BIBLIOGRAPHY AND INDEX

OF

NORTH AMERICAN GEOLOGY, PALEONTOLOGY, PETROLOGY, AND MINERALOGY

FOR

THE YEAR 1902

BY

FRED BOUGHTON WEEKS

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1903
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter of transmittal</td>
<td>5</td>
</tr>
<tr>
<td>Introduction</td>
<td>7</td>
</tr>
<tr>
<td>List of publications examined</td>
<td>9</td>
</tr>
<tr>
<td>Bibliography</td>
<td>13</td>
</tr>
<tr>
<td>Addenda to bibliographies for previous years</td>
<td>124</td>
</tr>
<tr>
<td>Classified key to the index</td>
<td>125</td>
</tr>
<tr>
<td>Index</td>
<td>133</td>
</tr>
</tbody>
</table>

**Total Pages:** 3
LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY,
Washington, D. C., October 20, 1903.

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 1902, 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.
The arrangement of the material of the Bibliography and Index for 1902 is similar to that adopted for the previous publications (Bulletins Nos. 130, 135, 146, 149, 156, 162, 172, 188, 189, and 203). Several papers that should have been entered in the previous bulletins are here recorded, and the date of publication is given with each entry.

Bibliography.—The bibliography consists of full titles of separate papers, arranged alphabetically by authors’ names, an abbreviated reference to the publication in which the paper is printed, and a brief description of the contents, each paper being numbered for index reference.

Index.—The subject headings, their subdivisions and arrangement, are shown in the classified key to the index, which immediately precedes the index. Reference is made in each entry by author’s name and number of article in the bibliography.

Mr. John M. Nickles has assisted in the compilation of this work, and credit is due him for its careful preparation and completeness.
LIST OF PUBLICATIONS EXAMINED.

American Association for the Advancement of Science: Proceedings, vol. 51, 1902.
American Geologist, vols. 29 and 30, 1902. Minneapolis, Minn.
American Institute of Mining Engineers: Transactions, vols. 31 and 32, 1902. New York, N. Y.
American Paleontology: Bulletins, nos. 14, 15, 1902. Ithaca, N. Y.
Botanical Gazette, vols. 32 and 33, 1902. Chicago, Ill.
California, University of, Department of Geology: Bulletin, vol. 2, no. 12, and vol. 3, nos. 1–6, 1902. Berkeley, Cal.
Canadian Mining Review, vol. 21, 1902. Ottawa, Canada.
Canadian Record of Science, vol. 8, nos. 7 and 8, 1902. Montreal, Canada.
Centralblatt für Mineralogie, Geologie und Palæontologie, nos. 1–24, 1902. Stuttgart, Germany.
Cincinnati Society of Natural History: Journal, vol. 20, nos. 2 and 3, 1902. Cincinnati, Ohio.
Colorado Mining Bureau: Bulletin, no. 5; Report, 1902. Denver, Colo.


Elisha Mitchell Scientific Society: Journal, 18th year, pt. 1, 1902. Chapel Hill, N. C.

Engineering and Mining Journal, vols. 73 and 74, 1902. New York, N. Y.


Greene (George K.): Contributions to Indiana paleontology, pts. 9 and 10, 1902. New Albany, Ind.


Harriman Alaska Expedition, 2 vols., 1902. New York, N. Y.


Indiana Academy of Science: Proceedings for 1901, 1902. Indianapolis, Ind.


Iowa State University, Laboratory of Natural History: Bulletin, vol. 5, no. 3, 1902. Iowa City, Iowa.


Louisiana State Experiment Stations: Geology and Agriculture, pts. 1–4; 6, 1902. Baton Rouge, La.


Maryland Geological Survey: vol. 4, 1902; Garrett County, 1902; Cecil County, 1902. Baltimore, Md.

Mexico, Instituto Geologico: Bulletin, no. 16, 1902. City of Mexico.

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Neues Jahrbuch für Mineralogie, Geologie und Paleontologie (except abstracts), band 1, hefte 1-3 and band 2, hefte 1-3, 1902; Beilage band 15, hefte 1-3, 1902. Berlin, Germany.
Ohio State Academy of Science: Annual Reports, 1st, 1893-10th, 1902; Special Papers, nos. 1, 1899-4, 1901. Columbus, Ohio.
Ottawa Naturalist, vol. 15, nos. 10-12, and vol. 16, nos. 1-9, 1902. Ottawa, Canada.
Paleontographica, band 49, hefte 1-3, 1902. Stuttgart, Germany.
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St. Louis Academy of Science: Transactions, vol. 12, 1902. St. Louis, Mo.
School of Mines Quarterly, vol. 23, nos. 2-4, 1902. New York, N. Y.
Science, new series, vols. 15 and 16, 1902. New York, N. Y.
Scientific American, vols. 86 and 87, 1902. New York, N. Y.
Smithsonian Institution: Annual Report for 1901, 1902; Miscellaneous Collections, vols. 40 and 41, 1902. Washington, D. C.
Société Géologique de Belgique: Annals, vol. 28, 1'01, and vol. 29, 1902. Liege, Belgium.
South Dakota School of Mines: Bulletin, nos. 5 and 6, 1902. Rapid City, S. Dak.

Stone, vols. 24 and 25, nos. 1-3, 1902. New York, N. Y.


Toronto University Studies: Geological series, no. 1, 1900, and no. 2, 1902. Toronto, Ontario.


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8 — Geology and water resources of the Patrick and Goshen Hole quadrangles in eastern Wyoming and western Nebraska. U. S. Geol. Surv., Water-Supply and Irrigation Paper no. 70, 50 pp., 11 pls., 4 figs., 1902. Describes geologic structure and physiographic features.
9 **Adams** (George L.). Physiographic divisions of Kansas.


Describes the characteristics of the several physiographic divisions of the region.

10 — Stratigraphic relations of the Red Beds to the Carboniferous and Permian in northern Texas.


11 — Lithologic phases of the Pennsylvanian and Permian of Kansas, Indian Territory, and Oklahoma.


12 — Note on a Tertiary terrane new in Kansas geology.

*Am. Geol.*, vol. 29, pp. 301-303, 1 fig., 1902.

Describes the occurrence and character of the beds.

13 **Aguilar y Santillán** (Rafael). Bibliography of Mexican geology and mining.


14 **Aguilera** (José G.). The geographical and geological distribution of the mineral deposits of Mexico.


Describes the occurrence of mineral deposits.


Describes geographic and topographic features, the general geologic relations, the occurrence and character of strata of Cambrian, Silurian, Devonian and Quaternary age, and the economic resources, chiefly building stones.

16 **Ami** (Henry M.). Bibliography of Sir John William Dawson.


17 — Bibliography of Canadian geology and paleontology for the year 1900.


18 — Preliminary lists of the organic remains occurring in the various geological formations comprised in the map of the Ottawa district, including formations in the provinces of Quebec and Ontario, along the Ottawa River.


19 — Lists of fossils obtained from the several formations along the Ottawa River pertaining to the report on Sheet no. 121, Quebec and Ontario (Grenville Sheet).

20 Ami (Henry M.). Artesian wells, paleontology, archeology, bibliographies, etc.
   A report upon the work done by the author.

21 — Field notes on the geology of the country about Chelsea, Quebec.
   Ottawa Nat., vol. 16, pp. 149–151, 1902.
   Contains notes on local geology.

22 — Brief description of the map of the "Ottawa district."

23 — Annual report of the geological section of the Ottawa Field-Naturalists’ Club, for the year 1901–1902.
   Contains notes on the geology of the vicinity of Ottawa and a list of fossils from the Utica at Ottawa, Ontario.

24 — Notes on the Albany meeting of the Geological Society of America held December, 1900.

25 — Bibliography of Dr. George M. Dawson.

26 — Description of tracks from the fine-grained siliceous mudstones of the Knoydart formation (Eo-Devonian) of Antigonish County, Nova Scotia.
   Describes Ichthyoidichnites acadiensis n. sp.

27 — On the possible occurrence of a coal area beneath the Neo-Carboniferous or Permian strata of Pictou County, Nova Scotia.
   Describes the geologic structure of this area.

28 — The Union and Riversdale formations in Nova Scotia.
   Gives abstract of a paper read before the Geological Society of America with the title "The Meso-Carboniferous age of the Union and Riversdale formations in Nova Scotia."

29 — On the possible occurrence of a coal area beneath the Neo-Carboniferous or Permian strata of Pictou County, Nova Scotia.
   Describes the geologic structure of this area.


Gives a general résumé of the geology of Canada, describing the geographic distribution of the formations of Paleozoic, Mesozoic, Tertiary and Quaternary age.

32 Anderson (Frank M.). The physiographic features of the Klamath Mountains.

Describes the physiographic features, the general character of the Cretaceous and Tertiary sediments and of the volcanic rocks, and the development of the present drainage.

33 — Cretaceous deposits of the Pacific coast.

Discusses the occurrence, characters, correlation, and faunas of the Cretaceous deposits of the Pacific coast region, and describes a large number of species—many of them new.

34 — Ore deposits of Shasta County [California].

35 Anderson (Tempest) and Flett (John S.). Preliminary report on the recent eruption of the Soufrière in St. Vincent, and of a visit to Mont Pelée, in Martinique.

Describes physical features of St. Vincent in the vicinity of Soufrière, the eruptions of May and July, 1902, of Soufrière and Mont Pelée, their effects and the character of the ejected materials.

36 Arnold (Delos) and Arnold (Ralph). The marine Pliocene and Pleistocene stratigraphy of the coast of southern California.

Describes the lithologic and faunal character of the strata and the Tertiary and Pleistocene history of the region. Discusses the relation of the Merced series with these beds.

37 Arnold (Ralph). Bibliography of the literature referring to the geology of Washington.

38 — Arnold (Delos) and. The marine Pliocene and Pleistocene stratigraphy of the coast of southern California.
See Arnold (Delos) and Arnold (Ralph), 36.
39 Ashley (George H.). The eastern interior coal field.
Describes extent, general geologic relations, stratigraphy and structure of the coal field occupying parts of Illinois, Indiana and Kentucky, and the character and occurrence of the coal and coal seams.

B.

40 Babcock (E. J.). Water resources of the Devils Lake region [North Dakota].
Describes topography, geologic structure, and water supply of this region.

41 Bailey (L. W.). On some geological correlations in New Brunswick.
Discusses geologic age of formations previously referred to Cambro-Silurian in the light of new evidence.

42 —— On some modes of occurrence of the mineral albertite.
Discusses geologic occurrence.

43 —— New Brunswick.
Describes observations upon Cambrian, Ordovician, Silurian and Carboniferous strata and economic products in this area.

Discusses relations of ore deposits to the circulation of underground waters and describes the character and occurrence of minerals and ore deposits in this region.

45 —— The western interior coal field.
Describes extent, general geologic relations, stratigraphy, and structure of this coal field occupying parts of Iowa, Missouri and Kansas, and the character and occurrence of the coal and coal beds.

Bull. 221—03—2
   Jour. Geol., vol. 10, pp. 139-143, 1902.
   Discusses the subject of the point of view of the mining geologist.

47 — [In discussion of "The origin of ore-deposits."]

48 — Van Hise (C. R.) and. Lead and zinc deposits of the Missis­sissippi Valley, U. S. A.
   See Van Hise (C. R.) and Bain (H. F.), 1061.

49 Barber (William B.), Nutter (Edward H.) and. On some glauco­phane and associated schists in the Coast Ranges of California.
   See Nutter (E. H.) and Barber (W. B.), 809.

50 Barbour (Carrie Adeline). Some methods of collecting, preparing, and mounting fossils.
   Contains directions for collecting and preparing remains of fossil vertebrates.

51 Barbour (Erwin Hinckley). The barites of Nebraska and the Bad Lands.

52 — Chalcedony-lime nuts from the Bad Lands, Archihicoria siouxensis gen. et sp. nov.

53 — Discovery of meteoric iron in Nebraska.
   Describes occurrence of a meteorite near York, Nebraska.

54 — Volcanic ash in Nebraska soils.
   Describes character and occurrence of this substance.

55 — and Fisher (Cassius A.). The geological bibliography of Nebraska.

   Describes and figures material from South Dakota and Wyoming.
   Notes their stratigraphic range.
57 Barlow (Alfred Ernest). Descriptions of rocks collected in 1900, by J. Macintosh-Bell, M. A., in Great Bear Lake district and thence to Great Slave Lake.

58 — Microscopic examination of sections of rocks associated with the iron ore deposits of the Kingston and Pembroke Railway district.

59 — The Sudbury district [Ontario].
Describes observations chiefly of a petrological and mineralogical character made in this area.

60 — On the nepheline rocks of Ice River, British Columbia.
Ottawa Nat., vol. 16, pp. 70-76, 1902.
Contains a brief discussion of magmatic differentiation and a description of the rock types of the hand specimens.

Ottawa Nat., vol. 16, pp. 171-177, por., 1902.
Gives a sketch of the life and work of Dr. Selwyn.

62 Barnum (George). Heat and frost in the weathering of stone.
Stone, vol. 25, pp. 222-228, 1 pl., 1902.
Discusses the action of heat and frost in rock disintegration.

63 Baron (J. Francis Patch-Le). Some geological notes in Honduras, Central America.
Gives a general account of the geology of this country.

64 Barrell (Joseph). Microscopical petrography of the Elkhorn mining district, Jefferson County, Montana.
Gives an account of the petrographical characters of the various rock types of the Elkhorn mining district, Montana.

65 — The physical effects of contact metamorphism.
Discusses the decomposition of rocks, the changes of mass and volume through metamorphism and the results of escape of gases.

66 Bascom (Florence). The geology of the crystalline rocks of Cecil County [Maryland].
Discusses the character, composition and distribution of the crystalline rocks of the county. A glossary of technical terms is added by E. B. M[athews].
67 Beadle (H. M.) Gold mining in eastern Oregon.
    Eng. & Mg. Jour., vol. 73, p. 136, 1902.

68 Beck (R.) [In discussion of "The origin of ore-deposits."]

69 Beecher (Charles Emerson). The ventral integuments of tri-
lobites.
    Describes the characters of the ventral integuments in Triarthrus
    which demonstrate that the conclusions of Jaekel in his study of
    Ptychoparia are erroneous.

70 — Notes on a new Xiphosuran from the Upper Devonian of
    Pennsylvania.
    Am. Geol., vol. 29, pp. 143–146, 1 fig., 1902.
    Describes Prestwichia randalli n. sp.

71 — The reconstruction of a Cretaceous dinosaur, Claosaurus
    annectens Marsh.
    Conn.-Acad. Arts & Sci., Trans., vol. 11, pt. 1, pp. 311–324, figs. 1–6,
    pls. xli–xlv, 1902.

72 — The ventral integument of trilobites.
    Geol. Mag., dec. iv, vol. 9, pp. 152–162, pls. ix–xi, 8 text figs., 1902.
    Discusses the ventral integument and appendages of trilobites.

73 — Revision of the Phyllocarida from the Chemung and Waverly
    groups of Pennsylvania.
    1902.

74 Beede (J. W.). New fossils from the Upper Carboniferous of
    Kansas.

75 — Variation of the spiralia in Seminula argentia (Shepard) Hall.

76 — Coal measures faunal studies, II. Fauna of the Shawnee
    formation (Haworth), the Wabaunsee formation (Prosser),
    the Cottonwood limestone.
    Describes geologic formations and gives lists of fossils from them.

77 — Note on the variation of the spires in Seminula argentia
    (Shepard) Hall.

78 — Invertebrate paleontology of the Red Beds [Oklahoma].
    Discusses the age of the Red Beds and describes fossils collected from
    them.


82 — Thunder Mountain and Mackay, Idaho.  
Describes the occurrence of gold and developments of the region.

83 — The origin of the fine gold of Snake River.  
Eng. & Mg. Jour., vol. 73, pp. 143-144, 1902.  
Describes the occurrence of gold bearing terraces of a Tertiary lake.

84 — The geology of Thunder Mountain and central Idaho.  
Eng. & Mg. Jour., vol. 73, pp. 791-793, 1902.  
Describes the general geology of the region.

85 — Facts about Thunder Mountain [Idaho].  
Contains notes on the geologic structure of the region and sections of strata.

86 Berkey (Charles P.). Sacred Heart "geyser spring," [Minnesota].  
Am. Geol., vol. 29, pp. 87-88, 1902.

87 — Origin and distribution of Minnesota clays.  
Am. Geol., vol. 29, pp. 171-177, 1902.  
Describes the occurrence of the Ordovician, Cretaceous, and glacial clays.

88 Beyer (S. W.). Mineral production of Iowa in 1901.  
Includes a discussion of the occurrence and production of iron ore at Iron Hill, Allamakee County, Iowa.

89 — Iowa's iron mine.  
Eng. & Mg. Jour., vol. 73, pp. 275-276, 2 figs., 1902.  
Describes the occurrence, character and origin of the ore.

90 Bibbins (A.), Clark (William B.) and. Geology of the Potomac group in the middle Atlantic slope.  
See Clark (W. B.) and Bibbins (A.), 178.
91 **Blake** (William P.). The caliche of southern Arizona; an example of deposition by the vadose circulation.


   Describes the formation of the caliche, a calcareous formation, and gives its chemical composition and that of well waters.

92 — The geology of the Galiuro Mountains, Arizona, and of the gold-bearing ledge known as Gold Mountain.

   Eng. & Mg. Jour., vol. 73, pp. 546-547, 5 figs, 1902.

   Describes the general geology of the region and the occurrence and origin of the gold ores.

93 — Lake Quiburis, an ancient Pliocene lake in Arizona.

   Ariz. Univ., Monthly, vol. 4, no. 4, 1902. (Not seen.)


94 — Notes on the mines and minerals of Guanajuato, Mexico.


95 **Blakemore** (William). The iron ore deposits near Kitchener, B. C.


96 **Bogdanović** (Karl Ivanović). [Sketch of Nome.]

   St. Petersburg. 8+116 pp., 1 pl., 1901. (Not seen.)

97 **Bøggild** (O. B.). On ilvaite from Siorarsuit at Julianehaab, Greenland.

   Meddelelser om Groenland, vol. 25, pp. 43-89, 32 figs., 1902; Copenhagen Univ., Min. and Geol. Mus., Cont. to Min., no. 1, 1902.

98 — and **Winther** (Chr.). On some minerals from the nephelite-syenite at Julianehaab, Greenland (epistolite, britholite, schizolite and steenstrupite), collected by G. Flink.

   Meddelelser om Groenland, vol. 24, pp. 181-213; 7 figs., 1901.

99 **Bond** (Josiah). Copper leaching at the American copper mine.


   Describes experiments made upon copper ores to determine methods of extracting copper.

100 **Bonney** (T. G.). On a sodalite syenite (ditroite) from Ice River Valley, Canadian Rocky Mountains.


   Describes mode of occurrence and gives chemical analysis of this mineral.

101 — The Canadian Rockies. Part II: On some rock specimens collected by E. Whymper, esq., F. R. S. E., in the Canadian Rocky Mountains.

Describes the occurrence, character, and origin of the auriferous gravels of the State.

103 Böse (Emilio). Sobre la independencia de los volcanes de grietas preexistentes.
Discussion origin of volcanoes.

104 — Villarello (Juan de D.) and. Criaderos de fierro de la hacienda de Vaquerías, en el estado de Hidalgo.
See Villarello (J. de D.) and Böse (E.), 1076.

105 Boston Society of Natural History. Memorial of Professor Alpheus Hyatt.
Contains remarks of various members at a meeting of the Society February 5, 1902.

106 Bowman (H. L.) On an occurrence of minerals at Haddam Neck, Connecticut, U. S. A.
Min. Mag., vol. 13, pp. 97-121, pl. iv, 5 figs., 1902.

107 Bownocker (J. A.). History of the Little Miami River [Ohio].
Ohio State Acad. Sci., Special Papers, no. 3, pp. 32-45, 2 figs., map, 1900.
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108 — The oil and gas producing rocks of Ohio.
Jour. Geol., vol. 10, pp. 822-838, 1902; Univ. Bull., ser. 7, no. 3 (Geol. ser., no. 4), 1902.
Describes the character and stratigraphic relations of these rocks and the occurrence of oil and gas.

Describes geologic structure and ore deposition in this area.

110 Branner (John C.). The zinc and lead deposits of north Arkansas.
Describes occurrence, mode of formation, and relations of bedded ores to the geologic structure of the region, and gives analyses of some of the ores.

111 — [In discussion of paper by Eric Hedburg on “The Missouri and Arkansas zinc mines.”]

112 — Syllabus of a course of lectures on elementary geology. Ed. 2. 369 pp., 25 pls., 109 figs., 1902.
113 Branner (John C.) and Newsom (John F.). The phosphate rocks of Arkansas.
Describes the character and geographic and geologic occurrence of phosphate rock in Arkansas.

114 Breeze (Fred J.). The valley of the lower Tippecanoe River [Indiana].


116 — Mining industry and mineral resources of British Columbia.

117 — John Wesley Powell.
Gives a sketch of Major Powell’s life and work.

118 — White Horse mining district, Yukon Territory.
Describes the general geology of the region and the occurrence of copper and coal.

119 — M’Kee Creek, Atlin mining division, British Columbia.
Describes the placers of the region.

120 — British Columbia coal fields.
Describes the occurrence of coal in Vancouver Island.

121 — The Crow’s Nest Pass coal fields [Canada].
Eng. & Mg. Jour., vol. 73, pp. 549–552, 2 figs., 1902.
Describes the geology of the region and the occurrence of coal.

122 — British Columbia, Boundary mining district, progress in mining and smelting.
Eng. & Mg. Jour., vol. 73, pp. 617–623, 4 figs., 1902.
Describes the general geology and the occurrence of the gold, silver, and copper ores.

123 — Alberta Territory, Canada. Coal fields of Crow’s Nest Pass Branch of the Canadian Pacific Railway.
Describes the geology and the development of the coal industry.

124 Bridge (Norman). Edward Claypole, the man.
Am. Geol., vol. 29, pp. 30–40, 1902.
125 **Bridge** (Norman). Address at the presentation of the memorial bronze of Edward Waller Claypole, Throop Polytechnic Institute, Pasadena, Cal., June 2, 1902. (Not seen.)

126 **Briggs** (Elmer S.) and **Farrington** (Oliver Cummings). The Dinosaur beds of the Grand River Valley of Colorado. 


128 **Broadhead** (Garland C.). The New Madrid earthquake. 
Am. Geol., vol. 30, pp. 76-87, 1902. 
Gives an account of earthquake shocks in the Mississippi Valley in 1811 and 1812.

129 **Brock** (R. W.). The Boundary Creek district, British Columbia. 
Describes the author's observations in this region.

130 —— The ore deposits of the Boundary Creek district, B. C. 
Describes the rocks of this area and the occurrence of ore-bodies.

131 **Broili** (F.). Ein Beitrag zur Kenntniss von Diplocaulus Cope. 
Centralbl. für Min., etc., no. 17, pp. 536-541, 4 figs., 1902.

132 **Brooks** (Alfred Hulse), assisted by **Richardson** (George B.) and **Collier** (Arthur J.). A reconnaissance of the Cape Nome and adjacent gold fields of Seward Peninsula, Alaska, in 1900. 
Describes the physiography and the surficial, general, and economic geology of the region, and includes detailed descriptions of the various placers.

133 —— The coal resources of Alaska. 
Gives a general account of the Cretaceous and Tertiary geology of Alaska and discusses the character and occurrence of coals in these formations.

134 —— Preliminary report on the Ketchikan mining district, Alaska, with an introductory sketch of the geology of southeastern Alaska. 
Describes the physiographic and stratigraphic features of the region and the occurrence of gold and copper.
135 Brooks (Alfred Hulse), assisted by Richardson (George B.) and Collier (Arthur J.). Geological reconnaissances in southeastern Alaska.
   Discusses the general stratigraphic relations, geologic history, and correlation of the beds of the region.

136 —— A reconnaissance in the Mt. McKinley region, Alaska.


138 Brower (Jacob V.). Kakabikansing [Little Falls, Minnesota].
   Contains observations on the geology in the vicinity of Little Falls, Minn.

   Discusses the correlation of the clays of the region.

140 —— Gaspee Point [Rhode Island]: a type of cuspate foreland.
   Describes the formation and gives a catalogue of cuspate forelands.

141 —— The Mississippi River from Cape Girardeau to the head of the passes.
   Contains notes on the physiography of the region.

142 Brown (S. S.). A bibliography of works upon the geology and natural resources of West Virginia, from 1764 to 1901.

143 Bruncken (Ernest). Physiographical field notes in the town of Wauwatosa [Wisconsin].
   Describes glacial and lacustrine deposits and discusses the origin of a natural exposure of Niagara limestone.

144 Buchan (J. S.). Some notes on Mount Royal [Quebec].
   Describes the general physiography and geology of the region.

145 Butts (Charles). Recent structural work in western Pennsylvania.

C.

147 Calkins (Frank C.). A contribution to the petrography of the John Day Basin.
Univ. of Cal., Dept. of Geol., Bull., vol. 3, pp. 109-172, pl. xvii, 1902.
Gives a resume of the geology of the John Day Basin in Oregon, and describes the rocks occurring in the pre-Eocene, Eocene, and Miocene formations in this region.

148 Calvin (Samuel). The geology and geological resources of Iowa.
Describes the stratigraphic geology and the occurrence of economic products of the State.

149 — The geological formations of Iowa.
Stone, vol. 25, pp. 118-124, 4 figs., 1902.
Describes briefly the character and distribution of the geologic formations in the State of Iowa.

150 — Tenth annual report of the State geologist [Iowa].
Gives a nomenclature of the divisions of the Glacial period and discusses the geologic occurrence of oil and gas.

151 — Concrete examples from the topography of Howard County, Iowa.
Am. Geol., vol. 30, pp. 375-381, pl. xxvii, 1902.
Describes the topographic forms of the region and reviews its glacial history.

152 — The geology and geological resources of Iowa—the formations and their economical values.

153 — [In discussion of paper by T. C. Chamberlin on “The geologic relations of the human relics of Lansing, Kan.”]

154 Campbell (C. M.). Mining in the Rossland district [British Columbia].
Contains notes on the rocks of this area.

155 Campbell (Marius R.). Recent geological work in western Pennsylvania.
Eng. & Mg. Jour., vol. 73, p. 245, 1902.
Abstract of paper read before the Geological Society of Washington.
156 **Campbell (Marius R.).** Reconnaissance of the borax deposits of Death Valley and Mohave Desert [California].


Describes topography and geology of the region and occurrence of borax deposits.

157 — **Raleigh Folio—West Virginia.**


Describes geographic and topographic features, general geologic relations, the character and occurrence of Carboniferous formations and coal beds.

158 — **Masontown-Uniontown Folio—Pennsylvania.**


Describes geographic and topographic features, general geologic relations, character and occurrence of Devonian and Carboniferous strata, Quaternary deposits, and the mineral resources, chiefly coal.

159 — **Recent geological work in Pennsylvania.**


160 — **White (David) and.** The bituminous coal field of Pennsylvania.

See White (David) and Campbell (M. R.), 1119.

161 — **White (David), and Haseltine (Robert M.).** The northern Appalachian coal field.

See White (David), Campbell (M. R.), and Haseltine (R. M.), 1120.

162 **Carter (Oscar S. C.).** The arid district between the Rio Grande and the Pacific traversed by the engineers of the Mexican Boundary Commission in 1892-94.


Contains notes on the physiography of the region.

163 **Case (E. C.).** Paleontological notes.


Describes Lysorophus tricarinatus and an undetermined Pelycosaurian.

164 **Casey (Thomas L.).** The Jackson outcrops on Red River [Louisiana].


Describes outcrops and discusses the fauna obtained, describing two new species.

165 **Chalmers (Robert).** Report on the surface geology shown on the Fredericktown and Andover quarter-sheet maps, New Brunswick.


Describes physiography, strike and other glacial phenomena of this area.

167 Chamberlin (Thomas C.). The geologic relations of the human relics of Lansing, Kansas.
Discusses certain phases of fluvial action and their bearing on the phenomena at this locality. Describes the character and relations of the river deposits and presents the author's interpretations.

168 — Distribution of the internal heat of the earth.

169 — Has the rate of rotation of the earth changed appreciably during geological history?

170 Chapman (Robert H.). Our northern Rockies.
Contains physiographic notes on the Rocky Mountains in Montana.

171 — The value of topographic maps.

172 Christy (S. B.). Biographical notice of Joseph LeConte.

173 Clapp (Frederick G.). Geological history of the Charles River in Massachusetts.
Am. Geol., vol. 29, pp. 218-233, pls. xiii-xvi, 1902. See no. 139 in U. S. Geol. Surv., Bull. no. 203.

174 Clark (W. Blair). Drainage modifications in Knox, Licking and Coshocton counties [Ohio].
Discusses modifications produced in the drainage of this area by the ice of the Glacial period.

175 Clark (William). Some new points on the fin attachment of Dinichthys and Cladodus.

176 Clark (William Bullock) and Bibbins (A.). Geology of the Potomac group in the middle Atlantic slope.
Describes the character, occurrence and distribution of the divisions of the Potomac group, the interpretation of these deposits and the surface configuration of the crystalline floor and of the Potomac group. Discusses the age of these deposits.
177 **Clark** (William Bullock) and **Bibbins** (A.). The Potomac group in Maryland.

178 — and **Martin** (George Curtis). Correlation of the Coal Measures of Maryland.
   Describes the character and occurrence of the subdivisions of the Coal Measures group in Maryland and discusses their correlation with the Coal Measures in other portions of the Appalachian province.

179 — and others.
   *Md. Geol. Surv.*, vol. 4, 524 pp., 69 pls., 34 figs., 1902.

180 — and others. (Reports on Cecil County [Maryland].)

181 — and others. (Reports on Garrett County [Maryland].)

182 **Clarke** (Frank Wigglesworth) and **Steiger** (George). The action of ammonium chloride upon silicates.
   *U. S. Geol. Surv., Bull. no. 207*, 57 pp., 1902.

183 **Clarke** (John M.). Report of the State paleontologist, 1901 [N. Y.]
   *N. Y. State Mus., Bull. no. 52*, pp. 419–456, 1902.
   Contains brief discussion of the results of the studies of the Cambrian, Silurian and Devonian rocks and fauna of the state in 1901.

184 — George Bancroft Simpson.
   *N. Y. State Mus., Bull. no. 52*, pp. 457–460, 1902.
   Contains an account of his life and work.

185 — Paleontologic results of the areal survey of the Olean quadrangle [N. Y.].
   *N. Y. State Mus., Bull. no. 52*, pp. 524–528, 1902.
   Discusses the paleontologic aspect of the faunas of the Devonian Carboniferous beds of the region.

186 — A new genus of Paleozoic brachiopods, Eunoa, with some considerations therefrom on the organic bodies known as Discinocaris, Spathiocaris and Cardiocaris.

187 — [Note on the occurrence and relations of the fauna.] [In Luther (D. D.), Stratigraphic value of the Portage sandstone. N. Y.]
   *N. Y. State Mus., Bull. no. 52*, pp. 630–631, 1 fig., 1902.

188 — The indigene and alien faunas of the New York Devonian.
   *N. Y. State Mus., Bull. no. 52*, pp. 664–672, 1902.
   Discusses the influence of the supposed barriers in the Devonian seas upon the migrations and distribution of the faunas of that period.

Notes on Paleozoic crustaceans.

Origin of the faunas of the Marcellus limestones of New York.

Ruedemann (R.) and Luther (D. D.). Contact lines of Upper Siluric formations on the Brockport and Medina quadrangles, N. Y.
N. Y. State Mus., Bull. no. 52, pp. 517-523, 1902.
Describes outcrops of these beds at various localities.

Claypole (Edward W.). On an unrecognized coal-horizon in northeastern Ohio.
Discusses stratigraphic position of coal seams in the vicinity of Massillon, Ohio.

On the Salina group in northeastern Ohio.
Recognizes the presence of Salina from the records of borings.

Cleland (H. F.) The landslides of Mt. Graylock and Briggsville, Mass.
Jour. Geol., vol. 10, pp. 513-517, 2 figs., 1902.
Describes the occurrence of recent landslips.

Clements (J. Morgan). Ellipsoidal structure in the pre-Cambrian basic and intermediate rocks of the Lake Superior region.

Vermilion district of Minnesota.
Describes the stratigraphy and geological structure of this region and discusses the origin of the ores.

Clendenin (W. W.) A preliminary report upon the Florida parishes of east Louisiana and the bluff, prairie and hill lands of southwest Louisiana.
La. State Experiment Stations: Geol. & Agric., pt. 3, pp. 159-256 [1896?].
Describes topographic, drainage and geologic features, soils and other economic resources of this area.

A preliminary report upon the bluff and Mississippi alluvial lands of Louisiana.
La. State Experiment Stations, Geol. & Agric., pt. 4, pp. 257-290 (1897?)
Describes physiographic features and soils of this area.


202 — The duration of the Toronto inter-Glacial period. Am. Geol., vol. 29, pp. 71-80, 1902. Reviews a recent paper by Upham and discusses the evidences indicating the duration of this period.

203 — The Huronian question. Am. Geol., vol. 29, pp. 327-334, 1902. Discusses the relations of the Huronian rocks and the views of various geologists regarding these questions.


208 — and Willmott (A. B.). The Michipicoten iron region [Ontario]. Ont. Bureau of Mines, Rept. for 1902, pp. 152-185, pls. xv-xviii, 2 text figs., geol. map, 1902. Describes the topography, gives a classification of the Huronian rocks, discusses the geology and formation of the iron ores, and describes the petrology of this region.


210 — See Brooks (Alfred H.), 132.

212 Comstock (Theodore B.) Edward Claypole, the scientist. 
Am. Geol., vol. 29, pp. 1-23, 1 pl., 1902.

213 Condra (G. E.). New Bryozoa from the Coal Measures of Nebraska. 

214 Corless (C. V.). Notes on the geology and ore deposits of southeastern British Columbia. 
Describes the geology and occurrence of ore bodies of this area.

215 Cornwall (H. B.). Occurrence of greenockite on calcite from Joplin, Missouri. 

216 Crane (W. R.). The Kansas coal mines of the Missouri Valley. 
Contains notes on the geologic occurrence of the coal seams.

217 Crawford (J.). Earthquakes in Nicaragua. 
Am. Geol., vol. 29, p. 323, 1902.

218 — Volcanoes and earthquakes in Nicaragua. 
Am. Geol., vol. 29, p. 395, 1902.

219 — List of the most important volcanic eruptions and earthquakes in western Nicaragua within historic time. 

220 — Additions to the list of Nicaragua volcanic eruptions in historic time. 

221 Crook (Alja Robinson). The mineralogy of the Chicago area. 
Discusses the occurrence and composition of the minerals of this area.

Am. Geol., vol. 29, pp. 233-242, figs. 1-2, 1902. 
Describes the character and occurrence of the ores and the associated rocks. 
This paper is no. 175 of U. S. Geol. Surv., Bull. no. 203.

223 — Origin and relations of the auriferous veins of Algoma [western Ontario]. 
Presents the author's observations in the region, reviews Dr. Coleman's conclusions, and discusses the origin of these auriferous veins. 
Bull. 221—03——3
Describes the character of the glacial gravels and gives the results of penetration tests.

225 — The origin of eskers.
Describes the characteristics of eskers, discusses the hypotheses as to their origin and reviews the evidence that has been heretofore presented.

226 Cross (Whitman). Geologic formations versus lithologic individuals.
Jour. Geol., vol. 10, pp. 223-244, 1902.
Reviews papers by Willis and Eckel and discusses geological formations as divisions of rock masses which should be discriminated through the consideration of all the geologic data which each contains.

227 — Systematic petrography.
Reviews the development of the science of petrography and gives the author's summary of some of the defects of the modern classifications of igneous rocks and of the status of systematic petrography at the close of the nineteenth century.

228 Iddings (Joseph P.), Pirsson (Louis V.), and Washington (Henry S.). A quantitative chemico-mineralogical classification and nomenclature of igneous rocks.
Jour. Geol., vol. 10, pp. 555-690, 1902.
Gives a general summary of the new system and describes the classification and nomenclature proposed. Includes chemical analyses and tables of alferric minerals and the rocks in which they occur.

229 Cumings (Edgar R.). Lower Silurian system of eastern Montgomery County, New York.
N. Y. State Mus., Bull. no. 34 [also in 54th Ann. Rept., vol. 1], pp. 418-468, pls. i-iv, 1 fig., 5 cross sections, geol. map, 1902.

230 — A revision of the Bryozoan genera Dekayia, Dekayella and Heterotrypa of the Cincinnati group.
Am. Geol., vol. 29, pp. 197-218, pls. ix-xii, 1902.
Reviews the literature on these genera and describes new species.

231 — and Mauck (A. V.). A quantitative study of variation in the fossil Brachiopod Platystrophia lynx.

232 Cushing (H. P.). Recent geologic work in Franklin and St. Lawrence counties [New York].
Discusses topography, geologic structure and petrology of the area.
233 **Cushing** (H. P.). Pre-Cambrian outlier at Little Falls, Herkimer County [New York].
Describes exposures and microscopic and chemical characters of rocks.

234 — The derivation of the rock name "Anorthosite."
Am. Geol., vol. 29, pp. 190-191, 1902.
Discusses the use of the name.

235 **Dale** (T. Nelson). Structural details in the Green mountain region [Vermont] and in eastern New York (Second paper).
U. S. Geol. Surv., Bull. no. 195, 22 pp., 4 pls., 8 figs., 1902.
Discusses geologic phenomena presented in this area.

236 **Dall** (William H.). A new Lyropecten.

237 — Alpheus Hyatt.
Gives a sketch of the life and work of Professor Hyatt.

238 — The Grand Gulf formation.
Discusses the age of this formation.

239 **Daly** (Reginald A.). The geology of the northeast coast of Labrador.
4 text figs., 1902.
Discusses the author's observations in the southern part of British Columbia.

240 — The geology of the region adjoining the western part of the International Boundary.
Discusses the author's observations in the southern part of British Columbia.


242 — Stratigraphy of the Big Horn Mountains.

U. S. Geol. Surv., Water-Supply and Irrigation Paper no. 57, 60 pp.,
1902.
U. S. Geol. Surv., Water-Supply and Irrigation Paper no. 61, 67 pp., 1902.

245 — Norfolk Folio—Virginia–North Carolina.
Describes the geographic and topographic features, the general geologic relations, and the character and occurrence of Cretaceous, Tertiary and Quaternary strata, and discusses the soils and underground waters.

246 — Oelrichs Folio—South Dakota–Nebraska.
Describes geographic and topographic features, the general geologic relations and history, the characters and occurrence of Carboniferous, Juratrias, Cretaceous, Tertiary and Quaternary strata, and the economic resources.

See Merrill (F. J. H.) and others, 770.

248 **Davis** (Arthur Powell). Water storage on Salt River, Arizona.
U. S. Geol. Surv., Water-Supply and Irrigation Paper no. 73, 54 pp., 4 figs., 24 pls., 1902.

249 — Hydrography of the American Isthmus.

250 **Davis** (William M.). La peneplaine.
See no. 1387 in U. S. Geol. Surv., Bull. no. 188.

251 — The drainage of cuestas.
Cites some American physiographic features in illustration.

Describes geologic and physiographic features of the Grand Canyon of the Colorado.

253 — Baselevel, grade and peneplain.
Jour. Geol., vol. 10, pp. 77–109, 1902.
Discusses the use of these words and the meanings that have been given them.

254 — Field work in physical geography.
Discusses the differences between geography and geology.


260 — Current notes on physiography. Science, new ser., vol. 15, pp. 154-156, 1902. Contains an abstract of a paper by Hershey on the 'Geology of the central portion of the Isthmus of Panama.'


267 **Dawson** (George M.). *Summary report on the operations of the Geological Survey of Canada for the year 1900.*

268 —— *Summary report on the operations of the Geological Survey for the year 1899 by the Director.*


271 —— *Mineral resources of the United States. Calendar year 1900.*

272 —— *Mineral resources of the United States. Calendar year 1901.*

273 **Dean** (Bashford). *Historical evidence as to the origin of the paired limbs of vertebrates.*
Describes the evidence of paleontology on the subject.

274 —— *Biometric evidence in the problem of the paired limbs on the vertebrates.*
Discusses studies of the development of paired limbs.

275 —— *The preservation of muscle-fibres in sharks of the Cleveland shale.*
Discusses the processes by which the delicate structures are preserved.

Contains critical notes on nomenclature and paleontology.

277 **Dennis** (W. B.). *A borax mine in southern Oregon.*
Eng. & Mg. Jour., vol. 73, pp. 581–582, 2 figs., 1902.
Contains brief description of the deposit.

278 **Dickson** (C. W.). *The concentration of barium in limestone.*
School of Mines Quart., vol. 23, pp. 366–370, 1902.

279 **Diller** (Joseph Silas). *The copper region of northern California.*
Describes the occurrence of apiriferous quartz veins and copper deposits of the region.
280 Diller (Joseph Silas). Copper in northern California. 
Discusses the geologic occurrence of copper ores.

281 — Volcanic rocks in Martinique and St. Vincent, collected by 
Robert T. Hill and Israel C. Russell.
Describes the microscopic characters of these specimens.

282 — The wreck of Mt. Mazama [Oregon].
Science, new ser., vol. 15, pp. 208-211, 1902.
Sketches the geologic history and formation of the Cascade Range, 
describes the formation and wrecking of Mt. Mazama, and discusses the 
evidences for the manner of its wrecking.

283 — Volcanic dust from Guatemala.

284 — Topographic development of the Klamath Mountains.
U. S. Geol. Surv., Bull. no. 196, 69 pp., 13 pls., 7 figs., 1902.
A supplement contains notes on the geologic age of some of the rocks 
of the Klamath Mountains.

285 — and Patton (Horace Bushnell). The geology and petro­
graphy of Crater Lake National Park [Oregon].
U. S. Geol. Surv., Professional Paper no. 3, 167 pp., 19 pls., 2 figs., 
1902.
Describes the physiographic and dynamic geology of the region and 
the occurrence and characters of the igneous rocks.

286 — and Steiger (George). Volcanic dust and sand from St. Vin­
cent caught at sea and the Barbados.
Describes the characters and composition of this material.

287 Dixon (C. W.). Note on the condition of nickel in nickeleriferous 
pyrrhotite from Sudbury [Ontario].
Eng. & Mg. Jour., vol. 73, p. 660, 1902.
Contains notes on the concentration of some of these ores.

288 Dodge (R. E.), and others. New York City Folio—New York—
New Jersey.
See Merrill (F. J. H.) and others, 770.

289 Donald (J. T.). The limestone of the Philipsburg Railway and 
Coal Company.
Eng. & Mg. Jour., vol. 73, p. 657, 1902.
Describes the occurrence and chemical composition of the limestones.

290 Douglass (Earl). A Cretaceous and Lower Tertiary section in 
south central Montana.
Describes the lithologic and faunal characters of the beds exposed 
along the Musselshell River, and discusses the problem of the transition 
from Mesozoic to Cenozoic time.
291 Douglass (Earl). Fossil mammalia of the White River beds of Montana.
Describes the characters of the strata and of the fossil mammals collected.

292 —— Dinosaurs in the Ft. Pierre shales and underlying beds in Montana.
Discusses the occurrence of the fossils and the character and origin of the beds in which they are found.

293 —— The discovery of Torrejon mammals in Montana.

294 Dowling (D. B.). The west side of James Bay.
Describes the author's observations in this area.

295 Dresser (John A.). A petrographical contribution to the geology of the eastern townships of the Province of Quebec.
Describes the pre-Cambrian igneous rocks that are regarded as similar to the volcanics of South Mountain, Pa.

296 —— The copper-bearing volcanic rocks in the eastern townships of the Province of Quebec.

297 —— Petrography of Sheffield and Brome Mountains [Canada].
Describes petrologic and other observations.

298 Duerden (J. E.). Aggregated colonies in Madreporarian corals.
Describes the process of fixation and development of larvae of the West Indian coral Siderastrea radians.

299 —— Boring algae as agents in the disintegration of corals.
Reviews the literature and discusses the chemical and physical processes by which the disintegration is effected.

300 —— Relationships of the Rugosa (Tetracoralla) to the living Zoanthæa.

301 —— The morphology of the Madreporaria.
302 **Duerden (J. E.).** The development of septa in the Paleozoic corals.

303 **Duffield (M. S.).** The Cumberland Plateau coal field [Tennessee].
Describes the geology of this area and gives a geological section of the Cumberland Plateau.

304 **Dumble (Edwin T.).** Notes on the geology of southeastern Arizona.
Describes the occurrence of Cenozoic, Mesozoic and Paleozoic strata of Cochise County, Arizona, and gives a general section of the rocks.

305 —— [In discussion of paper by A. F. Lucas "The great oil-well near Beaumont, Texas."

306 —— A Carboniferous coal in Arizona.
Describes the occurrence and gives a list of fossils.

307 —— The Tertiary of the Sabine River.
Discusses the correlation of Tertiary formations in Texas and Louisiana.

308 —— The red sandstone of the Diabolo Mountains, Texas.
Discusses the stratigraphic position of this formation.

309 —— Cretaceous and later rocks of Presidio and Brewster counties [Texas].
Describes the geologic structure of this region and gives sections of the strata.

**E.**

310 **Eakle (Arthur G.).** Colemanite from southern California.
Describes the crystals and the method of measurement with the two-circle goniometer.

311 **Eastman (Charles R.).** On Campyloprion, a new form of Edestus-like dentition.
Geol. Mag., dec. iv., vol. 9, pp. 148-152, pl. viii and fig. 3 (in text), 1902.

312 —— The Carboniferous fish fauna of Mazon Creek, Illinois.
Jour. Geol., vol. 10, pp. 535-541, 5 figs., 1902.
Describes two species of Acanthodes and one each of Celacanthus and Elonichthys, and gives a list of the vertebrates found at this locality.
Geol. Mag., dec. iv., vol. 9, pp. 388-391, 2 text figs., 1902.

314 —— Some Carboniferous cestraciont and acanthodian sharks.
figs. 1-14, 1902.

315 —— Phylogeny of the cestraciont group of sharks.

316 —— Some hitherto unpublished observations of Orestes St. John
on Paleozoic fishes.
Contains notes on Dinichthys pustulosus and Edestus and Cochliodus.

317 —— Notice of interesting new forms of Carboniferous fish
remains.
Describes material from the Carboniferous of the Mississippi Valley.

318 — and Barbour (E. H.). Synopsis of the Missourian and
Permo-Carboniferous fish fauna of Kansas and Nebraska.

319 Easton (S. A.). Notes on Tonopah, Nevada.
Eng. & Mg. Jour., vol. 73, p. 697, 1902.
Contains notes on the geology of the region and the occurrence of the
gold ores.

320 Eavenson (H. N.). The Connellsville region. Its mineral
resources—the extent of territory—the methods of mining
and amount of output.

N. Y. State Mus., Bull. no. 44, pp. 849-955, pls. lxxxvi-ciii, map in
pocket, 1901.
Describes character of materials and processes of manufacture of cement
in New York.

322 —— The quarry industry in southeastern New York.
N. Y. State Mus., 54th Ann. Rept., vol. 1, pp. r141-r176, pls. xlii-lxi,
1902.

323 —— The classification of the crystalline cements.
Am. Geol., vol. 29, pp. 146-154, 1902.

324 —— The preparation of a geologic map.
Jour. Geol., vol. 10, pp. 50-66, 1902.

325 —— Summaries of the literature of structural materials. I.
Jour. Geol., vol. 10, pp. 442-449, 1902.
326 **Eckel** (Edwin C.). Summaries of the literature of structural materials. II.

327 **Edman** (J. A.). Corundum in Montana.
   Brief notes on occurrence.

328 **Edwards** (Henry W.). Notes on the geology of the Isthmus of Panama.
   Eng. & Mg. Jour., vol. 73, pp. 862-863, 1902.
   Contains general notes on the rocks of the region.

329 **Edwards** (J. Jep.). Paleontology of Bartholomew County, Indiana, mammalian fossils.
   Discusses the occurrence of Quaternary mammalian remains.

330 **Eggleston** (J. W.). Some glacial remains near Woodstock, Conn.
   Describes local glacial features.

331 **Eldridge** (George H.). The petroleum industry of California.
   Eng. & Mg. Jour., vol. 73, p. 41, 1902.
   Describes the general developments in 1901.

   Discusses the geologic structure and location of coal seams in this area.

333 —— Report on the geology and natural resources of the area included in the map of the city of Ottawa and vicinity.
   Describes geologic structure and formations and economic minerals of this area.

334 —— Report on the geology of Argenteuil, Ottawa, and part of Pontiac counties, Province of Quebec, and portions of Carleton, Russell, and Prescott counties, Province of Quebec.

335 —— The district around Kingston, Ontario.
   Describes the author's observations in this area.

Describes the general character and distribution of the deposits.

337 **Elmore** (C. J.). A comparison of fossil diatoms from Nebraska with similar deposits at St. Joseph, Mo., and at Denver, Colo.

Gives lists of species identified from Tertiary deposits.

338 **Elrod** (Moses N.). Niagara group unconformities in Indiana.


339 **Emerson** (Benjamin Kendall). Note on corundum and a graphitic essonite from Barkhamsted, Conn.

Describes the occurrence and characters of garnet and corundum.

340 —— Two cases of metamorphosis without crushing.

Am. Geol., vol. 30, pp. 73-76, 1902.
Describes an amygdaloidal amphibolite and a porphyritic mica schist.

341 —— Holyokeite, a purely feldspathic diabase from the Trias of Massachusetts.

Describes the mineralogic and chemical characters of the rocks.

342 **Emerson** (Harrington). The coal resources of the Pacific.

Contains notes on the distribution of coal in this region.

343 **Emerson** (J. S.). Some characteristics of Kau [Hawaii].

Describes the physiography of the region and discusses the evidences regarding the source of certain eruptions.

344 **Emmons** (N. H.). The value of ores in Mexico.

Mg. & Sci. Press., vol. 84, p. 102, 1902.

345 **Emmons** (Samuel Franklin). The Delamar and the Horn-Silver mines; two types of ore-deposits in the deserts of Nevada and Utah.

Describes topography and geologic structure of the region, characters of the ore and history and development of these mines.

346 —— [In discussion of “The origin of ore-deposits.”]


347 —— Clarence King.

Includes an account of his life and work and a bibliography of his publications.
348 Emmons (Samuel Franklin). Tributes to Clarence King.
Eng. & Mg. Jour., vol. 73, pp. 3-5, por., 1902.
Gives an account of his life and work and a list of his publications.

349 — The U. S. Geological Survey in its relation to the practical miner.
Eng. & Mg. Jour., vol. 74, p. 43, 1902.

350 — [Discussion of James W. Malcolmson's paper on 'The Sierra Mojado, Coahuila, Mexico, and its ore-deposits. ']
Discusses the age of the beds, the structure of the mountains, and the distribution of the ores.

Describes physiographic changes which have taken place in this region.

Discusses the occurrence and deformation of the Iroquois shore line and gives results of recent studies in the Syracuse-Oneida and Cattaraugus-Chautauqua districts.

353 Falconer (J. D.) Volcanic dust from the West Indies.
Brief note on the character of the dust from recent eruptions.

354 Fall (Delos). Marls and clays in Michigan.
Discusses occurrence of materials in Michigan for making Portland cement.

Describes observations in this area.

356 Farrington (Oliver Cummings). Meteorite studies.
Describes meteorites from Kansas, Mexico and Ohio.

357 — A new meteorite from Kansas.
Gives an account of the discovery and characters of this meteorite.

358 — The meteorites of northwestern Kansas.
359 **Farrington** (Oliver Cummings), **Briggs** (Elmer S.) and **The** Dinosaur beds of the Grand River Valley of Colorado. See Briggs (E. S.) and Farrington (O. C.), 126.


365 —— The Arapahoe glacier in 1902 [Colorado]. Jour. Geol., vol. 10, pp. 839–851, figs. 1–8, 1902. Describes the moraines and crevasses of this glacier.


