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BULLETIN

OF THE

UNITED STATES NATIONAL MUSEUM.

No. 30.

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

BY

JOHN BELKNAP MARCOU.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1885.

Department of the Interior:

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OF THE

UNITED STATES NATIONAL MUSEUM.

No. 30.

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1885.

ADVERTISEMENT.

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.

CONTENTS.

	Page.
Introductory note.....	7
Part I.—The published writings of Fielding Bradford Meek.....	9
Part II.—The published writings of Charles Abiathar White.....	113
Part III.—The published writings of Charles Doolittle Walcott.....	183
Part IV.—Publications based upon the Paleontological collections of the United States Government by—	
	Page.
Jacob Whitman Bailey.....	203
Timothy Abbot Conrad.....	205
James Dwight Dana.....	223
Christian Gottfried Ehrenberg.....	229
James Hall.....	231
Angelo Heilprin.....	237
Robert Parr Whitfield.....	259
Alpheus Hyatt.....	239
Jules Marcou.....	241
John Strong Newberry.....	245
David Dale Owen.....	247
James Schiel.....	253
Benjamin F. Shumard.....	255
Supplement.....	273
	Page.
J. W. Bailey.....	273
T. N. Nicollet.....	273
Hiram A. Prout.....	273
Benjamin F. Shumard.....	274
Index of genera and species.....	275
General Index.....	327

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.

PART I.

THE PUBLISHED WRITINGS OF FIELDING BRADFORD MEEK.

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.

1.

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.

CONTENTS OF THE REPORT.

	Page.
Quaternary deposits	96
Carboniferous system.—Encrinital limestone	98
Chemung group	101
Devonian system.—Upper Helderberg.—Onondaga limestone	103
Lower Silurian strata:	
Saccharoidal sandstone	105
Second magnesian limestone	106
Economical geology:	
Soil	109
Building stones	110
Fire-stones, limestones for lime	110
Sand for making mortar, hydraulic limestone, millstones, materials for the construction of roads, clays for the manufacture of bricks	111
Coal	112
Iron ore	115
Lead	115
High-Point Mine	117

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.

	Page.
<i>Callianassa danai</i> , n. s., H. & M., 1856, pl. i, fig. 1 <i>a, b</i>	379-380
<i>Lingula subspatulata</i> , n. s., H. & M., 1856, pl. i, figs. 2 <i>a, b</i>	380
<i>Caprinella coralloidea</i> , n. s., H. & M., 1856, pl. ii, figs. 3 <i>a-f</i>	380-381
<i>Pecten rigida</i> , n. s., H. & M., 1856, pl. ii, figs. 4 <i>a-c</i>	381
<i>Aricula haydeni</i> , n. s., H. & M., 1856, pl. i, figs. 5 <i>a, b</i>	382
<i>Lucina subundata</i> , n. s., H. & M., 1856, pl. i, figs. 6 <i>a, b</i>	382
<i>Cytherca orbiculata</i> , n. s., H. & M., 1856, pl. i, fig. 7	382-383
<i>Cytherca tenuis</i> , n. s., H. & M., 1856, pl. i, figs. 8 <i>a-c</i>	383
<i>Crassatella evansii</i> , u. s., H. & M., 1856, pl. i, figs. 9 <i>a-e</i>	383-384
<i>Pectunculus sionzensis</i> , n. s., H. & M., 1856, pl. i, fig. 12	384
<i>Nucula subnasuta</i> , n. s., H. & M., 1856, pl. i, figs. 10 <i>a-c</i>	384-385
<i>Nucula ventricosa</i> , n. s., H. & M., 1856, pl. i, fig. 11 <i>a, b</i>	385
<i>Capulus occidentalis</i> , n. s., H. & M., 1856, pl. i, fig. 13 <i>a-d</i>	385-386
<i>Inoceramus sublevius</i> , n. s., H. & M., 1856, pl. ii, fig. 1 <i>a, b</i>	386
<i>Inoceramus convexus</i> , n. s., H. & M., 1856, pl. ii, fig. 2 <i>a, b</i>	386-387
<i>Inoceramus tenuilineatus</i> , n. s., H. & M., 1856, pl. ii, fig. 3 <i>a, b</i>	387
<i>Inoceramus conradi</i> , n. s., H. & M., 1856, pl. ii, fig. 5 <i>a, b</i>	387-388
<i>Inoceramus fragilis</i> , n. s., H. & M., 1856, pl. ii, figs. 6 <i>a, b</i>	388
<i>Natica obliquata</i> , n. s., H. & M., 1856, pl. iii, figs. 1 <i>a, b</i>	389
<i>Natica concinna</i> , n. s., H. & M., 1856, pl. iii, figs. 2 <i>a-d</i>	389
<i>Natica paludinaformis</i> , n. s., H. & M., 1856, pl. iii, fig. 3 <i>a-c</i>	389-390
<i>Acteon concinnus</i> , n. s., H. & M., 1856, pl. iii, figs. 4 <i>a-d</i>	390
<i>Buccinum ? rinctulum</i> , n. s., H. & M., 1856, pl. iii, figs. 5 <i>a-b</i>	390-391
<i>Fusus shumardii</i> , n. s., H. & M., 1856, pl. iii, figs. 6 <i>a-c</i>	391
<i>Fusus constrictus</i> , n. s., H. & M., 1856, pl. iii, figs. 7 <i>a-d</i>	391-392
<i>Fusus ? tenuilineata</i> , n. s., H. & M., 1856, pl. iii, figs. 8 <i>a-c</i> and 9 <i>a-c</i>	392
<i>Rostellaria fusiformis</i> , n. s., H. & M., 1856, pl. iii, fig. 10 <i>a, b</i>	393
<i>Dentalium gracilis</i> , n. s., H. & M., 1856, pl. iii, fig. 11 <i>a-c</i>	393

