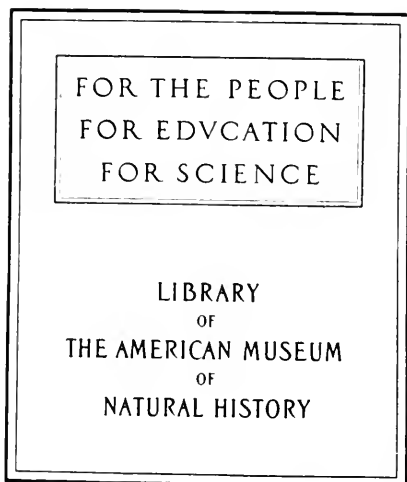




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Department of the Interior:

U. S. NATIONAL MUSEUM.

# BULLETIN

OF THE

UNITED STATES NATIONAL MUSEUM.

No. 30.

BIBLIOGRAPHIES OF AMERICAN NATURALISTS.—  
III. PUBLICATIONS RELATING TO FOSSIL INVERTEBRATES.

BY

JOHN BELKNAP MARCOU.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1885.





Department of the Interior:

U. S. NATIONAL MUSEUM.

— Serial Number 40 —

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OF THE

UNITED STATES NATIONAL MUSEUM.

No. 30.

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PUBLISHED UNDER THE DIRECTION OF THE SMITHSONIAN INSTITUTION.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1885.

## ADVERTISEMENT.

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This work (Bulletin No. 30) is the fortieth of a series of papers intended to illustrate the collections of natural history and ethnology belonging to the United States, and constituting the National Museum, of which the Smithsonian Institution was placed in charge by the act of Congress of August 10, 1846. It constitutes the third of the series of bibliographies illustrating the work of the Museum.

It has been prepared at the request of the Institution, and printed by authority of the honorable Secretary of the Interior.

The publications of the National Museum consist of two series—the Bulletins, of which this is No. 30, in continuous series, and the Proceedings, of which the eighth volume is now in press.

The volumes of Proceedings are printed signature by signature, each issue having its own date, and a small edition of each signature is distributed to libraries promptly after its publication.

From time to time the publications of the Museum which have been issued separately are combined together and issued as volumes of the Miscellaneous Collections. These are struck off from the stereotype plates from which the first edition was printed, and in this form are distributed by the Smithsonian Institution to libraries and scientific societies throughout the world. Volume 13 of these collections includes Bulletins 1 to 10, inclusive; volume 19, volumes 1 and 2 of the Proceedings; volume 22, volumes 3 and 4 of the Proceedings; and volume 23, Bulletins 11 to 15, inclusive.

Full lists of the publications of the Museum may be found in the current catalogues of the publications of the Smithsonian Institution.

SPENCER F. BAIRD,

*Secretary of the Smithsonian Institution.*

SMITHSONIAN INSTITUTION,

*Washington, December 1, 1885.*

III.

BIBLIOGRAPHY OF PUBLICATIONS

RELATING TO

THE COLLECTION OF FOSSIL INVERTEBRATES

IN THE

UNITED STATES NATIONAL MUSEUM,

INCLUDING

COMPLETE LISTS OF THE WRITINGS OF FIELDING B. MEEK,  
CHARLES A. WHITE, AND CHARLES D. WALCOTT.

BY

JOHN BELKNAP MARCOU.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1885.



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### INTRODUCTORY NOTE.

In preparing the following catalogues chronologic order has been followed under the different authors, and in Part IV the fifteen different authors are arranged, first, alphabetically and then chronologically under each author. Correctness of bibliographic form and detail has not been so much sought after as completeness and accuracy in the numerous references. A general alphabetic index of species will be found at the end of the volume. The compiler will be glad to have his attention called to any errors or omissions. Dr. White's bibliography is prepared from data furnished by himself. I am much indebted to Dr. White for his kind advice and help in the preparation of the work.





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PART I.

THE PUBLISHED WRITINGS OF FIELDING BRADFORD MEEK.

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## 1.—THE PUBLISHED WRITINGS OF FIELDING BRADFORD MEEK.

### BIOGRAPHIC SKETCH OF FIELDING BRADFORD MEEK.\*

On December 10, 1817, Fielding Bradford Meek was born in the city of Madison, Ind. His grandparents were Irish Presbyterians, who removed from Armagh County to America about 1768, and who finally settled in Hamilton County, Ohio. His father, together with his family, removed from there to Madison, where he was a lawyer of considerable eminence. The family, including those born in Madison, consisted of the parents, two sons and two daughters besides Fielding, all of whom died several years before him. The father died when the son who was to become so distinguished a paleontologist was only three years old, leaving the family in moderate circumstances. Mr. Meek's early youth was passed in Madison. His education was much impeded by the delicate condition of his health. Upon reaching manhood, by advice of his friends and against his own inclination, for he was of a studious and retiring disposition, he invested his small patrimony in mercantile business, first in his native place, and afterward in Owensborough, Ky. The result was financial failure and loss of all he possessed. After this, while laboring for his support and struggling with ill health and poverty, he continued his studies, general and special, for he began early to devote himself to natural history. His first public work was during the years 1848 and 1849, and was performed, as an assistant of Dr. D. D. Owen, upon the United States geological survey of Iowa, Wisconsin, and Minnesota.

Having closed this work, he returned to his home in Owensborough, but soon after, in the year 1852, went to Albany, N. Y., as assistant to Professor Hall, in the paleontologic work of that State. He remained there until 1858, serving three summers. Two of these summers were spent on the geologic survey of Missouri; the other, that of 1853, was employed in exploring the Bad Lands of Nebraska, together with Dr. F. V. Hayden, both being commissioned by Professor Hall for that work. Three

\* This sketch is compiled from data taken down at Mr. Meek's dictation by a friend shortly before his death.

years after this exploration, he prepared for publication, in conjunction with Professor Hall, an important memoir on cretaceous fossils from Nebraska. In 1858, Mr. Meek left Albany and took up his residence in Washington, where he continued to live until his death. His home, and the place of his scientific work, except when in the field, was at the Smithsonian Institution, and it was within its walls that the greatest part of his scientific work was accomplished. The association which he formed with Dr. Hayden in 1853 was tacitly continued until Mr. Meek's death. When Dr. Hayden commenced his explorations in the Western Territories, and afterwards organized the Geological Survey of the Rocky Mountain region, Mr. Meek was entrusted with all the invertebrate paleontology, much of which appeared under their joint names. It was the custom of Mr. Meek to publish preliminary descriptions of his new species, and afterward elaborate and illustrate the subjects for final publication. Thoroughness, scrupulous exactness, and nice powers of discrimination are manifested in all his labors; and with such merits his works will shed luster upon his name as long as paleontology is studied. No one in America has done more than he to systematize and advance the science to which he devoted his life. His personal character cannot be too highly eulogized, for it was without a blemish. He was a genial, sincere, pure-minded, honorable man. Gentleness and candor were apparent in every expression of his face, and in every word he uttered; but he was self-reliant and ready at all times to defend what he believed to be right, and with his keen sense of justice, he was seldom mistaken as to what was right. He was never in vigorous health and often ill; but never complaining, always hopeful, always cheerful, always at the work he loved so well, always helpful of others. His hearing began to fail in early manhood, and the affliction increased until he became entirely deaf several years before he died. Even when cut off from conversation with his fellow-men his cheerfulness did not forsake him; but he seemed to derive great pleasure from written communication with his friends. He was never married, and leaves no near relatives; but all with whom he was ever brought in contact will remember him with pleasure, while to those who were permitted to enjoy scientific intercourse or correspondence with him during his life, his memory will be especially dear. He died at Washington, D. C., on the 21st of December, 1876, having only a few days before completed his 59th year. He had been in ill health for several years past, and indeed almost all his life, for his malady was inherited *phthisis pulmonalis*. It had been his custom for several years to spend the winter in Florida, and the summer months in the Alleghany Mountains. He had made preparations to leave Washington for Florida early in December, but was taken with hemorrhage of the lungs on the day before the one set for his departure. He never rallied from this attack, but gradually sank to a peaceful and quiet death.

I.

MEEK, F. B. Mr. Meek's report on Moniteau County. <The first and second annual reports of the geological survey of Missouri, by G. C. Swallow, State geologist, Part II. pp. 96-117. Jefferson City, 1855.

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Mr. Meek also drew the figures illustrating the paleontological report in this volume. A geological map of the county is also given.

2.

HALL, JAMES, and MEEK, F. B. Descriptions of new species of fossils from the Cretaceous formations of Nebraska; with observations upon *Baculites ovatus* and *B. compressus*, and the progressive development of the septa in *Baculites*, *Ammonites*, and *Scaphites*. <Mem. Am. Acad. Arts and Sci., vol. v, new ser., pp. 379-411, 8 plates. 1856. Cambridge, 1856.

The fossils described in this paper were collected in 1853 by F. B. Meek and F. V. Hayden. The paper was communicated June 27, 1854, but was not published till 1856.

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## 3.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new species of Gasteropoda, from the Cretaceous formation of Nebraska Territory. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 63-69. 1856. Philadelphia, 1857.

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## 4.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new species of Gasteropoda and Cephalopoda, from the Cretaceous formations of Nebraska Territory. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 70-72. 1856. Philadelphia, 1857.

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MEEK, F. B., and HAYDEN, F. V. Descriptions of twenty-eight new species of Accephala and one Gasteropod, from the Cretaceous formations of Nebraska Territory. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 81-87. 1856. Philadelphia, 1857.

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MEEK, F. B., and HAYDEN, F. V. Descriptions of new species of Accephala and Gasteropoda, from the Tertiary formations of Nebraska Territory; with some general remarks on the geology of the country about the sources of the Misson River. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 111-126. 1856. Philadelphia, 1857.

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On page 126 *Pyrcia bairdi* is changed to *Busycon* (Bolten), and called *B. bairdi*.

## 7.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new fossil species of Mollusca collected by Dr. F. V. Hayden in Nebraska Territory, together with a complete catalogue of all the remains of Invertebrata hitherto described and identified from the Cretaceous and Tertiary formations of that region. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 265-286. 1856. Philadelphia, 1857.

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8.

MEEK, F. B. Description of new organic remains from the Cretaceous rocks of Vancouver's Island. <Trans. Albany Inst., vol. iv, pp. 37-49. 1857. Albany, 1858-1864.

The fossils here described were collected by Dr. J. S. Newberry, geologist of Lieutenant Williamson's North California and Oregon Exploring Expedition. The author describes twelve new species.

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Mr. Meek gives the date of these species as 1857 when he republished them with illustrations in the Bull. U. S. Geol. and Geogr. Surv. Terr., vol. ii, No. 4. Washington, 1876.

9.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new species and genera of fossils collected by Dr. F. V. Hayden in Nebraska Territory, under the direction of Lieut. G. K. Warren, U. S. Topographical Engineers; with some remarks on the Tertiary and Cretaceous formations of the Northwest and the parallelism of the latter with those of other portions of the United States and Territories. <Proc. Acad. Nat. Sci. Phila., 1st series, vol. ix, pp. 117-148. 1857. Philadelphia, 1858.

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## 10.

MEEK, F. B., and HAYDEN, F. V. Fossils of Nebraska. Letter from F. B. Meek and F. V. Hayden to G. K. Warren, Lieut. Topog. Eng., dated Washington February 8, 1857; printed in the National Intelligencer of March 16. <Am. Journ. Sci., vol. xxv, 2d ser., pp. 439-442. New Haven, 1858.

This article is mainly geologic only the genera, which characterize the formations under discussion, being enumerated.

## 11.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new organic remains collected in Nebraska Territory, in the year 1857, by Dr. F. V. Hayden, geologist to the exploring expedition under the command of Lieut. G. K. Warren, Top. Eng., U. S. Army; together with some remarks on the geology of the Black Hills and portions of the surrounding country. <Proc. Acad. Nat. Sci. Phila., vol. x, pp. 41-59. 1858. Philadelphia, 1859.

Jurassic fossils. Afterward republished and illustrated, in 1865, in Paleontology of the Upper Missouri, Smithsonian Contributions to Knowledge, 172.

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12.

MEEK, F. B., and HAYDEN, F. V. Remarks on the Lower Cretaceous beds of Kansas and Nebraska, together with descriptions of Carboniferous fossils from the valley of Kansas River. <Proc. Acad. Nat. Sci. Phila., vol. x, pp. 256-264. 1858. Philadelphia, 1859.

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MEEK, F. B., and HAYDEN, F. V. Descriptions of new organic remains from North-eastern Kansas, indicating the existence of Permian rocks in that territory. <Trans. Albany Institute, vol. iv, pp. 73-88. 1858. Albany, 1858-1864.

This includes a note in relation to the priority of discovery of these fossils of Permian type.

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## 15.

MEEK, F. B., and HAYDEN, F. V. On a new genus of Patelliform shells from the Cretaceous rocks of Nebraska. <Am. Journ. Sci., vol. xxix, 2d ser., pp. 33-35, plate i. 1860. New Haven, 1860.

Genus *Anisomyon*,\* n. g., M. & H., 1860.

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\* *Ἄνισος*, unequal; *μῦών*, muscle; in allusion to the unsymmetrical muscular scar.

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The authors refer the following Nebraska species to this genus:

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16.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new organic remains from the Tertiary, Cretaceous, and Jurassic rocks of Nebraska. < Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 175-184. 1860. Philadelphia, 1861.

A description of the Carboniferous species *Myalina aviculoides* is also added; also a corrected list of fossils.

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\* Σφιν, a wedge; ποτηριον, a cup.



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MEEK, F. B., and WORTHEN, A. H. Remarks on the age of the Goniatite limestone at Rockford, Indiana, and its relation to the "Black Slate" of the western States, and to some of the succeeding rocks above the latter. <Am. Journ. Sci., vol. xxxii, 2d ser., pp. 167-177. 1861. New Haven, 1861.

The authors conclude it to be probably of Carboniferous age, and, at any rate, much more recent than the Chemung, and not equivalent to any New York rock.

\* ὀλίγος, few; and πόρος, opening a pore.

MEEK, F. B., and WORTHEN, A. H. Descriptions of new Paleozoic fossils from Illinois and Iowa. <Proc. Acad. Nat. Sci. Phila., vol. xiii, pp. 128-148. 1861. Philadelphia. 1862.

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\* *Cardium* and *οφες*, from its resemblance to *Cardium*.

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Corrections in regard to a few fossils described in papers of September and October, 1860.

- Cyathocerinus scitulus* (September, 1860) should be *C. scutptilus*.
- Platystoma nana* (October, 1860) should be *Naticopsis*.
- Eulima peracuta* (October, 1860) should be ranged under *Polyphemopsis*, of Portlock, probably a section of the genus *Loxonema*.
- Orthoceras expansum* (October, 1860) belongs to the genus or subgenus *Actinoceras*.
- Cyrtoceras curtum* (October, 1860) should be ranged under the subgenus *Apiceras*.

23.

MEEK, F. B. Descriptions of new Cretaceous fossils collected by the Northwestern Boundary Commission on Vancouver and Sucia Islands. <Proc. Acad. Nat. Sci. Phila., vol. xiii, pp. 314-318. 1861. Philadelphia, 1862.

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24.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new Lower Silurian (Primordial), Jurassic, Cretaceous, and Tertiary fossils, collected in Nebraska by the exploring expedition under the command of Capt. Wm. F. Reynolds, U. S. Top. Engrs., with some remarks on the rocks from which they were obtained. <Proc. Acad. Nat. Sci. Phila., vol. xiii, pp. 415-447. 1861. Philadelphia, 1862.

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† ὀρθος, straight; νημα, thread.

‡ τρήμα and δίσκος, in allusion to the perforated umbilicus and the discoid form of the shell in the typical species.

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\* *Xairo*, to open or gape; and *mya*.



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In a note the authors consider their previously proposed *Evactinopora* as equivalent to *Conodictyum* Münster, and call their species *C. radiatum*.



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Genera Sphenopoterium, Cardiopsis, Trematodiscus, Strotocrinus, Steganocrinus, Calocrinus, Oligoporus, Erisocrinus, Syntrielasma, Eumierotis, Trachydromia, Orthonema, Soleniscus, Acanthotelson, Palæocaris, Anthracerpes, Palæocampa, Shænaster. Volumes ii, iii, v, and vi of these reports all comprise very important works on Invertebrate Paleontology, in which are not only species and genera described, but higher groups are defined, and many important questions are philosophically discussed.

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\* σφην, a wedge, ποτηριον, a drinking cup.

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\* *σπρωτος*, spread; *χρῖνον*, a lily.† *πτεγανος*, covered; *χρῖνον*, a lily; in allusion to the covered free rays.‡ *χολος*, hollow; *χρῖνον*, a lily.

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\* ὀλιγος, few; ἵσπος, a passage.

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\* σχοιρος, a rope; αστηρ, a star.

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\* ενδορ, within; λοβος, a lobe.