371 **Fisher** (Cassius A.). Directory of the limestone quarries of Nebraska.

372 —— Discovery of the Laramie in Nebraska.
   Am. Geol., vol. 30, pp. 315-316, pl. xviii, 1902.
   Describes occurrence and relations of the Laramie in southeastern Nebraska.

373 —— **Barbour** (Erwin H.) and. A new form of calcite-sand crystal.
   See Barbour (E. H.) and Fisher (C. A.), 56.

374 —— **Barbour** (Erwin H.) and. The geological bibliography of Nebraska.
   See Barbour (E. H.) and Fisher (C. A.), 55.

375 **Fletcher** (Hugh). Geological nomenclature in Nova Scotia.
   Discusses the age of the New Glasgow conglomerate.

376 —— Kings and Hants counties, Nova Scotia.
   Describes the author's observations in this area.

377 **Flett** (John Smith). Note on a preliminary examination of the ash that fell on Barbados after the eruption at St. Vincent [West Indies]. With a chemical analysis by Dr. William Pollard.

378 —— **Anderson** (Tempest) and. Preliminary report on the recent eruption of the Soufrière in St. Vincent, and of a visit to Mont Pelée, in Martinique.
   See Anderson (Tempest) and Flett (J. S.), 35.

379 **Flink** (Gust.). Berättelse om en mineralogisk resa i Syd-Groenland sommaren 1897.
   Describes minerals and rocks obtained from Greenland.

380 —— On the minerals from Narsarsuk on the firth of Tunugdliarfik in southern Greenland.
   Meddelelser om Groenland, vol. 24, pp. 7-180, pls. i–ix, 1901.
   Describes character and occurrence of minerals in this area.

381 **Fluker** (W. H.). Gold mining in McDuffie County, Georgia.
   Eng. & Mg. Jour., vol. 73, pp. 725-726, 1902.
   Contains general notes on the geology and gold ores of the county.
382 **Foerste** (August F.). The Cincinnati anticline in southern Kentucky.

Am. Geol., vol. 30, pp. 359-369, pl. xxvi, 1902.

Describes the relations of the Devonian, Silurian, and Ordovician formations along the Cincinnati anticline.

383 — Bearing of the Clinton and Osgood formations on the age of the Cincinnati anticline.


384 — Use of the terms Linden and Clifton limestones in Tennessee geology.


385 **Ford** (W. E.). On the chemical composition of dumortierite.


386 **Forsyth** (Alexander). [In discussion of paper by J. D. Irving "Wolframite in the Black Hills of South Dakota."]


387 **Fowke** (Gerard). The preglacial drainage of Ohio—introduction.

Ohio State Acad. Sci., Special Papers, no. 3, pp. 5-9, 1900.

Reviews work previously done in deciphering preglacial drainage as an introduction to papers following.

388 — Preglacial drainage conditions in the vicinity of Cincinnati [Ohio].

Ohio State Acad. Sci., Special Papers, no. 3, pp. 68-75, map, 1900.

389 **Frazer** (Persifor). Alphabetical cross reference catalogue of all the publications of Edward Drinker Cope, from 1859 till his death in 1897.


390 — Sketch of Dr. Frenzel.

Am. Geol., vol. 30, pp. 333-335, 1902.


392 — Catalogue chronologique des publications de Edward Drinker Cope.


393 **Frizell** (Joseph P.). Tidal scour in harbors, or the function of tidal basins with special reference to the Harbor of Boston.


Contains notes on deposition in harbors and its removal by tidal scour.
394 **Fuller** (Myron L.). Etching of quartz in the interior of conglomerates.
   Discusses the evidences as to the cause and the conditions during the etching.

395 —  The Gaines oil field of northern Pennsylvania.
   Describes location, topography, extent and development of the field, location and productiveness of wells, character and geologic occurrence of oil-producing sands and the stratigraphy and geologic structure of this area.

396 —  The Catskill rocks in northern Pennsylvania.

397 —  and **Ashley** (George H.). Ditney Folio—Indiana.
   Describes geographic and topographic features, general geologic relations, Carboniferous formations and Quaternary deposits, and economic resources, chiefly coal.

398 **Fulton** (Charles H.). The cyanide process in the Black Hills of South Dakota.
   S. Dak. School of Mines, Bull. no. 5, pp. 1-77, pl., 1902.

**G.**

399 **Gannett** (Henry). Geography of Alaska.

400 **Gaudry** (Albert) and **Barrois** (Charles). Congrès géologique international; comptes rendus de la VIII session, en France.

401 Gay (Ware B.). [In discussion of paper on “The Richmond coal-basin, Virginia,” by J. B. Woodworth.]

402 Gilbert (Grove Karl). On some joint veins.

403 —  **John Wesley Powell.**
   A sketch of his life and work.

   Bull. 221—03—4
405 **Gilmore** (Charles W.). Discovery of teeth in Baptanodon, an Ichthyosaurian from the Jurassic of Wyoming.

406 — **Peterson** (O. A.) and. Elosaurus parvus; a new genus and species of the Sauropoda.
See Peterson (O. A.) and Gilmore (C. W.), 851.


408 **Girty** (George H.). The Upper Permian in western Texas.
Describes the lithologic and faunal characters of the carboniferous section examined by Shumard in 1855, and proposes the geographic term Guadalupian for the Permian strata of the region.

409 — See Lane (A. C.), 646.

410 **Goodwin** (J. C.). Reformed copper ores.
Discusses the occurrence and origin of copper ore deposits.

411 **Gordon** (Charles H.). The Port Huron oil field [Michigan].
Contains well records of this field and the adjoining region in Canada.

412 — Wave-cutting on west shore of Lake Huron, Sanilac County, Mich.
Describes the recent encroachment of the lake upon the land.

413 **Gordon** (Réginald). Bones of a mastodon found.
Describes the occurrence of remains of a mastodon near Newburgh, New York.

414 — Tree trunks found with mastodon remains.
Describes occurrence of remains of trunks of trees near Newburgh, New York.

See no. 306 in U. S. Geol. Surv., Bull. no. 203.

416 — Studies of gastropoda.
Describes stages of development of gastropods.
417 **Grabau (Amadeus W.)** Stratigraphy of the Traverse group of Michigan.


Describes the character and occurrence of the subdivisions of this group and includes lists of fossils at various horizons and localities.

418 — The Geological Society of America [Proceedings and abstracts of papers].


419 **Shimer (Henry W.) and Hamilton group of Thedford, Ontario.**

See Shimer (H. W.) and Grabau (A. W.), 963.

420 **Grant (C. C.).** Opening address, geological section [Hamilton Scientific Association], for session 1901–1902.


Contains notes on fossils collected near Hamilton, Ontario.

421 — Coral reefs—modern and ancient.


Notes the occurrence of fossil corals in Ontario.

422 — Geological notes—(continued).


Contains notes on the occurrence of fossils near Hamilton, Ontario.

423 **Grant (Ulysses Sherman).** Junction of Lake Superior sandstone and Keweenawan traps in Wisconsin.


Reviews previous investigations and discusses the contact phenomena and the character of the sedimentary rocks.

424 — Lake Superior iron ore deposits.


Reviews recent literature on these ores.

425 — See Winchell (N. H.), 1168.

426 **Gratacap (L. P.).** Paleontological speculations. III.

Am. Geol., vol. 29, pp. 290–301, 1902.

427 — The great Jurassic dinosaur.


Describes the vertebrate animal life of the Jurassic and the occurrence of remains in Wyoming.

428 **Greene (George K.).** Contribution to Indiana paleontology, Part IX.

New Albany, Ind., pp. 75–84, pls. xxv–xxvii, 1902.

429 Greene (George K.). Contribution to Indiana paleontology, Part X.
   Contains descriptions of new corals from the Devonian by Greene and of new species of echinoderms from the Carboniferous and Devonian by Rowley.

430 Gregory (W. M.) Preliminary report on Arenac County and parts of Ogemaw, Iosco and Alcona counties [Michigan].
   Describes the occurrence of limestone, gypsum, coal, water supply and clays in these counties.

   Discusses the economic geology of this area.

432 Griffith (William). The anthracite of the Third Hill Mountain, West Virginia.
   Contains notes on the general geology of the region and the recurrence and character of coal.

433 Griswold (W. T.) The Berea Grit oil sand in the Cadiz quadrangle, Ohio.
   U. S. Geol. Surv., Bull. no. 198, 43 pp., 1 pl., 1 fig., 1902.
   Describes the occurrence of petroleum and the method used in constructing a contour map of the Berea Grit oil sand in this area.

434 Gulliver (F. P.) Joint meetings of the Geological Society of America, Section E, and the National Geographic Society.
   Gives titles and abstracts of papers read at the meeting at Pittsburgh, Pa., July 1 to 3, 1902.

   Discusses physiographic features, geologic structure and petrology of this area, and character and distribution of the gold-bearing gravels.

436 — Characteristics of the Atlin gold-field [British Columbia].
   Describes the general topography and geology of the region and the occurrence of placer gold.

437 — Glaciation in the Atlin district, British Columbia.
   Jour. Geol., vol. 10, pp. 182-185, 1902.
   Describes the valleys and local glaciers of the region.
438 **Hall** (Christopher W.) Exploration for gold in the central States. Lake Superior Mg. Inst., Proc., pp. 49-60 [1898?]. Discusses occurrences of gold.


444 **Harper** (Roland M.). Taxodium distichum and related species, with notes on some geological factors influencing their distribution. Torrey Bot. Club, Bull., vol. 29, pp. 381-399, 1902. Discusses the influence of certain geologic formations upon the geographic distribution of these plants.

445 —— Notes on the Lafayette and Columbia formations and some of their botanical features. Science, new ser., vol. 16, pp. 68-70, 1902. Discusses the use of plants growing in soils derived from these formations in identifying the presence of the latter where surface outcrops are not available.


447 **Harrington** (M. W.). See Winchell (N. H.), 1168.
448 **Harris** (Gilbert D.). The geology of the Mississippi embayment with special reference to the State of Louisiana.
La. Geol. Surv., pt. 6, pp. 5-39, pls. i-x, figs. 1-7, 1902.
Describes the orographic movements at the close of the Cretaceous, and the character and distribution of the Eocene, Oligocene, Miocene and Quaternary series in the region.

449 Subterranean waters of Louisiana.
Describes the character and occurrence of the Cretaceous and Tertiary beds, and gives sections of many well borings and analyses of the waters.

450 Oil in Louisiana.
La. Geol. Surv., pt. 6, pp. 265-275, pl. xlv, fig. 27, 1902.
Gives sections and data regarding the horizons of the oil-bearing sands.

451 **Haseltine** (Robert M.). The bituminous coal field of Ohio.
Describes extent of field, character, composition, occurrence and production of coals.

452 **White** (David), **Campbell** (Marius R.) and. The northern Appalachian coal field.
See White (David), Campbell (M. R.), and Haseltine (R. M.), 1120.

453 **Hatcher** (J. B.). On some new and little known fossil vertebrates.

454 On the cranial elements and the deciduous and permanent dentitions of Titanotherium.

455 Sabal rigida; a new species of palm from the Laramie.

456 The Jurassic Dinosaur deposits near Canyon City, Colorado.
Describes the mode of occurrence of the saurian remains near Canyon City and the geology of the strata in which found.

457 A mounted skeleton of Titanotherium dispar Marsh.

458 Structure of the fore limb and manus of Brontosaurus.

459 The genera and species of the Trachodontidae (Hadrosauridae, Claosauridae) Marsh.
460 Hatcher (J. B.) Oligocene Canidae.

461 —— Origin of the Oligocene and Miocene deposits of the Great Plains.
Discusses the character, distribution, origin and correlation of these strata.

462 —— Discovery of a musk ox skull (Ovibos cavifrons Leidy), in West Virginia, near Steubenville, Ohio.

463 —— A correction of Professor Osborn’s note entitled “New vertebrates of the Mid-Cretaceous.”
Contains notes on the locality of species of Ornithorhynchus and the age of the Judith River beds.

464 Haverstock (R. S.). Quicksilver.
Contains general notes on the occurrence and treatment of quicksilver ores, with descriptions of California deposits.

465 Haworth (Erasmus). Geology and mining interests of Kansas.
Describes the occurrence of economic minerals in the State.

466 —— Oil and gas in Kansas.
Eng. & Mg. Jour., vol. 73, p. 37, 1902.
Describes the developments in oil and gas in 1901.

467 Hay (Oliver Perry). Description of a new species of Baena (B. hatcheri) from the Laramie beds of Wyoming.

468 —— Snoutfishes of Kansas.

469 —— Description of a new species of Cladodus (C. formosus) from the Devonian of Colorado.
Am. Geol., vol. 30, pp. 373-374, fig. 1, 1902.

470 —— Bibliography and catalogue of the fossil vertebrata of North America.
U. S. Geol. Surv., Bull. no. 179, 868 pp., 1902.

Discusses the geologic history and structure of this area.

473 Hayes (Charles Willard), Vaughan (T. W.) and Spencer (A. C.). Report on a geological reconnaissance of Cuba. Washington, 1901. 123 pp., 29 pls., 17 figs. Describes the physiography, the general character and distribution of the igneous and sedimentary rocks, the geologic history and occurrence of gold, copper, manganese, iron, asphalts, oil and coal.

474 Hayes (Charles Willard). The asphalt deposits of Pike County, Arkansas. Eng. & Mg. Jour., vol. 74, p. 782, 1902. Contains notes on the geologic occurrence and gives a section of the strata.


481 **Heine** (R. E.). The water resources of Washington. Water power.

482 **Herrick** (C. L.). Applications of geology to economic problems in New Mexico.
   Describes some of the geologic features and the occurrence of economic minerals of the region.

483 **Hershey** (Oscar H.). The significance of the term Sierran.
   Am. Geol., vol. 29, pp. 88-95, 1902.
   Discusses the recent earth movements in the Sierra Nevada region and the use of the terms Ozarkian and Sierran.

484 —— Some crystalline rocks of southern California.
   Describes the character, occurrence and distribution of probable pre-Paleozoic crystalline granites, schists, etc., and of certain quartzite and limestone strata in this region.

485 —— Some Tertiary formations of southern California.
   Am. Geol., vol. 29, pp. 349-372, 1902.
   Describes volcanic and sedimentary beds of the region.

486 —— The significance of certain Cretaceous outliers in the Klamath region, California.
   Describes the occurrence and character of the Cretaceous sediment and the geological history of this region.

487 —— Boston Mountain physiography.
   Discusses topographic development of west central Arkansas and reviews a paper by A. H. Purdue on "Physiography of the Boston Mountain, Arkansas."

488 —— Neocene deposits of the Klamath region, California.
   Describes the occurrence of these deposits and the conditions under which they were accumulated.

489 —— The Quaternary of southern California.
   Describes orographic movements, erosion phenomena and deposits of Quaternary time in this region.

490 —— A supposed early Tertiary peneplain in the Klamath region, California.
   Discusses the evidences for the ancient peneplain character of the region and the date of formation of the peneplain.
491 **Herzer (H.).** Psaronius.
Gives description and critical remarks upon this fossil plant.

492 — Six new species, including two new genera, of fossil plants.

493 — A new fossil sponge from the Coal Measures [Ohio].

494 — New fossil plants from the Carboniferous and Devonian.

495 — New fossils from the Corniferous, Hamilton and Medina shales.

496 **Hilgard (E. W.).** The debris fans of the arid region in their relation to the water supply.
Describes the structure of fans at the mouths of canyons and their relations to water supply.

497 **Hill (Benjamin F.).** The Terlingua quicksilver deposits, Brewster County, Texas.
Texas Univ. Mineral Surv., Bull. no. 4, 74 pp., 21 pls., 10 figs., 1902.
Gives a brief account of the physiography, geologic structure and occurrence of the Cretaceous and igneous rocks. Describes the character and occurrence of the quicksilver deposits and associated minerals and discusses the mode of occurrence of the ores.

498 — See Phillips (W. B.), 853.

499 **Hill (Robert T.).** Geography and geology of the Black and Grand prairies, Texas, with detailed descriptions of the Cretaceous formations and special reference to artesian waters.
Describes physiographic and drainage features, the character and occurrence of Azoic, Cambrian, Ordovician, Carboniferous, Permo-Triassic and Cretaceous rocks and the conditions and occurrence of artesian waters. The nomenclature, classification, correlation, character and occurrence of the Cretaceous rocks are described in detail, with numerous sections, faunal lists and figures of characteristic fossils and typical exposures, and the geography and conditions of deposition prevailing in Cretaceous times are discussed.

500 — The geographic and geologic features, and their relation to the mineral products, of Mexico.
501 Hill (Robert T.). The Beaumont oil-field with notes on other oil-fields of the Texas region.
Describes the occurrence and geologic relations of the oil bearing strata of Texas.

502 — [Report to the National Geographic Society on volcanic disturbances in the West Indies.]
Contains an account of the author’s observations of the phenomena attending the eruptions in 1902.

503 — The upland placers of La Cienega, Sonora, Mexico.
Eng. & Mg. Jour., vol. 73, pp. 132-134, 7 figs., 1902.
Describes the occurrence of the gold and the method of dry washing.

504 — The cinnabar deposits of the Big Bend province of Texas.
Describes the geologic occurrence of the cinnabar deposits in this area.

505 — and Vaughan (T. Wayland). Austin Folio—Texas.
Describes geographic and topographic features, general geologic relations, the character and occurrence of Cretaceous, Tertiary and Quaternary formations, and the occurrence of economic products.

506 Hille (F.). The iron ore deposits of western Ontario and their genesis.
Describes the geologic and geographic position of the ore deposits and discusses their formation.


508 — The composition of yttrialite, with a criticism of the formula assigned to thalénite.
Discusses Benedicks' formula for thalénite and presents the author’s results of the chemical properties of yttrialite.

509 — and Penfield (S. L.). Some additions to the alunite-jarosite group of minerals.
Describes the crystallographic and chemical characters of minerals from Nevada and New Mexico.

Discusses the correlation of these beds.

512 Hobbs (William Herbert). The old tungsten mine at Trumbull, Conn.
U. S. Geol. Surv., 22d Ann. Rept., pt. 2, pp. 7-22, pls. i-v, fig. 1, 1901.
Describes petrology, geologic structure, and occurrence of ore bodies of this locality.

513 — Emigrant diamonds in America.
Describes the occurrence of diamonds in glacial materials, principally in Wisconsin.

514 — Still rivers of western Connecticut.
Describes the peculiar drainage features of the region and the conditions determining the course of the rivers, and discusses the theories that have been advanced.

515 — Former extent of the Newark system.
Gives a summary of the views of various geologists regarding this series, and discusses the conditions under which the beds were deposited.

516 — The mapping of the crystalline schists. Part I. Methods.
Jour. Geol., vol. 10, pp. 780–792, 1 pl., 1 fig., 1902.
Describes methods of studying the occurrence, character and relations of crystalline schists.

517 — The mapping of the crystalline schists. II. Basal assumptions.
Jour. Geol., vol. 10, pp. 858–890, figs. 1–11, 1902.
Discusses the mechanics of deformation and the criteria for recognizing folds and faults.

518 — An instance of the action of the ice sheet upon slender projecting rock masses.
Describes the glacial phenomena in the Pomperaug Valley (Connecticut).

519 — A new meteorite from Algoma, Kewaunee County, Wisconsin.

520 Hodgdon (F. W.). [In discussion of paper by J. P. Frizell on "Tidal scour in harbors, etc."]
Contains notes on scour in Boston Harbor.

522 —— On the occurrence of chrompicotite in Canada.
Describes its occurrence, characters, and chemical composition.

523 Hole (Allen D.), Moore (Joseph) and. Concerning well-defined ripple marks in the Hudson River limestone, Richmond, Indiana.
See Moore (J.) and Hole (A. D.), 786.

Describes the general geologic and botanical features of these localities.

525 —— and others. New York City Folio—New York-New Jersey.
See Merrill (F. J. H.), and others, 770.

526 Holmes (W. H.). Fossil human remains found near Lansing, Kansas.
Discusses the age of the deposits in which the human remains were found at Lansing, Kansas.

527 Hopkins (A. D.). Work of the prehistoric scolytid, Phlæosinus squalidens Scudd.

Describes character and occurrence of clays and their products manufactured in the State.

529 —— Clays and clay industries of Pennsylvania. III. Clays of the Great Valley and South Mountain areas.
Describes character and occurrence of clays and products manufactured from them.

530 —— Fireclays of the Coal Measures, a short discussion of their origin, and the causes of the qualities which render them more or less refractory.
531 Hopkins (Thomas C.). The Lower Carboniferous area in Indiana.

532 and Smallwood (Martin). On some anticlinal folds [Pennsylvania].

533 Hovey (Edmund Otis). The fourteenth annual meeting of the Geological Society of America.

534 The paleontological collections of the geological department of the American Museum of Natural History.
   Jour. Geol., vol. 10, pp. 252-255, 1902.

535 Observations on the eruptions of 1902 of La Soufrière, St. Vincent and Mt. Pelée, Martinique.
   Describes the eruptions in 1902 and the character of the material ejected.

536 The eruptions of La Soufrière, St. Vincent, in May, 1902.
   Describes the author's observations.

537 A visit to Martinique and St. Vincent after the great eruptions of May and June, 1902.

538 Martinique and St. Vincent; a preliminary report upon the eruptions of 1902.
   Describes the phenomena of these eruptions and the extent of the devastation.

539 Hrdlička (Aleš). The crania of Trenton, New Jersey, and their bearing upon the antiquity of man in that region.
   Describes the occurrence and character of the remains.

540 Hubbard (Lucius L.) Two new geological cross-sections of Keweenaw Point [Michigan].
   Lake Superior Mg. Inst., Proc., vol. 2, pp. 79-96 [1894?].
   Describes the geology of this area and gives a section of the strata.

541 The relation of the vein at the Central mine, Keweenaw Point, to the Kearsarge conglomerate [Michigan].
   Lake Superior Mg. Inst., Proc., vol. 3, pp. 74-83, 4 pls. [1895?].

543 Hulst (Nelson P.) The geology of that portion of the Menominee Range, east of the Menominee River [Michigan].
Lake Superior Mg. Inst., Proc. for 1893, pp. 19-28, 2 figs., geol. map [1893?].
Describes the geologic structure and occurrence of ores in this area.

I.

544 — Iddings (Joseph P.), Cross (Whitman), Pirsson (Louis V.), and Washington (Henry S.). A quantitative chemico-mineralogical classification and nomenclature of igneous rocks.
See Cross (W.), Iddings (J. P.), Pirsson (L. V.), and Washington (H. S.), 228.

545 Ingall (Elfric Drew). Report on the iron ore deposits along the Kingston and Pembroke Railway in eastern Ontario.
Gives a summary of the geology and petrology of the area and describes the character and occurrence of the iron ores.

546 Irving (John Duer). Some recently exploited deposits of wolframite in the Black Hills of South Dakota.
Describes the general geology and occurrence of wolframite in the ore-bearing veins of the region.

J.

547 Jaekel (O.). Bemerkungen über den beinbau der trilobiten.
Discusses criticisms by C. E. Beecher of a paper by the author on the structure of trilobites.

548 Jaggar (Thomas Augustus). Field notes of a geologist in Martinique and St. Vincent.
Describes recent volcanic phenomena.

549 —— The next eruption of Pelée.

Describes methods and results of meander studies.


553 Johnson (Douglas Wilson). Notes of a geological reconnaissance in eastern Valencia County, New Mexico. Am. Geol., vol. 29, pp. 80-87, pls. ii-iii, 1902. Describes the general physiographic and geologic features of the region.


558 Jones (T. Rupert). Notes on Dr. G. F. Matthew's Cambrian Ostracoda from northeastern America. Geol. Mag., dec. iv, vol. 9, pp. 401-403, 6 text figs., 1902.


K.


562 Kemp (James Furman). The deposits of copper-ores at Ducktown, Tennessee.
Describes briefly topography of Ducktown, mode of occurrence and
color of the ore and associated minerals, and possible origin of the
ore bodies.

563 —— The geological relations and distribution of platinum and
associated metals.
U. S. Geol. Surv., Bull. no 193, 95 pp., 6 pls., 8 figs., 1902; Columbia

564 —— Igneous rocks and circulating waters as factors in ore depo­
sition.

565 Kendall (J. D.). Ore in sight.
Inst. Mg. & Metal., Trans., vol. 10, pp. 143-149, figs. 1-7, 1902; Mg. &
5 figs., 1902.

566 Kerr (Frank M.). The sulphur deposits of Calcasieu Parish,
[Louisiana].
Describes the occurrence of the sulphur and presents the record of a
boring to a depth of 603 feet.

567 Keyes (Charles Rollin). Origine colienne du loess.
1901.
Discusses the origin of the loess of the Mississippi Valley.

568 —— Depositional equivalent of hiatus at base of our Coal Meas­
ures; and the Arkansan series, a new terrane of the Car­
oniferous in the western interior basin.
Iowa Acad. Sci., Proc., vol. 8, pp. 119-128, figs. 3-4, 1901.
Discusses evidences of denudation prior to the deposition of the Coal
Measures in this area, gives tables comparing the thickness of Coal
Measures formations, and describes the Arkansan series.

569 —— Names of coals west of the Mississippi River.
Discusses the Carboniferous deposits of the western interior coal field,
tabulates the terranes and percentage of coal production of each, and
gives a list of names that have been applied to the coal seams, with place
of publication and stratigraphic position.

570 —— Diverse origins and diverse times of formation of the lead
and zinc deposits of the Mississippi Valley.
Discusses mode of formation of these ores.

571 —— [In discussion of “The origin of ore-deposits.”]
Bull. 221—03—5
572 Keyes (Charles Rollin). Character and stratigraphical peculiarities of the southwestern Iowa coal fields.
   Eng. & Mg. Jour., vol. 73, p. 661, 1902.
   Describes the stratigraphic position of these coals.

573 — Determination of the Cambrian age [of] the magnesian limestones of Missouri.
   Reviews previous determinations of the age of these limestones.

574 — Geological age of certain gypsum deposits.
   Discusses the evidences of the age of the Kansas and Iowa gypsum beds.

575 — Cartographic representation of geological formations.
   Jour. Geol., vol. 10, pp. 691–699, figs. 1–2, 1902.
   Discusses the criteria by which formations are discriminated and the methods of their cartographic representation.

576 — Devonian interval in Missouri.
   Discusses the lithologic and faunal characters of the strata and the evidence of unconformities.

577 — Magmatic differentiation of rocks.
   Science, new ser., vol. 15, pp. 32–33, 1902.
   Discusses the formation of the Magnet Cove [Arkansas] igneous mass and the classification of rocks.

578 — A Devonian hiatus in the continental interior—its character and depositional equivalents.
   Discusses the absence of Devonian strata in west central Missouri and the history and meaning of the terms Kinderhook and Chouteau.

579 Killebrew (J. B.), Safford (J. M.) and. The elements of the geology of Tennessee.
   See Safford (J. M.) and Killebrew (J. B.), '926.

580 Kimball (James P.). Bohemia mining district of western Oregon.
   Eng. & Mg. Jour., vol. 73, pp. 889–890, 3 figs., 1902.
   Contains notes on the geology and mining developments in the district.

581 Kindle (Edward M.). The Niagara limestones of Hamilton County, Indiana.
   Describes the lithologic and faunal characters of the limestones and correlates them with the Lockport limestone.

582 Knight (Nicholas). Some recent analyses of Iowa building stones; also of potable waters.


585 — The petroleum fields of Wyoming, III. The fields of Uinta County. Eng. & Mg. Jour., vol. 73, pp. 720-722, 4 figs., 1902. Describes the topography, general geology and occurrence of oil in Uinta County.


588 Knight (William H.). Address at the presentation of the memorial bronze of Edward Waller Claypole, Throop Polytechnic Institute, Pasadena, Cal., June 2, 1902. (Not seen.)


595 **Knowlton** (Frank Hall). Fossil mosses.  
Gives a summary of what is known regarding these forms.

596 —— Notes on the fossil fruits and lignites of Brandon, Vermont.  

597 —— Report on a small collection of fossil plants from the vicinity of Porcupine Butte, Montana.  

598 —— Six new species.  

599 —— Fossil flora of the John Day Basin, Oregon.  
U. S. Geol. Surv!, Bull. no. 204, 153 pp., 17 pls., 1902.  
Gives a brief description of the geologic formations and localities of this area, describes the fossil plants, and discusses critically the age and relations to other floras.

600 **Koenig** (George A.). The crystallization of mohawkite, domey-kite and other similar arsenides.  

601 —— On the new species melanochalcite and keweenawite, with notes on some other known species.  
Describes occurrence and chemical characters of the material.

602 **Kolderup** (Carl Fred.). Guldforekomsterne i Alaska og tilgrænsende stroeg. [The occurrence of gold in Alaska and adjacent regions.]  

603 —— Nordhavets bund og den gamle landbro mellem Island og Greenland. [The bottom of the Arctic Ocean and the old bridge between Iceland and Greenland.]  

604 —— De vulkanske udbrud i Vestindien. [The volcanic eruption in the West Indies.]  
Describes eruptions of La Soufrière in St. Vincent and Mont Pelée in Martinique.

605 **Kraus** (E. H.) and **Reitinger** (J.). Hussakite, a new mineral, and its relation to xenotime.  
Describes the chemical and crystallographic characters of the material.
606 Kroustchoff (K. de). Note sur une roche basaltique de la Sierra Verde [Mexico].

Describes occurrence of copper ore bodies.

608 Kümmerl (Henry B.). The mining industry [of New Jersey].
Contains notes on the occurrence of iron, zinc and copper ores.

609 — and Weller (Stuart). The rocks of the Green Pond Mountain region.
Describes geologic occurrence and history and geographic distribution of the formations of this area, and gives lists of fossils determined.

610 Kunz (George F.). Precious stones in the United States in 1901.
Eng. & Mg. Jour., vol. 73, p. 38, 1902.

611 — Composition of tourmaline.
Eng. & Mg. Jour., vol. 73, pp. 482-483, 1902.

612 — Gems and precious stones of Mexico.
Describes occurrence, properties, etc.

L.

613 Lacroix (A.). Les roches volcaniques de la Martinique.

614 — Sur les cendres des éruptions de la Montagne Pelée de 1851 et de 1902.
Describes characters of volcanic ashes ejected from Mont Pelée.

615 — Les roches volcaniques de la Martinique.
Describes characters of volcanic material from Martinique.

616 Laflamme (—). Geological exploration of Anticosti [Canada].
Describes the author's observations upon the island.

617 Laguerenne (Teodoro L.). Estado de Tabasco [Mexico].
Describes topographic and geologic features and mineral deposits of this State.
618 Lakes (Arthur). The Buckhorn mine and the San Luis Park, Colorado. Peculiar formations which contain some ores and present a striking appearance.

619 — Oil in Colorado, the geology of the deposits, and the various horizons in which signs of oil have been found.

620 — A lesson on faults. Sketch of the Aspen mining region, Colorado, in which the effects of faulting in the past, and still going on, are shown.

621 — The coal, graphite and oil fields of Raton, New Mexico. The location and geological character. The coal mines.

622 — The western oil field of Mesa and Rio Blanco counties, Colorado. A region geologically favorable for oil.
Describes the general geology of the region.

623 — Geology along the Animas River, with descriptions of coal and metal mines along its course, including a sketch of the Silver Lake mine [Colorado].
Describes the character and occurrence of the coal and associated strata.

624 — Natural gas in Colorado, a description of some of its occurrences and the conditions which point to the probability of its existence.

625 — Prospecting for oil in the region of the cliff dwellers of southeastern Colorado.
Describes the general geology and structure of the region.

Gives a summary of R. C. Hill's description of the region.

627 — Crestone mining district in San Luis Park, Colorado. A region containing some good veins favorably situated for economical mining.

629 — Prospecting for coal in the western States—points of resemblance and points of difference between the western and eastern coal fields.

630 — The prairie region of northeastern Colorado. A description of some interesting geological occurrences near Sterling.
Describes the Tertiary strata of the region.

631 — Faults in metal mines. The different types and their various manifestations, their effects upon ore deposition.

632 — Volcanoes. The manner of their eruption, their effect upon the deposition of minerals.

633 — South Park, Colorado. A description of its geology and economic resources in gold, silver, lead, coal and oil.
Describes the general geology of the region.

634 — Prospecting for oil in Wyoming. A description of the prospects in the country around Medicine Butte, and Red Mountain, Uinta County.
Describes the Cretaceous and Tertiary strata of the region.

635 — Great Salt Lake Basin. A description of the terraces which show the shores of the ancient lake when it was much larger than now.

636 — Sketching the characteristic features of rocks.

637 Lambe (Lawrence M.). Notes on a turtle from the Cretaceous rocks of Alberta [Canada].

638 — A revision of the genera and species of Canadian Paleozoic corals: the Madreporaria Aporosa and the Madreporaria Rugosa.
639 Lambe (Lawrence M.). New genera and species from the Belly River series (Mid-Cretaceous).

640 — Red Deer River, Alberta [Canada].
Discusses the author's field work at this locality.

641 — On Trionyx foveatus, Leidy, and Trionyx vagans, Cope, from the Cretaceous rocks of Alberta [Canada].
Describes characters and occurrence of these fossil chelonia.

Discusses the topography and geologic formations found in the State of Washington.

643 — The non-metalliferous resources of Washington, except coal.
Discusses the geologic position and distribution of the coals of the State of Washington.

644 — The coal deposits of Washington.

645 — Thyng (William S.), Lyon (D. A.) and Roberts (Milnor). The metalliferous resources of Washington, except iron.

646 Lane (Alfred C.). Annual report of the State geologist [Michigan].
Summarizes the geological work done in Michigan.

647 — Suggestion from the State geologist.
Proposes to substitute the term Saginaw for Jackson as applied to coal beds in Michigan, and Antrim for St. Clair as applied to Upper Devonian shales of Thunder Bay and Grand Traverse Bay regions.

648 — The economic geology of Michigan in its relation to the business world.

649 — Asphalt in Delta County, Michigan.
Eng. & Mg. Jour., vol. 73, p. 50, 1902.
Gives a section of the Ordovician strata and describes the character of the asphalt material.
650 Lane (Alfred C.). Subsurface geology [Alcona County, Michigan].
Describes the character of the Carboniferous and Devonian rocks as exhibited by the well records and the possible occurrence of oil and gas.

651 —— Economic geology [of Michigan].

652 —— Limestones [of Michigan].
Describes the character, composition and occurrence of limestones in Michigan.

653 —— Deep wells and prospects for oil and gas [Michigan].
Gives notes on well records in various parts of the State.

654 —— Geological map of Michigan.

655 —— Salt [Michigan].
Contains brief notes on well records and analyses of the brines.

656 —— Geothermal gradient.
Contains notes on surface and underground temperatures.

657 —— Coal of Michigan: its mode of occurrence and quality.
Describes the geologic occurrence, composition and mining of coal in the Lower Peninsula of Michigan.

658 —— The northern interior coal field.
Describes extent, geologic relations and structure of the field, the character and occurrence of the coal beds, the properties, composition and development of the coal.

659 —— Variation of geothermal gradient in Michigan.

Gives record of boring, discusses strata penetrated and includes analyses of coal.

661 Launay (L. de). [In discussion of "The origin of ore-deposits."]
662 **Lawson** (Andrew C.). The Eparchean interval: a criticism of the use of the term Algonkian.  
Discusses the application of the terms Archaean and Algonkian, the correlation of their formations and defines the term Eparchean interval.

663 —— Third annual meeting of the Cordilleran section of the Geological Society of America [Proceedings and abstracts of papers].  

664 —— A geological section of the middle Coast Ranges of California.  
Gives a table showing succession and character of geologic formations in the Coast Ranges in the vicinity of the Bay of San Francisco.

665 —— On an orbicular gabbro from San Diego County, California.  

666 —— and **Palache** (Charles). The Berkeley Hills [California]. A detail of Coast Range geology.  
Describes the character, occurrence and relations of the formations of the region, erosion intervals, faults, and the microscopic characters of the volcanic rocks.

Presents the author's observations on the glacial phenomena, earth movements and underground waters of the region.

668 **Leach** (W. W.). Crows Nest coal fields.  
Describes the occurrence of coal seams of Cretaceous age in this area.

669 **Ledoux** (Albert R.). The production of copper in the Boundary district, B. C.  
Describes the character and occurrence of the ores.

310 pp., 1902.  
Contains notes on the geologic position and petrology of ore deposits in Colorado.

671 **Lee** (Willis T.). The areal geology of the Castle Rock region, Colorado.  
Am. Geol., vol. 29, pp. 96-110, pl. iv, 1902.  
Describes the occurrence and character of the sedimentary and igneous rocks and the geologic structure of the region.
672 Lee (Willis T.) The Morrison shales of southern Colorado and northern New Mexico.
   Jour. Geol., vol. 10, pp. 36-58, figs. 1-7, 1902.
   Describes the general structure of the region, gives detailed sections and discusses the age and equivalency of the shales.

673 —— Canyons of southeastern Colorado.
   Jour. Geol., vol. 1, pp. 357-370, figs. 1-12, 1902.
   Includes sections of the strata cut by some of the canyons described.

674 —— Note on the Carboniferous of the Sangre de Cristo Range, Colorado.
   Jour. Geol., vol. 10, pp. 393-396, 1902.
   Gives a detailed section in the Sangre de Cristo Range and a list of the fossils collected.

675 Leighton (Marshall Ora). Sewage pollution in the Metropolitan area near New York City and its effect on inland water resources.
   U.S. Geol. Surv., Water-Supply and Irrigation Paper no. 72, 75 pp., 4 figs., 8 pls., 1902.

   Abstract of paper read before the Geological Society of Washington. Discusses the stratigraphic geology and the origin of the ores.

677 —— Pre-Cambrian summaries for 1901.
   Jour. Geol., vol. 10, pp. 891-913, 1902.

678 Letson (Elizabeth J.). Post-Pliocene fossils of the Niagara River gravels.
   See no. 493 of U. S. Geol. Surv., Bull. no. 203.

   Gives record of a boring at Clarinda, Iowa.

680 —— Geology of Wapello County [Iowa].
   Iowa Geol. Surv., vol. 12, Ann. Rept. for 1901, pp. 441-499, pl. xi, figs 64-78, geol. map, 1902.
   Describes physiographic features, geologic structure, and occurrence and utilization of economic products.

   La. State Experiment Stations; Geol. & Agric., pt. 1, pp. 1-52, 6 figs., 2 pls. [1892?].
   Describes topography, drainage and geology of the area and discusses its economic resources.
682 Lerch (Otto). A preliminary report upon the hills of Louisiana, south of the Vicksburg, Shreveport and Pacific Railroad, to Alexandria, Louisiana.
   La. State Experiment Stations; Geol. & Agric., pt. 2, pp. 53-158, 26 figs., 2 pls. (sections) [1893?].
   Describes topography, drainage and geology of the area and discusses its economic resources.

683 Leverett (Frank). Soils of Illinois.
   Ill. Bd. of World’s Fair Commissioners, Rept., pp. 77-92, 1 pl., 1895.

   Describes the physiography, glacial deposits and lake history, and the occurrence of marl, clay, and water powers.

685 —— Glacial formations and drainage features of the Erie and Ohio basins.
   U. S. Geol. Surv., Mon. vol. 41, 802 pp., 26 pls., 8 figs., 1902.
   Describes physical features, present and former drainage, character and occurrence of drift deposits and the glacial history of the region.

686 Lévy (Michel). Sur la composition des cendres projetées, le 3 mai 1902, par la Montagne Pelée.
   Describes characters of volcanic material ejected from Mont Pelée.

687 Lindgren (Waldemar). The gold belt of the Blue Mountains of Oregon.
   Describes topography and drainage, general geologic features, the character and occurrence of Archaean, Paleozoic, Triassic, Neocene and Quaternary strata and intrusive rocks, the character, occurrence and general geologic relations of the ore deposits and minerals, the quartz and placer mining, and production of precious metals in this area.

688 —— The character and genesis of certain contact deposits.
   Describes the character, origin and geographic distribution of some ore deposits, discusses contact metamorphism and its cause, and gives a genetic classification.

689 —— The gold production of North America, its geological derivation and probable future.

690 —— Tests for gold and silver in shales from western Kansas.
   Describes the author’s observations in this region.
691 Lindgren (Waldemar). Tests for gold and silver in shales from western Kansas.
   Gives a brief description of the topography and geology and describes tests made to determine presence of gold and silver in certain shales in western Kansas.

692 —— A deposit of titanite iron ore from Wyoming.


694 —— Development and application of water near San Bernardino, Colton and Riverside, California. Part I.
   U. S. Geol. Surv., Water-Supply and Irrigation Paper no. 59, pp. 1–95, pls. i–xi, 14 figs., 1902.

695 —— Development and application of water near San Bernardino, Colton and Riverside, California. Part II.

696 Lobel (Loicq de). Relation du voyage au Klondyke.

697 Loomis (F. B.). On Jurassic stratigraphy on the west side of the Black Hills—second paper on American Jurassic stratigraphy.
   Describes the general characters of the Jurassic strata and gives detailed sections.

698 Louderbach (George D.). General geological features of Nevada and their relationships to the prevailing economic deposits.

   Describes method used in obtaining control of the well, the character of the oil, and gives section passed through in boring.

700 Lucas (Frederic A.). Animals of the past.
   New York, McClure, Phillips & Co. 20 + 258 pp., 41 figs., 1901.

701 —— The restoration of extinct animals.
   Smithsonian Inst., Ann. Rept. for 1900, pp. 479–492, pls. i–viii, figs. 1–2, 1901.
702 Lucas (Frederic A.)  The dinosaurs or terrible lizards.
Reprinted from "Animals of the past."

703 — The greatest flying creature, the pterodactyl Ornithostoma.

704 — Paleontological notes—the generic name Omosaurus—a new
generic name for Stegosaurus marshi.
Proposes the name Dacentrurus for Omosaurus Owen, preoccupied,
and Hoplitosaurus for the author's previously described Stegosaurus
marshi.

705 — Paleontological notes—North American elephantids.
Gives notes on the occurrence, characters and synonymy of these
fossils.

706 — Constructing an extinct monster from fossil remains [Tri-
ceratops].

707 — Animals before man in North America.

708 Ludlow (Edwin).  The coal fields of Las Esperanzas, Coahuila,
Mexico.
Describes the geology of the area, and character and production of
the coal (Cretaceous).

709 Luquer (Lea McL.).  On the determination of relative refractive
indices of minerals in rock sections by the Becke method.
School of Mines Quart., vol. 33, pp. 127–133, 1902.

710 — Moses (Alfred J.) and.  Notes on recent mineralogical liter-
ature.
See Moses (A. J.) and Luquer (L. McL.), 788.

711 Luther (D. D.).  Stratigraphic value of the Portage sandstones.
N. Y. State Mus., Bull. no. 52, pp. 616–631, 1 fig., 1902.
Describes the characters of these beds at various localities and discusses
the relations in different sections. Includes a note by J. M. Clarke on
the occurrence and relations of the faunas.

712 — Clarke (J. M.), Ruedemann (R.) and.  Contact lines of
upper Siluric formations on the Brockport and Medina
quadangles [New York].
See Clarke (J. M.), Ruedemann (R.), and Luther (D. D.), 192.
713 **Lyman** (Benjamin Smith). Accounting for the depth of the Wyoming buried valley [Pennsylvania].  
Discusses explanations offered to account for the depth of the buried valley and advances a new hypothesis.

714 **Lyon** (D. A.), **Roberts** (Milnor), **Landes** (Henry), and **Thyng** (William S.). The metalliferous resources of Washington, except iron.  
See Landes (H.), Thyng (W. S.), Lyon (D. A.), and Roberts (M.), 645.

**M.**

715 **Mabery** (Charles F.). Composition of Texas petroleum.  

716 — The composition of petroleum. On the hydro-carbons in Pennsylvania petroleum with boiling points above 216°.  

717 **McBeth** (William A.). Wabash River terraces in Tippecanoe County, Indiana.  
Describes topographic features and character of glacial deposits in this area and discusses changes in drainage.

718 — History of the Wea Creek in Tippecanoe County, Indiana.  
Discusses drainage changes produced in this region by glacial action.

719 **Macbride** (Thomas H.). Geology of Cherokee and Buena Vista counties [Iowa], with notes on the limits of the Wisconsin drift as seen in northwestern Iowa.  
Describes the physiographic and drainage features, geologic structure and economic products of the counties.

720 **McCallie** (S. W.). Mineral resources of Georgia.  
Gives an account of the various economic products of the State.

721 — A preliminary report on the roads and road-building materials of Georgia.  
Ga. Geol. Surv., Bull. no. 8, 264 pp., 27 pls., 28 text figs., 1901;  

722 — The Ducktown copper mining district.  
Contains notes on the geology of this area.
723 Maclaren (J. M.). Ores which are deposited by underground waters.

724 McConnell (R. G.). Note on the so-called basal granite of the Yukon Valley [Alaska].
    Reviews previous discussion of the age and relations of the granite, and presents the author's observations and conclusions.

725 —— The Yukon district.
    Describes topography, geology, and occurrences of gold in this area.

726 McGee (W J). The New Madrid earthquake.
    Refers to the records of this earthquake described by G. C. Broadhead. See no. 128.

727 —— Geest.
    Suggests the restoration of the term "geest" proposed by de Luc for the superficial mantle of rock débris.

728 —— The Antillean volcanoes.
    Reviews descriptions of the recent volcanic phenomena in this region and discusses the geographic distribution of volcanoes.

729 McInnes (William). Region southeast of Lac Seul [Canada].
    Describes author's observations in this region.

730 McLouth (C. D.). Some general remarks on the topography, soils, water resources, flora, etc., of Muskegon County [Michigan].
    Contains brief notes on the subjects mentioned and a statement regarding the recent geological history of the region.

731 Malcolmson (James W.). The Sierra Mojada, Coahuila, Mexico, and its ore-deposits.
    Describes geology of the area and character and occurrence of the ore deposits.

732 Manzano (Jesus P.). The mineral zone of Santa Maria del Rio, San Luis Potosí, Mexico.
    Contains observations on the geology and mineral deposits of the region.
733 Marbut (C. F.). The evolution of the northern part of the lowlands of southeastern Missouri.
   Mo. Univ., Studies, vol. 1, no. 3, viii, 63 pp., 5 pls., 2 maps; 1902.
   Describes geology and topography of this area and discusses the mode of formation of the physiographic features.

734 Marsters (V. F.). Topography and geography of Bean Blossom Valley, Monroe County, Indiana.
   Describes topographic features and glacial history of this area.

735 Martin (George Curtis). The geology of Garrett County [Maryland].
   Md. Geol. Surv., Garrett Co., pp. 55-182, pls. v-xiv, fig. 1, 1902.
   Reviews previous geologic work, gives a bibliography, describes the character, distribution, taxonomy and history of the geologic formations and occurrence of the anticlines and synclines of the county.

736—— The mineral resources of Garrett County [Maryland].
   Describes the character, occurrence and stratigraphic position of the coal seams, the distribution of fire-clays, clays, limestones, building stones, road materials and other economic products.

737—— Clark (William Bullock) and. Correlation of the Coal Measures of Maryland.
   See Clark (W. B.) and Martin (G. C.), 178.

738 Mathews (Edward Bennett). The mineral resources of Cecil County [Maryland].

739—— Recent work in the Piedmont area of northern Maryland.

740 Matthes (F. E.). Glacial erosion in the northern Rockies.

741 Matthew (George F.). Acrothryra and Hyolithes—a comparison.
   Discusses characters, systematic position and relation of these genera and describes several special of Hyolithes.

742—— Hyolithes gracilis and related forms from the Lower Cambrian of the St. John group.

743—— New species of Cambrian fossils from Cape Breton.
   Bull. 221—03——6
744 Matthew (George F.). Acrothja-a, a new genus of Etcheminian brachiopods.  

745 — Monocraterion and Oldhamia.  

746 — Additional notes on the Cambrian of Cape Breton, with descriptions of new species.  
Discusses the Cambrian of this area and describes its fauna.

747 — Ostracoda of the basal Cambrian rocks in Cape Breton.  
Describes the general characters of ostracods and of a number of new genera and species.

748 — Cambrian rocks and fossils of Cape Breton.  
Describes observations in this area and gives a table of geologic formations belonging to the lower portion of the Paleozoic rocks in the maritime provinces of Canada.

749 — “Stratigraphy versus paleontology in Nova Scotia.”  
Discusses the comparative age of formations in Nova Scotia and New Brunswick. See White (David), 1118.

750 — See Bailey (L. W.), 43.

751 Matthew (W. D.). Fossil mammals of the Tertiary of northeastern Colorado.  
Describes character and occurrence of Tertiary beds in Colorado and the vertebrate fauna obtained from them.

752 — A skull of Dinocyon from the Miocene of Texas.  

753 — On the skull of Bunælurus, a musteline from the White River Oligocene.  

754 — New Canidæ from the Miocene of Colorado.  

755 — A horned rodent from the Colorado Miocene. With a revision of the Mylagauli, beavers and hares of the American Tertiary.  


758 Mauck (A. V.), Cumings (E. R.) and. A quantitative study of variation in the fossil Brachiopod Platystrophia lynx. See Cumings (E. R.) and Mauck (A. V.), 231.


768 Merrill (Frederick J. H.). New York State Museum; report of the director and State geologist, 1900.
Summary of work done.

769 — Description of the State geologic map of 1901.
N. Y. State Mus., Bull. 56, pp. 3–37, 2 pls. (maps), and a table of formations, 1902.
Sketches the history of the New York Geological Survey, outlines briefly the geologic provinces and formations of New York, and discusses data used in compiling the geologic map.

Describes geographic and physiographic features, general geologic relations and history, character and occurrence of pre-Cambrian, Cambrian, Silurian, Juratrias, and Cretaceous strata, Quaternary deposits and water-supply.

771 Merrill (George P.). A newly found meteorite from Admire, Lyon County, Kansas.

772 — What constitutes a clay.
Discusses the composition of clay and reviews a paper by Rösseler entitled “Beitriige zur kenntniss einiger Kaolinlagerstätten.”

773 — Rutile mining in Virginia.
Abstract of paper read before the Geological Society of Washington.

774 Mickle (G. R.). The iron-bearing rocks of the Nastapokan Islands.
Describes the occurrence and composition of the iron ores.

775 Miers (Henry A.). A visit to the Yukon gold fields. Letter from Henry A. Miers [to the Hon. Clifford Sifton, Canadian Minister of the Interior]. 32 pp., 1901. (Not seen.)

776 Miller (Samuel A.). Strophomena and the type of the genus.

777 Miller (Willet G.). The eastern Ontario gold belt.
Describes the distribution and geologic occurrence of the ore bodies.
778 Miller (Willet G.). Lake Temiscaming to the Height of Land [Canada].
Contains notes on the geology of this region.

779 — Eastern Ontario; a region of varied mining industries.
Describes the occurrence of mineral deposits.

780 Milne (J.). The recent volcanic eruptions in the West Indies.
Discusses recent reports regarding these eruptions.

Contains notes on the geology of this area.

782 Monroe (Charles E.). Notes on a collection of Hamilton fossils from the town of Bethany, Genesee County, N. Y.
Contains notes on fossils collected and gives faunal lists.

783 Moore (Charles J.). The formation of the Cripple Creek mining district, Teller County, Colorado.

784 — The formation of the Leadville mining district, Lake County, Colorado.

785 Moore (Frederick). Gold in North Carolina.

786 Moore (Joseph) and Hole (Allen D.). Concerning well-defined ripple marks in the Hudson River limestone, Richmond, Indiana.

787 Mosely (E. L.). Submerged valleys in Sandusky Bay [Ohio].
Discusses the character and occurrence of these valleys and the indications that the tilting of the Great Lakes region is still progressing.