	Page.
<i>H. Ux loidyi</i> , n. s., H. & M., 1856, pl. iii, fig. 12 <i>a, b</i>	394
<i>Ammonites complexus</i> , n. s., H. & M., 1856, pl. iv, fig. 1 <i>a-f</i>	394-395
<i>Ammonites perracarinatus</i> , n. s., H. & M., 1856, pl. iv, fig. 2 <i>a-c</i>	395
<i>Hamites mortoni</i> , n. s., H. & M., 1856, pl. iv, figs. 3 <i>a-c</i>	396-397
<i>Ancylloceras? nicolletii</i> , n. s., H. & M., 1856, pl. iv, fig. 4	397-398
<i>Baculites oratus</i> and <i>B. compressus</i> , Say	398-399
<i>Baculites oratus</i> , Say, pl. v, fig. 1, <i>a-c</i> : pl. vi, figs. 1-7	399-400
<i>Baculites compressus</i> , Say, pl. v, figs. 2 <i>a-b</i> : pl. vi, figs. 8-9	400-412
<i>Baculites grandis</i> , n. s., H. & M., 1856, pl. vii, fig. 1, 2: pl. viii, figs. 1, 2: pl. vi, fig. 10	402-403
The same paper contains—	
“ Section of the members of the Cretaceous formation as observed on the Missouri River, and thence westward to the Manvaises Terres	405
List of fossils heretofore identified and described from the Cretaceous formation of Nebraska	405
List of species common to the Cretaceous formations of Nebraska and New Jersey	406
List of the new species of fossils described in the preceding paper	406
In the additions and corrections	411
<i>Fusus constrictus</i> is referred to the genus <i>Buccinum</i> .	
<i>Hamites mortoni</i> is regarded as belonging to the genus <i>Ancylloceras</i> as defined by Pictet.	

3.

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

	Page.
<i>Scabaria ccrethiformis</i> , n. s., M. & H., 1856	63
<i>Acteon subellipticus</i> , n. s., M. & H., 1856	63-64
<i>Avalana subglobosa</i> , n. s., M. & H., 1856	64
<i>Natica ? ambigua</i> , n. s., M. & H., 1856	64
<i>Natica occidentalis</i> , n. s., M. & H., 1856	64
<i>Natica moreauensis</i> , n. s., M. & H., 1856	64
<i>Turbo nebrascensis</i> , n. s., M. & H., 1856	64
<i>Turbo tenuilineatus</i> , n. s., M. & H., 1856	64-65
<i>Rostellaria biangulata</i> , n. s., M. & H., 1856	65
<i>Fusus dakotaensis</i> , n. s., M. & H., 1856	65
<i>Fusus galpinianus</i> , n. s., M. & H., 1856	65
<i>Fusus contortus</i> , n. s., M. & H., 1856	65
<i>Fusus culbertsoni</i> , n. s., M. & H., 1856	66
<i>Fusus flexuocostatus</i> , n. s., M. & H., 1856	66
<i>Fusus newberryi</i> , n. s., M. & H., 1856	66
<i>Pyrula bairdi</i> , n. s., M. & H., 1856	66
<i>Fasciolaria cretacea</i> , n. s., M. & H., 1856	66-67
<i>Fasciolaria buccinoides</i> , n. s., M. & H., 1856	67
<i>Buccinum ? nebrascensis</i> , n. s., M. & H., 1856	67
<i>Cyprius fragilis</i> , n. s., M. & H., 1856	68
<i>Helcion</i> , Montfort	68
<i>Helcion versulatus</i> , n. s., M. & H., 1856	68
<i>Helcion potelliformis</i> , n. s., M. & H., 1856	68
<i>Helcion ulveolus</i> , n. s., M. & H., 1856	68
<i>Helcion suboratus</i> , n. s., M. & H., 1856	68
<i>Helcion carinatus</i> , n. s., M. & H., 1856	68-69
<i>Dentalium fragilis</i> , n. s., M. & H., 1856	69
<i>Bulla edgaria</i> , n. s., M. & H., 1856	69
<i>Bulla minor</i> , n. s., M. & H., 1856	69
<i>Bulla occidentalis</i> , n. s., M. & H., 1856	69

