BIBLIOGRAPHY AND INDEX

OF

NORTH AMERICAN GEOLOGY, PALEONTOLOGY, PETROLOGY, AND MINERALOGY

FOR

THE YEAR 1897

BY

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WASHINGTON
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1898
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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY,
DIVISION OF GEOLOGY,
Washington, D. C., August 1, 1898.

SIR: I have the honor to transmit herewith the manuscript of a Bibliography and Index of North American Geology, Paleontology, Petrology, and Mineralogy for the Year 1897, and to request that it be published as a bulletin of the Survey.

Very respectfully,

F. B. Weeks.

Hon. Charles D. Walcott,
Director United States Geological Survey.
INTRODUCTION.

The method of preparing and arranging the material of the Bibliography and Index for 1897 is similar to that adopted for the previous publications on this subject (Bulletins Nos. 130, 135, 146, and 149). The geological papers printed in the Transactions of the American Institute of Mining Engineers, volume 27, were entered in Bulletin No. 149 (Bibliography and Index for 1896), although the publication bears the date 1897. These papers were printed and issued as separates in 1896, but without pagination or volume number. In order to make the bibliography complete for the calendar year these papers appear again in this bulletin. The same course has been followed with volume 28, which bears the date 1898. A few other publications, which bear the date 1898, are included for the same reason.

Bibliography.—The bibliography consists of full titles of separate papers, classified by authors; an abbreviated reference to the publication in which the paper is printed, and a brief summary of the contents, each paper being numbered for index reference. The extent of papers less than a single page in length is indicated as ½ p., 51 lines.

Index.—The subject headings, their subdivisions and arrangement, are shown in the Classified Key to the Index. They comprise geographic, geologic, mineralogic, paleontologic, and petrologic subdivisions. Under Economic Geology is given a list of useful minerals and ores described in publications examined; under Mineralogy, a list of minerals described in such publications; under Paleontology, a list of genera and species of fossils therein described, and under Petrology, a list of rocks described, reference being made in each case, by author's name and number of article in the Bibliography, to the paper in which the fossil, mineral, or rock is described. The Index has been enlarged by the addition of the names of all geological subdivisions that are described in the publications examined. They are not grouped together, but occur in the regular alphabetical order.
LIST OF PUBLICATIONS EXAMINED.

American Geologist, Vols. XIX-XX, 1897. Minneapolis, Minn.
Botanical Gazette, Vols. XXIII-XXIV, 1897. Chicago, Ill.
California State Mining Bureau: Bulletin No. 11, 1897. Sacramento, Cal.
Canadian Record of Science, Vol. VII, Nos. 4-6, 1897. Montreal, Quebec.
LIST OF PUBLICATIONS EXAMINED.


Engineering and Mining Journal, Vols. LXIII-LXIV, 1897. New York, N. Y.


Indiana, Department of Geology and Natural Resources: 21st Annual Report, 1897. Indianapolis, Ind.


Iowa State University, Laboratories of Natural History: Bulletin, Vol. IV, No. 1, 1897. Iowa City, Iowa.

Johns Hopkins University: Circulars, Nos. 128-133, 1897. Baltimore, Md.


Kansas University Quarterly, Vol. VI, 1897. Lawrence, Kans.


Mexico, Instituto geologica: Boletin, 4-9, 1897. City of Mexico.


New York Academy of Sciences: Annals, Vol. IX, Nos. 4-12, 1897. New York, N. Y.

New York State Museum: Bulletin, Vol. IV, Nos. 16-17, 1897. Albany, N. Y.


LIST OF PUBLICATIONS EXAMINED.


Scientific American, Vols. LXXVI–LXXVII, 1897. New York, N.Y.


Zeitschrift für praktische Geologie, Hefte 1–12, 1897. Berlin, Germany.
BIBLIOGRAPHY.

A.

1. **Adams** (Frank D.). On the structure and origin of certain rocks of the Laurentian system.
   Describes the origin and structure of certain igneous and altered sedimentary rocks.

2. Notes on the geology of the Admiralty group of the Thousand Islands, Ontario.
   Gives notes on the character of the granites and occurrence of the other igneous rocks.

3. [Review of some recent papers on the influence of granitic intrusions upon the development of crystalline schists.]
   Jour. of Geol., vol. v, pp. 293–302, 1897.

4. [Review of "Lakes of North America, a reading lesson for students of geography and geology," by Israel O. Russell.]

   Describes the occurrence, character, and age of the Fundamental Gneiss, and Grenville and Hastings series.

   Describes the petrographic characters of the series and their relations to the Laurentian.

   Describes the character and relations of the Fundamental Gneiss, Grenville and Hastings series.
8 Adams (Frank D.) and Nicolson (John T.). Preliminary notice of some experiments on the flow of rocks. 
Describes the methods employed and the results.

9 Adams (George I.). On the extinct Felidae. 
Describes the synonymy of the group.

10 Agassiz (Alexander). The elevated reefs of Florida. 
Jour. of Geol., vol. 5, pp. 312-313, 1897. 
Review by J. Edmund Woodman.

11 Aguilera (José G.). Antonio del Castillo. 
Inst. Geol. de Mexico, Bulls. Nos. 4-6, pp. 3-7, 1897. 
Gives a sketch of the life of A. del Castillo and a list of his published works.

12 — Bosquejo geologico de Mexico. Prologo. 
Inst. Geol. de Mexico, Bulls. Nos. 4-6, pp. 11-15, 1897. 
Describes the general results of the work of the Geological Survey of Mexico.

13 — Itinerarios geologicos. 
Inst. Geol. de Mexico, Bulls. Nos. 4-6, pp. 78-166, 1897. 
Describes the occurrence and character of the Cretaceous, Tertiary, and Pleistocene strata, and of the volcanic and metamorphic rocks in various parts of Mexico.

14 — Sinopsis de geologia Mexicana. 
Inst. Geol. de Mexico, Bulls. Nos. 4-6, pp. 189-250, 1897. 
Describes the general characters of the igneous rocks, the petrographic and paleontologic characters of the sedimentaries; and the occurrence of economic mineral products in Mexico.

15 — and Ordonez (Ezequiel). Fisiografia de la Sierra de Pachuca [Mexico]. 
Inst. Geol. de Mexico, Bulls. Nos. 7-9, pp. 19-26, pl. ii, 1897. 
Describes the physiography of the region.

16 — — Geologia general de la Sierra de Pachuca [Mexico]. 
Inst. Geol. de Mexico, Bulls. Nos. 7-9, pp. 27-50, pls. iii-v, 1897. 
Describes the occurrence and character of Tertiary eruptive rocks.

17 — — Las vetas [Sierra de Pachuca, Mexico]. 
Inst. Geol. de Mexico, Bulls. Nos. 7-9, pp. 51-80, 1897. 
Describes the vein systems in this region.

Gives notes on various species and describes and figures a number of new species.

19 — A new Cancellaria from the Alabama Eocene. 
The Nautilus, vol. xi, pp. 27-28, 1 fig., 1897. 
Describes C. lanceolata n. sp.
20 Allen (E. T.). Native iron in the Coal Measures of Missouri.
Describes its occurrence and character.

21 Ami (Henry M.). Notes on some of the fossil organic remains comprising in the geological formations and outliers of the Ottawa Paleozoic basin [Canada].
Gives a list of fossils found in each of the subdivisions of the Ordovician and Silurian systems occurring in the Ottawa basin.

22 — Contribution to the paleontology of the post-Pliocene deposits of the Ottawa valley [Canada].
Ottawa nat., vol. xi, pp. 20-26, 1897.
Gives lists of species collected at various localities.

23 Andersen (Carl). The mineral belt of the Mogollon range [New Mexico].
Describes the geologic features of the region and the occurrence and character of the gold ores.

24 Ashley (George H.). Geology of the Paleozoic area of Arkansas south of the novaculite region. With an introduction by John C. Branner.
Describes the geologic and geographic position of the region, the lithologic and faunal characters of the formations, and their structure, and discusses the correlations of the various beds.

25 Atwood (Wallace Walter), Salisbury (Rollin D.) and. Drift phenomena in the vicinity of Devils Lake and Baraboo, Wisconsin.
See Salisbury (R. D.) and Atwood (W. W.), No. 521.

B.

26 Bagg (R. M.). See Clark (W. B.), No. 128.

27 Bailey (E. H. S.) and Whitten (W. M.). On the chemical composition of some Kansas gypsum rocks.
Kan. Univ. Quart., vol. vi, pp. 29-34, 1897.
Gives chemical analyses of specimens from several localities.

Contains brief notes on the stratigraphy and structure of the region.

29 Bain (Harry Foster). Relations of the Wisconsin and Kansas drift sheets in central Iowa and related phenomena.
Describes the character and relations of the two drift sheets, and discusses the time ratios employed in estimating the length of Glacial time. Includes map of the Iowa drift sheets.

Bull. 156—2
Jour. of Geol., vol. v, pp. 210–212, 1897.

31 — A sketch of the geology of Mexico.
Gives a summary of the report of Jose G. Aguilera on the geology of Mexico.

Jour. of Geol., vol. v, pp. 399–400, 1897; Science, new ser., vol. v, p. 852, 1897.

33 — Geology of Polk County, Iowa.
Am. Geol., vol. xx, p. 334 (f p.), 1897.
Review by U. S. Grant.

34 Bannister (H. M.). The drift and geologic time.
Jour. of Geol., vol. v, pp. 730–743, 1897.
Discusses previous estimates of the duration of the Glacial period and its probable duration, estimated from a study of the transportation of erratics.

Describes and illustrates the occurrence and characters of Daemoneelix.

Describes the character of the mineral from elaeolite syenite of Quebec.

37 — Adams (Frank D.) and With remarks by R. W. Ellis. On the origin and relations of the Grenville and Hastings series in the Canadian Laurentian.
See Adams (Frank D.) and Barlow (A. E.), No. 5.

See Adams (F. D.) and Barlow (A. E.), No. 6.

See Adams (F. D.), Barlow (A. E.), and Ellis (R. W.), No. 7.

40 — — and Ferrier (W. F.). On the relations and structure of certain granites and associated arkoses of Lake Temiscaming, Canada.
Describes the microscopic characters and relations of the rocks.
41 Barrell (Robert W.). The mineral formation of the Golden Leaf mines [Montana].
   Eng. and Mg. Jour., vol. lxiv, p. 64, 1897.
   Describes the geologic features of the region and the occurrence of gold and silver.

42 Barton (George H.). Glacial observations in the Umanak district, Greenland.
   Describes the glacial features of the region.

43 Bascom (Florence). Aporhyolites of South Mountain, Pennsylvania.
   Describes the topography of the region and the petrographic structure of the aporhyolites.

44 — The relations of the streams in the neighborhood of Philadelphia to the Bryn Mawr gravel.
   Am. Geol., vol. xix, pp. 50-57, 1897.
   Gives a sketch of the geologic history of the region and discusses the evidence of the stream erosion as indicating the age of the Bryn Mawr gravel.

45 — [Review of “The geology of the Fox Islands, Maine, a contribution to the study of old volcanics,” by George Otis Smith].

46 — The ancient volcanic rocks of South Mountain, Pennsylvania.
   Review by N. H. W[inchell], Am. Geol., vol. xix, pp. 139-140, 1897.
   Review by J. P. Iddings, Jour. of Geol., vol. v, pp. 213-216, 1897.

   Waterville, Me., 1897.

   See Van Hise (C. R.) and Bayley (W. S.), No. 648.

49 Bayley (W. S.). See Van Hise (C. R.) and Bayley (W. S.), No. 648.

   Describes the character and occurrence of New England building stones.

51 Becker (George F.). Reconnoissance of the gold fields of southern Alaska, with some notes on general geology.
   Includes notes on some igneous rocks and on the glacial features and volcanic phenomena of the region. Describes the occurrence and character of the auriferous deposits and veins.
52 Becker (George F.). Witwatersrand banket, with notes on other gold-bearing pudding stones.
Describes the occurrence of gold on the Witwatersrand and the occurrence of auriferous conglomerates in various parts of the United States.

53 — Some queries on rock differentiation.
Discusses the hypotheses of rock differentiation from homogeneous magmas of great volume.

54 — Computing diffusion.
Describes methods and gives tables for computing diffusive phenomena.

55 — Fractional crystallization of rocks.
Describes the solidification of material in certain dikes and laccolites, and discusses its bearing on the theory of magmatic segregation or differentiation.

56 — Lewis on the diamond.
Discusses the paper by George F. Kunz on the genesis of the diamond and review of Prof. Lewis's papers on the "Genesis and matrix of the diamond."

Reviews previous classifications and describes the principles and application of a natural classification. Gives diagnoses of the orders and families and a list of the genera.

58 — Morphology of the brachia.
U. S. Geol. Surv., Bull. No. 87, pp. 105-112, figs. 2-6, 1897.
Describes the different stages of development.


60 — See Kingsley (J. S.), No. 337.

61 Beede (J. W.), Haworth (E.) and. The McPherson Equus beds [Kansas].
See Haworth (E.) and Beede (J. W.), No. 268.

62 Bell (Robert). Evidence of northeasterly differential rising of the land along Bell River [Canada].
Describes the characters of the drainage and its bearing on the evidence of an earth movement.