† μονος, solitary; πτερον, a wing.

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\* τραχος, rough; δωμα, a house.

† παλαιος, ancient; χερσις, a shrimp.

† ορθος, straight; νημα, a thread.

§ σωληνισχος, a little channel or gutter.

|| αθηραξ, coal; ερω, to creep.

*Insecta.*

*Lepidoptera.*

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\* παλαιος, ancient; χαμηλη, a caterpillar.

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46.

MEEK, F. B. Check lists of the Invertebrate fossils of North America. Miocene. <Smithsonian Miscellaneous Collections (No. 183), pp. 1-32, 1864. Washington, 1867.

Contains, besides the list, "Notes and explanations" of generic and specific characters.

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## 47.

MEEK, F. B. Note on *Bellinurus Danae*, from the Illinois Coal-measures. <Am. Journ. Sci., vol. xliii, 2d ser., pp. 257, 258. 1867. New Haven, 1867.

In this note the author expresses the opinion that *Bellinurus danae*, Meek and Worthen, properly belongs to the recently proposed genus *Prestwichia*, Woodward.

48.

MEEK, F. B. Note on a new genus of fossil Crustacea. <Am. Journ. Sci., vol. xliii, 2d ser., pp. 394, 395. 1867. New Haven, 1867.

Genus Eupröops. This genus was afterward fully described and illustrated in vol. iii of Worthen's Illinois Geological Reports.

49.

MEEK, F. B. On the punctate shell-structure of Syringothyris. <Am. Journ. Sci., vol. xliii, 2d ser., pp. 407, 408. 1867. New Haven, 1867.

50.

MEEK, F. B. Remarks on Professor Geinitz's views respecting the Upper Paleozoic rocks and Fossils of Southeastern Nebraska. <Am. Journ. Sci., vol. xliii, 2d ser., pp. 170-187; continued, pp. 327-339; notes to the same pp. 282, 283. 1867. New Haven, 1867.

This is an extended discussion and criticism of Dr. Geinitz's "Carbon formation and Dyas in Nebraska." The following fossils are discussed especially:

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Published by authority of the legislature of Illinois, 1868.

Silurian, Devonian, and Carboniferous.

## LOWER SILURIAN SPECIES.

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\* Βαρύς, heavy; Κρίνον, a lily.

† Πιστήρ, a washing vessel; Κρίνον, a lily.

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\* μικρος, small; κύκλος, a circle.

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\* σος, equal; νημα, a thread.

† βυρσα, a purse; χηвор, a lily.

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\* *Λεπτις*, a scale; *εσθης*, a garment.

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\* *ovvξ*, a claw; *αστηρ*, a star.

† Mazon, name of stream.

## 60.

MEEK, F. B. Remarks on the geology of the valley of Mackenzie River, with figures and descriptions of fossils from that region, in the Museum of the Smithsonian Institution, chiefly collected by the late Robert Kennicott, Esq. <Trans. Chicago Acad. of Sci., vol. i, pp. 61-114, plates xi, xv. 1868. Chicago, 1867-1869.

## Devonian.

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MEEK, F. B. Geology of the Line of the Great Pacific Railroad. [In a letter to Dr. J. J. Bigsby.] <Geological Magazine, Decade I, vol. vii, pp. 163-164. 1870. London, 1870.

Notes the fossils obtained by Mr. Clarence King along the line of the Pacific Railway.

\* σωλην, a channel; χεῖλος, lip.

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Trimerella ohioensis. Republished and illustrated in Paleontology of Ohio (Newberry).

## 71.

MEEK, F. B. On some new Silurian Crinoids and Shells. <Am. Journ. Sci., vol. ii, 3d ser., pp. 295-302. 1871. New Haven, 1871.

This article consists of descriptions of species, together with some extended remarks on the genus *Lichenocrinus* of Hall.

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73.

MEEK, F. B. Descriptions of new species of fossils from Ohio and other Western States and Territories. <Proc. Acad. Nat. Sci. Phila., vol. xxiii, pp. 159-184. 1871. Philadelphia, 1871.

This paper contains descriptions of fossils, mostly Carboniferous, from Ohio, Illinois, and Texas, with a *Melantho* and *Viviparus* from Wyoming.

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MEEK, F. B. Notice of a new Brachiopod, from the lead-bearing rocks at Mine La Motte, Missouri. <Proc. Acad., Nat. Sci. Phila., vol. xxiii, pp. 185-187. 4 woodcuts. 1871. Philadelphia, 1871.

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MEEK, F. B. Descriptions of new Western Paleozoic fossils, mainly from the Cincinnati Group of the Lower Silurian series of Ohio. <Proc. Acad. Nat. Sci. Phila., vol. xxiii, pp. 308-336. 1872. Philadelphia, 1871.

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MEEK, F. B. [Geological reports on Miller, Morgan, and Saline Counties, Missouri.]  
 <Reports on the Geological Survey of the State of Missouri, 1855-71, by G. C. Broadhead, F. B. Meek, and B. F. Shumard, chapters vii-ix, pp. 111-188. Jefferson City, 1873.

Geological maps of Miller and Morgan Counties accompany these reports.

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## 88.

MEEK, F. B. Spargen Hill fossils identified among specimens from Idaho. <Am. Journ. Sci., vol. v, 3d ser., pp. 383, 384. 1873. New Haven, 1873.

The author identifies, among some collections made by Prof. F. H. Bradley, some of the minute species of Mollusca, for which the locality in Washington County, Indiana, known as Spargen Hill, is noted. A list of the species identified is given, but no discussion of them is made.

## 89.

MEEK, F. B. Preliminary Paleontological Report, consisting of lists and descriptions of fossils, with remarks on the ages of the rocks in which they were found, &c., &c. <Sixth Ann. Report of the U. S. Geol. Survey of the Territories, pp. 431-518. 1873. Washington, 1873.

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MEEK, F. B. Descriptions of Invertebrate fossils of the Silurian and Devonian systems. <Geol. Surv. of Ohio, vol. i, part ii. Paleontology, pp. 1-243, plates 1-23, and 3 plates of diagrams of Crinoids. 1873. Columbus, 1873.

FOSSILS OF THE CINCINNATI GROUP.

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MEEK, F. B., and WORTHEN, A. H. Paleontology. Descriptions of Invertebrates from the Carboniferous System. <Geological Survey of Illinois, vol. v, pp. 323-619, pls. i-xxxii. 1873. Springfield, 1873.

Published by authority of the legislature of Illinois, 1873.  
 Genera *Physctocrinus*, *Nipterocrinus*, *Codonites*.

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In this series of articles Mr. Meek revises and extends the descriptions of a large number of the species embraced in the fifth volume of Illinois Geological Report, and also presents some very important philosophical discussions of the relations of the species and of the higher groups.

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Published by authority of the legislature, 1875.

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## 100.

MEEK, F. B. Notice of a very large Goniatite from Eastern Kansas (Carboniferous). <Bulletin U. S. Geol. and Geog. Surv. of the Terr. No. 6, 2d ser., vol. i, p. 445. Washington, 1875.

The author regards it as at most only a variety of *G. globulosus*, Meek & Worthen, although attaining so great size.

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## 101.

MEEK, F. B. Descriptions and illustrations of fossils from Vancouver's and Suclia Islands, and other Northwestern localities. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. ii, No. 4, pp. 351-374, 6 plates. 1876. Washington, 1876.

Carboniferous, Cretaceous, and Tertiary; mostly Cretaceous. A large part of the species embraced in this paper were originally described by the author in 1856 in vol. iv of Transactions Albany Institute, and are here redescribed with others and illustrated.

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102.

MEEK, F. B. Note on the new genus *Uintacrinus*, Grinnell. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. ii, No. 4, pp. 375-378, 2 wood cuts. 1876. Washington, 1876.

This paper consists largely of a redescription and rectification of the genus.

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103.

MEEK, F. B. Descriptions of the Cretaceous Fossils collected on the San Juan exploring expedition under Capt. J. N. Macomb, U. S. Engineers. <Report of the Exploring Expedition from Santa Fé, New Mexico, to the junction of the Grand and Green rivers of the Great Colorado of the West, in 1859, pp. 121-133, pls. i and ii. Washington, 1876.

The exploration was made in 1859, but the report was not published until 1876, when Mr. Meek revised the work in accordance with his views at the time of publication.

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## 104.

MEEK, F. B. Report on the Paleontological collections of the expedition, <Report Expl. Great Basin of the Terr. of Utah, in 1859. By J. H. Simpson. Appendix J, pp. 337-373, pls. i-v. Washington, 1876.

Devonian, Carboniferous, Jurassic, Cretaceous, and Tertiary. The explanations were made and the fossils collected nearly eighteen years before the publication of this report, but the paleontology was corrected in accordance with the views of the author at the time of publication.

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105.

MEEK, F. B. A report on the Invertebrate Cretaceous and Tertiary Fossils of the Upper Missouri Country. <Rep. U. S. Geol. & Geogr. Surv. of the Terr. 4°. vol. ix, pp. i-xiv, 1-629, pls. i-xlv. Washington, 1876.

This great work contains descriptions and illustrations of nearly 300 species; more than 200 genera and subgenera are fully diagnosed, besides which full diagnoses of the families which embrace them are given; also philosophical discussion of many important questions. The greater part of the species embraced in this volume were previously, from time to time, described and published, mainly in the publications of the Acad. Nat. Sc. Phila.

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\* κλωστήρ, a spindle (diminutive of).

† Vanikoro; ὄψις, form.

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\* ὀδούς, a tooth; βάσις, a base.

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*Gasteropoda.*

*Pulmonata.*

*Vitrinidæ.*

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MEEK, F. B. Paleontology. < Rep. Geol. Expl. 40th Parallel, vol. iv, part i, pp. 1-197, pls. i-xvii. Washington, 1877.

Silurian, Devonian, Carboniferous, Triassic, Jurassic, Cretaceous, Tertiary. Genera *Euto-*  
*mecerus* (Hyatt), *Eudiscoeceras* (Hyatt), *Polyrhynchis*, *Rhytophorus*, *Pyrgulifera*.

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<sup>1</sup> κόρυς, a helmet; κερας, a horn.

<sup>1</sup> ἀκροχορδών, a wart; κερας, a horn.

λύγμος, naked; ὄπισθ, back; κερας, a horn.

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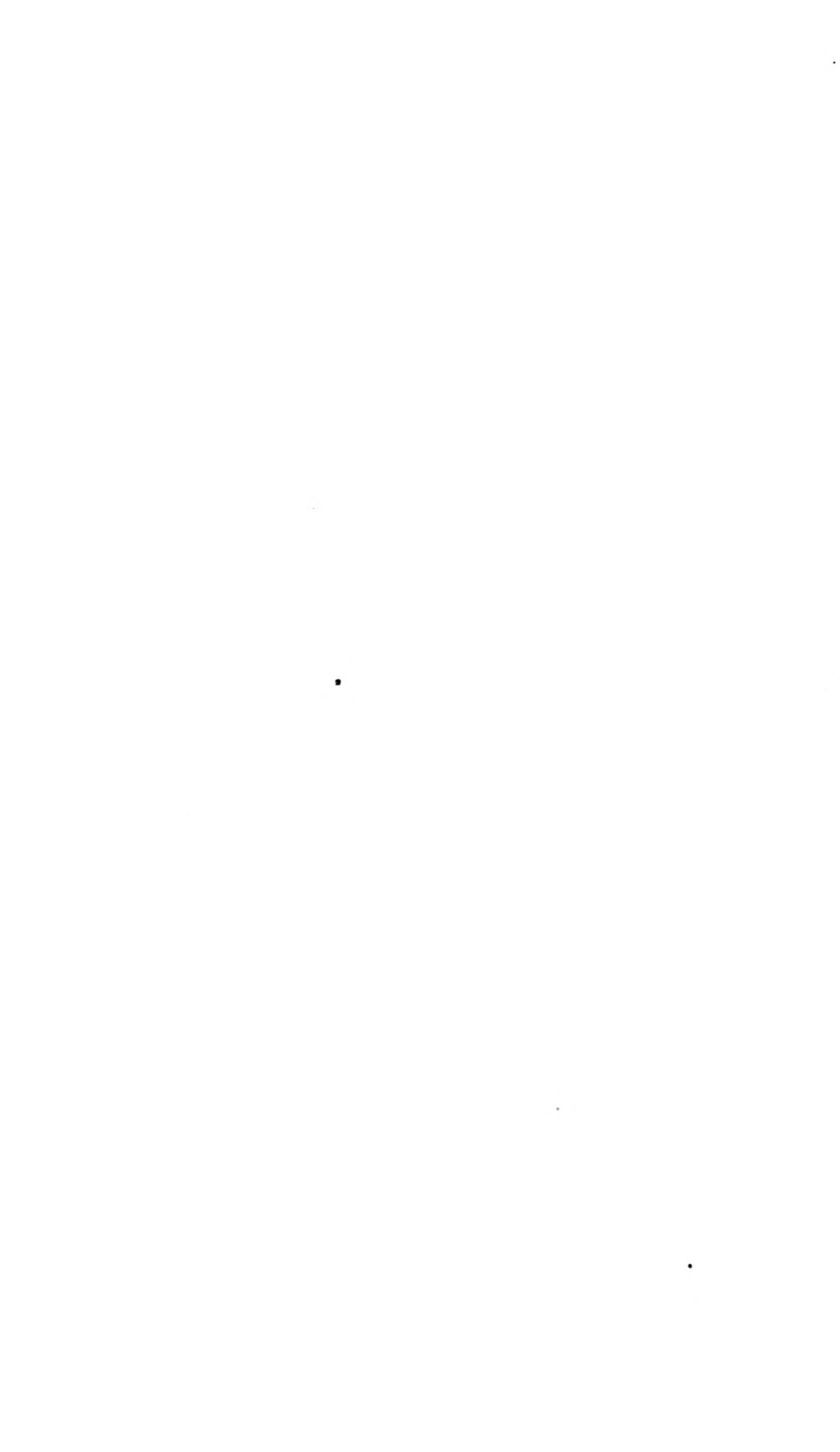
PART II.

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THE PUBLISHED WRITINGS OF CHARLES ABIATHAR WHITE, 1860-1884.

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## II.—THE PUBLISHED WRITINGS OF CHARLES ABIATHAR WHITE, A. M., M. D.

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This catalogue is intended to embrace the titles and place of publication, not only of all the scientific writings of Dr. White, but his reviews of the writings of other authors, and his more popular articles also. In only a few instances however, are newspaper articles, of which he has written many, noticed on the following pages; but the intention has been to make entry of all his short published notes which contain any expression of his views upon scientific subjects, as well as of his more elaborate works. The annotations which accompany this catalogue are made up mainly from data furnished by the author of the works, and all expressions of opinion upon geologic and paleontologic subjects contained in them should be regarded as his own.

Charles A. White was born in North Dighton, Bristol County, Massachusetts, on January 26, 1826. He has held the following official positions in education and science, to which subjects most of his writings pertain: State Geologist of Iowa, by legislative appointment, from 1866 to 1869, inclusive; Professor of Natural History in the Iowa State University, from 1867 to 1873; Professor of Natural History in Bowdoin College, from 1873 to 1875; Paleontologist to the U. S. Geographical and Geological Surveys West of the 100th Meridian, in charge of Lieut. George M. Wheeler, in 1874; Geologist and Paleontologist to the U. S. Geological Survey of the Territories, in charge of Maj. J. W. Powell, in 1875; Geologist and Paleontologist to the U. S. Geological Survey of the Territories, in charge of Dr. F. V. Hayden, from 1876 to 1879; in charge of paleontological collections in the U. S. National Museum from 1879 to 1882; detailed in 1881 to act as chief of the Artesian Wells Commission upon the Great Plains, under the auspices of the U. S. Agricultural Department; Geologist to the U. S. Geological Survey in 1882; Paleontologist to the U. S. Geological Survey in 1883, which position he now holds, together with honorary curatorship in the U. S. National Museum; President of the Biological Society of Washington for the years 1883 and 1884.

A partial bibliography of Dr. White appeared in the "American Field" for March and April, 1885; this is by Charles Aldrich.

1.

WHITE, C. A. Observations upon the Geology and Paleontology of Burlington, Iowa, and its Vicinity. <Bost. Jour. Nat. Hist., (Bost. Soc. Nat. Hist.) vol. vii, pp. 209-235. Boston, 1861.

Same. Boston, 1860, 8vo., p. 209-235. Fifty separates printed without title-page, covers, or repaging.

The 50 separates appeared at the date mentioned, but Part II of vol. vii, according to a note inserted in it, did not appear until December, 1862, although it bears the imprint 1861.

This paper is divided into two parts: in the first, details of local geology are given, and attention is called to the fact that in this locality the change from Devonian to Carboniferous took place so gradually as to render it impossible to point out the exact line where one ends and the other begins. A section of the rocks at Burlington is given with a table showing the vertical range of shells, and a list of the genera discovered in the rocks at Burlington, showing the different beds in which they have been recognized.