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.

	Page.
<i>Turritella convexa</i> , n. s., M. & H., 1857	70
<i>Turritella norvayensis</i> , n. s., M. & H., 1857	70

	Page.
<i>Belemnitella ? bulbosa</i> , n. s., M. & H., 1857	70
<i>Ammonites halli</i> , n. s., M. & H., 1857	70-71
<i>Ancylloceras ? nebrascensis</i> , n. s., M. & H., 1857	71
<i>Ancylloceras ? cheyensis</i> , n. s., M. & H., 1857	71-72

5,

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

	Page.
<i>Pholadomya undata</i> , n. s., M. & H., 1856	81
<i>Goniomya americana</i> , n. s., M. & H., 1856	81-82
<i>Solen subplicatus</i> , n. s., M. & H., 1856	82
<i>Tellina gracilis</i> , n. s., M. & H., 1856	82
<i>Tellina equilateralis</i> , n. s., M. & H., 1856	82
<i>Tellina ? cheyensis</i> , n. s., M. & H., 1856	82
<i>Tellina scitula</i> , n. s., M. & H., 1856	82
<i>Tellina subelliptica</i> , n. s., M. & H., 1856	83
<i>Tellina prouti</i> , n. s., M. & H., 1856	83
<i>Cytherea deweyi</i> , n. s., M. & H., 1856	83
<i>Cytherea nebrascensis</i> , n. s., M. & H., 1856	83
<i>Corbula ventricosa</i> , n. s., M. & H., 1856	83
<i>Corbula moreauensis</i> , n. s., M. & H., 1856	83-84
<i>Corbula ? gregaria</i> , n. s., M. & H., 1856	84
<i>Astarte gregaria</i> , n. s., M. & H., 1856	84
<i>Nucula scitula</i> , n. s., M. & H., 1856	84
<i>Nucula evansi</i> , n. s., M. & H., 1856	84
<i>Nucula equilateralis</i> , n. s., M. & H., 1856	84-85
<i>Nucula subplana</i> , n. s., M. & H., 1856	85
<i>Nucula cancellata</i> , n. s., M. & H., 1856	85
<i>Nucula planomarginata</i> , n. s., M. & H., 1856	85
<i>Pectunculina parvula</i> , n. s., M. & H., 1856	85
<i>Arca (Cucullaea) cordata</i> , n. s., M. & H., 1856	86
<i>Arca (Cucullaea) shumardi</i> , n. s., M. & H., 1856	86
<i>Mytilus attenuatus</i> , n. s., M. & H., 1856	86
<i>Avicula ? fibrosa</i> , n. s., M. & H., 1856	86-87
<i>Inoceramus ventricosus</i> , n. s., M. & H., 1856	87
<i>Pecten nebrascensis</i> , n. s., M. & H., 1856	87
<i>Natica subcrassa</i> , n. s., M. & H., 1856	87

6.

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

	Page.
Formations immediately beneath the Tertiary in this district	113
Formations at the base of the Cretaceous of this district	114
<i>Cyclas formosa</i> , n. s., M. & H., 1856	115
<i>Cyclas fragilis</i> , n. s., M. & H., 1856	115
<i>Cyclas subellipticus</i> , n. s., M. & H., 1856	115
<i>Cyrena moreauensis</i> , n. s., M. & H., 1856	115-116
<i>Cyrena intermedea</i> , n. s., M. & H., 1856	116
<i>Cyrena occidentalis</i> , n. s., M. & H., 1856	116
<i>Corbula subtrigonalis</i> , n. s., M. & H., 1856	116
<i>Corbula perundata</i> , n. s., M. & H., 1856	116
<i>Corbula mactriformis</i> , n. s., M. & H., 1856	117
<i>Unio priscus</i> , n. s., M. & H., 1856	117
<i>Bulimus ? teres</i> , n. s., M. & H., 1856	117-118
<i>Bulimus ? vermiculus</i> , n. s., M. & H., 1856	118