64 —— Geology of the St. Croix Dalles [Minnesota–Wisconsin]. Am. Geol., vol. xx, pp. 345-383, pls. xx-xxii, 1897. Describes the physiographic features, the glacial geology, the lithologic characters and distribution of the Cambrian subdivisions, and the characters of the igneous rocks. Presents a geological and topographical map of the region.

65 Beyer (Samuel Walker). The Sioux quartzite and certain associated rocks. Iowa Geol. Surv., vol. vi, pp. 69-112, figs. 24-28 and geologic map, 1897. Published in 1896. Describes the occurrence of Niobrara chalk, the character of the Sioux quartzite and slate, the petrographic characters of the olivine diabase, quartzite, and slate, and discusses their origin.


67 Bibbins (Arthur), Clark (W. B.) and. The stratigraphy of the Potomac group in Maryland. See Clark (W. B.) and Bibbins (A.), No. 130.


73 **Blue** (Archibald). Sixth report of the bureau of mines [Ontario]. Ottawa, 289 pp., 2 geological maps, 1897.
Includes notes on the occurrence of building materials, petroleum, natural gas, mica, graphite, iron, nickel, copper, gold, and corundum and two geological maps.

*Nature*, vol. 1v, p. 556, 1897.

75 **Boss** (O. M.). Some dike features of the Gogebic iron range [Michigan-Wisconsin].
Gives local details regarding the dikes of the region.

76 **Branner** (John Casper). Bacteria and the decomposition of rocks.
Discusses the agency of bacteria in the decomposition of rocks, and reviews some recent literature on the subject.

77 — The former extension of the Appalachians across Mississippi, Louisiana, and Texas.
Discusses the character and extent of the southwestern Appalachian depression and its bearing on the probable extension of the Appalachians across the lower Mississippi region.

78 — The bauxite deposits of Arkansas.
*Jour. of Geol.*, vol. v, pp. 263-289, pls. i-ii, figs. 1-4, 1897.
Describes the composition and structure of the bauxite material, and discusses the geological age, origin, and forms of the deposits. Gives a bibliography of the subject.

79 — [Review of “The Bedford oolitic limestone of Indiana,” by T. C. Hopkins and C. E. Siebenthal.]
*Jour. of Geol.*, vol. v, pp. 529-531, 1897.

80 — The phosphate deposits of Arkansas.
Describes the character of the Devonian strata in which the deposits occur, and the occurrence and characteristics of the phosphate material, and discusses its origin. Gives chemical analyses.

81 — The cement materials of southwest Arkansas.
Describes the occurrence of the chalk beds, and gives chemical analyses of the material.

82 — The introduction of new terms in geology.

83 — New terms in geology.
84 Branner (John Casper). See Ashley (George H.), No. 24.

85 — Newsom (J. F.) and. The Red River and Clinton monoclines.
    See Newsoni (J. F.) and Branner (J. C.), No. 439.

86 Bratnober (H.). The Klondike gold fields [British Columbia].
    Eng. and Mg. Jour., vol. lxiv, p. 484, 1897.
    Describes the occurrence of gold placers.

87 Brewer (William M.). Further notes on the Alabama and Georgia
    gold fields.
    Contains notes on the occurrence of gold ores and associated rocks in
    these States.

88 — Metal mining in Alabama.
    Describes the occurrence of gold in certain districts of Alabama.

89 — Gold mining in Georgia.
    Describes the occurrence of gold in northwest Georgia.

90 — The Villa Rica mining district, Georgia.
    Describes the occurrence of gold in this district.

91 — Some auriferous quartz bodies in Alabama.
    Describes the occurrence of gold in northern Alabama.

92 — Copper mining in Alabama.
    Gives brief notes on the occurrence of copper in Cleburne County.

93 — Gold fields of the South.
    Colliery Eng., vol. xvii, pp. 333-335, 1897.
    Describes the geologic formations and occurrence of gold in Georgia
    and Alabama.

94 Brigham (Albert Perry). Glacial flood deposits in Chenango Valley
    [New York].
    Describes the glacial phenomena of the region.

95 Brooks (Alfred Hulse), Wolff (J. E.) and. The age of the Frank-
    lin White limestone of Sussex County, New Jersey.
    See Wolff (J. E.) and Brooks (A. H.), No. 733.

    Describes the character and occurrence of phosphate rocks in certain
    parts of the State.
97 **Brush** (George J.). Manual of determinative mineralogy, with an introduction of blowpipe analysis.
Review by O. C. Farrington, Jour. of Geol., vol. v, pp. 86-87, 1897.

98 **Bryson** (John). The Hempstead Plains, Long Island [New York].
Am. Geol., correspondence, vol. xx, pp. 61-65, 1897.
Describes the glacial phenomena.

Inst. geol. de Mexico, Bulls., Nos. 4-6, pp. 19-29, 1897.
Describes the occurrence of gold and silver ore deposits in these States.

100 — The Copalquin and Lemon mineral zone, Durango, Mexico.
Describes the geologic features of the region.

101 **Burwash** (Edward M.). Geology of the Nipissing-Algoma line [Ontario].
Describes the occurrence of Huronian rocks and the glacial phenomena of the region.

102 **Calvin** (Samuel). Memoir of Charles Wachsmuth.
Gives a sketch of his life and list of his published papers.

103 — The State quarry limestone [Iowa].
Describes its lithologic and faunal characters and discusses its taxonomic relations.

104 — Synopsis of the drift deposits of Iowa.
Am. Geol., vol. xix, pp. 270-272, 1897.
Gives brief statements regarding the various stages of the Glacial epoch.

105 — Geology of Johnson County [Iowa].
Am. Geol., vol. xx, pp. 273, 1897.
Review by W. Uphem.

106 **Campbell** (Marius R.). Erosion at base level.
Describes local base-levels of the Appalachian region.

107 — Rapid section work in horizontal rocks.
Describes methods of studying areal geology in regions where the strata lie in a nearly horizontal position.
108 Case (E. C.). Foramina perforating the cranial region of a Permian reptile and on a cast of its brain cavity.
   Describes the characters of Dimetrodon incisivus Cope and the occurrence of the foramina.

109 — On the osteology and relationships of Protostega.
   Jour. of Morph., vol. xvi, pp. 21-55, pls. iv-vi, 1897.
   Describes material from the Niobrara Cretaceous of Kansas.

110 — [Review of “The Dinosaurs of North America,” by O. C. Marsh.]
   Jour. of Geol., vol. v, pp. 87-88, 1897.

111 Catlett (Charles). Some of the manganese deposits of the Valley of the Virginia.
   Describes the occurrence and character of the ores and gives a chemical analysis.

112 Chalmers (Robert). The pre-Glacial decay of rocks in eastern Canada.
   Describes beds of decayed rock beneath the glacial covering.

113 — The gold bearing deposits of the eastern townships of Quebec.
   Describes their geological occurrence and discusses their origin.

114 Chamberlin (T. C.). [Note on the former extension of the inland ice sheet of Greenland.]
   Jour. of Geol., vol. v, pp. 81-85, 1897.
   Reviews certain interpretations of the author’s views on this subject.

115 — Glacial studies in Greenland, X.
   Jour. of Geol., vol. v, pp. 229-240, figs. 64-68, 1897.
   Continues the description of the author’s observations of the glacial features of Greenland.

116 — [Review of “Glaciers of North America, a reading lesson for students in geography and geology,” by Israel C. Russell.]
   Jour. of Geol., vol. v, pp. 302-303, 1897.

117 — [Review of “Former extension of Cornell glacier near the southern end of Melville Bay,” by Ralph S. Tarr.]
   Jour. of Geol., vol. v, pp. 303-307, pl. 1, figs. 1-2, 1897.

   Jour. of Geol., vol. v, pp. 641-642, 1897.

118a — [Review of “Iowa Geological Survey, vol. vi, Report on lead, zinc, artesian wells, etc.”]
   Jour. of Geol., vol. v, pp. 642-644, 1897.


120 —— Supplementary hypothesis respecting the origin of the loess of the Mississippi Valley. Jour. of Geol., vol. v, pp. 795-802, 1897. Describes the distribution of the loess and discusses its origin.


125 —— Former extension of Cornell glacier near the southern end of Melville Bay. Science, new ser., vol. v, pp. 748-753, figs. 1-3, 1897. Reviews some of the questions discussed in previous papers by Prof. Tarr and the author.


128 Clark (William Bullock). (With the collaboration of R. M. Bagg and George B. Shattuck.) Upper Cretaceous formations of New Jersey, Delaware, and Maryland.


Describes the occurrence, characters, and distribution of the Matawan, Monmouth, Rancocas, Manasquan, and Shark River formations. Discusses the interpretation of the sedimentary and faunal records.

128a — Historical sketch embracing an account of the progress of investigation concerning the physical features and natural resources of Maryland.

Md. Geol. Surv., vol. i, pp. 43-138, pls. ii-v, 1897.

129 — Outline of present knowledge of the physical features of Maryland, embracing an account of the physiography, geology, and mineral resources.

Md. Geol. Surv., vol. i, pp. 141-228, pls. vi-xiii, 1897.

Describes the physiographic features of the State, the character and distribution of the igneous and sedimentary rocks, and the mineral resources.

130 — and Bibbins (Arthur). The stratigraphy of the Potomac group in Maryland.

Jour. of Geol., vol. v, pp. 479-506, 1897.

Describes the lithologic and faunal characters of the Patuxent, Arundel, Patapsco, and Raritan formations. Discusses the relations and age of the deposits and the views of other writers.

131 — and Shattuck (George B.). The geology of the sand hills of New Jersey.


Reviews the literature on this region and describes the stratigraphic relations and correlations of the deposits. Discusses the evidence of their age.

132 Clarke (F. W.) and Hillebrand (W. F.). Analyses of rocks with a chapter on analytical methods.


Includes analyses of a large number of igneous and sedimentary rocks from various parts of the United States.

133 Clarke (John M.). The Lower Silurian trilobites of Minnesota.


Gives the terminology of the trilobites and notes on various species; also descriptions of new species.

134 — The Lower Silurian Cephalopoda of Minnesota.


136 Clarke (John M.). The morphology of graptolites.
Am. Geol., vol. xx, pp. 188-189, 1897.
Reviews some recent literature on graptolites.

137 — A sphinctozoan calcisponge from the Upper Carboniferous of eastern Nebraska.
Am. Geol., vol. xx, pp. 387-392, pl. xxiii, 1897.
Describes the characters of the material.

Am. Geol., vol. xix, pp. 322-324, pl. xx, 1897.
Describes and figures a new species from the Cleveland shale of Ohio.

139 — [Review of "Pleistocene features and deposits of the Chicago area," by Frank Leverett.]
Am. Geol., vol. xx, p. 57, 1897.

140 — [Review of "Geological Survey of Canada, Annual Report for 1895."]
Am. Geol., vol. xx, pp. 130-131, 1897.

141 — [Review of "On the southern Devonian formation," by H. S. Williams.]
Am. Geol., vol. xx, pp. 133-134, 1897.

142 — [Review of "Geological Survey of Mexico, Bulletins 4, 5, 6."
Am. Geol., vol. xx, pp. 184-186, 1897.

143 Coleman (Arthur P.). Glacial and Interglacial deposits at Toronto [Canada].
Describes glacial phenomena of the vicinity.

144 — Third report on the West Ontario gold regions.
Describes the occurrence of gold in the region.

145 — Anthraxolite or anthracite carbon.
Ontario Bureau of Mines, 6th rept., pp. 159-161, 1897.
Describes its occurrence in Ontario.

146 — "Notes on the western Ontario gold fields."

147 — The anorthosites of the Rainy Lake region [Ontario].
See Bibliography and Index for 1896, No. 133.

148 Cooper (J. G.). On some new Cretaceous (and Eocene?) Mollusca of California.
Describes and figures five new species.
   Describes new species of fishes and batrachia from the Catskill and Coal Measure series of these States.

150 Cragin (F. W.). Discovery of marine Jurassic rocks in southwestern Texas.
   Jour. of Geol., vol. v, pp. 813-820, 1897.
   Discusses the fossil evidence of the occurrence of strata in southwestern Texas and names the beds the Malone formation.

151 — Observations on the Cimarron series.
   Am. Geol., vol. xix, correspondence, pp. 351-363, 1897.
   Describes the author's observations of this series in Kansas, Oklahoma, and Texas, and discusses the classification and nomenclature of the beds.

152 — Notes on some fossils of the Comanche series.
   Includes notes on certain species and description of Turritella belviderei n. sp.

153 — Stratigraphic names for Caprina and Caprotina (or Requienia) beds.
   Suggests that the name Barton Creek be abandoned, and proposes the name Stonewall limestone for it. Proposes the local names Granbury bed for the Caprotina limestone.

   Am. Geol., vol. xx, pp. 159-167, 1897.
   Describes the general physiographic features and geological history of the Park.

155 Crosby (W. O.). Contribution to the geology of Newport Neck and Conanicut Island [Rhode Island].
   Reviews previous descriptions of the geology of the region and describes the characters and relations of the Carboniferous and igneous rocks.