788 Moses (Alfred J.) and Luquer (Lea McI.). Notes on recent mineralogical literature.
School of Mines Quart., vol. 33, pp. 290–302, 1902.

789 Muir (John). Notes on the Pacific coast glaciers.

790 Murphy (Edward Charles). Accuracy of stream measurements.
U. S. Geol. Surv., Water-Supply and Irrigation Paper no. 64, 99 pp., 30 figs., 4 pls., 1902.
N.

791 Nason (Frank L.). The disseminated lead ores of southeast Missouri.
   Eng. & Mg. Jour., vol. 73, pp. 478-480, 2 figs., 1902.
   Describes the occurrence and origin of these ores.

792 — The geological relations and the age of the St. Joseph and Potosi limestones of Missouri.
   Eng. & Mg. Jour., vol. 73, p. 861, 1902.
   Discusses the relations of these beds.

   Describes the geology of northeastern Greenland.

794 Nattress (Thomas). The Corniferous exposure in Anderdon [Ontario].
   Gives notes on the distribution of the Corniferous, describes the geology at this locality and gives a faunal list.


797 Newsom (John F.). Drainage of southern Indiana.
   Jour. Geol., vol. 10, pp. 166-181, pl. vi, 1902.
   Describes the drainage features of this region that are dependent upon the geologic structure.

798 — A natural gas explosion near Waldron, Indiana.
   Jour. Geol., vol. 10, pp. 803-814, figs. 1-5, 1902.
   Describes the fissures and fractures caused by the explosion.

   Geol. Mag., dec. iv, vol. 9, pp. 303-305, 1902.

800 Nicholls (H. A. Alford). Notes on the recent eruptions of Mt. Pelée [West Indies].
   Contains daily notes of the recent eruptions.
801 **Nichols** (Henry W.). [In discussion of paper by Eric Hedburg on "The Missouri and Arkansas zinc-mines."]

802 **Nichols** (J. Clayton). Notes on the Pigholugan and Pigtao gold region, Island of Mindanao, Philippine Islands.
Describes the occurrence of gold veins and placers.

803 **Nickles** (John M.). Geological section—St. Louis to Shawneetown [Illinois],
Describes geology along the line of the section and gives records of borings and sections of outcrops.

804 — Geological section in southern Illinois through Waterloo, Sparta, Murphysboro and Olmstead.
Describes the geology along the line of the section, gives records of borings and sections of outcrops, and discusses the occurrence and exploitation of natural gas at Sparta, Illinois.

805 — The geology of Cincinnati.
Describes topography and geology of Cincinnati and the surrounding region, and gives faunal lists.

806 — Description of a new bryozoan "Homotrypa bassleri," n. sp., from the Warren beds of the Lorraine group.

807 **Nicolau** (Th.). Untersuchungen an den eisenführenden gesteinen der insel Disko.
Describes the occurrence, characters and composition of the iron-bearing rocks of the Island Disco.

808 **Nicolson** (John T.), **Adams** (Frank D.) and. An experimental investigation into the flow of marble.
See Adams (F. D.) and Nicolson (J. T.), 6.

809 **Nutter** (Edward Hoit) and **Barber** (William B.). On some glaucophane and associated schists in the Coast Ranges of California.
Describes the occurrence and contact relations of the schists and discusses their origin.
810 **Ochsenius** (Carl). Natürlicher koks in den Santa Clara-Kohlenfeldern, Sonora, Mexiko.
Zeitsch. für prak. Geol., Jahrg. 1900, p. 21, 1900.
Describes an occurrence of natural coke.

811 — Natronsalpeter in California.
Gives a general account of deposits of nitrate of soda.

Describes the striae, character of ice movement and glacial deposits of the region, and discusses the erosion history of the Adirondacks. Includes table of striae.

813 — An analcite-bearing camptonite from New Mexico.
Describes the general geology of the region and the occurrence and character of the camptonite and compares with rocks of similar composition from other regions.

814 **O’Harra** (Cleophas C.). Black Hills ore deposits.
Int. Mg. Cong., 4th session, pp. 97-100, 1901.
Describes the occurrence of the gold ores.

815 — The mineral wealth of the Black Hills [South Dakota].
Gives a general geological sketch of the geology of the Black Hills and describes the occurrence of the minerals.

816 **Ohly** (J.). The origin of petroleum. Different theories which have been advanced and the circumstances for and against them.

817 **Ordoñez** (Ezequiel). The onyx-marble deposits of Jimulco, Coahuila [Mexico].

818 — Les cendres d’un volcan près du Santa Maria (Guatemala).
Describes materials ejected from a volcano near Santa Maria.

819 — The mining district of Pachuca, Mexico.
Includes an account of the topography and geology of the area and the ore formations.
820 Ordoñez (Ezequiel) and Böse (E.). Apuntes para la geología del valle de Chilpancingo [Mexico].
Contains observations on the geology of this area.

821 Ortmann (A. E.). The geographical distribution of freshwater decapods and its bearing upon ancient geography.
Includes a discussion of the geography of the earth's surface during Cretaceous, Tertiary and Quaternary times.

822 Osann (A.). Notes on certain Archaean rocks of the Ottawa Valley [Canada].
Discusses petrology of this region and occurrence and characters of economic minerals.

823 Osborn (Henry Fairfield). Homoplasy as a law of latent or potential homology.
Discusses the independent evolution of identical structures in teeth of different families of mammals as a form of homology which has heretofore been defined as homoplasy.

824 — The law of adaptive radiation.
Quotes from the author's previous papers bearing upon this law and shows how it is exhibited in the geographic distribution of orders and families and in related contemporaneous forms.

825 — Dolichocephaly and brachycephaly in the lower mammals.
Discusses these factors in cranial evolution and their correlation with similar ones in the trunk and limbs.

826 — The four phyla of Oligocene Titanotheres. Titanotheres contributions, no. 4.
Discusses the general characters of the material and their stratigraphic position.

827 — American Eocene Primates and the supposed rodent family Mixodectidae.
Points out the synonymous genera and describes the species including several new ones.

828 — Distinctive characters of the Mid-Cretaceous fauna.
Discusses relative age and correlation of Cretaceous formations and the relations of their faunas and gives in tabular form the geologic distribution of Cretaceous vertebrates.
829 Osborn (Henry Fairfield). Recent zoopaleontology—new vertebrates of the Mid-Cretaceous.
Gives an abstract of a report by Henry F. Osborn and Lawrence M. Lambe on "Vertebrata from the Mid-Cretaceous rocks of the Northwest Territory of Canada."

830 — Recent zoopaleontology: a remarkable new mammal from Japan, its relationship to the Californian genus Desmostylus, Marsh—progress of the exploration for fossil horses—the perissodactyles typically polyphyletic.

831 — Recent zoopaleontology: Triassic Ichthyosaurs from California and Nevada—abandonment of the Oligocene and Miocene lake basin theory—studies of Eocene mammalia in the Marsh collection, Peabody Museum.

832 Owen (Luella Agnes). The bluffs of the Missouri River.
Describes loess deposits and discusses evidence as to their origin.


Describes occurrence, crystallography and chemical analysis.

835 — Lawson (Andrew C.) and. The Berkeley Hills [California]. A detail of Coast Range geology.
See Lawson (A. C.) and Palache (C.), 666.

836 — Wolff (John E.) and. Apatite from Minot, Maine.
See Wolff (J. E.) and Palache (C.), 1176.

837 Parks (W. A.). The Huronian of the Moose River Basin [Ontario].
Toronto Univ., Studies, Geol. Series, no. 1, 35 pp., 1 map, 1900.
Discusses the occurrence, character and classification of the Huronian rocks of the region.

838 — The country east of Nipigon Lake and River [Canada].
Describes the author's observations in this area.

839 Parsons (Arthur L.). Recent developments in the gypsum industry in New York State.
840 Patton (Horace Bushnell), Diller (Joseph Silas) and. The geology and petrography of Crater Lake National Park.  
See Diller (J. S.) and Patton (H. B.), 285.

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   Describes the finding of human remains near Lansing, Kansas, and discusses their antiquity.

1052 — Primitive man and stone implements in the North American loess.
   Describes the occurrence of human remains in the loess near Lansing, Kans.
1053 **Upham** (Warren). Primitive man in the Ice Age.
   Describes the occurrence of human remains in the loess near Lansing, Kansas, and discusses geological history during the Ice Age.

1054 — Primitive man in the Ice Age.
   Discusses evidences as to the origin and antiquity of man in Europe and America and his place in the geological scale.

1055 — See Winchell (N. H.), 1168.

   Describes mineralogy and petrology of Greenland.

   Discusses character, origin and concentration of lead and zinc ores of the upper Mississippi Valley and of the Ozark region of the lower Mississippi Valley.

1058 — Geological excursion in Colorado.
   Contains brief notes on the geology of the points visited.

1059 — The training and work of a geologist.

1060 — Some principles controlling the deposition of ores. [Continuation of paper in vol. 30, 1901.]
   Reviews recent papers that have been published since the author’s discussions of the subject, with special reference to the paper by Professor Kemp on “The rôle of the igneous rocks in the formation of veins.”

1061 — and **Bain** (H. Foster). Lead and zinc deposits of the Mississippi Valley, U. S. A.
   Describes the geographic distribution and stratigraphy of the lead and zinc producing areas of the Mississippi Valley and discusses the occurrence and genesis of the ore deposits.
1062 Van Ingen (Gilbert). Potsdam sanastone of the Lake Champlain Basin.
N. Y. State Mus., Bull. no. 52, pp. 529-545, geol. map, 1902.
Describes certain sections and discusses briefly the results of the investigations.

1063 Vaughan (T. Wayland). The locality of the type of Prionastrea vaughani, Gregory.

1064 — Bitumen in Cuba.
Eng. & Mg. Jour., vol. 73, pp. 344-347, 2 figs., 1902.
Describes the occurrence and character of the material.

1065 — Notes on Cuban fossil mammals.
Questions the occurrence of certain fossil remains in Cuba and gives a note on the priority of Megalocnus Leidy over Myomorphus Pomel.

1066 — Earliest Tertiary coral reefs in the Antilles and United States.

1067 — Evidence of recent elevation of the Gulf coast along the westward extension of Florida.
Science, new ser., vol. 16, p. 5-14, 1902.

1068 — Hayes (C. Willard), and Spencer (Arthur Coe). Report on a geological reconnaissance of Cuba.
See Hayes (C. W.), Vaughan (T. W.), and Spencer (A. C.), 473.

1069 — Hill (Robert T.) and Austin Folio—Texas.
See Hill (R. T.) and Vaughan (T. W.), 505.

1070 — and Spencer (Arthur Coe). The geography of Cuba.
Describes the mountains, plains, terraces, drainage and harbors of Cuba.

La. Geol. Surv., pt. 6, pp. 47-100, pls. xi-xxiii, figs. 8-9, 1902.
Describes the local geology of the various salt works and discusses the geological structure and history of the region.

1072 — The geography and geology of the Sabine River, Louisiana.
La. Geol. Surv., pt. 6, pp. 107-141, pls. xxiv-xxxvii, figs. 10-13, 1902.
Describes the physiography and the character and occurrence of the Tertiary strata of the region.

1073 — Notes on the geology along the Ouachita [Louisiana].
La. Geol. Surv., pt. 6, pp. 159-170, pls. xxxviii-xxxix, 1902.
Describes the physiography and Tertiary beds of the region.
   Discusses the cause of the destruction of St. Pierre.

1075 Very (Frank W.). A cosmic cycle.

1076 Villarello (Juan de D.) and Böse (Emilio). Criaderos de fierro de la hacienda de Vaquerías, en el estado de Hidalgo.
   Mexico Inst. Geol., Bull. no. 16, pp. 15-44, pls. ii-v, figs. 1-5, 1902.
   Describes the topography, geology and petrology, and discusses the occurrence of iron ores in this area.

   Discusses genesis of ore deposits.

1078 Wagenen (T. H. van). Nitrate deposits, Humboldt County, Nevada.
   Brief description of occurrence.

1079 Walcott (Charles Doolittle). Outlook of the geologist in America.
   Reviews the geologic investigations that have been undertaken in North America by organizations and individuals, broadly outlines the problems that are being studied and discusses the future prospects of geologists.

1080 —— Cambrian brachiopoda: Acrotreta; Linnarssonella; Obolus; with descriptions of new species.


1082 Wallace (E. C.), Richardson (Clifford) and. Petroleum from the Beaumont, Texas, field.
   Sess Richardson (Clifford) and Wallace (E. C.), 897.

1083 Ward (Henry A.). The St. Genevieve meteorite.
   Describes occurrence and characters of this meteorite from Ste. Genevieve County, Mo.

Bull. 221—03——8
1084 Ward (Henry A.). Description of four meteorites.
Describes meteorites from Andover, Me.; Cuernavaca, Mexico; Arispe, Mexico; and from near Williamsport, Pa.

1085 — On Bacubirito, or the great meteorite of Sinaloa, Mexico.
Describes occurrence, size and characters of this meteoric mass.

U. S. Geol. Surv., Bull., no. 177, 858 pp., 1901.

1087 Washington (Henry S.). Igneous rocks from eastern Siberia.
Compares the characters of some of these rocks with similar rocks occurring in this country.

1088 — Cross (Whitman), Iddings (Joseph P.), Pirsson (Louis V.) and. A quantitative chemico-mineralogical classification and nomenclature of igneous rocks.
See Cross (W.), Iddings (J. P.), Pirsson (L. V.), and Washington (H. S.), 228.

1089 Watson (Lawrence W.). Prince Edward Island.
Describes the author's field work in this area.


1091 — Copper-bearing rocks of Virginia copper district, Virginia and North Carolina.
Describes the megascopic and microscopic characters of the rocks, the evidences of eruptive character and the ore deposits of the district.

1092 — On the occurrence of uranophane in Georgia.
Describes its occurrence and chemical character.

1093 — A preliminary report on a part of the granites and gneisses of Georgia.
Discusses geological age, mode of occurrence, origin and distribution of granites in Georgia and eastern United States, their chemical and lithologic characteristics, and gives chemical analyses. The geography and physiography of the Georgia portion of the Piedmont Plateau are described.
1094 **Weatherbe (D'Arcy).** Recent developments with the calyx drill in the Nictaux iron field [Nova Scotia].
Contains notes on the geology of the area.

1095 **Weed (Walter Harvey).** Geology and ore deposits of the Elk-horn mining district, Jefferson County, Montana.
Describes history of mining operations in this district, the character and occurrence of igneous and metamorphic rocks and strata of Algolian, Cambrian, Devonian, Carboniferous and Mesozoic age, and discusses the general geologic structure, relations of the rock masses, the character, occurrence, mode of formation and commercial development of the ore bodies.

1096 Influence of country rock on mineral veins.
Discusses origin of certain ore deposits.

1097 [In discussion of "The origin of ore deposits."]

1098 Notes on certain mines in the States of Chihuahua, Sinaloa and Sonora, Mexico.
Contains notes on the geology of these States, and the character and occurrence of the ores.

1099 Notes on a section across the Sierra Madre Occidental of Chihuahua and Sinaloa, Mexico.
Contains observations on the geology and petrology of the region.

1100 Recent development of southern copper deposits.
Eng. & Mg. Jour., vol. 74, pp. 80-81, 1902.

1101 Contact metamorphic and other ore deposits near igneous contacts.

1102 The Cananea copper deposits, Mexico.

1103 **Weeks (Fred Boughton).** Gold-bearing quartzites of eastern Nevada.

1104 Bibliography of North American geology, paleontology, petrology, and mineralogy for the years 1892-1900, inclusive.
U. S. Geol. Surv., Bull. no. 188, 717 pp., 1902.
1105 **Weeks** (Fred Boughton). Index to North American geology, paleontology, petrology, and mineralogy for the years 1892–1903, inclusive.
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1106 — North American geologic formation names: bibliography, synonymy, and distribution.
U. S. Geol. Surv., Bull. no. 191, 448 pp., 1902.

1107 — Bibliography and index of North American geology, paleontology, petrology and mineralogy for the year 1901.
U. S. Geol. Surv., Bull. no. 203, 144 pp., 1902.

1108 **Weller** (Stuart). The composition, origin and relationship of the Corniferous fauna in the Appalachian province in North America.
Presents a comparative list of Corniferous and Oriskany faunas, describes the distribution and relations of these faunas and discusses the origin of the Corniferous fauna.

1109 — *Crotalocrinus cora* (Hall).
Jour. Geol., vol. 10, pp. 532–534, pl. iii, 1902.
Describes material from the Niagara group and gives the synonymy of Crotalocrinus cora.

1110 — **Kümmel** (Henry B.) and. The rocks of the Green Pond Mountain region.
See Kümmel (H. B.) and Weller (S.), 609.

1111 — See Stevenson (J. J.), 1001.

1112 **Wells** (H. L.) and **Penfield** (S. L.). On a new occurrence of sperrylite.
Describes occurrence in platiniferous copper ore from Wyoming.

1113 **Wells** (J. Walter). Arsenic in Ontario.
Describes distribution, manufacture, production and uses of arsenic.

1114 **Wheeler** (George D.). Zinc in Crittenden County, Kentucky.
Eng. & Mg.-Jour., vol. 74, pp. 413–414, 3 figs., 1902.

1115 **Whitbeck** (R. H.). The pre-Glacial course of the middle portion of the Genesee River [New York].
Contains notes on the physiography and discusses the evidences regarding the pre-Glacial course of this river.

1116 **White** (David). Description of a fossil Alga from the Chemung of New York with remarks on the genus Haliserites Sternberg.
N. Y. State Mus., Bull. no. 52, pp. 593–605, pls. iii–iv, 1902.
Describes *Thamnocladus clarkei*, n. gen. et sp.
1117 **White** (David). The bituminous coal field of Maryland.
   Describes area, structure and development of the field, and character,
   occurrence and production of the coal beds.

1118 — Stratigraphy versus paleontology in Nova Scotia.
   Discusses the age and evidences therefor of certain beds in the region
   of the Bay of Fundy.

1119 — **Campbell** (Marius R.). The bituminous coal field of
   Pennsylvania.
   Describes extent, geologic structure and development of the field,
   character, occurrence and productiveness of the coal beds, gives chemical
   analyses of the coals and discusses their economic value.

1120 — **Campbell** (Marius R.), and **Haseltine** (Robert M.). The
   northern Appalachian coal field.
   20–25, 1902.

1121 — See Lane (A. C.), 646.

1122 **White** (Israel C.). The geology of West Virginia.
   Presents a summary of the geologic history of the State.

1123 — Geological horizon of the Kanawha black flint.
   Reviews previous investigations of the stratigraphic problems involved
   in this discussion; presents the author's recent observations, and discusses
   the relative value of stratigraphic and paleobotanic data.

1124 — List of fossils from the lower half of the Conemaugh forma-
   tion near Morgantown, West Virginia, collected in 1870 by
   Dr. John J. Stevenson and identified by F. B. Meek.

1125 — The geology of the Pittsburgh district.
   Gives a general sketch of the stratigraphy of the Coal Measures and
   of geological history during Quaternary times.

1126 **Whiteaves** (J. F.). On the genus Trimerella, with descriptions
   of two supposed new species of that genus from the Silurian
   rocks of Keewatin.

1127 — On the genus Panenka, Barrande, with a description of
   a second species of that genus from the Devonian rocks of
   Ontario.
1128 Whiteaves (J. F.) Paleontology and zoology.
   Reports upon the paleontological work accomplished by the author's department.

1129 Whitfield (Robert Parr). Description of a new form of Myalina from the Coal Measures of Texas.

1130 —— Observations on and emended description of Heteroceras simplicostatum Whitfield.

1131 —— Description of a new Teredo-like shell from the Laramie group.

1132 —— Notice of a new genus of marine algae, fossil in the Niagara shale.
   Describes Paleodictyota n. gen.

1133 Whitlock (Herbert P.). Guide to the mineralogic collections of the New York State Museum.
   N. Y. State Mus., Bull. 58, pp. 3-147, 39 pls., 249 figs., 11 models in pocket, 1902.
   Gives an outline of crystallography and describes characters, composition and occurrence of minerals.

   Ill. Bd. of World's Fair Commissioners, Rept., pp. 93-114, 1895.


1136 Wilcox (Walter D.). Recent exploration in the Canadian Rockies.
   Contains notes on the physiography of the region.

1137 Wilder (Frank A.). The lignite deposits of North Dakota.

1138 —— The lignite coal fields of North Dakota.
   Describes character and occurrence of the deposits of lignite.
1139 **Wilder** (Frank A.). Geology of Webster County [Iowa].


Describes physiographic features and geology of the county, and discusses the origin, geologic and geographic occurrence and utilization of gypsum deposits and other economic products.

1140 **Williams** (Edward H.). Kansas glaciation and its effects on the river system of northern Pennsylvania.


Discusses drainage modifications produced by the ice of the Glacial period.

1141 **Willard** (Daniel E.). The story of the prairies, or, the landscape geology of North Dakota. Ed. 3, 256 pp., 83 figs., 1902.

Describes the physiography and geology of North Dakota.

1142 **Williams** (Henry Shaler). Fossil faunas and their use in correlating geological formations.


Discusses methods of employing fossil faunas in correlating definite formations and their limitations.

1143 **Willis** (Bailey). Paleozoic Appalachia or the history of Maryland during Paleozoic time.

Md. Geol. Surv., vol. 4, pp. 23-93, pls. i-xii, fig. 1, 1902.

Describes action of dynamic forces upon land surfaces and history of orographic movements and geographic changes during Paleozoic time affecting the area in which Maryland is situated.

1144 — Stratigraphy and structure, Lewis and Livingston ranges, Montana.


Describes the physiography, the occurrence and character of the Algonkian, Carboniferous, Cretaceous and Pleistocene formations and the geologic structure of the region.

1145 — Structure of the Front Range, northern Rocky Mountains, Montana.


1146 — Physiography of the northern Rocky Mountains.


1147 — Conditions of overthrust in the northern Rockies.


1148 — Mountain growths of the Great Plains.

1149 **Willis** (Bailey) and others. New York City Folio—New York—New Jersey.
See Merrill (F. J. H.) and others, 770.

1150 **Williston** (S. W.). On the hind limb of Protostega.

1151 — An arrow-head found with bones of Bison occidentalis Lucas in western Kansas.
Gives a section of the locality where the bones were found.

1152 — On the skull of Nyctodactylus, an Upper Cretaceous Pterodactyl.
Describes new material from western Kansas.

1153 — Winged reptiles.

1154 — On the skeleton of Nyctodactylus with restoration.

1155 — Restoration of Dolichorhyncops osborni, a new Cretaceous plesiosaur.

1156 — Notes on some new or little-known extinct reptiles.

1157 — On certain homoplastic characters in aquatic air-breathing vertebrates.
Discussion mainly of fossil forms.

1158 — A fossil man from Kansas.
Describes occurrence of human remains in loess near Lansing, Kansas.

1159 — The Laramie Cretaceous of Wyoming.
Discusses age of the Laramie deposits of Converse County, Wyoming, and gives notes on the fossils found in them.

1160 **Willmott** (A. B.). The nomenclature of the Lake Superior formations.
Discusses the use of names for the subdivisions of the Archean and Algonkian of the region.

1161 — **Coleman** (A. P.) and. The Michipicoten iron ranges [Ontario].
See Coleman (A. P.) and Willmott (A. B.), 207.
1162 Willmott (A. B.), Coleman (A. P.) and. The Michipicoten
iron region [Ontario].
See Coleman (A. P.) and Willmott (A. B.), 208.

1163 Wilson (Alfred W. G.). Some recent folds in the Lorraine
shales [Ontario].
Describes the occurrence and origin of the local folds.

1164 —— The country west of Nipigon Lake and River [Canada].
Describes the author's observations upon the geology, topography and
economic resources of this region.

1165 Wilson (W. J.). Western part of the Abitibi region [Canada].
Describes the author's observations in this region.

1166 Winchell (Horace V.). The ore deposits of Monte Cristo,
Washington.
Am. Geol., vol. 30, pp. 113-118, 1902.
Reviews a paper by J. E. Spurr.

1167 Winchell (Newton H.). A new iron-bearing horizon in the
Keevat in Minnesota.
Contains notes on the geology and occurrence of ore in this region.

1168 —— Geological atlas with synoptical descriptions [Minnesota].

1169 —— Sketch of the iron ores of Minnesota.
Am. Geol., vol. 29, pp. 154-162, 1902; Int. Mg. Cong., 4th session,
Describes the general geology and the occurrence and origin of the
iron ores.

1170 —— The geology of the Mississippi Valley at Little Falls,
Minnesota.
Memoirs of Explorations in the Basin of the Mississippi, vol. 5, Kaka-
abikansing, pp. 89-104, 1902.
Describes occurrence and character of strata at this locality and
sketches their geological history.

1171 —— Regeneration of clastic feldspar.

1172 —— The Monthly American Journal of Geology and Natural
Science.
Am. Geol., vol. 30, pp. 62-64, 1902.
Gives an account of this publication issued in 1831-2.
1173 **Winchell** (Newton H.). *The Sutton Mountain.*  
*Am. Geol.*, vol. 30, pp. 118-120, 1902.  
In discussing the geology of the region refers to an article by J. A. Dresser.

1174 —— *The Lansing [Kansas] skeleton.*  
Describes the deposits in which the skeleton was found and gives an estimate of its age.

1175 **Wolff** (John E.). *Leucite-tinguaite from Beemerville, New Jersey.*  
Describes this rock and gives chemical analyses.

1176 and **Palache** (Charles). *Apatite from Minot, Maine.*  
Describes occurrence, crystallography, chemical composition and properties of a specimen from Maine.

*Geol. Mag.*, dec. iv, vol. 9, pp. 502-505, 529-544, pl. xxii, 7 text figs., 1902.  
Gives a geological section of Mount Stephen and describes fossils from this locality.

1178 **Woodworth** (Jay Backus). *Pleistocene geology of portions of Nassau County and Borough of Queens [New York].*  
See no. 858 in *U. S. Geol. Surv.*, Bull. no. 203.

1179 —— *The Atlantic coast Triassic coal field.*  
Describes extent, general geologic relations and structure of this coal field occupying parts of Virginia and North Carolina, the number, thickness and extent of the coal beds, and the character, composition and production of the coal.

1180 —— *The history and conditions of mining in the Richmond coal-basin, Virginia.*  
Describes geologic conditions in this coal field.

1181 **Woolman** (Lewis). *Artesian wells.*  
Contains records of wells and notes on the strata passed through.

1182 **Wortman** (J. L.). *The probable successors of certain North American primates.*  


Describes two new species of Sinopa, discusses certain relations of the creodonts and gives a summary of the author’s previous papers on the Eocene carnivora in the Marsh collection.

1184 — Studies of Eocene mammalia in the Marsh collection, Peabody Museum.


Describes *Mesonyx obtusidens* Cope and discusses the origin of the tritubercular molar.

1185 — Studies of Eocene mammalia in the Marsh collection, Peabody Museum.


Discusses the character and habits of *Patriofelis ferox* Marsh.

1186 — Studies of Eocene mammalia in the Marsh collection, Peabody Museum.


1187 — Studies of Eocene mammalia in the Marsh collection, Peabody Museum.


Describes *Sinopa rapax* Leidy and *S. agilis* Marsh.

1188 **Wright** (Albert A.). New evidence upon the structure of *Dinichthys*.


1189 — Ohio boulders containing "huronite."


1190 **Wright** (F. E.). A new combination wedge for use with the petrographical microscope.

Jour. Geol., vol. 10, pp. 33-35, fig. 1, 1902.

1191 **Wright** (G. Frederick). Report of the boulder committee of the Ohio State Academy of Sciences.

Ohio State Acad. Sci., 2d Ann. Rept., pp. 5-10 [1894].

Discusses source and distribution of glacial boulders.

1192 — Report of the boulder committee of the Ohio State Academy of Sciences.

Ohio State Acad. Sci., 3d Ann. Rept., pp. 6-7 [1895].

Discusses distribution and source of glacial boulders in Ohio.

1193 — The rate of lateral erosion at Niagara.

Am. Geol., vol. 29, pp. 140-143, pl. vi, 2 figs., 1902.

Gives the results of measurements to determine the rate at which the face of the gorge crumbles away under the influence of subaerial agencies.
### ADDENDA TO BIBLIOGRAPHIES FOR PREVIOUS YEARS.

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<td>134</td>
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</tr>
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<td>136</td>
<td></td>
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<td>137</td>
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<td>137</td>
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### Classified Key to the Index

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<th>Page</th>
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</tr>
<tr>
<td></td>
<td>Prince Edward Island .................................................. 138</td>
</tr>
<tr>
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<td>Quebec .............................................................. 138</td>
</tr>
<tr>
<td></td>
<td>Ungava .................................................................. 138</td>
</tr>
<tr>
<td></td>
<td>Yukon Territory .................................................. 138</td>
</tr>
<tr>
<td></td>
<td>General ............................................................ 138</td>
</tr>
<tr>
<td></td>
<td>Carboniferous .......................................................... 138</td>
</tr>
<tr>
<td></td>
<td>Alaska ............................................................... 138</td>
</tr>
<tr>
<td></td>
<td>Appalachian region ................................................... 138</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
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</tr>
<tr>
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<td>Great Plains region .................................................... 139</td>
</tr>
<tr>
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</tr>
<tr>
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<td>Ohio Valley region ................................................... 139</td>
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</tr>
<tr>
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<td>Southwestern region .................................................. 139</td>
</tr>
<tr>
<td></td>
<td>General ............................................................ 139</td>
</tr>
<tr>
<td></td>
<td>Cartography ........................................................... 139</td>
</tr>
<tr>
<td></td>
<td>Chemical analyses ...................................................... 140</td>
</tr>
<tr>
<td></td>
<td>Classification .......................................................... 142</td>
</tr>
<tr>
<td></td>
<td>Colorado ............................................................... 142</td>
</tr>
<tr>
<td></td>
<td>Connecticut ............................................................ 142</td>
</tr>
<tr>
<td></td>
<td>Correlation ............................................................ 142</td>
</tr>
<tr>
<td></td>
<td>Cretaceous ............................................................. 143</td>
</tr>
<tr>
<td></td>
<td>Alaska ............................................................... 143</td>
</tr>
<tr>
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</tr>
<tr>
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<tr>
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</tr>
<tr>
<td></td>
<td>Mexico ................................................................. 143</td>
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<td>Pacific coast region .................................................. 143</td>
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<tr>
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</tr>
<tr>
<td></td>
<td>West Indies ........................................................... 143</td>
</tr>
<tr>
<td></td>
<td>General ............................................................ 144</td>
</tr>
<tr>
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<td>Devonian ............................................................... 144</td>
</tr>
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<td>Alaska ............................................................... 144</td>
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</tr>
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<tr>
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<tr>
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<td>Dynamic geology (geographic divisions) ................................... 144</td>
</tr>
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Dynamic geology (geographic divisions)—Continued.

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Dynamic geology (divisions by subject-matter).

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<td>146</td>
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Economic geology

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<td>148</td>
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### Economic geology—Continued.

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<td>151</td>
</tr>
<tr>
<td>General</td>
<td>151</td>
</tr>
</tbody>
</table>

### Economic products described

- Florida: 155

### Geologic formations, description and synonymy

- 155

### Geologic maps

- 164

### Georgia

- 165

### Glacial geology

- Appalachian region: 165
- Atlantic coast region: 165
- Canada: 165
- Great Lakes region: 165
- Mississippi Valley region: 165
- New England and New York: 165
- Ohio Valley region: 165
- Rocky Mountain region: 165
- General: 165

### Greenland

- 165

### Guatemala

- 166

### Hawaiian Islands

- 166

### Honduras

- 166

### Hydrology

- Appalachian region: 166
- Atlantic coast region: 166
- Central America: 166
- Great Plains region: 166
### Classified Key to the Index

**Hydrology—Continued.**

- Gulf region: 166
- New England and New York: 166
- Pacific coast region: 166
- Rocky Mountain region: 166
- Southwestern region: 166
- General: 166

**States and Regions:**

- Idaho: 166
- Illinois: 166
- Indian Territory: 166
- Indiana: 166
- Iowa: 167
- Jura: 167
- Atlantic coast region: 167
- Great Basin region: 167
- Great Plains region: 167
- Greenland: 167
- Rocky Mountain region: 167
- Kansas: 167
- Kentucky: 168
- Louisiana: 168
- Maine: 168
- Maryland: 168
- Massachusetts: 168
- Mexico: 168
- Michigan: 169
- Mineralogy: 169
- Minerals described: 170
- Minnesota: 175
- Mississippi: 175
- Missouri: 175
- Montana: 175
- Nebraska: 176
- Nevada: 176
- Newfoundland: 176
- New Jersey: 176
- New Mexico: 176
- New York: 176
- Nicaragua: 177
- Nomenclature: 177
- North Carolina: 177
- North Dakota: 177
- Ohio: 177
- Oklahoma: 177
- Ordovician: 177
- Appalachian region: 177
- Atlantic coast region: 177
- Canada: 177
- Mississippi Valley region: 177
- New England and New York: 178
- Ohio Valley region: 178
- Rocky Mountain region: 178
- Southwestern region: 178
- Oregon: 178

Bull. 221—03—9
<table>
<thead>
<tr>
<th>Class</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paleontology</td>
<td>178</td>
</tr>
<tr>
<td>Cambrian</td>
<td>178</td>
</tr>
<tr>
<td>Carboniferous</td>
<td>178</td>
</tr>
<tr>
<td>Cretaceous</td>
<td>179</td>
</tr>
<tr>
<td>Devonian</td>
<td>179</td>
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<td>179</td>
</tr>
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<td>Quaternary</td>
<td>179</td>
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<tr>
<td>Ordovician</td>
<td>180</td>
</tr>
<tr>
<td>Silurian</td>
<td>180</td>
</tr>
<tr>
<td>Tertiary</td>
<td>180</td>
</tr>
<tr>
<td>Triassic</td>
<td>180</td>
</tr>
<tr>
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<td>181</td>
</tr>
<tr>
<td>Genera and species described</td>
<td>181</td>
</tr>
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</table>

<table>
<thead>
<tr>
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<th>Page</th>
</tr>
</thead>
<tbody>
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<td>190</td>
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<tr>
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<td>190</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrology</td>
<td>191</td>
</tr>
<tr>
<td>Alaska</td>
<td>191</td>
</tr>
<tr>
<td>Arizona</td>
<td>191</td>
</tr>
<tr>
<td>Arkansas</td>
<td>191</td>
</tr>
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<tr>
<td>Rocks described</td>
<td>192</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippine Islands</td>
<td>193</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiographic geology</td>
<td>194</td>
</tr>
<tr>
<td>Alaska</td>
<td>194</td>
</tr>
<tr>
<td>Appalachian region</td>
<td>194</td>
</tr>
<tr>
<td>Atlantic coast region</td>
<td>194</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Canada</td>
<td>194</td>
</tr>
<tr>
<td>Great Basin region</td>
<td>194</td>
</tr>
<tr>
<td>Great Lakes region</td>
<td>194</td>
</tr>
<tr>
<td>Great Plains region</td>
<td>194</td>
</tr>
<tr>
<td>Mississippi Valley region</td>
<td>194</td>
</tr>
<tr>
<td>New England and New York</td>
<td>194</td>
</tr>
<tr>
<td>Ohio Valley region</td>
<td>194</td>
</tr>
<tr>
<td>Pacific coast region</td>
<td>195</td>
</tr>
<tr>
<td>Panama</td>
<td>195</td>
</tr>
<tr>
<td>Rocky Mountain region</td>
<td>195</td>
</tr>
<tr>
<td>Southwestern region</td>
<td>195</td>
</tr>
<tr>
<td>West Indies</td>
<td>195</td>
</tr>
<tr>
<td>General</td>
<td>195</td>
</tr>
<tr>
<td>Quaternary</td>
<td>195</td>
</tr>
<tr>
<td>Alaska</td>
<td>195</td>
</tr>
<tr>
<td>Appalachian region</td>
<td>195</td>
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<tr>
<td>Atlantic coast region</td>
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<td>Canada</td>
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<td>Great Plains region</td>
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<td>Gulf region</td>
<td>195</td>
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<td>Mexico</td>
<td>195</td>
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<tr>
<td>Mississippi Valley region</td>
<td>195</td>
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<tr>
<td>New England and New York</td>
<td>196</td>
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<td>Ohio Valley region</td>
<td>196</td>
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<td>Rocky Mountain region</td>
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<td>Pacific coast region</td>
<td>196</td>
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<tr>
<td>West Indies</td>
<td>196</td>
</tr>
<tr>
<td>General</td>
<td>196</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>196</td>
</tr>
<tr>
<td>Silurian</td>
<td>196</td>
</tr>
<tr>
<td>Alaska</td>
<td>196</td>
</tr>
<tr>
<td>Appalachian region</td>
<td>196</td>
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<td>Atlantic coast region</td>
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<td>Mississippi Valley region</td>
<td>196</td>
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<td>New England and New York</td>
<td>196</td>
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<td>Ohio Valley region</td>
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<td>Southwestern region</td>
<td>196</td>
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<td>South Dakota</td>
<td>196</td>
</tr>
<tr>
<td>Tennessee</td>
<td>197</td>
</tr>
<tr>
<td>Tertiary</td>
<td>197</td>
</tr>
<tr>
<td>Alaska</td>
<td>197</td>
</tr>
<tr>
<td>Atlantic coast region</td>
<td>197</td>
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<td>Great Basin region</td>
<td>197</td>
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<tr>
<td>Great Plains region</td>
<td>197</td>
</tr>
<tr>
<td>Greenland</td>
<td>197</td>
</tr>
<tr>
<td>Gulf region</td>
<td>197</td>
</tr>
</tbody>
</table>
Mexico .............................................................. 197
Mississippi Valley region ................................ 197
Pacific coast region .......................................... 197
Rocky Mountain region ........................................ 197
Southwestern region ........................................... 197
West Indies ....................................................... 198
General ........................................................... 198
Texas ................................................................. 198
Trias ..................................................................... 198
Atlantic coast region .......................................... 198
Canada ............................................................... 198
Great Basin region .............................................. 198
Great Plains region ............................................. 198
Pacific coast region ............................................ 198
Rocky Mountain region ....................................... 198
Southwestern region ........................................... 198
General ........................................................... 198
Utah ..................................................................... 198
Vermont ............................................................. 198
Virginia ............................................................. 198
Washington ....................................................... 199
West Indies ........................................................ 199
West Virginia ...................................................... 199
Wisconsin .......................................................... 199
Wyoming ........................................................... 200
INDEX.

[The numbers refer to entries in the Bibliography.]

Alabama.
Grand Gulf formation, Smith and Aldrich, 970.
Oligocene of western Europe and southern United States, Maury, 759.
Rome Folio, Hayes, 475.
Southern Appalachian coal field, Hayes, 477.

Alaska.
Bogoslof, our newest volcano, Merriam, 765.
Coal resources of Alaska, Brooks, 133.
Epidotc crystals from Alaska, Palache, 833.
Geography of Alaska, Gannett, 399.
Geological reconnaissance in southeastern Alaska, Brooks, 135.
Geological section of Rocky Mountains in northern Alaska, Schrader, 942.
Geology and mineral resources of Copper River district, Schrader and Spencer, 941.
Geology of the Klondike, Mendenhall, 764.
Gold sands of Cape Nome, Queneau, 880.
Guldforekomsterne i Alaska og tilgrensende strøg, Kolderup, 602.
Ore formation on Prince of Wales Island, Thomas, 1021.
Pacific coast glaciers, Muir, 789.
Pacific Mountain system of British Columbia and Alaska, Spencer, 933.
Preliminary report on the Ketchikan mining district, Brooks, 134.
Reconnaissance from Fort Hamlin to Kotzebue Sound, Mendenhall, 764.
Reconnaissance in Mount McKinley region, Alaska, Brooks, 136.
Reconnaissance in Norton Bay region, Mendenhall, 762.
Reconnaissance of northwestern portion of Seward Peninsula, Coller, 209.
Reconnaissance of the Cape Nome and adjacent gold fields of Seward Peninsula, Brooks, 132.
Relation de voyage au Klondyke, Lobel, 697.
Sketch of Nome, Bogdanović, 96.
So-called basal granite of Yukon Valley, McConnell, 724.
Yukon gold fields, Miers, 775.

Archean and Algkennian.
Alaska.
So-called basal granite of Yukon Valley, 724.
Appalachian region.
Copper-bearing rocks of Virginia copper district, Watson, 1091.

Archean and Algonkian—Continued.
Atlantic coast region.
New York City Folio, Merrill, 770.
Canada.
Country west of Nipigon Lake and River, Wilson, 1060.
Geology of northeast coast of Labrador, Daly, 239.
Geology of Province of Quebec, Ells, 334.
Geology and natural resources of Ottawa and vicinity, Ells, 333.
Huronian question, Coleman, 203.
Iron ranges of northwestern Ontario, Coleman, 205.
Michipicoten iron ranges, Coleman and Willmott, 207.
Michipicoten iron region, Coleman and Willmott, 208.
Types of iron-bearing rocks in Ontario, Coleman, 200.
Great Basin region.
Historical geology of Esmeralda County, Nevada, Turner, 1063.
Great Lakes region.
Ellipsoidal structure in pre-Cambrian basic and intermediate rocks of Lake Superior region, Clements, 196.
Geological cross sections of Keweenaw Point, Hubbard, 540.
Geology of Menominee Range, Hulst, 543.
Relation of vein at Central mine, Keweenaw Point, to Kearsarge conglomerate, Hubbard, 541.
Vermilion district of Minnesota, Clements, 197.
Great Plains region.
Water resources of Devils Lake region, Babcock, 40.
Lake Superior region.
Huronian question, Coleman, 203.
Mesabi Iron Range, Leith, 676.
New iron-bearing horizon in Keewatin in Minnesota, Winchell, 1167.
Nomenclature of Lake Superior formations, Willmott, 1160.
Mississippi Valley region.
Geology of Mississippi Valley at Little Falls, Minnesota, Winchell, 1170.
Physiography and geology of Ozark region, Adams, 7.
Archean and Algongian—Continued.

New England and New York.
Field work in town of Minerva, Finlay, 367.
Quarry industry in southeastern New York, Eckel, 322.
Pre-Cambrian outlier at Little Falls, Herkimer Co., Cushing, 233.
Recent geologic work in Franklin and St. Lawrence counties, Cushing, 232.
Terraces of Orange County, Vermont, Richardson, 895.

Pacific coast region.
Crystaline rocks of southern California, Hershey, 464.

Rocky Mountain region.
Geology and ore deposits of Elkhorn mining district, Montana, Weed, 1005.
Igneous rocks of Algongian series, Finlay, 369.
Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.
Structure of Front Range, northern Rocky Mountains, Montana, Willis, 1145.

Southwestern region.
Geography and geology of Black and Grand prairies, Hill, 499.
Red sandstone of Diabolo Mountains, Dumble, 308.

General.
Eparchsean interval, Lawson, 662.

Arkansas.
Arid district between Rio Grande and Pacific, Carter, 162.
Carboniferous coal in Arizona, Dumble, 306.
Faulting and mountain structure in Arizona, Ransome, 886.
Gold deposits of Arizona, Pratt, 562.
Geology of Galluro Mountains, Blake, 92.
Lake Quibiris, an ancient Pliocene lake in Arizona, Blake, 23.
Notes on geology of southeastern Arizona, Dumble, 304.
Reformed copper ores, Goodwin, 410.
Water storage on Salt River, Arizona, Davis, 248.

Arkansas—Continued.
Physiography and geology of Ozark region, Adams, 7.
Southwestern coal field, Taff, 1007.
Zinc and lead deposits of north Arkansas, Branner, 110.

Bibliography.
American Eocene primates, Osborn, 827.
Archaean rocks of Ottawa Valley, Osann, 822.
Archeology in Ontario, Wells, 1113.
Atlantic coast Triassic coal field, Woodworth, 1179.
Base level, grade and peneplain, Davis, 253.
Bibliography and catalogue of fossil vertebrata, Dean, 276.
Bibliography and catalogue of fossil vertebrata, Hay, 470.
Bibliography and index of North American geology, paleontology, petrology, and mineralogy for 1901, Weeks, 1109.
Bibliography of Canadian geology and paleontology for 1890, Ami, 17.
Bibliography of Dr. George M. Dawson, Ami, 25.
Bibliography of literature referring to geology of Washington, Arnold, 37.
Bibliography of Mexican geology and mining, Aguilar y Santillan, 13.
Bibliography of North American geology, paleontology, petrology, and mineralogy for 1892-1900, Weeks, 1104.
Bibliography of Sir John William Dawson, Ami, 16.
Bibliography of works upon the geology and natural resources of West Virginia, Brown, 142.
Biographical notice of Joseph Le Conte, Christy, 127.
Bogoslof, our newest volcano, Merriam, 765.
Catalogue chronologique des publications de Edward Drinker Cope, Frazer, 382.
Chicago Folio, Alden, 15.
Clarence King, Emmons, 347, 348.
Clays of Maryland, Ries, 909.
Coal fields of Pacific coast, Smith, 978.
Cretaceous deposits of Pacific coast, Anderson, 33.
Cycles from Coal Measures, Rogers, 912.
Deposits of copper ores at Doughton, Tenn., Kemp, 562.
Description of Slategeologic map [New York], Merrill, 769.
Dolichocephaly and brachycephaly in the lower mammals, Osborn, 825.
Dr. Ferdinand von Roemer, the father of Texas geology, his life and work, Simonds, 965.
Eastern interior coal field, Ashley, 39.
Edward Claypole, the man, Bridge, 124.
Eisenführenden gusteinen der insel Disko, Nicolau, 807.
Bibliography—Continued.

Fossil mammals of Tertiary of northeastern Colorado, Matthew, 751.

Geographical distribution of freshwater decapods, Ortman, 821.

Geological bibliography of Nebraska, Barbour and Fisher, 56.

Geological relations and distribution of platinum and associated metals, Kemp, 663.

Geology of Cincinnati, Nickles, 805.

Geology of Garrett County, Martin, 735.

Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.

Hamilton formation at Milwaukee, Wisconsin, Teller, 1019.

Hamilton group of Thedford, Ontario, Shimer and Grabau, 943.

Homoplasy as a law of latent or potential homology, Osborn, 823.

Index to North American geology, paleontology, petrology, and mineralogy for 1892-1900, Weeks, 1105.

Law of adaptive radiation, Osborn, 824.

List of reports and publications on the geology of Vermont, Perkins, 848.

Lime and cement industries of New York, Ries, 908.

Marble, slate and granite industries of Vermont, Perkins, 844.

Middle Cambrian fossils, Woodward, 1178.

Mineral industries and geology of certain areas of Vermont, Perkins, 847.

Mines and minerals of Guanajuato, Blake, 94.

Mining in the Richmond coal basin, Virginia, Woodworth, 1180.

Names of coals west of Mississippi River, Keyes, 609.

North American geologic formation names, Weeks, 1106.

Oligocene titanotheres. Osborn, 826.

Origin of eskers, Crosby, 225.

Paleozoic Appalachia, Willis, 1143.

Pennsylvania anthracite coal field, Stock, 1003.

Phosphate rocks of Arkansas, Branner and Newsom, 112.

Physical features of Cecil County, Maryland, Shattuck, 953.

Physical geography of New York State, Tarr, 1011.

Portland cement industry in Michigan, Russell, 924.

Pre-Cambrian summaries for 1901, Leith, 677.

Pre- glacial course of middle portion of Genesee River, Whitbeck, 1115.

Recent minienological literature, Moses and Luquer, 788.

Reconstruction of a Cretaceous dinosaur, Beecher, 71.

Relationships of the Rugosa (Tetraecora llia) to living Zoanthce, Duerden, 500.

Restoration of Dolichorhynchops esborni, William, 1052.

River terraces in New England, Davis, 256.

Rocks of Green Pond Mountain region, Kimmel and Weller, 609.

Saint Peters sandstone, Sardeson, 982.

Bibliography—Continued.

Sketch of the life of Zadoch Thompson, Perkins, 846.

Sulphide ore bodies of Sudbury region, Ontario, Silver, 964.

Surface geology of Alcona County, Michigan, Leverett, 684.

Syllabus for field and laboratory work in geology, Tarr, 1019.

Terrains of Orange County, Vermont, Richardson, 896.

Time divisions of Ices Age, Upham, 1046.

Triassic Ichthyopterygia from California and Nevada, Merriam, 766.

Volcanic eruptions on Martinique and St. Vincent, Russell, 922.

Biography.

Claypole, address at presentation of memorial bronze of Edward Waller Claypole, Bridge, 125.

Claypole, address at presentation of memorial bronze of Edward Waller Claypole, Knight, 588.

Claypole, Edward, the scientist, Comstock, 212.

Claypole, Edward Waller, as a teacher, Richardson, 900.

Claypole, Edward, the man, Bridge, 124.

Dawson, George Mercer, Harrington, 446.

Dawson (Sir John William), Adams, 4.

Frenzel, Dr., Frazer, 390.

Hyatt, Alpheus, Dall, 237.


King, Clarence, Emmons, 347, 348.

Le Conte, biographical notice of Joseph Le Conte, Christy, 172.

Powell, John Wesley, Brewer, 117.

Powell, John Wesley, Gilbert, 405.

Boomer, Dr. Ferdinand von, the father of Texas geology: his life and work, Simonds, 965.

Rowe, Richard Burton, Prosser, 579.

Selwyn (Dr. Alfred R. C.), Barlow, 61.

Simpson, George Bancroft, Clarke, 184.

Thompson, Zadoch, Perkins, 846.

Wing, Augustus, sketch of life and work of, Seely, 949.

California.

Arid district between Rio Grande and Pacific, Carter, 162.

Berkeley Hills, Lawson and Palache, 666.

Coal fields of Pacific coast, Smith, 978.

Coemanite from southern California, Eakle, 310.

Copper region of northern California, Diller, 279, 280.

Cretaceous deposits of Pacific coast, Anderson, 33.

Crystalline rocks of southern California, Hershey, 484.

Development and application of water near San Bernardino, Colton and Riverside, Lipincott, 694, 695.

Formation of bonanzas in upper portions of gold veins, Rickard, 901.

Geological section of middle Coast Ranges, Lawson, 604.
California—Continued.
Glaucophane and associated schists in Coast Ranges of California, Nutter and Barber, 809.
Greenback copper mine, Turner, 1034.
Igneous rocks near Pajaro, Reid, 892.
Les anciens chenaux aurifères de Californie, Bordeaux, 102.
L'Etat de Californie, Privat-Deschanel, 874.
Marine Pliocene and Pleistocene stratigraphy of coast of southern California, Arnold and Arnold, 36.
Natronsalpeter in Californien, Ochsenius, 811.
Neocene deposits of Klamath region, Hershey, 488.
Orbicular gabbro from San Diego County, Lawson, 665.
Ore deposits of Shasta County, Anderson, 34.
Petroleum industry of California, Eldridge, 331.
Post-Tertiary elevation of Sierra Nevada, Turner, 1037.
Post-Quaternary of southern California, Hershey, 489.
Quicksilver, Haverstock, 464.
Reconnaissance of borax deposits of Death Valley and Mohave Desert, Campbell, 156.
Significance of Cretaceous outliers in Klamath region, Hershey, 486.
Storage of water on King River, Lippincott, 693.
Tertiary formations of southern California, Hershey, 485.
Tertiary peneplain in Klamath region, California, Hershey, 499.
Topographic development of Klamath Mountains, Diller, 284.
Triassic Ichthyopterygia from California and Nevada, Merriam, 766.
Triassic Ichthyosaurus from California and Nevada, Osborn, 831.
Triassic Reptilia from northern California, Merriam, 767.
Variability in a rock magma, Turner, 1036.