	Page.
<i>Bulinus linnaeiformis</i> , n. s., M. & H., 1856	118
<i>Bulinus nebrascensis</i> , n. s., M. & H., 1856	118
<i>Pupa heliceoides</i> , n. s., M. & H., 1856	118-119
<i>Limnæa tenuicosta</i> , n. s., M. & H., 1856	119
<i>Physa longicauda</i> , n. s., M. & H., 1856	119
<i>Physa rhomboides</i> , n. s., M. & H., 1856	119
<i>Physa nebrascensis</i> , n. s., M. & H., 1856	119-120
<i>Physa subelongata</i> , n. s., M. & H., 1856	120
<i>Planorbis subumbilicatus</i> , n. s., M. & H., 1856	120
<i>Planorbis convolutus</i> , n. s., M. & H., 1856	120
<i>Valdetia (Anegulus) minuta</i> , n. s., M. & H., 1856	120
<i>Paludina multilimata</i> , n. s., M. & H., 1856	120-121
<i>Paludina retula</i> , n. s., M. & H., 1856	121
<i>Paludina leai</i> , n. s., M. & H., 1856	121-122
<i>Paludina retusa</i> , n. s., M. & H., 1856	122
<i>Paludina concadi</i> , n. s., M. & H., 1856	122
<i>Paludina peculiaris</i> , n. s., M. & H., 1856	122
<i>Paludina trochiformis</i> , n. s., M. & H., 1856	122-123
<i>Paludina leidyi</i> , n. s., M. & H., 1856	123
<i>Valvata parvula</i> , n. s., M. & H., 1856	123
<i>Melania minutula</i> , n. s., M. & H., 1856	123-124
<i>Melania anthonyi</i> , n. s., M. & H., 1856	124
<i>Melania multistriata</i> , n. s., M. & H., 1856	124
<i>Melania nebrascensis</i> , n. s., M. & H., 1856	124-125
<i>Melania convexa</i> , n. s., M. & H., 1856	125
<i>Cerithium nebrascensis</i> , n. s., M. & H., 1856	125

On page 126 *Pyrola 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.

	Page.
Vertical section of the geological formation of Nebraska Territory, so far as determined	269
<i>Natica tuomyana</i> , n. s., M. & H., 1856	270
<i>Bulla subcylindrica</i> , n. s., M. & H., 1856	270
<i>Panopæa occidentalis</i> , n. s., M. & H., 1856	270
<i>Mastra formosa</i> , n. s., M. & H., 1856	271
<i>Mastra warrenana</i> , n. s., M. & H., 1856	271
<i>Mastra alta</i> , n. s., M. & H., 1856	271-272
<i>Tellina subtruncata</i> , n. s., M. & H., 1856	272
<i>Venus? circularis</i> , n. s., M. & H., 1856	272
<i>Cutherea pellucida</i> , n. s., M. & H., 1856	272-273
<i>Cytherea oregonana</i> , n. s., M. & H., 1856	273
<i>Lucina occidentalis</i> , n. s., M. & H., 1856	273-274
<i>Hettungia americana</i> , n. s., M. & H., 1856	274
<i>Cardium speciosum</i> , n. s., M. & H., 1856	274-275
<i>Nucula obsoletostriata</i> , n. s., M. & H., 1856	275
<i>Cucullæa exigua</i> , n. s., M. & H., 1856	275-276
<i>Mytilus subarenatus</i> , n. s., M. & H., 1856	276
<i>Gerrilla subtruncata</i> , n. s., M. & H., 1856	276
<i>Inoceramus perleuiis</i> , n. s., M. & H., 1856	276-277
<i>Inoceramus incurvus</i> , n. s., M. & H., 1856	277
<i>Ustrina patina</i> , n. s., M. & H., 1856	277
Catalogue of all the invertebrate fossil remains hitherto described and identified, from the Tertiary and Cretaceous formations of Nebraska Territory	278
Tertiary species	278
Cretaceous species	280

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.