156 — The great fault and accompanying sandstone dikes of Ute Pass, Colorado.
   Describes the occurrence of the fault and discusses the origin of the dikes.

   Am. Geol., vol. xix, pp. 147-180, pls. viii-ix, 1897.
   Describes the character of acid pegmatites and discusses the theories of their igneous and aqueo-igneous origin.
Describes the occurrence and petrographic and chemical characters of wyomingite, oreudite, and madupite. Discusses the classification and nomenclature, and describes the inclusions in the Leucite Hills rocks.

159 — An auralcite basalt from Colorado.
Jour. of Geol., vol. v, pp. 684-693, 1897.
Describes the petrographic and chemical characters of the material, and discusses its relations with closely allied rocks.

160 — and Penrose (R. A. F., jr.). Geology and mining industry of the Cripple Creek district, Colorado.
Jour. of Geol., vol. v, pp. 197-203, 1897.
Review by Arthur Winslow.

161 Cushing (H. P.). Notes on hypersthene andesite from Mt. Edgecumbe, Alaska.
Am. Geol., vol. xx, pp. 156-159, 1897.
Includes a letter from H. F. Reid describing its occurrence, and a discussion of the petrographic characters of the material.

162 Dall (William H.). A table of North American Tertiary horizons correlated with one another and with those of western Europe, with annotations.
Defines the main divisions of the Tertiary and includes notes on the table.

163 — Guppy (R. J. L.) and. Descriptions of Tertiary fossils from the Antillean region.
See Guppy (R. J. L.) and Dall (W. H.), No. 255.

164 Daly (Reginald Aldworth). Studies of the so-called porphyritic gneiss of New Hampshire.
Jour. of Geol., vol. v, pp. 694-722, figs. 1-2, pp. 776-794, 1897.
Reviews previous descriptions of the gneiss, describes its field relations and structure, and discusses the age of the intrusions.

Describes the progress of well sinking, the extent of the artesian basin, and the irrigation by artesian waters in 1896.

166 — Preliminary report on artesian waters of a portion of the Dakotas.
Am. Geol., vol xix, pp. 274-276, 1897.
Review by J. E. T[odd].
167 **Davidson** (George). The submerged valleys of the coast of California, U. S. A., and of Lower California, Mexico. 


Describes the submerged valleys of the coast of California, and presents a number of contour maps of the coast line.

168 **Davis** (William M.). The Triassic formation of Connecticut. 


Describes the deposition, character, and occurrence of the Triassic strata, the occurrence and characters of the igneous rocks, and the deformation and denudation of the region.

169 — Is the Denver formation lacustrine or fluvial? 


Discusses the origin of the Denver formation.

170 **Dawson** (George M.). Are the bowlder clays of the Great Plains marine? 

Jour. of Geol., vol. v, pp. 257–262, 1897.

Describes the occurrence of Cretaceous marine organisms in the bowlder clays of the Great Plains in British Columbia. Gives a list of the fossils determined by Mr. Joseph Wright.

171 — [Review of "Genesis of Lake Agassiz," by J. B. Tyrrell.] 

Jour. of Geol., vol. v, pp. 78–81, 1897.

172 — Opening address. Section C, British Association for the Advancement of Science, 1897. 


Discusses the relations of the pre-Cambrian rocks of Canada and other parts of North America.

173 — The physical geography and geology of Canada. 

Toronto, 48 pp., 1897.

Gives a general outline of the physiography and geologic features of Canada.

174 **Dawson** (J. William). Note on Carboniferous Entomostraca from Nova Scotia, in the Peter Redpath museum, determined and described by Prof. T. Rupert Jones, F. R. S., and Mr. Kirkby. 


Describes and figures a number of species.

175 — Additional notes on fossil sponges and other organic remains from the Quebec group of Little Metis, on the lower St. Lawrence. With notes on some of the specimens by G. J. Hinde. 


Discusses the nomenclature of the subdivisions of the Quebec group, and describes the geologic features at Little Metis. Gives general remarks on the fossil sponges and descriptions of the species, including several new ones.


185 Drew (Charles D.), Dixon (Roland B.) and. Observations on the physiography of western Massachusetts. See Dixon (R. B.) and Drew (C. D.), No. 181.

Gives a brief statement as to the different geologic horizons at which oil occurs in this state.

188 Eastman (C. R.). On Ctenacanthus spines from the Keokuk limestone of Iowa.
Describes two species, including one new one.

189 — Tamiobatis vetustus, a new form of fossil skate.
Describes material from the Devonian of Kentucky.

190 — On the characters of Macropetalichthys.

191 Ellis (W. Hodgson). Chemical composition of the anthraxolite.
Gives analyses of various specimens.

Describes the general results of the study of the geology of this province.

193 — Paleozoic outliers in the Ottawa River basin [Canada].
Describes the occurrence of Cambro-Silurian and Upper Silurian formations in this region.

194 — Memoir of N. J. Giroux.
Gives a sketch of his life.

195 — [Note on “Origin and relations of the Grenville-Hastings series of the Canadian Laurentian.”]
Describes briefly the characters of the series.

196 — See Adams (F. D.) and Barlow (A. E.), No. 5.

197 — Adams (F. D.), Barlow (A. E.) and. On the origin and relations of the Grenville and Hastings series in the Canadian Laurentian.
See Adams (F. D.), Barlow (A. E.), and Ellis (R. W.), No. 7.

Describes the characters of the tuff, mud inclosures, pitchstone, and the petrographic character of the Greenfield bed and the Meriden ash bed. Discusses the origin of the glass and minerals,

Bull. 156—3
199 Emmons (Samuel Franklin). Some mines of Rosita and Silver Cliff, Colorado.
    Describes the geologic history of the region, and the occurrence and character of the ore bodies in the principal mines. Discusses their origin. Gives chemical analyses of waters from deep levels in the Geyser mine and a discussion of the results.

200 — Origin of Green River.
    Science, new ser., vol. vi, pp. 19-21, 1897.
    Discusses the evidence as to the origin and development of this river.

201 — The geology of government explorations.
    Gives a historical sketch of the work of geological surveys undertaken by the United States government, and a bibliography of the subject.

202 — and Tower (George Warren, jr.). Economic geology of the Butte Special district [Montana].
    Describes the fissure systems, the distribution of the ores, the ore deposition, the minerals occurring with the ores, and the character and occurrence of the lodes.

203 Endlich (F. M.). The Pearce mining district, Arizona.

204 Engel (George W.). Description of a peculiar fault in the Mammoth coal bed, Panther Creek basin, Pennsylvania.
    Colliery Engineer, vol. xviii, p. 100, 2 figs., 1897.

F.

205 Fairbanks (Harold W.). The geology of the San Francisco peninsula [California].
    Jour. of Geol., vol. v, pp. 63-76, 1897.
    Reviews the report of Prof. Lawson on this subject and discusses the author's conclusions.

206 — An interesting case of contact metamorphism.
    Describes the geologic features of the locality in southern California and the contact phenomena.

207 — The tin deposits at Temescal, southern California.
    Describes the geologic features of the region and the occurrence of the vein system and the tin deposits.
208 **Fairbanks** (Harold W.). Oscillations of the coast of California during the Pliocene and Pleistocene.

*Am. Geol.*, vol. xx, pp. 213-245, pl. xv, 1897.

Reviews previous opinions concerning the subject, and discusses the evidences of the separation of the Pliocene and Pleistocene, and the evidence of a post-Pliocene disturbance and uplift.

209 — Outline of the geology of California with reference to its mineral deposits.


Describes the general geologic features of the occurrence of mineral deposits in California.

210 **Fairchild** (Herman LeRoy). Glacial geology of western New York.


Describes the glacial deposits and phenomena of this portion of the state.


Describes the occurrence of the shore lines and other glacial phenomena of the region.

212 **Farrington** (Oliver C.). Observations on Popocatepetl and Ixtaccihuatl, with a review of the geographic and geologic features of the mountains [Mexico].


Reviews the literature on the region, and describes the geographic, geologic, and glacial features.

213 — [Review of “Manual of determinative mineralogy, with an introduction on blowpipe analysis,” by George J. Brush.]

*Jour. of Geol.*, vol. v, pp. 86-87, 1897.

214 — The average specific gravity of meteorites.

*Jour. of Geol.*, vol. v., pp. 126-130, 1897.

Reviews previous discussions of the subject, and gives the results of the author's studies.

215 — The eruptive rocks of Mexico.

*Jour. of Geol.*, vol. v, pp. 467-468, 1897.

Gives a summary of recent work by Señor Ordonez on this subject.

216 **Fenderson** (W. C.). Turquoise mining in New Mexico.


Describes the occurrence of turquoise in New Mexico.
217 Ferrier (W. F.), Barlow (A. E.) and. On the relations and structure of certain granites and associated arkoses of Lake Temiscaming, Canada.
See Barlow (A. E.) and Ferrier (W. F.), No. 40.

218 Finch (Grant E.). Drift section at Oelwein, Iowa.
Iowa Acad. Sci., Proc., vol. iv, pp. 54-58, pl. 1, 1897.
Describes the local features of the drift beds.

219 Foerste (August F.). A report on the geology of the Middle and Upper Silurian rocks of Clark, Jefferson, Ripley, Jennings, and southern Decatur counties, Indiana.
Describes the lithologic and faunal characters and occurrence of the different subdivisions of the Silurian strata, and includes geological maps of the counties named.

220 Foote (H. W.), Pratt (J. H.) and. On wellsite, a new mineral.
See Pratt (J. H.) and Foote (H. W.), No. 485.

221 — Penfield (S. L.) and. On bixbyite, a new mineral, and notes on the associated topaz.
See Penfield (S. L.) and Foote (H. W.), No. 469.

222 — — Note concerning the composition of ilmenite.
See Penfield (S. L.) and Foote (H. W.), No. 470.

223 Foote (Warren M.). Note on a new meteorite from the Sacramento Mountains, New Mexico.
Describes the mass and gives its chemical analysis.

224 Powke (Gerard). The formation of natural bridges.
Stone, vol. xiv, pp. 335-357, 1897.
Discusses the mode of formation of natural bridges.

225 Frazer (Persifor). Tables for the determination of minerals by physical properties ascertainable with the aid of a few field instruments.

226 — Notes on the northern Black Hills of South Dakota.
Describes the general geology of the region and occurrence of the gold ores. Includes a bibliography.

227 Fuller (M. L.), Crosby (W. O.) and. Origin of pegmatite.
See Crosby (W. O.) and Fuller (M. L.), No. 157.
228 Gemmell (R. C.). The Camp Floyd mining district and the Mer­
cur mine, Utah.  
Describes the topographic and geologic features of the district.

229 Gilbert (Grove Karl). Recent earth movements in the Great  
Lakes region.  
Describes the general features of the region and the methods of ob­taining the data, and gives a discussion and summary of results.

230 — Pueblo folio, Colorado.  
Describes the geologic history of the region, the character and occur­rence of the Archean, Silurian, Carboniferous, Jura-Trias, Cretaceous,  
Neocene, and Pleistocene strata, the character and origin of the topo­graphic features and the economic resources of the region. Includes  
topographic and geological maps.

231 — Old tracks of Erian drainage in western New York.  
Describes the general features of the Glacial drainage of the region.

in the history of Science.  
225-243, 1897; Sci. Am. Suppl., vol. xlix, pp. 18028, 18080-18092, and  
18092-18094, 1897.  
Gives a sketch of the life of Prof. Cope and a review of his work as a  
naturalist.

233 Gilpin (E., jr.). The geological horizons of some Nova Scotia min­
erals.  
Mentions the geologic horizons at which certain minerals occur.

234 — Some analyses of Nova Scotia coals and other minerals.  
Gives analyses of coals and iron ore.

235 Goodrich (Harold Beach). Recent warpings as shown by drain­age peculiarities [Alaska].  
Describes Alaskan drainage and the warping of the region as mea­sured by the streams, and gives a summary of conclusions.

236 — See Spurr (J. E.), No. 575.
Jour. of Geol., vol. v, pp. 313-317, 1897.

238 Grabau (Amadeus W.). The sand plains of Truro, Wellfleet, and Eastham [Massachusetts].
Describes the physiography of the region and the character and occurrence of the sand plains.

Jour. of Geol., vol. v, pp. 401-404, 1897.

240 — [Review of "Tables for the determination of minerals by physical properties ascertainable with the aid of a few field instruments," by Persifor Frazer.]
Am. Geol., vol. xix, pp. 221-222, 1897.

241 — [Review of "Biennial report of the State geologist of Missouri," by C. R. Keyes.]
Am. Geol., vol. xix, p. 350 (i p.), 1897.

242 — Lakes with two outlets in northeastern Minnesota.
Describes the occurrence of several lakes of this character, and discusses the evidences of their probable duration.

243 — [Review of "Treatise on rocks, rock-weathering and soils," by George P. Merrill.]
Am. Geol., vol. xx, pp. 273-274, 1897.

244 — [Review of "Syllabus of general geology for students; with definition and references," by C. W. Hall.]
Am. Geol., vol. xx, pp. 323-324, 1897.

245 — [Review of "Geology of Polk County, Iowa," by H. F. Bain.]
Am. Geol., vol. xx, p. 334 (i p.), 1897.

