

Leperditia altoides. Weller, Pal. N.J., III, p.252, pl.23, f.1,2, 1903.-Ulrich & Bassler, Md. Geol. Surv., L. Dev., p.513, pl.97, f.8,9, 1913; Helderberg Form. Keyser Member, Devil's Backbone, Tonoloway, Md.

Leperditia elongata Weller.

Leperditia elongata. Weller, Pal. N.H., III, p.259, pl.23, f. 1, 1903.-Ulrich & Bassler, Md. Geol. Surv., L. Dev., p.514,

pl.97,f.11,1913;Helderberg Form.,Keyser Member,Tonoloway,Md.

Leperditia gigantea Weller

Leperditia gigantea. Weller,Pal.N.J.,III,p.260,pl.23, f.14,1903.-Ulrich & Bassler,Md. Geol.Surv.,L.Dev., p.514-515,pl.97,f.10,1913;Helderberg Form.,Keyser Member.Tonoloway,Md.

Leperditia hudsonica Hall.

Leperditia hudsonica.Hall,Pal.N.Y.,III,p.375,pl.79A, f.7a-c,1859;L.Helderberg gr.Becraft's Mountain,near Hudson,N.Y.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 308,f.250,1899;Eighteen Mile Creek,Lake Erie Shore, N.Y.

Leperditia jonesi Hall

Leperditia (Cytherina) alta? Pal.N.Y.,II,p.331,pl.78,f. 2,1852.

Leperditia jonesi Hall,Pal.N.Y.,III,p.372,pl.79A,f.5a-e,1859;L.Helderberg gr. Shoharie and Herkimer Co., N.Y.

Leperditia parasitica Hall

Leperditia parasitica Hall,Pal.N.Y.,III,p.376,pl.79A,f. 8a,b,1859;L.Helderberg.gr.

Leperditia parvula Hall

Leperditia parvula Hall,Pal.N.Y.,III,p.376,pl.79A,f.9a, b,1859;L.Helderberg gr.Herkimer Co.,N.Y.

Leperditia punctulifera Hall, See Primitiopsis punctulifera (Hall)

Leperditia? subrotunda Ulrich

Leperditia subrotunda Ulrich,Jour.Cin.Soc.Nat.Hist.,XIII p.181,pl.16,f.1a-c,1891.

Leperditia ? cf.subrotunda Kindle,U.S.G.S.,Bull.508,p. 115,pl.9,f.7,1912.

Leperditia? subrotunda Kindle,Md. Geol.Surv.,Mid.& Up. Dev.,p. 335-336,pl.44,f.6,1913;Romney Form.,Onondaga Member. 1 mil.s.Berkeley Springs,W.Va.

Genus LICHAS Corda

Lichas sp. Stewart

Lichas sp. Stewart, The Dev. of Mo.,p.264,pl.71,f.8,9, 1922;Little Saline Creek l.s. Ste Genevieve Co.,Mo.

Lichas sp. Kindle

Lichas sp.Kindle,25th. Ann.Rep.Ind. Dep. Geol.Nat. Res., p.758,pl.31,f.6,1901;Jeffersonville l.s. Falls of the Ohio.

Lichas bigsbyi Hall

Lichas bigsbyi Hall,Pal.N.Y.,III,p.364,pl.77,f.1-8,1859; L. Helderberg gr. Coeymans,Schoharie and Carlisle, N.Y.

Lichas (Ceratolichas) gryps Hall, See Ceratolichas gryps Hall

Lichas pustulosus Hall

Lichas pustulosus.Hall,Pal.N.Y.,III,p.366,pl.77,f.9-12;pl.78,f.1-7,1859;Helderberg gr.Albany and Schoharie Cos.N.Y.,-Weller,Pal.N.J.,III,p.320,pl.40,f.1, 2,1903;Becraft l.s. N.Jersey.

Genus MESOMPHALUS Ohern & Maynard
(1913.Md. G.S.,L.Dev.,p.522)

Mesomphalus hartleyi Ulrich & Bassler

Mesomphalus hartleyi Ulrich and Bassler, Md. Geol.Surv., L.Dev.,p.523,pl.95,f.22-24;pl.96,f.1-3,1913;Helderberg Form.,Keyser Member.Cumberland,Md.,Keyser,W.Va.

Mesomphalus submarginata Ulrich & Bassler

Mesomphalus submarginata Ulrich & Bassler,Md.Geol.Surv., L.Dev.,p.523,pl.96,f.4,5,1913;Helderberg Form,Keyser ember. Cumb.,Md.

Genus MOOREA Jones & Kirby
(1869.Ann. & Mag.Nat.Hist.,ser.4,III,p.225)

Moorea bicornuta Ulrich

Moorea bicornuta. Ulrich,Jour. Cin.Soc.Nat.Hist.,XIII, p.191,pl.16.-Grabau,Buffalo SoclNat.Sci.,Bull.6,p. 310,f.253,1899;Hamilton group Eighteen Mile Creek, N.Y.

Genus OCTONARIA Jones

Octonaria angylata Ulrich & Bassler

Octonaria? angulata Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.537,pl.98,f.9-11,1913;Helderberg Form.,Keyser Member.Cumb.,Md.Keyser,W.Va.

Octonaria inaequalis Ulrich & Bassler.

Octonaria inaequalis Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.538,pl.98,f.12-18,1913;Helderberg Form.,Keyser Member.Cumb.,Md.

Octonaria simplex (Krause)

Thlipsura simplex Krause,Zeits.deutsch,Geol.Gesell,, XLIII,p.1508,pl.32,f.16,1891.

Octonaria simplex Ulrich & Bassler,Md.Geol.Surv.,L.Dev., p.538,pl.98,f.19,1913;Helderberg Form.,Keyser Member. Cumb.,Md.

Sub Genus Odontocephalus Conrad (1840.Ann.Rep.Palaeont.N.Y.,p.204)

Odontocephalus sp.Meek & Worthen

Odontocephalus sp. Meek & Worthen,Ill.Geol.Surv.,III,p. 416,pl.9,f.10,1868;4 mi.w.Jonesboro,Union Co.,Ill.

Genus OLENUS Burmeister

Olenus thompsoni Hall

Olenus thompsoni Hall,Pal.N.Y.,III,p.525-526,f.on p. 526,1859;Upper Helderberg group.

Olenus vermontana Hall

Olenus vermontana Hall,Pal.N.Y.,III,p.527,f.on page 527,1859;Sh.Up.Helderberg gr.