The second part contains descriptions of seven new species of *Brachiopoda* from the Chemung rocks at Burlington, Iowa.

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This part also contains a list of described fossils recognized in the Burlington beds. 233-235

2.

WHITE, C. A., and WHITFIELD, R. P. Observations upon the Rocks of the Mississippi Valley which have been referred to the Chemung Group of New York, together with Descriptions of New Species of Fossils from the same horizon at Burlington, Iowa. <Proc. Bost. Soc. Nat. Hist., vol. viii, pp. 289-306. Boston, 1862.

Same. Boston, 1862, 8vo., pp. 289-306. Fifty separates printed without title-page, covers, or repaging.

Thirty-one species of Lower Carboniferous fossils are described in this paper.

*Description of new species.*

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3.

WHITE, C. A. Observations on the Summit Structure of Pentremites, the Structure and Arrangement of certain Parts of Crinoids, and Descriptions of New Species from the Carboniferous Rocks of Burlington, Iowa. < Boston Jour. Nat. Hist. (Boston Soc. Nat. Hist.), vol. vii, pp. 481-506. Boston, 1863.

Same. Boston, 1863. 8vo, pp. 581-506. Fifty separates printed without title-page, covers, or repaging.

The summit structure of *Pentremites norwoodi*, *P. stelliformis*, *P. lineatus*, and *P. elongatus* is noticed. Instances of the recuperative power of Crinoids are also given. The genus *Cæliocrinus* is proposed, and five species of Crinoids are described.

Some observations on certain modifications of the structure of the probosces of *Actinocrinus* are given, p. 489-491.

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\* Κοιλία, venter; κρίνον, liliūm.

WHITE, C. A. Descriptions of new species of Fossils from the Devonian and Carboniferous Rocks of the Mississippi Valley. < Proc. Boston Soc. Nat. Hist., vol. ix, pp. 8-33. Boston, 1865.

Same. Boston, 1862. 8vo, pp. 8-33. Fifty separates printed without title-page, covers, or repaging.

Forty-five species and two varieties of fossils are described, and the genera *Belemnocrinus* and *Acambona* are proposed. The author now regards the latter as identical with *Eumicrotis*, Hall.

*Echinodermata.*

*Crinoidea.*

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\* βελεμων, a dart; κρινον, a lily.

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5.

WHITE, C. A. Fetal hydrocephalus. <Chicago Medical Journal, vol. xxii, pp. 55-57. Chicago, 1865.

A report of an obstetrical case in which the child's cranium was too much enlarged to pass through the pelvic arch, and the serum was drawn off by an operation *in utero*.

6.

WHITE, C. A. Cerebro-spinal meningitis. <Chicago Medical Journal, vol. xxii, pp. 529-532. Chicago, 1865.

A report of a successful case, in which the application of dry heat to the extremities was a leading feature of the treatment.

7.

WHITE, C. A. The Soils of Iowa and their origin. <Report of the Secretary of the Iowa State Agricultural Society for the year 1865. pp. 245-267. Des Moines, 1866.

A popular lecture, delivered before the Society September 29, 1865. Some of the views expressed in the lecture have since been much modified by the author.

\*ἀχῆ, a point; ἀμβων, umbo.

## 8.

WHITE, C. A. Observations on the genus *Belemnocrinus*. <Proc. Boston Soc. Nat. Hist., vol. x, p. 180. Boston, 1866.

This note is merely a rectification of the generic formula of *Belemnocrinus* as it was originally published in volume ix.

## 9.

WHITE, C. A. First Annual Report of Progress, of Charles A. White, State Geologist. pp. 1-4. Des Moines, 1867.

Probably not over fifty copies of this report were printed in its original form. It was reprinted on pages 5 to 8 of the first and second annual reports, Des Moines, 1868. See entry No. 20.

## 10.

WHITE, C. A. and ST. JOHN, O. H. Preliminary notice of new genera and species of fossils. By C. A. White, M. D., State Geologist, and O. H. St. John, Assistant. [pp. 1-3.] Iowa City, May 8, 1867.

This small publication of only fifty copies was made by the Iowa State Geological Survey. Four species are described. The genus *Meekella* proposed, *Cryptacanthia* suggested; and the whole, together with other matter, was republished in Vol. I, Transactions of the Chicago Academy of Sciences. See entry No. 15.

*Protozoa.*

*Amphistegina*, White & St. John, 1867.

*Mollusca.*

*Aulosteges spondyliiformis*, n. s., White & St. John, 1867.

*Waldheimia compacta*, n. s., White & St. John, 1867.

*Beyrichia lithofactor*, n. s., White & St. John, 1867.

*Beyrichia lithofactor* var. *velata*, White & St. John, 1867.

*Meekella*, n. g., White & St. John, 1867.

## 11.

WHITE, C. A. Observations upon the Drift phenomena of Southwestern Iowa. <Amer. Jour. Sci., 2d ser., vol. xliii, pp. 301-305. New Haven, 1867.

Same. New Haven, 1867. 8vo., pp. 301-305. Twenty-five separates printed without covers, title-page, or repaging.

Mentions the occurrence of glacial striæ upon rocks *in situ*.

## 12.

WHITE, C. A. A Sketch of the Geology of Southwestern Iowa. <Amer. Jour. Sci., 2d ser., vol. xlv, pp. 23-31. New Haven, 1867.

Same. New Haven, 1867. 8vo., pp. 23-31. Twenty-five separates printed without title-page, covers, or repaging.

It is shown that the limestones of the region discussed belong to the upper and not to the lower Carboniferous series, as had been supposed by some previous authors.

## 13.

WHITE, C. A. Drift phenomena in Southwestern Iowa. <Amer. Jour. Sci., 2d ser., vol. xlv, p. 119. New Haven, 1867.

This is an additional note to the article of the preceding entry, which was inadvertently omitted by the printer.

## 14.

WHITE, C. A. Exogenous leaves in the Cretaceous rocks of Iowa. <Amer. Jour. Sci., 2d ser., vol. xlv, p. 119. New Haven, 1867.

A note announcing the discovery of exogenous leaves, and showing that the "Nishnabolan sandstone" is identical with the Dakota group.



15.

WHITE, C. A., and ST. JOHN, O. H. Descriptions of new Subcarboniferous and Coal-Measure Fossils, collected upon the Geological Survey of Iowa, together with notice of new generic characters observed in two species of Brachiopods. <Trans. Chicago Acad. Sci., vol. i, pp. 115-127, figs. 1-12. Chicago, 1867.

Same. Chicago, 1867. pp. 115-127. Fifty separates printed without title-page, covers, or repaging.

Fourteen species are described, four of which were previously described in the paper, entry No. 10. The genus *Tomoceras* is proposed, and the previously suggested genera *Meekella* and *Cryptacanthia* are proposed and illustrated.

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16.

WHITE, C. A. Character of the Unconformability of the Iowa Coal-measures upon the Older Rocks. <Am. Jour. Sci., 2d ser., vol. xlv, pp. 331-334. New Haven, 1868.

Same. New Haven, 1868, 8vo., pp. 331-334. Twenty-five separates printed without title-page, covers, or repaging.

## 17.

WHITE, C. A. On Coal in Nebraska, with reference to a paragraph in the Geological Report of Dr. Hayden. <Am. Jour. Sci., 2d ser., vol. xlv., pp. 399-400. New Haven, 1868.

The paragraph referred to is on page 125 of the report of the Commissioner of the General Land Office for the year 1867.

## 18.

WHITE, C. A. Note on the shell-structure of certain Naiades. <Am. Jour. Sci., 2d ser., vol. xlv., pp. 400-401. New Haven, 1868.

The outer prismatic layer of the shell is noticed as a family character, not as a new discovery, as was supposed by Meek.

## 19.

WHITE, C. A. Note on "Cone-in-cone." <Am. Jour. Sci., 2d ser., vol. xlv., pp. 401-402. New Haven, 1868.

## 20.

WHITE, C. A. First and Second Annual Report of Progress by the State Geologist, and the Assistant and Chemist; on the Geological Survey of the State of Iowa; together with the substance of Popular Letters contributed to the Newspapers of the State during the years 1866 and 1867, in accordance with law; also extracts originally contributed to Scientific Journals as a part of the work of the Survey. pp. 1-254. Des Moines, 1868.

The brief first annual report (Entry No. 9) is reprinted in this volume, upon pages 5-8.

## 21.

WHITE, C. A. Lakes of Iowa, Past and Present. <American Naturalist, vol. ii, pp. 143-155. Salem, 1868.

Same. Salem, 1868, pp. 143-155. Thirty separates printed without title-page, covers, or repaging.

The Drift lakes, including the so-called walled lakes, are described, and the origin of the "walls" explained. Also the Bluff deposit of the Missouri River valley is shown to be the deposit of an ancient lake.

## 22.

WHITE, C. A. The Iowa Drift. <American Naturalist, vol. ii, pp. 615-616. Salem, 1869.

The derivation of the drift material from the underlying rocks, by their disintegration and comminution, is shown.

## 23.

WHITE, C. A. A trip to the Great Red Pipestone Quarry. <American Naturalist, vol. ii, pp. 644-653. Salem, 1869.

Same. Salem, 1869, 8vo., pp. 644-653. Thirty separates printed without title-page, covers, or repaging.

The quarry, the region, and the formation which contains the pipestone, are described.

## 24.

WHITE, C. A. Are Unios sensitive to light? <Am. Jour. Sci., 2d ser., vol. xlvii, pp. 280-281. New Haven, 1869.

An experiment is described, showing that the sensitiveness which Unios manifest when the sun's rays are suddenly intercepted by an opaque body, is due to an interruption of light rays, and not heat rays.

25.

WHITE, C. A. Announcement of the Existence of Cretaceous Rocks in Guthrie County, Iowa <Proc. Amer. Ass. Adv. Sci., 17th Meeting. Chicago, 1868, vol. xvii, pp. 326-327. Cambridge, 1869.

26.

WHITE, C. A. Observation on the Red Quartzite Boulders of Western Iowa; and their original ledges of Red Quartzite in Iowa, Dakota, and Minnesota. <Proc. Amer. Ass. Adv. Sci., 17th Meeting. Chicago, 1868, vol. xvii, pp. 340-342. Cambridge, 1869.

Same. Cambridge, 1869, pp. 340-342. Thirty separates printed without title page, covers, or repaging.

27.

WHITE, C. A. Report on the Geological Survey of the State of Iowa, to the Thirtieth General Assembly, January, 1870, Containing results of Examinations and Observations made within the years 1866, 1867, 1868, and 1869. By Charles A. White, M. D., Geological Corps; Charles A. White, State Geologist; Orestes H. St. John, Assistant; Rush Emery, Chemist. Vols. I and II. Des Moines, 1870.

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One Geological map of the State, colored.	

## 28.

WHITE, C. A. Natural Science in our Common Schools. <Iowa School Journal, vol. xii, pp. 1-4. Des Moines, 1870.

Methods of interesting school children in natural history are suggested.

## 29.

WHITE, C. A. Kjøekkenmeddings in Iowa. <American Naturalist, vol. iii, pp. 54-55. Salem, 1870.

This is the first public announcement of the fact that the shell-heaps of the western rivers are true kjøekkenmeddings.

## 30.

WHITE, C. A. Lilies of the Rocks. <American Naturalist, vol. iii, pp. 553-554. Salem, 1870.

A review of part of an article by G. Hinrichs, in the August No., vol. iii, of the Naturalist, entitled "Lilies of the Fields, of the Rocks, and the Clouds." This note is signed "Zoologus."

## 31.

WHITE, C. A. Prairie Fires. <American Naturalist, vol. v, pp. 68-70. Salem, 1871.

An incident of personal experience related.

## 32.

WHITE, C. A. Albino Flowers. <American Naturalist, vol. v, pp. 161-162. Salem, 1871.

It is observed that a certain cluster of the common field clover produced white flowers one year, and those of the ordinary red color the next. Also, that a specimen of white *Liatris* was observed, the latter being deemed important because the rose-red color is common to the whole genus.

## 33.

WHITE, C. A. [Remarks on the "Geological History of the Gulf of Mexico" by Prof. E. W. Hilgard.] <American Naturalist, vol. v, pp. 519-520. Salem, 1871.

These remarks were made before the American Association for the Advancement of Science, at the 20th (Indianapolis) meeting, 1871, with reference to the paper above cited.

## 34.

WHITE, C. A. [Remarks on the homologies of the Carpal and Tarsal bones in Birds.] <American Naturalist, vol. v, p. 525. Salem, 1871.

These remarks were made before the American Association for the Advancement of Science, 20th meeting (Indianapolis), with reference to a paper read by E. S. Morse, "On the Carpal and Tarsal bones of Birds."

## 35.

WHITE, C. A. Mammoth Cave. <University Reporter, [a college paper of the Iowa State University.] 4to. Vol. iv, pp. 81-83. Iowa City, 1872.

An account of a visit to Mammoth Cave, Kentucky, in company with the American Association for the Advancement of Science.

## 36

WHITE, C. A. Manual of Physical Geography and Institutions of the State of Iowa. 4to. pp. 1-85, pls. i-iii and figs. Davenport, 1873.

This book was prepared for use in the schools of the State. It embraces an account of the history, constitution, and school laws of the State; its educational, charitable, and penal institutions, land surveys, elections, taxes, &c. In 1883 an edition was issued purporting to be the 15th and also to be revised, but it has never been revised by the author since the first edition.

## 37.

WHITE, C. A. Woodpeckers Tapping Sugar Trees. <American Naturalist, vol. vii, p. 496. Salem, 1873.

Woodpeckers were observed to peck holes in the bark of young and sound sugar maples, evidently to get the sap.

## 38.

WHITE, C. A. Kjækkenmøddings de l'Amérique du nord. <Congrès International d'Anthropologie et d'Archéologie. Préhistoriques; Compte rendu de la cinquième session à Bologne, 1871. pp. 379-389. Bologna (Italy), 1873.

Same. Bologna (Italy), 1873. 8vo, pp. 15. Thirty separates printed with title-page and repaging.

This paper embraces a general review of the subject of shell heaps in North America as known up to that date.

## 39.

WHITE, C. A. On Spontaneous fission? in *Zaphrentis*. <Amer. Jour. Sc., 3d ser., vol. v., p. 72. New Haven, 1873.

A specimen of *Zaphrentis spinulifera*, Hall is described, which seemed to be a case of spontaneous fission. The author now thinks it probable that it was the result of a twin polyp or that the fission took place at a very early stage in the formation of the corallite.

## 40.

WHITE, C. A. On the Eastern Limit of Cretaceous Deposits in Iowa. <Proc. Amer. Ass. Adv. Sci. ? 21st meeting (Dubuque), 1872, vol. xxi, pp. 187-192. Cambridge, 1873.

Same. Cambridge, 1873. 8vo. pp. 187-192. Fifty separates printed without title-page, covers, or repaging.

The discovery is announced of Cretaceous fossils in the drift or glacier-disturbed Cretaceous deposits in Howard, Black Hawk, and Johnson Counties, Iowa; showing that the Cretaceous deposits once extended as far eastward as Eastern Iowa and Southeastern Minnesota.

## 41.

WHITE, C. A. The proposed genus *Anomalodonta* of Miller identical with the earlier *Megaptera* of Meek. <Amer. Jour. Sci., 3d ser., vol. viii, pp. 218-219. New Haven, 1874.

Meek's claim to priority is defended against that of Miller. The note bears only the initials of the author, "C. A. W."

## 42.

WHITE, C. A. Artificial Shell-heaps of Fresh-water Mollusks. <Proc. Amer. Ass. Adv. Sci., 22d meeting, Portland, 1873, pp. 133-137. Salem, 1874.

Same. Salem, 1874. 8vo. pp. 133-137. Fifty separates printed without title-page, covers, or repaging.

It is herein shown that the fresh-water mollusks were extensively used as food by the aboriginal inhabitants.

## 43.

WHITE, C. A. Preliminary Report upon Invertebrate Fossils collected by the Expeditions of 1871, 1872, and 1873, with Descriptions of New Species. <Engineer Department, U. S. Army. Geographical and Geological Explorations and Surveys west of the 100th meridian. First Lieut. George M. Wheeler, Corps of Engineers, in charge. pp. 1-27. Washington, 1874.

Thirty-nine species are described as new, and five others are noticed. They are all re-described and figured in part i, vol. iv, Report upon Geographical and Geological Explorations and Surveys West of the 100th Meridian. See entry No. 48. *Anchura nuptialis* is a Cretaceous species, and herein wrongly referred to the Jurassic.

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## 44.

WHITE, C. A. On the Equivalency of the Coal-Measures of the United States and Europe. < Proc. Amer. Ass. Adv. Sci., 23d Meeting (Hartford), 1874, pp. B, 35-38. Salem, 1875.