246 Gratacap (L. P.). Fossils and fossilization.

247 Gregory (J. W.). Some problems of Arctic geology. I. The polar basin.
Discusses the geologic history of the Arctic region.

248 — Some problems of Arctic geology. II. Former Arctic climates.
Discusses the evidences as to the nature of Arctic climates in former geologic ages.
249 Gresley (W. S.). Traces of organic remains from Huronian (?) series at Iron Mountain, Mich., etc.
   Describes the characteristics of markings considered to be of organic origin from the ore bodies at this locality.

   Describes the topography of the areas, the origin, character, and age of the gypsum deposits, and the occurrence and character of the secondary gypsum deposits.

251 — Gypsum in Kansas.
   Describes the character and extent of the gypsum deposits of the State.

252 — The study of natural palimpsests.
   Am. Geol., vol. xix, pp. 15-21, 1897.
   Discusses the phenomena of metamorphism.

   Am. Geol., vol. xix, pp. 272-274, 1897.

254 Griswold (Leon S.). Notes on the geology of Southern Florida.
   Jour. of Geol., vol. v, pp. 312-313, 1897.
   Review by J. Edmund Woodman.

255 Guppy (R. J. Lechmere) and Dall (William H.). Descriptions of Tertiary fossils from the Antillean region.

256 Gurley (William F. E.), Miller (S. A.) and. New species of crinoids, cephalopods, and other Paleozoic fossils.
   See Miller (S. A.) and Gurley (Wm. F. E.), No. 431.

257 Gwillim (J. O.) and Johnson (W. S.). Some ores and rocks of southern Slocan division, West Kootenay, British Columbia.
   Describes the geologic features and the occurrence of the gold and silver ores of the region.

H.

258 Hall (Christopher W.). Syllabus of general geology for students, with definitions and references.
   The University Book Store, Minneapolis, Minn., 8vo, 127 pp., 1897.
   Review by U. S. G[rant], Am. Geol., vol. xx, pp. 323-324, 1897.

   School of Mines Quart., vol. xviii, pp. 148-153, 1897.
   Gives notes on the temperatures in deep wells at these localities.
260 Hanna (George B.), Nitze (H. B. C.) and Gold deposits of North Carolina.

See Nitze (H. B. C.) and Hanna (G. B.), No. 445.

261 Hardman (John E.). Notes on some mining districts in British Columbia.


Describes briefly the occurrence of gold and silver in the Rossland, Nelson, and Fort Steele districts.

262 Hatcher (J. B.). Diceratherium proavitum.

Am. Geol., vol. xx, pp. 313-316, pl. xix, 1897.

Makes correction of error in original description, and discusses its assignment to the genus Diceratherium rather than Aceratherium.

263 Haworth (Erasmus). Underground waters of southwestern Kansas.

U. S. Geol. Surv., Water-Supply and Irrigation Papers No. 6, 63 pp., pls. i-xii, figs. 1-2, 1897.

Describes the physiography of the region, the character and occurrence of the Jurassic, Cretaceous, and Tertiary beds, and the water supply. Includes a geological map.

264 — Physiography of western Kansas.

Kan. Univ. Geol. Surv., vol. ii, pp. 11-49, pls. i-viii, fig. 1, 1897.

Describes the stream erosion of the region.

265 — Physical properties of the Tertiary [Kansas].


Describes the physical character of the material forming the Tertiary deposits, and discusses their origin and mode of formation.

266 — The University Geological Survey of Kansas, vol. ii.

Review by S. W. Wi[lliston], Jour. of Geol., vol. v, pp. 400-401, 1897;

267 — See Logan (W. N.), No. 388.

268 — and Beede (J. W.). The McPherson Equus beds [Kansas].


Describes the topographic features of the region, and the character, structure, and origin of the beds.

269 Hayes (O. W.). Solution of silica under atmospheric conditions.


Describes occurrence of this phenomenon and the chemical reactions involved.


Science, new ser., vol. vi, p. 296, 1897.

271 — The geological relations of some Southern iron ores.

272 Head (Jeremiah). The coal industry of the southeastern States of North America.


Describes the character and occurrence of coal in the southern Appalachian region.

273 Henrich (Carl). Faulting and accompanying features observed in glacial gravel and sand in southern Michigan.


Describes the character of the strata and the faulting that has taken place.

274 Herrick (C. L.). The geology of a typical mining camp in New Mexico.

Am. Geol., vol. xix, pp. 256-262, pls. xiii-xiv, 1897.

Describes the general geologic features of the Magdalena Mountains and the fault phenomena of the region.

275 Hershey (Oscar F.). The Florencia formation.


Describes the lithologic character, distribution, and relations of the formation in Illinois, and gives a list of fossils determined by W. H. Dall.

276 — Mode of formation of till as illustrated by the Kansan drift of northern Illinois.

Jour. of Geol., vol. v, pp. 50-62, fig. 1, 1897.

Describes the general glacial features of the region and the occurrence and mode of formation of the till.

277 — Eskers indicating stages of glacial recession in the Kansan epoch in northern Illinois.


Describes the distribution of the stratified gravel and sand, its mode of deposition, and the occurrence of transported rock masses. Presents a map showing the Kansan stages of recession and gives the author’s conclusions.

278 — The term Pecatonica limestone.

Am. Geol., vol. xx, correspondence, pp. 66-67, 1897.

Discusses the use of the term Pecatonica.

279 — The physiographic development of the upper Mississippi valley.

Am. Geol., vol. xx, pp. 246-268, 1897.

Describes the peneplains in southeastern Minnesota, northeastern Iowa, northwestern Illinois, and the canyon valleys of the upper Mississippi region.

280 — The inferior boundary of the Quaternary era.


Discusses the evidences of the beginning of the Quaternary epoch.
281 **Hershey** (Oscar F.). [Review of “The formation of the Quaternary deposits of Missouri,” by James E. Todd.]

282 —— The loess formation of the Mississippi valley.
Describes the character and origin of the loess.

Gives a sketch of his life and a list of his published papers.

284 —— The alleged Jurassic of Texas. A reply to Prof. Jules Marcou.
Reviews the work on the Cretaceous series of the southwest, with special reference to the work and publications of Prof. Marcou in the same region.

285 —— The easternmost volcanoes of the United States.
Describes occurrence of volcanic flows in eastern New Mexico.

286 —— The stratigraphic succession in Jamaica.

Describes the physiography of the region, the character and occurrence of the Comanche and Gulf series, and the Eocene strata, and the occurrence of underground water.

288 **Hille** (P.). The western Ontario gold fields and their genesis.
Describes the origin of the ore bodies.

289 **Hillebrand** (W. F.), **Clarke** (F. W.) and. Analyses of rocks, with a chapter on analytical methods.
See Clarke (F. W.) and Hillebrand (W. F.), No. 132.

290 **Hinde** (G. J.). Eminent living geologists. Dr. G. M. Dawson.
Gives a sketch of the life and work of Dr. Dawson.

291 —— See Dawson (J. William), No. 175.

292 **Hitchcock** (C. H.). Note on the stratigraphy of certain homogeneous rocks.
Describes the cleavage and stratification planes of certain rocks of Vermont and New Hampshire.
293 **Hitchcock** (C. H.). *Sketch of W. W. Mather.*

*Am. Geol., vol. xix, pp. 1-15, pl. 1, 1897.*

Gives a sketch of his life and a list of his published writings.

294 — **The eastern lobe of the ice sheet.**

*Am. Geol., vol. xx, pp. 27-33, 1897.*

Describes recent observations in the Adirondack region.

295 — **The southern lobe of the Laurentian ice sheet.**


Contains a brief discussion of the extent of the ice sheet in northern United States.


*Science, new series, vol. v, pp. 621-624, 1897.*

297 **Hobbs** (William H.). *Note on the geology of southwestern New England.*

*Jour. of Geol., vol. v., pp. 175-177, 1897.*

Describes observations of the structure in southwestern Massachusetts and northwestern Connecticut, and its bearing on the correlation of the Canaan limestone with the Stockbridge, the Riga schist with the Berkshire schist, and the Egremont limestone with the Bellowspipe limestone.

298 **Hollick** (A.). [Review of "Stratigraphy and paleontology of the Laramie and related formations in Wyoming" by T. W. Stanton and F. H. Knowlton.]


299 — **A new fossil grass from Staten Island [New York].**


Describes a new species from the Tertiary beds.


301 — [Review of "Age of the lower coals of Henry County, Missouri," by David White.]


302 — **A new fossil Monocotyledon from the Yellow gravel at Bridgeton, N. J.**


Describes a new species from the Tertiary beds.

303 **Hoover** (Herbert C.). *Geology of the Four Mile placer mining district, Colorado.*

*Eng. and Mg. Jour., vol. lxiii, p. 510, 1897.*

Describes the placer mines and discusses the origin of the gold.
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   Describes the chemical and mineralogic composition and geologic occurrence of the brownstones.

305 — Origin of conglomerates of western Indiana.
   Discusses the origin of the Carboniferous conglomerate.

306 — Stylolites.
   Describes their occurrence and origin.

   Describes the general characteristics of brownstones, their lithologic and chemical characters in Pennsylvania, and their character and distribution in other parts of the United States.

308 — and Siebenthal (O. E.). The Bedford oolitic limestone of Indiana.
   Describes the general stratigraphic, structural and economic features of the Bedford limestone. Includes a description of the local occurrences, a discussion of the origin of oolitic limestones, a bibliography and geologic map.

309 Hosea (R. M.). The Newcastle mines [Colorado].
   Describes the character and occurrence of coal in these mines and the methods of working.

310 Hovey (E. O.). A relatively acid dike in the Connecticut Triassic area.
   Describes the occurrence of the dikes, and the petrographic characters and chemical composition of the dike rock. Presents a geological map.

   Jour. of Geol., vol. v, pp. 213-216, 1897.

   Continues the paper in vol. xviii, p. 140. See Bibliography and Index for 1896, No. 360.
313 Jefferson (Mark S. W.). The antecedent Colorado.
Discusses the origin of the Colorado River.

314 Johnson (Guy R.). The Embreville estate, Tennessee.
Describes the geology of the region and the occurrence of the iron ores.

315 Johnson (W. S.), Gwillim (J. C.) and. Some ores and rocks of southern Slocan division, West Kootenay, British Columbia.
See Gwillim (J. C.) and Johnson (W. S.) No. 257.

316 Jopling (James E.). The Marquette range, its discovery, development, and resources.
Includes brief notes on the iron-ore bodies and cross sections.

317 Jordan (David S.). Richard Owen.
Gives a sketch of the life and character of Richard Owen.

Describes the topographic features and geologic history of the quadrangle, the character and occurrence of the Carboniferous rocks, the geologic structure, and the occurrence of coal and petroleum. Includes topographical and geological maps.

319 Kemp (James Furman). The Leucite hills of Wyoming.
Describes the geology of the hills and the petrographic and chemical characters of the rocks.

320 — Physiography of the eastern Adirondacks in the Cambrian and Ordovician periods.
Describes the physiographic features of the region during Cambrian and Ordovician time.

321 — The geology of the magnetites near Port Henry, N. Y., and especially those of Mineville.
Describes the general geologic features of the region, the occurrence, character, chemical composition, relations, and origin of the non titaniferous ore bodies. Includes a bibliography of the subject.

322 Keyes (Charles Rollin). [Review of “Eocene deposits of the Middle Atlantic slope in Maryland, Delaware, and Virginia,” by W. B. Clark.]
Jour. of Geol., vol. v, pp. 310-312, 1897.
323 **Keyes** (Charles Rollin). Dual character of the Kinderhook fauna. 
*Am. Geol.*, vol. xx, pp. 167-176, 1897.
Discusses the character of the Kinderhook fauna and its bearing on the evidence of the line separating the Carboniferous and Devonian systems.

324 **Memorial of Charles Wachsmuth.** 
Gives a sketch of his life.

325 **Stages of the Des Moines or chief coal-bearing series of Kansas and southwest Missouri and their equivalents in Iowa.** 
Discusses the succession of the beds of the coal-bearing series of the region and compares them with the series in Iowa.

326 **Relation of the Devonian and Carboniferous in the Upper Mississippi Valley.** 
Discusses the separation of the Carboniferous and Devonian formations. Describes the section at Louisiana, Missouri, and gives a list of fossils.

327 **A new method of synchronizing strata.** 
Discusses principles of geologic correlation.

328 **Distribution and character of Missouri clays.** 

329 **Central Maryland granites III.** 
*Stone*, vol. xiv, pp. 126-129, 226-228, 1897.
Describes their character and occurrence.

330 **Biennial report of the State Geologist [Missouri].** 
Review by U. S. G[rant].

331 **and Rowley (R. R.). Vertical range of fossils at Louisiana [Missouri].** 
Describes the section at this locality and gives a list of fossils. Discusses the faunal characters of the Lower Carboniferous and the occurrence of Devonian forms in the lower portion of the Kinderhook group.

Describes the physiographic and orographic changes that have occurred in the region and the character and structure of the Cretaceous, Tertiary, and Pleistocene strata, with remarks on the glacial phenomena. Mentions the occurrence of coal.
333 **Kimball** (James P.). Secondary occurrences of magnetite on islands of British Columbia by replacement of limestone and by weathering of eruptives.