Genus PACHYDOMELLA Ulrich

Pachydomella longula Ulrich & Bassler

Pachydomella longula Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.542,pl.98,f.29-31,1913;Helderberg Form.,Keyser Member.Cumb.,Md.

Genus PELTURA Milne Edwards

Paltura (Olenus)holopyga Hall

Peltura (Olenus)holopyga Hall,Pal.N.Y.,III,pl528-529, f.on p.529,1859;Sh.Hudson river group.

Genus PHACOPS Emmrich
(1839.Emmrich,De Trilob.Dessert)

Phacops sp. Stewart

Phacops sp. Stewart,The Dev. of Mo.,p.269,pl.71,f.26, 1922;Little Saline Creek l.s. Ste Genevieve Co.,Mo.

Phacops sp. Ohern

Phacops sp. Ohern,Md.Geol. Surv.,L.Dev.,p.498,pl.91,f. 5-7,1913;Oriskany Form.,Ridgely Member.Cumb.,Md.

Phacops ? sp. Weller

Phacops? sp. Weller,Pal.N.J.,III,p.364,pl.50,f.7,1903; Mid.& Up.Oriskany. New Jersey

Phacops anchiops Burmeister,See Dalmanites (Chasmops) anchiops (Green)

Phacops bombifrous Hall, See Phacops cristata Hall

Phacops bufo Emmons,See Phacops rana (Green)

Phacops cristata Hall

Phacops bombifrous Hall,Descriptions of New Species of Fossils,etc.,p.67,1861.

Phacops cristata.Hall and Clarke,Pal.N.Y.,VII,p.14-19, pl.6,f.1-13,16-29;pl.8A,f.1-4,1888.-Kindle,Ind.Dept. Geol.Nat.Res.,25th.Ann.Rep.,p.744,1901;Jeffersonville l.s.Falls of the Ohio;U.S.G.S.Bull.508,p.107-108,pl. 10,f.6-8,1912;Md.Geol.Surv.,Mid.& Up.Dev.,p.331-332, pl.43,f.13-15;1913; Romney Form.,Onondaga Member.s.e. Cumb.,Tonoloway,Md.;Hanging Rock,W.Va.-Grabau and Shimer,N.Am.Index Foss.,II,p.322-323,f.1637,1910.- Branson & Williams, The Dev. of Mo.,p.163,pl.39,f.1, 2,1922;Grand Tower l.s. Little Saline Creek,Mo.; Stewart,The Dev. of Mo.,p.268-269,pl.71,f.23-25,1922; Little Saline Creek l.s. Ste Genevieve Co.,Mo.

Phacops cristata var pipa Hall

Phacops cristata var.pipa-Hall,Pal.N.Y.,VII,p.18,pl.8A, f.5-18,1888.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat. Res.,p.744-745,pl.30,f.4,1901;Jeffersonville l.s. Falls of the Ohio;U.S.G.S.,Bull.508,p.108,pl.10,f. 9,10,1912;Md.Geol.Surv.,Mid.& Up.Dev.,p.337,pl.43, f.16,17,1913;Romney Form.,Onondaga Member. E.Oldtown

in cut of Western Maryland R.R.,Md.

Phacops hudsonicus Hall

Phacops hudsonicus.Hall,Pal.N.Y.,III,p.355,pl.73,f.24a, 26,28,1861.-Girty,U.S.G.S.,19th.Ann.Rep.,pt.3,p.571, pl.71,f.4a-d,1899.-Tansey, The Dev. of Mo.,p.210-211, pl.56,f.5-10,1922;Bailey l.s. Little Saline Creek, Ste. Genevieve Co.,Mo.

Phacops logani Hall

Phacops logani. Hall,Pal.N.Y.,III,p.353,pl.73,f.15-24, (not 24a),25,1861;L.Helderberg gr.Helderberg Mtns., N.Y.-Girty,U.S.G.S.,19th.Ann.Rep.,pt.3,p.571,1899.- Clarke,N.Y.State Mus.,Mem.III,p.21,pl.1,f.1-5,1900; N.Y.State Mus.,Mem.IX,pt.1,p.103,118,pl.10,f.1-4,7-9, 1908;N.Y.State Mus.,Mem.IX,pt.2,p.138,1909.-Weller, Pal.N.J.,III,p.321,pl.40,f.3,4,1903;New Scotland-Becraft Fauna,N.J.-Shimer,N.Y.State Mus.,Bull.80,p. 260,1905.Ohern,Md.Geol.Surv.,L.Dev.,p.497,pl.91,f.1-4;Helderberg Form,New Scotland Member. Devil's Backbone;Corriganville,Md; Cedar Cliff,W.Va.-Dunbar,Tenn. Geol.Surv.,Bull.21,pl.2,f.18,1919.-Tansey,The Dev.of Mo.,p.211-212,pl.56,f.16,17,1922;Bailey l.s. Little Saline Creek,Ste Genevieve Co.,Mo.

Phacops rana (Green)

Calymene bufo var.rana Green,monograph of the Trilobites of N.Am.p.42,1832.

Phacops bufo Emmons,Mon.Geol.p.138,f.124(6),1860.

Phacops rana.Hall,Descriptions of New species of Foss., etc.,p.55,1861;Rep.Regents Univ.N.Y.,appendix D,p. 93,1862;15th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p.93, 1862.-Meek & Worthen,Ill. Geol.Surv.,III,p.447-449, pl.11,f.1a-e,1868;Hamilton gr. "Bake oven",Jackson Co.,Ill.-Nicholson,Pal.Prov.Ontario,p.123,f.56a,1873. -Whitfield,Geol.Wisc.,IV,p.339,pl.26,f.17-19,1882.- Hall and Clarke,Pal.N.Y.,VII,p.19,f.1-11;pl.8,f.1-18, pl.8A,f.21-23,1888.-Keyes,Johns Hopkins Univ.Circ., XI,p.29,1891.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 313,f.256,Moscow to Marcellus sh.N.Y.-Kindle,25th. Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.744,pl.31,f.1,1a,b, 1901;Jefferson ville l.s. Charlestown,Ind.;Falls of the Ohio.-Clarke,N.Y.State Mus.,Bull.65,p.737,1903.- Weller,Pal.N.J.,III,p.387-388,pl.53,f.18,1903;Monroe sh.N.J.-Clarke and Mathews,Md.Geol.Surv.,VI,pl.17,f. 9,1906.-Grabau & Shimer,N.Am.Index Foss.II,p.323,f. 1638,1910.-Prosser & Kindle,Md.Geol.Surv.,Mid.& Up. Dev.,p.329-331,pl.43,f.8-12,1913;Romney Form.,Hamil-

ton Member.E. bank Evitts Creek below Wolfe Mill;just west Tonoloway Ridge;McCoys Ferry,Md.-Clarke & Swartz Md.Geol.Surv.,Mid.& Up.Dev.p.699,pl.72,f.8,9,1913; Jennings Form.,Parkhead Member.Williams Road on Polish Mtn.;National Road on Polish Hill,Md.-Branson and Williams,The Dev. of Mo.,p.163-164,pl.39,f.5,1922; St Laurent Form.,w.Lithium,Perry Co.,Mo.