Same. Salem, 1875. 8vo, pp. 35-38. Thirty separates printed without title-page, covers, or repaging.

An affirmative opinion is expressed.

## 45.

WHITE, C. A. The Great Western Exploring Parties and their Progress. < Boston Daily Advertiser (newspaper), vol. 126, No. 91. Boston, October 15, 1875.

This is the first of a series of three articles written from the field. This one was written from Southern Wyoming, describing the country, and mentioning Powell's plan for having the arid region surveyed into irregular-shaped ranches, and not by the rectangular method in use in the humid regions.

## 46.

WHITE, C. A. The Far West. < Boston Daily Advertiser (newspaper), vol. 126, No. 108. Boston, November 4, 1875.

The second of a series of articles written from the field. This one is from Northern Utah, describing the vegetable products of that region.

## 47.

WHITE, C. A. The Far West. < Boston Daily Advertiser (newspaper), vol. 126, No. 115. Boston, November 12, 1875.

The third and last of a series of three articles written from the field. This was written from Northern Utah, describing the animals of that region.

## 48.

WHITE, C. A. Report upon the Invertebrate Fossils collected in portions of Nevada, Utah, Colorado, New Mexico, and Arizona, by Parties of the Expeditions of 1871, 1872, 1873, and 1874. < Report upon Geographical and Geological Explorations and Surveys West of the 100th Meridian, in charge of First Lieut. Geo. M. Wheeler, Corps of Engineers, U. S. Army. 4to. vol. iv. part i, Paleontology. pp. 1-219, pls. i-xxi. Washington, 1875.

Same. Washington: Government Printing Office, 1875. 4to, pp. 219, and 21 plates of illustrations. Two hundred and fifty separates printed and bound in paper covers, and 30 copies printed and bound separately in boards for the author, with a different imprint upon the back.

This report comprises descriptions and illustrations of fossils and some general observations upon the periods which they represent. One hundred and seventy-five species are described and illustrated, from the Primordial, Silurian, Carboniferous, Jurassic, Cretaceous, and Tertiary rocks, the majority of which were formerly known. A few, however, are herein described for the first time, but the new forms of these collections were mostly described in the preliminary report (Entry No. 43). The genus *Lispodesthes* is here proposed.

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\* λισπος, smooth, and ἱσθος, a garment.

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## 49.

WHITE, C. A. Invertebrate Paleontology of the Plateau Province, together with notice of a few species from localities beyond its limits in Colorado. <United States Geological and Geographical Survey of the Territories: Report on the Geology of the Uintah Mountains. By J. W. Powell. 4to, pp. 74-135. Washington, 1876.

Same. Washington, 1876. 4to, pp. 74-135. Fifty separates printed without title-page, covers, or repaging.

This memoir embraces some general geological discussions, catalogues of fossils, and descriptions of 48 new species.

In subsequent works the author has referred to the Laramie group some of the fossils herein assigned, respectively, to the Cretaceous and Tertiary. Most of the species have since been illustrated by the author in various works.

General observations, pp. 75-87.

Catalogue of the fossils collected by the various parties in the field during the years 1868 to 1875, inclusive, pp. 88-107.

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## 50.

WHITE, C. A. In Memoriam: Fielding Bradford Meek. <Am. Jour. Sci., 3d ser., vol. xiii, pp. 169-171. New Haven, 1877.

Same. New Haven, 1877. 8vo., 3 pages. One hundred separates printed with half-title and repaging.

A brief sketch of the life and labors of the paleontologist, Mr. Meek.

## 51.

WHITE, C. A. Descriptions of new species of fossils from the Paleozoic rocks of Iowa.

<Proc. Acad. Nat. Sci. Phila., for 1876, vol. xxviii, pp. 27-34. Philadelphia, 1877.

Same. Philadelphia, 1876. 8vo., pp. 27-34. Fifty separates printed without title-page, covers, or repaging.

Thirteen species are described as new, and the genus *Strobilocystites* is proposed.

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52.

WHITE, C. A. Paleontological papers, No. 1: Descriptions of Unionida and Physida, collected by Prof. E. D. Cope, from the Judith River Group of Montana, during the summer of 1876. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xx, pp. 599-602. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 599-602. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 2, 3, 4, and 5.

Six species are described as new. This is the first of a series of short unillustrated articles which reached eleven in number, and then ceased with the suspension of the survey in charge of Dr. Hayden. This form of title has not since been used by the author.

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53.

WHITE, C. A. Paleontological Papers No. 2: Descriptions of new species of Uniones, and a new genus of fresh-water Gasteropoda from the Tertiary strata of Wyoming and Utah. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxi, pp. 603-606. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 603-606. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 3, 4, and 5.

Four species are described as new, two preoccupied names changed, and the genus *Cassiopella* proposed.

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54.

WHITE, C. A. Paleontological Papers No. 3: Catalogue of the Invertebrate Fossils, hitherto published from the fresh- and brackish water deposits of the western portion of North America. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxii, pp. 607-614. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 607-614. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 2, 4, and 5.

This paper contains a list of the fossil non-marine invertebrate forms at that time known. They have since been much increased. (See entry No. 115.)

The author has somewhat modified certain views expressed in this paper. These later views are published in entry No. 115.

## 55.

WHITE, C. A. Paleontological Papers No. 4: Comparison of the North American Mesozoic and Cenozoic Unionidae and associated mollusks with living species. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxiii, pp. 615-624. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 615-624. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 2, 3, and 5.

The relations of the living Uniones of the Mississippi River system with the fossil forms from western North America are pointed out.

## 56.

WHITE, C. A. Paleontological Papers No. 5: Remarks on the Paleontological characteristics of the Cenozoic and Mesozoic groups as developed in the Green River region. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxiv, pp. 625-629. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 625-629. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 2, 3, and 4.

Same. Washington: Government Printing Office, 1878. 8vo, pp. 721-724. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers No. 6.

## 57.

WHITE, C. A. Circulation of the Blood, subjectively seen. <Am. Journ. of the Med. Sci., vol. lxxiii, n. s., p. 279. Philadelphia, 1877.

The appearance of multitudes of rapidly moving corpuscles to be observed when the eyes are shut, especially when there is more or less cerebral excitement, the author conceives to be due to the impact of the blood corpuscles behind the layer of rods and cones.

## 58.

WHITE, C. A. Paleontological Papers No. 6: Descriptions of new species of Invertebrate fossils from the Laramie Group. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iv., art. xxviii, pp. 707-719. Washington, 1878.

Same. Washington: Government Printing Office, 1878. 8vo, pp. 707-719. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers No. 7.

Nineteen species of mollusks are described as new.

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59.

WHITE, C. A. Paleontological Papers No. 7: On the distribution of Molluscan species in the Laramie Group. < Bulletin U. S. Geol. and Geog. Surv. of the Terr. vol. iv, art. xxix, pp. 721-724. Washington, 1878.

The unity of the Judith River, Fort Union, Lignitic, and Bitter Creek series, as the Laramie Group is shown in this paper.

60.

WHITE, C. A. Paleontological papers No. 8. Remarks upon the Laramie group. < Bulletin U. S. Geol. and Geogr. Surv. of the Terr., vol. iv, art. xxxvi, pp. 865-876. Washington, 1878.

Same. Washington: Government Printing Office, 1878. 8vo, pp. 865-876. Two hundred separates printed (author's edition), with title-page and paper covers, but without repaging.

The characteristics of the group and its probable geological age are discussed.

61.

WHITE, C. A., and NICHOLSON, H. A. Bibliography of North American Invertebrate Paleontology; being a report upon the publications that have hitherto been made upon the invertebrate paleontology of North America, including the West Indies and Greenland. By C. A. White, M. D., Paleontologist of the United States Geological Survey, and H. Alleyne Nicholson, M. D., D. Sc., Professor at the University of St. Andrews, Scotland. < Department of the Interior; United States Geological Survey of the Territories. Miscellaneous publications No. 10. Washington: Government Printing Office, 1878. 8vo, 132 pp.

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Part I. Embracing titles and abstracts of publications made in the United States. By C. A. White, M. D. pp. 7-69.

Part II. Embracing titles and abstracts of publications made in British North America, in the West Indies, and Europe. By H. Alleyne Nicholson, M. D., D. Sc., pp. 71-132.

62.

WHITE, C. A. Change in the habits of Toads. < Nature. 4to, vol. xvii, p. 242. London and New York, 1878.

Observations made in Colorado along irrigating ditches show that the toads there have formed, or reverted to, the habit of diving to the bottom, when disturbed, and remaining there like frogs.

## 63.

WHITE, C. A. Note on the Re-establishment of Forests in Iowa, now in progress. <Amer. Jour. Sci., 3d ser., vol. xvi, p. 328. New Haven, 1878.

This note has reference to an article by Prof. Asa Gray in the same volume of the Journal, entitled, Forestry and Archeology.

## 64.

WHITE, C. A. Report on the Geology of a portion of Northwestern Colorado. <Tenth Annual Report U. S. Geol. and Geogr. Surv. of the Terr. (for the year 1876), pp. 1-60. One map and one plate. Washington, 1878.

The structure of the eastern end of the Uinta Mountain range is shown, and its relation to the Park range of the Rocky Mountain system explained. "The isolated up-thrust mountains are described, and the term "pariversal," as applied to dips, is first used in this report. The results of this work, as shown on the accompanying map, were subsequently incorporated in sheets iv and xi of the Atlas of Colorado and Portions of the Adjacent Territory, published in 1877 by the same survey.

## 65.

WHITE, C. A. Note on the Garter Snake. <Amer. Naturalist, vol. xii, p. 53. Philadelphia, 1878.

This note records a supposed instance of the swallowing of a quantity of air by a garter snake immediately before diving to the bottom of a pool of water.

## 66.

WHITE, C. A. Contributions to Invertebrate Paleontology, No. 1: Cretaceous Fossils of the Western States and Territories. <Eleventh Annual Report U. S. Geol. and Geogr. Surv. of the Terr. (for the year 1877), pp. 273-319, pls. i-x. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo, pp. 273-319, pls. i-x. Two hundred separates printed without repaging, but with title-page and paper covers. The title upon the title-page differs from that which heads the text by the omission of the word "Invertebrate."

Fifty-six species are described and figured, a part of which are new, but most of which had been previously described by different authors, without illustrations. This series of "Contributions" was established for the purpose of illustrating species of fossils previously described, as well as new forms. They number eight in all, and that form of title has not been subsequently used by the author in connection with his work for the United States Surveys.

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## 67.

WHITE, C. A. Descriptions of new species of Invertebrate fossils from the Carboniferous and Upper Silurian rocks of Illinois and Indiana. <Proc. Acad. Nat. Sci., Phila., vol. xxx, pp. 29-37. Philadelphia, 1878.

Same. 8 vo., pp. 29-37. Philadelphia, 1878. Thirty separates printed without title-page, covers, or repaging.

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## 68.

WHITE, C. A. Anecdote of the Great Horned Owl. <American Naturalist, vol. xiii, p. 783. Philadelphia, 1879.

This anecdote is told to illustrate the precision, rapidity, and extent of the action of the muscles of the neck of that owl. Its authorship is indicated only by the initials "C. A. W."

## 69.

WHITE, C. A. Remarks on the Jura-Trias of Western North America. <Am. Jour. Sci., vol. xvii, 3d ser., pp. 214-218. New Haven, 1879.

Same. New Haven, 1879. 8vo., pp. 214-218. Twenty separates printed without title-page, covers, or repaging.

Reference is made in this article to the Triassic fossils which are described in Paleontological Papers No. 9.

## 70.

WHITE, C. A. Report on the Paleontological Field-work for the season of 1877. <Eleventh Annual Report U. S. Geol. and Geog. Surv. of the Terr. (for the year 1877), pp. 161-272. Washington, 1879.



Same. Washington: Government Printing Office, 1879. 8vo, pp. 161-272. Two hundred separates printed, with title-page and paper covers, but without re-paging.

This report gives results of observations in Colorado, Utah, and Wyoming. The existence of the Green River and Bridger groups south of the Uinta Mountains is first announced in this report; and descriptions of three species of fossils are given in foot-notes.

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## 71.

WHITE, C. A. Paleontological Papers No. 9: Fossils of the Jura-Trias of Southeastern Idaho. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. v, art. v, pp. 105-117. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo, pp. 105-117. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers No. 10.

Ten species are described, most of which are new; and the genus *Meekoceras*, Hyatt, is described for the first time in this article.

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## 72.

WHITE, C. A. Paleontological Papers No. 10. Conditions of Preservation of Invertebrate Fossils. <Bulletin U. S. Geol. and Geog. Surv. of the Terr. Vol. v, art. viii, pp. 133-141. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo., pp. 133-141. Two hundred separates printed (author's edition) without repaging, but with title page and with paper covers, together with Paleontological Papers No. 9.

The fact is pointed out that shells of different classes and families which have been fossilized under the same conditions are differently preserved.

## 73.

WHITE, C. A. Paleontological Papers No. 11. Remarks upon Certain Carboniferous Fossils from Colorado, Arizona, Idaho, Utah, and Wyoming, and Certain Cretaceous Corals from Colorado, together with Descriptions of New Forms. <Bulletin U. S. Geol. and Geog. Surv. of the Terr. Vol. v, art. xiv, pp. 209-221. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo., pp. 209-221. Two hundred separates printed (author's edition) without repaging, but with title-page and paper covers. The series of Paleontological Papers closes with this number.

Thirteen species are described, most of which are new. Attention is called to the comingling of Upper and Lower Carboniferous types in the Carboniferous strata of the western portion of North America.

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74.

WHITE, C. A., and NICHOLSON, H. A. Supplement to the Bibliography of North American Invertebrate Paleontology. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. v, pp. 143-152. Washington, 1879.

Same. Washington: Government Printing Office, 1879, pp. 143-152. Two hundred separates printed (author's edition) with title-page and paper covers, but without repaging.

This supplement embraces works which were published after the publication of the Bibliography, besides some that were inadvertently omitted then.

Part I. Publications made in the United States. By C. A. White, pp. 143-149.

Part II. Publications made in British North America, the West Indies, and Europe. By H. Alleyne Nicholson, pp. 150-152.

75.

WHITE, C. A. Paleontology: Fossils of the Indiana Rocks. <State of Indiana. Second Annual Report of the Department of Statistics and Geology, 471-522, pls. i-xi. Indianapolis, 1880.

Same. In Indiana Geological Report, 1879-80. From the Second Annual Report of the Bureau of Statistics and Geology. John Collett, Chief of Department. Indianapolis, 1881. 8vo. pp. 103-154, and 11 plates.

This book is an extract of the geological and biological matter from the volume of the preceding entry, repaged and bound in cloth, with new title-page as above.

This work is designed for popular use, and, with the exception of one variety, none of the species described and figured are new. The illustrations are also largely copies of formerly published figures. Forty-nine species of characteristic Silurian, Devonian, and Carboniferous forms are given.

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## 76.

WHITE, C. A. Progress of Invertebrate Paleontology in the United States for the year 1879. <Amer. Nat. vol. xiv, pp. 250-260. Philadelphia, 1880.

Same. Philadelphia, 1880, 8vo, pp. 250-260. One hundred separates printed without title-page, covers, or repaging.

This article, like those for the years 1880, 1881, and 1882, respectively, is a list of the titles of the works published within the year designated, together with remarks upon them.

## 77.

WHITE, C. A. On the Antiquity of Certain Subordinate Types of Fresh-water and Land Mollusca. <Amer. Jour. Sci., 3d ser., vol. xx, pp. 44-49. New Haven, 1880.

Same. New Haven, 1880, 8vo, pp. 44-49. Twenty separates printed without title-page, covers, or repaging.

It is shown that not only were many of the genera of living North American Mollusca established as early as the close of the Cretaceous period, but many of the subgenera were established thus early also.

## 78.

WHITE, C. A. Descriptions of new species of Carboniferous Invertebrate Fossils. <Proc. U. S. Nat. Mus., vol. ii, pp. 252-260, one plate. Washington, 1880.

Same. Washington: Government Printing Office, 1879, 8vo, pp. 252-260, one plate. One hundred and fifty separates printed without title-page, covers, or repaging.

Six species of Echinoderms are described, and the genus *Lecythiocrinus* is proposed.

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## 79.

WHITE, C. A. Note on *Endothyra ornata*. <Proc. U. S. Nat. Mus., vol. ii, p. 291. Washington, 1880.

Same. Washington: Government Printing Office, 1879, 8vo, p. 291. One hundred and fifty separates printed, together with the papers of the two following entries, without title-page, covers, or repaging.

The discovery of that foraminiferous form in the Carboniferous rocks of Wyoming is noticed. It was previously known only in Europe.

## 80.

WHITE, C. A. Note on *Criocardium* and *Ethmocardium*. <Proc. U. S. Nat. Mus., vol. ii, pp. 291-292. Washington, 1880.