Discusses the theory of replacement, and describes the occurrence and character of ore bodies in the region named.

334 — On the magnetite belt at Cranberry, North Carolina, and notes on the genesis of iron ore in general in crystalline schists.

*Am. Geol.*, vol. xx, pp. 299-312, pl. xviii, 1897.

Describes the character and form of the ore deposits, and discusses the origin of this and similar ore bodies. Gives chemical analyses of the ore.

335 **Kindle** (Edward M.). The relation of the fauna of the Ithaca group to the faunas of the Portage and Chemung.

*Am. Geol.*, vol. xix, pp. 140-141, 1897.

Review by T. L. *Watson*.

336 — Pleistocene fossils from Baffinland and Greenland.

*Science*, new ser., vol. v, pp. 91-93, 1897.

Gives lists of species determined and describes their occurrence.


*Am. Geol.*, vol. xx, pp. 33-40, 1897.

Discusses the characteristics of and position to which trilobites should be assigned. Includes a partial bibliography.

338 — Edward Drinker Cope.


Gives an account of the life and works of Prof. Cope.

339 **Klittke** (M.). Die geologische Landesfahme der Dominion of Canada.

*Zeit. prak. Geol.*, Heft 4, pp. 117-144, 1897.

340 **Knapp** (George N.), **Salisbury** (R. D.) and. Surface geology. Report of progress [New Jersey].

See Salisbury (R. D.) and Knapp (G. N.), No. 522.

341 **Knapp** (M. A.). The coal fields of Esmeralda County, Nevada.


Describes the character and occurrence of the coal-bearing strata.

342 **Knight** (W. C.) The geology of the Popo-Agie, Lander, and Shoshone oil fields [Wyoming].


Describes the general geology of the region.

343 — The petroleum fields of Wyoming.


Describes the geologic features of the region and the occurrence of the oil.
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344 Knowlton (F. H.). Report on a collection of fossil plants from the Yukon River, Alaska, obtained by Mr. J. E. Spurr and party during the summer of 1896.
Gives a list of the fossils collected and discusses their bearing on the age of the beds.

345 — The fossil plants of the Payette formation [Idaho].
Describes a number of new species from this formation and discusses their bearing on its age.


347 — Stanton (T. W.) and. Stratigraphy and paleontology of the Laramie and related formations in Wyoming.
See Stanton (T. W.) and Knowlton (F. H.), No. 580.

348 Krusch (P.). Goldvorkommen in Minnesota mit besonderer Berücksichtigung des Rainy Lake district.

[New Jersey.]
N. J. Geol. Surv., Rept. 1896, pp. 27–88, pl. viii, 1897.
Describes the topography of the Newark area, the lithologic character and distribution of the Stockton, Lockatong, and Brunswick series and of the trap rocks, and discusses the structure of the region.

350 — The Newark system of New Jersey.
Describes the physiography of northwestern New Jersey, the character and occurrence of the Newark strata, and their geologic structure. Presents a geologic map of the region.

351 — [Review of “Elementary geology,” by Ralph S. Tarr.]
Jour. of Geol., vol. v, pp. 317–318, 1897.

352 Kunz (George F.). On the sapphires from Montana, with special reference to those from Yogo gulch, in Fergus County.
Describes their character and occurrence.

353 — The genesis of the diamond.
Discusses the origin of diamonds in a review of Prof. Lewis’s papers on the “Genesis and matrix of the diamond.”
354 **Lakes** (Arthur). Sketch of a portion of the Gunnison gold belt, including the Vulcan and Mammoth Chimney mines [Colorado].  

355 — Common freaks of nature.  
Describes the occurrence and origin of concretionary structures.

356 — Peculiar formations in the San Juan region [Colorado].  
Describes the character and occurrence of the San Miguel conglomerate and the San Juan formation.

357 — Rico mining district [Colorado].  
Colliery Eng., vol. xvii, pp. 359–360, 6 figs., 1897.  
Describes the occurrence of the gold and silver mines of the district.

358 — Mining sketches [Colorado].  
Describes the general geologic features of portions of the San Juan region.

359 — Ore shoots of Cripple Creek [Colorado].  
Colliery Eng., vol. xvii, pp. 481–482, 4 figs., 1897.  
Describes the occurrence of the ore veins at Cripple Creek.

360 — The La Plata mountains [Colorado].  
Describes the geologic and ore deposits of the region.

361 — A study of vein formation as illustrated in Clear Creek canyon, Colorado.  
Colliery Eng., vol. xvii, pp. 109–110, 10 figs., 1897.  
Describes the occurrence and character of the veins.

362 — A sketch of the mining fields of British Columbia and the great Northwest.  
Describes the general geologic features and ore deposits of the region.

363 — A mountain placer [Colorado].  
Describes the character and occurrence of a placer in South Park, Colorado.

364 — Local restriction and distribution of certain ores.  
Remarks on the local occurrences of minerals.

365 — “Nigger heads,” turtle stones, etc., explained.  

**Bull. 156—4**


377 Leverett (Frank). Changes in drainage in southern Ohio.
Describes an abandoned valley in southern Ohio.

378 Lewis (Henry Carvill). Papers and notes on the genesis and matrix of the diamond.

379 Lewis (J. F.). The Chicago main drainage channel.
Includes notes on the glacial geology of the region.

380 Lewis (Joseph Volney). Corundum and the basic magnesian rocks of western North Carolina.
N. C. Geol. Surv., Bull., No. 11, 167 pp., 6 pls., 8 figs., 1896.
Describes the character and distribution of the peridotites and associated rocks, and the occurrence and distribution of corundum in the state. Includes a bibliography of the literature of the corundum belt and a geological map of western North Carolina.

381 Lindahl (Josua). Description of a Devonian Ichthyodorulite, Heteracanthus uddeni, n. sp., from Buffalo, Iowa.
Describes a new species and gives an emended description of the genus.

Describes the general geologic history and the occurrence and character of the ore deposits and of the Tertiary and Pleistocene strata. Includes a report on the fossil plants of the Payette formation.

383 --- Truckee folio, California.
Describes the geologic history and topography of the gold-belt region, the occurrence and character of the Bed Rock series, the Carboniferous, Jura-Triasô, Neocene, and Pleistocene strata, the character of the igneous rocks and the Glacial history of the region. Includes topographic and geologic maps.

384 --- The granitic rocks of the Pyramid Peak district, Sierra Nevada, Cal.
Describes briefly the character and distribution of the Carboniferous and Jura-Trias strata, the petrographic characters of the granite, gabbro, diorite, and granodiorite. Gives chemical analyses of the granite and a geological map.

385 --- Monazite from Idaho.
Describes the occurrence of Monazite.


M.


394 — The hematites of Alabama geologically considered. Eng. and Mg. Jour., vol. lxiii, pp. 43-44, 1897. Describes the geologic occurrence of the hematites and gives a section of Red Mountain.

396 McGee (W J.). Sheetflood erosion.

Describes the erosion of the Sonoro district, Mexico.

397 — [Review of "Elementary geology," by Ralph S. Tarr.]


398 — [Review of "An introduction to geology," by W. B. Scott.]


399 — [Review of "Glaciers of North America," by Israel C. Russell.]


400 — [Review of "A treatise on rocks, rock weathering, and soils," by George P. Merrill.]


Zeit. fur prak. Geol., Heft 8, pp. 297-300, fig. 85, 1897.


Discusses the chemical composition of petroleum.

403 Marcou (Jules). Jura and Neocomian of Arkansas, Kansas, Oklahoma, New Mexico, and Texas.

Discusses the classification and stratigraphy of the formations in the States named.

404 — Rules and misrules in stratigraphic classification.

Am. Geol., vol. xix, pp. 35-47, 1897.
Reviews the history of geological classification and nomenclature and discusses the classification of Cambrian and Silurian formations of eastern North America adopted by other writers.

405 — Rules and misrules in stratigraphic nomenclature.

Am. Geol., vol. xix, pp. 111-131, 1897.
Discusses the classification and nomenclature of various geologic formations.

406 — Note on "The easternmost volcanoes of the United States."

Refers to certain statements in a paper by R. T. Hill on this subject.

407 Marsh (Othniel C.). The skull of Protoceras.


408 — Affinities of Hesperornis.


409 — The Stylinodonta, a suborder of Eocene edentates.

Describes and figures Stylinodon mirus and discusses the origin of the edentates.
410 Marsh (Othniel C.). Principal characters of the Protoceratidæ. Part I.  
Discusses the characters of Protoceras and Calops.

411 — The Dinosaurs of North America.  
Jour. of Geol., vol. v, pp. 87-88, 1897.  
Reviewed by E. C. Case.

412 — Dinosaurs.  

412a Mathews (Edward B.). Bibliography and cartography of Maryland, including publications relating to the physiography, geology, and mineral resources.  
Md. Geol. Surv., vol. i, pp. 229-401, 1897.

413 — [Review of “Tables for the determination of minerals by physical properties ascertainable with the aid of a few field instruments based on the system of Prof. Dr. Weisbach,” by Persifor Fraser.]  

414 Matthew (G. F.). What is the Olenellus fauna?  
Discusses the relations of the Olenellus and Paradoxides faunas.

415 — Abraham Gesner. A review of his scientific work.  
Reviews the scientific publications of Gesner and includes his geological map of New Brunswick.

416 — Description of an extinct Paleozoic insect and a review of the fauna with which it occurs.  
Describes a new species and gives an account of the associated forms.

417 — Some characteristic genera of the Cambrian.  
Gives a summary of the relations of the various genera.

418 Matthew (W. D.). A revision of the Puerco fauna.  
Reviews the characters of the fauna described from these beds and describes three new species.

419 — Development of the foot in the Paleosyopinae.  
Gives notes on Paleosyops borealis Cope.

420 — Notes on intrusive rocks near St. John, N. B., Canada.  
New Brunswick Nat. Hist. Soc., Bull., No. xv, pp. 61-64, 1897:  
Gives brief notes on the petrographic characters of the intrusive rocks.
421 **Maynard** (George W.). *The chromite deposits of Port au Port Bay, Newfoundland.*


Describes the occurrence of chrome ores in this region.

422 **Mendenhall** (T. C.). *Life and letters of William Barton Rogers.*

*Science, new ser.*, vol. vi, pp. 1-9, 1897.

Gives a sketch of the life of Prof. Rogers.

423 **Mercer** (Henry C.). *The finding of the remains of the fossil sloth at Big Bone Cave, Tennessee, in 1896.*


Describes the character of the remains and the strata in which they were found.

424 **Merriam** (John O.). *The geologic relations of the Martinez group of California at the typical locality.*

*Jour. of Geol.*, vol. v, pp. 767-775, 1897.

Describes the character and relations of the group and gives a list of fossils. Discusses the evidence for the separation of the group.

425 --- **New species of Tertiary mollusca from Vancouver Island [British Columbia].**

*The Nautilus*, vol. xi, pp. 64-65, 1897.

Describes a number of new species.


427 --- **Road materials and road building in New York.**

*N. Y. State Mus., Bull.*, vol. iv, pp. 91-131, pls. i-xiv, 1897.

Includes a brief description of some of the road materials in New York.

428 **Merrill** (George P.). *A treatise on rocks, rock weathering, and soils.*


429 --- **Weathering of micaceous gneiss in Albemarle County, Virginia.**


Describes the petrographic and chemical characters of the rock and the process of weathering.

430 **Miller** (H. H.). *The Segovia gold region of Nicaragua.*

*Eng. and Mg. Jour.*, vol. lxiv, pp. 335-336, figs. 1-5, 1897.

Describes the geologic features and the occurrence of the ore bodies.

431 **Miller** (S. A.) and **Gurley** (William F. E.). *New species of crinoids, cephalopods, and other Paleozoic fossils.*


Describes new species mainly from the Lower Carboniferous rocks of the Central Mississippi valley states and Montana.


Newsome (John F.) and Branner (John C.). The Red River and Clinton monoclines [Arkansas]. Am. Geol., vol. xx, pp. 1-13, pl. i, figs. 1-3, 1897. Describes the general physiographic features and the character and geologic structure of the region in which the monoclines occur.


Nicolson (John T.), Adams (Frank D.) and. Preliminary notice of some experiments on the flow of rocks. See Adams (F. D.) and Nicolson (J. T.), No. 8.


444 Nitze (Henry B. C.). The genesis of the gold ores in the central slate belt of the Carolinas.


Describes the character of the country rock, the structure of the deposits, and the formation and filling of the fissure openings.

and Hanna (George B.). Gold deposits of North Carolina.


Describes the occurrence, character, and age of the gold-bearing rocks, and gives local details of the occurrence of gold at the various mines. Discusses the genesis of the gold ores. Includes geological map of the State.

446 Norton (William Harmon). Artesian wells of Iowa.

Iowa Geol. Surv., vol. vi, pp. 115-428, pls. v-xxiv, figs. 29-43, 1897.

Describes the requisite conditions of artesian wells, the geologic features of the Iowa artesian field, the records of numerous wells, and the chemical characters of the artesian waters. Includes a bibliography.

447 [Review of “Water resources of Illinois,” by Frank Leverett.]