Cambrian.
Appalachian region.
Paleozoic Appalachian, Willis, 1143.
Rocks of Green Pond Mountain region, Kühn and Weller, 669.
Rome Folio, Hayes, 475.
Canada.
Cambrian fossils from Cape Breton, Matthew, 743.
Cambrian of Cape Breton, with descriptions of new species, Matthew, 746.
Cambrian rocks and fossils of Cape Breton, Matthew, 748.
Geological correlations in New Brunswick, Bailey, 41.
Geology and natural resources of Ottawa and vicinity, Els, 333.
Geology of Province of Quebec, Els, 334.
Middle Cambrian fossils, Woodward, 1117.
New Brunswick, Bailey, 43.

Cambrian—Continued.
Canada—Continued.
Ostracoda of basal Cambrian rocks in Cape Breton, Matthew, 747.
Great Lakes region.
Chicago Folio, Alden, 15.
Great Britain region.
Historical geology of Esmeralda County, Nevada, Turner, 1033.
Lake Superior region.
Junction of Lake Superior sandstone and Keweenawan traps in Wisconsin, Grant, 423.
Mississippi Valley region.
Cambrian age of magnesian limestones of Missouri, Keyes, 573.
Geological formations of Iowa, Calvin, 149.
Geological relations and age of St. Joseph and Potosi limestones of Missouri, Nason, 792.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
Physiography and geology of Ozark region, Adams, 7.
New England and New York.
Potsdam sandstone of Lake Champlain Basin, Van Ingen, 1062.
Quarry industry in southeastern New York, Eckel, 322.
Report of State paleontologist, Clarke, 183.
Pacific coast region.
Crystalline rocks of southern California, Hershey, 484.
Rocky Mountain region.
Geology and ore deposits of Elkhorn mining district, Montana, Wood, 1095.
Geology of Castle Rock region, Colorado, Lee, 671.
Southwestern region.
Atoka Folio, Taff, 1006.
Geography and Geology of Black and Grand prairies, Hill, 499.
General.
Cambrian brachiopoda, Walcott, 1080.

Canada.
Alberta.
Coal in Alberta, Rickert, 905.
Red Deer River, Lambe, 640.
Trionyx foveatus, Leidy, and Trionyx vagans, Gope, from Cretaceous rocks, Lambe, 641.
Turtle from the Cretaceous rocks, Lambe, 687.

British Columbia.
Atlin mining district, Gwillim, 435.
Boundary Creek district, British Columbia, Brock, 129.
British Columbia, Boundary mining district, Brewer, 122.
British Columbia coal fields, Brewer, 120.
British Columbia iron and coal, Brewer, 115.
Characteristics of Atlin gold fields, Gwillim, 436.

CanadL
Coal fields of Crows Nest Pass Branch of Canadian Pacific Railway, Brewer, 128.
Crows Nest coal fields, Leach, 668.
Crows Nest Pass coal field, Brewer, 121.
Geology of region adjoining western part of International Boundary, Daly, 240.
Glaciation in Atlin district, Gwillim, 437.
Canada—Continued.

British Columbia—Continued.

Iron ore deposits near Kitchener, Blakemore, 95.

M'Kee Creek, Atlin mining division, British Columbia, Brewer, 119.

Middle Cambrian fossils, Woodward, 1177.

Mining districts near Kamloops Lake, Monckton, 781.

Mining in the Rossland district, Campbell, 154.

Nephelinc rocks of Ice River, Barlow, 60.

Notes on geology and ore deposits of southeastern British Columbia, Corless, 214.

Ore deposits of Boundary Creek district, Brock, 130.

Ore deposits of Copper Mountain, Scott, 947.

Pacific Mountain system of British Columbia and Alaska, Spencer, 988.

Production of copper in Boundary district, Ledoux, 669.

White Horse mining district, Yukon Territory, Brewer, 118.

Cape Breton Island.

Cambrian fossils from Cape Breton, Matthew, 743.

Cambrian of Cape Breton, with descriptions of new species, Matthew, 746.

Cambrian rocks and fossils of Cape Breton, Matthew, 748.

Keevatin.

Genus Trimerella, with descriptions of species from Silurian rocks of Keevatin Whiteaves, 1126.

Labrador.

Drift ice as an eroding and transporting agent, Prest, 870.

Geology of northeast coast of Labrador, Daly, 259.

New Brunswick.

Cambrian ostracods from northeastern America, Jones, 558.

Carboniferous basin in New Brunswick, Ells, 322.

Coal fields of New Brunswick, Poole, 856.

Coal problem in New Brunswick, Poole, 857.

Geological notes in New Brunswick, Bailey, 41.

Marl deposits, Ells, 336.

Mödes of occurrence of mineral albertite, Bailey, 42.

New Brunswick, Bailey, 43.

Ostracoda of basal Cambrian rocks in Cape Breton, Matthew, 747.

Report on surface geology shown on Fredericton and Andover quarter sheet maps, Chalmers, 165.

Northwest Territory.

Coal mining in the Northwest territories, Smith, 972.

New vertebrates of the Mid-Cretaceous, Osborn, 829.

Nova Scotia.


Description of tracks from mudstones of Knoydart formation, Ami, 26.

Canada—Continued.

Nova Scotia—Continued.

Fossils, possibly Triassic, in bowlder-clay of Kings Co., Haycock, 472.

Geological history of Gaspereau valley, Haycock, 471.

Geological nomenclature in Nova Scotia, Fletcher, 375.

Kings and Hans counties, Fletcher, 376.

Marl deposits, Ells, 336.

Nictaux iron field, Weatherbe, 1094.

Nova Scotia gold fields, Faribault, 555.

Possible occurrence of coal area beneath Non-Carboniferous, Nova Scotia, Ami, 27, 29.

Stratigraphy versus paleontology in Nova Scotia, Matthew, 749.

Stratigraphy versus paleontology in Nova Scotia, White, 1117.

Stigmata structure, Poole, 855.

Union and Riverdale formations in Nova Scotia, Ami, 28.

Ontario.

Annual report of geological section of Ottawa Field-Naturalists' Club, Ami, 23.

Arsenic in Ontario, Wells, 1113.

Borings for natural gas, petroleum, and water, Chalmers, 166.

Canadian fossil insects, Scudder, 948.

Condition of nickel in nickeliferous pyrrhotite from Sudbury, Dixon, 287.

Coral reefs—modern and ancient, Grant, 421.

Corniferous exposure in Anderton, Nattress, 794.

Description of map of Ottawa district, Ami, 22.

District around Kingston, Ontario, Ells, 335.

Duration of Toronto interglacial period, Coleman, 202.

Eastern Ontario, Miller, 779.

Eastern Ontario gold belt, Miller, 777.

Genus Panenka, with description of a species from Devonian rocks of Ontario, Whiteaves, 1126.

Geological notes, Grant, 422.

Geology and natural resources of Ottawa and vicinity, Ells, 333.

Haliburton and Bancroft areas, Ontario, Adams, 5.

Hamilton group of Thedford, Shimer and Grabau, 963.

Iron ore deposits along Kingston and Pembroke Railway in eastern Ontario, Ingall, 545.

Iron ore deposits of western Ontario, Hille, 506.

Iron ranges of northwestern Ontario, Coleman, 295.

Lake Temiscaming to Height of Land, Miller, 778.

Lists of organic remains of Ottawa district, Ami, 18.

Marl deposits, Ells, 336.

Michipicoten iron ranges, Coleman and Willmott, 207.

Michipicoten iron region, Coleman and Willmott, 208.

Microscopic examination of sections of rocks, Barlow, 58.
Canada—Continued.

Ontario—Continued.
Mining developments in eastern Ontario, Thomas, 1022.
Nepheline and other syenites near Port Coldwell, Ontario, Coleman, 201.
Opening address, Grant, 420.
Origin and relations of auriferous veins of Algoma (western Ontario), Crosby, 223.
Port Huron oil field, Gordon, 411.
Recent folds in Lorraine shales, Wilson, 1163.
Rock basins of Helen mine, Michipicoten, Canada, Coleman, 204.
Sudbury district, Barlow, 59.
Sulphide ore bodies of Sudbury region, Silver, 964.
Syenites near Port Coldwell, Coleman, 206.
Types of iron-bearing rocks in Ontario, Coleman, 200.

Prince Edward Island.
Prince Edward Island, Watson, 1089.

Quebec.
Copper-bearing rocks in Quebec, Dresser, 296.
Description of map of Ottawa district, Ami, 22.
Field notes on geology of country about Chelsea, Quebec, Ami, 21.
Geological exploration of Anticosti, Laflamme, 616.
Geology of Province of Quebec, Ells, 334.
Limestone of Philipsburg railway and Coal Co., Donald, 289.
Marl deposits, Ells, 336.
Notes on Mount Royal, Buchan, 144.
Petrographical contribution to geology of Quebec, Dresser, 295.

Ungava.
Iron-bearing rocks of Nastapokan Islands, Mickle, 774.

Yukon Territory.
Yukon district, McConnell, 725.

General.
Acrorytha and Hyolithes, a comparison, Matthew, 741.
Archaean rocks of Ottawa Valley, Osann, 822.
Artesian wells, paleontology, Ami, 20.
Bibliography of Canadian geology and paleontology for 1900, Ami, 17.
Country east of Nipigon Lake and River, Parks, 538.
Country west of Nipigon Lake and River, Wilson, 1164.
Descriptions of rocks collected in 1900, Barlow, 57.
Distinctive characters of the Mid-Cretaceous fauna, Osborn, 828.
Eastern part of Abitibi region, Johnston, 556.
Esquisse geologique du Canada, Ami, 31.
Exploration in Canadian Rockies, Wilcox, 1136.
Huronian of Moose River basin, Parks, 837.
Huronian question, Coleman, 203.
Lists of fossils from formations along Ottawa River, Ami, 19.

Carboniferous.
Alaska.
Geological section of Rocky Mountains in northern Alaska, Schrader, 942.
Appalachian region.
Bituminous coal field of Maryland, White, 1117.
Bituminous coal field of Ohio, Haseltine, 451.
Bituminous coal field of Pennsylvania, White and Campbell, 1119.
Correlation of Coal Measures of Maryland, Clark and Martin, 178.
Cumberland Plateau coal field, Duffield, 303.
Gaines oil field of northern Pennsylvania, Fuller, 395.
Geological horizon of the Kanawha black flint, White, 1123.
Geology of Garrett County, Martin, 735.
Geology of Pittsburgh district, White, 1125.
Lower Carboniferous of Appalachian Basin, Stevenson, 1002.
Masontown-Unftontown Folio, Campbell, 158.
Mauch Chunk of Pennsylvania, Stevenson, 1001.
Paleozoic Appalachia, Willis, 1143.
Raleigh Folio, Campbell, 157.
Recent geological work in western Pennsylvania, Campbell, 155, 159.
Recent structural work in western Pennsylvania, Butts, 145.
Rome Folio, Hayes, 475.
Southern Appalachian coal field, Hayes, 477.

Canada.
Carboniferous basin in New Brunswick, Els, 332.
Coal fields of New Brunswick, Poole, 866.
Coal problem in New Brunswick, Poole, 867.
Geological history of Gaspereau Valley, Haycock, 471.
Carboniferous—Continued.

Canada—Continued.
Geological nomenclature in Nova Scotia, Fletcher, 375.
Kings and Hants counties, Nova Scotia, Fletcher, 376.
New Brunswick, Bailey, 43.
Possible occurrence of coal beneath Neo-Carboniferous, Nova Scotia, Ami, 27, 29.
Stigmaria structure, Poole, 855.
Stratigraphy versus paleontology in Nova Scotia, Matthew, 749.
Stratigraphy versus paleontology in Nova Scotia, White, 1117.
Union and Riversdale formations in Nova Scotia, Ami, 28.

Great Basin region.
Carboniferous coal in Arizona, Dumble, 306.
Historical geology of Esmeralda County, Nevada, Turner, 1033.
Notes on geology of southeastern Arizona, Dumble, 304.

Great Lakes region.
Coal of Michigan, Lane, 657.
Northern interior coal field, Lane, 688.
Subsurface geology of Alcona County, Michigan, Lane, 660.

Great Plains region.
Analyses of Mississippian limestone from Atchison prospect well, Porter, 656.
Atchison diamond-drill prospect hole, Langworthy, 660.
Coal Measures faunal studies, II, Beede, 76.
Kansas coal mines of the Missouri Valley, Crane, 216.
Names of coals west of Mississippi River, Keyes, 569.
New fossils from Upper Carboniferous of Kansas, Beede, 74.
Oelrichs Folio, Darton, 246.
Variation of spiralia in Seminula argentia (Shepard) Hall, Beede, 75, 77.

Mississippi Valley region.
Carboniferous formations of Humboldt, Iowa, Sardeson, 935.
Cyclus from Coal Measures, Rogers, 912.
Depositional equivalent of hiatus at base of our Coal Measures, Keyes, 568.
Devonian hiatus in continental interior, Keyes, 578.
Devonian interval in Missouri, Keyes, 576.
Eastern interior coal field, Ashley, 39.
Geological age of certain gypsum deposits, Keyes, 574.
Geological formations of Iowa, Calvin, 149.
Geological section across northern Illinois, Udden, 1029.
Geological section in southern Illinois, Nickles, 804.
Geological section, St. Louis to Shawneetown, Nickles, 903.
Oil and gas producing rocks of Ohio, Bownocker, 107.
Geology of Henry County, Iowa, Savage, 937.
Geology of Jefferson County, Iowa, Udden, 1041.
Geology of Wapello County, Leonard, 680.

Carboniferous—Continued.

Mississippi Valley region—Continued.
Geology of Webster County, Iowa, Wilder, 1139.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
Lithologic phases of Pennsylvanian and Permian of Kansas, Indian Territory, and Oklahoma, Adams, 11.
Missouri and Arkansas zinc mines, Hemburg, 480.
Names of coals west of Mississippi River, Keyes, 569.
Physiography and geology of the Ozark region, Adams, 7.
Revised classification of Upper Paleozoic formations of Kansas, Prosser, 877.
Western interior coal field, Bain, 46.

Ohio Valley region.
Berea Grit oil sand in Cadiz quadrangle, Griswold, 433.
Cumberland Plateau coal field, Duftield, 306.
Ditney Folio, Fuller and Ashley, 397.
Lithographic stone deposits of eastern Kentucky, Ulrich, 1044.
New fossil plants from Carboniferous and Devonian, Herzer, 494.
New fossil sponge from Coal Measures, Herzer, 493.
On an unrecognized coal horizon in northeastern Ohio, Claypole, 193.
Parsionius, Herzer, 491.
Six new species, including two new genera, of fossil plants, Herzer, 492.
Sunbury shale of Ohio, Prosser, 876.

Rocky Mountain region.
Carboniferous of Sangre de Cristo Range, Colorado, Lee, 674.
Geological reconnaissance in eastern Valencic County, New Mexico, Johnson, 553.
Geology and ore deposits of Elk horn mining district, Montana, Weed, 1086.
Geology of Castle Rock region, Lee, 671.
Laramie Plains Red Beds and their age, Knight, 656.
Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.

Southwestern region.
Atoka Folio, Taff, 1006.
Geography and geology of Black and Grand prairies, Hill, 499.
Invertebrate paleontology of Red Beds, Beede, 78.
Stratigraphic relations of Red Beds to Carboniferous in northern Texas, Adams, 10.
Southwestern coal field, Taff, 1007.
Upper Permian in western Texas, Girty, 408.

General.
Carboniferous cestraciont and acanthodian sharks, Eastman, 314.

Cartography.
Cartographic representation of geological formations, Keyes, 575.
Mapping of crystalline schists, Part I, Methods, Hobbs, 516.
Preparation of a geologic map, Eckel, 324.
INDEX TO NORTH AMERICAN GEOLOGY,

[BUll. 221]

Chemical analyses.
Adammellite, Cushing, 232.
Aegirite, Clarke and Steiger, 182.
Albite, Bonney, 100.
Algodonite, Koenig, 601.
Allophane, Bain, 44.
Analcite, Clarke and Steiger, 182.
Analcite, Steiger, 998.
Analcite-basalt, Clarke and Steiger, 182.
Andesite, Barrell, 64.
Andesite, Diller, 281.
Andesite, Lawson and Palache, 666.
Andesite, Scott, 947.
Andesite, Watson, 1091.
Andesite, Weed, 1095.
Apatite, Osann, 822.
Apatite, Wolff and Palache, 1176.
Aplite, Barrell, 64.
Aplite, Reid, 892.
Aplite, Watson, 1090.
Apophyllite, Clarke and Steiger, 182.
Arsenopyrite, Richardson, 896.
Ash, recent, Calkins, 147.
Asphalt, Harper, 443.
Asphalt, Vaughn, 1084.
Augite, Lacroix, 615.
Augite, Reid, 892.
Augite, Scott, 947.
Augite, Watson, 1091.
Augite, Weed, 1095.
Babingtonite, Palache and Fraprie, 834.
Basalt-augite, Nicolau, 807.
Basalt, Bascom, 66.
Basalt, Breitholte, 341.
Diorite, Reid, 892.
Dolomite, Dale, 339.
Domeylite, Koenig, 601.
Dumorterite, Ford, 385.
Diabase, Bascom, 66.
Dioctite, Reid, 892.
Hematite, Hofmann, 521.
Hematite, Weatherbe, 1094.
Heronite, Clarke and Steiger, 182.
Hessite (amphibole gabbro), Davis, 228.
Hornblende-andesite-porphyry, Barrell, 64.
Hornblende-andesite, Bascom, 66.
Hornblende, Bascom, 66.
Hornblende-basalt, Cushing, 232.
Hornblende, Watson, 1091.

Chemical analyses—Continued.
Coal, Russell, 924.
Coal, Smith, 972.
Coal, Smith, 978.
Coal, Stock, 1003.
Coal, Storrs, 1004.
Coal, Taff, 1007.
Coal, White and Campbell, 1119.
Coal, Woodworth, 1179.
Copper ore, Bond, 99.
Dacite, Lacroix, 615.
Datolite, Clarke and Steiger, 182.
Datolite, Hoffman, 621.
Diabase, Bascom, 66.
Diabase, Emerson, 341.
Dike-rock (acid), Bascom, 66.
Diorite, Reid, 892.
Dolomite, Dale, 339.
Domeylite, Koenig, 601.
Dumorterite, Ford, 385.
Diabase, Bascom, 66.
Dioctite, Reid, 892.
Ezolite, Clarke and Steiger, 182.
Ezolite-andesite, Wolff, 1175.
Enstatite-gabbro, Osann, 822.
Epistolite, Boggild and Winther, 98.
Eldsparr, Bascom, 66.
Feldspar, Miller, 779.
Gabbro, Bascom, 64.
Gabbro, Cushing, 232.
Gabbro, Weed, 1095.
Gneiss, Watson, 1093.
Granite, Barrell, 64.
Granite, Bascom, 66.
Granite, Cross, 228.
Granite, Eckel, 322.
Granite, Finlay, 383.
Granite, Lindgren, 687.
Granite, Mathews, 738.
Granite, Pratt, 385.
Granite, Watson, 1093.
Granite-gneiss, Bascom, 66.
Granite, Clarke and Steiger, 182.
Granite, Bascom, 66.
Granite, Weed, 1095.
Gypsum, Ransome, 884.
Halloysite, Ransome, 884.
Hematite, Hoffmann, 521.
Hematite, Weatherbe, 1094.
Heroite, Clarke and Steiger, 182.
Hessite (amphibole gabbro), Davis, 228.
Heslandite, Clarke and Steiger, 182.
Hepakite, Emerson, 341.
Hornblende-andesite-porphyry, Barrell, 64.
Hornblende-gabbro, Bascom, 66.
Hornblende gabbro, Reid, 892.
Hornblende-granite, Bascom, 66.
Hornblende-granite, Bascom, 66.
Hornblende-granite, Bascom, 66.
Hornblende-granite, Bascom, 66.
Hornblende-granite, Bascom, 66.
Chemical analyses—Continued.

Hypersthene-andesite, Diller and Steiger, 286.
Hypersthene-andesite, Lacroix, 615.
Hypersthene-labradorite, Lacroix, 615.
Iwaarite, Barlow, 60.
Ijolite, Barlow, 60.
Iwaeite, Boggild, 97.
Iwaite, Clarke and Steiger, 182.
Iron ore, Beyer, 88.
Iron ore, Coleman, 205.
Iron ore, Mickle, 774.
Iron ore, Richardson, 896.
Iron ore, Shedd, 958.
Janeirose (pseudo-leucite-sodalite-tinguaite),
Cross, 228.
Jarosite, Ransome, 884.
Kaolin, Hopkins, 628.
Kaolin, Mathews, 738.
Keweehawite, Koenig, 601.
Laumontite, Clarke and Steiger, 182.
Laurdalose (landalite), Cross, 228.
Lava, Russell, 923.
Lepidolite, Hoffmann, 921.
Leucitenbergite, Clarke and Steiger, 182.
Leucite, Clarke and Steiger, 182.
Leucite-tinguaite, Wolff, 1175.
Leucitite, Clarke and Steiger, 182.
Lignite, Hoffmann, 521.
Lignite, Smith, 978.
Limestone, Barton, 246.
Limestone, Dickson, 278.
Limestone, Donald, 289.
Limestone, Eckel, 321, 322.
Limestone, Gilpin, 407.
Limestone, Hoffman, 521.
Limestone, Hulst, 543.
Limestone, Landes, 643.
Limestone, Lane, 652.
Limestone, Porter, 888.
Limestone, Ransome, 884.
Limestone, Ries, 905.
Limestone, Russell, 924.
Limonite, Hoffmann, 521.
Loess, Knight, 583.
Madapite, Clarke and Steiger, 182.
Marble, Perkins, 844.
Marble, Pratt, 863.
Marble, Richardson, 895, 896.
Marl, Russell, 924.
Marls, Ries, 905.
Mclanocaulite, Koenig, 601.
Meteorite, Farrington, 356.
Meteorite, Preston, 871, 872.
Meteorite, Ward, 1083.
Metaree, Tassin, 1014.
Mica-gabbro, Barrell, 56.
Mica-gneiss, Bascom, 85.
Mica-hypersthene-gabbro, Osann, 822.
Mineral water, Lindgren, 687.
Mineral waters, Hoffmann, 521.
Missouriite, Clarke and Steiger, 182.
Mohawkite, Koenig, 601.
Monzonite, Cushing, 232.
Natrojarosite, Hillebrand and Penfield, 509.
Natrolite, Clarke and Steiger, 182.
Nepheline, Bonney, 100.
Nepheline-pyroene-malignite, Osann, 822.
Nordmarkose (lichfieldite), Cross, 228.
Norite, Bascom, 66.
Oche, Coleman and Willmot, 207.
Oil, Hill, 691.
Oil, Knight, 656.
Olvin diabase, Cushing, 232.
Olvin, Richardson, 896.
Olvin hyperite, Osann, 822.
Orendite, Clarke and Steiger, 182.
Pegmatite, Reid, 982.
Peridotite, Kemp, 563.
Petroeon, Mabery, 715, 716.
Petroeon, Richardson and Wallace, 897.
Petroeon, Thiele, 1020.
Phlogopite, Clarke and Steiger, 182.
Phlogopite, Osann, 822.
Phonolite, Clarke and Steiger, 182.
Phosphate rock, Branner and Newsom, 113.
Phylite, Richardson, 896.
Plaster, Parsons, 893.
Pumbojarosite, Hillebrand and Penfield, 509.
Pollucite, Clarke and Steiger, 182.
Portland cement, Fall, 354.
Portland cement, Meade, 760.
Portland cement, Russell, 924.
Portland cement, Taft, 1068.
Prehnite, Clarke and Steiger, 182.
Pumice, Diller, 281.
Pyrophyllite, Clarke and Steiger, 182.
Pyroxene, Osann, 822.
Pyroxene, Turner, 1082.
Pyroxenite (websterite), Bascom, 66.
Quarts angite syenite, Cushing, 292.
Quartz basalt, Calkins, 147.
Quartz-biotite-hornblende-gabbro, Bascom, 66.
Quartz-diorite-porphory, Barrell, 64.
Quartz-monzonite, Weed, 1095
Quartz syenite porphyry, Cushing, 292.
Ranite, Barlow, 60.
Rhodonite, Richardson, 896.
Rhyolite, Calkins, 147.
Rhyolite, Reid, 892.
Rhyolite tuff, Calkins, 147.
Riebeckite (?), Clarke and Steiger, 182.
Roscoelite, Lindgren, 687.
Salt brine, Lane, 855.
Sandstone, Ransome, 884.
Scapolite, Osann, 822.
Schizolite, Boggild and Winther, 98.
Schorlomite, Barlow, 60.
Schorlomite, Hoffmann, 521.
Scolelite, Clarke and Steiger, 182.
Serpentine, Clarke and Steiger, 182.
Shale, Russell, 924.
Shonkinite, Osann, 822.
Smithsonite, Branner, 110.
Soda-granite-porphyry, Clarke and Steiger, 182.
Sodalite, Bonney, 100.
Sodalite, Clarke and Steiger, 182.
Soil, Russell, 924.
Solls, Whitney, 1031.
Sphalerite, Branner, 110.
Steenstrupite, Boggild and Winther, 98.
Chemical analyses—Continued.
Stilbite, Clarke and Steiger, 182.
 Sulphur waters, Phillips, 882.
 Syenite, basic, Cushing, 232.
 Syenite porphyry, Cushing, 232.
 Tallow-clays, Branner, 119.
 Theralite, Osann, 822.
 Thomsonite, Clarke and Steiger, 182.
 Titanomagnetite, Lindgren, 692.
 Toscane (grano-diorite), Cross, 228.
 Uranophane, Watson, 1092.
 Vesuvianite, Turner, 1032.
 Vesuvose-albanose (leucitite), Cross, 228.
 Volcanic ash, Flett, 377.
 Volcanic ash, Hovey, 535.
 Volcanic ash, Lacroix, 614, 615.
 Volcanic dust, Diller, 281.
 Volcanic dust, Diller and Steiger, 286.
 Volcanic dust, Hillebrand, 507.
 Volcanic dust, Teall, 1018.
 Volcanic sand, Diller, 281.
 Well water, Blake, 91.
 Wolframite, Irving, 546.
 Wolframite, O’Harra, 815.
 Wollastonite, Clarke and Steiger, 182.
 Wyomingite, Clarke and Steiger, 182.
 Xenotime, Kraus and Reitinger, 605.
 Yttrolite, Hillebrand, 508.

Classification.
Eparchsean interval, Lawson, 662.
Geography and geology of Black and Grand prairies, Hill, 499.
Huronian of Moose River Basin, Parks, 837.
Individuals of stratigraphic classification, Bain, 46.
Mchicoten iron ranges, Coleman and Willmott, 207.
Quantitative chemico-mineralogical classification and nomenclature of igneous rocks, Cross, 228.

Tenth annual report of State geologist, Calvin, 150.

Colorado—Continued.
Fossil mammals of Tertiary of northeastern Colorado, Matthew, 751.
Franccveille meteorite, Preston, 872, 873.
Geology along the Animas River, Lakes, 623.
Geology of Castle Rock region, Lee, 671.
Geological excursion in Colorado, Van Hise, 1058.
Glacial placer beds on flanks of Mosquito Range, South Park, Lakes, 628.
Influence of country-rock on mineral veins, Weed, 1066.
Jurassic dinosaur deposits near Canyon City, Hatchet, 466.
Morrison shales of southern Colorado and northern New Mexico, Lee, 672.
Natural gas in Colorado, Lakes, 624.
New Caultds from Miocene of Colorado, Matthew, 754.
Species of Cladodus from the Devonian, Hay, 469.
Oil field of Mesa and Rio Blanco counties, Lakes, 622.
Oil in Colorado, Lakes, 619.
Ore deposits of Rirco Mountains, Ransome, 884.
Prairie region of northeastern Colorado, Lakes, 630.
Prospecting for oil in the region of the cliff dwellers, Lakes, 625.
Rocky Mountain coal fields, Storrs, 1004.
South Park, Lakes, 633.
Spanish peaks, Lakes, 626.
Volcanoes, Lakes, 632.
Water resources of State of Colorado, Fellows, 362.

Connecticut.
Corundum and essonite from Barkhamsted, Emerson, 359.
Glacial remains near Woodstock, Eggleston, 380.
Instance of action of ice-sheet upon projecting rock masses, Hobbs, 518.
Occurrence of minerals at Haddam Neck, Bowman, 106.
Tungsten mine at Trumbull, Hobbs, 512.

Correlation.
Cretaceous deposits of Pacific coast, Anderson, 33.
Distinctive characters of the Mid-Cretaceous fauna, Osborn, 828.
Eocene and earlier beds of Ruerfano Basin, Colorado, 510.
Fossil faunas and their use in correlating geological formations, Williams, 1142.
Geography and geology of Black and Grand prairies, Hill, 499.
Geological correlations in New Brunswick, Bailey, 41.
Jackson outcrops on Red River, Casey, 164.
Report of State paleontologist, Clarke, 189.
Time divisions of ice Age, Upham, 1046.
Cretaceous.

Alaska.

Coal resources of Alaska, Brooks, 133.

Geological section of Rocky Mountains in northern Alaska, Schrader, 943.

Atlantic coast region.

Artesian wells, Woolman, 1181.

Geology of Coastal Plain formations, Shattuck, 957.

Geology of Potomac group in middle Atlantic slope, Clark and Bibbins, 176.

New York City Folio, Merrill, 770.

Norfolk Folio, Darton, 245.

Physical features of Cecil County, Maryland, Shattuck, 963.

Canada.

Coal mining in the Northwest Territories, Smith, 572.

Crows Nest coal fields, Leach, 668.

Drift sections of the Mid-Cretaceous fauna, Osborn, 828.

New vertebrates of the Mid-Cretaceous, Osborn, 829.

Red Deer River, Lambe, 640.

Trionyx foveatus Leidy and Trionyx vagans Cope from Cretaceous rocks of Alberta, Lambe, 641.

Turtle from Cretaceous rocks, Lambe, 637.

Great Basin region.

Notes on geology of southeastern Arizona, Dumble, 304.

Great Plains region.

Discovery of the Laramie in Nebraska, Fisher, 572.

Geology and water resources of Patrick and Goshen Hole quadrangles, Adams, 8.

Laramie Cretaceous of Wyoming, Williston, 1159.

Lignite coal fields of North Dakota, Wilder, 1138.

Lignite deposits of North Dakota, Wilder, 1137.

Morrison shales of southern Colorado and northern New Mexico, Lee, 672.

Oelrichs Folio, Darton, 246.

Restoration of Dolichorhynchos osborni, Williston, 1155.

Skeleton of Nyctodactylus with restoration, Williston, 1154.

Stratigraphic position of Judith River beds, Stanton, 994.

Tests for gold and silver in shales from western Kansas, Lindgren, 690, 691.

Uintacrinus, Springer, 989.

Water resources of Devils Lake region, Babcock, 49.

Gulf region.


Hills of Louisiana south of V. S. & P. Railroad, Lorch, 682.

Preliminary report upon Florida parishes of east Louisiana, Clendenin, 198.

Salines of north Louisiana, Veatch, 1071.

Subterranean waters of Louisiana, Harris, 449.

Mexico.

Coal fields of Las Esperanzas, Ludlow, 708.

Cretaceous—Continued.

Mexico—Continued.

Criaderos de fierro de la hacienda de Vaquerias, Villareal and Bisco, 1076.

Geographic and geologic features, and their relation to the mineral products of Mexico, Hill, 500.

Geologia del valle de Chilpancingo, Ordoñez and Bisco, 520.

Mines in the states of Chihuahua, Sinaloa, and Sonora, Weed, 1098.

Section across the Sierra Madre Occidental of Chihuahua and Sinaloa, Weed, 1099.

Mississippi Valley region.

Geological age of certain gypsum deposits, Keyes, 574.

Geological formations of Iowa, Calvin, 149.

Geology of Mississippi Valley at Little Falls, Minnesota, Winchell, 1170.

New England and New York.

Geological and botanical notes: Cape Cod and Chappaquiddick Island, Hollick, 524.

Pacific coast region.

Berkeley Hills, Lawson and Palache, 666.

British Columbia coal fields, Brewer, 120.

Cretaceous deposits of Pacific coast, Anderson, 33.

Crows Nest Pass coal field, Brewer, 121.

Geology of Washington, Landes, 642.

Physiographic features of Klamath Mountains, Anderson, 32.

Significance of Cretaceous outliers in Klamath region, Hershey, 486.

Rocky Mountain region.

Cretaceous and Lower Tertiary section in south central Montana, Douglass, 290.

Geology and ore deposits of Elkhorn mining district, Montana, Weed, 1056.

Geology of Castle Rock region, Lee, 671.

New and little known fossil vertebrates, Hatcher, 453.

New species of Baenia from Laramie beds, Hay, 467.

Prospecting for oil, Lakes, 634.

Rocky Mountain coal fields, Storrs, 1004.

Sabal rigida, Hatcher, 455.

Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.

Southwestern region.

Ashphalt deposits of Pike County, Arkansas, Hayes, 474.

Atoka Folio, Taff, 1006.

Austin chalk underlying Waco, Texas, Prather, 861.

Austin Folio, Hill and Vaughan, 505.

Cinnabar deposits of Big Bend province, Hill, 504.

Chalk of southwestern Arkansas, Taff, 1008.

Cretaceous and later rocks of Presidio and Brewster counties, Dumble, 309.

Fossils of the Texas Cretaceous, Prather, 860.

Geography and geology of Black and Grand prairies, Hill, 499.

West Indies.

Geological reconnaissance of Cuba, Hayes, Vaughan, and Spencer, 473.
INDEX TO NORTH AMERICAN GEOLOGY,

144

Cretaceous—Continued.

General.
Geographical distribution of fresh-water decapods, Ortmann, 821.
Devonian.
Alaska.
Geological section of Rocky Mountains in northern Alaska, Schrader, 942.
Preliminary report on the Ketchikan mining district, Brooks, 134.
Appalachian region.
Catskill rocks in northern Pennsylvania, Fuller, 396.
Geology of Garrett County, Martin, 735.
Mason town-Union town Folio, Campbell, 158.
Paleozoic Appalachia, Willis, 1143.
Rocks of Green Pond Mountain region, Kümml and Weller, 609.
Rome Folio, Hayes, 475.
Canada.
Corniferous exposure in Anderdon, Nattress, 794.
Description of tracks from mudstones of Knoydart formation, Ami, 26.
Genus Panenka, with description of a species from Devonian rocks of Ontario, Whiteaves, 1127.
Geological history of Gaspepeno Valley, Haycock, 471.
Hamilton group of Thedford, Ontario, Simher and Grabau, 963.
Nictau iron field, Weatherbe, 1094.
Stratigraphy versus paleontology in Nova Scotia, Matthew, 749.
Great Basin region.
Notes on geology of southeastern Arizona, Dumble, 304.
Great Lakes region.
Chicago Folio, Aiden, 15.
Hamilton formation at Milwaukee, Teller, 1019.
Stratigraphy of Traverse group of Michigan, Grabau, 417.
Subsurface geology of Alcona County, Michigan, Lane, 650.
Greenland.
Bidrag till nordöstra Grönländs geologi, Nathorst, 793.
Mississippi Valley region.
Devonian hiatus in continental interior, Keyes, 578.
Devonian interval in Missouri, Keyes, 576.
Geological formations of Iowa, Calvin, 149.
Geological section across northern Illinois, Udden, 1039.
Physiography and geology of the Ozark region, Adams, 7.
New England and New York.
Hamilton fossils from Bethany, New York, Monroe, 782.
Lime and cement industries of New York, Ries, 908.
Origin of faunas of Marcellus limestones of New York, Clarke, 191.

Devonian—Continued.

Quarry industry in southeastern New York, Eckel, 592.
Report of State paleontologist, Clarke, 153, 159.
Stratigraphic value of Portage sandstones, Luther, 711.
Ohio Valley region.
Berea Grit oil sand in Cadiz quadrangle, 433.
Cincinnati anticline in southern Kentucky, Foerste, 392.
New fossil plants from Carboniferous and Devonian, Herzer, 494.
New fossils from Corniferous, Hamilton, and Medina shales, Herzer, 495.
New points on the fin attachment of Dinichthys and Cladosaurus, Clark, 175.
Oil and gas producing rocks of Ohio, Bowknock, 108.
Structure of Dinichthys, Wright, 1188.
Rocky Mountain region.
Geology and ore deposits of Elkhorn mining district, Montana, Weed, 1095.
Dynamic geology (geographic divisions).
Alaska.
Pacific coast glaciers, Muir, 789.
Reconnaissance of the Cape Nome and adjacent gold fields of the Seward Peninsula, Brooks, 132.
Appalachian region.
Anticlinal folds, Hopkins and Smallwood, 532.
Folded faults in southern Appalachian, Keith, 500.
Mismarked Indiana anticline, Richardson, 898.
Paleozoic Appalachia, Willis, 1143.
Canada.
Recent folds in Lorraine shales, Wilson, 1163.
Rock basins of Helen mine, Michipicoten, Canada, Coleman, 294.
Great Basin region.
Historical geology of Esmeralda County, Nevada, Turner, 1083.
Great Lakes region.
Geothermal gradient in Michigan, Lane, 659.
Wave cutting on west shore of Lake Huron, Gordon, 412.
Great Plains region.
Mountain growths of Great Plains, Willis, 1148.
Gulf region.
Recent elevation of Gulf coast, Vaughan, 1067.
Hawaiian Islands.
Characteristics of Kau, Emerson, 343.
Mexico.
Geographic and geologic features, and their relation to the mineral products, of Mexico, Hill, 505.
Mississippi Valley region.
Devonian interval in Missouri, Keyes, 576.
Geologic relations of the human relics of Lansing, Kansas, Chamberlin, 167.
Loess with horizontal shearing planes, Udden, 1040.
New Madrid earthquake, Broadhead, 128.
New Madrid earthquake, McGee, 726.
Terrace formation in Turkey River Valley, 365.
**Dynamic geology—Continued.**

**West Indies—Continued.**

Volcanic eruptions on Martinique and St. Vincent, Russell, 922.

Vulkanske udbrud i Vestindien Kolderup, 604.

**General.**

Distribution of the Internal heat of the earth. Chamberlin, 168.

Effect of shore line on waves, Davis, 259.

Experimental investigation into flow of marble, Adams and Nicolson, 6.

Geologic relations of the human relics of Lansing, Kansas, Chamberlin, 167.

Has the rate of rotation of the earth changed appreciably during geological history? Chamberlin, 169.

Heat and frost in weathering of stone, Barnum, 62.

Joint veins, Gilbert, 402.

Metamorphism without crushing, Emerson, 340.

Mountain growths of Great Plains, Willis, 1148.

Paleozoic Appalachia, Willis, 1143.

Physical effects of contact metamorphism, Barrell, 55.

Ripple marks in Hudson River limestone, Moore and Hole, 786.

Structure of Front Range, northern Rocky Mountains, Willis, 1145.

Study of hard-packed sand and gravel, Crosby, 224.

Syllabus for field and laboratory work in geology, Tarr, 1010.

Tertiary penplain in Klamath region, California, Hershey, 490.

Wreck of Mount Mazama, Diller, 282.

**Dynamic geology** (divisions by subject-matter).

**Contact phenomena.**

Junction of Lake Superior sandstone and Keweenawan traps in Wisconsin, Grant, 424.

**Earthquakes.**

Earthquakes in Nicaragua, Crawford, 217.

List of most important volcanic eruptions and earthquakes in western Nicaragua within historic time, Crawford, 219.

New Madrid earthquake, Broadhead, 128.

New Madrid earthquake, McGee, 726.

Volcanoes and earthquakes in Nicaragua, Crawford, 218.

**Erosion.**

Depositional equivalent of hiatus at base of our Coal Measures, Keyes, 508.

Drift ice as an eroding and transporting agent, Prest, 870.

Etching of quartz in interior of conglomerates, Fuller, 394.

Glacial erosion in northern Rockies, Matthes, 740.

Instance of action of ice sheet upon projecting rock masses, Hobbs, 518.

Laws of river flow, Tutton, 1638.

Niagara group unconformities in Indiana, Elrod, 398.

Physiographic features of Klamath Mountains, Anderson, 82.

**Ohio Valley region.**

Natural gas explosion near Waldron, Indiana, Newsom, 798.

**Pacific coast region.**

Marine Pliocene and Pleistocene stratigraphy of coast of southern California, Arnold and Arnold, 36.

Significance of Cretaceous Fillers in Klamath region, Hershey, 486.

Significance of term Sierran, Hershey, 483.

**Rocky Mountain region.**

Boston Mountain physiography, Hershey, 487.

Geology of Castle Rock region, Lee, 671.

Hydrographic history of South Dakota, Todd, 1028.

Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.

Structure of Front Range, northern Rocky Mountains, Montana, Willis, 1145.

Volcanoes, Lakes, 682.

**Southwestern region.**

Caliche of southern Arizona, Blake, 91.

**West Indies.**

Antillean volcanoes, McGee, 728.

Eruptions of La Soufrière, St. Vincent, in May, 1902, Hovey, 586.

Eruptions of 1902 of La Soufrière, St. Vincent, and Mont Pelée, Martinique, Hovey, 585.

Field notes of a geologist in Martinique and St. Vincent, Jaggar, 548.

Martinique and St. Vincent; preliminary report upon the eruptions of 1902, Hovey, 588.

Next eruption of Mont Pelée, Jaggar, 549.

Peculiar character of eruption of Mont Pelée, Verrill, 1074.

Recent eruptions of Mont Pelée, Nicholls, 800.

Recent volcanic eruptions in West Indies, Milne, 780.

Recent volcanic eruptions in West Indies, Russell, 921.

Visit to Martinique and St. Vincent after the great eruptions of May and June, 1902, Hovey, 597.

Volcanic disturbances in West Indies, Hill, 502.

**Dynamic geology—Continued.**

**New England and New York.**

Glacial phenomena in Adirondacks and Champlain Valley, Ogilvie, 812.

Landslides of Mount Greylock and Briggsville, Massachusetts, Cleland, 195.

Rate of lateral erosion at Niagara, Wright, 1193.


Terraces of Westfield River, Massachusetts, Davis, 255.

**Nicaragua.**

Additions to the list of Nicaragua volcanic eruptions in historic time, Crawford, 220.

Earthquakes in Nicaragua, Crawford, 217.

List of most important volcanic eruptions and earthquakes in western Nicaragua within historic time, Crawford, 219.

Volcanoes and earthquakes in Nicaragua, Crawford, 218.

**Nicaragua.**

Additions to the list of Nicaragua volcanic eruptions in historic time, Crawford, 220.

Earthquakes in Nicaragua, Crawford, 217.

List of most important volcanic eruptions and earthquakes in western Nicaragua within historic time, Crawford, 219.

Volcanoes and earthquakes in Nicaragua, Crawford, 218.

**Ohio Valley region.**

Natural gas explosion near Waldron, Indiana, Newsom, 798.

**Pacific coast region.**

Marine Pliocene and Pleistocene stratigraphy of coast of southern California, Arnold and Arnold, 36.

Significance of Cretaceous Fillers in Klamath region, Hershey, 486.

Significance of term Sierran, Hershey, 483.

**Rocky Mountain region.**

Boston Mountain physiography, Hershey, 487.

Geology of Castle Rock region, Lee, 671.

Hydrographic history of South Dakota, Todd, 1028.

Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.

Structure of Front Range, northern Rocky Mountains, Montana, Willis, 1145.

Volcanoes, Lakes, 682.

**Southwestern region.**

Caliche of southern Arizona, Blake, 91.

**West Indies.**

Antillean volcanoes, McGee, 728.

Eruptions of La Soufrière, St. Vincent, in May, 1902, Hovey, 586.

Eruptions of 1902 of La Soufrière, St. Vincent, and Mont Pelée, Martinique, Hovey, 585.

Field notes of a geologist in Martinique and St. Vincent, Jaggar, 548.

Martinique and St. Vincent; preliminary report upon the eruptions of 1902, Hovey, 588.

Next eruption of Mont Pelée, Jaggar, 549.

Peculiar character of eruption of Mont Pelée, Verrill, 1074.

Recent eruptions of Mont Pelée, Nicholls, 800.

Recent volcanic eruptions in West Indies, Milne, 780.

Recent volcanic eruptions in West Indies, Russell, 921.

Visit to Martinique and St. Vincent after the great eruptions of May and June, 1902, Hovey, 597.

Volcanic disturbances in West Indies, Hill, 502.

**Niagara.**

Dynamic geology—Continued.

Dynamic geology—Continued.

West Indies—Continued.

Volcanic eruptions on Martinique and St. Vincent, Russell, 922.

Vulkanske udbrud i Vestindien Kolderup, 604.

**General.**

Distribution of the Internal heat of the earth. Chamberlin, 168.

Effect of shore line on waves, Davis, 259.

Experimental investigation into flow of marble, Adams and Nicolson, 6.

Geologic relations of the human relics of Lansing, Kansas, Chamberlin, 167.

Has the rate of rotation of the earth changed appreciably during geological history? Chamberlin, 169.

Heat and frost in weathering of stone, Barnum, 62.

Joint veins, Gilbert, 402.

Metamorphism without crushing, Emerson, 340.

Mountain growths of Great Plains, Willis, 1148.

Paleozoic Appalachia, Willis, 1143.

Physical effects of contact metamorphism, Barrell, 55.

Ripple marks in Hudson River limestone, Moore and Hole, 786.

Structure of Front Range, northern Rocky Mountains, Willis, 1145.

Study of hard-packed sand and gravel, Crosby, 224.

Syllabus for field and laboratory work in geology, Tarr, 1010.

Tertiary penplain in Klamath region, California, Hershey, 490.

Wreck of Mount Mazama, Diller, 282.

**Dynamic geology** (divisions by subject-matter).

**Contact phenomena.**

Junction of Lake Superior sandstone and Keweenawan traps in Wisconsin, Grant, 424.

**Earthquakes.**

Earthquakes in Nicaragua, Crawford, 217.

List of most important volcanic eruptions and earthquakes in western Nicaragua within historic time, Crawford, 219.

New Madrid earthquake, Broadhead, 128.

New Madrid earthquake, McGee, 726.

Volcanoes and earthquakes in Nicaragua, Crawford, 218.

**Erosion.**

Depositional equivalent of hiatus at base of our Coal Measures, Keyes, 508.

Drift ice as an eroding and transporting agent, Prest, 870.

Etching of quartz in interior of conglomerates, Fuller, 394.

Glacial erosion in northern Rockies, Matthes, 740.

Instance of action of ice sheet upon projecting rock masses, Hobbs, 518.

Laws of river flow, Tutton, 1638.

Niagara group unconformities in Indiana, Elrod, 398.

Physiographic features of Klamath Mountains, Anderson, 82.

Bull. 221—03—10
Dynamic geology—Continued.

Erosion—Continued.

Preliminary report upon bluff and Mississippi alluvial lands of Louisiana, Clendenin, 199.

Quaternary of southern California, Hershey, 489.

Rate of lateral erosion at Niagara, Wright, 1193.

Significance of Cretaceous outliers in Klamath region, Hershey, 485.


Tidal scour in harbors, Frizzell, 393.

Tidal scour in harbors, Hodgdon, 520.

Wave cutting on west shore of Lake Huron, Gordon, 412.

Faulting.

Conditions in veins and faults in Butte, Braden, 109.

Faulting and mountain structure in Arizona, Ransome, 896.

Folded faults in southern Appalachian, Keith, 500.

Historical geology of Esmeralda County, Nevada, Turner, 1033.

Mapping of crystalline schists, II, Basal assumptions, Hobbs, 517.

Overthrust in northern Rockies, Willis, 1147.

Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.

Folding.

Anticlinal folds, Hopkins and Smallwood, 532.

Folded faults in southern Appalachian, Keith, 500.

Mapping of crystalline schists, II, Basal assumptions, Hobbs, 517.

Misnamed Indiana anticline, Richardson, 896.

Recent folds in Lorraine shales, Wilson, 1163.

Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.

Structural details in Green Mountain region, Dale, 235.

Glaciers.

Glacial erosion in northern Rockies, Matthes, 740.

Pacific coast glaciers, Muir, 789.

Reconnaissance of Mount Hood and Mount Adams, Reid, 891.

Variations of glaciers, Reid, 890.

Landslides.

Landslides of Mount Greylock and Briggsville, Massachusetts, Cilolland, 126.

Metamorphism.

Physical effects of contact metamorphism, Barrell, 65.

Oscillation.

Geology of Mississippi embayment, Harris, 445.

Hydrographic history of South Dakota, Todd, 1028.

Marine Pliocene and Pleistocene stratigraphy of coast of California, Arnold and Arnold, 36.

Paleozoic seas and barriers in eastern North America, Ulrich and Schuchert, 1045.

Recent elevation of Gulf coast, Vaughan, 1067.

Reconnaissance of the Cape Nobe and adjacent fields of Seward Peninsula, Brooks, 132.

Dynamic geology—Continued.

Oscillation—Continued.

Significance of Cretaceous outliers in Klamath region, Hershey, 486.

Submerged valleys in Sandusky Bay, Massory, 787.

Terraces of Westfield River, Massachusetts, Davis, 256.

Submergence.

Caliche of southern Arizona, Blake, 91.

Former extent of Newark system, Hobbs, 515.

Shearing.

Loess with horizontal shearing planes, Udden, 1040.

Solution.

Etching of quartz in interior of conglomerates, Fuller, 394.

Rock basins of Helen mine, Michipicoten, Canada, 204.

Unconformity.

Devonian interval in Missouri, Keyes, 576.

Underground temperature.

Geothermal gradient, Lane, 656.

Geothermal gradient in Michigan, Lane, 659.

Volcanoes.

Antillean volcanoes, McGee, 728.

Bogolof, our newest volcano, Merriam, 765.

Characteristics of Kau, Emerson, 343.

Eruptions of La Soufriere, St. Vincent, in May, 1902, Hovey, 536.

Eruptions of La Soufriere, St. Vincent, and Mont Pelée, Martinique, Hovey, 535.

Field notes of a geologist in Martinique and St. Vincent, Jaggar, 548.

Geology and petrography of Crater Lake National Park, Diller and Patton, 285.

Geology and water resources of Snake River Plains, Russell, 1022.

Independencia de los volcanes de grietas preexistentes, Böse, 103.

Martinique and St. Vincent; preliminary report upon the eruptions of 1902, Hovey, 538.

Mohokes caldera on Hawaii, Hitchcock, 511.

Next eruption of Pelée, Jaggar, 549.

Peculiar character of eruption of Mont Pelée, Verrill, 1074.

Preliminary report on recent eruption of Soufrière in St. Vincent, and of a visit to Mont Pelé in Martinique, Anderson and Flett, 35.

Recent eruptions in West Indies, Milne, 780.

Recent eruptions of Mont Pele in Martinique, Russell, 921.

Recent volcanic eruptions in West Indies, Russell, 921.

Reconnaissance of Mount Hood and Mount Adams, Reid, 891.

Visit to Martinique and St. Vincent after the great eruptions of May and June, 1902, Hovey, 537.

Volcanic disturbances in West Indies, Hill, 560.

Volcanic eruptions on Martinique and St. Vincent, Russell, 922.

Volcanoes, Lakes, 692.

Vulkanische udbrud i Vestindien, Kolderup, 604.
Dynamic geology—Continued.

Weathering.
Copper-bearing rocks of Virginia copper district, Watson, 1091.

Economic geology.

Alabama.
Rome Folio, Hayes, 475.
Southern Appalachian coal field, Hayes, 477.

Alaska.
Coal resources of Alaska, Brooks, 133.
Geology and mineral resources of Copper River district, Schrader and Spencer, 911.
Geology of the Klondike, Mendenhall, 764.
Gold sands of Cape Nome, Queneau, 899.
Guldforekomstern i Alaska og tilgrensende strokk, Kolderup, 692.
Ore formation on Prince of Wales Island, Thomas, 1021.
Preliminary report on the Ketchikan mining district, Brooks, 134.
Reconnaissance from Fort Hamlin to Kotzebue Sound, Mendenhall, 763.
Reconnaissance in Norton Bay region, Mendenhall, 732.
Reconnaissance of northwestern portion of Seward Peninsula, Collier, 209.
Reconnaissance of the Cape Nome and adjacent gold fields of Seward Peninsula, Brooks, 132.
Yukon gold fields, Miers, 776.