Same. Washington: Government Printing Office, 1879, 8vo, pp. 291-292. One hundred and fifty separates printed, together with the papers of the preceding and the following entry, without title-page, covers, or repaging.

The new genus *Ethmocardium* is proposed.

\* *Λγκυθον*, a small oil flask.

81.

WHITE, C. A. Descriptions of new Cretaceous Invertebrate Fossils from Kansas and Texas. <Proc. U. S. Nat. Mus., vol. ii, pp. 292-298, pls. i-v. Washington, 1880.  
 Same. Washington: Government Printing Office, 1879, 8vo, pp. 292-298, and five plates. One hundred and fifty separates printed, together with the papers of the two preceding entries, without title-page, covers, or repaging.

Six species are described as new and illustrated.

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82.

WHITE, C. A. Report on the Carboniferous Invertebrate Fossils of New Mexico. <Report upon U. S. Geog. and Geol. Surveys West of the 100th Meridian; in charge of Capt. George M. Wheeler, Corps of Engineers, U. S. Army. 4to., vol. iii; Supplement. Geology. Appendix, pp. i-xxxviii, pl. i-ii. Washington, 1881.  
 Same. Washington: Government Printing Office, 1881, 4to, pp. i-xxxviii, and two plates. Seventy-five separates printed, without title-page, covers, or repaging.

This report embraces an annotated catalogue of the species collected at each locality, and also descriptions of seventeen species, a part of which are new.

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## 83.

WHITE, C. A. Progress of Invertebrate Paleontology in the United States for the year 1880. <Amer. Nat., vol. xvi, pp. 273-279. Philadelphia, 1881.

Same. Philadelphia, 1881, 8vo, pp. 273-279. One hundred separates printed without title-page, covers, or repaging.

This article is similar to that of entry No. 74.

## 84.

WHITE, C. A. English Sparrows refusing to eat worms. <Amer. Nat., vol. xv, pp. 671-672. Philadelphia, 1881.

It is observed that the sparrows refused to eat earth worms, which are favorite food with other birds, when they come to the surface after rains.

## 85.

WHITE, C. A. Note on the occurrence of *Productus giganteus* in California. <Proc. U. S. Nat. Mus., vol. iii, pp. 46-47, pl. i. Washington, 1881.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 46-47, and one plate. One hundred and fifty separates printed, together with the papers of the two following entries, without title-page, covers, or repaging.

The volume was first distributed without the plate; but the latter was afterward printed and distributed.

## 86.

WHITE, C. A. Note on *Aerothele*. <Proc. U. S. Nat. Mus., vol. iii, p. 47. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, p. 47. One hundred and fifty separates printed, together with the last, and the next following entry.

It is shown that *Aerotretra subsidua*, White, from Southern Utah, really belongs to the genus *Aerothele*, Linnarsson.

## 87.

WHITE, C. A. Description of a new Cretaceous *Pinna* from New Mexico. <Proc. U. S. Nat. Mus., vol. iii, pp. 47-48. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 47-48. One hundred and fifty separates printed, together with the papers of the two preceding entries, without title page, covers, or repaging.

The author now thinks that the proposed new species (*Pinna stercensoni*) is only a variety of *P. petrina*, White.

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## 88.

WHITE, C. A. Note on the occurrence of *Stricklandinia salteri* and *S. davidsoni* in Georgia. <Proc. U. S. Nat. Mus., vol. iii, pp. 48-49. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 48-49. One hundred and fifty separates printed without title-page, covers, or repaging.



89.

WHITE, C. A. Description of a very large fossil Gasteropod from the State of Puebla, Mexico. <Proc. U. S. Nat. Mus., vol. iii, pp. 140-142, and one plate. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 140-142, and one plate. One hundred and fifty separates printed without title-page, covers, or repaging.

The species described is from strata believed to be of Cretaceous age.

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WHITE, C. A. Descriptions of new Invertebrate fossils from the Mesozoic and Cenozoic rocks of Arkansas, Wyoming, Colorado, and Utah. <Proc. U. S. Nat. Mus., vol. iii, pp. 157-162. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 157-162. One hundred and fifty separates printed without title-page, covers, or repaging.

Nine species are described as new; but none are illustrated.

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91.

WHITE, C. A. [Review of] A. G. Wetherby: Description of new fossils from the Lower Silurian and Subcarboniferous rocks of Ohio and Kentucky. (Journ. Cincinnati Soc. Nat. History, vol. iv, no. 1 [April, 1881], pp. 77-85, pl. ii.) <Neues Jahrbuch für Mineralogie, Geologie, und Palæontologie, ii Band, p. 408. Stuttgart, 1881.

92.

WHITE, C. A. [Review of] A. G. Wetherby: Description of new fossils from the Lower Silurian and Subcarboniferous rocks of Kentucky. (Journ. Cincinnati Soc. Nat. History, vol. iv, no. 2 [July, 1881], pp. 177-179, pl. v.) <Neues Jahrbuch für Mineralogie, Geologie, und Palæontologie, ii Band, p. 408. Stuttgart, 1881.

## 93.

WHITE, C. A. [Review of] S. A. Miller: New species of fossils and remarks upon others from the Niagara Group of Illinois. (Journ. Cincinnati Soc. Nat. History, vol. iv, no. 2 [July, 1881], pp. 166-176, pl. iv.) < Neues Jahrbuch für Mineralogie, Geologie, und Paläontologie. ii Band, p. 408. Stuttgart, 1881.

## 94.

WHITE, C. A. Fossils of the Indiana rocks, No. 2. < Indiana, Department of Geology and Natural History, Eleventh Annual Report. John Collet, State Geologist, 1881; pp. 347-401, pls. xxxvii-iv. Indianapolis, 1882.

Same. Indianapolis, 1882; 8vo, pp. 347-401, with 19 plates and the index for the whole volume. Fifty separates printed without title-page or repaging, and without date.

The object of his memoir, like that of entry No. 75, is largely that of popular instruction. The greater part of the species here described and figured are republished from the works of other authors, only four of the species being new. Twelve of the plates are devoted to figures of fossil corals, which figures were engraved many years ago by J. W. Van Cleve, to accompany a work on fossil corals by himself, which he did not live to publish or to finish. There are 29 species of these corals here described and figured, besides 20 other species, all from Paleozoic rocks.

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## 95.

WHITE, C. A. Progress of Invertebrate Paleontology in the United States for the year 1881. <American Naturalist, vol. xvi, pp. 887-891. Philadelphia, 1882.

Same. Philadelphia, 1882. 8vo, pp. 887-891. One hundred separates printed without title page, covers, or repaging.

This article is similar to those of entries 74 and 81.

## 96.

WHITE, C. A. Artesian Wells upon the Great Plains. <North American Review, vol. 135, pp. 187-195. New York, 1882.

Same. New York, 1882. 8vo, 9 pages. Fifty separates printed without title-page or covers, but repaged.

This article gives some results of the examination of the region of Eastern Colorado by a commission appointed by the U. S. Commissioner of Agriculture, of which the author was chief.

## 97.

WHITE, C. A. Tanganyika Shells. <Nature, 4to, vol. xxv, pp. 101-102. London and New York, 1882.

This note suggests the probable identity of *Paramclania* Smith, a proposed molluscan subgenus now living in Lake Tanganyika, Africa, with the fossil genus *Pyrgulifera* Meek, from the Laramie Group of Southwestern Wyoming.

## 98.

WHITE, C. A. On certain conditions attending the geological descent of some North American types of fresh-water gill-bearing Mollusks. <Amer. Jour. Sci., 3d ser., vol. xxiii, pp. 382-386. New Haven, 1882.

Same. New Haven, 1882. 8vo, pp. 382-386. Twenty separates printed without title-page, covers, or repaging.

The substance, not the words, of this article is an extract from parts of an illustrated work, the title of which is given in entry No. 105. The opinion is advanced that the present gill-bearing fauna of the Mississippi River system has been derived in part from the Laramie sea and the fresh-water lakes which succeeded it, by means of the persistence of their outlets as rivers, down to the present time.

99.

WHITE, C. A. Artesian Wells upon the Great Plains; being the report of a geological commission appointed to examine a portion of the Great Plains east of the Rocky Mountains, and report upon the localities deemed most favorable for making experimental borings. Department of Agriculture, pp. 1-38, pl. i. Washington, 1882.

The map is a copy of part of sheet xi of the atlas of Colorado, published by the United States Geological Survey of the Territories.

100.

WHITE, C. A. On certain Cretaceous fossils from Arkansas and Colorado. <Proc. U. S. National Museum, vol. iv, pp. 136-139, pl. i. Washington, 1882.

Same. Washington, Government Printing Office, 1882. 8vo, pp. 136-139, and one plate. One hundred and fifty separates printed without title-page, covers, or repaging.

Six species are described and figured, two of which are new.

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101.

WHITE, C. A. [Review of] S. A. Miller: Description of some new and remarkable crinoids and other fossils of the Hudson River Group, and notice of *Strotocrinus bloomfieldensis*. (Journ. Cincinnati Soc. Nat. History. Vol. iv, No. 1 [April, 1881], pp. 69-77, pl. i.) <Neues Jahrbuch für Mineralogie, Geologie, und Paläontologie. I Band, p. 307. Stuttgart, 1881.

102.

WHITE, C. A. [Review of] Henry Newton, E. M., and Walter P. Jenney, E. M.: Report on the Geology and resources of the Black Hills of Dakota. 4to, pp. 1-555, with Atlas. Washington, 1880. <Neues Jahrbuch für Mineralogie, Geologie, und Paläontologie. II Band, pp. 216-218. Stuttgart, 1882.

103.

WHITE, C. A. [Review of] United States Geological Survey: Annual Report for 1881 of J. W. Powell, Director. Imperial 8vo, pp. 1-558, lxi plates, and 32 woodcuts. Washington, 1882. <Neues Jahrbuch für Mineralogie, Geologie, und Paläontologie. II Band, pp. 365-366. Stuttgart, 1882.

104.

WHITE, C. A. Contributions to Invertebrate Paleontology, No. 2: Cretaceous fossils from the Western States and Territories. <Twelfth Annual Report of the United States Geological and Geographical Survey of the Territories (for the year 1878). pp. 1-38; appendix, pp. 38, 39, pls. xi-xviii. Washington, 1883.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 1-39, and plates 11-18. Two hundred separates printed (author's edition) without repaging, but with title-page and covers, together with Contributions to Invertebrate Paleontology, Nos. 3, 4, 5, 6, 7, and 8. In 1883 100 additional copies of the same were printed in the same form. The title-page in both these cases differs from the title which heads the text by the omission of the word "Invertebrate."

Thirty-seven species are described and figured, five of which are new. On plate xviii ten species are also illustrated which were originally published by Dr. Shumard, but were never before illustrated.

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105.

WHITE, C. A. Contributions to Invertebrate Paleontology No. 3.—Certain Tertiary Mollusca from Colorado, Utah, and Wyoming. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 41-48, and pl. xix. Washington, 1883.

Same. Washington, Government Printing Office, 1880. 8vo, pp. 41-48, and pl. xix. Three hundred separates printed. See remarks following entry No. 104.

Ten species are described and figured, one of which is new.

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WHITE, C. A. Contributions to Invertebrate Paleontology No. 4.—Fossils of the Laramie Group. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 49-103, and pls. xx-xxx. Washington, 1883.

Same. Washington, Government Printing Office, 1880. 8vo, pp. 49-103, and pls. xx-xxx. Three hundred separates printed. See remarks following entry No. 104.

The object of this article is to give a list of all the mollusca that were known from the Laramie Group up to the time of publication, and to illustrate those which had not before been illustrated.

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WHITE, C. A. Contributions to Invertebrate Paleontology, No. 5. Triassic Fossils of Southeastern Idaho. <Twelfth Annual Report U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 105-118, pls. xxxi-xxxii. Washington, 1883. Same. Washington: Government Printing Office, 1880, 8vo, pp. 105-118, pls. xxxi-xxxii. Three hundred separates printed. See remarks following entry No. 93.

This article is essentially a republication of Paleontological paper No. 9. (See entry No. 71.)

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WHITE, C. A. Contributions to Invertebrate Paleontology, No. 6.—Certain Carboniferous Fossils from the Western States and Territories. <Twelfth Annual Report U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 119-141, and pls. xxxiii-xxxvi. Washington, 1883.

Same. Washington: Government Printing Office, 1883. 8vo, pp. 119-141, and pls. xxxiii-xxxvi. Three hundred separates printed. See remarks following entry No. 104.

Twenty-seven species of fossils are described and illustrated, all of which had been previously published.

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## 109.

WHITE, C. A. Contributions to Invertebrate Paleontology No. 7. Jurassic Fossils from the Western Territories. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 143-153, pls. xxxvii-xxxviii. Washington, 1883.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 143-153, and plates xxxvii-xxxviii. Three hundred separates printed. See remarks following entry No. 93.

Sixteen species are described and figured, part of which are new, and the genus *Lyosoma* is diagnosed.

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## 110.

WHITE, C. A. Contributions to Invertebrate Paleontology No. 8. Fossils from the Carboniferous Rocks of the Interior States. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878). pp. 155-171, pls. xxxix-xlii. Washington, 1883.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 155-171, and plates xxxix-xlii. Three hundred separates printed. See remarks following entry No. 93. The series of contributions closes with No. 8, and it is not again resumed in that form.

Twenty-eight species are described and figured, part of which are new.

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## 111.

WHITE, C. A. Forestry in the Great Prairie Region. <American Journal of Forestry, vol. i (May No.), pp. 366-370. Cincinnati, 1883.

Same. Cincinnati, 1883. 8vo, pp. 1-6. Forty separates printed without title-page, or covers, but repaged.

This Journal was started at the beginning of 1883, with Dr. F. B. Hough as editor and Robert Clarke & Co. as publishers. It was published one year and then discontinued.

## 112.

WHITE, C. A. The reversion of Sunflowers at night. <Nature. 4to, vol. [xxvii?] p. 241. London and New York, 1883.

Sunflowers are observed to turn to the eastward immediately after dark.

## 113.

WHITE, C. A. New Molluscan forms from the Laramie and Green River groups; with discussion of some associated forms heretofore known. <Proc. U. S. National Museum, vol. v, pp. 94-99, pls. i-ii. Washington, 1883.

Same. Washington: Government Printing Office, 1882. 8vo, pp. 94-99, and two plates. One hundred and fifty separates printed, together with the paper of the next entry, without title-page, covers, or repaging.

Six species are described and figured as new; and *Paramelania*, Smith, is figured and compared with *Pyrgulifera*, Meek. Also the discovery of the under valve of *Anomia microanema* is announced and figured; and the prismatic structure of that valve suggested as the cause that it has so generally been destroyed.

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## 114.

WHITE, C. A. The Molluscan Fauna of the Truckee Group, including a new form. <Proc. U. S. National Museum, vol. v, pp. 99-101, pl. i. Washington, 1883.

Same. Washington: Government Printing Office, 1882. 8vo, pp. 99-101, and one plate. One hundred and fifty separates printed, together with the paper of the last entry, without title-page, covers, or repaging.

Nine species are figured, which constitute the entire molluscan fauna of the Truckee Group as it was then known to the author. A species of *Latia* is described, which is the only one of that genus yet known in North America.

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WHITE, C. A. A Review of the Non-Marine Fossil Mollusca of North America. <Third Annual Report of the Director of the United States Geological Survey to the Secretary of the Interior, 1881-'82. By J. W. Powell, Director, pp. 403-550 and pls. p. i-xxxii. Washington, 1883.

Same. Washington: Government Printing Office, 1883. Imp. 8vo, pp. 1-80 and pls. 1-32. One hundred copies printed early in 1883 with paging, numbering of the plates, and title-page separate from that of the volume.

Same. One hundred more copies printed at the time of the issuance of the volume in 1884.

This memoir contains a discussion of the families which are represented in the brackish and fresh water deposits, an annotated catalogue of all the known species in the order in which the formations occur, general discussion of the conditions which prevailed when the mollusks lived, and the manner in which the lines of descent of a part of them have been continued to the present time. Two hundred and twenty-seven species are noticed, all of which are illustrated. Although the volume of which this work is an extract, bears the date 1883 upon its title-page, the volume, as a whole, was not issued until near the middle of 1884.

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## 116.

WHITE, C. A. Progress of Invertebrate Paleontology in the United States for the year 1882. < Amer. Nat., vol. xvii, pp. 598-603. Philadelphia, 1883.

Same. Philadelphia, 1883. 8vo, pp. 598-603. One hundred separates printed without title-page, covers, or repaging.

This series of articles, which was begun for the year 1879, was discontinued with this article; but the series is continued by Mr. J. B. Marcou.

## 117.

WHITE, C. A. Glacial Drift in the Upper Missouri River Region. < Amer. Jour. Sci., 3d ser., vol. xxv, p. 206. New Haven, 1883.