Jour. of Geol., vol. v, pp. 206-208, 1897.

448 Noyes (W. A.). Composition of Indiana coals.


Describes the methods of analyses and in tabular form shows the chemical composition of coal from various mines.

O.

449 Ogilvie (W. M.). Gold mining in the Yukon district [British Columbia].


Describes the topography and drainage of the region and the occurrence of the placers.

450 Ordonez (Ezequiel). Itinerarios geologicos.

Inst. Geol. de Mexico, Bulls. Nos. 4-6, pp. 30-77, 1897.

Describes geologic features in different parts of Mexico, including occurrences of Pleistocene strata and the character of igneous rocks.

451 — Rocas eruptivas [Mexico].

Inst. Geol. de Mexico, Bulls. Nos. 4-6, pp. 253-270, 1897.

Describes the occurrence and general character of the eruptive rocks of Mexico.

452 — Descripcion de las rocas [Sierra de Pachuca, Mexico].

Inst. geol. de Mexico, Bulls. Nos. 7-9, pp. 99-126, pl. vi, 1897.

Describes the volcanic rocks of the region.

453 — Aguilera (J. G.) and. Fisiografia de la Sierra de Pachuca [Mexico].

See Aguilera (J. G.) and Ordonez (E.), No. 15.

454 — Geologia general de la Sierra de Pachuca [Mexico].

See Aguilera (J. G.) and Ordonez (E.), No. 16.
455 Ordonez (Ezequiel), Aguilera (J. G.) and. Las vetas [Sierra de Pachuca, Mexico].
See Aguilera (J. G.) and Ordonez (E.), No. 17.

456 Ortmann (Arnold E.). The systematic position of Crangopsis vermiformis (Meek) from the sub-Carboniferous rocks of Kentucky.
Discusses its characters and the position to which it should be assigned.

457 — On a new species of palinurid, genus Linunparus, found in the upper Cretaceous of Dakota.
Describes the characters of the Palinuridae and of Linunparus atavus n.sp.

458 Osborn (Henry Fairfield). The Huerfano lake basin, southern Colorado, and its Wind River and Bridger fauna.
Reviews the literature on this region, describes the character and distribution of the beds, and gives notes on the fauna.

459 — Reconstruction and model of Phenacodus primævus Cope.
Gives a brief account of its relations.

460 — The origin of the mammalia.
Discusses the relations of the subdivisions of the mammalia.

461. — Lambdotherium not related to Palæosyops or the Titanotheres.
Describes Lambdotherium Cope and L. popoagicus Cope.

462 — Wind River and Huerfano beds in the Huerfano lake basin.
Reviews the work of R. C. Hills on these beds, and gives the results of the author's observations.

463 — Edward D. Cope.
Gives a sketch of his life, character, and publications.

464 — The Ganodonta or primitive edentates with enameled teeth.
Describes their geographic distribution and osteologic characters.

465 Pearce (Richard). Occurrence of Tellurium in Montana.

465a — Tellurium from the Griffith lode, Colorado.
466 Pearce (Richard). Telluride gold ores.
   Brief note on the detection of tellurium in gold ores.

467 Peckham (S. F.). On the nature and origin of petroleum.
   Reviews recent literature on the subject and discusses the origin of bitumens.

   Describes the chemical and crystallographic characters of hauilinite and the crystallographic characters of bertrandite.

469 — and Foote (H. W.). On bixbyite, a new mineral, and notes on the associated topaz.
   Describes its crystallographic and chemical characters.

470 — — Note concerning the composition of ilmenite.
   Describes the crystallographic and chemical characters of ilmenite.

   Gives notes on the characters of the species, and in tabular form shows the extent and distribution of the flora.

472 — Myelopteris topekanusis, n. sp., a new Carboniferous plant.
   Describes a new species from the Carboniferous of Kansas.

473 Penrose (R. A. F., jr.). Geology and mining industry of the Cripple Creek district, Colorado.
   See Cross (W.) and Penrose (R. A. F., jr.), No. 160.

474 Phillips (Francis C.). On the genesis of natural gas and petroleum.
   Discusses Mendeleeff’s theory as to the origin of these products.

475 — On the occurrence of petroleum in the cavities of fossils.
   Discusses the origin of petroleum oil found in the cavities of fossils.

   Eng. and Mg. Jour., vol. lxiv, pp. 185–186, figs. 1–6, 1897.
   Describes the occurrence and character of certain ore bodies.

477 — The southwestern extremity of the Appalachian gold fields.
   Describes the occurrence of gold in northern Alabama.
478 Phillips (William B.). The gold regions of Alabama, U. S. A.
Describes the general character and occurrence of gold ores in this state.

479 Pierce (S. J.). The pre-Glacial Cuyahoga valley [Ohio].
Am. Geol., vol. xx, pp. 176-181, pl. xiii, 1897.
Presents the data of deep wells in the vicinity of Cleveland, Ohio, and discusses its bearing on the depth and origin of Cuyahoga valley.

480 Pirsson (Louis V.). On the corundum-bearing rocks from Yogo gulch, Montana.
Discusses the megascopic and microscopic characters of the rocks and the origin of the sapphites found in them.

481 — Weed (W. H.) and. Geology and mineral resources of the Judith Mountains of Montana.
See Weed (W. H.) and Pirsson (L. V.) No. 674.

482 Porter (J. A.). The Smuggler-Union mines, Telluride, Colorado.
Describes the occurrence and character of the gold and silver ores in these mines.

483 Pratt (J. H.). On the crystallography of the Montana sapphires.
Describes their crystallographic characters.

484 — Notes on North Carolina minerals.
Includes crystallographic notes and chemical analyses of wellsite, chabazite, anorthite, anthophyllite, enstatite, beryl, cyanite, and zircon.

Describes the crystallographic form and physical properties of a new mineral from North Carolina.

486 Prosser (Charles S.). Comparison of the Carboniferous and Permian formations of Nebraska and Kansas.
Jour. of Geol., vol. v, pp. 1-16, 148-173, 1897.
Reviews the previous work on these formations in Kansas and Nebraska. Discusses the character, succession, and correlation of the various subdivisions, and describes the lithologic and faunal characters of a number of sections.

487 — The upper Permian and lower Cretaceous [Kansas].
Describes the character, occurrence, correlation, and classification of the upper Permian and lower Cretaceous beds of Kansas.
488 Prosser (Charles S.). The Permian and upper Carboniferous of southern Kansas.

Kan. Univ. Quart., vol. vi, pp. 149-175, plas. xviii-xix, 1897.

Describes several sections and discusses their correlation and faunal characters.


Jour. of Geol., vol. v, pp. 759-760, 1897.


Gives a general description of the sedimentary and igneous rocks, the fissures and vein systems, and the occurrence of the ore. Discusses the origin and age of the ore deposits.

491 Telluride mining district, Colorado.


Gives brief notes on the geology of the region and the occurrence of the ores.

R.

492 Rangel (M.). Exploitacion de las minas [Sierra de Pachuca, Mexico].

Inst. Geol. de Mexico, Bulls. Nos. 7-9, pp. 127-141, 1897.

Describes the mining geology of the region.

493 Ransome (F. Leslie). The age of the California coast ranges.


Discusses briefly the relations of the Coast ranges and Great Valley of California in pre-Miocene time.

494 [Review of "The geology of Santa Catalina island," by W. S. T. Smith.]

Jour. of Geol., vol. v, pp. 208-210, 1897.

494a and Turner (H. W.). Sonoro folio, California.

See Turner (H. W.) and Ransome (F. L.), No. 621.

495 Reid (Harry Fielding). Variations of glaciers.

Jour. of Geol., vol. v, pp. 378-383, 1897.

Gives a summary of the first annual report of the International Committee on glaciers as to the state of glaciers in various parts of the world.

496 [Review of "The glaciers of North America," by Israel C. Russell.]


504 **Rowley** (R. R.) and **Keyes** (C. R.). Vertical range of fossils at Louisiana [Missouri]. See Keyes (C. R.) and Rowley (R. R.), No. 331.

505 **Ruedemann** (R.). Evidence of current action in the Ordovician of New York. Am. Geol., vol. xix, pp. 367-391, pls. xxii, 1897. Describes the evidence of the parallel arrangement in the rocks of the remains of certain fossils, as bearing on the probable course of the currents by which they were transported. Presents a geologic map of the region described.


WEEKS.] PALEONTOLOGY, PETROLOGY, AND MINERALOGY, 1897. 63

508 Russell (Israel Cook). Glaciers of Mount Rainier. With a paper on the rocks of Mount Rainier by George Otis Smith.
Describes the physical features of the state of Washington and the glaciers and glacial phenomena of the region.

509 — A reconnaissance in southeastern Washington.
U. S. Geol. Surv., Water Supply and Irrigation Papers No. 4, 96 pp., pls. i-vii, figs. 1-3, 1897.
Describes the physiography of the region, the occurrence and character of the metamorphic rocks, the Kittitas system, the Columbia lava, the John Day system, and the artesian waters conditions.

510 — Principal features of the geology of southeastern Washington.
Mining, vol. iii, pp. 163-165, 1897.
Describes the general geologic features of the region.

511 — "Plasticity" of glacial ice.
Discusses the relation of plasticity to the flow of glacier ice.

512 — [Review of "Glacier Bay and its glaciers," by H. F. Reid.]


514 — Volcanoes of North America, a reading lesson for students of geography and geology.
The Macmillan Company, New York, 1897.

515 — Lakes of North America, a reading lesson for students of geography and geology.
Ginn & Co., Boston, 8vo, 125 pp.

S.

516 Sadtler (Samuel P.). The genesis and chemical relations of petroleum and natural gas.
Discusses the origin of petroleum and natural gas.

517 — [On the origin of Pennsylvania petroleum.]
In discussion of paper by David T. Day on the same subject.
518 Salisbury (Rollin D.). On the origin and age of the relic-bearing sand at Trenton, N. J.
Discusses the evidence as to the age of these beds.

519 — [Review of “An introduction to geology,” by W. B. Scott.]
Jour. of Geol., vol. v, pp. 398-399, 1897.

Jour. of Geol., vol. v, pp. 760-761, 1897.

521 — and Atwood (Wallace Walter). Drift phenomena in the vicinity of Devils Lake and Baraboo, Wisconsin.
Jour. of Geol., vol. v, pp. 131-147, figs. 1-7, 1897.
Describes glacial phenomena in the south-central portion of the State.

N. J. Geol. Surv., Rept. for 1896, pp. 1-23, pls. i-vii, 1897.
Describes the character, distribution, and correlation of the Pen­sauken formation, and the character and distribution of the Beacon Hill formation, and of the road materials in certain portions of the State. Includes a geologic map.

523 Sanchez (P. C.). Sistema de fracturas [Sierra de Pachuca, Mexico].
-Inst. geol. de Mexico, Bulls. Nos. 7-9, pp. 81-98, 1897.
Describes the occurrence and characters of the fracture systems of the region.

524 Sardeson (Frederic W.). The Galena and Maquoketa series. Part II.
Am. Geol., vol. xix, pp. 21-35, 1897.
Presents the author’s classification of the series and describes their faunal relationships.

525 — The Galena and Maquoketa series. Part III.
Am. Geol., vol. xix, pp. 91-111, pls. iv-v, 1897.
Describes a number of species of Orthis, including some new ones, and discusses their relations.

526 — The Galena and Maquoketa series. Part IV.
Am. Geol., vol. xix, pp. 180-190, 1897.
Gives a list of the species of Plectambonites and Rhynchonella occurring in these beds and a summary of facts presented in this and former papers on the same subject.

527 — Nomenclature of the Galena and Maquoketa series.
Discusses some of the principles of geologic nomenclature and the use of the names applied to the Galena and Maquoketa series.

528 — On Streptelasma profundum (Owen), S. corniculum Hall.
Am. Geol., vol. xx, pp. 277-292, pls. xvi-xvii, 1897.
Discusses the author’s conclusion that S. profundum shows all the distinctive characters of the 14 species assigned to the genus.
529 Sardeson (Frederic W.). *On glacial deposits in the driftless area.*
Am. Geol., vol. xx, pp. 392-403, 1897.
Discusses the evidences of glacial phenomena in the driftless area of
the Upper Mississippi Valley.

530 Schmidt (A.). *Die Talklagerstaaten von St. Lawrence County im
Staat New York.*
Zeit. für prak. Geol., Heft 1, pp. 29-30, 1897.
See Bibliography and Index for 1896, No. 637.

531 — *Die Goldeszange von Cripple Creek in Colorado.*
Zeit. für prak. Geol., Heft 3, pp. 98-99, 1897.
See Bibliography and Index for 1896, No. 621.

532 — *Der Snuggler Erzgau zu Telluride in Colorado.*
Zeit. für prak. Geol., Heft 3, pp. 99-100, 1897.
See Bibliography and Index for 1896, No. 550.

533 — *Die Gunnison goldzone in Colorado.*
Zeit. für prak. Geol., Heft 3, pp. 100-101, 1897.
See Bibliography and Index for 1896, No. 424.

534 — *Palaeozoische phosphorite in Arkansas.*
Zeit. für prak. Geol., Heft 3, pp. 101-102, 1897.
See Bibliography and Index for 1896, No. 73.