	Page.
<i>Nucula traskana</i> , n. s., Meek, 1857	39
<i>Arca (Oucullosa) equilateralis</i> , n. s., Meek, 1857.....	39-40
<i>Arca vancouverensis</i> , n. s., Meek, 1857.....	40
<i>Cardium scitulum</i> , n. s., Meek, 1857.....	40-41
<i>Ph[o]ladya (Goniomya) borealis</i> , n. s., Meek, 1857	41-42
<i>Ph[o]ladya subelongata</i> , n. s., Meek, 1857.....	42
<i>Trigonia evansana</i> , n. s., Meek, 1857.....	43
<i>Thracia? occidentalis</i> , n. s., Meek, 1857	43-44
<i>Thracia? subtruncata</i> , n. s., Meek, 1857.....	44
<i>Dentalium nanaimoensis</i> , n. s., Meek, 1857.....	44-45
<i>Ammonites (Scaphites?) ramosus</i> , n. s., Meek, 1857.....	45-47
<i>Ammonites newberryanus</i> , n. s., Meek, 1857	47-48
<i>Baculites oratus?</i> (Say).....	48-49

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.

Genera Pseudobuccinum, Corbulamella.

	Page.
Gives a brief account of the results of previous explorations.....	117-121
Section of Tertiary beds thirteen miles above Fort Clark.....	122
Section of fresh-water and estuary deposits near the mouth of Judith River	124
Section of the older deposits at the mouth of Judith River, in the descending order ...	125
Alabama section, from facts communicated by Prof. A. Winchell.....	126
New Jersey section, compiled from the reports of that State	127
Vertical section of the geological formations of Nebraska Territory, so far as determined.....	128
Sections of the rocks in Northeastern Kansas (above the Coal Measures). By Major F. Hawn, U. S. deputy surveyor.....	130
Section of the formations at Pyramid Mountain, New Mexico [by Jules Marcou].....	132
Conclusions.....	133
<i>Ptychoceras mortoni</i> , n. s., M. & H., 1857.....	134
<i>Serpula? tenuicarinatus</i> , n. s., M. & H., 1857.....	134
<i>Vitrina obliqua</i> , n. s., M. & H., 1857.....	134
<i>Helix occidentalis</i> , n. s., M. & H., 1857	135
<i>Helix vitrinoides</i> , n. s., M. & H., 1857	135
<i>Planorbis tenuivolvis</i> , n. s., M. & H., 1857	135
<i>Planorbis amplexus</i> , n. s., M. & H., 1857	135-136
<i>Planorbis fragilis</i> , n. s., M. & H., 1857.....	136
<i>Melania subtoruosa</i> , n. s., M. & H., 1857	136
<i>Melania omitta</i> , n. s., M. & H., 1857	136
<i>Melania sublaevis</i> , n. s., M. & H., 1857	136-137
<i>Melania invenusta</i> , n. s., M. & H., 1857	137
<i>Melania warrenana</i> , n. s., M. & H., 1857	137
<i>Melania tenuicarinata</i> , n. s., M. & H., 1857.....	137-138
<i>Melania convexa</i> , M. & H.....	138
<i>Fusus vaughani</i> , n. s., M. & H., 1857.....	138-139
<i>Fusus subturritus</i> , n. s., M. & H., 1857	139

	Page.
<i>Fusus intertextus</i> , n. s., M. & H., 1857	139
<i>Fusus</i> (<i>Pleuruloma</i> ?) <i>scarboroughi</i> , n. s., M. & H., 1857	139-140
<i>Pseudobuccinum</i> , n. g., M. & H., 1857	140
<i>Pseudobuccinum nebrascensis</i> , M. & H.	140-141
<i>Xylophaga elegantula</i> , n. s., M. H., 1857	141
<i>Xylophaga stimpsoni</i> , n. s., M. & H., 1857	141-142
<i>Pholadomya subventriosa</i> , n. s., M. & H., 1857	142
<i>Solen</i> <i>dakotensis</i> , n. s., M. & H., 1857	142
<i>Corbulamella</i> , n. g., M. & H., 1857	142-143
<i>Corbulamella gregaria</i> , M. & H.	143
<i>Cyprina arenaria</i> , n. s., M. & H., 1857	143
<i>Cyprina cordata</i> , n. s., M. & H., 1857	143
<i>Cyprina compressa</i> , n. s., M. & H., 1857	144
<i>Cyprina subtumida</i> , n. s., M. & H., 1857	144
<i>Cyprina orata</i> , n. s., M. & H., 1857	144
<i>Unio danwi</i> , n. s., M. & H., 1857	145
<i>Unio deweyanus</i> , n. s., M. & H., 1857	145-146
<i>Unio subspatulata</i> , n. s., M. & H., 1857	146
<i>Pectunculus subimbricatus</i> , n. s., M. & H., 1857	146
<i>Ostrea glabra</i> , n. s., M. & H., 1857	146-147
<i>Ostrea translucida</i> , n. s., M. & H., 1857	147
<i>Hemiaser</i> <i>humphreysanus</i> , n. s., M. & H., 1857	147-148

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, 1858; 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.