Same. New Haven, 1883. 8vo, p. 206. Twenty separates printed without title-page, covers, or repaging.

The existence of true northern glacial drift in the region of the mouth of the Yellowstone River is announced.

## 118.

WHITE, C. A. Late observations concerning the Molluscan Fauna and the Geographical extent of the Laramie Group. < Amer. Jour. Sci., 3d ser., vol. xxv, pp. 207-209. New Haven, 1883.

Same. New Haven, 1883. 8vo, pp. 207-209. Twenty separates printed without title-page, covers, or repaging.

The discovery of Laramie fossils in the State of Nuevo Leon, Mexico, and in the Saskatchewan Valley, British America, is announced.

## 119.

WHITE, C. A. On the existence of a deposit in Northeastern Montana and Northwestern Dakota, that is possibly equivalent with the Green River Group. < Amer. Jour. Sci., 3d ser., vol. xxv, pp. 411-416. New Haven, 1883.

Same. New Haven, 1883. 8vo, pp. 411-416. Twenty separates printed without title-page, covers, or repaging.

Some teleost fish remains were obtained from certain layers which rest conformably upon the top of the Laramie Group. On pages 414-416 of this article Prof. E. D. Cope describes a new genus of fishes and two species.

## 120.

WHITE, C. A. The burning of Lignite in situ. < Amer. Jour. Sci., 3d ser., vol. xxvi, pp. 24-26. New Haven, 1883.

Same. New Haven, 1883. 8vo, pp. 24-26. Twenty separates printed without title-page, covers, or repaging.

The opinion is advanced that the burning of the beds of lignite of the Laramie Group has been mainly the result of spontaneous ignition, and that these fires probably began as early as the later Tertiary and before the advent of man.

## 121.

WHITE, C. A. On the commingling of ancient faunal and modern floral types in the Laramie Group. < Amer. Jour. Sci., 3d ser., vol. xxvi, pp. 120-123. New Haven, 1883.

Same. New Haven, 1883. 8vo, pp. 120-123. Twenty separates printed without title-page, covers, or repaging.

It is shown that well-known species of Miocene plants are found associated with Dinosaurs and characteristic Laramie mollusks.

## 122.

WHITE, C. A. [Administrative report for the year 1882-'83.] < Fourth Annual Report of the Director of the United States Geological Survey, pp. 42-44. Washington, 1883.

## 123.

WHITE, C. A. A review of the Fossil Ostreidae of North America; and a comparison of the fossil with the living forms. < Fourth Annual Report of the Director of the United States Geological Survey. pp. 281-333, and pls. xxxiv-lxxvi. Washington, 1883.

Same. Washington: Government Printing Office, 1883. Imp. 8vo, pp. 281-333, and pls. xxxiv-lxxvi. One hundred separates printed with paper covers and title-page, but without repaging.

This work is an annotated catalogue of the species. It contains two appendices, by Prof. A. Heilprin and Mr. John A. Ryder, respectively. The former is on the North American Tertiary *Ostreidae*, pp. 309-316, and pls. lxii-lxxii. The latter is a sketch of the life-history of the oyster. pp. 317-333, and pls. lxxiii-lxxvi.

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## 124.

WHITE, C. A. [Review of] E. O. Ulrich. Description of two new species of Crinoids. (Journ. Cincinnati Soc. Nat. History, vol. v, No. 3, p. 118, pl. v.) <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, p. 118. Stuttgart, 1883.

## 125.

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## 126.

WHITE, C. A. [Review of] S. A. Miller. Description of three new orders and four new families in the class Echinodermata, and eight new species from the Silurian and Devonian formations. (Journ. Cincinnati Soc. Nat. History, vol. v, No. 4, pp. 221-231, pl. ix.) <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, p. 117. Stuttgart, 1883.

## 127.

WHITE, C. A. [Review of] S. A. Miller. Description of three new species and remarks upon others. (Journ. Cincinnati Soc. Nat. History, vol. v, No. 3, pp. 116-117, pl. v.) <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, p. 98. Stuttgart, 1883.

## 128.

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## 129.

WHITE, C. A. [Review of] vol. 3, Supplement. Geology. U. S. Geographical Surveys West of the one hundredth Meridian. <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 1. Band, pp. 232-233. Stuttgart, 1883.

## 130.

WHITE, C. A. [Review of] Geology of Wisconsin. Final reports of the State Geological Survey. 4 volumes, royal 8vo. Published under the direction of the Chief Geologist by the Commissioners of Public Printing. <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, pp. 341-349. Stuttgart, 1883.

## 131.

WHITE, C. A. [Review of] Clarence E. Dutton, Captain of Ordnance, U. S. Army. The Tertiary History of the Grand Cañon District. 4to, pp. i-xiv and 1-264; pls. i-xlii, with folio atlas containing 23 plates. Washington: Government Printing Office. 1882. <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, pp. 190-191. Stuttgart, 1883.

## 132.

WHITE, C. A. [Review of] John Collett. Department of Geology and Natural History. (Eleventh Annual Report, 1881. Indianapolis, 1882. 8vo, pp. 414, pls. iv, and three small maps.) <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, pp. 189-190. Stuttgart, 1883.

133.

WHITE, C. A. [Review of] S. A. Miller. Description of ten new species of fossils. (Journ. Cincinnati Soc. Nat. Hist., vol. v, No. 2, pp. 79-88, pls. iii-iv.) <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, p. 98. Stuttgart, 1883.

134.

WHITE, C. A. [Review of] S. A. Miller. Description of two new genera and eight new species of fossils from the Hudson River Group, with remarks upon others. (Journ. Cincinnati Soc. Nat. Hist., vol. v, No. 1, pp. 34-44, pls. i and ii.) <Neues Jahrbuch für Mineralogie, Geologie und Paläontologie. 2. Band, pp. 97-98. Stuttgart, 1883.

135.

WHITE, C. A. [Annual report to the director of the National Museum.] <Report of the Assistant Director of the U. S. National Museum, G. Brown Goode, for the year 1882. pp. 31-32. Washington, 1883.

A portion of Dr. White's statements and recommendations are quoted.

136.

WHITE, C. A. On the *Macrocheilus* of Phillips, *Plectostylus* of Conrad, and *Soleniscus* of Meek & Worthen. <Proc. U. S. National Museum, vol. vi, pp. 184-187, pl. viii. Washington, 1884.

Same. Washington: Government Printing Office, 1884, 8vo, pp. 184-187, pl. viii. One hundred and fifty separates printed without title-page, covers, or repaging.

Many of the Carboniferous species which have hitherto been referred by authors to *Macrocheilus* are herein referred to *Soleniscus*.

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WHITE, C. A. On the character and function of the epiglottis in the Bull snake (*Pityophis*). <Amer. Nat., vol. xviii, pp. 19-21. Philadelphia, 1884.

Same. Philadelphia, 1884, 8vo, pp. 19-21. Fifty separates, printed without title-page, covers, or repaging.

It is shown that the hoarse hiss of this snake is produced by the fluttering of the thin erect epiglottis in the current of air expelled from the rima glottidis.

138.

WHITE, C. A. The permanence of the domestic instinct in the cat. <Amer. Nat., vol. xviii, pp. 213-214. Philadelphia, 1884.

Same. Philadelphia, 1884, 8vo, pp. 213-214. Fifty separates printed without title-page, covers, or repaging.

A story of a cat which had spent a year alone in the wilderness of the Upper Missouri.

## 139.

WHITE, C. A. Glacial drift in Montana and Dakota. <Amer. Jour. Sci. 3d ser., vol. xxvii, pp. 112-113. New Haven, 1884.

Same. New Haven, 1884, 8vo 3d ser., vol. xxvii, pp. 112-113. Twenty separates printed without title-page, covers, or repaging.

The presence of true northern glacial drift is observed along the Upper Missouri River, from the Great Falls to Bismarek.

## 140.

WHITE, C. A. Description of certain aberrant forms of the Chamidæ from the Cretaceous rocks of Texas. <Bull. of the U. S. Geol. Surv. No. 4. On Mesozoic fossils. pp. 5 (93)-9 (94), pls. i-v. Washington, 1884.

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## 141.

WHITE, C. A. On a small collection of Mesozoic fossils, obtained in Alaska by Mr. W. H. Dall, of the United States Coast Survey. <Bull. of the U. S. Geol. Surv. No. 4. On Mesozoic fossils. pp. 10 (98)-15 (103), pl. vi. Washington, 1884.

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## 142.

WHITE, C. A. On the Nautiloid genus *Enclimatoceras* Hyatt, and a description of the type species. <Bull. of the U. S. Geol. Surv. No. 4. On Mesozoic fossils. pp. 16 (104)-17 (105), pls. vii-ix. Washington, 1884.

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## 143.

WHITE, C. A. On the adaptability of the prairies for artificial forestry. <Science, 4<sup>o</sup>, vol. iii, pp. 438-443. Cambridge, 1884.

The view is held that the prairie soil is well adapted to the growth of forest trees; and that the prairies are such only because their occupation by forests has not been accomplished by the natural distribution of trees; also that such distribution has long been retarded by prairie fires.

## 144.

WHITE, C. A. Enemies and parasites of the oyster, past and present. <Science, 4<sup>to</sup>, vol. iii, p. 618. Cambridge, 1884.

It is shown that *Cliona* or a similar burrowing sponge infested certain *Brachiopod* shells as early as the Devonian, and that they were as common upon the fossil *Ostreidæ* as upon the living. Also that remains of star fishes are rarely found with fossil *Ostreidæ*, although they are so common an enemy to living oysters.



145.

WHITE, C. A. Certain phases in the geological history of the North American Continent, biologically considered. <Proceedings of the Washington Biological Society. vol. ii, pp. 41-66. Washington, 1884.

Same. One hundred separates printed with paper covers, title-page, and repaging. Address as retiring president of the Biological Society of Washington.

146.

WHITE, C. A. Fossils of the Indiana rocks, No. 3. <Indiana, Department of Geology and Natural History. Thirteenth annual report, John Collett, State geologist. pp. 105-180, pls. xxiii-xxxix. Indianapolis, 1884.

This paper contains some elementary remarks and description of three new species, but it is mainly devoted to the republication of well-known forms.

Same. Indianapolis, 1884, pp. —. Fifteen separates printed.

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WHITE, C. A. [Review of] Geological Survey of Illinois; A. H. Worthen, Director. Vol. vii, Geology and Paleontology. Springfield. 1883. pp. 1-373; pls. i-xxxi. <Science. 4to. Vol. iii, pp. 332-333. Cambridge, 1884.

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WHITE, C. A. Notes on the Jurassic strata of North America. <Amer. Jour. Sci. 3d ser., vol. xxix, pp. 228-232. New Haven, 1885.

A criticism of the views published by Mr. J. F. Whiteaves in Geol. Surv. Canada, Mesozoic Fossils, vol. 1, part ii. Montreal, 1884. The identification of the following species is considered very doubtful:

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## 149.

WHITE, C. A. The Genus *Pyrgulifera*, Meek, and its Associates and Congeners. < Amer. Jour. Sci., 3d ser., vol. xxix, pp. 277-280. New Haven, 1885.

A summary of the occurrence, fossil and recent, of the genus *Pyrgulifera*.

## 150.

WHITE, C. A. On Marine Eocene, Fresh-water Miocene, and other Fossil Mollusca of Western North America. < Bull. U. S. Geol. Surv., No. 18, pp. 1-19, pls. 1-iii. Washington, 1885.

This paper is divided into three parts, the first on "The occurrence of *Cardita planicosta*, Lamarck, in Western Oregon," pl. i, pp. 7-9.

The second on "Fossil Mollusca, from the John Day group in Eastern Oregon," pp. 10-16.

The following new species are described:

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WHITE, C. A. On new Cretaceous Fossils from California. < Bull. U. S. Geol. Surv., No. 22, pp. 1 (349);-15 (361), pls. i-v. Washington, 1885.

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Besides the foregoing, Dr. White has in press an important work on the Cretaceous invertebrates of Brazil, which were collected by the Imperial Geological Commission under the direction of the late Prof. Ch. Fred. Hartt. The work is in process of publication at Rio de Janeiro by the Brazilian National Museum. It is to appear in Volume VII of the "Archives" of that museum, in both the Portuguese and English languages, and will be illustrated with 28 lithographic plates of figures.

The work consists of five parts, which are as follows in the original Portuguese edition—

Contribuições para a Paleontologia do Brazil :

No. 1. Conchíferos Cretaceos.

No. 2. Gasteropodes Cretaceos.

No. 3. Cephalopodes Cretaceos.

No. 4. Molluscos Cretaceos de Água doce do Grupo da Bahia.

No. 5. Echinodermes Cretaceos.

Two hundred and fourteen species in all are published and figured in this work, of which 116 species are diagnosed as new. Four new genera are proposed, three of gasteropoda and one of echinoids. The former are *Orvillia*, *Cylindritella*, and *Cypræactæon*. The latter is *Heteropoda*, the generic diagnosis of which was furnished to the author by Prof. P. de Loriol, of Geneva.



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PART III.

THE PUBLISHED WRITINGS OF CHARLES DOOLITTLE WALCOTT.

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### III.—PUBLISHED WRITINGS OF CHARLES DOOLITTLE WALCOTT.

#### 1.

WALCOTT, C. D. Description of a New Species of Trilobite. <Cincinnati Quarterly Journal of Science, vol. ii, pp. 273-274, figs. 18 a, b. July. Cincinnati, 1875.

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<i>Spherocoryphe</i> , Angelin.	
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WALCOTT, C. D. New Species of Trilobite from the Trenton Limestone at Trenton Falls, N. Y. <Cincinnati Quarterly Journal of Science, vol. ii, pp. 347-349, fig. 27. October. Cincinnati, 1875.

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<i>Remopleurides</i> , Portlock.	
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WALCOTT, C. D. Notes on *Ceraurus pleurexanthemus*, Green. <Annals Lyc. Nat. Hist. N. Y., vol. xi, pp. 155-162, pl. xi. November. New York, 1875.

#### 4.

WALCOTT, C. D. Preliminary Notice of the Discovery of the Remains of the Natory and Branchial appendages of Trilobites. <28th Regent's Report N. Y. State Mus. Nat. Hist., pp. 89-92. 1877. Albany, 1879.

#### 5.

WALCOTT, C. D. Descriptions of New Species of Fossils from the Trenton limestone. <28th Regent's Report N. Y. State Mus. Nat. Hist., pp. 93-97. 1877. Albany, 1879.

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WALCOTT, C. D. Notes on some Sections of Trilobites from the Trenton limestone, [and] Note upon the Legs of Trilobites. <31st Regent's Report N. Y. State Mus. Nat. Hist., pp. 61-65, pl. i. Albany, 1879.

Published in advance, September 20, 1877, pp. 1-17, pl. i.  
 Extracts from the 31st Regent's report, published in March, 1879.

\* κορυφή, shell; πάλτη, shield.

## 7.

WALCOTT, C. D. Note upon the Eggs of the Trilobite. <31st Regent's Report N. Y. State Mus. Nat. Hist., pp. 66-67? Albany, 1879.

Published in advance, September 20, 1877, pp. 11-13.

Extracts from the 31st Regent's report, published in March, 1879.

## 8.

WALCOTT, C. D. Descriptions of New Species of Fossils from the Chazy and Trenton limestones. <31st Regent's Report N. Y. State Mus. Nat. Hist., pp. 68-71. Albany, 1879.

Published in advance, September 20, 1877, pp. 15-21.

Extract from the 31st Regent's report, published in March, 1879.

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WALCOTT, C. D. Descriptions of New Species of Fossils from the Calciferous formation. <32d Regent's Report N. Y. State Mus. Nat. Hist., pp. —. Albany.

Published in advance, January 3, 1879, pp. 1-4.

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WALCOTT, C. D. The Utica slate and Related formations. Fossils of the Utica slate and Metamorphoses of Triarthrus Becki. <Trans. Albany Institute, vol. x, pp. 1-38, pls. i-ii. Albany, 1879.

Published in advance, June, 1879.

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\* Κύαθος, a cup; φύκος, a weed.

† Δίσκος, a disk; φῦκος, a sea-weed.

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## 24.

WALCOTT, C. D.—On the Cambrian Faunas of North America; Preliminary studies.  
 <Bull. U. S. Geol. Surv. No. 10, pp. 1-74, pl. i-x. Washington, 1884.

This contains three parts. The first is a "Review of the fauna of the Saint John formation, contained in the Hartt collection." Mr. Matthew proposed the specific names for the new species excepting for one, *Harttia matthewi*, the type of the n. g. *Harttia*, Walcott. The author does not accept the genus *Conoccephalites* and refers its different species to some of *Ptychoparia* and one of *Conocoryphe*. The following species are mentioned:

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The second part is on the "Fauna of the Braintree argillites." The author doubts the specific difference between *Paradoxides harlani* and *P. benetti*. He describes the following forms:

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25.