Arizona.
Geology of Galiuro Mountains, Blake, 92.
Gold deposits of Arizona, Pratt, 862.
Reformed copper ores, Goodwin, 410.

Arkansas.
Asphalt deposits of Pike County, Hayes, 474.
Chalk of southwestern Arkansas, Taff, 1068.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
Lead and zinc deposits of Ozark region, Bailey, 44.
Missouri and Arkansas zinc mines, Branner, 111.
Missouri and Arkansas zinc mines, Hedburg, 480.
Missouri and Arkansas zinc mines, Nichols, 801.
Phosphate rocks of Arkansas, Branner and Nuswom, 113.
Southwestern coal field, Taff, 1007.
Zinc and lead deposits of north Arkansas, Branner, 110.

California.
Coal fields of Pacific coast, Smith, 978.
Copper region of northern California, Diller, 279, 280.
Formation of bonanzas in upper portions of gold veins, Rickard, 901.
Greenback copper mine, Turner, 1034.
Les anciens chenaux aurifères de Californie, Bordeaux, 108.
Nationalpeter in Californien, Oehsenius, 811.
Ore deposits of Shasta County, Anderson, 34.
Quicksilver, Havestock, 404.
Reconnaissance of borax deposits of Death Valley and Mohave Desert, Campbell, 156.

Economic geology—Continued.

Canada.
Arsenic in Ontario, Wells, 1113.
Artesian wells, palaeontology, Aml, 20.
Atlin mining district, Gwillim, 485.
Borings for natural gas, petroleum and water, Chamlers, 166.
Boundary Creek district, British Columbia, .Brock, 129.
British Columbia, Boundary mining district, Brewer, 122.
British Columbia coal fields, Brewer, 120.
British Columbia iron and coal, Brewer, 118.
Carboniferous basin in New Brunswick, Ellis, 322.
Characteristics of Atlin gold field, Gwillim, 436.
Coal fields of Crows Nest Pass Branch of Canadian Pacific Railway, Brewer, 123.
Coal fields of New Brunswick, Poole, 856.
Coal in Alberta, Rickett, 905.
Coal mining in the Northwest Territories, Smith, 972.
Coal problem in New Brunswick, Poole, 857.
Copper-bearing rocks in Quebec, Dresser, 296.
Crows Nest coal fields, Leach, 668.
Crows Nest Pass coal field, Brewer, 121.
Eastern Ontario, Miller, 779.
Eastern Ontario gold belt, Miller, 777.
Geology and natural resources of Ottawa and vicinity, Ellis, 333.
Geology of Province of Quebec, Ellis, 334.
Iron ore deposits along Kingston and Pembroke railway in eastern Ontario, Ingall, 545.
Iron ore deposits near Kitchener, Blakemore, 94.
Iron ore deposits of western Ontario, Hillo, 506.
Iron ranges of northwestern Ontario, Coleman, 266.
Iron-bearing rocks of Nastapokan Islands, Mickle, 774.
Limestone of Phippsburg Railway and Coal Company, Donald, 289.
M'Kee Creek, Atlin mining division, British Columbia, Brewer, 119.
Marl deposits, Ellis, 836.
Michipicoten iron ranges, Coleman and Willmott, 207.
Michipicoten iron region, Coleman and Willmott, 208.
Mining developments in eastern Ontario, Thomas, 1022.
Mining districts near Kamloops Lake, Monckton, 751.
Mining in the Rossland district, Campbell, 154.
Mining industry and mineral resources of British Columbia, Brewer, 116.
Modes of occurrence of mineral albite, Bailey, 42.
New Brunswick, Bailey, 43.
Nictaux iron field, Weatherbee, 1084.
Notes on geology and ore deposits of south-eastern British Columbia, Corless, 214.
INDEX TO NORTH AMERICAN GEOLOGY,

Economic geology—Continued.

Canada—Continued.
Nova Scotia gold fields, Faribault, 355.
Ore deposits of Boundary Creek district, Brock, 130.
Ore deposits of Copper Mountain, Scott, 947.
Origin and relations of auriferous veins of Algoma (western Ontario), Crosby, 223.
Port Huron oil field, Gordon, 411.
Possible occurrence of coal area beneath Neo-Carboniferous, Nova Scotia, Ami, 27, 29.
Production of copper in Boundary district, Ledoux, 669.
Sudbury district, Barlow, 59.
Sulphide ore bodies of Sudbury region, Silver, 964.
Types of iron-bearing rocks in Ontario, Coleman, 200.
White Horse mining district, Yukon Territory, Brewer, 118.
Yukon district, McConnell, 725.

Colorado.
Example of localization of rich ore, Rickard, 904.
Formation of bonanzas in upper portions of gold veins, Rickard, 901.
Formation of Cripple Creek mining district, Moore, 783.
Formation of Leadville mining district, Moore, 784.
Geology along the Animas River, Lakes, 623.
Influence of country rock on mineral veins, Weed, 1096.
Oil field of Mesa and Rio Blanco counties, Lakes, 622.
Oil in Colorado, Lakes, 619.
Ore deposits of Rico Mountains, Ransome, 884.
Rocky Mountain coal fields, Storm, 1004.

Connecticut.
Tungsten mine at Trumbull, Hobbs, 512.

Georgia.
Gold mining in McDuffie County, Fluker, 381.
Granites and gneisses of Georgia, Watson, 1093.
Mineral resources of Georgia, McCollie, 720.
Roads and road-building materials of Georgia, McCollie, 721.
Rome Folio, Hayes, 475.
Southern Appalachian coal field, Hayes, 477.

Idaho.
Facts about Thunder Mountain, Bell, 85.
Geology of Thunder Mountain and central Idaho, Bell, 84.
Outline of Idaho geology and of principal ore deposits of Lemhi and Custer counties, Idaho, Bell, 81.
Thunder Mountain and Mackay, Idaho, Bell, 82.

Illinois—Continued.
Geological section in southern Illinois, Nickles, 894.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.

Indianas—Continued.
Atoka Folio, Taft, 1006.
Southwestern coal field, Taft, 1007.

Indiana.
Ditmy Folio, Fuller and Ashley, 397.
Eastern Interior coal field, Ashley, 39.

Iowa.
Analyses of Iowa building stones, Knight, 582.
Geology and geological resources of Iowa, Calvin, 148, 152.
Geology of Cherokee and Buena Vista counties, Machride, 719.
Geology of Henry County, Savage, 386.
Geology of Jefferson County, Udden, 1041.
Geology of Wapello County, Leonard, 680.
Geology of Webster County, Wilder, 1149.
Iowa's iron mine, Beyer, 89.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
Mineral production of Iowa in 1901, Beyer, 88.
Southwestern Iowa coal fields, Koyes, 572.
Tenth annual report of State geologist, Calvin, 150.
Western Interior coal field, Bain, 45.

Kansas.
Atchison diamond-drill prospect hole, Langworthy, 660.
Geology and mining interests of Kansas, Haworth, 465.
Kansas coal mines of the Missouri Valley, Crane, 216.
Oil and gas in Kansas, Haworth, 466.
Tests for gold and silver in shales from western Kansas, Lindgren, 690, 691.
Western Interior coal field, Bain, 45.

Kentucky.
Eastern interior coal field, Ashley, 39.
Lithographic stone deposits of eastern Kentucky, Ulrich, 1044.
Southern Appalachian coal field, Hayes, 477.
Zinc in Crittenden County, Wheeler, 1114.

Louisiana.
Accumulation of petroleum, Hayes, 478.
Geological horizon of petroleum, Fishback, 379.
Hills of Louisiana south of V. S. & P. Railroad, Letch, 682.
Oil in Louisiana, Harris, 450.
Preliminary report upon bluff and Mississippi alluvial lands of Louisiana, Cledenlin, 199.
Preliminary report upon Florida parishes of eastern Louisiana, Cledenlin, 198.
Salines of north Louisiana, Ventch, 1071.
Subterranean waters of Louisiana, Harris, 449.
Sulphur deposits of Calcasieu Parish, Kerr, 566.
Economic geology—Continued.  

Maine.  
Water powers of Maine, Pressy, 868.

Maryland.  
Bituminous coal field of Maryland, White, 1117.  
Clays of Maryland, Ries, 909.  
Mineral resources of Cecil County, Mathews, 738.  
Mineral resources of Garrett County, Martin, 738.

Mexico.  
Canaan copper deposits, Weed, 1102.  
Coal fields of Las Esperanzas, Ludlow, 708.  
Criadero de fierro del Cerro de Mercado, Durango, Rangel, 883.  
Criaderos de fierro de la hacienda de Vaquezlas, Villarelo and Bose, 1076.  
Estado de Tabasco, Laguerenne, 617.  
Geographic and geologic features, and their relation to the mineral products of Mexico, Hill, 500.  
Geographical and geological distribution of mineral deposits of Mexico, Aguilara, 14.  
Kupfererzlagerstätte in Nieder-Californien, Krusch, 607.  
Mineral zone of Santa María del Río, Manzano, 732.  
Mines and minerals of Guaiiajuato, Blake, 94.  
Mining district of Pachuca, Ordofiez, 819.  
Onyx-marble deposits of Jimulco, Ordofiez, 817.  
Sierra Mojada and its ore deposits, Emmons, 350.  
Sierra Mojada and its ore deposits, Malcolmson, 731.  
Structure of ore-bearing veins in Mexico, Halse, 440.  
Upland placers of La Cienaga, Sonora, Hill, 503.  
Value of ores in Mexico, Emmons, 344.

Michigan.  
Asphalt in Delta County, Lane, 649.  
Clays and shales of Michigan, Ries, 906.  
Coal of Michigan, Lane, 657.  
Deep wells and prospects for oil and gas, Lane, 633.  
Economic geology, Lane, 651.  
Economic geology of Michigan, Lane, 648.  
Geology of Menominee Range, Hulst, 543.  
Limestones, Lane, 652.  
Maris and clays, Full, 354.  
Northern interior coal field, Lane, 658.  
Port Huron oil field, Gordon, 411.  
Portland cement industry in Michigan, Russo, 924.  
Relation of vein at Central mine, Keweenaw Point, to Kearsarge conglomerate, Hubbard, 541.  
Report on Arenac County, Gregory, 430, 431.  
Salt, Lane, 655.  
Surface geology of Alcona County, Leverett, 684.  
Topography, soils, water resources, etc., of Muskegon County, McLaugh, 739.

Economic geology—Continued.  

Minnesota.  
Geology of Minnesota, Hall, 439.  
Iron ores of Minnesota, Winchell, 1169.  
New iron-bearing horizon in Keewatin in Minnesota, Winchell, 1167.  
Origin and distribution of Minnesota clays, Berkey, 87.  
Original source of Lake Superior iron ores, Spurr, 994.  
Vermilion district of Minnesota, Clements, 197.  
Mississippi.  
Loess of Natchez, Mississippi, Shimik, 961.  
Missouri.  
Disseminated lead ores of southeast Missouri, Nason, 791.  
Lead and zinc deposits of Ozark region, Bailey, 44.  
Lead and zinc deposits of Ozark region, Van Hise, 1067.  
Lead and zinc deposits of Mississippi Valley, Kays, 570.  
Lead and zinc deposits of Mississippi Valley, Van Hise, 1061.  
Missouri and Arkansas zinc mines, Branner, 111.  
Missouri and Arkansas zinc mines, Hedburg, 483.  
Missouri and Arkansas zinc mines, Nichols, 891.  
Western interior coal field, Bain, 45.  
Montana.  
Conditions in veins and faults in Butte, Braden, 109.  
Corundum in Montana, Edman, 327.  
Geology and ore deposits of Elkhorn mining district, Weed, 1095.  
Influence of country rock on mineral veins, Weed, 1096.  
Rocky Mountain coal fields, Storrs, 1004.

Nebraska.  
Limestone quarries of Nebraska, 371.

Nevada.  
Delamar and Horn-Silver mines, Emmons, 346.  
Geological features of Nevada, Louderbach, 698.  
Gold-bearing quartzites of eastern Nevada, Weeks, 1103.  
Nitrate deposits, Humboldt County, Wagenen, 1078.  
Notes on Tonopah, Easton, 319.  
Ocecola tungsten deposits, Smith, 973.

New Jersey.  
Artesian wells, Woolman, 1181.  
Copper leaching at the American copper mine, Bond, 99.  
Mining industry, Kümml, 698.

New Mexico.  
Applications of geology to economic problems in New Mexico, Herrick, 482.  
Burro Mountain copper district, Reid, 889.  
Coal, graphite, and oil field of Raton, Lakes, 821.  
Rocky Mountain coal fields, Stors, 1004.
Economic geology—Continued.

New York.
Cement industry in New York, Eckel, 321.
Geological history of hematite iron ores of Antwerp and Fowler belt in New York, Crosby, 222.
Gypsum industry in New York State, Parsons, 839.
Lime and cement industries of New York, Ries, 968.
New York City Folio, Merrill, 770.
Quarry industry in southeastern New York, Eckel, 322.

Newfoundland.
Pyrites deposits at Port au Port, Meissner, 761.

North Carolina.
Atlantic coast Triassic coal field, Woodworth, 1179.
Gold in North Carolina, Moore, 755.
Marble and talc of North Carolina, Pratt, 864.
Mining industry in North Carolina, Pratt, 865.
Norfolk Folio, Darton, 246.

North Dakota.
Lignite coal fields of North Dakota, Wilder, 1128.
Lignite deposits of North Dakota, Wilder, 1137.
Rocky Mountain coal fields, Storm, 1004.
Water resources of Devils Lake region, Babcock, 40.

Ohio.
Berea Grit oil sand in Cadiz quadrangle, Griswold, 433.
Bituminous coal field of Ohio, Haseltine, 451.
Oil and gas producing rocks of Ohio, Bownocker, 108.

Oregon.
Bohemian mining district of western Oregon, Kinabail, 580.
Borax mine in southern Oregon, Dennis, 277.
Coal fields of Pacific coast, Smith, 978.
Coos Bay coal fields, Rockwell, 911.
Gold belt of Blue Mountains, Lindgren, 687.
Gold mining in eastern Oregon, Beadle, 67.

Pennsylvania.
Bituminous coal field of Pennsylvania, White and Campbell, 1119.
Clays of Great Valley and South Mountain areas, Hopkins, 525.
Clays of southeastern Pennsylvania, Hopkins, 529.
Connellsville region mineral resources, Eavenson, 320.
Gaines oil field, Fuller, 394.
Masontown-Unisontown Folio, Campbell, 158.
Pennsylvania anthracite coal field, Stoeck, 1002.

Philippine Islands.
Pigohulan and Pigtas gold regions, Island of Mindanano, Nichols, 802.

South Dakota.
Black Hills ore deposits, O'Harra, 814.
Deposits of wolframate in the Black Hills, Irving, 545.
Mineral building material, fuels, and waters of South Dakota, Todd, 1023.
Mineral wealth of Black Hills, O'Harra, 815.

Economic geology—Continued.

South Dakota—Continued.
Oelrichs Folio, Darton, 246.
Wolframite in Black Hills, Forsyth, 390.
Wolframite in Black Hills, Raymond, 888.

Tennessee.
Cumberland Plateau coal field, Duffield, 303.
Deposits of copper ores at Ducktown, Kemp, 562.
Ducktown copper-mining district, McCallie, 722.
Southern Appalachian coal field, Hayes, 477.

Texas.
Accumulation of petroleum, Hayes, 478.
Austin Folio, Hill and Vaughan, 565.
Beaumont oil field, Hill, 501.
Chemistry of asphalt rocks, Harper, 443.
Cinnabar deposits of Big Bend province, Hill, 504.
Coal, lignite, and asphalt rocks, Phillips, 833.
Composition of Texas petroleum, Mabery, 715.
Geography and geology of Black and Grand prairies, Hill, 499.
Geological horizon of petroleum, Fishback, 578.
Great oil well near Beaumont, Dumble, 305.
Great oil well near Beaumont, Lucas, 699.
Petroleum from the Beaumont field, Richardson and Wallace, 897.
Southwestern coal field, Taft, 1007.
Sulphur, oil, and quicksilver in trans-Pecos Texas, Phillips, 852.
Terlingua quicksilver deposits, Brewster County, Hill, 497.
Texas petroleum, Thiele, 1020.

Utah.
Delamar and Horn-Silver mines, Emmons, 345.
Rocky Mountain coal fields, Storm, 1004.
Stateline mining district, Smith, 975.

Vermont.
Granite area of Barre, Finlay, 368.
Marble, slate, and granite industries, Perkins, 844.
Mineral industries, Perkins, 849.
Mineral resources of Vermont, Perkins, 845.
Terranes of Orange County, Richardson, 896.

Virginia.
Atlantic coast Triassic coal field, Woodworth, 1179.
Copper-bearing rocks of Virginia copper district, Watson, 1091.
Mining in the Richmond coal basin, Woodworth, 1130.
Norfolk Folio, Darton, 245.
Richmond coal basin, Gay, 401.
Rutile mining in Virginia, Merrill, 773.

Washington.
Coal deposits of Washington, Landes, 644.
Coal fields of Pacific coast, Smith, 978.
Independent mine at Silverton, Stretch, 1005.
Iron ores of Washington, Sheldon, 958.
Metalliferous resources of Washington, Landes, 645.

Mount Baker mining district, Smith, 976.
Nonmetalliferous resources of Washington, Landes, 649.
Economic geology—Continued.

Washington—Continued.
Ore deposits of Monte Cristo, Spurr, 992, 993.
Water resources of Washington, Ryers, 146.
Water resources of Washington, Heine, 481.
Water resources of Washington, Ruddy, 917.

West Indies.
Bitumen in Cuba, Vaughan, 1064.
Geological reconnaissance of Cuba, Hayes, Vaughan, and Spencer, 473.
Manganese deposits of Santiago Province, Cuba, Spencer, 862.

West Virginia.
Anthracite of Third Hill Mountain, Griffith, 432.
Raleigh Folio, Campbell, 157.

Wisconsin.
Glacial gold in Wisconsin, Thomas, 1023.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
Lead and zinc deposits of Ozark region, Van Hise, 1057.
Zinc and lead deposits of north Arkansas, Branner, 110.

Wyoming.
Deposit of titanic iron ore, Lindgren, 692.
New occurrence of sperrylite, Wells and Penfield, 1112.
New Castle oil field, Knight and Slosson, 587.
Occurrence of rare metals in Rambler mine, Knight, 584.
Petroleum fields of Wyoming, Knight, 585.
Rocky Mountain coal fields, Storrs, 1004.

General.
Application of geology to mining, Spurr, 991.
Character and genesis of certain contact deposits, Lindgren, 688.
Classification of crystalline cements, Eckel, 325.
Coal fields of United States, Hayes, 476.
Coal resources of Pacific, Emerson, 342.
Contact metamorphic and other ore deposits near igneous contacts, Weed, 1101.
Criticism of Dr. Jenney’s paper on the mineral crest, Smith, 977.
Debris fans of the arid region, Hilgard, 496.
Exploration for gold in central States, Hail, 438.
Faults in metal mines, Lakes, 631.
Fireclays of Coal Measures, Hopkins, 530.
Formation and geology of salt deposits, Jones, 557.
Formation of bonanzas in upper portions of gold veins, Rickard, 901.
Geological relations and distribution of platinum and associated metals, Kemp, 563.
Geological Survey and the western miner, Rickard, 903.
Geology and water resources of Snake River Plains, Russell, 923.
Gold mining in southern Appalachians, Pratt, 863.
Gold production of North America, Lindgren, 689.
Igneous rocks and circulating waters as factors in ore deposition, Kemp, 564.

Economic geology—Continued.

General—Continued.
Lake Superior iron ore deposits, Grant, 424.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
Mesabi Iron Range, Leith, 676.
Mineral crest, Jenney, 551, 552.
Motions of underground waters, Schlichter, 866.
Ore formation on Prince of Wales Island, Thompson, 1021.
Ore in sight, Kendall, 565.
Ores deposited by underground waters, Maclaren, 723.
Origin and relations of auriferous veins of Algoma (western Ontario), Crosby, 223.
Origin of fine gold of Snake River, Bell, 83.
Origin of ore deposits, Adams, 3.
Origin of ore deposits, Bain, 47.
Origin of ore deposits, Beck, 68.
Origin of ore deposits, Collins, 211.
Origin of ore deposits, Emmons, 346.
Origin of ore deposits, Keyes, 571.
Origin of ore deposits, Launay, 661.
Origin of ore deposits, Weed, 1097.
Origin of petroleum, Ohly, 816.
Origine eolienne du loess, Keyes, 567.
Precious stones in the United States, Kunz, 610.
Preliminary list of deep borings in United States, Darton, 243, 244.
Principles controlling deposition of ores, Van Hise, 1000.
Problems in geology of ore deposits, Vogt, 1077.
Prospecting for coal in western States, Lakes, 629.
Recent progress in study of ore deposits, Rickard, 902.
Role of igneous rocks in formation of veins, Kemp, 561.
Summaries of literature of structural materials, Eckel, 325, 326.
Southern copper deposits, Weed, 1100.
Sulphur deposits of Calcasieu Parish, Kerr, 566.
United States Geological Survey in its relation to the practical miner, Emmons, 349.
What constitutes a clay, Merrill, 762.

Economic products described.
Actinolite, Miller, 779.
Antimony, Aguilera, 14.
Apatite, Emms, 331, 334.
Arsenic, Miller, 779.
Arsenic, Wells, 1113.
Artesian borings, Kerr, 566.
Artesian water, Long, 681, 682.
Artesian water, Ruddy, 917.
Artesian water, Schlichter, 869.
Artesian water, Udden, 1089.
Artesian waters, Hill, 499.
Artesian wells, Ami, 20.
Artesian wells, Darton, 243, 244.
Artesian wells, Leonard, 679.
Artesian wells, Nickles, 803, 804.
Artesian wells, Woolman, 1181.
Asbestos, Aguilera, 14.
Economic geology—Continued.
Economic products described—Continued.
Asbestos, Ellis, 334.
Asbestos, Perkins, 349.
Asbestos, Pratt, 865.
Asphalt, Harper, 443.
Asphalt, Hayes, 474.
Asphalt, Hayes, Vaughan, and Spencer, 473.
Asphalt, Lane, 469.
Barite, Aguilera, 14.
Barite, Ellis, 333, 334.
Barytes, Pratt, 865.
Bauxite, Hayes, 475.
Beryl, Aguilera, 14.
Beryl, Pratt, 865.
Bismuth, Aguilera, 14.
Bitumen, Vaughan, 1064.
Borax, Campbell, 156.
Borax, Dennis, 277.
Building and ornamental stones, Landes, 643.
Building stone, Alden, 15.
Building stone, Ellis, 334.
Building stone, Gilpin, 407.
Building stone, Knight, 582.
Building stone, Leonard, 680.
Building stone, Perkins, 865.
Building stone, Pratt, 865.
Building stone, Pratt and Ashley, 397.
Building stone, Taff, 1006.
Building stone, toddler, 1029.
Building stone, Wilder, 1139.
Cement, Eckel, 321.
Cement, Fall, 321.
Cement, Miller, 779.
Cement, Ries, 909.
Cement, Todd, 1029.
Chrome, Mathews, 738.
Chromite, Lindgren, 687.
Chromium, Aguilera, 14.
Clay, Berkey, 87.
Clay, Gregory, 430.
Clay, Hopkins, 528, 529.
Clay, Landes, 643.
Clay, Leonard, 680.
Clay, Leverett, 684.
Clay, Lindgren, 687.
Clay, Martin, 736.
Clay, Mathews, 738.
Clay, Merrill, 772.
Clay, Pratt, 865.
Clay, Ries, 909, 909.
Clay, Taff, 1008.
Clay, Todd, 1029.
Clay, Wilder, 1139.
Coal, Aguilera, 14.
Coal, Ashley, 39.
Coal, Bain, 45.
Coal, Brewer, 115, 118, 129, 121, 122.
Coal, Brooks, 133.
Coal, Campbell, 157, 158.
Coal, Crane, 316.
Coal, Duffield, 303.
Coal, Eavenson, 309.
Coal, Ells, 332.
Coal, Emerson, 342.
Coal, Fullcrand Ashley, 397.
Coal, Gay, 401.
Coal, Gregory, 430, 431.
Coal, Griffith, 432.
Coal, Haseltine, 451.
Coal, Hayes, 476, 477.
Coal, Hayes, Vaughan, and Spencer, 473.
Coal, Keyes, 572.
Coal, Laguerenne, 617.
Coal, Lake, 621, 623.
Coal, Landes, 644.
Coal, Lane, 657, 658.
Coal, Leach, 668.
Coal, Leonard, 680.
Coal, Lindgren, 687.
Coal, Ludlow, 788.
Coal, Martin, 736.
Coal, Phillips, 853.
Coal, Poola, 856, 857.
Coal, Pratt, 865.
Coal, Rickert, 909.
Coal, Rockwell, 911.
Coal, Smith, 972.
Coal, Smith, 978.
Coal, Stock, 1003.
Coal, Storey, 1004.
Coal, Taff, 1006, 1007.
Coal, Todd, 1029.
Coal, White, 1117.
Coal, Wilder, 1139.
Coal, Woodworth, 1179.
Copper, Aguilera, 14.
Copper, Bond, 99.
Copper, Brewer, 118.
Copper, Brooks, 134.
Copper, Dresser, 296.
Copper, Diller, 273, 280.
Copper, Emmans, 345.
Copper, Goodwin, 410.
Copper, Hayes, Vaughan, and Spencer, 473.
Copper, Hill, 500.
Copper, Kusch, 607.
Copper, Kümmel, 608.
Copper, Lane, 651.
Copper, Ledoux, 699.
Copper, Lindgren, 687.
Copper, McCallie, 722.
Copper, Malcolmson, 731.
Copper, Miller, 779.
Copper, O’Hara, 815.
Copper, Perkins, 845, 849.
Copper, Pratt, 865.
Copper, Ransone, 884.
Copper, Roid, 889.
Copper, Schrader and Spencer, 941.
Copper, Scott, 947.
Copper, Turner, 1034.
Copper, Watson, 1091.
Copper, Wood, 1100, 1102.
Corundum, Edman, 327.
Corundum, Miller, 779.
Corundum, Pratt, 865.
Diamond, Hobbs, 819.
Diamond, Kunz, 819.
Diamond, Pratt, 865.
Economic geology—Continued.

Economic products described—Continued.

Emerald, Kunz, 610.

Emerald, Hopkins, 528.

Emerald, Mathews, 738.

Emerald, Pratt, 805.

Fireclay, Campbell, 158.

Fireclay, Hopkins, 530.

Fireclay, Martin, 730.

Fireclay, Mathews, 738.

Fireclay, Pratt, 805.

Graphite, Ells, 334.

Graphite, Miller, 779.

Graphite, Pratt, 805.

Graphite, O'Hara, 815.

Gypsum, Gregory, 430, 431.

Gypsum, Lindgren, 687.

Gypsum, Parks, 889.

Gypsum, Wilder, 1139.

Hiddenite, Pratt, 865.

Hydrocarbons, Aguilera, 14.

Iron, Aguilera, 14.

Iron, Beyer, 88, 89.

Iron, Blakemore, 95.

Iron, Brewer, 115.

Iron, Coleman, 200.

Iron, Coleman and Willmott, 207, 208.

Iron, Crosby, 222.

Iron, Ells, 333, 334.

Iron, Hayes, 475.

Iron, Hayes, Vaughan, and Spencer, 473.

Iron, Hille, 506.

Iron, Hulst, 543.

Iron, Ingall, 545.

Iron, Lane, 651.

Iron, Lindgren, 687, 692.

Iron, Kümmler, 608.

Iron, Mathews, 738.

Iron, Mickel, 770.

Iron, Miller, 779.

Iron, O'Hara, 815.

Iron, Pratt, 865.

Iron, Range, 883.

Iron, Shedd, 958.

Iron, Spurr, 994.

Iron, Villarello and Bise, 1076.

Iron, Weatherbe, 1094.

Iron, Wincheill, 1169.

Kaolin, Aguilera, 14.

Kaolin, Hopkins, 528.

Kaolin, Lindgren, 687.

Kaolin, Mathews, 738.

Lead, Aguilera, 14.

Lead, Ballard, 44.

Lead, Emmons, 345.

Lead, Hoburg, 480.

Lead, Kelsey, 570.

Lead, Malcolmson, 731.

Lead, Nason, 791.

Lead, O'Hara, 815.

Lead, Van Hise and Bise, 1061.

Lignite, Storrs, 1004.

Lignite, Wilder, 1137, 1138.

Lime, Ries, 908.

Limestone, Donald, 106.

Limestone, Eckel, 322.

Limestone, Fisher, 371.

Limestone, Gregory, 430, 431.

Limestone, Hayes, 475.

Limestone, Landes, 645.

Limestone, Lane, 651, 652.

Limestone, Lindgren, 687.

Limestone, Martin, 730.

Limestone, Pratt, 865.

Limestone, Ries, 908.

Lithographic stone, Ulrich, 1044.

Loess, Keyes, 567.

Manganese, Aguilera, 14.

Manganese, Hayes, Vaughan, and Spencer, 473.
Economic geology—Continued.

Economic products described—Continued.

Manganese, Lindgren, 687.
Manganese, O’Harra, 815.
Manganese, Pratt, 865.
Manganese, Spencer, 982.
Marble, Eckel, 322.
Marble, Perkins, 844, 849.
Marble, Pratt, 864, 865.
Marble, Richardson, 896.
Marl, Ells, 336.
Marl, Phil., 334.
Marl, Leverett, 664.
Mercury, Aguilera, 14.
Mica, Ells, 333, 334.
Mica, Miller, 779.
Mica, O’Harra, 815.
Mica, Perkins, 849.
Mica, Pratt, 865.
Mica, O’Harra, 815.
Mica, Perkins, 849.
Mica, Pratt, 865.
Marl, Ells, 336.
Marl, Phil., 334.
Marl, Leverett, 664.
Mercury, Aguilera, 14.
Mica, Ells, 333, 334.
Mica, Miller, 779.
Mica, O’Harra, 815.
Mica, Perkins, 849.
Mica, Pratt, 865.
Mineral waters, Todd, 1029.
Molybdenum, Aguilera, 14.
Monazite, Pratt, 865.
Natural gas, Bownocker, 108.
Natural gas, Chalmers, 166.
Natural gas, Lane, 653.
Natural gas, Nickles, 804.
Natural gas, Todd, 1029.
Nickel, Aguilera, 14.
Nickel, Miller, 779.
Nickel, Silver, 964.
Nitrate, Wagenen, 1078.
Ocher, Ells, 334.
Ocher, Pratt, 865.
Oil, Bownocker, 108.
Oil, Gordon, 411.
Oil, Harris, 450.
Oil, Hayes, Vaughan, and Spencer, 473.
Oil, Hill, 501.
Oil, Knight, 585.
Oil, Lakes, 619, 622.
Oil, Lane, 653.
Oil, Mabery, 715.
Oil, Ohly, 816.
Oil, Richardson and Wallace, 897.
Oil, Thiele, 1020.
Onyx-marble, Ordoffez, 817.
Opal, Aguilera, 14.
Peat, Ells, 334.
Petroleum, Chalmers, 166.
Petroleum, Dumble, 305.
Petroleum, Fishback, 370.
Petroleum, Fuller, 395.
Petroleum, Griswold, 433.
Petroleum, Hayes, 478.
Petroleum, Laggerenne, 617.
Petroleum, Landes, 643.
Petroleum, Lucas, 699.
Petroleum, Todd, 1029.
Phosphate, Oehsenius, 811.
Phosphate rock, Branner and Newson, 118.
Platinum, Kemp, 563.
Platinum, Knight, 584.
Platinum, Wells and Penfield, 1112.
Portland cement, Russell, 924.
Portland cement, Taff, 1008.
Portland cement, Wilder, 1139.
Pyrite, Meissner, 761.
Economic geology—Continued.

Economic products described—Continued.

Pyrite, Miller, 779.
Pyrite, Pratt, 865.
Pyrophyllite, Pratt, 865.
Quartz, Pratt, 865.
Quicksilver, Havenstock, 464.
Quicksilver, Hill, 497, 504.
Quicksilver, Phillips, 853.
Rhadolite, Pratt, 865.
Road materials, Landes, 643.
Road materials, McCallie, 721.
Road materials, Martin, 736.
Road materials, Matthews, 738.
Ruby, Kunz, 610.
Ruby, Pratt, 865.
Rutile, Merrill, 779.
Salt, Aguilera, 14.
Salt, Clendenin, 198.
Salt, Lane, 651, 655.
Salt, Veatch, 1071.
Sandstone, Eckel, 322.
Sandstone, Lane, 651.
Sandstone, Martin, 736.
Sapphire, Kunz, 611.
Sapphire, Pratt, 865.
Selenium, Aguilera, 14.
Silver, Aguilera, 14.
Silver, Emmons, 345.
Silver, Hill, 500.
Silver, Lindgren, 687, 690, 691.
Silver, Malcolmson, 731.
Silver, Mendenhall, 762.
Silver, O’Harra, 815.
Silver, Pratt, 865.
Silver, Ransom, 884.
Silver, Weed, 1095.
Slate, Hayes, 475.
Slate, Perkins, 844, 846, 849.
Slate, Richardson, 896.
Soils, Darton, 245, 246.
Soils, Hayes, 475.
Spodumene, O’Harra, 815.
Strontianite, Ells, 333.
Strontium, Aguilera, 14.
Sulphur, Aguilera, 14.
Sulphur, Kerr, 566.
Sulphur, Phillips, 852.
Talc, Miller, 779.
Talc, Pratt, 864, 865.
Tellurium, Aguilera, 14.
Tin, Aguilera, 14.
Tin, Collier, 299.
Tin, O’Harra, 815.
Topaz, Aguilera, 14.
Tourmaline, Kunz, 610.
Tungsten, O’Harra, 815.
Tungsten, Smith, 973.
Vanadium, Aguilera, 14.
Water power, Leverett, 684.
Water power, Pressey, 888.
Water supply, Babcock, 40.
Water supply, Chalmers, 166.
Water supply, Darton, 245, 246.
Water supply, Gregory, 430, 431.
Water supply, Harris, 449.
Economic geology—Continued.

Economic products described—Continued.

Economic products described

Wolframite, Irving, 546.
Wolframite, Raymond, 888.
Zinc, Bain, 44.
Zinc, Brauner, 111.
Zinc, Emmons, 345.
Zinc, Hedburg, 480.
Zinc, Keyes, 570.
Zinc, Kinnell, 608.
Zinc, Van Hise and Bain, 1061.
Zinc, Wheeler, 1114.
Zircon, Pratt, 855.

Florida.

Oligocene of western Europe and southern United States, Maury, 759.
Recent elevation of Gulf coast, Vaughan, 1067.

Geologic formations, description and synonymy.

Aftonian, Quaternary, New Jersey, Salisbury, 930.
Albany division, Carboniferous, Texas, Taff, 1007.
Albertan, Quaternary, New Jersey, Salisbury, 930.
Allegheny formation, Carboniferous, Maryland. Included in Coal Measures. Includes Brookville coal, Clarion coal, Clarion sandstone, Ferriferous limestone, Kittanning limestone, Kittanning sandstone, “Split-six” coal, Lower Kittanning coal, Middle Kittanning coal, Upper Kittanning coal, Lower Freeport sandstone, Lower Freeport limestone, Lower Freeport coal, Upper Freeport sandstone, Upper Freeport limestone and Boilvar clay, and Upper Freeport coal, Clark and Martin, 178.
Allegheny formation, Carboniferous, Maryland, Martin, 736.
Allegheny formation, Carboniferous, Pennsylvania, Campbell, 135.
Allegheny formation (includes Bluebaugh coal, Parker coal, Davis coal, Thomas coal), Carboniferous, Maryland, White, 1117.
Allegheny formation (includes Brookville coal, Clarion coal, Lower Kittanning coal, Middle Kittanning coal, Upper Kittanning coal, Lower Freeport coal, Upper Freeport coal), Carboniferous, Pennsylvania, White and Campbell, 1119.
Alma limestone, Carboniferous, Kansas, Prosser, 877.
Alpena limestone, Devonian, included in Traverse group, Michigan, Grabau, 417.
Alpeno quartzites (Flathead quartzites), Cambrian, Montana, Weed, 1065.
Alton limestone, Algonkian, Montana, Willis, 1144.
American limestone, Carboniferous, Kansas, Prosser, 877.
Anacacho formation, Cretaceous, Texas, Hill, 499.
Anaktoovuk series, Cretaceous, Alaska, Schrader, 942.
Anonas chalk, Cretaceous, Texas, Hill, 499.
Antigua formation, West Indies, Spencer, 987.
Antlers sands, Cretaceous, Texas, Hill, 499.
Geologic formations—Continued.

Benton group, Cretaceous, Kansas, Lindgren, 691.
Benton sand, Tertiary, Missouri, Marbut, 733.
Benton shales, Jurassic, Colorado, Hatcher, 456.
Berea Grit, Carboniferous, Ohio, Bownocker, 108.
Bergman series, Cretaceous?, Alaska, Schrader, 942.
Bergman series, probably Mesozoic, Alaska, Mendenhall, 763.
Berkeleyan series, California, Lawson and Palache, 666.
Big Injun series, Carboniferous, Ohio, Bownocker, 108.
Black River limestone, Ordovician, Canada, Ells, 333, 334.
Black River limestone, Ordovician, Vermont, Perkins, 850.
Blacktail Deer Creek beds, Tertiary, Douglass, 291.
Blossburg formation, Devonian, Pennsylvania, Fuller, 395.
Boggy formation, Carboniferous, Indian Territory, Taft, 1007.
Boggy shales, Carboniferous, Indian Territory, Taft, 1006.
Boise granite, Archean, Idaho, Russell, 1022.
Bokchito formation, Cretaceous, Indian Territory, Taft, 1006.
Brome formation, Carboniferous, Arkansas, Adams, 7.
Boscael bowlder beds, Triassic, Virginia, Woodworth, 1179.
Boston group, Carboniferous, Arkansas, Adams, 7.
Bradford schist, Ordovician, Vermont, Richardson, 896.
Brazil formation, Carboniferous, Indiana, Fuller and Ashley, 397.
Brownstone beds, Cretaceous, Texas, Hill, 493.
Brownwood division (Canyon division), Carboniferous, Texas, Hill, 499.
Brule clay, Tertiary, South Dakota, Darton, 246.
Brule formation, Tertiary, Wyoming, Nebraska, Adams, 8.
Buda formation, Cretaceous, Texas, Hill, 499.
Buda limestone, Cretaceous, Texas, Hill and Vaughan, 505.
Burlingame limestone and shale, Carboniferous, Kansas, Prosser, 577.
Burlingame shales, Carboniferous, Kansas, Beede, 76.
Burlington limestone, Carboniferous, Missouri, Adams, 7.
Caddo limestone, Cretaceous, Indian Territory, Taft, 1006.
Calmiferous formation, Ordovician, Canada, Ells, 334.
Calhoun shales, Carboniferous, Kansas, Beede, 76.
Campan series, Pliocene, Tertiary, California, Lawson and Palache, 666.

Geologic formations—Continued.

Canyon shale, Carboniferous, Indian Territory, Taff, 1006.
Canyon division, Carboniferous, Texas, Taff, 1007.
Carroll formation, Cretaceous, South Dakota, Darton, 246.
Carmichael clay, Quaternary, Pennsylvania, Campbell, 158.
Cason shale, Upper Silurian, Arkansas, Adams, 7.
Castle conglomerate, Colorado, Lee, 671.
 Catskill formation, Devonian, Pennsylvania, Campbell, 158.
Catskill formation, Devonian, Pennsylvania, Fuller, 395, 396.
Cavanal (Cavaniol) group, Carboniferous, Indian Territory and Arkansas, Taff, 1007.
Cedar Creek beds, Tertiary, Colorado, Matthew, 751.
Cemetery limestone, Cambrian, Montana, Weed, 1095.
Chadron formation, Tertiary, Wyoming, Adams, 8.
Chadron sand, Tertiary, South Dakota, Darton, 246.
Charleston sandstone, Carboniferous, West Virginia, Campbell, 157.
Chase stage, Carboniferous, Kansas, Prosser, 577.
Chattanooga shale, Devonian, Georgia, Hayes, 475.
Chazy, Ordovician, Vermont, Perkins, 850.
Chazy formation, Ordovician, Canada, Ells, 334.
Chazy limestone, Ordovician, Canada, Ells, 333.
Chazy shales, Ordovician, Canada, Ells, 333.
Chenung formation, Devonian, Pennsylvania, Fuller, 395.
Cherokee shale, Carboniferous, Kansas, Iowa, Bain, 49.
Cherokee shales, Carboniferous, Missouri, Adams, 7.
Chesapeake formation, Tertiary, Virginia, North Carolina, Darton, 246.
Chickamauga limestone, Silurian, Alabama and Georgia, Hayes, 475.
Chickasawhatchee chert, Carboniferous, Indian Territory, Taff, 1006.
Chico beds, Carboniferous, Oregon, Knowlton, 599.
Chico sandstones, Cretaceous, Oregon, Knowlton, 599.
Chocolate limestone, Cretaceous, California, Lawson and Palache, 666.
Chocolate limestone, Carboniferous, Kansas, Beede, 76.
Chouteau formation, Carboniferous, Mississippi Valley region, Keyes, 578.
Chouteau limestones, Carboniferous, Missouri, Adams, 7.
Cincinnati or Hudson group, Silurian, Illinois, Alden, 15.
Cincinnati period, Ordovician, Silurian, Illinois, Alden, 15.
Cisco division, Carboniferous, Ohio and Indiana, Nickles, 805.
Geologic formations—Continued.
Claiborne, Lower, Eocene, Tertiary, Louisiana, Veatch, 1072, 1073.
Claiborne formation, Tertiary, Louisiana, Lorch, 681.
Clark formation, Carboniferous, West Virginia, Campbell, 157.
Clarno formation, Oregon, Knowlton, 599.
Clear Fork formation, Carboniferous, Texas, Hill, 499.
Clinton, Silurian, Ohio, Bownocker, 108.
Coal Measures, Carboniferous, Maryland. Includes Pottsville, Allegheny, Conemaugh, Monongahela, and Dunkard formations, Clark and Martin, 178.
Coal Measures, Carboniferous, Ohio, Bownocker, 108.
Columbia formation, Tertiary, Oregon, Smith, 798.
Cocksfield, Eocene, Tertiary, Louisiana, Veatch, 1073.
Cocksfield beds, included in Eocene, Tertiary, Louisiana, Harris, 448.
Cocksfield Ferry beds, Eocene, Tertiary, Louisiana, Veatch, 1072.
Coldwater shales, Carboniferous, Michigan, Russell, 924.
Coleman division, Carboniferous, Texas, Hill, 499.
Columbia, Pleistocene, Quaternary, Virginia, North Carolina, Darton, 245.
Columbia formation, Tertiary, Louisiana, Clendenin, 158.
Columbia group, Quaternary, Maryland, Shattuck, 953, 955.
Columbia River lava, Tertiary, Oregon, Knowlton, 599.
Colville series, Tertiary, Alaska, Schrader, 942.
Comanche Peak beds, Cretaceous, Texas, Hill, 499.
Comanche Peak limestone, Cretaceous, Texas, Hill and Vaughan, 505.
Comanche series, Cretaceous, Texas, Hill, 499.
Comanche series, Cretaceous, Texas, Hill and Vaughan, 505.
Conasauga formation, Cambrian, Alabama, Hayes, 475.
Conemaugh formation, Carboniferous, Maryland. Included in Coal Measures. Includes Lower Mahoning sandstone, Mahoning limestone, Mahoning coal, Upper Mahoning sandstone, Masontown coal, Lower Cambridge limestone, Buffalo sandstone, Upper Cambridge limestone, Lower red shales, Bakerstown coal, Saltsburg sandstone, Crinoidal coal, Ames or Crinoidal limestone, Elklick coal, Morgantown sandstone, Clarksburg limestone, Franklin or Little Clarksburg coal, Connellsville sandstone, Lower Pittsburg limestone, and Lower Pittsburg coal, Clark and Martin, 178.
Conemaugh formation, Carboniferous, Maryland, Martin, 735.
Conemaugh formation, Carboniferous, Pennsylvania, Campbell, 158.
Columbian sandstone, Ordovician, Kentucky, Foorste, 582.
Dakota, Cretaceous, Montana, Willis, 1134.
Dakota formation, Cretaceous, North Dakota, Babcock, 40.
Dakota sandstone, Cretaceous, South Dakota, Darton, 246.
Dakota sandstones, Jurassic, Colorado, Hatcher, 456.
Decker Ferry limestone, Silurian, New Jersey, Kimmel and Wolf, 609.
Deer Creek limestone, Carboniferous, Kansas, Bownocker, 108.
Del Rio clay, Cretaceous, Texas, Hill and Vaughan, 505.
Del Rio formation, Cretaceous, Texas, Hill, 499.
Denison beds, Cretaceous, Texas, Hill, 499.
Denton subgroup, Cretaceous, Texas, Hill, 499.
Des Moines division, Carboniferous, Kansas, Missouri, Bain, 45.
Des Moines stage, Pennsylvania series, Carboniferous, Iowa, Wilder, 1139.
Dexter sands, Cretaceous, Texas, Hill, 499.
Ditney formation, Carboniferous, Indiana, Fuller and Ashley, 397.
Doré conglomerate, Huronian, Canada, Coleman and Willmott, 207, 208.
Double Mountain formation, Carboniferous, Texas, Hill, 499.
Dover limestone, Carboniferous, Kansas, Bownocker, 108.
Doxle shales, Carboniferous, Kansas, Prosser, 577.
Duck Creek formation, Cretaceous, Texas, Hill, 499.
Dundee limestone, Devonian, Michigan, Russell, 924.
Dundee limestone, included in Traverse group, Devonian, Michigan, Grabau, 417.
Dunkard formation, Carboniferous, Pennsylvania, Campbell, 158.
Dunkard formation, Carboniferous, Maryland, Martin, 735.
Dunkard formation, Carboniferous, Pennsylvania, White and Campbell, 1119.
Geologic formations—Continued.


Eagle Ford formation, Cretaceous, Texas, Dumble, 889.

Eagle Ford formation, Cretaceous, Texas, Hill, 499.

Eagle Ford formation, Cretaceous, Texas, Hill and Vaughan, 555.

Edwards limestone, Cretaceous, Texas, Hill and Vaughan, 555.

Edwards limestone, Cretaceous, Texas, Hill, 499.

Edwards limestone, Cretaceous, Texas, Hill and Vaughan, 555.

Eleanor slates, Huronian, Canada, Coleman and Willmott, 207, 208.

Elkhorn hornstone, Cambrian, Montana, Weed, 1095.

Elmendale formation, Carboniferous, Kansas, Beede, 76.

Elmendale formation, Carboniferous, Kansas, Prosser, 877.

Emporia limestone and shale, Carboniferous, Kansas, Prosser, 877.

Escondido series, Mesozoic, Alaska, Brooks, 134.

Escondido series, Tertiary, California, Hershey, 485.

Fairmount beds, Ordovician, Ohio and Indiana, Nickles, 805.

Fayetteville shale, Carboniferous, Arkansas, Adams, 7.

Fickett series, Carboniferous, Alaska, Schrader, 942.

Florence flint, Carboniferous, Kansas, Prosser, 877.

Floyd shale, Carboniferous, Alabama and Georgia, Hayes, 475.

Fordham gneiss, New York, Eckel, 322.

Fordham gneiss, Pre-Cambrian, New York, Merrill, 770.

Fort Payne chert, Carboniferous, Alabama and Georgia, Hayes, 475.

Fort Riley limestone, Carboniferous, Kansas, Prosser, 877.

Fort Worth formation, Cretaceous, Texas, Hill, 499.

Franciscan series, California, Lawson and Palache, 666.

Fredericksburg division, Cretaceous, Texas, Hill, 499.

Fredericksburg limestone, Cretaceous, Texas, Dumble, 889.

Fredericktown limestone, Cambrian, Missouri, Adams, 7.

Frog Mountain limestone, Devonian, Alabama, Hayes, 475.

Frio clays, Oligocene, Tertiary, Louisiana, Veatch, 1072.

Frio clays, Tertiary, Texas and Louisiana, Willbach, 570.

Fusion formation, Cretaceous, South Dakota, Darton, 246.
### Geologic formations—Continued.