	Page.
General section of the geological formations seen in and near the Black Hills (descending)	43-44
Carboniferous rocks of the Black Hills	47
Lower Silurian	49
Potsdam sandstone	49
Metamorphic and igneous rocks	49
<i>Pentamerus astericus</i> , n. s., M. & H., 1858	49-50
<i>Lingula brevirostris</i> , n. s., M. & H., 1858	50
<i>Inoceramus umbonatus</i> , n. s., M. & H., 1858	50
<i>Avicula</i> (<i>Monotis</i>) <i>tennicostata</i> , n. s., M. & H., 1858	50-51
<i>Mytilus pertenuis</i> , n. s., M. & H., 1858	51
<i>Arca</i> (<i>Cucullaea</i>) <i>inornata</i> , n. s., M. & H., 1858	51
<i>Unio nivalis</i> , n. s., M. & H., 1858	52
<i>Corbula inornata</i> , n. s., M. & H., 1858	52
<i>Panopaea</i> (<i>Myacites</i>) <i>subelliptica</i> , n. s., M. & H., 1858	52-53
<i>Teredo globosa</i> , n. s., M. & H., 1858	53
<i>Pholas cuneata</i> , n. s., M. & H., 1858	53
<i>Acteon</i> (<i>Solidula</i>) <i>attenuata</i> , n. s., M. & H., 1858	54
<i>Helicoceras</i> ? <i>tortus</i> , n. s., M. & H., 1858	54-55
<i>Turritiles</i> (<i>Helicoceras</i>) <i>cochleatus</i> , n. s., M. & H., 1858	55-56
<i>Turritiles</i> ? <i>umbilicatus</i> , n. s., M. & H., 1858	56

	Page.
<i>Helicoceras tenuicostatus</i> , n. s., M. & H., 1858	56
<i>Ancyloceras (Hamites) unicus</i> , n. s., M. & H., 1858	56-57
<i>Ammonites cordiformis</i> , n. s., M. & H., 1858	57
<i>Ammonites henryi</i> , n. s., M. & H., 1858	57-58
<i>Scaphites larcaformis</i> , n. s., M. & H., 1858	58
<i>Belemnites densus</i> , n. s., M. & H., 1858	58-59

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.

	Page.
Description of new Carboniferous fossils	260
<i>Fusulina cylindrica</i> , Fischer	260-261
<i>F. cylindrica</i> var. <i>ventricosa</i> , M. & H., 1858	261
<i>Orthisina crassa</i> , n. s., M. & H., 1858	261
<i>Chonetes mucronata</i> , n. s., M. & H., 1858	262
<i>Azinus (Schizodus) ovatus</i> , n. s., M. & H., 1858	262
<i>Allorisma? altirostrata</i> , n. s., M. & H., 1858	263
<i>Allorisma subcuneata</i> , n. s., M. & H., 1858	263
<i>Allorisma? leavenworthensis</i> , n. s., M. & H., 1858	263-264
<i>Allorisma? cooperi</i> , M. & H., (1858)	264
<i>Pleurotomaria subturbinata</i> , n. s., M. & H., 1858	264
<i>Pleurotomaria humerosa</i> , n. s., M. & H., 1858	264

13

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.

DESCRIPTIONS OF FOSSILS.

	Page.
<i>Monotis hawni</i> , n. s., M. & H., 1858	76-77
<i>Myalina (Mytelus) perattenuata</i> , n. s., M. & H., 1858	77-78
<i>Bakevellia parva</i> , n. s., M. & H., 1858	78-79
<i>Leda (Nucula) subscitula</i> , n. s., M. & H., 1858	79
<i>Edmondia? calhouni</i> , n. s., M. & H., 1858	80
<i>Pleurophorus? occidentalis</i> , n. s., M. & H., 1858	80-81
<i>Pleurophorus? (Cardinea) subcuneata</i> , n. s., M. & H., 1858	81-82
<i>Lyonsia (Panopæa) concava</i> , n. s., M. & H., 1858	82-83
<i>Panopæa cooperi</i> , n. s., M. & H., 1858	83
<i>Nautilus eccentricus</i> , n. s., M. & H., 1858	83-84

14

MEEK, F. B., and HAYDEN, F. V. Geological explorations in Kansas Territory. <Proc. Acad. Nat. Sci. Phila., vol. xi, pp. 8-30. 1859. Philadelphia, 1860.