535 — *Ueber das alter der Goldseifen der Sierra Nevada in Cali­
ifornien.*
Zeit. für prak. Geol., Heft 6, pp. 226-227, 1897.
See Bibliography and Index for 1896, No. 449.

536 — *Die Magnetit-Lagerstatten bei Port Henry im Staat New
York.*
Zeit. für prak. Geol., Heft 9, p. 318, 1897.

537 Schmitz (E. J.). *Copper ores in the Permian of Texas.*
Describes the stratigraphic and lithologic features of the district and
the occurrence and character of the ore bodies.

538 Schneider (Philip F.). *A geologic fault at Jamesville, near Syra­
cuse, N. Y.*
Describes fault phenomena in Devonian rocks of central New York.

539 Schuchert (Charles). *A synopsis of American fossil Brachiopoda,
including bibliography and synonymy.*
U. S. Geol. Surv., Bull. No. 87, 464 pp., pl. i, figs. 1-6, 1897.
Describes in tabular form the geographic and geologic distribution
of brachiopod genera, discusses the biologic development and the clas­
sification of the Brachiopoda, and gives an alphabetic list of genera
and species with references and synonymy. Includes a chapter on the
morphology of the brachia by Charles E. Beecher.

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540 Schuchert (Charles). On the fossil phyllopod genera Dipeltis and Protocaris of the family Apodidae.

541 Schultze (E.-A.) and Kain (C. Henry). The Santa Monica diatomaceous deposit, with list of references to figures of species.
Gives a brief mention of the occurrence of the deposits and a reference list of species figured from this deposit.

542 Scofield (W. H.), Ulrich (E. O.) and. The Lower Silurian Gastropoda of Minnesota.
See Ulrich (E. O.) and Scofield (W. H.), No. 628.

542a Scott (Samuel). Map of the Black Hills of South Dakota and Wyoming, with full descriptions of mineral resources, etc.
Custer City, S. D. 40 pp. and geological map, 1897.
Gives brief notes on the geologic formations and igneous rocks and the occurrence of minerals in the Black Hills. Presents a geological map of the region.

543 Scott (W. B.). Lakes.
Discusses the origin of lakes in various parts of the United States. An abstract of a lecture before the Wagner Institute.

544 — Glaciers.
Comprises an abstract of a lecture on the constructive work of glaciers.

545 — An introduction to geology.
The Macmillan Company, New York, 1897.
Review by R. D. Salisbury, Jour. of Geol., vol. v, pp. 398-399;

546 Scovell (J. T.). Geology of Vigo County, Indiana.
Describes the character of the Carboniferous rocks, the occurrence of coal, and the glacial features of the county.

547 Shaler (Nathaniel S.). Geology of the Cape Cod district [Massachusetts].
Describes the general relations, understructure, glacial deposits and history, and other geologic features of the Cape Cod region.

548 — [Water supply of eastern Massachusetts.]
Describes briefly the occurrence and character of the water supply.
549 Shaler (Nathaniel S.), Woodworth (J. B.), and Marbut (C. F.). The glacial brick clays of Rhode Island. Am. Geol., vol. xx, pp. 328-329, 1897.
Review by W. U[pham].

550 Shattuck (George B.). See Clark (W. B.), No. 128.

551 ——— Clark (W. B.) and. The geology of the sand hills of New Jersey.
See Clark (W. B.) and Shattuck (G. B.), No. 131.

552 Shimek (B.). Additional observations on the surface deposits in Iowa.
Describes character of drift beds at various localities.

553 Simonds (Frederic W.). Professor Oh. Fred. Hartt, M. A. A tribute.
Am. Geol., vol. xix, pp. 69-90, pl. iii, 1897.
Gives an account of the life and work of Prof. Hartt and a bibliographic list of his papers.

554 ——— [Review of “Marine fossils from the Coal Measures of Arkansas,” by J. P. Smith.]

Am. Geol., vol. xx, pp. 330-331, 1897.
Review by R. R[uedemann].

Colliery Eng., vol. xix, pp. 532, 2 figs., 1897.
Describes occurrence of a syncline between two partings of the coal seam.

557 Sisley (L. A.). The porphyry dike mines of Montana.
Eng. and Mg. Jour., vol. lxiv, p. 399, 1897.
Describes the geologic features and occurrence of gold southwest of Helena, Mont.

558 Skewes (Edward). The ore shoots of Cripple Creek [Colorado].
Describes the occurrence of the ore shoots and their structural features.

Describes the chemical character and composition of the oils.


505 Smith (James Perrin). Studies for students: Comparative study of paleontology and phytogeny. Jour. of Geol., vol. v, pp. 507-524, pl. 1, 1897. Discusses the law of acceleration of development, the nomenclature of stages of growth, the groups available for ontogenetic studies and methods of working.


Jour. of Geol., vol. v, pp. 533-534, 1897.

570 —— A note on the migration of divides.
Jour. of Geol., vol. v, pp. 809-812, 1897.
Describes the migration of a divide on San Clemente Island, off the coast of California.

Describes pseudomorphs of pyroxene after wallastonite and mica after scapolite and pyroxene.

Describes the character and occurrence of the Upper and Lower Marquette series, and the position, relation, and origin of the iron ore deposits.

573 —— Magnetic observations in geological mapping.
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**Lepidopodas** pagoda, Aldrich, No. 18.

**Lichas** (Terataspis) grandis Hall, Whitfield, No. 690.

**Limonopsis** subangulata n. sp., Guppy and Dall, No. 255.

**Lingula**

- elongata Hall, Whiteaves, No. 687.
- iowensis Owen, Whiteaves, No. 687.
- obtusa Hall, Whiteaves, No. 687.

**Lingulepis** meeki n. sp., Walcott, No. 656.

**Lingula**

- elongata Hall, Whiteaves, No. 687.
- *iowensis* Owen, Whiteaves, No. 687.
- *obtusa* Hall, Whiteaves, No. 687.

**Lingulepis** meeki n. sp., Walcott, No. 656.

**Linuparus** atavua n. sp., Ortmann, No. 457.

**Liospira** n. gen., Ulrich and Scofield, No. 628.

- *abrupta* n. sp., Ulrich and Scofield, No. 628.
- *americana* Billings, Ulrich and Scofield, No. 628.
- *angulata* n. sp., Ulrich and Scofield, No. 628.
- *angustata* n. sp., Ulrich and Scofield, No. 628.
- *decipiens* n. sp., Ulrich and Scofield, No. 628.
- *micula* Hall, Ulrich and Scofield, No. 628.

**Lithodesma** Conrad, Ulrich, No. 626.

- *acuminatum* n. sp., Ulrich, No. 626.
- *cannonense* n. sp., Ulrich, No. 626.

**Loxonema** winnipegense Whiteaves, Whitfield, No. 691.

**Loxonema**

- *conradana* n. sp., Ulrich and Scofield, No. 628.
- *decussata* n. sp., Ulrich and Scofield, No. 628.
- *elevata* n. sp., Ulrich and Scofield, No. 628.
- *fillmorensis* n. sp., Ulrich and Scofield, No. 628.
- *helicenter var. wisconsinensis* var. *ulrichi* and Scofield, No. 628.
- *humilis* n. sp., Ulrich and Scofield, No. 628.
- *medius* n. sp., Ulrich and Scofield, No. 628.
- *var. burginensis* var. *ulrichi* and Scofield, No. 628.
- *multigruma* Miller, Ulrich and Scofield, No. 628.
- *obliqua* n. sp., Ulrich and Scofield, No. 628.
- *ovata* n. sp., Ulrich and Scofield, No. 628.
- *peracuta* n. sp., Ulrich and Scofield, No. 628.
- *vagans* n. sp., Ulrich and Scofield, No. 628.
- *vulcanica* n. sp., Ulrich and Scofield, No. 628.
- *vulcanica* n. sp., Ulrich and Scofield, No. 628.
- *vagans* n. sp., Ulrich and Scofield, No. 628.

**Lucina**

- *astartiformis* n. sp., Aldrich, No. 18.
- *pauperata* n. sp., Guppy and Dall, No. 255.
- *textilis* n. sp., Guppy and Dall, No. 255.

**Lydodema** Conrad, Ulrich, No. 626.

- *acuminatum* n. sp., Ulrich, No. 626.
- *cannonense* n. sp., Ulrich, No. 626.

**Lynchodorus** Smith, No. 9.

**Macularea** (Leesmeur) Woodward, Ulrich and Scofield, No. 628.

- *affinis* Bill., Whitfield, No. 691.
Paleontology—Continued.
Genera and species described—Continued.
Macurina Continued.
microscopica var., Ulrich and Scofield, No. 628.
macroscopica var., Ulrich and Scofield, No. 628.
depressa var., Ulrich and Scofield, No. 628.
lausana var., Ulrich and Scofield, No. 628.
strigosa var., Ulrich and Scofield, No. 628.
modioloides var., Ulrich and Scofield, No. 628.
modioloides var., Ulrich and Scofield, No. 628.
nudibunda var., Ulrich and Scofield, No. 628.
subrotunda Whitfield, Ulrich and Scofield, No. 628.
Taeniurna var., Ulrich and Scofield, No. 628.
Tatjana var., Ulrich and Scofield, No. 628.
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Tatjana var., Ulrich and Scofield, No. 628.
Tatjana var., Ulrich and Scofield, No. 628.
Paleontology—Continued.

Genera and species described—Continued.

Omithotarsus immensus Cope, Woolman, No. 741.

Orthis
corpulenta Sardeson, Sardeson, No. 525.
emacerta Hall, Sardeson, No. 525.
futilis n. sp., Sardeson, No. 525.
iguotecta Sardeson, Sardeson, No. 525.
emacerata Hall, Sardeson, No. 525.
futilis n. sp., Sardeson, No. 525.
iguotecta Sardeson, Sardeson, No. 525.
meeki'S. A. Miller, Sardeson, No. 525.
multiseota Meek, Sardeson, No. 525.
porrecta n. sp., Sardeson, No. 525.
rogata Sardeson, Sardeson, No. 525.
teran Sardeson, Sardeson, No. 525.
testudinaria Sardeson, No. 525.

Orthoceras
of. amplicameratum Hall, 1847, Clarke, No. 134.
anellus Conrad, 1843, Clarke, No. 134.
beltramii n. sp., Clarke, No. 134.
bilineatum Hall, 1847, Clarke, No. 134.
-Junceum Hall, 1847, Clarke, No. 134.
leseri n. sp., Clarke, No. 134.
multicameratum Emons, 1842, Clarke, No. 134.
nicolleti n. sp., Clarke, No. 134.
perroti n. sp., Clarke, No. 134.
loreus Hall, 1877, Clarke, No. 134.
solkirkensis Whiteaves, Whiteaves, No. 687.
sociale Hall, 1877, Clarke, No. 134.
teniatrum Hall, 1847, Clarke, No. 134.
optimus Seiflange, Whiteaves, No. 687.

Orthodesma Hall and Whitfield, Ulrich, No. 626.
afrine n. sp., Whiteaves, No. 687.
canaliculatum, Ulrich, No. 626.
minnesotense Ulrich, Ulrich, No. 626.
schucherti n. sp., Ulrich, No. 626.
sbusasatum Moor and Worthen, Ulrich, No. 626.

Ocilla indiscreta n. sp., Guppy and Dall, No. 625.

Owenella n. gen., Ulrich and Scofield, No. 628.
antiqunata Whiteaves sp., Ulrich and Scofield, No. 628.

Oxyaena huerfanensis n. sp., Osborn, No. 458.
Oxyclusus (Cope) Scott, Matthew, No. 418.
cuspidatus Cope, Matthew, No. 418.
cruralis Cope, Matthew, No. 418.
Phasianella sp., Guppy and Ball, No. 255.
Phenacodus primus Cope, Osborn, No. 459.
Phileine alabamensis n. sp., Aldrich, No. 18.
Phoidomys (Tripliocosta) progressiva n. sp., Cooper, No. 148.
Pholidops greenel n. sp., Miller and Gurlay, No. 431.

Phos
fasciolatus n. sp., Guppy and Dall, No. 255.
gabli n. sp., Guppy and Dall, No. 255.
metabolides n. sp., Guppy and Dall, No. 255.
(Strongylus) chipolatus n. sp., Guppy and Dall, No. 255.

Phragmites aquhongensis n. sp., Hollick, No. 299.
Phyllites flexuosus n. sp., Knowlton, No. 345.
obscurus n. sp., Knowlton, No. 345.
Picea nigra, Penhallow, No. 471.
Pilokeras newton-winchei n. sp., Clarke, No. 134.

Pinus sp., Knowlton, No. 345.
Platecarpus, Willistom, No. 710.

Platycceras
(1) depressum n. sp., Ulrich and Scofield, No. 625.
ianjamberense n. sp., Miller and Gurlay, No. 431.
wisconsinensis n. sp., Ulrich and Scofield, No. 628.

Platyccrinus
bozemanensis n. sp., Miller and Gurlay, No. 431.
briderensis n. sp., Miller and Gurlay, No. 431.
sharonensis n. sp., Miller and Gurlay, No. 431.