Genus PHARTHONIDES Angelin
(1878.Palaeontologia Scnadinavica,p.21)

Phaethonides cyclurus Hall & Clarke,See Cordania Cyclurus (Hall and Clarke)

Phaethonides gemmaeus Hall & Clarke

Phaethonides gemmaeus.Hall & Clarke,Pal.N.Y.,VII,p.136, pl.24,1888.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p1317, f.263,1899;Hamilton gr.Eighteen Mile Creek,Erie Co., N.Y.

Genus PONTOCYPRIS Sars.

Pontocypris arcuata Ulrich and Bassler

Pontocypris arcuata Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.541,pl.98,f.23-25,1913;Helderberg Form.,Keyser Member. Cumb.,Md.

Pontocypris mawii var breviata Jones

Pontocypris mawii var breviata.Jones,Ann. and Mag.Nat. Hist.(6),IV,p.269,pl.15,f.4,1889.-Ulrich and Bassler, Md.Geol.Surv.,L.Dev.,p.541-542,pl.98,f.26-28,1913; Helderberg Form.,Keyser Mem.Cumb.,Md.

Genus PRIMITIA Jones and Hall
(1865.Ann.& Mag.Nat.Hist.,3d.Ser.,XVI,p.415)

Primitia concentrica Ulrich & Bassler

Primitia? concentrica Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.517-518,pl.95,f.6-8,1913;Oriskany Form., Shriver member.21st.Bridge,Cumb.,Md.

Primitia cumberlandica Ulrich & Bassler

Primitia? cumberlandica Ulrich & Bassler,Md.Geol.Surv., L.Dev.,p.516-517,pl.95,f.5,1913.Helderberg Form.,Keyser ember.Cumb.,Md.;Keyser,W.Va.

Primitia postturgida Ulrich & Bassler,

Primitia postturgida Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.515-516,pl.95,f.4,1913;Oriskany Form.,Shriver

Member.21st.Bridge,Cumb.,Md.

Primitia seminulum Jones

Primitia seminulum.Jones,Ann. & Mag.Nat.Hist.,Ser.5,XVII p.413,pl.14;Quart.Jour.Geol.Soc.,XLVI,p.5.-Grabau, Buffalo Soc.Nat.Sci.,6,p.303,f.242,1899;Encrinal l.s. Eighteen Mile Creek,Lake Erie Shore,N.Y.

Primitiella variolata Ulrich and Bassler

Primitiella variolata Ulrich and Bassler,Md.Geol.Surv., L.Dev.,p.518,pl.95,f.9,10.1913;Oriskany Form.,Shriver Member.21st.Bridge,Cumb.,Md.

Genus PRIMITIOPSIS Jones
(1887.Notes on Sil.Ostracoda,from Gotland,p.5)

Primitiopsis punctulifera (Hall)

Leperditia punctulifera Hall,13th.Ann.Rep.N.Y.State Mus. Nat.Hist.,p.92,1860.

Primitiopsis punctulifera Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.304,f.243,1899;Lower sh.on the Lake Shore, Erie Co.,N.Y.

Genus PROETUS Steininger
(1831.Mem. Soc.Geol.de France)

Proetus sp. Branson & Williams

Proetus sp.Branson and Willisam.The Dev. of Mo.,p.162, 1922;Grand Tower l.s. Mo.

Proetus canaliculatus Hall

Proetus canaliculatus.Hall & Clarke,Pal.N.Y.,VII,p.107, pl.20,f.10,11;pl.23,f.10,11,1888.-Kindle,25thlAnn. Rep.Ind.Dept.Geol.Nat.Res.,p.747,not figured,1901; "Corniferous l.s." Falls of the Ohio(H & C).

Proetus clarus Hall

Proetus clarus.Hall & Clarke,Pal.N.Y.,VII,p.104,pl.20, f.13-14;pl.22,f.28-30,1888.-Kindle,25th.Ann. Rep. Ind.Dep.Geol.Nat.Res.,p.751,pl.30,f.8,9,12,1901; Jeffersonville l.s. Falls of the Ohio;Lexington; Bunker Hill;Pipe Creek Falls.

Proetus conradi Hall

Proetus conradi.Clarke,N.Y.State Mus.Mem.III,No.3,p.25, pl.2,f.11-16,1900.-Stewart,The Dev. of Mo.p.263,pl.

71,f.2,1922;Little Saline Creek l.s.Ste Genevieve Co.,Mo.

Proetus phocion Clarke,N.Y.State Mus.,Mem.IX,pt.1,p. 135,pl.9,f.14-16,1908.

Proetus crassinarginatus Hall and Clarke

Proetus crassimarginatus-Hall & Clarke,Pa.N.Y.,VII,p.99 pl.20,f.6-8,20-31;pl.22,f.20-26;pl.15,f.8,1888.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p.750,pl. 30,f.1,1a,2,5,6,1901;Jeffersonville l.s. and Sellesburg beds.Pipe Creek Falls;Charlestown; Falls of the Ohio.-Grabau and Shimer,N.Am.Index Foss.,II,p.300, f.1611,1910.-Branson,The Dev. of Mo.,p.125-126,pl.21, f.8,9,10;pl.30,f.6-8,1922;Mineola l.s. Mo.-Branson & Williams, The Dev. of M.,p.161,pl.39,f.4,1922; Grand Tower l.s. Little Saline Creek,Mo.

Proetus curvimarginatus Hall and Clarke.

Proetus cruvimarginatus.Hall & Clarke,Pal.N.Y.,VII,p.94, pl.22,f.13-19,1888.-Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.316,f.261,1899;lowest Trilobite bed.Wananka Cliff N.Y.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p. 748,not.fig.,1901;Pendleton s.s.Pendleton,Ind.

Proetus sp.Grabau,Faunas Hamilton gr.,p.242.