<table>
<thead>
<tr>
<th>Formation</th>
<th>Age</th>
<th>State/Region</th>
<th>Reference(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartford (Topeka) limestone</td>
<td>Carboniferous</td>
<td>Kansas</td>
<td>Beede, 76</td>
</tr>
<tr>
<td>Hartshorne sandstone</td>
<td>Carboniferous, Indian</td>
<td>Territory</td>
<td>Taff, 1006, 1007</td>
</tr>
<tr>
<td>Harvey iron formation</td>
<td>Huronian, Canada</td>
<td>Coleman and Willmott, 598</td>
<td></td>
</tr>
<tr>
<td>Hensell sands</td>
<td>Cretaceous, Texas, Hill</td>
<td>499</td>
<td></td>
</tr>
<tr>
<td>Hinton formation</td>
<td>Carboniferous, West</td>
<td>Virginia, Campbell</td>
<td>157</td>
</tr>
<tr>
<td>Hobo-Gulch lime-shale</td>
<td>Cambrian</td>
<td>Montana, Weed</td>
<td>1095</td>
</tr>
<tr>
<td>Horsetail Creek beds</td>
<td>Tertiary, Colorado</td>
<td>Matthew</td>
<td>761</td>
</tr>
<tr>
<td>Horton series</td>
<td>Carboniferous</td>
<td>Indian Territory</td>
<td>Taff, 1006, 1007</td>
</tr>
<tr>
<td>Horton slates</td>
<td>Devonian or Carboniferous</td>
<td>Canada, Haycock</td>
<td>471</td>
</tr>
<tr>
<td>Howard limestone</td>
<td>Carboniferous, Kansas</td>
<td>Beede, 76</td>
<td></td>
</tr>
<tr>
<td>Hudson formation</td>
<td>Ordovician, New York</td>
<td>Eckel, 522</td>
<td></td>
</tr>
<tr>
<td>Hudson River group</td>
<td>Ordovician, New York</td>
<td>Clarke, 185</td>
<td></td>
</tr>
<tr>
<td>Hudson River shale</td>
<td>Ordovician, New Jersey</td>
<td>Kümmler and Weller, 609</td>
<td></td>
</tr>
<tr>
<td>Hudson schist</td>
<td>Silurian, New York</td>
<td>Merrill</td>
<td>770</td>
</tr>
<tr>
<td>Huntington series</td>
<td>Triassic, Oregon</td>
<td>Lindgren</td>
<td>687</td>
</tr>
<tr>
<td>Hunton limestone</td>
<td>Indian Territory</td>
<td>Taff, 1005</td>
<td></td>
</tr>
<tr>
<td>Huronian, Willmott</td>
<td></td>
<td>1190</td>
<td></td>
</tr>
<tr>
<td>Idaho formation</td>
<td>Tertiary, Idaho, Russell</td>
<td>923</td>
<td></td>
</tr>
<tr>
<td>Idalia shale</td>
<td>Tertiary, Missouri</td>
<td>Marbut</td>
<td>782</td>
</tr>
<tr>
<td>Illinois drift</td>
<td>Quaternary, Salisbury</td>
<td>New Jersey</td>
<td>930</td>
</tr>
<tr>
<td>Illinoisan drift</td>
<td>Quaternary, Leverett</td>
<td>685</td>
<td></td>
</tr>
<tr>
<td>Iowan, Quaternary</td>
<td>New Jersey, Salisbay</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>Iron Mountain porphyry</td>
<td>pre-Cambrian, Missouri</td>
<td>Adams, 7</td>
<td></td>
</tr>
<tr>
<td>Ithaca group</td>
<td>Devonian, New York</td>
<td>Clarke, 189</td>
<td></td>
</tr>
<tr>
<td>Izaak limestone</td>
<td>Ordovician, Missouri</td>
<td>Adams, 7</td>
<td></td>
</tr>
<tr>
<td>Jackson sandstone</td>
<td>Silurian, Indian Territory</td>
<td>Taff, 1005</td>
<td></td>
</tr>
<tr>
<td>Jackson, Eocene</td>
<td>Tertiary, Louisiana, Veatch</td>
<td>1072, 1073</td>
<td></td>
</tr>
<tr>
<td>Jackson stage</td>
<td>included in Eocene, Tertiary</td>
<td>Louisiana, Harris</td>
<td>445</td>
</tr>
<tr>
<td>Jackson stage</td>
<td>Tertiary, Louisiana</td>
<td>Casey</td>
<td>164</td>
</tr>
<tr>
<td>Jennings formation</td>
<td>Devonian, Maryland</td>
<td>Martin, 725</td>
<td></td>
</tr>
<tr>
<td>John Day series</td>
<td>Tertiary, Oregon</td>
<td>Knowlton, 598</td>
<td></td>
</tr>
<tr>
<td>Judith River beds</td>
<td>Cretaceous, Hatcher</td>
<td>463</td>
<td></td>
</tr>
<tr>
<td>Judith River beds</td>
<td>Cretaceous, Stanton</td>
<td>995</td>
<td></td>
</tr>
<tr>
<td>Kanawha black flint</td>
<td>Carboniferous, West</td>
<td>Virginia, White</td>
<td>1123</td>
</tr>
<tr>
<td>Kanawha formation</td>
<td>Carboniferous, West</td>
<td>Virginia, Campbell</td>
<td>157</td>
</tr>
</tbody>
</table>

### Geologic formations—Continued.

<table>
<thead>
<tr>
<th>Formation</th>
<th>Age</th>
<th>State/Region</th>
<th>Reference(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kansas, Quaternary</td>
<td>New Jersey, Salisbury</td>
<td>990</td>
<td></td>
</tr>
<tr>
<td>Kansas or pre-Kansas drift</td>
<td>Quaternary, Leverett</td>
<td>685</td>
<td></td>
</tr>
<tr>
<td>Kanutli series</td>
<td>probably Paleozoic, Alaska</td>
<td>Mendenhall, 763</td>
<td></td>
</tr>
<tr>
<td>Kanwaka shales</td>
<td>Carboniferous, Kansas</td>
<td>Beede, 76</td>
<td></td>
</tr>
<tr>
<td>Keene limestone</td>
<td>Devonian, Montana, Weed</td>
<td>1095</td>
<td></td>
</tr>
<tr>
<td>Kemp clay</td>
<td>Cretaceous, Texas, Hill</td>
<td>499</td>
<td></td>
</tr>
<tr>
<td>Kenaq series</td>
<td>probably Tertiary, Alaska</td>
<td>Mendenhall, 763</td>
<td></td>
</tr>
<tr>
<td>Kenaq series</td>
<td>Tertiary, Alaska</td>
<td>Schrader, 931</td>
<td></td>
</tr>
<tr>
<td>Kookuk limestone</td>
<td>Mississippian series</td>
<td>Carboniferous, Iowa,</td>
<td>Savage, 937</td>
</tr>
<tr>
<td>Ketehikan series</td>
<td>Upper Paleozoic, Alaska</td>
<td>Brooks, 134</td>
<td></td>
</tr>
<tr>
<td>Kiamichi formation</td>
<td>Cretaceous, Indian Territory</td>
<td>Taff, 1006</td>
<td></td>
</tr>
<tr>
<td>Kiamitla clays</td>
<td>Cretaceous, Texas, Hill</td>
<td>499</td>
<td></td>
</tr>
<tr>
<td>Kigluaik series</td>
<td>Alaska, Brooks, 132</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kigluaik series</td>
<td>older than Silurian, Alaska</td>
<td>Collier, 209</td>
<td></td>
</tr>
<tr>
<td>Kinderhook formation</td>
<td>Carboniferous, Iowa</td>
<td>Sardeson, 935</td>
<td></td>
</tr>
<tr>
<td>Kinderhook formation</td>
<td>Carboniferous, Mississippi Valley region, Keyes, 578</td>
<td></td>
<td></td>
</tr>
<tr>
<td>King limestone</td>
<td>Carboniferous, Missouri</td>
<td>Adams, 7</td>
<td></td>
</tr>
<tr>
<td>Kittatinny limestone</td>
<td>Cambrian, New Jersey</td>
<td>Kümmel and Weller, 609</td>
<td></td>
</tr>
<tr>
<td>Kuitia argillite</td>
<td>Algonkian, Montana</td>
<td>Willis, 1144</td>
<td></td>
</tr>
<tr>
<td>Knox dolomite</td>
<td>Silurian, Alabama and Georgi a, Hayes, 475</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knoxville beds</td>
<td>Cretaceous, Oregon</td>
<td>Knowlton, 599</td>
<td></td>
</tr>
<tr>
<td>Knoxville shales</td>
<td>Cretaceous, California</td>
<td>Lawson and Palache, 666</td>
<td></td>
</tr>
<tr>
<td>Koyukuk series</td>
<td>Cretaceous, Alaska</td>
<td>Schrader, 942</td>
<td></td>
</tr>
<tr>
<td>Kugruk group</td>
<td>Silurian or Devonian, Alaska</td>
<td>Collier, 209</td>
<td></td>
</tr>
<tr>
<td>Kuzitrin series</td>
<td>Alaska, Brooks, 132</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kuzitrin series</td>
<td>older than Silurian, Alaska</td>
<td>Collier, 209</td>
<td></td>
</tr>
<tr>
<td>Lafayette</td>
<td>Louisiana, Veatch</td>
<td>1072</td>
<td></td>
</tr>
<tr>
<td>Lafayette formation</td>
<td>Neocene, Maryland</td>
<td>Shattuck, 956</td>
<td></td>
</tr>
<tr>
<td>Lafayette (?) formation</td>
<td>Neocene (?), Tertiary, Georgia and Alabama, Hayes, 475</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lafayette formation</td>
<td>Tertiary, Quaternary</td>
<td>Louisiana, Clendenin, 198</td>
<td></td>
</tr>
<tr>
<td>Lakota formation</td>
<td>Cretaceous, South Dakota</td>
<td>Darton, 246</td>
<td></td>
</tr>
<tr>
<td>La Motte sandstone</td>
<td>Cambrian, Missouri</td>
<td>Adams, 7</td>
<td></td>
</tr>
<tr>
<td>Lang division</td>
<td>Pilocene, Tertiary, Calif o rnia</td>
<td>Hershey, 485</td>
<td></td>
</tr>
<tr>
<td>Laramie, Cretaceous</td>
<td>Montana, Willis, 1144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laramie, Cretaceous</td>
<td>Nebraska, Fisher, 372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laramie formation, Cretaceous, North Dakota, Babcock, 40.</td>
<td>Marion formation, Carboniferous, Kansas, Prosser, 577.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecompton limestone, Carboniferous, Kansas, Beede, 76.</td>
<td>Malawian formation, upper Cretaceous, Maryland, Shattuck, 395.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lignite, Eocene, Tertiary, Louisiana, Veatch, 1072.</td>
<td>Mauch Chunk formation, Carboniferous, Maryland, Martin, 785.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lignite formation, Eocene, Louisiana, Harris, 449.</td>
<td>Mauch Chunk formation, Carboniferous, Pennsylvania, Fuller, 395.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lignite stage, included in Eocene, Tertiary, Louisiana, Harris, 448.</td>
<td>Mauch Chunk shale, Carboniferous, Pennsylvania, Campbell, 158.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIsburne formation, Devonian, Alaska, Schrader, 942.</td>
<td>Medina shales, Silurian, Canada, Eills, 383.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logan group, Carboniferous, Ohio, Bownocker, 108.</td>
<td>Mercer group, included in Pottsville, Carboniferous, Pennsylvania, White and Campbell, 1119.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lookout sandstone, Carboniferous, Georgia, Hayes, 475.</td>
<td>Midway stage, included in Eocene, Tertiary, Louisiana, Harris, 448.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lorraine formation, Ordovician, Canada, Eills, 392.</td>
<td>Millburn beds, Carboniferous, Texas, Hill, 499.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lorraine formation, Ordovician, Kentucky, Foerste, 382.</td>
<td>Millersburg formation, Carboniferous, Indiana, Fuller and Ashley, 397.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lorraine group, Ordovician, Ohio and Indiana, Nickles, 865.</td>
<td>Millsap division, Carboniferous, Texas, Taff, 1007.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Angelan epoch, Quaternary, California, Hershey, 489.</td>
<td>Millstone grit, Carboniferous, Missouri, Adams, 7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Louisiana limestone, Carboniferous, Missouri, Adams, 7.</td>
<td>Minnekahta limestone, Carboniferous, South Dakota, Darton, 246.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Claiborne stage, included in Eocene, Tertiary, Louisiana, Harris, 448.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Helderberg, Silurian, Ohio, Bownocker, 108.</td>
<td>Minnewaste limestone, Cretaceous, South Dakota, Darton, 246.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Magnesian group, Silurian, Illinois, Alden, 15.</td>
<td>Missourian division, Carboniferous, Kansas, Missouri, Batin, 45.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lytton formation, Eocene, Tertiary, Texas, Hill and Vaughan, 505.</td>
<td>Monmouth formation, upper Cretaceous, Maryland, Shattuck, 295.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>McAlester shale, Carboniferous, Indian Territory, Taff, 1006, 1007.</td>
<td>Monongahela formation, Carboniferous, Maryland. Included in Coal Measures. Includes Pittsburg coal, Redstone limestone, Redstone coal, Sewickley limestone, Lower Sewickley coal, Upper Sewickley or Tyson coal, Sewickley sandstone, Unlontown coal, Unlontown sandstone, Wayneburg limestone, and Wayneburg coal, Clark and Martin, 178.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madison limestone, Carboniferous, Montana, Weed, 1095.</td>
<td>Monongahela formation, Carboniferous, Maryland, Martin, 785.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Street limestone, Cretaceous, Texas, Hill, 499.</td>
<td>Monongahela formation, Carboniferous, Pennsylvania, Campbell, 158.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maltrata, Cretaceous, Mexico, Villarrello and Bose, 1076.</td>
<td>Monongahela formation, Carboniferous, Pennsylvanian, Campbell, 158.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mansfield group, Carboniferous, Indiana, Ashley, 39.</td>
<td>Monongahela formation (includes Elk Garden coal, Tyson coal, Koontz coal) Carboniferous, Maryland, White, 1117.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Geologic formations—Continued.


Monroe formation, Silurian, Michigan, Kummel and Weller, 607.

Monroe shales, Devonian, New York, Eckel, 322.

Monterey series, California, Lawson and Palache, 666.

Monument Creek formation, Colorado, Lee, 671.

Morrison shales, Cretaceous, Colorado, Lee, 672.

Mount Auburn beds, Ordovician, Ohio and Indiana, Nickles, 805.

Mount Hope beds, Ordovician, Ohio and Indiana, Nickles, 805.

Nanushak series, Cretaceous, Alaska, Schrader, 942.

Navarro beds, Cretaceous, Texas, Hill, 499.

Navesink marls, included in Monmouth formation, Cretaceous, Maryland, Shattuck, 355.

Necoxtla, Cretaceous, Mexico, Villarello and Bose, 1076.

Neville limestone, Carboniferous, Iowa, Udden, 1041.

New Glasgow conglomerate, Permian, Carboniferous, Canada, Fletcher, 375.

Newark beds, Jurasssic, New Jersey, Merrill, 770.

Newark group, Jurasssic, New Jersey, Merrill, 770.

Newark system, Atlantic coast region, Hobbs, 514.

Newfoundland grit, Devonian, New Jersey, Kitchen and Weller, 593.

Newfoundland quartzite, Devonian, New York, Eckel, 322.

Niobrara formation, Cretaceous, South Dakota, Darton, 246.

Niobrara formation, Cretaceous, North Dakota, Babcock, 40.

Niobrara formation, Jurassic, Colorado, Hatcher, 456.

Niobrara group, Cretaceous, Kansas, Lindgren, 691.

Nome division, Tertiary, Arizona, Dumble, 394.

Nome series, Alaska, Brooks, 132.

Nome series, Paleozoic and Mesozoic, Alaska, Collier, 209.

Nulato sandstone, Alaska, Schrader, 381.

Ogallala formation, Tertiary, Wyoming, Nebraska, Adams, 8.

Olpe shales, Carboniferous, Kansas, Beede, 76.

Bull. 221—03——11
INDEX TO NORTH AMERICAN GEOLOGY,

Geologic formations—Continued.

Port Hudson clays, Columbia, Tertiary, Louisiana, Clendenin, 128.
Port Hudson stage, Quaternary, Louisiana, Harris, 448.
Portage sandstones, Devonian, New York, Luther, 711.
Potomac group, Carboniferous, Indian Territory and Arkansas, Taft, 1007.
Portomac formation, Cretaceous, Virginia, North Carolina, Darton, 245.
Potomac group, Cretaceous, Jurassic, and Cretaceous, Maryland, Clark and Bibbins, 176.
Potomac group, Maryland, Includes Patauxent, Arundel, Patapsco, and Raritan formations, Clark and Bibbins, 176.
Potomac group, Mesozoic, Maryland, Shattuck, 993.
Potosi limestone, Cambrian, Missouri, Nason, 792.
Potsdam group, Cambrian, Illinois, Alden, 15.
Potsdam sandstone, Cambrian, Canada, Ells, 334.
Pottsboro subgroup, Cretaceous, Texas, Hill, 499.
Pottsville formation, Carboniferous, Maryland, Included in Coal Measures. Includes Sharon sandstone, Sharon coal, Lower Connoquenessing sandstone, Quakertown coal, Upper Connoquenessing sandstone, Lower Mercer coal, Mount Savage fire-clay, Mount Savage or Upper Mercer coal, and Homewood sandstone, Clark and Martin, 178.
Pottsville formation, Carboniferous, Maryland, Martin, 723.
Pottsville formation (includes Bloomington coal, Mercer group) Carboniferous, Maryland, White, 1117.
Pottsville formation, Carboniferous, Pennsylvania, Fuller, 265.
Pottsville formation, Carboniferous, Pennsylvania, White and Campbell, 1119.
Pottsville sandstone, Carboniferous, Pennsylvania, Campbell, 158.
Pottsville series, Carboniferous, West Virginia, Campbell, 157.
Poughquag quartzite, Cambrian, New York, Eckel, 322.
Poughquag quartzite, Cambrian, New York, Merrill, 770.
Preston beds, Cretaceous, Texas, Hill, 499.
Princeton conglomerate, Carboniferous, West Virginia, Campbell, 157.
Puget formation, Tertiary, Washington, Smith, 978.
Quadrant formation, Carboniferous, Montana, Weed, 1095.
Quaternary, Alaska, Brooks, 132.
Quillinnomont formation, Carboniferous, West Virginia, Campbell, 157.
Ragged Point series, West Indies, Spencer, 987.
Raleigh sandstone, Carboniferous, West Virginia, Campbell, 157.
Rattlesnake formation, Tertiary, Oregon, Knowlton, 599.
Ravenna plutonic series, California, Hershey, 484.
Reagan sandstone, Cambrian, Indian Territory, Taft, 1006.
Red Bank sands, included in Monmouth formation, Cretaceous, Maryland, Shattuck, 995.
Red Beds, Permio-Triassic, Texas, Hill, 499.
Red Bluff epoch, Quaternary, California, Hershey, 489.
Richland division, Carboniferous, Texas, Hill, 499.
Richmond formation, Ordovician, Kentucky, Foerste, 382.
Richmond group, Ordovician, Ohio and Indiana, Nickles, 805.
Rockmart slate, Silurian, Georgia, Hayes, 475.
Rockwood formation, Silurian, Alabama and Georgia, Hayes, 475.
Roma formation, Cambrian, Alabama, Hayes, 475.
Rosamond series, Tertiary, California, Hershey, 485.
Roubidoux sandstone, Ordovician, Missouri, Adams, 7.
Roxton beds, Cretaceous, Texas, Hill, 499.
Sac limestone, Carboniferous, Missouri, Adams, 7.
Saccharoidal sandstone, Ordovician, Missouri, Adams, 7.
Saginaw, Carboniferous, Michigan, Lane, 647.
Saginaw formation, Carboniferous, Michigan, Russell, 924.
St. Clair limestone, Upper Silurian, Arkansas, Adams, 7.
St. Joseph limestone, Cambrian, Missouri, Nason, 792.
St. Louis, Mississippian series, Iowa, Leonard, 680.
St. Louis limestone, Mississippian series, Carboniferous, Iowa, Wilder, 1139.
St. Peter group, Silurian, Illinois, Alden, 15.
St. Peter sandstone, Ordovician, Sardeson, 932.
Sattara bed, Ordovician, Kentucky, Foerste, 382.
San Emidio series, California, Hershey, 484.
San Pedroan epoch, Quaternary, California, Hershey, 489.
San Pedro series, Pleistocene, California, Arnold and Arnold, 36.
Santa Claraan epoch, Quaternary, California, Hershey, 489.
Santo Fe schists, Cuba, Hayes, Vaughan, and Spencer, 473.
San Mateo formation, Cretaceous, Arkansas, Taft, 308.

Geologic formations—Continued.

Raritan formation, Cretaceous, Maryland, Clark and Bibbins, 176.
Raritan formation, Cretaceous, New York, Merrill, 773.
Raritan formation, Lower Cretaceous, Maryland, Shattuck, 995.
Rattlesnake formation, Tertiary, Oregon, Knowlton, 599.
Ravenna plutonic series, California, Hershey, 484.
Reagan sandstone, Cambrian, Indian Territory, Taft, 1006.
Red Bank sands, included in Monmouth formation, Cretaceous, Maryland, Shattuck, 995.
Red Beds, Permio-Triassic, Texas, Hill, 499.
Red Bluff epoch, Quaternary, California, Hershey, 489.
Richland division, Carboniferous, Texas, Hill, 499.
Richmond formation, Ordovician, Kentucky, Foerste, 382.
Richmond group, Ordovician, Ohio and Indiana, Nickles, 805.
Rockmart slate, Silurian, Georgia, Hayes, 475.
Rockwood formation, Silurian, Alabama and Georgia, Hayes, 475.
Roma formation, Cambrian, Alabama, Hayes, 475.
Rosamond series, Tertiary, California, Hershey, 485.
Roubidoux sandstone, Ordovician, Missouri, Adams, 7.
Roxton beds, Cretaceous, Texas, Hill, 499.
Sac limestone, Carboniferous, Missouri, Adams, 7.
Saccharoidal sandstone, Ordovician, Missouri, Adams, 7.
Saginaw, Carboniferous, Michigan, Lane, 647.
Saginaw formation, Carboniferous, Michigan, Russell, 924.
St. Clair limestone, Upper Silurian, Arkansas, Adams, 7.
St. Joseph limestone, Cambrian, Missouri, Nason, 792.
St. Louis, Mississippian series, Iowa, Leonard, 680.
St. Louis limestone, Mississippian series, Carboniferous, Iowa, Wilder, 1139.
St. Peter group, Silurian, Illinois, Alden, 15.
St. Peter sandstone, Ordovician, Sardeson, 932.
Sattara bed, Ordovician, Kentucky, Foerste, 382.
San Emidio series, California, Hershey, 484.
San Pedroan epoch, Quaternary, California, Hershey, 489.
San Pedro series, Pleistocene, California, Arnold and Arnold, 36.
Santa Claraan epoch, Quaternary, California, Hershey, 489.
Santo Fe schists, Cuba, Hayes, Vaughan, and Spencer, 473.
San Mateo formation, Cretaceous, Arkansas, Taft, 308.
Savanna formation, Carboniferous, Indian Territory, Taff, 1007.
Savanna sandstone, Carboniferous, Indian Territory, Taff, 1007.
Saugus division, Pliocene, Tertiary, California, Hershey, 485.
Saukememunk conglomerate, Devonian, New York, Eckel, 322.
Savery shales, Carboniferous, Kansas, Beede, 76.
Sewell formation, Carboniferous, West Virginia, Campbell, 157.
Shasta-Chico series, Cretaceous, California, Lawson and Palache, 666.
Sheppard quartzite, Algonkian, Montana, Willis, 1144.
Sierran, Hershey, 483.
Siyeh limestone, Algonkian, Montana, Willis, 1144.
Sierran, Hershey, 483.
Sierra formation, Carboniferous, West Virginia, Campbell, 157.
Sibley sandstone, Carboniferous, Carbon, New York, Eckel, 322.
Silo sandstone, Cretaceous, Indian Territory, Taff, 1006.
Simpson formation, Silurian, Indian Territory, Taff, 1006.
Skajit formation, Silurian, Montana, Willis, 1144.
Skymoon conglomerate, Devonian, New Jersey, Kümml and Weller, 699.
Slocan series, British Columbia, Corless, 214.
Smokey division, Pliocene, Tertiary, California, Hershey, 485.
Somerville formation, Carboniferous, Indiana, Fuller and Ashley, 397.
South Bosque marl, Cretaceous, Texas, Pru­ther, 861.
Spearfish shale, Triassic, South Dakota, Darton, 216.
Springvale beds, included in St. Louis, Carboniferous, Iowa, Udden, 1041.
Springvale beds, included in St. Louis, Mississippian series, Iowa, Savage, 937.
Standley shale, Silurian, Indian Territory, Taff, 1006.
Stockbridge dolomite, Silurian, New York, Merrill, 770.
Stockbridge limestone, Cambro-Silurian, New York, Eckel, 322.
Strawn division, Carboniferous, Texas, Taff, 1007.
Stringtown shale, Silurian, Indian Territory, Taff, 1006.
Stuver series, pre-Devonian, Alaska, Schrader, 942.
Summer stage, Carboniferous, Kansas, Pros­ser, 877.
Sunbury shale, Carboniferous, Ohio, Prosser, 876.
Sundance formation, Jurassic, South Dakota, Darton, 246.
Sunderland formation, Quadrinary, Maryland, Shattuck, 955.
Sycamore sands, Cretaceous, Texas, Hill, 499.
Sylvania sandstone, Carboniferous, Arkansas, Adams, 7.
Talihina chert, Silurian, Indian Territory, Taff, 1006.
Talbot formation, Quadrinary, Maryland, Shattuck, 955.
Taylor formation, Cretaceous, Texas, Hill, 499.
Taylor marl, Cretaceous, Texas, Hill and Vaughan, 505.
Tecumseh shales, Carboniferous, Kansas, Beede, 76.
Thompson Creek beds, Tertiary, Montana, Douglas, 291.
Tishomingo granite, pre-Cambrian, Indian Territory, Taff, 1006.
Totsen series, Silurian, Alaska, Schrader, 942.
Traverse group, Devonian, Michigan, Graham, 417.
Traverse group, Devonian, Michigan, Rus­sell, 224.
Traverse series, Upper Devonian, Michigan. Exact synonym, Thunder Bay series, Gra­bou, 417.
Travis Peak formation, Cretaceous, Texas, Hill, 499.
Travis Peak formation, Cretaceous, Texas, Hill and Vaughan, 505.
Trinton, Silurian, Illinois, Alden, 15.
Trinton formation, Ordovician, Ohio, Nickles, 805.
Trinton limestone, Ordovician, Canada, Eells, 333, 334.
Trinton limestone, Ordovician, Ohio, Bow­nercker, 108.
Trinton limestone, Ordovician, Vermont, Perkins, 850.
Trinchera division, Tertiary, Arizona, Dum­ble, 304.
Trinity division, Cretaceous, Texas, Hill, 499.
Trinity sand, Cretaceous, Arkansas, Taff, 1008.
Trinity sandstone, Cretaceous, Indian Territ­ory, Taff, 1006.
Turnley hornstones (Spokane shale?), Algon­kian, Montana, Weed, 1095.
Tuscau tuff, California, Anderson, 32.
Union shale, Devonian, Montana, Weed, 1095.
Unkpapa sandstone, Jurassic, South Dakota, Darton, 246.
Utica, Ordovician, Vermont, Perkins, 850.
Utica group, Ordovician, Ohio and Indiana, Nickles, 855.
Utica shale, Ordovician, Canada, Eells, 333, 334.
Uvalde formation, Neocene, Tertiary, Texas, Hill and Vaughan, 505.
Vallenar series, Upper Paleozoic?, Alaska, Brooks, 134.
Verdi beds, included in St. Louis, Mississip­pian series, Iowa, Savage, 937.
Verdi beds, Upper and Lower, included in St. Louis, Carboniferous, Iowa, Udden, 1041.
INDEX TO NORTH AMERICAN GEOLOGY,

Geologic formations—Continued.

Vicksburg group, Tertiary, Louisiana, Lerch, 682.
Vicksburg stage, included in Oligocene, Tertiary, Louisiana, Harris, 448.
Vinita beds, Triassic, Virginia, Woodworth, 1379.
Viola limestone, Silurian, Indian Territory, Taff, 1006.
Viola limestone, Cretaceous, Texas, Dumble, 309.
Wabash group, Carboniferous, Illinois, Indiana, Ashley, 39.
Wabaunsee stage, Carboniferous, Kansas, Prosser, 877.
Waldrip division, Carboniferous, Texas, Hill, 499.
Wales series, Lower Paleozoic?, Alaska, Brooks, 134.
Wheat clay, Cretaceous, Texas, Hill and Vaughan, 505.
Walnut formation, Cretaceous, Texas, Hill, 499.
Wapanucka limestone, Carboniferous, Indian Territory, Taff, 1006.
Warren beds, Ordovician, Ohio and Indiana, Nickles, 805.
Washington beds, Cretaceous, Texas, Hill, 499.
Washington limestone, Ordovician, Vermont, Richardson, 896.
Washita limestone, Cretaceous, Texas, Dumble, 309.
Washita division, Cretaceous, Texas, Hill, 499.
Watching basalt, Jurassic, New Jersey, Merrill, 770.
Wawa tuffs, Huronian, Canada, Coleman and Willmott, 207, 208.
Weberville formation, Cretaceous, Texas, Hill, 499.
Weberville formation, Cretaceous, Texas, Hill and Vaughan, 505.
Weianer quartzite, Cambrian, Alabama and Georgia, Hayes, 475.
Wellington shales, Carboniferous, Kansas, Prosser, 877.
Weno subgroup, Cretaceous, Texas, Hill, 499.
West Fork series, Alaska, Schrader, 931.
White River formation, Tertiary, Colorado, Matthew, 792.
White River formation, Tertiary, Montana, Douglass, 291.
White River series, Tertiary, Great Plains region, Hatcher, 461.
Whitecliffs formation, Cretaceous, Arkansas, Taff, 1008.
Wichita formation, Carboniferous, Texas, Hill, 499.
Wisconsin formation, Quaternary, Maryland, Shattuck, 555.
Wixard shales, Carboniferous, Kansas, Beebe, 76.
Winfield formation, Carboniferous, Kansas, Prosser, 877.
Wisconsin, Quaternary, New Jersey, Salisbury, 980.
Wisconsin drift, Quaternary, Leverett, 685.

Geologic maps—Continued.

Wiscony beds, included in Portage, Devonian, New York, Luther, 711.
Woodbine formation, Cretaceous, Texas, Hill, 499.
Woodford chert, Devonian, Indian Territory, Taff, 1006.
Wreford limestone, Carboniferous, Kansas, Prosser, 877.
Yonkers gneiss, New York, Eekel, 222.
Yonkers gneiss, post-Hudson, New York, Merrill, 770.

Geologic maps.

Alaska, Brooks, 132, 134.
Alaska, Collier, 209.
Alaska, Mendenhall, 762, 763.
Alaska, Schrader and Spencer, 932.
Arkansas, Branner, 110.
Arkansas, Taff, 1008.
California, Campbell, 156.
California, Hervey, 489.
California, Lawson and Palache, 666.
Canada, Bell, 80.
Canada, Brewer, 120.
Canada, Buchan, 144.
Canada, Coleman and Willmott, 208.
Canada, Dawson, 267, 268.
Canada, Els, 333.
Canada, Gwillim, 489.
Canada, Miller, 777.
Colombo, Lee, 671.
Connecticut, Hobbs, 512.
Georgia, Watson, 1093.
Greenland, Athorpe, 793.
Illinois, Leverett, 681.
Indian Territory, Taff, 1006, 1007.
Indiana, Leverett, 685.
Iowa, Leonard, 680.
Iowa, Macbride, 720.
Iowa, Savage, 937.
Iowa, Udden, 1041.
Iowa, Wilder, 1129.
Kentucky, Foerste, 382.
Louisiana, Harris, 448.
Louisiana, Veatch, 1071.
Maryland, Clark, 131, 131.
Maryland, Clark and Bibbins, 176.
Maryland, Clark and Martin, 178.
Maryland, Ries, 909.
Michigan, Lane, 650, 654, 657, 658.
Michigan, Leverett, 684, 685.
Michigan, Russell, 924.
Michigan, Taylor, 1015.
Minnesota, Winchell, 1165.
Missouri, Marbut, 722.
Montana, Douglass, 291.
Montana, Williams, 1144.
Nebraska, Adams, 8.
New Jersey, Salisbury, 930.
New Mexico, Johnson, 533.
New York, Cumings, 229.
New York, Cushing, 232.
New York, Eekel, 321, 322.
New York, Fairchild, 352.
New York, Finlay, 367.
New York, Merrill, 770.
New York, Ries, 908.

*Includes geologic maps of the whole or any part of the States mentioned.
Geologic maps—Continued.

New York, Van Ingen, 1062.
Ohio, Bownocker, 107.
Ohio, Fowke, 388.
Ohio, Griswold, 483.
Ohio, Leverett, 685.
Ohio, Todd, 1027.
Oregon, Lindgren, 687.
Pennsylvania, Leverett, 685.
Pennsylvania, Stock, 1093.
Texas, Hill, 498, 501.
Texas, Taff, 1097.
United States, Hayes, 476, 477.
United States, Maury, 760.
Vermont, Perkins, 849.
Virginia, Woodworth, 1179, 1180.
Washington, Smith, 978.
Washington, Spurr, 992.
West Indies, Spencer, 986.
Wyoming, Adams, 8.

Georgia.
Aplitic, pegmatite, and tourmaline bunches in Stone Mountain granite, Watson, 1090.
Granites and gneisses of Georgia, Watson, 1083.
Gold mining in McDuffie County, Flulcer, 381.
Mineral resources of Georgia, McCullie, 720.
Oligocene of western Europe and southern United States, Maury, 759.
Rocks and road-building materials of Georgia, McCullie, 721.
Rome Folio, Hayes, 475.
Southern Appalachian coal field, Hayes, 477.
Uranophane in Georgia, Watson, 1092.

Glacial geology.

Appalachian region.
Kansas glaciation and its effects on the river system of northern Pennsylvania, Williams, 1146.
Atlantic coast region.
Glacial geology of New Jersey, Salisbury, 990.
New York City Folio, Merrill, 770.
Canada.
Duration of Toronto interglacial period; Coleman, 202.
Glaciation in Atil district; Gwillim, 437.

Great Lakes region.
Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.
Emigrant diamonds in America, Hobbs, 513.
Ice work in southeastern Michigan, Sherzer, 969.
Mineralogy of Chicago area, Crook, 221.
Physical geography of New York State, Tarr, 1011.
Physiographical field notes in the town of Wauwatosa, Wisconsin, Bruneckcn, 143.
Report of bowlder committee, Wright, 1191, 1192.
Surface geology of Alcona County, Michigan, Leverett, 684.
Surface geology of Lapeer County, Michigan, Taylor, 1015.

Mississippi Valley region.
Bluffs of Missouri River, Owen, 832.

Glacial geology—Continued.

Mississippi Valley region—Continued.
Concrete examples from topography of Howard County, Calvin, 151.
Drift exposure in Tama County, Iowa, Savage, 936.
Geologic relations of the human relics of Lansing, Kansas, Chamberlin, 167.
Lansing skeleton, Winchell, 1174.
Man in the Ice Age at Lansing, Kansas, and Little Falls, Minnesota, Upham, 1049.

New England and New York.
Glacial phenomena in Adirondacks and Champlain Valley, Ogilvie, 812.
Instance of action of ice sheet upon projecting rock masses, Hobbs, 518.
Pleistocene geology of western New York, Fairchild, 352.

Ohio Valley region.
Ditney Folio, Fuller and Ashley, 397.
Drainage modifications in Knox, Licking, and Coshocton counties, Clark, 714.
Drainage modifications in Washington and adjacent counties, Ohio, Todd, 1026.
Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.
History of Little Miami River, Bownocker, 107.
Lake Licking, a contribution to the buried drainage of Ohio, Todd, 1025.
Pre-Glacial drainage conditions in vicinity of Cincinnati, Fowke, 388.
Pre-Glacial drainage of Ohio, Fowke, 387.
Pre-Glacial drainage of Wayne and adjacent counties, Ohio, Todd, 1027.
Report of bowlder committee, Wright, 1191, 1192.
Topography and geography of Bean Blossom Valley, Monroe County, Indiana, Marsters, 734.
Topography of Athens and vicinity, Ohio, Stearns, 997.
Valley of lower Tippecanoe River, Brezee, 114.
Wabash River terraces in Tippecanoe County, Indiana, McBeth, 717.

Rocky Mountain region.
Arapahoe glacier in 1902, Fenneman, 305.

General.
Cause of Glacial period, True, 1081.
Glacier work, Scott, 940.
New evidence of epeirogenic movements causing and ending the Ice Age, Upham, 1047.
Origin of eskers, Crosby, 225.
Post-Glacial origin and migration of life of northeastern United States, Adams, 2.
Recent progress in glaciology, Salisbury, 929.
Time divisions of Ice Age, Upham, 1046.
Variations of glaciers, Reid, 890.

Greenland.
Bidrag till nordstroa Gronlands geologi, Nathorst, 799.
Eisenfurhrenden gestoimen der insel Disko, Nicolai, 807.
Geologic du gronland, Rabot, 883.
Greenland—Continued.
Ilvait from Siorarsuit at Julianehaab, Bøggild, 97.
Mineralogisk resa i Syd-Groenland, Flink, 379.
Mineralogisk-petrograflske undersøgelser af
Groenlandske nefelinsyeniter og beslagtige
bøjgarter, Using, 1056.
Minerals from Narsarsuk, Flink, 380.
Minerals from the nephelite-syenite at Ju-
lanehaab, Bøggild and Winther, 98.
Nordhavets bund, Kolderup, 603.
Guatemala.
Cendres d’un volcan pres du Santa Maria,
Ordonez, 818.
Volcanic dust from Guatemala, Diller, 283.
Hawaiian Islands.
Characteristics of Kau, Emerson, 343.
Mohokan calderas on Hawaii, Hitchcock, 511.
Honduras.
Geological notes in Honduras, Baron, 63.
Hydrology.
Appalachian region.
Hydrography of southern Appalachian re-
gion, Pressey, 866, 867.
Atlantic coast region.
New York City Folio, Merrill, 770.
Sewage pollution near New York City, Leight-
ton, 674.
Central America.
Hydrography of the American Isthmus, Davis,
249.
Great Plains region.
Geology and water resources of Patrick and
Goshen Hole quadrangles, Adams, 8.
Water resources of Devils Lake region, Bab-
cock, 40.
Gulf region.
Subterranean waters of Louisiana, Harris, 449.
New England and New York.
Water powers of Maine, Pressey, 868.
Pacific coast region.
Development and application of water near
San Bernardino, Colton, and Riverside, Cali-
ifornia, Lippincott, 695, 696.
Storage of water on King River, California,
Lippincott, 694.
Water resources of Washington, Ruddy, 917.
Rocky Mountains region.
Geology and water resources of Snake River
Plains, Russell, 923.
Hydrographic history of South Dakota, Todd,
1028.
Water resources of State of Colorado, Follows,
362.
Southwestern region.
Irrigation systems of Texas, Taylor, 1017.
Water storage on Salt River, Arizona, Davis,
249.
General.
Accuracy of steam measurements, Murphy,
730.
Débris fans of the arid region, Hilgard, 496.
High plains and their utilization, Johnson,
555.
Motions of underground waters, Schlichter,
585.
Hydrology—Continued.
General—Continued.
Operations at river stations, Newell, 795, 796.
Preliminary list of deep borings in United
States, Darton, 243, 244.
Idaho.
Facts about Thunder Mountain, Bell, 85.
Geology and water resources of Snake River
Plains, Russell, 922.
Geology of Snake River Plains, Russell, 925.
Geology of Thunder Mountain and central
Idaho, Bell, 84.
Origin of fine gold of Snake River, Bell, 83.
Outline of Idaho geology and of principal ore
deposits of Lemhi and Custer counties,
Idaho, Bell, 81.
Thunder Mountain and Mackay, Idaho, Bell,
82.
Illinois.
Eastern interior coal field, Ashley, 29.
Carboniferous ferns from Mazon Creek, Sol-
lards, 951.
Carboniferous fish-fauna of Mazon Creek,
Eastman, 312.
Chicago Folio, Alden, 15.
Examination of soils from Illinois, Whitney,
1134.
Geological section across northern Illinois,
Udden, 1089.
Geological section in southern Illinois,
Nickles, 804.
Geological section, St. Louis to Shawneetown,
Nickles, 803.
Lead and zinc deposits of Mississippi Valley,
Van Hise and Bain, 1061.
Mineralogy of Chicago area, Crook, 221.
New forms of Carboniferous fish remains,
Eastman, 317.
Soils of Illinois, Leverett, 688.
Validity of Idiophyllum rotundifolium, Sel-
lards, 902.
Indian Territory.
Atoka Folio, Taff, 1006.
Southwestern coal field, Taff, 1007.
Indiana.
Chicago Folio, Alden, 15.
Contribution to Indiana paleontology, Part
IX, Greene, 428.
Contribution to Indiana paleontology, Part
X, Greene, 429.
Current notes on physiography, Davis, 262.
Ditney Folio, Fuller and Ashley, 397.
Drainage of southern Indiana, Newson,
797.
Eastern interior coal field, Ashley, 39.
Glacial formations and drainage features of
Erie and Ohio basins, Leverett, 686.
Geology of Cincinnati, Nickles, 805.
Lower Carboniferous area in Indiana, Hop-
kins, 531.
Natural gas explosion near Waldron, New-
son, 798.
Niagara group of unconformities, Elrod, 338.
Niagara limestones of Hamilton County,
Kindle, 681.
Paleontology of Bartholomew County, Indi-
ana, mammalian fossils, Edwards, 329.
Indiana—Continued.
Ripple marks in Hudson River limestone, Moore and Hole, 786.
Topography and geography of Bean Blossom Valley, Monroe County, Marders, 784.
Valley of lower Tippecanoe River, Breeze, 114.
Wabash River terraces in Tippecanoe County, McBeth, 717.

Iowa.
Analyses of Iowa building stones, Knight, 582.
Analysis of Mount Vernon loess, Knight, 583.
Carboniferous formations of Humboldt, Sar- deson, 935.
Concrete examples from the topography of Howard County, Calvin, 151.
Depositional equivalent of hiatus at base of our Coal Measures, Keyes, 568.
Devonian hiatus in continental interior, Keyes, 578.
Drift exposure in Tama County, Savage, 936.
Geological age of certain gypsum deposits, Keyes, 574.
Geological formations of Iowa, Calvin, 149.
Geology and geological resources of Iowa, Calvin, 148, 152.
Geology of Cherokee and Bunpa Vista counties, Macbride, 719.
Geology of Henry County, Savage, 937.
Geology of Jefferson County, Udden, 1041.
Geology of Wapello County, Leonard, 680.
Geology of Webster County, Wilder, 1139.
Iowa's iron mine, Beyer, 89.
Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
Mineral production of Iowa in 1901, Beyer, 88.
Names of coals west of Mississippi River, Keyes, 569.
Plagopteryx in Iowa Coal Measures, Udden, 1043.
Rhizopods in Pella beds, Udden, 1042.
Southwestern Iowa coal fields, Keyes, 572.
Tenth annual report of State geologist, Calvin, 150.
Terrace formation in Turkey River Valley, Finch, 366.
Western interior coal fields, Bean, 45.

Jurassic.
Atlantic coast region.
Former extent of Newark system, Hobbs, 515.
Geology of Coastal Plain formations, Shattuck, 955.
New York City Folio, Morrill, 776.
Great Basin region.
Historical geology of Esmeralda County, Nevada, Turner, 1039.
Jurassic dinosaurs, Gratacap, 427.
Oelrichia Folio, Darton, 246.
Greenland.
Birds on the North-east Greenland geology, Na- thorst, 783.
Rocky Mountain region.
Dinosaur beds of Grand River Valley of Colorado, Briggs and Farrington, 128.

Jurassic—Continued.
Rocky Mountain region—Continued.
Forelimb and manus of Brontosaurus, Hatcher, 458.
Geology and ore deposits of Elkhorn mining district, Montana, Weed, 1095.
Jurassic dinosaur deposits near Canyon City, Hatcher, 456.
Jurassic stratigraphy on west side of Black Hills, Loomis, 697.

Kansas.
Analyses of Mississippian limestone from the Atchison prospect well, Porter, 588.
Arrow-head found with bones of Bison occidentalis Lucas in western Kansas, Williston, 1048.
Atchison diamond-drill prospect hole, Langworthy, 699.
Coal Measures fauna studies, II, Beede, 76.
Cyclos from Coal Measures, Rogers, 912.
Fossil human remains found near Lansing, Holmes, 526.
Fossil man from Kansas, Williston, 11.
Fossil man of Lansing, Upham, 1051.
Geologic relations of human relics of Lansing, Calvin, 153.
Geologic relations of the human relics of Lansing, Chamberlin, 167.
Geological age of certain gypsum deposits, Keyes, 574.
Geology and mining interests of Kansas, Haworth, 465.
Kansas coal mines of the Missouri Valley, Crane, 216.
Lansing skeleton, Winchell, 1173.
Man in Kansas during the Iowan stage of the Glacial period, Upham, 1050.
Man in the Ice Age at Lansing, Kansas, and Little Falls, Minnesota, Upham, 1049.
Meteorite from Admire, Lyon County, Mer- rill, 771.
Meteorites of northwestern Kansas, Farrington, 358.
Missourian and Permo-Carboniferous fish- fauna of Kansas and Nebraska, Eastman and Barber, 318.
Names of coals west of Missouri River, Keyes, 569.
New Fossils from Upper Carboniferous of Kansas, Beede, 74.
New meteorite, Farrington, 357.
Oil and gas in Kansas, Haworth, 466.
Physiographic divisions of Kansas, Adams, 9.
Primitive man in the Ice Age, Upham, 1050.
Restoration of Dolichorhynchops osborni, Wil- liston, 1155.
Revised classification of Upper Paleozoic for- mations of Kansas, Pressor, 877.
Skull of Nyctodactylus, Williston, 1152.
Snoutfishes of Kansas, Hay, 468.
Tertiary terrane new in Kansas geology, Adams, 12.
Tests for gold and silver in shales from west- ern Kansas, Lindgren, 690, 691.
Uinucrinus, Springer, 990.
Variation of spiralia in Seminula argentia (Shepard) Hall, Beede, 75, 77.
Kansas—Continued.
Western interior coal field, Buhl, 45.
Winged reptiles, Williston, 1153.

Kentucky.
Cincinnati anticline in southern Kentucky, Foerste, 382.
Eastern interior coal field, Ashley, 39.
Lithographic stone deposits of eastern Kentucky, Ulrich, 1044.
Southern Appalachian coal field, Hayes, 477.
Zinc in Crittenden County, Wheeler, 1114.

Louisiana.
Accumulation of petroleum, Hayes, 478.
Geography and geology of Sabine River, Veatch, 1072.
Geological horizon of petroleum, Fishback, 370.
Geology along the Ouachita, Veatch, 1073.
Geology of Mississippi embayment, Harris, 448.
Hills of Louisiana south of V. S. & P. Railroad, Lerch, 682.
Jackson outcrops on Red River, Casey, 164.
Oil in Louisiana, Harris, 450.
Oligocene of western Europe and southern United States, Maury, 760.
Preliminary report upon bluff and Mississippi alluvial lands of Louisiana, Clendenin, 199.
Preliminary report upon Florida parishes of east Louisiana, Clendenin, 198.
Salines of north Louisiana, Veatch, 1071.
Subterranean waters of Louisiana, Harris, 449.
Sulphur deposits of Calcasieu Parish, Kerr, 566.

Maine.
Apatite from Minot, Wolff and Palache, 1176.
Description of four meteorites, Ward, 1084.
Water powers of Maine, Pressey, 868.

Maryland—Continued.
Pleistocene problem in Maryland, Shattuck, 957.
Potomac group in Maryland, Clark and Bibbins, 177.
Recent work in Piedmont area of northern Maryland, Mathews, 739.
Reports on Cecil County, Clark, 180.
Reports on Garrett County, Clark, 181.
Types of Maryland Tertiary mollusca in British Museum, Newton, 799.

Massachusetts.
Babingtonite from Somerville, Palache and Fraprie, 834.
Clays of Boston Basin, Brown, 139.
Geological and botanical notes, Cape Cod and Chappaquiddick Island, Hollick, 524.
Holyokeite from the Trias of Massachusetts, Emerson, 341.
Landslides of Mount Greylock and Briggsville, Massachusetts, Cleland, 193.
Study of hard-packed sand and gravel, Crosby, 224.
Tidal scour in harbors, Frzell, 383.
Tidal scour in harbors, Hodgdon, 520.
Terraces of Westfield River, Davis, 225.

Mexico.
A puntes relativos al mineral de Taxco de Alarcon, Salazar, 927.
Iacuirbito; or, the great meteorite of Sinaloa, Ward, 1085.
Bibliography of Mexican geology and mining, Aguilar y Santillan, 13.
Caliche of southern Arizona, Blake, 91.
Cananea copper deposits, Weed, 1102.
Casas Grandes meteorite, Tassin, 1014.
Coal fields of Las Esperanzas, Lundow, 708.
Criadero de fierro del Cerro de Mercado, Durango, Rangel, 883.
Criaderos de fierro de la hacienda de Vaquerias, Villarello and Bose, 1076.
Description of four meteorites, Ward, 1084.
Estado de Tabasco, Lagueurre, 617.
Gems and precious stones of Mexico, Halse, 441.
Gems and precious stones of Mexico, Kunz, 612.
Geographic and geologic features, and their relation to the mineral products of Mexico, Hilla, 500.
Geographichal and geological distribution of mineral deposits of Mexico, Aguilera, 14.
Geologia del valle de Chihualango, Ordoiez and Bose, 828.
Independencia de los volcanes de grietas preexistentes, Bose, 103.
Jurassic fossils from Durango, Johnson, 554.
Kupfererzlagerstätte in Nieder-Californien, Krusch, 607.
Mineral zone of Santa Maria del Rio, Manzano, 732.
Mines and minerals of Guanajuato, Blake, 94.
Mines in the States of Chihuahua, Sinaloa, and Sonora, Weed, 199.
Ming district of Pachuca, Ordoiez, 819.
Naturlicher koks in den Santa Clara kohlenfeldern, Sonora, Ochsenius, 819.
**Mexico—Continued.**

Onyx-marble deposits of Jimulco, Ordóñez, 817.

Roche basaltique de la Sierra Verde, Krouschhoff, 606.

Section across the Sierra Madre Occidental of Chihuahua and Sinaloa, Weed, 1099.

Sierra Mojada and its ore deposits, Emmons, 350.

Sierra Mojada and its ore deposits, Malcolmson, 731.

Structure of ore-bearing veins in Mexico, Hube, 440.

Topographie und geologie von Mexico, Felix and Lenk, 360.

Upland placers of La Cienega, Sonora, Hill, 503.

Value of ores in Mexico, Emmons, 344.

**Michigan.**

Asphalt in Delta County, Lane, 649.

Clays and shales of Michigan, Ries, 966.

Coal of Michigan, Lane, 657.

Deep wells and prospects for oil and gas, Lane, 633.

Economic geology, Lane, 631.

Economic geology of Michigan, Lane, 648.

Field work of 3000, Savicki, 988.

Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.

Geological cross-sections of Keweenaw Point, Hubbard, 540.

Geological map of Michigan, Lane, 654.

Geological Survey of Michigan, Savicki, 988.

Geology of Menominee Range, Tullst, 543.

Geothermal gradient in Michigan, Lane, 650.

Ice work in southeastern Michigan, Sherzer, 959.

Limestones, Lane, 652.

Marls and clays, Fall, 354.

Northern Interior coal field, Lane, 658.

Port Huron oil field, Gordon, 411.

Portland cement industry in Michigan, Russell, 924.

Relation of vein at Central mine, Keweenaw Point, to Kearsarge conglomerate, Hubbard, 541.

Report of State geologist, Lane, 646.

Report on Arenac County, Gregory, 430, 431.

Salt, Lane, 655.

Stratigraphy of Traverse group, Grabau, 417.

Subsurface geology of Alcona County, Lane, 650.

Suggestion from State geologist, Lane, 647.

Surface geology of Alcona County, Leverett, 684.

Surface geology of Lapeer County, Taylor, 1015.

Topography, soils, water resources, etc., of Muskegon County, McLoeth, 730.

Wave cutting on west shore of Lake Huron, Gordon, 412.


**Mineralogy.**

Action of ammonium chloride upon silicates, Clarke and Steiger, 182.

**Mineralogy—Continued.**

Alunite-jarosite group of minerals, Hillebrand and Penfield, 569.

Apatite, from Minot, Maine, Wolff and Palache, 822.

Archean rocks of Ottawa Valley, Osann, 822.

Bubingtonite from Massachusetts, Palache and Fraupie, 834.

Bunzburgite, or the great meteorite of Sinaloa, Mexico, Ward, 1085.

Barites of Nebraska and Bad Lands, Barbour, 51.

Bibliography and index of North American geology, paleontology, petrology, and mineralogy for 1901, Weeks, 1107.

Bibliography of North American geology, paleontology, petrology, and mineralogy, for 1892-1900, Weeks, 1104.

Casas Grandes meteorite, Tassin, 1014.

Columbinites from southern California, Eakle, 310.

Composition of tourmaline, Kunz, 611.

Composition of yttrialite, Hillebrand, 658.

Concentration of barium in limestone, Dickson, 278.

Condition of nickel in nickeliferous pyrrhotite from Sudbury, Dixon, 287.

Crystalline development of calaverite, Smith, 974.

Crystallography of calcites of New Jersey trap region, Rogers, 914.

Crystallization of mohawkite, domeykite, and other similar arsenides, Koenig, 600.

Deposits of copper ores at Dunktown, Tennessee, Kemp, 962.

Deposits of wolmaminite in the Black Hills, Irving, 546.

Description of four meteorites, Ward, 1084.

Descriptive catalogue of collections of gems of U. S. National Museum, Tassin, 1012.


Determination of relative refractive indices of minerals, Luqner, 607.

Discovery of meteoric iron in Nebraska, Barbour, 53.

Epidote crystals from Alaska, Palache, 883.

Francheville meteorite, Preston, 872, 873.

Gems and precious stones of Mexico, Halse, 441.

Gems and precious stones of Mexico, Kunz, 612.

Geological relations and distribution of platinum and associated metals, Kemp, 563.

Geology and ore deposits of Elkhorn mining district, Montana, Ward, 1095.

Gold belt of Blue Mountains of Oregon, Lindgren, 687.

Guide to mineralogic collections of New York State Museum, Whitlock, 1133.

Hussakite, a new mineral, and its relation to xenotime, Kraus and Reitinger, 605.

Ilvaite from Siorarsuit at Julianehaab, Bøggild, 97.