Platymetopus
bicornis Ulrich (sp.), 1892, Clarke, No. 133.
cucullus Meek and Worthen (sp.), 1895.
robins Ulrich (sp.), 1892, Clarke, No. 133.

Plesiosaurus gouldi n. sp., Williston, No. 707.
Pliothecalgula Ulrich, Ulrich, No. 626.
suberecta Ulrich, Ulrich, No. 626.
ubronata Ulrich, Ulrich, No. 626.

Plethoepira n. gen., Ulrich and Scofield, No. 628.

Pleurocopites n. sp., Ulrich and Scofield, No. 628.

Platecarpus, Williston, No. 710.

Pleurodermapides n. sp., Ulrich, No. 710.

Pleurodermapides n. sp., Ulrich, No. 710.
Paleontology—Continued.

**Genera and species described—Continued.**

**Pleurotoma**
- pulcherrima, Aldrich, No. 18.
- venusta, Aldrich, No. 18.

**Pleurotomaria**
- (?) margaritoides n. sp., Whiteaves, No. 687.
- stokesiana n. sp., Whiteaves, No. 687.

**Populus**
- eotremuloidea n. sp., Knowlton, No. 345.
- lindgreni n. sp., Knowlton, No. 345.
- occidentalis n. sp., Knowlton, No. 345.

**Potamogeton**
- pectinatus, Penhallow, No. 471.
- pusillus, Penhallow, No. 471.

**Poterioceras**
- apertum Whiteaves 1889, Clarke, No. 134.
- gracile Whiteaves, No. 687.
- nobile "Whiteaves, No. 687.

**Primitia**
- Jones and Holl, Ulrich, No. 627.
- celesta n. sp., Ulrich, No. 627.
- duplicata n. sp., Ulrich, No. 627.
- mammata n. sp., Ulrich, No. 627.
- micula n. sp., Ulrich, No. 627.
- minittisima n. sp., Ulrich, No. 627.
- noci paullii n. sp., Ulrich, No. 627.
- nudilula n. sp., Ulrich, No. 627.
- uphani n. sp., Ulrich, No. 627.

**Primitiella**
- n. gen., Ulrich, No. 627.
- constricta n. sp., Ulrich, No. 627.
- fallmorensis n. sp., Ulrich, No. 627.
- limbata n. sp., Ulrich, No. 627.
- simulans n. sp., Ulrich, No. 627.
- unicornis Ulrich, No. 627.

**Proitus**
- parviusculus Hall 1866, Clarke, No. 133.
- ?placidus n. sp., Vogdes, No. 657.

**Prolobella**
- n. gen., Ulrich, No. 627.
- striulta n. sp., Ulrich, No. 627.

**Protarca (vetustafvar.)**
- magna, Whiteaves, No. 687.

**Protocaris**
- Walcott, Snouchert, No. 540.
- attenuatus Osborn and Earle, Matthew, No. 418.
- hyattiatus (Cope), Matthew, No. 418.
- priscens (Cope), Matthew, No. 418.
- angulata Scott, Matthew, No. 418.
- attenuatus Osborn and Earle, Matthew, No. 418.

**Protostega**
- Case, No. 109.

**Protowartbia**
- n. gen., Ulrich and Scofield, No. 628.
- caucellata Hall, Ulrich and Scofield, No. 628.
- concinnan.sp., Ulrich and Scofield, No. 628.
- granistriata n. sp., Ulrich, No. 627.

**Psilococoncha**
- n. sp., Ulrich, No. 626.
- minnesotensis n. sp., Ulrich, No. 626.

**Psittacotherium**
- Cope, Wortman, No. 742.
- eboraceua n. sp., Clarke, No. 133.
- intermedius Walcott (sp.) 1877, Clarke, No. 133.
- schmidti n. sp., Clarke, No. 133.

**Ptychocrinus**
- Wachsmuth and Springer, James, No. 312.
- angularis Miller and Dyer, James, No. 312.
- parvus Hall, James, No. 312.

**Ptychopyge**
- ulrichi n. sp., Clarke, No. 132.

**Pyramidella**
- (Longchamps) jamaicensis n. sp., Guppy and Dall, No. 255.
- foralata n. sp., Guppy and Dall, No. 255.

**Quercus**
- consimilis Newby., Knowlton, No. 345.
- idahoensis n. sp., Knowlton, No. 345.
- payetensis n. sp., Knowlton, No. 345.

**Radiolites**
- adherens n. sp., Whitfield, No. 692.
- annulatus n. sp., Whitfield, No. 692.
- cancellatus n. sp., Whitfield, No. 692.

**Raphistoma**
- Hall, Ulrich and Scofield, No. 628.
- peracanth n. sp., Ulrich and Scofield, No. 628.
- richmondensis n. sp., Ulrich and Scofield, No. 628.

**Raphistomidae**
- n. fam., Ulrich and Scofield, No. 628.
Paleontology—Continued.

Genera and species described—Continued.

Remedelecites clarkense n. sp., Miller and Gurley, No. 431.

Remondia Gabb, Stanton, No. 431.

furcata Gabb, Stanton, No. 431.

robbinsi (White), Stanton, No. 431.

Keteocrinus Billings 1859, James, No. 312.

cognatus S. A. Miller, James, No. 312.

graeilis "Wetherby, James, No. 312.

magnificus S. A. Miller, James, No. 312.

o'nealli Hall, James, No. 312.

Rhinidictya n. sp., "Whiteaves, No. 687.

Rhinopora prima n. sp., Whitfield, No. 691.

Rhodoerinus bozemanensis n. sp., Miller and Gurley, No. 431.

bridgerensis n. sp., Miller and Gurley, No. 431.

douglassi n. sp., Miller and Gurley, No. 431.

Rhus payetensis n. sp., Knowlton, No. 345.

Rhyynchonella antissicostensis var., Whiteaves, No. 687.

recta n. sp., "Whiteaves, No. 687.

sinuata n. sp., Ulrich, No. 626.

Ringicula alabamensis n. sp., Aldrich, No. 18.

biplicata, Aldrich, No. 18.

buteriana, Aldrich, No. 18.

buteriana var. liquitifera var., Aldrich, No. 18.

claiersonia n. sp., Aldrich, No. 18.

dalli, Aldrich, No. 18.

lisbonensis, n. sp., Aldrich, No. 18.

magnifica n. sp., Ulrich and Scofield, No. 626.

obtusa Sardeson, Ulrich and Scofield, No. 626.

radialis n. sp., Ulrich and Scofield, No. 626.

Scaphander ligniticus n. sp., Aldrich, No. 18.

Scaphander ligniticus n. sp., Aldrich, No. 18.

Scaevola angustifolia? Lx., Knowlton, No. 345.

Sperulites dissolutus Billings, Whiteaves, No. 687.

Sperulites dissolutus Billings, Whiteaves, No. 687.

Sperulites dissolutus Billings, Whiteaves, No. 687.

Sphenolium S. A. Miller, Ulrich, No. 626.

parallelum n. sp., Ulrich, No. 626.

striatum n. sp., Ulrich, No. 626.

Sporangites radiatus n. sp., Duden, No. 186.

Sporangites radiatus n. sp., Duden, No. 186.

Sporangites radiatus n. sp., Duden, No. 186.

Sporangites; radiatus n. sp., Duden, No. 186.

Sporangites radiatus n. sp., Duden, No. 186.

Sporangites radiatus n. sp., Duden, No. 186.

Sporangites radiatus n. sp., Duden, No. 186.

Sporangites radiatus n. sp., Duden, No. 186.
Paleontology—Continued.

Genera and species described—Continued.

Squama n. gen., Logan, No. 389.
lata n. sp., Logan, No. 389.
espissa n. sp., Logan, No. 389.
Stachella Waagen, Ulrich and Scofield, No. 628.
Steganocrinus

blairi n. sp., Miller and Gurley, No. 431.
griphidi n. sp., Miller and Gurley, No. 431.
sharonensis n. sp., Miller and Gurley, No. 431.
Stenotheca Salter, Ulrich and Scofield, No. 628.
exerta Sardeson, Ulrich and Scofield, No. 628.
Streptelasma corniculum Hall, Sardeson, No. 528.
profundum (Owen), Sardeson, No. 528.
Robustum Whiteaves, Whiteaves, No. 687.
Strombina n. sp., Guppy and Dall, No. 255.
Strombina Dall, Guppy and Dall, No. 255.
Strophostylus Hall, Ulrich and Scofield, No. 628.
textilis n. sp., Ulrich and Scofield, No. 628.
Stylolodon cylindrifer Cope, Wortman, No. 742.
miro Marsh, Wortman, No. 742.
miro Marsh, No. 469.

Subulites Conrad, Ulrich and Scofield, No. 628.
belothen n. sp., Ulrich and Scofield, No. 628.
canadensis n. sp., Ulrich and Scofield, No. 628.
conradi, n. sp., Ulrich and Scofield, No. 628.
dixenis n. sp., Ulrich and Scofield, No. 628.
nanus n. sp., Ulrich and Scofield, No. 628.
parvus n. sp., Ulrich and Scofield, No. 628.
pergracilis n. sp., Ulrich and Scofield, No. 628.
regularis n. sp., Ulrich and Scofield, No. 628.
sp. undet., Ulrich and Scofield, No. 628.
Succin gabi, Aldrich, No. 15.
Talarocinus patei n. sp., Miller and Gurley, No. 431.
Tamiaobatias vetustus, n. gen. et sp., Eastman, No. 169.
Technophorus Miller, Ulrich, No. 628.
divariates Ulrich, Ulrich, No. 628.
extenuatus Ulrich, Ulrich, No. 628.

Technophorus—Continued.

filistriatus Ulrich, Ulrich, No. 628.
subacutus Ulrich, Ulrich, No. 628.
Tomoxochilus greensense n. sp., Miller and Gurley, No. 431.
"Terebra" pliocera, Aldrich, No. 18.
Teredina sp., Guppy and Dall, No. 255.
Tetradella Ulrich, Ulrich, No. 627.
lunafera Ulrich, Ulrich, No. 627.
quadririlata Hall and Whitfield, Ulrich, No. 627.

Tetranota n. gen., Ulrich and Scofield, No. 628.
bidorata Hall, Ulrich and Scofield, No. 628.
var. minor n. var., Ulrich and Scofield, No. 628.
macra n. sp., Ulrich and Scofield, No. 628.
obsoleta n. sp., Ulrich and Scofield, No. 628.
saxicinanta n. sp., Ulrich and Scofield, No. 628.
wisconsinensis Whitfield, Ulrich and Scofield, No. 628.

Thaleops ovata Conrad, 1843, Clarke, No. 133.
Thamnograptus affinis nom. prov., Whiteaves, No. 687.
Tillotherium fodiens Marsh, Osborn, No. 458.
Trapa americana n. sp., Knowlton, No. 345.
(?) occidentalis n. sp., Knowlton, No. 345.
Trematon Hall, Ulrich and Scofield, No. 628.
Tricenites Cope, Matthew, No. 418.
crassicollidens Cope, Matthew, No. 418.
subtrigonus (Cope), Matthew, No. 418.
Triplicosta n. subgen., Cooper, No. 148.
Trigoceras sp. ?, Clarke, No. 134.
lambi Whiteaves, 1891, Clarke, No. 134.
lambit Whiteaves, Whiteaves, No. 687.
oeweni n. sp., Clarke, No. 134.
planococonxum Hall, 1891, Clarke, No. 134.
planodosatum, Whitfield, 1882, Clarke, No. 134.
semiplanatum Whiteaves, Whiteaves, No. 687.
Trococeras (?) mecharlesii Whiteaves, Whiteaves, No. 687.
Trachonema Saltzer, Ulrich and Scofield, No. 628.
altum n. sp., Ulrich and Scofield, No. 628.
beachii Whitfield, Ulrich and Scofield, No. 628.
belothenense Whiteaves, Ulrich and Scofield, No. 628.
bellum n. sp., Ulrich and Scofield, No. 628.
ecentricum n. sp., Ulrich and Scofield, No. 628.
fragile n. sp., Ulrich and Scofield, No. 628.
Paleontology—Continued.

**Genera and species described—Continued.**

**Trochonema—Continued.**

madisonense n. sp., Ulrich and Scofield, No. 628.
niota Hall, Ulrich and Scofield, No. 628.
retrosum n. sp., Ulrich and Scofield, No. 628.
rugosum n. sp., Ulrich and Scofield, No. 628.
sinuatum Hall, Ulrich and Scofield, No. 628.
subcrassum n. sp., Ulrich and Scofield, No. 628.
unilaticatum Hall, Ulrich and Scofield, No. 628.

**Tryblidium** Lindstrom, Ulrich and Scofield, No. 628.

modestum n. sp., Ulrich and Scofield, No. 628.

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- Leucite Hills, Kemp, No. 319.
- Petroleum fields, Knight, No. 343.
- Stylinodontia, Marsh, No. 409.
- Yellowstone National Park, Crook, No. 154.
- Yukon silts, Spurr, No. 575.

Wyoming.
- Analysis of petroleum, Slosson, No. 559.
- Black Hills, Scott, No. 542a.
- Geology of the oil fields, Knight, No. 342.
- Igneous rocks of Leucite Hills, Cross, No. 158.
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