Proetus folliceps Hall & Clarke

Proetus folliceps.Hall & Clarke,Pal.N.Y.,VII,p.101,pl.29 f.3-8,1888.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res p.749-750,pl.30,f.10,10a,1901;Jeffersonville l.s. Pipe Creek Falls

Proetus haldemani Hall

Proetus haldemani.Hall,Descriptions of New Species of Fossils,etc.,p.74,1861.-Hall & Clarke,Pal.N.Y.,VII, p.113-116,pl.21,f.7-9;pl.23,f.13-15,1888.-Branson & Williams,The Dev. of Mo.,p.161-162,pl.39,f.12,1922; Grand Tower l.s. Little Saline Creek,Ste Genevieve Co.,Mo.

Proetus latimarginatus Hall & Clarke

Proetus latimarginatus.Hall & Clarke,Pal.N.Y.,VII,p.97, pl.22,f.7-12,1888.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.746-747,not.fig.,1901;Pendleton s.s. Pendleton,Ind.

Proetus macrocephalus Hall & Clarke

Proetus macrocephalus.Hall & Clarke,Pal.N.Y.,VII,p.116,

pl.21,f.10-21;pl.23,f.30-31,1888.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.315,f.259,1899;Encrinal l.s. N.Y.-Kindle,25th.Ann.Rep.Ind.Dept.Geol.Nat.Res.,p. 751-753,pl.30,f.7-11,1901;Jeffersonville l.s.Pipe Creek Falls;Bunker Hill

Proetus microgemma Hall & Clarke

Proetus microgemma.Hall & Clarke,Pal.N.Y.,VII,p.109,pl. 22,f.33-34,1888.-Kindle,25th.Ann.Rep.Ind.Dept.Geol. Nat.Res.,p.748,not fig.,1901;"Corniferous l.s."Falls of the Ohio.

Proetus pachydermatus Barrett

Proetus pachydermatus-Weller,Pal.N.J.,III,p.248,pl.22, f.16-21,1903.-Maynard,Md.Geol.Surv.,L.Dev.,p.489,pl. 89,f.1,1913;Helderberg Form.,Keyser Member.Cumb.Md.

Proetus cf.Pachydermatus Stewart,The Dev. of Mo.,p. 263,pl.71,f.3,1922;Little Saline Creek l.s. Ste Genevieve Co.,Mo.

Proetus phocion Clarke,See Proetus conradi Clarke

Proetus protuberans Hall

Proetus protuberans-Hall,Pal.N.Y.,III,p.351,pl.73,f. 5-8,1861;L.Helderberg gr.Schoharie Co.,N.Y.-Weller, Pal.N.J.,III,p.296,pl.32,f.2,1903;Coeymanus l.s. N.J.-Stewart,The Dev.of Mo.,p.263-264,pl.71,f.4-7, 1922;Little Saline l.s. Ste Genevieve W.,Mo.

Proetus cf protuberans Ohern,Md.Geol.Surv.,L.Dev.,p. 490,pl.89,f.2-4,1913;Helderberg Form.,New Scotland Member,Corriganville,Md.

Proetus rowi (Green)

Proetus rowi. Hall & Clarke,Pal.N.Y.,VII,p.119,pls.21, 23,1888.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.316, f.260,1899;Trilobite(?)beds.Hamburgh and Eighteen Mile Creek,Erie Co.,N.Y.

Genus PTERYGOTUS (Agassiz)
(1859.Hall,Pal.N.Y.,III,p.416-417)

Pterygotus cobbi Hall

Pterygotus cobbi Hall,Pal.N.Y.,III,p.417,pl.83B,f.4; pl.84,f.8?,1859;Waterline gr.near Buffalo.

Pterygotus macrophthalmus Hall

Pterygotus macrophthalmus Hall,Pal.N.Y.,III,p.418,pl. 80A.f.8,8a,1859;Waterline gr.Wheelock's Hill,Litchfield,Herkimer Co.,N.Y.

Pterygotus osborni Hall

Pterygotus osborni Hall,Pal.N.Y.,III,p.419,pl.80A,f.9, 1859;Waterline gr.Waterville,Oneida Co.,N.Y.

Spathocharis emersoni Clark

Spathocharis emersoni Kindle,25th.Ann.Rep.Ind.Dept. Geol.Nat.Res.,p.579,pl.2,f.5-7,1901;New Albany St. Delphi,Ind.

Genus STREPULA Jones & Hall
(1886.Ann.& Mag.Nat.Hist.,Sec.5,XVII,p.403)

Strepula irregularis Jones & Hall

Strepula irregularis.Jones & Hall,Ann. & Mag.Nat.Hist. (5),XVII,p.404,pl.13,f.5,7,8,9,15,1886.-Ulrich and Bassler,Md.Geol.Sur.v,L.Dev.,p.519-520,pl.95,f.12-15,1913;Helderberg Form.,Keyser Member,Cumb.,Md.

Strepula plantaris Jones

Strepula plantaris.Jones,Quart.Jour.Geol.Soc.,XLVI,p. 540,pl.15,1890.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6, p.305,f.246,1899;Hamilton gr.Eighteen Mile Creek, Lake Erie Shore,N.Y.

Strepula sigmoidales Jones

Strepula sigmoidalis.Jones,Quart.Jour.Geol.Soc,,XLVI, p.11,1890.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p. 305,f.245,1899;Hamilton gr.Eighteen Mile Creek,Lake Erie Shore,N.Y.

Genus THLIPSURA Jones & Hall

Thlipsura multipunctata Ulrich & Bassler

Thlipsura multipunctata Ulrich & Bassler,Md.Geol.Surv., L.Dev.,p.536,pl.98,f.8,1913;Oriskany Form.,Shriver Member.21st.Bridge,Cumb.,Md.

Thlipsura simplex Krause,See Octonaria simplex(Krause)

Genus ULRICHIA Jones

Ulrichia aequalis Ulrich & Bassler

Ulrichia aequalis Ulrich & Bassler,Md.Geol.Surv.,L.Dev.,

p.518-519,pl.95,f.11,1913;Oriskany Form.,Shriver Member.21st.Bridge,Cumb.,Md.