WALCOTT, C. D. Paleontologic Notes. < Amer. Jour. Sci., 3d ser., vol. xxix, February, pp. 114-117, pl. on p. 116. New Haven, 1885.

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26.

WALCOTT, C. D. Paleozoic Notes; New Genus of Cambrian Trilobites, *Mesonacis*. < Amer. Jour. Sci., 3d ser., vol. xxix, April, pp. 328-330, figs. 2. New Haven, 1885.

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27.

WALCOTT, C. D. Note on some Paleozoic Pteropods. < Amer. Journ. Sci., 3d ser., vol. xxx, July, pp. 17-21, figs. 1-6. New Haven, 1885.

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## PART IV.

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PUBLICATIONS BASED UPON THE PALEONTOLOGICAL COLLECTIONS  
OF THE UNITED STATES GOVERNMENT

BY

JACOB WHITMAN BAILEY,  
TIMOTHY ABBOTT CONRAD,  
JAMES DWIGHT DANA,  
CHRISTIAN GOTTFRIED EHRENBERG,  
JAMES HALL,  
ANGELO HEILPRIN,  
ALPHEUS HYATT,  
JULES MARCOU,

JOHN STRONG NEWBERRY,  
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BENJAMIN F. SHUMARD,  
ROBERT PARR WHITFIELD.



# I.—THE WRITINGS OF JACOB WHITMAN BAILEY.

## 1.

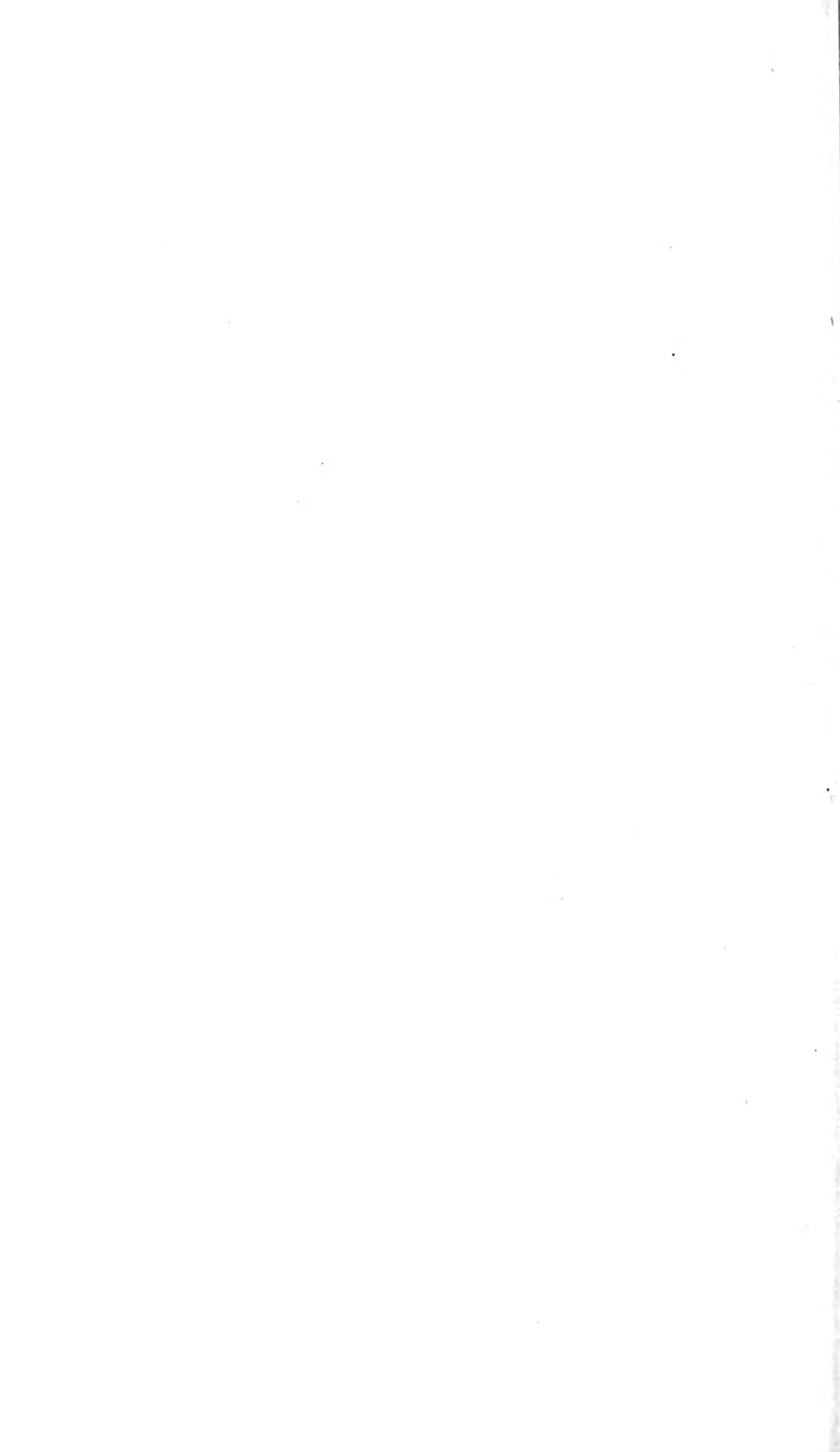
BAILEY, J. W. [Descriptions of fossil fresh-water infusoria from Oregon.] <Rep. Expl. Exp. to the Rocky Mountains and to Oregon and North California, by J. C. Frémont. Appendix A. Geological formations by James Hall, p. 302, pl. v. Washington, 1845.

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## 2.

BAILEY, J. W. Letter upon Infusorial Fossils submitted to him by Dr. Schiel. <Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean. Report of Expls. for a route for the Pacific Railroad of the line of the forty-first parallel of north latitude, by Lieut. E. G. Beckwith, 1854. Vol. ii, chap. x, pp. 111, 112, pl. iii (pars.). Washington, 1855.

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## II.—THE WRITINGS OF TIMOTHY ABBOTT CONRAD.

### 1.

CONRAD, T. A. Observations on a portion of the Atlantic Tertiary region, with a description of New Species of organic remains. <2d Bull. Proc. Natl. Institution, pp. 171-194, pls. i and ii. Washington, 1842.

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CONRAD, T. A. [Descriptions of the fossil shells of Astoria, Oregon.] <U. S. Expl. Exp. under the command of Charles Wilkes, vol. x, Geology, Appendix i, pp. 723-728, pls. xvii-xxi. Philadelphia, 1849.

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The plates were destroyed by fire, but about a dozen photographic copies of them have been taken by the U. S. Geological Survey.

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CONRAD, T. A. [Description of a new genus and subgenus.] <Rep. U. S. Geol. and Geogr. Surv. Terr., F. V. Hayden, vol. ii. The vertebrata of the Cretaceous formations of the West by E. D. Cope, pp. 23-24. Washington, 1875.

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### III.—THE WRITINGS OF JAMES DWIGHT DANA.

#### 1.

DANA, J. D. Zoophytes. <U. S. Expl. Exp. during the years 1838-1842 under the command of Charles Wilkes, U. S. N., vol. vii, pp. 1-741, Atlas pls. i-lxi. Philadelphia, 1846.

Many fossil genera are mentioned and discussed in this work.

#### 2.

DANA, J. D. Genera of Fossil Corals of the family Cyathophyllidæ. <Amer. Journ. Sci., 2d ser., vol. i, pp. 178-189, figs. 1-5. New Haven, 1846.

This article is extracted from the report of the United States Exploring Expedition during the years 1838-'42, under the command of Charles Wilkes, U. S. N. Zoophytes, by James D. Dana, Geologist of the Expedition, pp. 1-741. 4to. See entry No. 1.

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#### 3.

DANA, J. D. Description of Fossil Shells of the collections of the Exploring Expedition under the command of Charles Wilkes, U. S. N., obtained in Australia, from the lower layers of the coal formation in Hlawara, and from a deposit probably of nearly the same age at Harper's Hill, valley of the Hunter. <Amer. Journ. Sci., 2d ser., vol. iv. Appendix, pp. 151-160. New Haven, 1847.

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## 4.

DANA, J. D. Fossils of the Exploring Expedition under the command of Charles Wilkes, U. S. N., a fossil fish from Australia, and a Belemnite from Terra Del Fuego. <Am. Journ. Sci., vol. v, 2d ser., pp. 433-435. New Haven, 1848.

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## 5.

DANA, J. D. Descriptions of fossils. <U. S. Expl. Exp., 1838-'42, under the command of Charles Wilkes, U. S. N. Geology. By James D. Dana. Vol. x, Appendix, pp. 681-720, *pars*. Atlas, xxi, pls. *pars*. Philadelphia, 1849.

## APPENDIX I.

## FOSSILS OF NEW SOUTH WALES.

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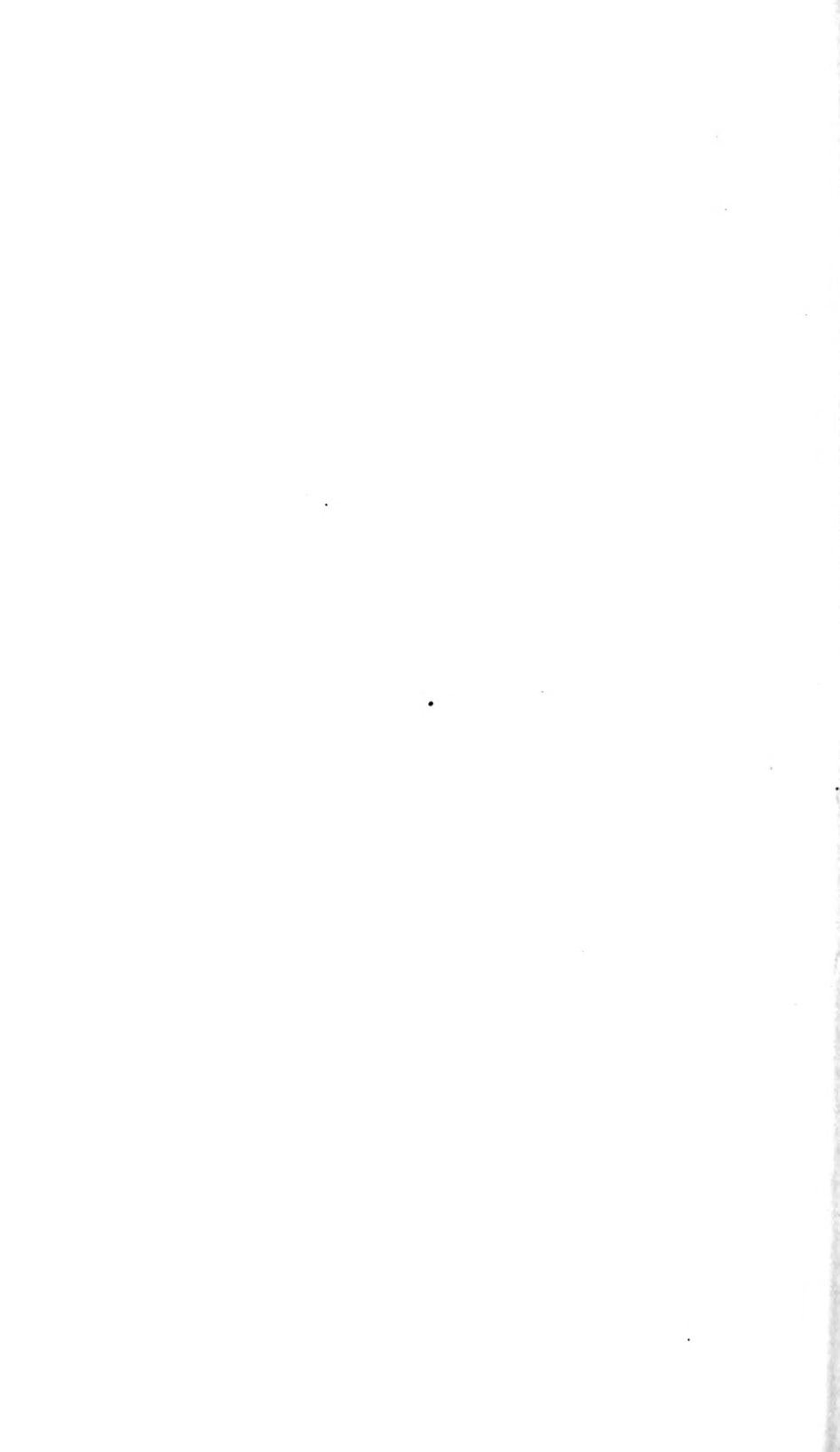
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## IV.—THE WRITINGS OF CHRISTIAN GOTTFRIED EHRENBERG.

### 1.

EHRENBERG, C. G. On Infusorial Deposits on the River Chutes in Oregon. Amer. Jour. Sci., 2d ser., Vol. IX, p. 140. New Haven, 1850.

A brief notice of the author's work in the Monatsb. Akad., Berlin, February, 1849, p. 76.

### 2.

EHRENBERG, C. G. Über das mächtigste bis jetzt bekannt gewordene (angeblich 500 Fuss mächtige) Lager von mikroskopischen reinen Kieselschaligen Süßwasser-Formen am Wasserfall-Flusse im Oregon. <Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königl. Preuss. Akademie der Wissenschaften zu Berlin aus dem Jahre 1849. February. pp. 76-87. Berlin, 1850.

*Amphora libyca.*

*Campylodiscus americ.?*

*Coconeis finnica.*

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*C. gemmata.*

*C. lineata.*

*C. oblonga.*

*C. protexta.*

*C. punctata.*

*Coconema asperum.*

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*E. gibberula.*

*E. granulata.*

*E. librile.*

*E. subulata.*

*E. textricula.*

*E. uncinata.*

*E. westermanni.*

*E. zebra.*

*E. zebra.*

*Fragilaria acuta.*

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*F. rhabdosoma.*

*Glaucocema paradoxum.?*

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*G. olar.*

*G. oregonicum.*

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*G. distans.*

*G. granulata.*

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*G. punctata.*

*G. undulata.*

*Himantidium arcus.*

*Navicula sigma.*

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*N. scalprum.*

*N. semen.*

*N. sifidula.*

*Pinnularia affinis.*

*P. amphioxys.*

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*P. gastrum.*

*P. macilata.*

*P. mesogongyla.*

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*P. placentula.*

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*P. viridis.*

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*S. plicata.*

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*S. semen.*

*Synedra ulna.*

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*Amphidiscus armatus.*

*Lithodiantium furcatum.*

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*L. scorpius.*

*Lithostylidium amphiodon.*

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*Lithostylidium.?*

*Spongolithis acicularis.*

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*S. fustis.*

*S. inflexa.*

*S. mesogongyla.*



## V—THE WRITINGS OF JAMES HALL.

### 1.

HALL, JAMES. Organic remains. Descriptions of organic remains collected by Captain J. C. Frémont, in the geographical survey of Oregon and North California. <Rep. Expl. Exp. to the Rocky Mountains and to Oregon and North California, by J. C. Frémont. Appendix B, pp. 304-310, pls. i-iv. Washington, 1845.

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### 2.

HALL, JAMES. Description of new or rare species of fossils, from the Palaeozoic series. <Rep. on the Geology of the Lake Superior Land district, by J. W. Foster and J. D. Whitney. Part ii, chapter xiii, pp. 203-231, pls. xxxiii-xxxv. Washington, 1851.

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HALL, JAMES. Descriptions and Notices of the Fossils collected upon the route. <Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean, vol. iii. No. 1, general report upon the geological collections, chapter ix, pp. 99-105, pls. i and ii. Washington, 1856.

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5.

HALL, JAMES. Geology and Palaeontology of the Boundary. <U. S. and Mex. Boundary Survey. Report of William H. Emory, vol. i, part ii, pp. 101-140, and 144-146, pls. i and xx and xxi pars. Washington, 1857.

The fossils figured on pl. xx were apparently named by James Hall, but no descriptions accompany them.

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HALL, JAMES, and WHITEFIELD, R. P. Palaeontology. <Rep. Geol. Expl. 40th parallel by Clarence King, vol. iv, part ii, pp. 198-302, pls. i-vii. Washington, 1877.

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## VI.—THE WRITINGS OF ANGELO HEILPRIN.

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## VII.—THE WRITINGS OF ALPHEUS HYATT.

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HYATT, ALPHEUS. [Description of the new genus *Meekoceras*, and remarks on the different species of the same.] < Contributions to Invertebrate Paleontology No. 5, Triassic fossils of Southeastern Idaho, by C. A. White. Twelfth Ann. Rep. of the U. S. Geol. and Geogr. Surv. of the Terr., by F. V. Hayden. pp. 112-116, pls. xxxi-xxxii. Washington, 1883.

An author's edition of these contributions was published in 1880.