	Page.
General section of the rocks of Kansas valley from the Cretaceous down, so as to include portions of the upper Coal measures	16-18
List of the species mentioned in this paper, with some remarks on the synonymy, and references to the works in which they are described	24-30
<i>Foraminifera</i>	24
<i>Fusulina cylindrica</i> , Fischer	24
<i>Fusulina cylindrica</i> var. <i>ventricosa</i> , M. & H.	24
<i>Bryozoa</i>	24
<i>Synocladia biserialis</i> , Swallow	24
<i>Acanthocladia americana</i> , Swallow	24
<i>Echinodermata</i>	24
<i>Cyathocrinus</i> ———?	24
<i>Archæocidaris</i> ———?	25
<i>Archæocidaris</i> ———?	25

	Page.
<i>Brachiopoda</i>	25
<i>Discina tenuilineata</i> , n. s., M. & H., 1859	25
<i>D. manhattanensis</i> , n. s., M. & H., 1859	25
<i>Productus splendens</i> (?) Norwood & Pratten	25
<i>P. norwoodi</i> , Swallow	25
<i>P. rogersi</i> , Norwood & Pratten	26
<i>P. pustulosus</i> (?), Phillips	26
<i>P. prattenianus</i> , Norwood	26
<i>P. calhounianus</i> , Swallow	26
<i>Chonetes verueuliana</i> , Norwood & Pratten	26
<i>C. mucronata</i> , M. & H., 1858	26
<i>Orthisina crassa</i> , M. & H., 1858	26
<i>O. umbraculum</i> ?, Schlot sp.	26
<i>O. missouriensis</i> , Swallow	26
<i>O. shumardiana</i> , Swallow	26
<i>Terebratula millepunctata</i> , Hall	26-27
<i>Rhynchonella uta</i> , Marcou	27
<i>Retzia mormonii</i> , Marcou	27
<i>Spirifer kentuckensis</i> , Shumard	27
<i>S. cameratus</i> , Morton	27
<i>S. hemiplicata</i> , Hall	28
<i>S. lineatus</i> , Phillips	28
<i>Spirifer</i> , ———	28
<i>S. planoconvexa</i> , Shumard	28
<i>Spirigera subtilita</i> , Shumard	28
<i>Spirigera</i> ———?	28
<i>Lamellibranchiata</i>	28
<i>Monotis hawni</i> , M. & H., 1858	28
<i>Myalina (Mytilus) perattenuata</i> , M. & H., 1858	28-29
<i>Myalina squamosa</i> (J. de C.) Sowerby	29
<i>M. subquadrata</i> , Shumard	29
<i>Edmondia? calhouni</i> , M. & H., 1858	29
<i>Bakerellia parva</i> , M. & H., 1858	29
<i>Arca carbonaria</i> , Cox	29
<i>Leda subscitula</i> , M. & H., 1858	29
<i>Pleurophorus? subcuneata</i> , M. & H., 1858	29
<i>Azinus (Schizodus) ovatus</i> , M. & H., 1858	29
<i>Azinus rotundatus</i> , Brown	29
<i>Alorisma? leavenworthensis</i> , M. & H., 1858	29
<i>A. subcuneata</i> , M. & H., 1858	29
<i>A.? altirostrata</i> , M. & H., 1858	29
<i>A.? cooperi</i> , M. & H., 1858	29
<i>Leptodomus granosus</i> , Shumard	29
<i>Gasteropoda</i>	30
<i>Pleurotomaria humerosa</i> , M. & H., 1858	30
<i>P. subturbinata</i> , M. & H., 1858	30
<i>Bellerophon</i> ———?	30
<i>Euomphalus</i> ———?	30
<i>Cephalopoda</i>	30
<i>Nautilus eccentricus</i> , M. & H., 1858	30
<i>Fishes</i>	30
<i>Xystacanthus arcuatus</i> , Leidy	30
<i>Cladodus occidentalis</i> , Leidy	30
<i>Petalodus alleghaniensis</i> , Leidy	30

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.

	Page.
<i>Anisomyon patelliformis</i> , M. & H., pl. i, figs. 1-3	34-35

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

Page.