P I S C E S

Genus DINCHTHYS Newberry

Dinichthys pustulosus,Eastman

Dinichthys pustulosus.Eastman,Bull.Mus.Comp.Zool., XXXI,no.2,p.38,pl.3,f.4,1897;Amer.Nat.XXXII,p.748-755,text fig.1,2, 1898;Jour.Geol.VIII,p.32-34,text fig.1.1900;Amer.Nat.XXXVI,p.657,text figs.1,2,1902 Mem.N.Y.State Mus.X,p.130-133,pl.2,f.6;pl.5,2 & 3; pl.12,text fig.25,1907;Iowa Geol.Surv.vol.18,p.194-198,pl.1,f.10;pl.4,text fig.28,1908.-Dean,Mem.N.Y. Acad.Sci.II,pt.3,p.122,1901.-Hussakof,Mem.Amer.Mus Nat.Hist. IX,pt.3,p.142-148,text fig.22 d,1906.-Branson, Dev. of Mo.,p.127-128pl.31,f.7,8,1922;Mineola l.s., Ralls Co.

Genus DIPTERUS Sedgw. and Murch.

Dipterus mordax.Eastman

Dipterus mordax Eastman,Jour.Geol.,VIII,p.39-40,text figs.6,8,1900;Rept.N.Y.State Mus.60,p.161-162,pl. 4,f.5 & 6, 1908;Iowa Geol.Surv.,18,p.220-221,pl. 2,fig.4 & 5,pl.7,f.5-9,1908.-Branson,Dev.Mo.,p. 128-129,pl.21,f.11,1922;Calloway l.s.Montgomery Co.

Genus GLYPTASPIS Newberry

(1913.Md. Geol.Surv.,Mid. & Up.Dev.,p.700,Swartz)

Glyptaspis sp. Branson

Glyptaspis sp. Branson,The Dev. of Mo.p.128,pl.31,f. 3,1922;Snyder Creek Shale,Calloway Co.

Glyptaspis eastmani Swartz

Glyptaspis eastmani Swartz,Md. Geol.Sur.,Mid. & Up. Dev.,p.700-701,pl.73,f.1-3,1913;Jennings Form; Parkhead Member Horse Ridge,S. W. of Hancock,W.Va., W. of Green Ridge,S. of Md-Penn.state line.

Genus ONYCHODUS Newberry

Onychodus sigmoides.Newberry

Onychodus sigmoides.Newberry,Proc.Nat.Ins.,Wash.,D. C.,New sec.,1,p.124,1857;Monograph U.S.Geol.Surv., XVI,p.56-57,pl.36,f.1-4a;pl.37,f.1-11,1889;-Hay U.S.Geol.Surv.,Bull.179,p.363,1902.-Eastman,Iowa Geol.Surv.,p.18,pl.1,f.4,11,1908;N.Y.State Mus., Memoir X,pl.1,f.3;pl.3,f.2,1908.-Branson and Wil-

liams, Dev. of Mo.,p.164-165,pl.39,f.3,1922; Grand Tower,l.s.,S.E.,Mo.

Genus PTYCTODUS Ponder.

Ptyctodus calceolus (Newberry & Worthen)

Rinodus calceolus Newberry & Worthen,Rept. Geol.Sur., Ill.,II,p.106-107,pl.10,f.10,10a-c,1866.

Ptyctodus calceolus.(Newberry & Worthen) Rept.Geol. Sur.Ill.,IV,p.274,1870;-Newberry, Rept. Geol.Sur., Ohio,II,Pal.pt.2,p.59,pl.59,f.13 & 13a,1875.-Calvin,Proc.Iowa Acad.Sci.,IV,p.18,1897.-Eastman,Rept. Geol.Sur. Iowa,VII,p.115,text fig.10a,1898;Amer. Nat.XXXII,p.476-479,f.1-17,1898;Mem.N.Y.State Mus. X,p.71-72,1907;Iowa Geol.Sur.,XVIII,p.133-135,pl.5, f.1-17,1908.-Weller,Jour.Geol.,VII,p.484-485,1899.-Norton,Rept.Geol.,Surv.,Iowa(1905),XVI,p.356,1906.-Cleland,Wis.Geol.Sur.Bull.21,p.150,pl.48,f.1-17, 1911.-Branson,Dev. Fishes of Mo.,Univ.Mo. Bull., Sci.,Ser.vol.2,p.64-65,pl.3,f.3 & 4,1914;Geol. of Mo.pl.4,f.16,1918;Dev. of Mo.,p.126-127,pl.31,f.1, 2,1922;Mineola l.s. Ralls Co.

Ptyctodus sp. Dean,Carnegie Ins.Wash.Pub.,no.32,p.137, text fig.116,1906.

Ptyctodus sp. Dean see Ptyctodus ferox Eastman.

Ptyctodus ferox Eastman

Ptyctodus ferox. Eastman,Amer.Nat.XXXII,p.480-484, text fig.35-40,1898;Jour.Geol.,VII,p.382,1899;Mem. N.Y.State Mus.X,p.72-73,1907;Iowa Geol.Sur.,XVIII, p.135-137,text. f.20-22,1908.-Cleland,Wis.Geol. Sur.Bull.21,p.151,pl.49,f.35-40,1911.-Branson,Dev. Fishes of Mo.,Mo. Univ. Bull.Sci.Ser.,Vol.2,p.63-64,pl.4,f.3,4,1914;Dev. of Mo.,p.127,pl.21,f.12, 1922;Snyder Creek Ste.Calloway Co.

Ptyctodus sp. Dean,Carnegie Inst.Wash.Pub.no.32,p.139, text fig.126,1906.

Genus RINODUS Newberry & Worthen
(1866.Geol.Sur.Ill,,II,p.106)

Rinodus calceolus Newberry & Worthen see Ptyctodus calceolus (N.& W)

Unidentified fish remains.Branson,& Williams,The Dev. of Mo.,p.165,1922.-Branson,The Dev. of Mo.,p.129,pl. 31,f.4,5,6,1922;Mineola,Calloway,Snyder Creek Form Mo.

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Dalmanites boothi Keyes, See Dalmanites(Cryphaeus) boothi (Green)

Dalmanites (Cryphaeus) boothi var calliteles Greene (H & C)

Dalmanites (Cryphaeus) calliteles Hall & Clarke, Pal.N. Y.VII, p.45, pl.16, f.5-22, pl.16A, f.9-17, 1888.

Dalmanites (Cryphaeus) boothi var calliteles Kindle, 25 th. Ann. Repl Ind. Dept. Geol. Nat. Res., p.754, pl.31, f.3, 4, 1901; Jeffersonville l.s., Little Rock Creek, Cass Co., Ind.