Index to North American geology, paleontology, petrology, and mineralogy for 1892-1900, Weeks, 1105.
Internal structure of cliftonite, Davison, 266.
Lead and zinc deposits of Ozark region, Bain, 44.
Lead and zinc deposits of Ozark region, Van Hise, 1057.
Melanochalcite and keweeuawite, Koenig, 601.
Meteorite from Admiral, Kansas, Merrill, 770.
Meteorite from Algoa, Kewannee County, Wisconsin, Hobbs, 519.
Meteorite studies, Farrington, 356.
Meteorites of northwestern Kansas, Farrington, 358.
Mineralogical notes, Rogers, 1009.
Mineralogy in the Syd-Groenland, Flink, 379.
Mineralogisk-petrograflske undersoegelser af Groenlandske nefelin syeniter og beslægte døde bjærgarter, Ussing, 1056.
Mineralogizisk rea i Syd-Groenland, Flink, 379.
Minerals described.
Actinolite, Whitlock, 1133.
Aegirine, Flink, 380.
Aegirite, Clarke and Steiger, 182.
Aeolite, Whitlock, 1133.
Albite, Whitlock, 1133.
Albite, Flink, 380.
Albite, Whitlock, 1133.
Albrite, Whitlock, 1133.
Albite, Bowman, 106.
Albite, Whitlock, 1133.
Albite, Wolff and Palache, 1176.
Apophyllite, Clarke and Steiger, 182.
Apophyllite, Tassin, 1012.
Apophyllite, Whitlock, 1133.
Aragonite, Crook, 221.
Aragonite, Tassin, 1012.
Aragonite, Whitlock, 1133.
Aragonite, Whitlock, 1133.
Arsenopyrite, Whitlock, 1133.
Arsenopyrite, Whitlock, 1133.
Asbestos, Whitlock, 1133.
Asphalt, Crook, 221.
Asphaltum, Whitlock, 1133.
Atacamite, Whitlock, 1133.
Augite, Crook, 221.
Augite, Whitlock, 1133.
Augite, Rogers, 914.
Aurichalcite, Wood, 1095.
Autunite, Whitlock, 1133.
Axinite, Tassin, 1012.
Axinite, Wood, 1095.
Axinite, Whitlock, 1133.
Azurite, Crook, 221.
Azurite, Tassin, 1012.
Azurite, Wood, 1095.
Azurite, Whitlock, 1133.
Babingtonite, Palache and Fraprie, 884.
### Mineralogy—Continued.

**Minerals described—Continued.**

<table>
<thead>
<tr>
<th>Mineral</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barite</td>
<td>Bain, 44</td>
<td></td>
</tr>
<tr>
<td>Barite</td>
<td>Hoffmann, 521</td>
<td></td>
</tr>
<tr>
<td>Barite</td>
<td>Rogers, 913</td>
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<tr>
<td>Barite</td>
<td>Tassin, 1012</td>
<td></td>
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<tr>
<td>Barite</td>
<td>Whitlock, 1133</td>
<td></td>
</tr>
<tr>
<td>Barites</td>
<td>Barbour, 51</td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>Dickson, 273</td>
<td></td>
</tr>
<tr>
<td>Bauxite</td>
<td>Whitlock, 1133</td>
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<tr>
<td>Beryl</td>
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<td>Beryl</td>
<td>Whitlock, 1133</td>
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<td>Beryllonite</td>
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<td>Biotite</td>
<td>Crook, 221</td>
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<td>Biotite</td>
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<td>Biotite</td>
<td>Whitlock, 1133</td>
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<td>Bitumen</td>
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<td>Bismuth</td>
<td>Whitlock, 1133</td>
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<td>Tassin, 1012</td>
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<td>Hedburg, 480</td>
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<td>Bricholite</td>
<td>Böggild and Winther, 98</td>
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<td>Brochantite</td>
<td>Whitlock, 1133</td>
<td></td>
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<td>Brookite</td>
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<td>Calcite</td>
<td>Whitlock, 1133</td>
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<tr>
<td>Calcite-sand crystal</td>
<td>Barbour and Fisher, 56</td>
<td></td>
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<tr>
<td>Calaverite</td>
<td>Lindgren, 794</td>
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<td>Canerinite</td>
<td>Clarke and Steiger, 182</td>
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<td>Clarke and Steiger, 182</td>
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</tbody>
</table>
Mineralogy—Continued.

Minerals described—Continued.

Diopside, Whitlock, 1133.
Dolomite, Bain, 44.
Dolomite, Crook, 221.
Dolomite, Rogers, 914.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Domeykite, Koenig, 600, 601.
Dumortierite, Tassin, 1012.
Dioptase, Whitlock, 1133.
Dolomite, Bain, 44.
Dolomite, Crook, 221.
Dolomite, Rogers, 914.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Dolomite, Weed, 1095.
Dolomite, Whitlock, 1133.
Dolomite, Crook, 221.
Mineralogy—Continued.

Minerals described—Continued.

Minerals described—Continued.

Linarite, Weed, 1395.
Lorenzenite, Flink, 380.
Magnesite, Hoffmann, 521.
Magnesite, Whitlock, 1133.
Magnetite, Crook, 221.
Magnetite, Flink, 380.
Magnetite, Ransome, 885.
Magnetite, Tassin, 1012.
Malachite, Weed, 1095.
Malachite, Whitlock, 1133.
Malachite, Tassin, 1012.
Malachite, Whitlock, 1133.
Malaeolite, Whitlock, 1133.
Maltha, Crook, 221.
Manganite, Whitlock, 1133.
Marcasite, Bain, 44.
Marcasite, Crook, 221.
Marcasite, Julien, 550.
Marcasite, Tassin, 1012.
Marcasite, Van Hise, 107.
Marcasite, Whitlock, 1133.
Marlonite, Branner, 111.
Malamomeite, Spurr, 992.
Melanochalcite, Koenig, 601.
Menacanite, Whitlock, 1133.
Mercury, Whitlock, 1133.
Meteorite, Barbour, 63.
Meteorite, Farrington, 356, 357, 358.
Meteorite, Hobbs, 519.
Meteorite, Merrill, 771.
Meteorite, Preston, 871, 872, 873.
Meteorite, Tassin, 1013, 1014.
Meteorite, Ward, 1083, 1084, 1085.
Microcline, Bowman, 106.
Microcline, Crook, 221.
Microcline, Tassin, 1012.
Microcline, Weed, 1095.
Microcline, Whitlock, 1133.
Microcline, Tassin, 1012.
Microcline, Whitlock, 1133.
Oligoclase, Osmann, 822.
Oligoclase, Tassin, 1012.
Olivine, Tassin, 1012.
Onyx, Kunz, 612.
Opal, Tassin, 1012.
Opal, Whitlock, 1133.
Orthoclase, Clarke and Steiger, 182.
Orthoclase, Crook, 221.
Orthoclase, Tassin, 1012.
Orthoclase, Whitlock, 1133.
Orpiment, Whitlock, 1133.
Osmellite, Whitlock, 1133.
Parisite, Flink, 380.
Pectolite, Clarke and Steiger, 182.
Pectolite, Crook, 221.
Pectolite, Whitlock, 1133.
Pentamethide, Tassin, 1012.
Pentamethide, Whitlock, 1133.
Petroilmenite, Crook, 221.
Petroilmenite, Whitlock, 1133.
Phlogopite, Tassin, 1012.
Phlogopite, Whitlock, 1133.
Plagioclase, Crook, 221.
Plagioclase, Whitlock, 1133.
Plumbogranite, Hillebrand and Penfield, 509.
Plumbogranite, Tassin, 1012.
Plumbogranite, Whitlock, 1133.
Plumbogranite, Tassin, 1012.
Plumbogranite, Whitlock, 1133.
Plumbogranite, Tassin, 1012.
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Plumbogranite, Whitlock, 1133.
### Mineralogy—Continued.

#### Minerals described—Continued.

<table>
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<tr>
<th>Mineral</th>
<th>Author</th>
<th>Page</th>
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### Mineralogy—Continued.

#### Minerals described—Continued.

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<th>Mineral</th>
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Mineralogy—Continued.

Minerals described—Continued.

Turquoise, Tassin, 1012.
Turquoise, Whitlock, 1133.
Umatite, Whitlock, 1133.
Ulexite, Whitlock, 1133.
Uraninite, Whitlock, 1133.
Uranophane, Hoffmann, 521.
Uranophane, Watson, 1092.
Uvarovite, Whitlock, 1133.
Vancuimite, Whitlock, 1133.
Variscite, Tassin, 1012.
Vermiculites, Crook, 221.
Vesuvianite, Rogers, 913.
Vesuvianite, Turner, 1032.
Vesuvianite, Whitlock, 1133.
Vesuvianite, Turner, 1032.
Vesuvianite, Tassin, 1012.
Vesuvianite, Turner, 1032.
Vesuvianite, Whitlock, 1133.
Vivianite, Turner, 1035.
Vivianite, Whitlock, 1133.
Vivianite, Turner, 1032.
Vivianite, Klein, 913.
Vivianite, Turner, 1035.
Vivianite, Whitlock, 1133.
Wernerite, Whitlock, 1133.
Wollastonite, Weed, 1095.
Wollastonite, Whitlock, 1133.
Wulfenite, Whitlock, 1133.
Zincblende, Kemp, 502.
Zincite, Whitlock, 1133.
Zinnwaldite (Polylithionite), Flink, 380.
Zircon, Flink, 380.
Zircon, Osann, 822.
Zircon, Tassin, 1012.
Zircon, Whitlock, 1133.
Zoisite, Kemp, 562.

Minnesota.

Geological atlas with synoptical descriptions,
Winchell, 1168.
Geology of Mesabi Iron region, Leith, 676.
Geology of Minnesota, Hall, 439.
Geology of Mississippi Valley at Little Falls,
Winchell, 1170.
Iron ores of Minnesota, Winchell, 1169.
Kakabikansing, Brower, 138.
Man in the Ice Age at Lansing, Kansas, and
Little Falls, Minnesota, Upham, 1049.
Mesabi Iron Range, Leith, 676.
New iron-bearing horizon in Keweenaw in
Minnesota, Winchell, 1167.
Origins and distribution of Minnesota clays,
Berkey, 87.
Original source of Lake Superior iron ores
Spurr, 994.
Sacred Heart geyser spring, Berkey, 86.
Vermilion district of Minnesota, Clements, 197.

Missouri.

Bluffs of Missouri River, Owen, 882.
Cambrian age of magnesian limestones of
Missouri, Keyes, 573.
Comparison of fossil diatoms, Elmore, 337.
Cyclos from Coal Measures, Rogers, 912.
Depositional equivalent of hiatus at base of
our Coal Measures, Keyes, 568.
Devonian hiatus in continental interior,
Keyes, 578.
Devonian interval in Missouri, Keyes, 576.
Disseminated lead ores of southeast Missouri,
Nason, 791.
Evolution of lowlands of southeastern Mis­souri, Marbut, 733.
Fossils from subcarboniferous rocks of north­eastern Missouri, Rowley, 915.
Geological relations and age of St. Joseph and
Potosi limestones of Missouri, Nason, 792.
Lead and zinc deposits of Mississippi Valley,
Keyes, 570.
Lead and zinc deposits of Mississippi Valley,
Van Hise and Bain, 1061.
Lead and zinc deposits of Ozark region, Bain,
44.
Lead and zinc deposits of Ozark region, Van
Hise, 1057.
Missouri and Arkansas zinc mines, Branner,
111.
Missouri and Arkansas zinc mines, Hedburg,
480.
Missouri and Arkansas zinc mines, Nichols,
801.
Names of coals west of Missouri River,
Keyes, 569.
New forms of Carboniferous fish remains,
Eastman, 317.
Occurrence of greenockite on calcite from
Joplin, Cornwall, 215.
Physiography and geology of Ozark region,
Adams, 7.
St. Genevieve meteorite, Ward, 1083.
Western interior coal field, Bain, 46.

Montana.

Conditions in veins and faults in Butte, Bra­den, 169.
Corundum in Montana, Edman, 327.
Cretaceous and Lower Tertiary section in
south central Montana, Douglass, 290.
Dinosaurs in Fort Pierre shales, Douglass, 292.
Discovery of Torrejon mammals in Montana,
Douglass, 298.
Fossil plants from vicinity of Porcupine
Butte, Knowlton, 997.
Fossil mammals of White River beds, Doug­lass, 291.
Geology and ore deposits of Elkhorn mining
district, Wood, 1065.
Igneous rocks of Algolican series, Finlay,
309.
Influence of country rock on mineral veins,
Wood, 1096.
Microscopical petrography of Elkhorn mining
district, Barrell, 64.
Our northern Rockies, Chapman, 170.
Overthrust in northern Rockies, Willis, 1147.
Montana—Continued.
Physiography of northern Rocky Mountains, Willis, 114.
Rocky Mountain coal fields, Storrs, 1004.
Stratigraphy and structure of Lewis and Livingston ranges, Willis, 1144.
Structure of Front Range, northern Rocky Mountains, Willis, 1145.

Nebraska.
Barites of Nebraska and Bad Lands, Barbour, 59.
Chalcedony-lime nuts from Bad Lands, Barbour, 52.
Comparison of fossil diatoms, Elmore, 337.
Discovery of meteoric iron in Nebraska, Barbour, 53.
Discovery of the Laramie in Nebraska, Fisher, 372.
Geological bibliography of Nebraska, Barbour and Fisher, 55.
Geology and water resources of Patrick and Goshen Hole quadrangles, Adams, 8.
Limestone quarries of Nebraska, Fisher, 371.
Missourian and Permo-Carboniferous fish fauna of Kansas and Nebraska, Eastman and Barbour, 378.
New bryozoa from Coal Measures of Nebraska, Condra, 213.
Pleistocene fauna from Hay Springs, Matthew, 757.
Volcanic ash in Nebraska soils, Barbour, 54.

Nevada.
Alunite-jarosite group of minerals, Hillebrand and Penfield, 509.
Delamar and Horn-Silver mines, Emmons, 345.
Geological features of Nevada, Loudenbach, 698.
Gold-bearing quartzites of eastern Nevada, Weeks, 1108.
Historical geology of Esmeralda County, Turner, 1633.
Minerals from Pacific States, Turner, 1632.
Nitrato deposits, Humboldt County, Wagenen, 1078.
Notes on Tonopah, Easton, 310.
Owseola tungsten deposits, Smith, 722.
Triassic Ichthyopterygia from California and Nevada, Merriam, 766.
Triassic Ichthyosaurus from California and Nevada, Osborn, 831.

Newfoundland.
Pyrites deposits at Port au Port, Meissner, 761.

New Jersey.
Artesian wells, Woolman, 1181.
Copper leaching at the American copper mine, Bond, 92.
Crania of Trenton, Hrdlicka, 539.
Crystallography of calcites of New Jersey trap region, Rogers, 1010.
Glacial geology of New Jersey, Salisbury, 930.
Leucite-tinguata from Beemerville, Wolff, 1175.
Minning industry, Kümnel, 608.
New York City Folio, Merrill, 770.
Rocks of Green Pond Mountain region, Kümnel and Weller, 609.

New Mexico.
Alunite-jarosite group of minerals, Hillebrand and Penfield, 509.
Anatelite-bearing camptonite from New Mexico, Ogilvie, 813.
Applications of geology to economic problems in New Mexico, Herrick, 492.
Burro Mountain copper district, Rudd, 889.
Coal, graphite, and oil field of Raton, Lakes, 621.
Geological reconnaissance in eastern Valencia County, Johnson, 583.
Morrison shales of southern Colorado and northern New Mexico, Lee, 672.
Rocky Mountain coal fields, Storrs, 1004.

New York.
Notes of a mastodon found, Gordon, 413.
Cement industry in New York, Eckel, 321.
Contact lines of Upper Siluric formations on the Brockport and Medina quadrangles, Clarke, Ruedemann, and Luther, 192.
Crown Point section, Raymond, 887.
Description of State geologic map, Merrill, 769.
Eruptive dikes in Syracuse, Schneider, 940.
Field work in town of Minerva, Finlay, 367.
Fossil alga from Chemung of New York, White, 1116.
Geological history of hematite iron ores of Antwerp and Fowler belt in New York, Crosby, 222.
Glacial phenomena in Adirondacks and Champlain Valley, Ogilvie, 812.
Graptolite (Levis) facies of Beekmantown formation in Rensselaer County, Ruedemann, 918.
Growth and development of Goniatitatus thuriecui McCoy, Ruedemann, 919.
Guide to mineralogic collections of New York State Museum, Whitlock, 1133.
Gypsum industry in New York State, Parsons, 1383.
Hamilton fossils from Bethany, Monroe, 782.
Indigene and alien faunas of New York Devonian, Clarke, 188.
Lime and cement industries of New York, Ries, 998.
Lower Silurian system of eastern Montgomery County, Cumings, 229.
Nematophyton in New York State Museum, Prosser, 878.
New genus of Paleozoic brachiopods, Eunoa, Clarke, 186.
New York City Folio, Merrill, 770.
Notes on Paleozoic crustaceans, Clarke, 190.
Origin of faunas of Marcellus limestones of New York, Clarke, 191.
Paleontologic results of areal survey of Olean quadrangle, Clarke, 188.
Petrography of dikes in Syracuse, Smyth, 980.
Pleistocene geology of western New York, Fairchild, 352.
Physical geography of New York State, Tarr, 1011.
Potsdam sandstone of Lake Champlain Basin, Van Ingen, 1062.
Pre-Cambrian outlier at Little Falls, Herkimer County, Cushing, 233.
New York—Continued.

Pre-Glacial course of middle portion of Gene
see River, Whitbeck, 1115.
Quarry industry in southeastern New York,
Eckel, 322.
Rate of lateral erosion at Niagara, Wright,
1193.
Recent geologic work in Franklin and St.
Lawrence counties, Cushing, 232.
Report of State paleontologist, Clarke, 183, 189.
Sewage pollution near New York City, Leight-
ton, 575.
Stratigraphic value of Portage sandstones,
Luther, 711.
Stratigraphy of Mohawk Valley, Prosser, 875.
Structural details in Green Mountain region,
Dale, 235.
Syllabus for field and laboratory work in
geology, Tarr, 1010.
Tourmaline contact zones near Alexandria
Bay, Smyth, 981.
Tree trunks found with mastodon remains,
Gordon, 414.

Nicaragua.

Additions to the list of Nicaragua volcanic
eruptions in historic time, Crawford, 229.
Earthquakes in Nicaragua, Crawford, 217.
List of most important volcanic eruptions and
earthquakes in western Nicaragua within
historic time, Crawford, 219.
Volcanoes and earthquakes in Nicaragua,
Crawford, 218.

Nomenclature.

Base level, grade, and peneplain, Davis, 238.
Epearchen interval, Lawson, 662.
Geest, McGee, 727.
Mauch Chunk of Pennsylvania, Stevenson,
1001.
Names of coals west of Mississippi River,
Keys, 569.
Nomenclature of Lake Superior formations,
Willmott, 1160.
Significance of term Sierran, Hershey, 483.
Suggestion from the State geologist, Lane, 647.

North Carolina.

Atlantic coast Triassic coal field, Woodworth,
1179.
Gold in North Carolina, Moore, 786.
Marble and talc of North Carolina, Pratt, 864.
Mining industry in North Carolina, Pratt, 865.
Norfolk Folio, Barton, 245.

North Dakota.

Lignite coal fields of North Dakota, Wilder,
1138.
Lignite deposits of North Dakota, Wilder,
3137.
Niagara meteorite, Preston, 571.
Rocky Mountain coal fields, Storrs, 1004.
Story of the prairies, Willard, 1141.
Water resources of Devils Lake region, Bab-
cock, 40.

Ohio.

Berea Grit oil sand in Cadiz quadrangle, Gris-
wold, 433.
Bituminous coal field of Ohio, Haseltine, 451.
Drainage modifications in Knox, Licking,
and Coshocton counties, Clark, 174.

Ohio—Continued.

Drainage modifications in Washington and
adjacent counties, Tight, 1026.
Geology of Cincinnati, Nickles, 805.
Glacial formations and drainage features of
Eric and Ohio basins, Leverett, 685.
History of Little Miami River, Bowmocker,
107.
Lake Licking, a contribution to the buried
drainage of Ohio, Tight, 1025.
New-fossil plants from Carboniferous and
Devonian, Herzer, 494.
New fossil sponge from Coal Measures, Herzer,
493.
New fossils from Corniferous, Hamilton, and
Medina shales, Herzer, 495.
New points on the fin attachment of Dinich-
thys and Cliododus, Clark, 175.
Ohio bowlders containing huronite, Wright,
1189.
Oil and gas producing rocks of Ohio, Bow-
mocke, 108.
On an unrecognized coal horizon in north­
eastern Ohio, Claypole, 193.
On the Salina group in northeastern Ohio,
Claypole, 194.
Pre-Glacial drainage conditions in vicinity of
Cincinnati, Fowke, 388.
Pre-Glacial drainage of Ohio, Fowke, 387.
Pre-Glacial drainage of Wayne and adjacent
counties, Todd, 1027.
Psaronius, Herzer, 491.
Report of bowlder committee, Wright, 1191,
1192.
Shaw mastodon, Hayes, 479.
Six new species, including two new genera,
of fossil plants, Herzer, 492.
Structure of Dinichthys, Wright, 1188.
Sunbury shale of Ohio, Prosser, 876.
Topography of Athens and vicinity; Stearnis,
967.

Oklahoma.

Invertebrate paleontology of Red Beds, Beede,
78.

Ordovician.

Appalachian region.
Paleozoic Appalachia, Willis, 1143.
Rocks of Green Pond Mountain region, Küm-
mel and Weller, 699.

Canada.

Annual report of geological section of Ottawa
Field-Naturalists' Club, Amil, 23.
Geology and natural resources of Ottawa and
vicinity, Ells, 533.
Geological correlations in New Brunswick,
Bailey, 41.
Geology of Province of Quebec, Ellis, 534.
New Brunswick, Bailey, 43.

Mississippi Valley region.
Evolution of lowlands of southeastern Mis-
souri, Marbut, 733.
Fauna of Magnesian series, Sardeison, 933.
Geological formations of Iowa, Calvin, 49.
Geological section across northern Illinois,
Udden, 1039.
Lead and zinc deposits of Mississippi Valley,
Van Hise and Bean, 1061.

Bull. 221—03—12
INDEX TO NORTH AMERICAN GEOLOGY,

178

[REV. 221.

INDEX TO NORTH AMERICAN GEOLOGY, [BULL. 221.

Ordovician—Continued.

Mississippi Valley region—Continued.

Physiography and geology of the Ozark region, Adams, 7.

Saint Peter sandstone, Sardeson, 922.

New England and New York.

Analysis of Washington marble, Richardson, 895.

Crown Point section, Raymond, 887.

Geology of Grand Isle, Perkins, 850.

Lime and cement industries of New York, Ries, 908.

Lower Silurian system of eastern Montgomery County, New York, Cumings, 229.

Quarry industry in southeastern New York, Eckel, 322.

Report of State paleontologist, Clarke, 183.

Ohio Valley region.

Geology of Cincinnati, Nickles, 805.

Oil and gas producing rocks of Ohio, Bow- nocker, 108.

Ripple marks in Hudson River limestone, Moore and Hole, 786.

Rocky Mountain region.

Geology of Castle Rock region, Colorado, Lee, 671.

Southwestern region.

Geography and geology of Black and Grand prairies, Hill, 499.

Oregon.

Bohemia mining district of western Oregon, Kimball, 580.

Bonax mine in southern Oregon, Dennis, 277.

Coal fields of Pacific coast, Smith, 978.

Contribution to petrography of John Day Basin, Calkins, 147.

Coe's Bay coal fields, Rockwell, 911.

Cretaceous deposits of Pacific coast, Anderson, 33.

Fossil flora of John Day Basin, Knowlton, 599.

Fossil shells of John Day region, Stearns, 998.

Geology and petrography of Crater Lake National Park, Diller and Patton, 285.

Gold belt of Blue Mountains, Lindgren, 687.

Gold mining in eastern Oregon, Beede, 78.

Geological horizon of the Kanawha black flint, White, 1123.

Invertebrate paleontology of Red Beds, Beede, 78.

List of fossils from lower half of Conemaugh formation near Morgantown, West Virginia, White, 1124.

Mauch Chunk of Pennsylvania, Stevenson, 1001.

Micro-organismes des combustibles fossiles, Renanit, 894.

Missourian and Perm-Carboniferous fish fauna of Kansas and Nebraska, Eastman and Barbour, 318.

Myalina from Coal Measures of Texas, Whitefield, 1129.

New bryozoans from Coal Measures of Illinois, Condra, 213.

New forms of Carboniferous fish remains, Eastman, 317.

New fossil plants from Carboniferous and Devonian, Herzer, 494.

New fossil sponge from Coal Measures, Herzer, 493.

New fossils from Upper Carboniferous of Kansas, Beede, 74.

Paleontologic results of areal survey of Olean quadrangle, Clarke, 185.

Phycroptyx in Iowa Coal Measures, Udden, 1083.

Potash sandstone of Lake Champlain Basin, Van Ingen, 1062.

Psaronius, Herzer, 491.

Revision of Phyllocarida from Chemung and Waverly groups of Pennsylvania, Beecher, 73.

Six new species, including two new genera, of fossil plants, Herzer, 492.
Paleontology—Continued.
Carboniferous—Continued.
Six new species, Knowlton, 598.
Stigmaria structure, Poole, 855.
Upper Permian in western Texas, Girty, 408.
Validity of Idiophyllum rotundifolium, Seldars, 992.
Cretaceous.
Correction of Professor Osborn's note, Hatcher, 463.
Cretaceous and Tertiary section in Montana, Douglass, 290.
Cretaceous deposits of Pacific coast, Anderson, 33.
Cretaceous turtles, Wieland, 123.
Dinosaurs in Fort Pierre shales, Douglass, 292.
Distinctive characters of the Mid-Cretaceous fauna, Osborn, 828.
Eosaurus parvus, a new genus and species of sauropoda, Peterson and Gilmore, 851.
Fossils of the Texas Cretaceous, Prather, 800.
Genera and species of Trachodontidae Marsh, Hatcher, 459.
Geological and botanical notes: Cape Cod and Chappaquidick Island, Hollick, 524.
Geology of Potomac group in middle Atlantic slope, Clark and Bibbins, 176.
Greatest flying creature, the great pterodactyl Ornithostoma, Lucas, 703.
Heteroceras simplicostatum, Whitfield, 1130.
Hind limb of Protostega, Villiston, 1150.
Laramie Cretaceous of Wyoming, Williston, 1159.
New and little-known fossil vertebrates, Hatcher, 453.
New genera and species from Belly River series, Lambe, 639.
New or little-known extinct reptiles, Williston, 1156.
New species of Baena from Laramie beds of Wyoming, Hay, 467.
New vertebrates of the Mid-Cretaceous, Osborn, 829.
Reconstruction of a Cretaceous dinosaur, Beecher, 71.
Restoration of Dolichorhyncops osborni, Williston, 1156.
Salal rigid, Hatcher, 455.
The skeleton of Nyctodactylyus with restoration, Williston, 1156.
The teredo-like shell from Laramie group, Whitfield, 1131.
Trionyx forcaeus Leidy and Trionyx vagans Cope from Cretaceous rocks of Alberta, Lambe, 641.
The turtle from Cretaceous rocks, Lambe, 637.
Ulnatracinus, Springer, 989.
Winged reptiles, Williston, 1159.
Devonian.
Discovery of teeth in Baptanodon, Gilmore, 406.
The fore limb and manus of Brontosaurus, Hatcher, 458.
Jurassic dinosaur deposits near Canyon City, Hatcher, 456.
Jurassic dinosaurs, Gratacap, 427.
Jurassic fossils from Durango, Mexico, Johnson, 584.

Quaternary.
Discovery of a musk ox skull, Hatcher, 462.
Fossil nut pine, Knowlton, 594.
Geologic relations of the human relics of Lansing, Kansas, Chamberlin, 167.
Lists of organic remains of Ottawa district, Ami, 18.
Loess of Natchez, Miss., Shimel, 361.
Canarian fossil insects, Scudder, 948.
Crinial of Trenton, New Jersey, Hrdlička, 509.
Mammalian fauna. Part X, Greene, 429.
Coral reefs—ancient and modern, Grant, 421.
Carboniferous exposure in Anderson, Mattress, 794.
INDEX TO NORTH AMERICAN GEOLOGY,

Paleontology—Continued.

Quaternary—Continued.

Paleontology of Bartholomew County, Indiana, mammalian fossils, Edwards, 329.

Pleistocene fauna from Hay Springs, Nebraska, Matthew, 757.

Postglacial origin and migrations of life of northeastern United States, Adams, 2.

Shaw mastodon, Hayes, 479.

Work of prehistoric scolytid, Hopkins, 527.

Ordovician.

Annual report of geological section of Ottawa Field-Naturalists' Club, Ami, 23.

Crown Point section, Raymond, 887.

Fauna of Magnesian series, Sardeson, 933.

Geology of Cincinnati, Nickles, 805.

Lists of fossils from formations along Ottawa River, Ami, 19.

Lists of organic remains of Ottawa district, Ami, 18.

New bryozoan Homotrypa bassleri, Nickles, 806.

Quantitative study of variation in the fossil brachiopod Platystrophia lynx, Cumings and Mauck, 231.

Revision of bryozoan genera Dckayia, Deckayella, and Heterotrypa of the Cincinnati group, Cumings, 230.

St. Peter sandstone, Sardeson, 932.

Sponges of Chazy formation, Seely, 950.

Silurian.

Crotalocrinus cora (Hall), Weller, 1109.

Genus Trimerella, with descriptions of species from Silurian rocks of Kseauatin, Whitecaves, 1126.

Geological notes, Grant, 422.

Graptolite (Levis) facies of Beekmantown formation in Rensselaer County, New York, Ruedemann, 918.

Growth and development of Goniochrysis thureauli McCoy, Ruedemann, 919.

Indigene and alien faunas of New York Devonic, Clarke, 188.

New fossils from Corniferous, Hamilton, and Medina shales, Herzer, 495.

New genus of Paleozoic brachiopods,乙pona, Clarke, 186.

Notes on Paleozoic crustaceans, Clarke, 190.

Opening address, Grant, 420.

Report of State paleontologist, Clarke, 183.

Stratigraphic value of Portage sandstones, Luther, 711.

Tertiary.

American Eocene primates, Osborn, 827.

Chalcedony-lime nuts from Bad Lands, Bourboun, 52.

Comparison of fossil Silbatoms, Elmore, 337.

Cranial elements and dentitions of Titanotherium, Hatcher, 454.

Cretaceous and Tertiary section in Montana, Douglass, 290.

Discovery of Torrejon mammals in Montana, Douglass, 290.

Earliest Tertiary coral reefs in Antilles and United States, Vaughan, 1066.

Eocene mammalia in Marsh collection, Wortman, 1183-1187.

Bibliography of North American geology, paleontology, petrology, and mineralogy for 1892-1900, Weeks, 1104.

Eocene of western Europe and southern United States, Muury, 760.

Oligocene canidae, Hatcher, 460.

Oligocene of western Europe and southern United States, Muury, 760.

Oligocene titanotheres, Osborn, 825.

Origin of Oligocene and Miocene deposits of Great Plains, Hatcher, 461.

Rodent from Colorado Miocene, Matthew, 755.

Skeleton of Titanotherium dispar Marsh, Hatcher, 457.

Skull of Bunelurus, Matthew, 753.

Skull of Dinocyon from Miocene of Texas, Matthew, 752.

Successors of certain North American primates, Wortman, 1182.

Triassic Ichthyosaurs from California and Nevada, Osborn, 831.

Types of Maryland Tertiary mollusca in British Museum, Newton, 800.

Triassic.

Fossils, possibly Triassic, in bowlder clay of Kings County, Haycock, 472.

Triassic Ichthyopterygia from California and Nevada, Merriam, 766.

Triassic Ichthyosaurs from California and Nevada, Osborn, 881.

Triassic reptilia from northern California, Merriam, 767.

General.

Aggregated colonies in Madreporarian corals, Duerten, 298.

Animals before man in North America, Lucas, 707.

Animals of the past, Lucas, 700.

Beinbau der trilobiten, Jaekel, 547.

Bibliography and catalogue of fossil vertebrates, Hay, 470.

Bibliography and catalogue of fossil vertebrates, Dean, 276.

Bibliography and index of North American geology, paleontology, petrology, and mineralogy for 1901, Weeks, 1107.

Bibliography of North American geology, paleontology, petrology, and mineralogy for 1892-1900, Weeks, 1104.
Paleontology—Continued.

General—Continued.

Biometric evidence in problem of paired limbs of vertebrates, Dean, 274.

Bones of a mastodon found, Gordon, 413.

Boring algae as agents in disintegration of corals, Duerden, 299.

Constructing an extinct monster from fossil remains, Lucas, 706.

Crinoid genera Sagenocrinus, Forbesicrinus, and allied forms, Springer, 990.

Cuban fossil mammals, Vaughan, 1065.

Deceptive fossilization of certain pelecypod species, Sardeson, 934.

Development of septa in Paleozoic corals, Duerden, 302.

Dinosaurs or terrible lizards, Lucas, 702.

Dolichocephaly and brachycephaly in the lower mammals, Osborn, 825.

Ein beitrag zur kenntniss von Diplocaulus Cope, Broili, 131.

Fossil flower, Knowlton, 591.

Fossil fruits and lignites of Brandon, Vermont, Knowlton, 596.

Fossil hickory nuts, Knowlton, 590.

Fossil mosses, Knowlton, 595.

Fossil sequoias in North America, Knowlton, 592.

Historical evidence, as to origin of paired limbs of vertebrates, Dean, 273.

Hombplastic characters in aquatic air-breathing vertebrates, Williston, 1157.

Homoplasy as a law of latent or potential homology, Osborn, 823.

Index to North American geology, paleontology, petrology, and mineralogy for 1892-1900, Weeks, 1105.

Law of adaptive radiation, Osborn, 824.

Methods of collecting, preparing, and mounting fossils, Barbour, 50.

Monocraterion and Oldhamia, Matthew, 745.

Morphology of the Madreporaria, Duerden, 301.

Observations of Orestes St. John on Paleozoic fishes, Eastman, 316.

On the genus Peripristis, St. John, Eastman, 313.

Paleontological collections of geological department of American Museum of Natural History, Hovey, 534.

Paleontological notes, Case, 163.

Paleontological speculations, III, Gratiacap, 426.

Paleontology and zoology, Whiteaves, 1128.

Paleozoic seas and barriers in eastern North America, Ulrich and Schuchert, 1151.

Phylogeny of the edestacean group of sharks, Eastman, 313.

Relationships of the Rugosa (Tetracoralla) to living Zoanthete, Duerden, 300.

Skull of Hypisodus, Matthew, 756.

Skull of Nycodactylus, Williston, 1162.

Snoutfishes of Kansas, Hay, 488.

Paleontology—Continued.

General—Continued.

Stratigraphy versus paleontology in Nova Scotia, Matthew, 749.

Stratigraphy versus paleontology in Nova Scotia, White, 1118.

Strophomena and the type of the genus, Miller, 776.

Studies of gastropoda, Grabau, 416.

Tree trunks found with mastodon remains, Gordon, 414.

Ueber Pelecypoden-zonen in der Trias Nord-Amerikas, Smith, 970.

Variation of spiralia in Seminula argentica (Shepard) Hall, Beece, 75, 77.

Ventral integuments of trilobites, Beecher, 69, 72.

Genera and species described.

Acanthoceras compressum n. sp., Anderson, 33.

Acanthodes beecheri n. sp., Eastman, 314.

A. beecheri Eastman, 312.

A. marshi n. sp., Eastman, 314.

A. marshi Eastman, 312.

Adocus (?) Lincolni Cope, Lambe, 659.

A. variolosus Cope (sp.), Lambe, 649.

A. variolosus (Cope), Lambe, 587.

Ascius simulans n. sp., Knowlton, 599.

A. agabus perditus n. sp., Scudder, 925.

A. agaricocrinus praecursor n. sp., Rowley, 915.

A. agnostus trisectus Salt., mut. germanus n. mut., Matthew, 743.

A. trisectus Salt., mut. ponepunctus n. mut., Matthews, 743.

A. agroechaurus maximus n. sp., Douglass, 291.

A. minimus n. sp., Douglass, 291.

Ailanthus ovata Lesq., Knowlton, 599.

Acer pendrioli Lesq., Knowlton, 599.

A. gigas n. sp., Knowlton, 599.

A. medianum n. sp., Knowlton, 599.

A. merriami n. sp., Knowlton, 599.

A. minor n. sp., Knowlton, 599.

A. oregonianum n. sp., Knowlton, 599.

A. osmonti n. sp., Knowlton, 599.

A. sp. Knowlton, Knowlton, 599.

Acervularia Schweigger, Lambe, 638.

A. davidsoni Milno Edwards and Halme, Lambe, 688.

A. graculis Biltinges (sp.), Lambe, 688.

Acidota crenata Fabr., var. nigra n. var., Scudder, 948.

Acipenser albertensis n. sp., Lambe, 639.

Acrophyllum Thomson and Nicholson, Lambe, 639.

A. oueidiiense Billings (sp.), Lambe, 639.

Acrothela abavia n. sp., Matthew, 746.

A. avia, Matthew, 746.

A. avia-putcis n. mut., Matthew, 746.

A. prolent n. sp., Matthew, 746.

A. aerothyra n. gen., Matthew, 741, 744.

A. proavia, Matthew, 746.

A. proavia-cressa n. mut., Matthew, 746.

A. proavia mut. prima, Matthew, 744.

A. proavia-prima n. mut., Matthew, 746.

A. signata n. sp., Matthew, 746.

A. signata-prima, Matthew, 746.

A. signata-prima, Matthew, 746.

A. signata-sera, Matthew, 746.

A. signata-tarda, Matthew, 746.
Paleontology—Continued.

Genera and species described—Continued.

Acrotreta Kutorga, Walcott, 1880.
argenta n. sp., Walcott, 1880.
baleyi, Matthew, Walcott, 1880.
bisecta, Matthew, 746.
bisecta n. sp., Matthew, 743.
bisecta Matthew, Walcott, 1880.
concentrica n. sp., Walcott, 1880.
conula n. sp., Walcott, 1880.
convexa n. sp., Walcott, 1880.
curvata n. sp., Walcott, 1880.
definita n. sp., Walcott, 1880.
gemma Billings, Walcott, 1880.
gracia n. sp., Walcott, 1880.
idahoensis n. sp., Walcott, 1880.
idahoensis alta n. var., Walcott, 1880.
idahoensis sulcata n. var., Walcott, 1880.
inflecta Matthew, Walcott, 1880.
miser Billings, Walcott, 1880.
ophirensis n. sp., Walcott, 1880.
ophirensis rugosus n. var., Walcott, 1880.
ovalis n. sp., Walcott, 1880.
papillata n. sp., Matthew, 746.
papillata-prima n. mut., Matthew, 746.
papillata var., Matthew, 746.
parvula Wallerius, Walcott, 1880.
primasea n. sp., Walcott, 1880.
sagittalis Salter, Walcott, 1880.
sagittalis magna Matthew, Walcott, 1880.
sagittalis transversa Hartt, Walcott, 1880.
schmalensei n. sp., Walcott, 1880.
seebachi n. sp., Walcott, 1880.
signalis n. sp., Walcott, 1880.
sipo n. sp., Matthew, 746.
socialis v. Seebach, Walcott, 1880.
subconica Kutorga, Walcott, 1880.

Actinocystis Lindström, Lambe, 638.
varibalis Whiteaves, Lambe, 638.
Allophylum amplus Marsh, Osborn, 826.

Arilicamels n. gen., Matthew, 751.

Archeophyllum Dana, Lambe, 638.
eximium Billings (sp.), Lambe, 638.
mammillare Dale Owen (sp.), Lambe, 638.
pentagonum Goldfuss (sp.), Lambe, 638.

Aralia? sp. Knowlton, Knowlton, 599.
siouxensis Barbour, Knowlton, 590.

Arctotherium acutidens n. gen. and sp., Douglass, 291.

Arthrophycus elegans n. sp., Herzer, 495.

Ascoceras n. gen., Herzer, 495.
ohioense n. sp., Herzer, 495.
ternacameratum n. sp., Herzer, 495.

Asaphellus homfrayi var., Matthew, 746.

Baculites fairbanksi n. sp., Anderson, 33.

Badister antecursor n. sp., Scudder, 948.

Bacons antiqua n. sp., Lambe, 639.
hatcheri Hay, Lambe, 639.
hatcheri n. sp., Hay, 467.

Bakewellia gouldii n. sp., Beede, 78.

Baptanodon discus?, Gilmore, 405.

Bathyuriscus howelli n. sp., Lambe, 639.
hatcheri Hay, Lambe, 639.
hatcheri n. sp., Hay, 467.

Bathuriscus howelli Walcott, Woodward, 1177.

Batostomella leia n. sp., Condra, 213.

Bellerophon bretonensis n. sp., Matthew, 746.
insula n. sp., Matthew, 746.

Belotaphyllum n. sp., Scudder, 948.

Berberis? gigantea n. sp., Knowlton, 599.

Blastomyx? sp., Matthew, 751.

Blastomeryx? sp., Matthew, 751.

Boreodon matutinus n. sp., Lambe, 639.

Bryogeny alpha n. gen. and sp., Douglass, 291.

Bryogeny alpha n. gen. and sp., Douglass, 291.
Bottosaurus perrugosus Cope, Lambe, 639.
Bradoria (?) ornata n. sp., Matthew, 747.
Bradoria rugulosa, Matthew, 747.
Bradoria scrutator, Matthew, 747.
Bradoria vigilans, Matthew, 747.
Bradorona observator n. sp., Matthew, 747.
Bradorona perspicator n. sp., Matthew, 747.
Bradorona spectator, n. sp., Matthew, 747.
Broggerian subg. of Obolus, Walcott, 1080.
Brontosaurus, Hatcher, 458.
Brontotherium bucco Cope, Osborn, 820.
Campodus de Konick, Eastman, 317.
Campodus corrvigatus (Newberry and Worthen), Eastman, 317.
Campodus variabilis (Newb. & W.), Eastman, 311.
Capromeryx furcifer n. gen. and sp., Matthew, 757.
Campyloprion, Eastman, 314.
Cauopteris magnifica n. sp., Herzcr, 492.
Cayugam n. gen., Lambe, 638.
whiteavesiana n. sp., Lambe, 638.
Celastrns confluens n. sp., Knowlton, 599.
dignatus n. sp., Knowlton, 599.
Centrinus disjunctus n. sp., Scudder, 948.
Ceriocrinus harshbargeri u. sp., Beede, 74.
Chanapsosaurus annectens Cope, Lambe, 639.
Chonetes cinctatus n. sp., Herzer, 495.
Chonotia ? reversa n. sp., Sardeson, 932.
Cratsegus flavescens Newb., Knowlton, 599.
imparsi n. sp., Knowlton, 599.
Crepidiophyllum Nicholson and Thompson, Lambe, 638.
archai Billings (sp.), Lambe, 638.
colligatum Billings (sp.), Lambe, 638.
Crocodilus humilis Leidy, Lambe, 638.
Gastrotheca sagittata, Sellards, 951.
trisecta n. sp., Sellards, 951.
Crotalocrinus cora (Hall), Weller, 1109.
Cryptobium cinctum n. sp., Scudder, 948.
detectum n. sp., Scudder, 948.
Ctenacanthus, Eastman, 314.
coxians St. John and Worthen, Eastman, 314.
decussatus n. sp., Eastman, 314.
gracilimus N. & W., Eastman, 314.
longinodosus n. sp., Eastman, 314.
lucasi n. sp., Eastman, 314.
secomatus St. John and Worthen, Eastman, 314.
solidus n. sp., Eastman, 314.
sp. indet., Eastman, 314.
spectabilis St. John and Worthen, Eastman, 314.
varians St. John and Worthen, Eastman, 314.
Cucumites lesquereuxii n. sp., Knowlton, 596.
Cunninghamites elegans (Corda) Endl., Hollick, 524.
Cyathocrinus snivelyi n. sp., Rowley, 915.
Cyathophyllum Goldfuss, Lambe, 638.
Cymatium bidentatum n. sp., Knowlton, 599.
Cladocardium dominicus Marsh, Beecher, 74.
(Thepestus) annectens Marsh, Hatcher, 453.
Paleontology—Continued.

Genera and species described—Continued.

Cystiphyllum prostratum n. sp., Herzer, 495.
retrosum n. sp., Herzer, 495.
scyphus n. sp., Herzer, 495.
sulcatum Billings, Lambe, 638.
vesiculose Goldfuss (sp.), Lambe, 638.

Cystodictya anisopora n. sp., Condra, 213.
lipoides n. sp., Condra, 213.
Dacentrurus nov. nom., Lucas, 704.
Dammara borealis Heer, Hollick, 524.
Daphnenus Leidy, Hatcher, 460.
dodgesii, Hatcher, 460.
fenius Scott, Hatcher, 460.
Deinodon explanatus Cope (sp.), Lambe, 639.
horridus Leidy, Lambe, 639.
Denayella, Cumings, 230.
Derayfa, Cumings, 230.

perfrondosa, n. n., Cumings, 230.
ubranchus n. sp., Cumings, 230.
ulrichi-bolata n. var., Cumings, 230.

Desmoceras ashlandicum n. sp., Anderson, 33.
colusnse n. sp., Anderson, 33.
dilleri n. sp., Anderson, 33.
hoffmanni Gabb, Anderson, 33.
jugalis Gabb, Anderson, 33.
leonte n. sp., Anderson, 33.
subquadratum n. sp., Anderson, 33.
sugatum Forbes, Anderson, 33.
voyi n. sp., Anderson, 33.
Dielasma schucherti n. sp., Beebe, 78.
Dikelocerulus minnesotaensis Owen, Sardeson, 933.

Dinichthys, Clark, 176.
Dinichthys, Wright, 1158.
pustulosus, Eastman, 316.

Dinictis bombifrons Adams, Matthew, 751.
fortis Adams, Matthew, 751.
equaldens Cope, Matthew, 751.

Dinocyon (Borophagus) diversidens (Cope), Matthew, 754.

Diospyros elliptica n. sp., Knowlton, 599.
Diphyodus longirostris n. sp., Lambe, 639.
Diphyodium Lonsdale, Lambe, 638.

Dinocerites arundinaceum, Billings, Lambe, 638.
cespitosum Hall (sp.), Lambe, 638.
multicaule Hall (sp.), Lambe, 638.
rugosum Milne Edwards and Haime (sp.), Lambe, 638.

Diplocaulus Cope, Broili, 131.
magnicornis, Broili, 131.
Dolicborhynchops osborni n. sp., Williston, 1155.

Doulvilliceras mammillare Schloth., Anderson, 33.

Echinocaris clarkei n. sp., Beecher, 73.
randalii n. sp., Beecher, 73.
socialis, Beecher, 73.

Cyathophyllum capax n. sp., Herzer, 495.
ecatites Goldfuss, Lambe, 638.
coalitum Rominger, Lambe, 638.
dawsoni Billings, Lambe, 638.
elipticum Hall and Whitfield (sp.), Lambe, 638.
euryoe Billings, Lambe, 638.
euuniform Billings (sp.), Lambe, 638.
larum Keyes, Sardeson, 935.
Halli Milne Edwards and Haime (sp.), Lambe, 638.

interruptum Billings, Lambe, 638.
pavimentum Whiteaves (sp.), Lambe, 638.
pasithea Billings, Lambe, 638.
pennanti Billings, Lambe, 638.
petraioides Whiteaves, Lambe, 638.
quadrigeminum Goldfuss, Lambe, 638.
richardsoni Meek (sp.), Lambe, 638.
spenceri Lambe, Lambe, 638.

thoroldense n. sp., Lambe, 638.
vermiculare Goldfuss, var. precursor Frech, Lambe, 638.
wahlenbergi Billings, Lambe, 638.
waskasense Whiteaves, Lambe, 638.

Cyclotrypa (?) baroeri Ulrich n. sp., Condra, 213.
Cylindrodon fontis n. gen. and sp., Douglass, 291.

Cynarctus n. gen., Matthew, 751.
saxatilis n. sp., Matthew, 751.
Cynodictis gregarius (Cope), Matthew, 751.
Cyon or Icticyon sp., Matthew, 754.
Cyperacites sp., Knowlton, 599.

Cyprioceras columbiense n. sp., Herzer, 495.
ecetis n. sp., Herzer, 495.
dresbachense n. sp., Sardeson, 933.

Cystiphycus latifrons n. sp., Herzer, 492.
Cystiphyllum Lonsdale, Lambe, 638.
aggregatum Billings, Lambe, 638.
dis coma Billings, Lambe, 638.

Cyclotrypa (?) baroeri Ulrich n. sp., Condra, 213.
Cylindrodon fontis n. gen. and sp., Douglass, 291.
PALEONTOLOGY—Continued.

Genera and species described—Continued.

Ecculomphalus fredericus n. sp., Raymond, 887.
Edestus, Eastman, 314, 316.
heinrichi N. & P., Eastman, 314.
Eleutherocrinuscassadayi Shumard and Yandell, Rowley, 429.
Elymocaris siliqua, Beecher, 73.
Emmelezoe decora n. sp., Clarke, 190.
Endoceras consuetum n. sp., Sardesbn, 933.
Eospongia Billings, Seely, 950.
varians Billings, Seely, 950.
Eporeodon major var. cedrensis n. var., Mat.
Equisetum oregonense Newb., Knowltoii,,599.
sp., Knowlton, 599.
Erato veraghoorensis (?) Stol., Anderson, 33.
Eretmocrinus brevis n. sp., Rowley, 915.
? parvus n. sp., Rowley, 915.
Erismacanthus M'Coy, Eastman, 317.
formosus n. sp., Eastman, 317.
Erycus consumptus n. sp., Scudder, 948.
Escasona (??) ingens n. sp., Matthew, 747.
(?) vetus n. sp., Matthew, 747.
ortoni n. sp., Clarke, 190.
Eucastor (Leidy) Alien, Matthew, 755.
Eucrotaphus helenae n. sp., Douglass, 291.
Eumys minor n. sp., Douglass, 291.
Eurymya, Sardeson, 934.
Favosites cystoides n. sp., Herzcr, 495.
seamani n. sp., Greene, 428.
Fenestella binodata n. sp., Condra, 213.
conradi var. compactilis n. var., Condra, 213.
cyclofenestrata n. sp., Condra, 213.
gracilis n. sp., Condra, 213.
parypora n. sp., Condra, 213.
polyponoides n. sp., Condra, 213.
sp. (?), Condra, 213.
spinulosa n. sp., Condra, 213.
subrudis n. sp., Condra, 213.
Ficus ? oregoniana Lesq., Knowlton, 599.
Fistnlipora carbonaria var. nebrascensis n. sp., Condra, 213.
Forbesiocrinus, Springer, 500.
Fraxinus integrifolia Newb., Knowlton, 509.
Ginkgo sp., Knowlton, 509.
Hydnangea bendirei (Ward) Knowlton, 599.
Hydroporus inanimatus n. sp., Scudder, 948.
sectus n. sp., Scudder, 948.
Hylolites academicus, Matthew, 741.
carinatus, Matthew, 741.
caudatus, Matthew, 741.
danius, Matthew, 741.
gracilis, Matthew, 741.
gracillimus, Matthew, 742.
gracillimus n. mut., Matthew, 741.
sericus, Matthew, 741.
Hypiosodus Leidy, Osborn, 827.
(Lemuravus) distans-Marsh, Osborn, 827.
leminianus Cope, Osborn, 827.
marshi n. sp., Osborn, 827.
(Esthonyx)?miticulus Copc, Osborn, 827.
paulus, Osborn, 827.
powellianus Cope, Osborn, 827.
uniensis n. sp., Osborn, 827.
vicarius Cope, Osborn, 827.
wortmani n. sp., Osborn, 827.
Hypotrachelites, Matthew, 756.
Hypisodus, Matthew, 751, 750.
minimus Cope, Matthew, 756.
Ichthyoidichnites acadiensis n. sp., Ami, 25.
Paleontology—Continued.
Genera and species described—Continued.