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\* *κόρυς*, a helmet; *κέρας*, a horn.

† *γυμνός*, naked; *ῥῶτος*, back; *κέρας*, a horn.

‡ *ακροχορδών*, a wart; *κέρας*, a horn.

§ *εὐ* (augm. part.); *τομος*, sharp; *κέρας*, a horn.

|| *εὐ* (augm. part.); *δίσκος*, a quoit; *κέρας*, a horn.





## VIII.—THE WRITINGS OF JULES MARCOU.

### 1.

MARCOU, JULES. Sur la géologie des Montagnes Rocheuses, entre le Fort Smith (Arkansas) et Albuquerque (Nouveau Mexique). <Bull. Geol. Soc. France, 2d ser., vol. xi, pp. 156-160. Paris, 1854.

Mentions the existence, at Tucumcari, of the Jurassic formation with *Gryphæa dilatata* and *Ostrea Marshii*.

### 2.

MARCOU, JULES. Résumé of a geological reconnaissance extending from Napoleon, at the junction of the Arkansas with the Mississippi, to the Pueblo de los Angeles, in California. <U. S. Pacific R. R. Expl., 1853-'54, vol. iii, 8vo. Report of explorations for a railway route near the 35th parallel of latitude, from the Mississippi River to the Pacific Ocean, by Lieut. A. W. Whipple, Corps of Topographical Engineers, chap. vi, pp. 40-48. H. Doc. 129. [Washington, 1855.]

Mentions the occurrence of a number of fossils and employs for the first time the name *Gryphæa tueumcarii*.

### 3.

MARCOU, JULES. Résumé d'une section géologique des Montagnes Rochenses à San Pedro, sur la côte de l'Océan Pacifique. <Bull. Geol. Soc. France, 2d ser., vol. xi, pp. 474-478. Paris, 1855.

Mentions the occurrence of a *Gryphæa* at Laguna (New Mexico), and of Carboniferous fossils near the San Francisco Mountains (Arizona).

### 4.

MARCOU, JULES. Geological notes of a survey of the country comprised between Preston, Red River, and El Paso, Rio Grande del Norte. <U. S. Pacific R. R. Expl., vol. iv, 8vo. Report of explorations of a route for the Pacific Railroad, near the 32d parallel of latitude from the Red River to the Rio Grande, by Brevet Capt. John Pope, Corps of Topographical Engineers. Chap. xiii, pp. 125-128. H. Doc. 126. [Washington, 1855.]

Mentions the occurrence of a number of fossils.

### 5.

MARCOU, JULES. Résumé explicatif d'une carte géologique des États-Unis et des provinces anglaises de l'Amérique du Nord, avec un profil géologique allant de la vallée du Mississippi aux côtes du Pacifique, et une planche de fossiles. <Bull. Geol. Soc. France, 2d ser., vol. xii, pp. 813-936, pls. xx-xxi. Paris, 1855.

The occurrence of many fossils is mentioned in this paper.

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*G. dilatata* var. *tueumcarii*, Marcou, 1855, pl. xxi, fig. 3.

*Ostrea marshii*, Sowerby, pl. xxi, fig. 4.

*Gryphæa pitcheri*, Morton, pl. xxi, figs. 5 a, b, and 6.

## 6.

MARCOU, JULES. Notes géologiques sur le pays compris entre Preston, sur la rivière Rouge, et el Paso, sur le rio Grande del Norte. < Bull. Geol. Soc. France, 2d series, vol. xii, pp. 80-813. Paris, 1855.

In this paper the author mentions the occurrence of many fossils. The notes are made up from collections and observations brought back by Captain Pope, U. S. Top. Engrs., from his survey from the Red River to the Rio Grande, in 1854.

## 7.

MARCOU, JULES. Résumé and field-notes by Jules Marcou, geologist and mining engineer of the Expedition, with a translation by William P. Blake. < Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean, vol. iii, part. iv, pp. 121-164. Washington, 1856.

The occurrence of many fossils is mentioned in these field-notes, originally written in French.

## 8.

MARCOU, JULES. Résumé of a Geological reconnaissance extending from Napoleon, at the junction of the Arkansas with the Mississippi, to the Pueblo de los Angeles, in California. < Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean, vol. iii. Rep. of Lieut. A. W. Whipple, part iv, pp. 165-171. Washington, 1856.

This resumé is reprinted from the preliminary or first report of Lieutenant Whipple, in 8vo, chap. vi, p. 40, Reports of Pacific Railroad Surveys, House Doc. 129, Washington, 1855. A few notes are added.

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## 9.

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MAIRAC, JULES. Report on the Geology of a portion of Southern California. <Annual Report upon the Geographical Surveys West of the One Hundredth Meridian, in California, Nevada, Utah, Colorado, Wyoming, New Mexico, Arizona, and Montana, by George M. Wheeler, First Lieutenant of Engineers, U. S. A., being Appendix J J of the Annual Report of the Chief of Engineers for 1876. Appendix II, pp. 158-172. Washington, 1876.

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The occurrence of many fossils is mentioned in this report.

# IX.—THE WRITINGS OF JOHN STRONG NEWBERRY.

## I.

NEWBERRY, J. S. Palaeontology. <Report upon the Colorado River of the West, by Lieut. Joseph C. Ives. Part iii, chapter xi, pp. 116-132, pls. i-iii. Washington, 1861.

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# X.—THE WRITINGS OF DAVID DALE OWEN.

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This article, of which an abstract was given in the Proc. Geol. Soc., London., vol. iv, p. 1. contains many paleontological notes.

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OWEN, D. D., and SHUMARD, B. F. Descriptions of fifteen new species of Crinoidea from the subcarboniferous limestone of Iowa, collected during the U. S. Geological Survey of Iowa, Wisconsin, and Minnesota, in the years 1848-'49. <Journ. Acad. Nat. Sci., Philadelphia. Second series, vol. ii, part i, pp. 57-70, pl. vii. Philadelphia, 1850.

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OWEN, D. D. Description of new and imperfectly known Genera and Species of Organic Remains, collected during the geological surveys of Wisconsin, Iowa and Minnesota. < Rep. Geol. Surv. of Wisconsin, Iowa, and Minnesota, and incidentally of a part of Nebraska Territory, by David Dale Owen. Appendix, Article I, pp. 573-577, pls. i-*id.*, ii-*iiib.*, iii-*iiia.*, iv-v, vii-*viiia.* Philadelphia, 1852.

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## 6.

WHITFIELD, R. P., and HALL, JAMES. (See Hall, James, and Whitfield, R. P.)

WHITFIELD, R. P., and WHITE, C. A. (See White, C. A., and Whitfield, R. P.)



# SUPPLEMENT.

## THE WRITINGS OF J. W. BAILEY.

BAILEY, J. W. Notes concerning the minerals and fossils collected by Lieutenant J. W. Abert, while engaged in the geographical examination of New Mexico. <Rep. of Lieut. J. W. Abert of his Examination of New Mexico in the years 1846-'47. Ex. Doc. No. 41, pp. 547-548, and 3 plates. Washington [1849].

Plate [I] faces p. 522, and contains fossil leaves from the coal beds of the Raton.

Plate [II] faces p. 546, and contains sharks' teeth and some *Gasteropoda* from Poblazon and an [*Athyris*] from Tuerto.

Plate [III] faces p. 547, and contains an *Inoceramus* [*problematicus*] and a fossil leaf from the coal bed at Raton.

## THE WRITINGS OF I. N. NICOLLET.

NICOLLET, I. N. List of Fossils belonging to the several formations alluded to in the Report; arranged according to localities. <Rep. intended to illustrate a Map of the Hydrographical basin of the Upper Mississippi river made by I. N. Nicollet. 26th Congress, 2d session, Senate Ex. Doc. No. 237. Appendix C, pp. 167-170. Washington, 1843.

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A large number of fossils are mentioned by their generic names and said to be new species, but no specific name is given and they are not described.	

## THE WRITINGS OF HIRAM A. PROUT.

### 1.

PROUT, H. A. Description of New Species of Bryozoa from Texas and New Mexico, collected by Dr. George G. Shumard, Geologist of the U. S. Expedition for Boring Artesian Wells along the 32d Parallel, under the direction of Capt. John Pope, U. S. Corps Top. Eng. <Trans. St. Louis Acad. Sci., vol. i, pp. 228-235. 1858. St. Louis, 1856-'60.

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## 2.

PROUT, H. A. Second Series of Descriptions of Bryozoa from the Palæozoic Rocks of the Western States and Territories. <Trans. St. Louis Acad. Sci., vol. i, pp. 266-273, pl. xvi, figs. 2 a, b. 1858. St. Louis, 1856-'60.

## PERMIAN SPECIES.

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## THE WRITINGS OF BENJAMIN F. SHUMARD.

SHUMARD, B. F. Palæontology. <Rep. of a geological exploration from Fort Leavenworth to Bryan's Pass, made in connection with the survey of a road from Fort Riley to Bridger's Pass, under command of Lieutenant F. T. Bryan, topographical engineer, 1856, by H. Engelmann, geologist and mining engineer. <Rep. of the Secretary of War. Message from the President of the U. S. to the 35th Congress, 1st session, Ex. Doc. No. 2, vol. ii, pp. 517-520. Washington, 1857.

Gives two lists and notes of fossils, and describes one new species *Mytilus engelmanni*.

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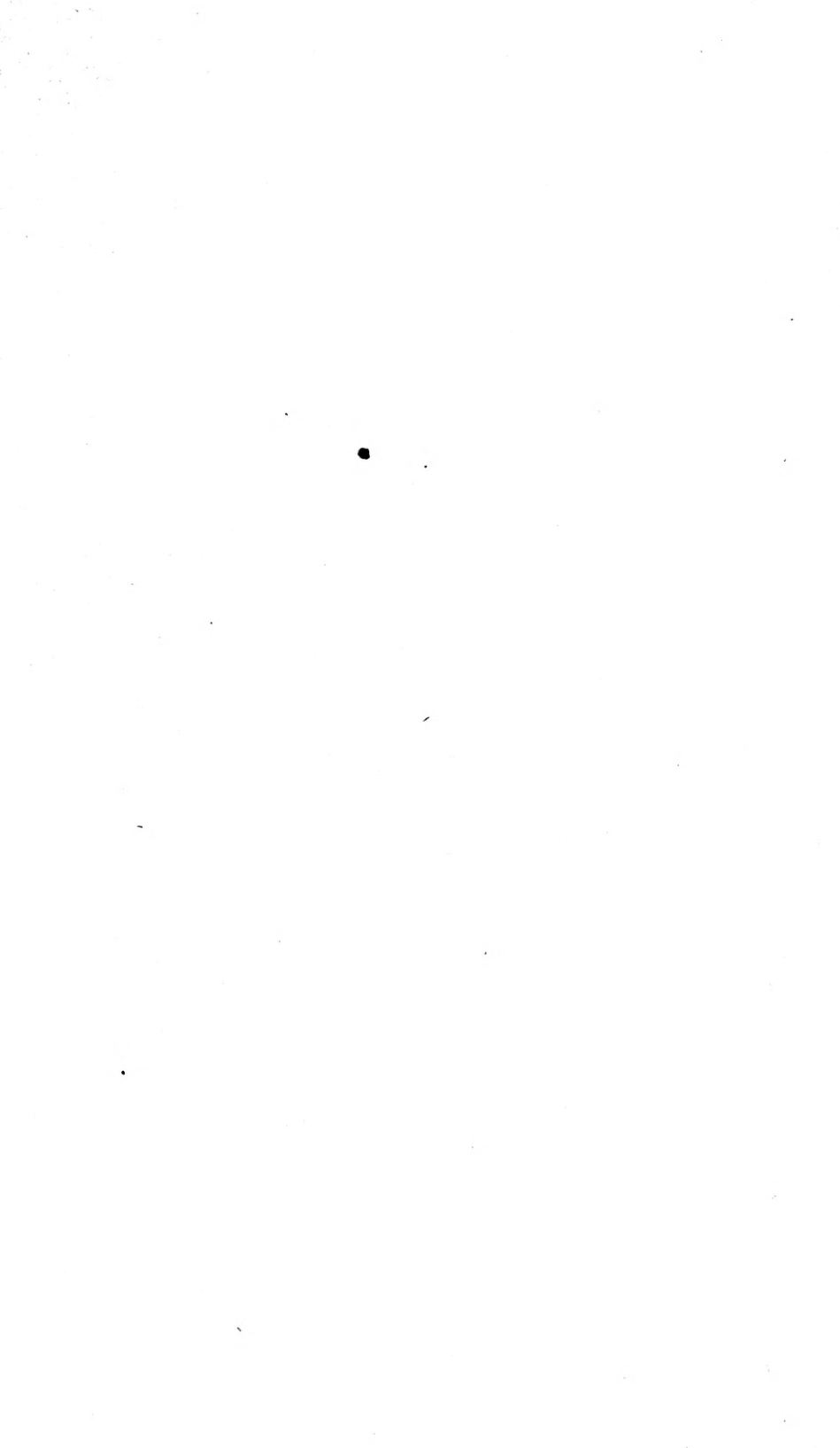


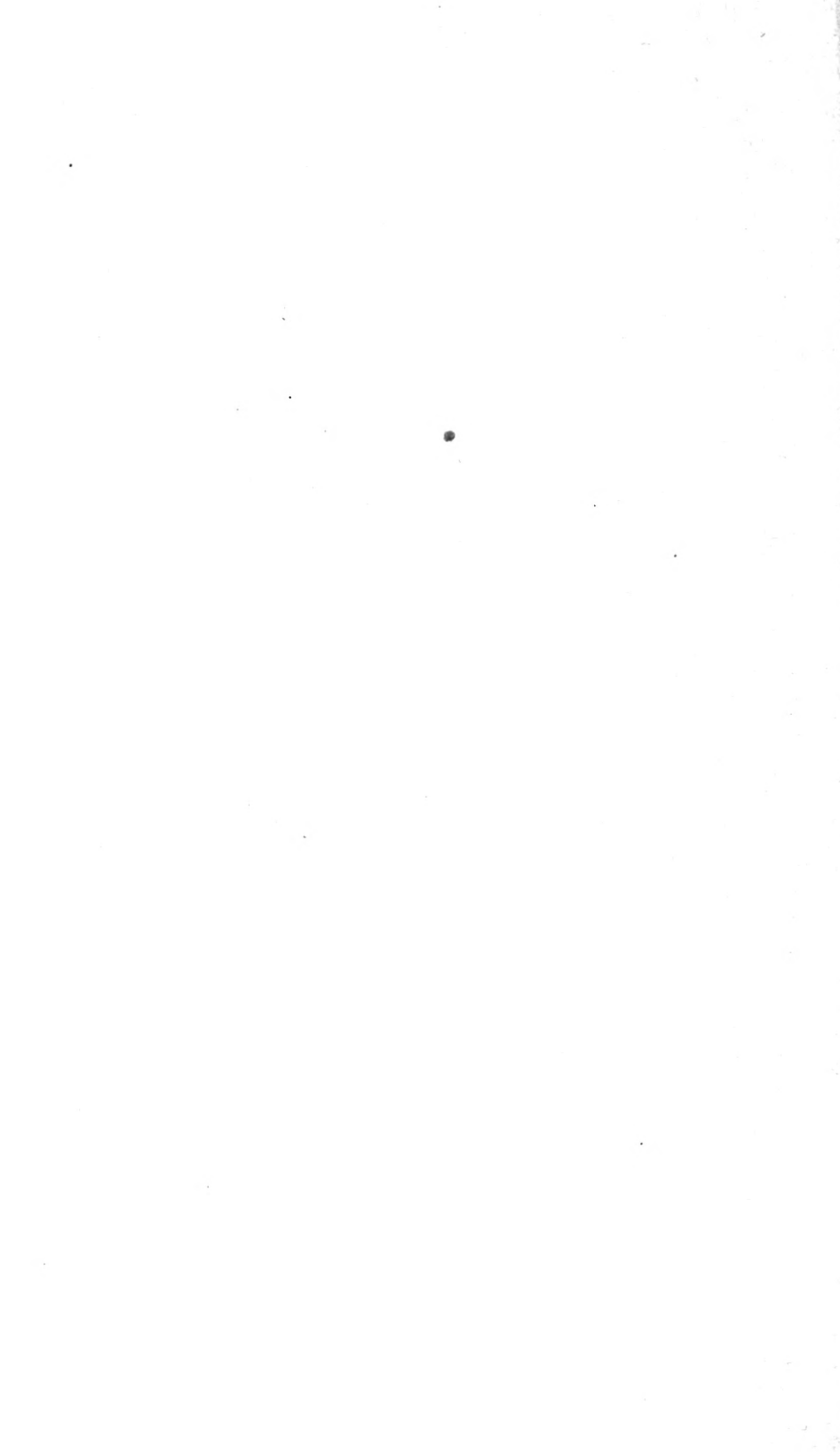












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