Dalmanites (Cryphaeus) calliteles Halll& Clarke, See Dalmanites (Cryphaeus) boothi var calliteles Greene (H & C)

Dalmanites (Chosmaps) calypso Hall & Clarke,

Dalmanites (Chosmops) calypso. Hall & Clarke, Pal. N.Y., VII, p.64, pl.11a, f.19-22, 1888.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.755, pl.30, f.3, 1901; Sellers -burg beds, Charlestown, Ind.

Dalmanites carlwegi Tansey

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Dalmanites (Corycephalus) dentatus Barrett

Dalmanites dentata Barrett, Amer. Jour. Sci., 3d. ser., XI, p.200, pl.-1876.; Am. Jour. Sci., 3d. ser., XII, p.70, 1876.

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Dalmanites dentatus Weller, Pal. N.J., III, p.339, pl.44, f. 1-3, 1903; Lower Oriskany, N.J.

Dalmanites (Corycephalus) dentatus ? Ohern, Md. Geol. Sur L.Dev., p.505-506, pl.93, f.4, 1913; Oriskany Form., Ridgely Member, Evick Gap opposite Franklin, Pendleton Col, W.Va.

Dalmanited griffoni Clarke

Dalmanites griffoni. Clarke, N.Y. State Mus., Mem. IX, pt.1, p.103, pl.7, f.4; pl.9, f.4, 1908;-Tansey, The Dev. of Mo p.209, pl.55, f.1, 1922; Bailey l.s., Little Saline Creek Ste Genevieve Co., Mo.

Dalmanites keyserensis Swartz

Dalmanites keyserensis,Swartz,Md.Geol.Surv.,L.Dev.,p. 499-500,pl.91,f.8,9,1913;Helderberg Form.,Keyser Member,Monoloway,Md.

Dalmanites latus Ohern

Dalmanites latus Ohern,Md.GeolSurv.,L.Dev.,p.502-503, pl.93,f.2,1913;Oriskany Form.,Ridgely Member.Cumberland,Md.

Dalmanites marylandicus Prosser & Kindle

Dalmanites marylandicus Prosser & Kindle,Md.Geol.Surv. Mid.& Up.Dev.,p.334-335,pl.44,f.5,1913;Romney Form. Hamilton Member.Ernstville,Md.

Dalmanites micrurus (Green)

Asaphus micrurus Green,Monograph.Trilobites,N.Am.,p. 56,f.3,1832.

Dalmania micrurus Hall,Pal.N.Y.,III,p.359,pl.74,f.13-20,1861;L.Helderberg group,Albany & Schoharie Cos., N.Y.

Dalmanites micrurus.Clarke,N.Y.State Mus.,Mem.IX,pt.1 p.120,pl.9,f.1-3,1908-Ohern,Md.Geol.Surv.,L.Dev., p.507,pl.91,f.10,11,1913;Helderberg Form.,New Scotland (?) Member.Cumberland,Md;Oriskany Form.,Ridgely Member.Cumberland,Md.

Dalmanites micrurus ? Stewart,The Dev. of Mo.,p.266,pl. 71,f.22,1932;Little Saline Creek l.s.Ste Genevieve Co.,Mo.

Dalmanites multiannulatus Ohern

Dalmanites multiannulatus OhernMd.Geol.Surv.,L.Dev.,p. 500-502,pl.91,f12-15,pl.92;pl.93,f.1,1913;Oriskany Form.,Ridgely Member,Knobly Mtn.,near Cumberland,Md

Dalmanites ohioensis Meek,See Dalminates (Coronura) aspectans Conrad (H & C)

Dalmanites (Cryphaeus) pleione Hall & Clarke

Dalmanites (Crypaheus) pleione.Hall & Clarke,Pal.N.Y., VII,p.41,pl.16A,f.3,1888.-Kindle,25th.Ann.Rep.Ind. Dept.Geol.Nat.Res.,p.754,not figured,1901;Sellersburg beds Falls of the Ohio.

Dalmanites (Hausmannis) pleuroptyx (Green)

Asaphus pleuroptyx Green, See Dalmanites (Hausmannia) pleuroptyx(Green)

Dalmania pleuroptyx Hall, Pal. N.Y., III, p.356, pl.74, f. 5? 9? (not fig.1-4, 6-8, 10-12); pl.75, f.1?1861; L. Helderberg group. Schoharie, Becraft's Mt., N.Y.

Dalmanites (Hansmannia) plruroptyx. Hall and Clarke, Pal. N.Y., VII, p.28, pl.11a, f.1-3, 1888.-Kindle, 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.756, 1901; Jeffersonville l.s. Falls of the Ohio.-Ohern, Md. Geol. Surv., L. Dev., p.510, pl.93, f.6-10, 1913; Helderberg Form., Coeymens Member. Devil's Backbone; New Scotland Member. Devil's Backbone, Corriganville, Dawson, Md.-Stewart, The Dev. of Mo., p.266, pl.71, f.16, 1922; Little Saline Creek l.s., Ste Genevieve Co., Mo.

Dalmanites pleuroptyx Weller, Pal. N.J., III, p.295, pl.32, f. 1; p.322, pl.39, f.9-10, 1903; Coeymans l.s. N.J., New Scotland beds, N.J.

Dalmanites praenuntia Stewart

Dalmanites praenuntia Stewart, The Dev. of Mo., p.267-268, pl.71, f.19, 1922; Little Saline Creek, l.s. Ste Genevieve Co., Mo.

Dalmanites (Odontocephalus) selenurus (Hall & Clarke)

Dalmanites (Odontocephalus) selenurus. Hall & Clarke, Pal. N.Y., VII, p.49, pl.11B, f.15-21; pl.12, f.1-3, 1888.-Kindle 25th. Ann. Rep. Ind. Dept. Geol. Nat. Res., p.756, 1901; Jeffersonville l.s. Falls of the Ohio.

Dalmanites Slocomi Stewart

Dalmanites Slocomi Stewart, The Dev. of Mo., p.266-267, pl. 71, f.20, 1922; Little Saline Creek l.s. Ste Genevieve Co., Mo.

Dalmanites (Synphoria) Stemmatus Clarke

Dalmanites (Synphoria) Stemmatus. Clarke, N.Y., State Mus., Mem. III, No.3, p.15, pl.1, f.6-16; pl.2, f.1, 2, 1900;-Ohern, Md. Geol. Surv., L. Dev., p.503-505, pl.93, f.3, 1913; Oriskany Form., Ridgely Member. Cumb., Md.