Ictops acutidens n. sp., Douglass, 291.

Idiophyllum rotundifolium Lesquereux, Sel-
lards, 952.

Indiana lippa n. sp., Matthew, 747.

Incolaria securiformis Herz., Herzer, 494.

Indiana lippa n. sp., Matthew, 747.

Indrodon malaria Cope, Osborn, 827.

Inoceramus adunca n. sp., Anderson, 33.

Indiana lippa n. sp., Matthew, 747.

Inoceramus adunca n. sp., Anderson, 33.

Inhibita n. sp., Scudder, 948.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

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Jaurus oreoniana n. sp., Knowlton, 599.

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Jaurus oreoniana n. sp., Knowlton, 599.

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Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.

Jaurus oreoniana n. sp., Knowlton, 599.
Genera and species described—Continued.

Nucleocrinus venenii var. pomum (?) Etheridge and Carpenter, Rowley, 428.

venenii var. suculatus n. var., Rowley, 428.

Nyctodactylus, Willisont, 1152, 1154.

Obolus (Linguellia) atavus Matthew, Walcott, 1080.

(Linguellia) canius n. sp., Walcott, 1080.

(Linguellia) colliea Matthew, Walcott, 1080.

(Linguellia) concinnus Matthew, Walcott, 1080.

(Westonia) finlandensis n. sp., Walcott, 1080.

(Linguellia) lens Matthew, Walcott, 1080.

(Boogeria) salteri Holli, Walcott, 1080.

(Linguellia) schmalensei n. sp., Walcott, 1080.

(Linguellia) spatulatus n. sp., Walcott, 1080.

(Linguellia) welleri n. sp., Walcott, 1080.

Ogygopsis klotzi Rom. sp., Woodward, 1177.

Oblodotes copei n. gen. and sp., Osborn, 429.

Olophrum arcanum n. sp., Scudder, 948.

celatum n. sp., Scudder, 948.

decjctum n. sp., Scudder, 948.

Onomys Rafinesque and Clifford, Lambe, 948.

 אלקטרum (sp.), Lambe, 948.

Oscillaria sensibilis fossils Newb., Knowlton, 597.

Ophiolita aurencis n. sp., Sardeson, 933.

fausta n. sp., Sardeson, 932.

Orbitremites grandis n. sp., Rowley, 429.

oppellii n. sp., Rowley, 429.

Orchestes avus n. sp., Scudder, 948.

Oreodon robustum n. sp., Douglass, 291.

Ornthomimus altus n. sp., Lembe, 639.

Ornithostoma ingens Willisont, Lucas, 708.

Orohippus ? sp., Hatcher, 453.

Orthis (Billingsella) pepina Hall, Sardeson, 933.

Orohippus (?) sp., Sardeson, 933.

Orohippus (Billingsella) pepina Hall, Sardeson, 933.

Orthocerus minnesotaense n. sp., Sardeson, 932.

Oxoclea sensibilis fossils Newb., Knowlton, 597.

Pachydiscus meadensis n. sp., Anderson, 33.

merriami n. sp., Anderson, 33.

newberryanus Meek (not Gabb), Anderson, 33.

Pachyceras costatus n. sp., Douglass, 291.

Pachydiscus costatus n. sp., Douglass, 291.

Pachydiscus devoniense n. sp., Anderson, 33.

Pachydiscus meadensis n. sp., Anderson, 33.

Pachydiscus meadensis n. sp., Anderson, 33.

Pachydiscus meadensis n. sp., Anderson, 33.

Pachydiscus meadensis n. sp., Anderson, 33.

Pachydiscus meadensis n. sp., Anderson, 33.
Paleontology—Continued.
Genera and species described—Continued.
Platanus conodi (Newb.) Knowlton, Knowlton, 599.

nobilis? Newb., Knowlton, 599.
Platyceris arkonense n. sp., Shimer and Grabau, 963.
bucculentum Hall, Shimer and Grabau, 963.
subspinulum Hall, Shimer and Grabau, 963.
thesis Hall, Shimer and Grabau, 963.
vetulum n. sp., Sardeson, 932.
Platynus exterminatus n. sp., Scudder, 948.
teriglacialis n. sp., Scudder, 948.
terlitos n. sp., Scudder, 948.
longaes n. sp., Scudder, 948.
Platystrophia lynx, Cumings and Mauck, 231.
Electrochilus plicatellus Hall, Raymond, 887.
Pleurophorus sp., Beede, 74.
whitei n. sp., Beede, 74.
Pleurotomaria aliens n. sp., Sardeson, 932.
sp., Beede, 78.
sweeti Whitfield, Sardeson, 933.
Podozamites sp., Hollick, 524.
Polypora baseli n. sp., Condra, 213.
remota n. sp., Condra, 213.
reversipora n. sp., Condra, 213.
ulrichi n. sp., Condra, 213.
Populus lindgreni Knowlton, Knowlton, 599.
Prestwichia randalli n. sp., Beecher, 70.
Prionastrea vaughani, Gregory, Vaughan, 1063.
Prionotropis branneri n. sp., Anderson, 33.
Pracanthocyon nebrascensis n. gen. and sp., Hatcher, 460.
Procambelus Leidy, Matthew, 751.
issidens Cope, Matthew, 751.
rustus Leidy, Matthew, 751.
Proscalops n. gen., Matthew, 751.
?sp., Beede, 78.
sweeti Whitfield, Sardeson, 933.
Podozamites sp., Hollick, 524.
Polypora baseli n. sp., Condra, 213.
remota n. sp., Condra, 213.
reversipora n. sp., Condra, 213.
ulrichi n. sp., Condra, 213.

Protanodon (Ornithostoma), Williston, 1153.
Pteranodon microporosum brandonianum n. sp., Knowlton, 599.

Pseudoniscus, Clarke, 190.
?sp., Clarke, 190.

Pseudocharis chinensis n. sp., Anderson, 33.
Phylloceras shastalense n. sp., Anderson, 33.
Piloceras corriicnluin n. sp., Sardeson, 933.
Pinna lata n. sp., Beede, 74.
Pinus lindgreni n. sp., Knowlton, 599.
Pityoxylon microporosum brandonianum n.

Pizeopithecus cappellanus n. sp., Sardeson, 932.
Pliocenodon (Ornithostoma), Williston, 1153.
Pteropychus plicatus n. gen. and sp., Herzer, 494.
Pterostichus depletus n. sp., Scudder, 948.
Pterotheres expansus Emmens, Raymond, 887.

Pteropteryx cappellanus n. sp., Sardeson, 932.
Pteropictus primus n. sp., Lambe, 639.
Pithecoporia cordillera Walcott, Woodward, 1177.
Genera and species described—Continued.

**Pycnostylus** Whiteaves, Lambe, 638.

**Pyramidula lecontei** n. sp., Stearns, 998.

**Quedius deperditus** n. sp., Scudder, 948.

**Quercus affinis** (Newb.), Knowlton, 599.

**Quercus brevleri** Lesq., Knowlton, 599.

**Quercus consirailis** Newb., Knowlton, 599.

**Quercus dayana** n. sp., Knowlton, 599.

**Quercus duriuscula** n. sp., Knowlton, 599.

**Quercus liorniana** Lesq., Knowlton, 599.

**Quercus merriami** n. sp., Knowlton, 599.

**Quercus oreoniana** n. sp., Knowlton, 599.

**Quercus pseudo-lyrata** Lesq., Knowlton, 599.

**Rafinesquina ehamplainensis** n. sp., Raymond, 887.

**Raphistoma leiosomellus** n. sp., Sartelon, 933.

**Rhamphorhynchus**, Williston, 1153.

**Rhineastes eruciferus** Cope (sp.), Lambe, 639.

**Rhynchonella densletonis** n. sp., Anderson, 33.

**Rhus bendirei** Lesq., Knowlton, 599.

**Rulac crategifolium** n. sp., Knowlton, 599.

**Sabal rigida** n. sp., Hatcher, 455.

**Sagenocrinus**, Springer, 990.

**Sagionocrus**, Springer, 990.

**Salix dayana** n. sp., Knowlton, 599.

**Schizambon prisons** n. sp., Matthew, 743.

**Schizorhynchus** Whiteaves, Lambe, 638.

**Schizoophyllina dichotoma** Heer (?), Hollick, 524.

**Schizopora compacta**, Seely, 950.

**Spathioceras**, Clarke, 186.

**Sphenodictya cornigera** n. gen. and sp., Herzer, 493.

**Spirifer macronatus** var. arkonensis n. var., Shimer and Grabau, 963.

**Spirifer pseudo-argentea** n. sp., Knowlton, 599.

**Squamosina angustifolia** Lesq., Knowlton, 599.

**Stegoceras** Merriam, 766, 767.

**Schistosaurus**, Merriam, 766.

**Schistosaurus** merriami n. sp., Anderson, 33.

**Schistosaurus** pacificus n. sp., Merriam, 766.

**Schistosaurus** perrini n. sp., Merriam, 766.

**Schistosaurus** roguensis n. sp., Merriam, 766.

**Sphenodictya cornigera** n. gen. and sp., Herzer, 493.

**Sphenodictya cornigera** n. sp., Knowlton, 599.

**Spathioceras**, Clarke, 186.

**Sphenodictya cornigera** n. gen. and sp., Herzer, 493.

**Spirifer macronatus** var. arkonensis n. var., Shimer and Grabau, 963.

**Spirifer pseudo-argentea** n. sp., Knowlton, 599.

**Squamosina angustifolia** Lesq., Knowlton, 599.

**Stegoceras** Merriam, 766, 767.

**Sphenodictya cornigera** n. gen. and sp., Herzer, 493.

**Spirifer macronatus** var. arkonensis n. var., Shimer and Grabau, 963.

**Sphenodictya cornigera** n. gen. and sp., Herzer, 493.

**Spirifer macronatus** var. arkonensis n. var., Shimer and Grabau, 963.

**Squamosina angustifolia** Lesq., Knowlton, 599.

**Stegoceras** Merriam, 766, 767.

**Sphenodictya cornigera** n. gen. and sp., Herzer, 493.

**Spirifer macronatus** var. arkonensis n. var., Shimer and Grabau, 963.

**Squamosina angustifolia** Lesq., Knowlton, 599.
INDEX TO NORTH AMERICAN GEOLOGY,

Paleontology—Continued.

Genera and species described—Continued.

Strephochetus atratus n. sp., Seely, 950.
ocellatus n. sp., Seely, 950.
prunus n. sp., Seely, 950.
richmondensis S. A. Miller, Seely, 950.
Incurvata Shepard, Raymond, 887.
angulatum Lambe, 638.
caliculus Hall, Lambe, 638.
latusculum (sp.), Lambe, 638.
latusculum var. trilobatum Whiteaves, Lambe, 638.
prolificum Billings (sp.), Lambe, 638.
rectum Hall, Lambe, 638.
robustum Whiteaves, Lambe, 638.
selectum Billings (sp.), Lambe, 638.
Subulites exactus n. sp., Sardeson, 933.
Symburodon acer Cope, Osborn, 326.
Talarocrinus simplex Shumard, Rowley, 429.
Taxocrinus Springer, 990.
Taxodidichium micromon. Heer, Knowlton, 599.
Tellinomya absimilis n. sp., Sardeson, 932.
Thamniscus palmatus n. sp. (provisional), Condra, 213.
pinnatus n. sp., Condra, 213.
Thamnoclados clarkei n. gen. and sp., White, 1116.
Tryblidium repertum n. sp., Sardeson, 933.
Uintacrinus Grinnell, Springer, 989.
Socialis Grinnell, Springer, 989.
Ulmus californica Lesq., Knowlton, 599.
Urotheca sp., Matthew, 746.
Uranus sp., Matthew, 746.
Xylophora n. gen., Whitfield, 1131.
Zacanthoides (Olenoides) spinosus Walcott.
Woodward, 1177.
Zaphrentis Rafinesque and Clifford, Lambe, 638.
affinis Billings, Lambe, 638.
axiiformis n. sp., Greene, 429.
cingulara Billings, Lambe, 638.
gigantea Lesques (sp.), Lambe, 638.
incondita Billings, Lambe, 638.
minas Dawson, Lambe, 638.
mirabilis Billings (sp.), Lambe, 638.
neptun n. sp., Herzer, 495.
patens Billings, Lambe, 638.
shumardi Milne Edwards and Haime (sp.), Lambe, 638.
stokesii Milne Edwards and Haime, Lambe, 638.

Panama.
Current notes on physiography, Davis, 260.
Geology of Isthmus of Panama, Edwards, 328.

Pennsylvania.
Accounting for the depth of the Wyoming buried valley, Lyman, 714.
Anticlinal folds, Hopkins and Smallwood, 532.
Bituminous coal field of Pennsylvania, White and Campbell, 1119.
Catskill rocks in northern Pennsylvania, Fuller, 296.
Clays of Great Valley and South Mountain areas, Hopkins, 629.
Clays of southeastern Pennsylvania, Hopkins, 528.
Composition of petroleum, Mabery, 716.
Connellsville region mineral resources, Eavenson, 320.
Description of four meteorites, Ward, 1084.
Gaines oil field, Fuller, 395.
Geology of Pittsburg district, White, 1125.
Geology of Pittsburgh district, White, 1125.
Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.
Kansas glaciation and its effects on the river system of northern Pennsylvania, Williams, 1140.
Lower Carboniferous of Appalachian Basin, Stevenson, 1002.
Masontown-Uniontown Foli, Campbell, 158.
Mauch Chunk of Pennsylvania, Stevenson, 1001.
Mismamed Indiana antiline, Richardson, 898.
New Xiphosuran from Upper Devonian of Pennsylvania, Beecher, 70.
Pennsylvania anthracite coal field, Stock, 1063.
Recent geological work in western Pennsylvania, Campbell, 255, 154.
Pennsylvania—Continued.
Recent structural work in western Pennsyl-
vania, Butts, 145.
Revision of Phyllocarida from Chemung and
Waverly groups of Pennsylvania, Beecher,
73.

Petrology—Continued.
Canada—Continued.
Sulphide ore bodies of Sudbury region, Silver,
964.
Syenites near Port Coldwell, Coleman, 206.
Colorado.
Ore deposits of Rico Mountains, Ransome,
884.
Connecticut.
Tungsten mine at Trumbull, Hobbs, 512.
Georgia.
Aplitic, pegmatitic, and tourmaline bunches in
Stone Mountain granite, Watson, 1090.
Granites and gneisses of Georgia, Watson,
1093.
Greenland.
Eisenführenden gesteinen der Insel Disko,
Nicolaus, 897.
Mineralogisk resa i Syd Grønland, Flink, 379.
Mineralogisk-petrografiske undersøgelser af
Grønlandske nefelinesynten og beslæg-
tede bjærgarter, Usig, 1565.
Guatemala.
Cendres d’un volcan près du Santa Maria,
Ordoraké, 818.
Idaho.
Geology and water resources of Snake River
Plains, Russell, 923.
Maryland.
Geology of crystalline rocks of Cecil County,
Bascom, 66.
Massachusetts.
Holyokeite from the Trias of Massachusetts,
Emerson, 841.
Mexico.
Criadero de fierro del Cerro de Mercedes, Du-
amugo, Rangel, 883.
Criaderos de fierro de la hacienda de Vaque-
rias, Villareillo and Bése, 1076.
N#elifischer koks in den Santa Clara kohlen-
feldern, Sonora, Ochsenius, 810.
Roche basaltique de la Sierra Verde, Kroust-
choff, 606.
Section across the Sierra Madre Occidental de
Chihuahua and Sinaloa, Weed, 1099.
Michigan.
Geological cross-sections of Keweenaw Point,
Hubbard, 566.
Minnesota.
New iron-bearing horizon in Keewatin in
Minnesota, Winchell, 1167.
Missouri.
Lead and zinc deposits of Mississippi Valley,
Keye, 570.
Montana.
Geology and ore deposits of Elkhorn mining
district, Weed, 1095.
Igneous rocks of Algolian series, Finlay, 369.
Microscopical petrography of Elkhorn mining
district, Barrell, 64.
New Jersey.
Leucite-tinguaite from Beemerville, Wolff,
1175.
New Mexico.
Analcite-bearing camptonite from New
Mexico, Ogilvie, 813.
INDEX TO NORTH AMERICAN GEOLOGY,

Petrology—Continued.

New York.
Eruptive dikes in Syracuse, Schneider, 940.
Field work in town of Minerva, Finlay, 367.
Geological history of the hematite iron ores
of Antwerp and Fowler belt in New York,
Crosby, 222.
Petrography of dikes in Syracuse, Smyth, 980.
Pre-Cambrian outlier at Little Falls, Herkimer
County, Cushing, 233.
Recent geologic work in Franklin and St.
Lawrence counties, Cushing, 232.
Ohio.
Ohio bowlders containing hirunite, Wright, 1189.
Oregon.
Contribution to petrography of John Day
Basin, Calkins, 147.
Geology and petrography of Crater Lake Na­
tional Park, Diller and Patton, 285.
Gold belt of Blue Mountains, Lindgren, 687.
South Dakota.
Deposits of wolframite in the Black Hills,
Irving, 546.
Tennessee.
Deposits of copper ores at Ducktown, Kemp,
562.
Utah.
Mineral crest, Jenney, 552.
Vermont.
Granite area of Barre, Finlay, 367.
Petrographic description of dikes of Grand
Isle, Shimer, 962.
Structural details in Green Mountain region,
Dale, 235.
Terranes of Orange County, Richardson, 896.
Virginia.
Copper-bearing rocks of Virginia copper dis­
trict, Watson, 1091.
Washington.
Ore deposits of Monte Cristo, Spurr, 992.
West Indies.
Cendres des éruptions de la Montagne Pelée,
Lacroix, 614.
Composition des cendres projetées par la
Montagne Pelée, Lévã, 686.
Examination of ash that fell on Barbados
after eruption of St. Vincent, Flett, 377.
Roches volcaniques de la Martinique, La­
croix, 613, 615.
Volcanic dust, Falconer, 353.
Volcanic dust and sand from St. Vincent,
Diller and Steiger, 286.
Volcanic dust from West Indies; Porter, 558.
Volcanic rocks of Martinique and St. Vin­
cent, Diller, 281.
General.
Bibliography and index of North American
geology, paleontology, petrology, and min­
eralogy for 1901, Weeks, 1107.
Bibliography of North American geology,
paleontology, petrology, and mineralogy for 1892-1900,
Weeks, 1105.
Influence of country rock on mineral veins,
Weed, 1096.
Magmatic differentiation of rocks, Keyes, 77.
New combination wedge for use with petro­
graphical microscope, Wright, 1190.
Ores deposited by underground waters, Mac­
laren, 621.
Reformed copper ores, Goodwin, 410.
Rôle of igneous rocks in formation of veins,
Kemp, 561.
Reformed copper ores, Goodwin, 410.
Rôle of igneous rocks in formation of veins,
Kemp, 561.
Size of grain in igneous rocks in relation to
distance from cooling wall, Queneau, 881.
Systematic petrography, Cross, 227.
Volcanic dust and sand from St. Vincent,
Diller and Steiger, 286.
Rocks described.
Analcite-basalt, Clarke and Steiger, 182.
Andesite, Barrell, 64.
Andesite, Calkins, 147.
Andesite, Diller, 281.
Andesite, Diller and Patton, 285.
Andesite, Lindgren, 687.
Andesite, Scott, 947.
Andesite, Weed, 1095.
Andesitic tuff, Calkins, 147.
Anorthosite, Cushing, 234.
Apatite, Osann, 822.
Aplite, Barrell, 64.
Aplite, Reid, 892.
Aplite, Watson, 1090.
Aplite-granite, Weed, 1090.
Augite-camptonite, Shimer, 362.
Augite-latite, Clarke and Steiger, 182.
Augite-porphyrite, Campbell, 154.
Augite-syenite, Barrell, 64.
Augite syenite, Coleman, 201, 206.
### Petrology—Continued.
### Rocks described—Continued.

<table>
<thead>
<tr>
<th>Rock Type</th>
<th>Author(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augite-syenite</td>
<td>Kemp, 565</td>
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<tr>
<td>Augite-syenite</td>
<td>Parks, 837</td>
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</tr>
<tr>
<td>Basalt</td>
<td>Diller and Patton, 285</td>
<td></td>
</tr>
<tr>
<td>Basalt</td>
<td>Lindgren, 687</td>
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<tr>
<td>Biotite-aegerine-ijolite</td>
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<td>Bascom, 66</td>
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<td>Biotite mica schist</td>
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<tr>
<td>Bostonite</td>
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<td>Camptonite</td>
<td>Ogilvie, 813</td>
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<td>Cancrinite-syenite</td>
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<td>Ochsenius, 810</td>
<td></td>
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<tr>
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<td>Diller and Patton, 285</td>
<td></td>
</tr>
<tr>
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<td>Lindgren, 687</td>
<td></td>
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<tr>
<td>Dacite</td>
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<td>Diabase</td>
<td>Bascom, 66</td>
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<tr>
<td>Diabase</td>
<td>Finlay, 369</td>
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<td>Parks, 837</td>
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<td>Osann, 822</td>
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<td>Spurr, 992</td>
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<td>Gabbro</td>
<td>Bascom, 66</td>
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<td>Gabbro</td>
<td>Coleman, 206</td>
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<td>Gabbro, Weed, 1095</td>
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<td>Glaucophane schists, Nutter and Barber, 809</td>
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<td>Gneiss</td>
<td>Watson, 1093</td>
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<tr>
<td>Granite-porphyry</td>
<td>Calkins, 147</td>
<td></td>
</tr>
<tr>
<td>Granitite, Clarke and Steiger, 182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granodiorite</td>
<td>Lindgren, 687</td>
<td></td>
</tr>
<tr>
<td>Greensone, Silver, 964</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heronite, Clarke and Steiger, 182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holyokeite, Emerson, 341</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hornblende-andesite, Calkins, 147</td>
<td></td>
<td></td>
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<tr>
<td>Hornblende-biotite-granite (quartz monzonite), Bascom, 66</td>
<td></td>
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<tr>
<td>Hornblende-gneiss, Hobbs, 512</td>
<td></td>
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<tr>
<td>Hornblende-hypersthene-andesite, Calkins, 147</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hornblende schist, Parks, 837</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hornstone, Barrell, 64</td>
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<tr>
<td>Hornosite, Wright, 1189</td>
<td></td>
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<tr>
<td>Hypersthene-biotite-gabbro, Osann, 822</td>
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<tr>
<td>Hypersthene-dacite, Diller and Patton, 285</td>
<td></td>
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<tr>
<td>Hypersthene-gabbro, Bascom, 66</td>
<td></td>
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</tr>
<tr>
<td>Ijolite, Barlow, 60</td>
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<tr>
<td>Leucite-tinguaite, Wolff, 1175</td>
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<tr>
<td>Lecutite, Clarke and Steiger, 182</td>
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**Bull. 221—03—13**

### Petrology—Continued.
### Rocks described—Continued.

<table>
<thead>
<tr>
<th>Rock Type</th>
<th>Author(s)</th>
<th>Page</th>
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</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>Hobbs, 512</td>
<td></td>
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<tr>
<td>Madupite, Clarke and Steiger, 182</td>
<td></td>
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</tr>
<tr>
<td>Marble</td>
<td>Barrell, 64</td>
<td></td>
</tr>
<tr>
<td>Meta-gabbro, Bascom, 66</td>
<td></td>
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<tr>
<td>Meta-ryolite, Bascom, 66</td>
<td></td>
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<tr>
<td>Mica, Osann, 822</td>
<td></td>
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<tr>
<td>Mica-gneiss, Bascom, 66</td>
<td></td>
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</tr>
<tr>
<td>Microdiorite, Barrell, 64</td>
<td></td>
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<tr>
<td>Missourite, Clarke and Steiger, 182</td>
<td></td>
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</tr>
<tr>
<td>Monchiquite, Shimer, 962</td>
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<tr>
<td>Monzonite, Campbell, 154</td>
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<tr>
<td>Nepheline-syenite, Barlow, 60</td>
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<tr>
<td>Nepheline-syenite, Coleman, 201</td>
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<tr>
<td>Norite, Bascom, 66</td>
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<tr>
<td>Olivine basalt, Calkins, 147</td>
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<tr>
<td>Olivine diabase, Parks, 837</td>
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<tr>
<td>Orendite, Clarke and Steiger, 182</td>
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<tr>
<td>Pegmatite, Reid, 892</td>
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<tr>
<td>Peridotite, Bascom, 66</td>
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<tr>
<td>Peridotite, Kemp, 563</td>
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<tr>
<td>Phonolite, Clarke and Steiger, 182</td>
<td></td>
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</tr>
<tr>
<td>Porphyry, Tussin, 1012</td>
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<tr>
<td>Pumice, Diller, 281</td>
<td></td>
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</tr>
<tr>
<td>Pumice, Diller and Patton, 285</td>
<td></td>
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<tr>
<td>Pyroclastic schist, Parks, 837</td>
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<td>Pyroxene-andesite, Calkins, 147</td>
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<td>Pyroxenite, Osann, 822</td>
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<tr>
<td>Pyroxenite (Websterite), Bascom, 66</td>
<td></td>
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<tr>
<td>Quartz, basalt, Calkins, 147</td>
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<td>Quartz-diorite-porphyry, Barrell, 64</td>
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<td>Quartz-diorite-porphyry, Weed, 1095</td>
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<td>Quartz-monzonite, Barrell, 64</td>
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<td>Quartz-mica-diorite, Barrell, 64</td>
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<td>Quartz-porphyry, Parks, 837</td>
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<td>Quartztite, Barrell, 64</td>
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<td>Quartzite, Russell, 923</td>
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<tr>
<td>Quartzose schist, Parks, 837</td>
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<tr>
<td>Rhyolite, Calkins, 147</td>
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<td>Rhyolite, Lindgren, 687</td>
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<td>Rhyolite, Reid, 892</td>
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<td>Rhyolite, Spurr, 992</td>
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<td>Schist, Parks, 837</td>
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<td>Serpentine, Calkins, 147</td>
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<td>Serpentine, Lindgren, 687</td>
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<td>Shonkinite, Osann, 822</td>
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<tr>
<td>Soda-granite-porphyry, Clarke and Steiger, 182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syenite, Barlow, 60</td>
<td></td>
<td></td>
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<tr>
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<td>Syenite, Coleman, 206</td>
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</tr>
<tr>
<td>Syenite, Parks, 837</td>
<td></td>
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</tr>
<tr>
<td>Tinguaitae, Finlay, 369</td>
<td></td>
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<tr>
<td>Tonalite, Spurr, 992</td>
<td></td>
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<td>Tonalite-porphyry, Spurr, 992</td>
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<td>Volcanic dust, Porter, 858</td>
<td></td>
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<tr>
<td>Wyomingite, Clarke and Steiger, 182</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Philippine Islands.

Pigholugan and Pigtao gold regions, Island of Mindanao, Nichols, 802.
Physiographic geology.

Alaska.

Geography of Alaska, Gannett, 399.
Geological section of Rocky Mountains in northern Alaska, Schrader, 942.
Geology and mineral resources of Copper River district, Schrader and Spencer, 941.
Reconnaissance in Norton Bay region, Men- denhall, 762.
Reconnaissance of the Cape Nome and adjacent gold fields of Seward Peninsula, Brooks, 133.

Appalachian region.

Deposits of copper ores at Ducktown, Tennessee, Kemp, 562.
Geology of Garrett County, Martin, 736.
Granites and gneisses of Georgia, Watson, 1093.
Hydrography of southern Appalachian region, Pressoy, 866, 867.
Kansas glaciation and its effects on the river system of northern Pennsylvania, Williams, 1140.
Masontown-Uniontown Folio, Campbell, 158.
Physiography of Garrett County, Abbe, 1.
Raleigh Folio, Campbell, 157.

Atlantic coast region.

Current notes on physiography, Davis, 257.
Geology of Coastal Plain formations, Shattuck, 955.
New York City Folio, Merrill, 770.
Norfolk Folio, Darton, 245.
Physical features of Cecil County, Maryland, Shattuck, 953.
Physiography of Cecil County, Maryland, Shattuck, 954.

Canada.

Current notes on physiography, Davis, 265.
Exploration in Canadian Rockies, Wilcox, 1130.
Geology of northeast coast of Labrador, Daly, 229.
Geology of region adjoining western part of international boundary, Daly, 240.
Report on surface geology shown on Fredericton and Andover quarter-sheet maps, Chalmers, 165.

Great Basin region.

Arid district between Rio Grande and Pacific, Carter, 162.
Walls of Colorado Canyon, Davis, 258.

Great Lakes region.

Chicago Folio, Alden, 15.
Current notes on physiography, Davis, 261.
Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.
Lakes of southeastern Wisconsin, Fenneman, 363.
Submerged valleys in Sandusky Bay, Mosely, 787.
Surface geology of Alcona County, Michigan, Leverett, 684.

Great Plains region.

Current notes on physiography, Davis, 264.

Physiographic geology—Continued.

Great Plains region—Continued.

Hydrographic history of South Dakota, Todd, 1028.
Osdrich Folio, Darton, 246.
Physiographic divisions of Kansas, Adams, 9.
Story of the prairies, Willard, 1141.

Mississippi Valley region.

Concrete examples from topography of Howard County, Calvin, 151.
Current notes on physiography, Davis, 266.
Evolution of lowlands of southeastern Missouri, Marbut, 735.
Geology of Cherokee and Buena Vista counties, Machride, 710.
Geology of Henry County, Iowa, Savage, 957.
Geology of Jefferson County, Udden, 1041.
Geology of Wapello County, Iowa, Leonard, 698.
Geology of Webster County, Iowa, Wilder, 1139.
Mississippi River from Cape Girardeau to the Head of the Passes, Brown, 141.
Physiography and geology of Ozark region, Adams, 7.
Preliminary report upon bluff and Mississippi alluvial lands of Louisians, Clandenlin, 199.
Growth of Mississippi Delta, Upham, 1045.

New England and New York.

Granite area of Barre, Vermont, Finlay, 368.
Lower Silurian system of eastern Montgomery County, New York, Cummings, 222.
Physical geography of New York State, Tarr, 1010.

Pleistocene geology of western New York, Fairchild, 322.
Pre-Glacial course of middle portion of Genesee River, Whitbeck, 1115.
River terraces in New England, Davis, 256.
Still rivers of western Connecticut, Hobs, 514.
Syllabus for field and laboratory work in geology, Tarr, 1010.

Terraces of Westfield River, Massachusetts, 255.

Ohio Valley region.

Ditney Folio, Fuller and Ashley, 287.
Drainage of southern Indiana, Newsom, 797.
Drainage modifications in Knox, Licking, and Coshocton counties, Clark, 174.
Drainage modifications in Washington and adjacent counties, Ohio, Tight, 1026.
Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.
Geology of Cincinnati, Nickles, 805.
History of Little Miami River, Bownocker, 107.
Pre-Glacial drainage conditions in vicinity of Cincinnati, Fowke, 388.
Pre-Glacial drainage of Wayne and adjacent counties, Ohio, Todd, 1027.
Topography and geography of Bean Blossom Valley, Monroe County, Indiana, 734.
Topography of Athens and vicinity, Ohio, Stearns, 997.
Valley of lower Tippecanoe River, Breeze, 114.
Wabash River terraces in Tippecanoe County, Indiana, McBeth, 717.
Physiographic geology—Continued.

Pacific coast region.

Geology and petrography of Crater Lake National Park, Diller and Patton, 285.
Lake Chelan, Fairbanks, 351.
Pacific Mountain system of British Columbia and Alaska, Spencer, 883.
Physiographic features of Klamath Mountains, Anderson, 82.
Post-Tertiary elevation of Sierra Nevada, Turner, 1087.
Tertiary peneplain in Klamath region, California, Hershey, 490.
Topographic development of Klamath Mountains, Diller, 284.
Wreck of Mount Mazama, Diller, 282.

Panama.

Current notes on physiography, Davis, 260.

Rocky Mountain region.

Canyons of southeastern Colorado, Lee, 673.
Geological reconnaissance in eastern Valencia County, New Mexico, Johnson, 558.
Geology and water resources of Snake River plains, Russell, 953.
Hydrographic history of South Dakota, Todd, 1028.
Our northern Rockies, Chapman, 170.
Physiography of northern Rocky Mountains, Willis, 1146.

Southwestern region.

Atoka Polio, Taff, 1006.
Austin Polio, Hill and Vaughan, 585.
Boston Mountain physiography, Hershey, 487.

West Indies.

Geography of Cuba, Vaughan and Spencer, 1070.
Geological and physical development of Barbados, Spencer, 987.
Geological and physical development of Dominica, Spencer, 986.
Geological reconnaissance of Cuba, Hayes, Vaughan and Spencer, 470.
Geology and physiography of Cuba, Hamilton, 442.
Preliminary report on recent eruption of Soufrière, in St. Vincent, and of a visit to Mont Pelée, in Martinique, Anderson and Flett, 25.
Volcanic disturbances in West Indies, Hill, 502.
Windward Islands, Spencer, 988.

General.

Baselevel, grade, and peneplain, Davis, 253.
Boston Mountain physiography, Hershey, 487.
Current notes on physiography, Davis, 262.
Development of profile of equilibrium of subaqueous shore terrace, Fenneman, 564.
Drainage of cuestas, Davis, 261.
Field work in physical geography, Davis, 254.
Formation and geology of salt deposits, Jones, 557.
Introduction to physical geography, Gilbert and Brigham, 404.
Limiting width of meander belts, Jefferson, 559.

Physiographic geology—Continued.

General—Continued.

Northovet's bund og den gamle landbro mellem Island og Groenland, Koldørup, 603.
River terraces in New England, Davis, 256.
Terraces of Westfield River, Massachusetts, Davis, 255.
Value of topographic maps, Chapman, 171.

Quaternary.

Alaska.

Geological section of Rocky Mountains in northern Alaska, Schnader, 942.

Appalachian region.

Accounting for the depth of the Wyoming buried valley, Lyman, 713.
Geology of Garrett County, Martin, 735.
Geology of Pittsburgh district, White, 1125.
Masontown-Uniontown Folio, Campbell, 158.

Atlantic coast region.

Crania of Trenton, New Jersey, Hrdlicka, 539.
Geology of Coastal Plain formations, Shattuck, 955.
Glacial geology of New Jersey, Salisbury, 930.
New York City Folio, Merrill, 770.
Norfolk Folio, Darton, 248.
Pleistocene problem in Maryland, Shattuck, 957.

Canada.

Borings for natural gas, petroleum, and water, Chalmers, 166.
Canadian fossil insects, Scudder, 948.
Geology of northeast coast of Labrador, Daly, 239.
Geology of Province of Quebec, Ells, 334.
Michipicoten iron region, Coleman and Willmott, 285.
Report on surface geology shown on Frederick and Andover quarter-sheet maps, Chalmers, 165.

Great Basin region.

Historical geology of Esmeralda County, Nevada, Turner, 1033.

Great Lakes region.

Chicago Folio, Alden, 15.
Glacial formations and drainage features of Erie and Ohio basins, Leverett, 865.
Lakes of southeastern Wisconsin, Fenneman, 363.
Physiographical field notes in the town of Wauwatosa, Wisconsin, Bruncken, 143.

Great Plains region.

Fossil human remains found near Lansing, Kansas, Holmes, 526.
Man in Kansas during the lowan stage of the Glacial period, Upham, 1050.
Oelrichs Folio, Darton, 246.

Gulf region.

Geology of Mississippi embayment, Harris, 448.

Mexico.

Criadores de fierro de la hacienda de Vaquerías, Villarello and Böse, 1076.

Mississippi Valley region.

Examination of soils from Illinois, Whitney, 1134.
Fossil man from Kansas, Williston, 1158.
Fossil man of Lansing, Kansas, Upham, 1154.
Quaternary—Continued.

Mississippi Valley region—Continued.
Geological formations of Iowa, Calvin, 149.
Geology of Cherokee and Buena Vista counties, Maehride, 719.
Geology of Henry County, Iowa, Savage, 937.
Geology of Jefferson County, Iowa, Udden, 1041.
Geology of Mississippi Valley at Little Falls, Minnesota, Winchell, 1170.
Geological formations of Iowa, Calvin, 149.
Geology of Wapello County, Leonard, 660.
Geology of Webster County, Iowa, 1041.

New England and New York.
Clays of Boston Basin, Brown, 139.
Geological and botanical notes: Cape Cod and Chappaquidick Island, Hollick, 524.

Ohio Valley region.
Discovery of a musk ox skull, Hatcher, 462.
Ditney Folio, Fuller and Ashley, 397.
Glacial formations and drainage features of Erie and Ohio basins, Leverett, 685.
Paleontology of Bartholomew County, Indiana, mammalian fossils, Edwards, 329.

Rocky Mountain region.
Stratigraphy and structure, Lewis and Livingston ranges, Montana, Willis, 1144.

Pacific coast region.
Gold belt of Blue Mountains of Oregon, 687.
Marine Pliocene and Pleistocene stratigraphy of coast of southern California, Arnold and Arnold, 36.
Quaternary deposits of southern California, Hershey, 489.

West Indies.
Windward Islands, Spencer, 988.

Canada.

Generated section of Kocky Mountains in northern Alaska, Schnader, 942.
Preliminary report on the Ketchikan mining district, Brooks, 134.

Geological section across northern Illinois, Udden, 1039.
Niagara limestones of Hamilton County, Indiana, Kindle, 581.
Niagara group unconformities in Indiana, Elrod, 336.

Southwestern region.
Atoka Folio, Taff, 1006.

Silurian.

Alaska.
Geological section of Rocky Mountains in northern Alaska, Schnader, 942.

Appalachian region.
Paleozoic Appalachia, Willis, 1143.
Rocks of Green Pond Mountain region, Krummel and Weller, 609.

Atlantic coast region.
New York City Folio, Merril, 770.

Canada.
Genus Trimerella, with descriptions of species from Silurian rocks of Kewatin, Whittacres, 1126.
South Dakota—Continued.
  Mineral building material, fuels and waters of South Dakota, Todd, 1029.
  Mineral wealth of Black Hills, O’Harra, 815.
  New form of calcite-sand crystal, Barbour and Fisher, 56.
  Oelrichs Folio, Darton, 246.
  Wolfromite in Black Hills, Forsyth, 586.
  Wolfromite in Black Hills, Raymond, 588.

Tennessee.
  Cumberland Plateau coal field, Duffield, 563.
  Deposits of copper ores at Ducktown, Kemp, 562.
  Ducktown copper mining district, McCallie, 722.
  Geology of Tennessee, Safford and Killbrow, 926.
  Southern Appalachian coal field, Hayes, 477.
  Terms Lindon and Clifton limestones in Tennessee geology, Foerste, 384.

Tertiary.
  Alaska.
    Coal resources of Alaska, Brooks, 133.
    Geological section of Rocky Mountains in northern Alaska, Schrader, 942.

Atlantic coast region.
  Geology of Coastal Plain formations, Shattuck, 955.
  Miocene formation of Maryland, Shattuck, 956.
  Norfolk Folio, Darton, 245.
  Physical features of Cecil County, Maryland, Shattuck, 953.

Great Basin region.
  Historical geology of Esmeralda County, Nevada, Turner, 1033.
  Lake Quiburis, an ancient Pliocene lake in Arizona, Blake, 93.
  Notes on geology of southeastern Arizona, Dumble, 304.
  Triassico Ichthyosaurs from California and Nevada, Osborn, 831.

Great Plains region.
  Comparison of fossil dianioms, Elmore, 337.
  Fossil mammals of Tertiary of northeastern Colorado, Matthew, 761.
  Geology and water resources of Patrick and Goshen Hole quadrangles, Adams, 5.
  Oelrichs Folio, Darton, 246.
  Origin of Oligocene and Miocene deposits of Great Plains, Hatcher, 461.
  Prairie region of northeastern Colorado, Lakes, 630.
  Skeleton of Titanotherium dispar, Marsh, Hatcher, 457.
  Tertiary terrane, new in Kansas geology, Adams, 12.

Greenland.
  Bidrag till nordöstra Grönlands geologi, Nathorst, 793.

Gulf region.
  Geography and geology of Sabine River, Louisiana, Veatch, 1072.
  Geology along the Ouachita, Louisiana, Veatch, 1073.

Tertiary—Continued.
  Gulf region—Continued.
    Geology of Mississippi embayment, Harris, 448.
    Hills of Louisiana south of V. S. & P. Railroad, Lerch, 682.
    Jackson outcrops on Red River, Casey, 164.
    Oligocene of western Europe and southern United States, Meury, 793.
    Preliminary report upon Florida parishes of east Louisiana, Clendenin, 198.
    Salines of north Louisiana, Veatch, 1071.
    Subterranean waters of Louisiana, Harris, 449.

Mexico.
  Criaderos de fierro de la hacienda de Vaquerías, Villarello and Bose, 1076.
  Estado de Tabasco, Lagueerre, 617.
  Geologia del valle del Chilpancingo, Ordofiez and Bosc, 820.

Mississippi Valley region.
  Evolution of lowlands of southeastern Missouri, Marbut, 733.
  Geological section in southern Illinois, Nickles, 894.

Pacific coast region.
  Berkeley Hills, Lawson and Palaech, 666.
  Coal fields of Pacific coast, Smith, 978.
  Contribution to petrography of John Day Basin, Calkins, 147.
  Coos Bay coal fields, Rockwell, 911.
  Fossil flora of John Day Basin, Oregon, Knowlton, 599.
  Fossil shells of John Day region, Stearns, 998.
  Geological section of middle Coast Ranges of California, Lawson, 663.
  Geology of Washington, Landes, 642.
  Gold belt of Blue Mountains of Oregon, Lindgren, 687.
  Marine Pliocene and Pleistocene stratigraphy of coast of southern California, Arnold and Arnold, 36.
  Neocene deposits of Klamath region, California, Hershey, 484.
  Ore deposits of Monte Cristo, Spurr, 992.
  Physiographic features of Klamath Mountains, Anderson, 32.
  Reconnaissance of borax deposits of Death Valley and Mohave Desert, Campbell, 156.
  Tertiary formations of southern California, Hershey, 485.
  Topographic development of Klamath Mountains, Diller, 284.

Rocky Mountain region.
  Cranial elements and dentitions of Titanotherium, Hatcher, 454.
  Cretaceous and Lower Tertiary section in south central Montana, Douglass, 290.
  Discovery of Torrejon mammals in Montana, Douglass, 293.
INDEX TO NORTH AMERICAN GEOLOGY,

Tertiary—Continued.

Rocky Mountain region—Continued.

Fossil mammalia of White River beds, Douglas, 290.
Fossil nut pine from Idaho, Knowlton, 589.
Geology of Castle Rock region, Lee, 671.
Origin of fine gold of Snake River, Bell, 83.
Prospecting for oil, Lakes, 634.

Southwestern region.

Austin Folio, Hill and Vaughan, 505.
Cretaceous and later rocks of Presidio and Brewster counties, Durable, 309.

West Indies.

Geological reconnaissance of Cuba, Hayes, Vaughan and Spencer, 473.
Windward Islands, Spencer, 988.

General.

Geographical distribution of freshwater decapods, Ortmann, 821.
Oligocene canidce, Hatcher, 460.

Texas.

Accumulation of petroleum, Hayes, 478.
Austin chalk underlying Waco, Prather, 801.
Austin Folio, Hill and Vaughan, 505.
Beaumont oil field, Hill, 501.
Chemistry of asphalt rocks, Harper, 443.
Cinnabar deposits of Big Bend province, Hill, 504.
Coal, lignite, and asphalt rocks, Phillips, 855.
Composition of Texas petroleum, Mabery, 715.
Cretaceous and later rocks of Presidio and Brewster counties, Dumble, 500.
Fossils from Texas Cretaceous, Prather, 860.
Geography and geology of Black and Grand prairies, Hill, 499.
Geological horizon of petroleum, Fishback, 370.
Great oil well near Beaumont, Dumble, 305.
Great oil well near Beaumont, Lucas, 699.
Irrigation systems of Texas, Taylor, 1117.
Myalina from Coal Measures of Texas, Whitefield, 1126.
Oligocene of western Europe and southern United States, Maury, 759.
Petroleum from the Beaumont field, Richardson and Wallace, 897.
Red sandstone of Diabolo Mountains, Dumble, 308.
Skull of Dinocyon from Miocene of Texas, Matthew, 702.
Southwestern coal field, Taff, 1008.
Stratigraphic relations of the Red Beds to Carboniferous and Permian in northern Texas, Adams, 10.

Utah.

Delamar and Horn-Silver mines, Emmons, 345.
Geology of Utah, Talmage, 1009.
Great Salt Lake Basin, Lakes, 635.
Joint veins, Gilbert, 492.
Mineral crest, Jenney, 552.
Rocky Mountain coal fields, Storrs, 1004.
Stateline mining district, Smith, 975.

Vermont.

Analysis of Washington marble, Richardson, 896.
Fossil fruits and lignites of Brandon, Vt., Knowlton, 596.
Geology of Grand Isle, Perkins, 850.
Granite area of Barre, Finlay, 368.
List of reports on the geology of Vermont, Perkins, 848.
Marble, slate, and granite industries, Perkins, 841.
Mineral industries, Perkins, 849.
Mineral industries and geology of certain areas of Vermont, Perkins, 847.
Mineral resources of Vermont, Perkins, 845.
Petrographic description of dikes of Grand Isle, Shimer, 962.
Sketch of life and work of Augustus Wing, Seely, 949.
Sponges of Chazy formation, Seely, 950.
Structural details in Green Mountain region, Dale, 335.
Terranes of Orange County, Richardson, 896.

Virginia.

Atlantic coast Triassic coal field, Woodworth, 1179.

Triacl—Continued.

Atlantic coast region—Continued.

Mining in the Richmond coal basin, Virginia, Woodworth, 1180.
New York City Folio, Merril, 776.

Canada.

Fossils, possibly Triassic, in bowlder clay of Kings County, Haycock, 472.
Geological history of Gaspereau Valley, Haycock, 471.
Kings and Hants counties, Nova Scotia, Fletcher, 375.

Great Basin region.

Notes on geology of southeastern Arizona, Dumble, 304.

Great Plains region.

Atlantic coast region—Continued.

Mining in the Richmond coal basin, Virginia, Woodworth, 1180.

Utah.

Delamar and Horn-Silver mines, Emmons, 345.
Geology of Utah, Talmage, 1009.

Vermont.

Analysis of Washington marble, Richardson, 896.
Fossil fruits and lignites of Brandon, Vt., Knowlton, 596.
Geology of Grand Isle, Perkins, 850.
Granite area of Barre, Finlay, 368.
List of reports on the geology of Vermont, Perkins, 848.
Marble, slate, and granite industries, Perkins, 841.
Mineral industries, Perkins, 849.
Mineral industries and geology of certain areas of Vermont, Perkins, 847.
Mineral resources of Vermont, Perkins, 845.
Petrographic description of dikes of Grand Isle, Shimer, 962.
Sketch of life and work of Augustus Wing, Seely, 949.
Sponges of Chazy formation, Seely, 950.
Structural details in Green Mountain region, Dale, 335.
Terranes of Orange County, Richardson, 896.

Virginia.

Atlantic coast Triassic coal field, Woodworth, 1179.
Virginia—Continued.
- Copper-bearing rocks of Virginia copper district, Watson, 1091.
- Mining in the Richmond coal basin, Woodworth, 1180.
- Norfolk Folio, Darton, 245.
- Richmond coal basin, Gay, 401.
- Rutile mining in Virginia, Merrill, 773.

Washington.
- Bibliography of literature referring to geology of Washington, Arnold, 37.
- Coal deposits of Washington, Landes, 644.
- Coal fields of Pacific coast, Smith, 978.
- Fossil plants from State of Washington, Knowlton, 593.
- Geology of Washington, Landes, 642.
- Independent mine at Silvertown, Stretch, 1005.
- Iron ores of Washington, Shed, 928.
- Lake Chelan, Fairbanks, 351.
- Metalliferous resources of Washington, Landes, 645.
- Mount Baker mining district, Smith, 976.
- Nonmetalliferous resources of Washington, Landes, 648.
- Ore deposits of Monte Cristo, Spurr, 992, 993.
- Ore deposits of Monte Cristo, Washington, Winchell, 1166.
- Reconnaissance of Mount Hood and Mount Adams, Reid, 891.
- Water resources of Washington, Byers, 146.
- Water resources of Washington, Heine, 481.
- Water resources of Washington, Rudy, 917.

West Indies—Continued.
- Next eruption of Pelée, Jaggar, 549.
- Peculiar character of eruption of Mont Pelée, Vorriil, 1074.
- Preliminary report on recent eruption of Soufrière in St. Vincent, and of a visit to Mont Pelée, in Martinique, Anderson and Flett, 35.
- Recent eruptions of Mont Pelée, Nichols, 800.
- Recent volcanic eruptions in West Indies, Milne, 780.
- Recent volcanic eruptions in West Indies, Russell, 921.
- Roches volcaniques de Martinique, Lacroix, 613, 615.
- Visit to Martinique and St. Vincent after the great eruptions of May and June, 1902, Hovey, 557.
- Volcanic disturbances in the West Indies, Hill, 502.
- Volcanic dust, Falconer, 353.
- Volcanic dust and sand from St. Vincent, Diller and Steiger, 286.
- Volcanic dust from West Indies, Porter, 858.
- Volcanic dust from West Indies, Teall, 1018.
- Volcanic eruptions on Martinique and St. Vincent, Russell, 922.
- Volcanic rocks of Martinique and St. Vincent, Diller, 281.
- Vulcanske udbrud i Vestindien, Kolderup, 604.
- Windward Islands, Spencer, 988.

West Virginia.
- Anthracite of Third Hill Mountain, Griffith, 432.
- Bibliography of works upon the geology and natural resources of West Virginia, Brown, 142.
- Discovery of a musk-ox skull, Hatcher, 462.
- Geological horizon of the Kanawha black flint, White, 1123.
- Geology of West Virginia, White, 1122.
- List of fossils from lower half of Conemaugh formation near Morgantown, White, 1124.
- Raleigh Folio, Campbell, 157.

Wisconsin.
- Current notes on physiography, Davis, 261.
- Emigrant diamonds in America, Hobbs, 513.
- Glacial gold in Wisconsin, Thomas, 1023.
- Hamilton formation at Milwaukee, Teller, 1019.
- Junction of Lake Superior sandstone and Keweenawan traps, Grant, 423.
- Lakes of southeastern Wisconsin, Fenneman, 363.
- Lead and zinc deposits of Mississippi Valley, Van Hise and Bain, 1061.
- Lead and zinc deposits of Ozark region, Van Hise, 1067.
- Meteorite from Algoma, Kewaunee County, Hobbs, 519.
- Physiographical field notes in the town of Wautawatos, Brunecken, 143.
- Zinc and lead deposits of north Arkansas, Branner, 110.
Wyoming.
Deposit of titanic iron ore, Lindgren, 692.
Discovery of teeth in Bactosaurus, Gilmore, 405.
Fore limb and manus of Brontosaurus, Hatcher, 488.
Geology and water resources of the Patrick and Goshen Hole quadrangles, Adams, 8.
Jurassic dinosaurs, Gratacap, 427.
Laramie Cretaceous of Wyoming, Williston, 1159.
Laramie Plains Red Beds and their age, Knight, 586.
New form of calcite-sand crystal, Harbour and Fisher, 56.

Wyoming—Continued.
New occurrence of sperrylite, Wells and Penfield, 1112.
New species of Bactosaurus from Laramie beds, Hay, 467.
Newcastle oil field, Knight and Slosson, 587.
Occurrence of rare metals in Rambler mine, Knight, 584.
Petroleum fields of Wyoming, Knight, 585.
Prospecting for oil, Lakes, 634.
Rocky Mountain coal fields, Storrs, 1004.
Teredo-like shell from Laramie group, Whitfield, 1131.
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