Dalmanites Stennatus var convergens Clarke

Dalmanites Stemmatus var convergens Clarke, N.Y. State Mus., Mem. III, No.3, p.19, pl.2, f.3-5, 1900.-

Dalmanites cf. Stemmatus var convergens Stewart, The Dev. of Mo., p.267, pl.71, f.17, 1922; Little Saline Creek l.s

Ste Genevieve Co.,Mo.

Dalmanites sp.Nov.A. var.,Amer.Jour.Sic.,p.412,1892.

Dicranurus hamatus conrad,See acidaspis hamata Hall

Dipleura dekayi Green,See Homalonotus dekayi (Green)

Dipleura dekayi vanuxem,See Homalonotus dekayi(Green)

Dolichopterus macrocheirus Hall

Dolichopterus macrocheirus Hall,Pal.N.Y.,III,p.414,pl. 83,f.1;pl.83A,f.1,1861;Waterline Group.Near Buffalo

Genus ENTOMIS Jones
(1873.Ann. & Mag.Nat.Hist.,Sec.4,XI,p.413)

Entomis rhomboidea Jones

Entomis rhomboidea.Jones,Quart.Jour.Geol.Soc.,XLVI,p. 10,1890.-Grabau,Buffalo Soc.Nat.Sci.,Bull.6,p.304,f. 244,1899;Eighteen Mile Creek,Lake Erie Shore,N.Y.

Genus EURYPTERUS DeKay

DeKay,Annals of the Lyceum of Nat.Hist. of N.Y.

Harlan,Hibbert,Fischer,Conrad,Vanuxem,

Burmeister,Roemer,Eichwald,Pictet,McCoy,Salter,Huxley and others.

Eidothea:Scouler

Lepidoderma: Reuss
(1859.Hall,Pal.N.Y.,III,p.382-384)

Eurypterus dekayi Hall

Eurypterus dekayi Hall,Pal.N.Y.,III,p.411,pl.82,f.1, 1861;Waterline group.Blackrock,N.Y.

Eyrypterus lacustris Harlan

Eurypterus lacustris Harlan,Trans.Geol.Soc.Penn.,I,p.98, pl.5,1834;Med.& Phys.Researches,p.297.-Hibbert,Trans. Royal Soc.Edinburgh,XIII,pl.12-Hall,Pal.N.Y.,III,p. 407,pl.81,f.1-11;pl.81A,f.1;pl.81B,f.1-5;pl.83B,f. 3,1861;Waterline group.Near Williamsville and Buffalo N.Y.

Eurypterus remipes.Roemer,Dunker and von Meyer,

Palaeontographica,I,p.18,- Picket,Traite de Paleontologic,II,p.29,pl.46,f.14,1853.-Brown,et Roemer, Lethea,3d.ed.,II,p.666,pl.9,f.1,1854.

Not Eurypterus remipes of DeKay.

Not Eurypterus lacustris. Salter,Quart.Jour.Geol.Soc. London,XV,p.235,1859.

Eurypterus lacustris var robustus Hall

Eurypterus lacustris var robustus Hall,Pal.N.Y.,III,p. 410,pl.81 C,f.1,1859;Waterline group.Near Buffalo, N.Y.

Eurypterus microphthalmus Hall

Eurypterus microphthalmus Hall,Pal.N.Y.,III,p.407,pl. 80A,f.7,1859;Waterline group. Near Cazenovia ,N.Y.

Eurypterus pachycheirus Hall

Eurypterus pachycheirus Hall,Pa.N.Y.,III,p.412,pl.82,f. 1-3,1859;Waterline group. Blackrock and 4 mi.e.Buffalo,N.Y.

Eurypterus pustulosus Hall

Eurypterus pustulosus Hall,PalN.Y.,III,p.413,pl.83B,f. 1,1859;Waterline group.Near Buffalo,N.Y.

Eurypterus remipes DeKay

Eurypterus remipes.DeKay,Annals of Lyceum Nat.Hist.,N.Y I,p.375,pl.29,1825.-Harlan,Trans.Geol.Soc.Phila.,I, p.96,pl.5,1832;Medical & Physical Researches.-Milne-Edwards,Hist.Nat.des Crustacees,III,p.432.-Burmeister Organisation der Trilobiten,p.62,1843;Roy.Soc.Pub., p.54,1846.-Bronn,Lethea Geognostica,I,p.109,t.9,f.1-Salter,Quarterly Jour.Geol.Soc.,London,p.235,1859, Also cited by mumerous other authors.-Hall,Pal.N.Y., III,p.404,pl.80,f.1-12;pl.80A,f.1-6;pl.83B,f.2,1859; Waterline group,Westmoreland,Oneida Co.,Wheelock's hill,Litchfield,Herkimer Co.,N.Y.

Not Eurypterus remipes. Eichwald,Bull.Imp.Soc.Nat.Moscow,1851.-Roemer,Palaeontographica,I,t.27,1884; Lethea,Ed.III,t.9,f.1,1854.

Genus GOLDIUS Raymond (BRONTEUS Angelin)

Goldius barrandii Hall

Bronteus barrandi Hall,Pal.N.Y.,III,p.350,pl.73,f.1-4,

1861;L.Helderberg group.Schoharie Co.,N.Y.

Bronteus canadensis Logan,Geol.Canada,p.391,1863.

Bronteus barrandii. Clarke,N.Y.State Mus.,Mem.IX,pt.1, p.104,pl.9,f.12,13,1908.-Tansey,The Dev. of Mo.,p. 208,pl.54,f.27,1922;Bailey l.s.,Little Saline Creek, Ste Genevieve Co.,Mo.

Genus HALLIELLA Ulrich

Halliella?seminulum var longa Ulrich & Bassler

Halliella? seminulum var longa Ulrich & Bassler,Md.Geol. Surv.,L.Dev.,p.520-521,pl.95,f.16,1913;Helderberg Form.,Keyser Member.Cumberland,Md.

Halliella? triplicata Ulrich & Bassler.

Halliella? triplicata Ulrich & Bassler,Md.Geol.Surv.,L. Dev.,p.521,pl.95,f.17,18,1913;Helderberg Form.,Keyser,Member.Cumberland,Md.

Genus Homalonotus Koenig
(1825.Icones Foss.Sectiles,p.4)

Homalonotus sp. Branson & Williams

Homalonotus sp.Branson & Williams,The Dev.of Mo.,p.162, 1922;St.Laurent l.s. 3 mi.s.St.Marys,Perry Co.,Mo.

Homalonotus dekayi (Green)

Dipleura dekayi. Green,Mon.Trilobites,N.A.,p.79,1832; vanuxem,Geol.N.Y.,pt.3,p.150,f.1,1842.

Homalonotus dekayi,Emmons,Mon.Geol.p.146,f.134,135, 1860.-Hall,15th.Ann.Rep.N.Y.State Cab.Nat.Hist.,p. 113,1862;Pal.N.Y.,VII,p.7,pl.2,f.1-11;pl.3,f.1-5; pl.4,f.1-6;pl.5,f.1-10,1888.-Keyes,Johns Hopkins Univ.Circ.,XI,p.39,1891.-Grabau,Buffalo Soc.Nat.Sci., Bull.6,p.312,f.255,1899;Hamburgh and Eighteen Mile Creek,Erie Co.,N.Y.-Weller,Pal.N.J.,III,p.387,not figured,1903;Monroe St.,Sylvester's Corners,N.J.-Grabau & Shimer,N.Am.Index Foss.,II,p.318,f.1631, 1910.-Prosser & Kindle Md.Geol.Surv.,Mid.& Up.Dev., p.328-329,pl.43,f.1-7,1913;Romney Form.,Hamilton Member,e.Pine Hill 4 mi.n.Oldtown,Md.,Hancock-Harrisonville Road 2 mi.n.Hancock,Md.

Homalonotus (Diplrura)dekayi,Clarke,N.Y.State Mus., Bull,65,p.712,1903.

Homalonotus swartzi ohern

Homalonotus swartzi Ohern,Md.Geol.Surv.,L.Dev.,p.495, pl.83,f.10-12;pl.90,f.1,2,1913;Oriskany Form.,Ridgely Member.Sand Quarry 4 mi.s.w.Hancock,Md; Miller's Spring,W.Va.

Homalonotus vanuxemi Hall.

Homalonotus vanuxemi.Hall,pa.N.Y.,III,p.352,pl.73,f.9-14,1861;L.Helderberg group.Helderberg Mountains, Albany Co. and Herkimer Co.,N.Y.-Hall and Clarke,Pal. N.Y.,VII,p.11,pl.5b,f.1,2,1888.-Weller,Pal.N.J.,III, p.321,pl.39,f.7,8;p.338,pl.44,f.4-7,1903;Berraft l.s. N.J.;Lower Oriskany,pl.89,f.13-15;pl.90,f.3,1913; Oriskany Form.,Ridgely Member.Knobly Mountain,Near Cumberland,Md.

Genus ISOCHILINA Jones
(1858.Can.Org.Remains,Decade III,p.197)

Isochilina fabacea Jones

Isochilina fabocea Jones,Quart.Jour.Geol.Soc.,XLVI, p.22,pl.11.

Isochilina(?) fabacea.Grabau,Buffalo Soc.Nat.Sci.,Bull. 6,p.307,f.249,1899;Hamilton group.Eighteen Mile Creek Lake Erie Shore,N.Y.

Genus KLOEDENIA Jones & Hall

Kloedenia barretti(Weller)

Beyrichia barretti Weller,Pal.N.J.,III,p.354,pl.23,f. 9,1903.

Kloedenia barretti Ulrich & Bassler,Proc.U.S.Nat.Mus., XXXV,p.301(gen.ref),1908; Md.Geol.Surv.,L.Dev.,p. 532-533,pl.97,f.17,1913;Helderberg Form.,Keyser Member.Tonoloway,Md.

Kloedenia Centricornis Ulrich & Bassler

Kloedenia centricornis Ulrich & Bassler,Proc.U.S.Nat. Mus.,XXXV,pl.38,f.23,1908;Md.Geol.Surv.,L.Dev.,p. 529,pl.97,f.14,1913;Helderberg Form.,Keyser Member. Cumberland,Md.

Kloedenella Clarkei (Jones)

Beyrichia Clarkei,Jones,Quart.Jour.Geol.Soc.London, XLVI,p.17,text fig.2,1890.

Bollia clarkei Ulrich,Geol. and Nat.Hist.Surv.,Minnesota Final Rep.,III,pt.2,p.669,1894.

Kloedenella clarkei Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, p. 319, 1908; Md. Geol. Surv., L. Dev., p. 533-534, pl. 97, f. 21, 1913; Helderberg Form., Keyser Member. Cumberland, Md.

Kloedenella clarkei var paupera Ulrich & Bassler,

Kloedenella clarkei var paupera Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, pl. 43, f. 5, 1908; Md. Geol. Surv., L. Dev., p. 534, pl. 98, f. 1-3, 1913; Helderberg Form., Keyser Member. Cumberland, Md.

Kloedenia fumbriata Ulrich & Bassler

Kloedenia fimbriata Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, pl. 38, f. 22, 1908; Md. Geol. Surv., L. Dev., p. 529-530, pl. 97, f. 5-7, 1913; Helderberg Form., Keyser Member. Cumberland, Md.

Kloedenia kummeli (Weller)

Beyrichia kummeli Weller, Pal. N.J., III, p. 266, pl. 24, f. 21, 1903.

Kloedenia kummeli Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, p. 301 (gen. ref.), 1908; Md. Geol. Surv., L. Dev., p. 531, pl. 97, f. 16, 1913; Helderberg Form., Keyser Member. Tonoloway, Md.

Kloedenia nearpassi (Weller)

Beyrichia nearpassi Weller, Pal. N.J., III, p. 255, pl. 23, f. 7, 8, 1903.

Kloedenia nearpassi Ulrich & Bassler, Proc. U.S. Nat. Mus., XXXV, p. 301 (gen. ref.) 1908; Md. Geol. Surv., L. Dev., p. 530-531, pl. 97, f. 12, 13, 1913; Helderberg Form., Keyser Member. Tonoloway, Md.

Kloedenella pennsylvanica (Jones)

Kloedenia pennsylvanica Jones (part), Am. Geol., IV, p. 341, pl., f. 5a-d, 6 (not 7a, b, 8, 9), 1889.

Kloedenella pennsylvanica Ulrich and Bassler, Proc. U.S. Nat. Mus., XXXV, p. 304, f. 54; p1318, pl. 43, f. 1-3, 1908; Md. Geol. Surv., L. Dev., p. 533, pl. 97, f. 18-21, 1913; Helderberg Form., Keyser Member Tonoloway, Md.

Kloedenia pennsylvanica Jones, See:

Kloedenella pennsylvanica (Jones)

Kloedenella turgida Ulrich & Bassler.