The authors refer the following Nebraska species to this genus:

<i>Anisomyon borealis</i> (= <i>Hipponyx borealis</i> , Morton, 1842, = <i>Helcium carinatum</i> , M. & H., 1856)	35
<i>Anisomyon sexsulcatus</i> (= <i>Helcium sexsulcatum</i> , M. & H.)	35
<i>Anisomyon alveolus</i> (= <i>Helcium alveolum</i> , M. & H.)	35
<i>Anisomyon patelliformis</i> (= <i>Helcium patelliforme</i> , M. & H.)	35
<i>Anisomyon subovatus</i> (= <i>Helcium subovatum</i> , M. & H.)	35

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.

TERTIARY SPECIES.

Page.

<i>Gasteropoda</i>	175
<i>Helix evansi</i> , n. s., [M.] & H., 1860	175
<i>Planorbis vetulus</i> , n. s., M. & H., 1860	175
<i>Planorbis leidyi</i> , n. s., M. & H., 1860	175
<i>Conchifera</i>	175
<i>Sphaerium planum</i> , n. s., M. & H., 1860	175-176
<i>Sphaerium recticardinale</i> , n. s., M. & H., 1860	176
<i>Cyrena</i> (<i>Corbicula</i> ?) <i>cytheriformis</i> , n. s., M. & H., 1860	176

CRETACEOUS SPECIES.

<i>Cephalopoda</i>	176
<i>Phylloteuthis</i> , n. g., M. & H., 1860	176
<i>Phylloteuthis subovatus</i> , n. s., M. & H., 1860	176
<i>Helicoceras angulatum</i> , n. s., M. & H., 1860	176
<i>Ammonites placenta</i> var. <i>intercalaris</i> , M. & H.	177
<i>Ammonites vermilionensis</i> , n. s., M. & H., 1860	177
<i>Scaphites nodosus</i> var. <i>plenus</i> , M. & H.	177-178
<i>Gasteropoda</i>	178
<i>Aporrhais parva</i> , n. s., M. & H., 1860	178
<i>Aporrhais sublevis</i> , n. s., M. & H., 1860	178
<i>Dentalium pauperculum</i> , n. s., M. & H., 1860	178
<i>Cylichna scitula</i> , n. s., M. & H., 1860	178
<i>Conchifera</i>	178
<i>Teredo selliformis</i> , n. s., M. & H., 1860	178-179
<i>Mactra siouxensis</i> , n. s., M. & H., 1860	179
<i>Mactra gracilis</i> , n. s., M. & H., 1860	179
<i>Tellina</i> ? <i>formosa</i> , n. s., M. & H., 1860	179
<i>Cyprina humilis</i> , n. s., M. & H., 1860	179-180
<i>Avicula subgibbosa</i> , n. s., M. & H., 1860	180
<i>Inoceramus cuneatus</i> , n. s., M. & H., 1860	180
<i>Inoceramus vanuxemi</i> , n. s., M. & H., 1860	180
<i>Inoceramus balchii</i> , n. s., M. & H., 1860	180-181
<i>Inoceramus subcompressus</i> , n. s., M. & H., 1860	181
<i>Inoceramus aviculoid</i> [e]s, n. s., M. & H., 1860	181
<i>Anomia obliqua</i> , n. s., M. & H., 1860	181
<i>Anomia subtrigonalis</i> , n. s., M. & H., 1860	181
<i>Ostrea inornata</i> , n. s., M. & H., 1860	181-182

JURASSIC SPECIES.

<i>Conchifera</i>	182
<i>Pholadomya humilis</i> , n. s., M. & H., 1860	182
<i>Myacites nebrascensis</i> , n. s., M. & H., 1860	182
<i>Thracia</i> ? <i>sublevis</i> , n. s., M. & H., 1860	182
<i>Thracia</i> ? <i>arcuata</i> , n. s., M. & H., 1860	182
<i>Cardium shunardi</i> , n. s., M. & H., 1860	182-183
<i>Tancredia</i> ? <i>equilateralis</i> , n. s., M. & H., 1860	183
<i>Tancredia warrenana</i> , n. s., M. & H., 1860	183

	Page.
<i>Astarte fragilis</i> , n. s., M. & H., 1860.....	183
<i>Astarte inornata</i> , n. s., M. & H., 1860.....	183
<i>Trigonia conradi</i> , n. s., M. & H., 1860.....	183-184
<i>Pecten extenuatus</i> , n. s., M. & H., 1860.....	184

17.

MEEK, F. B. Descriptions of new fossil remains collected in Nebraska and Utah by the exploring expeditions under the command of Capt. J. H. Simpson, of the U. S. topographical engineers (extracted from that officer's forthcoming report). <Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 308-315. 1860. Philadelphia, 1861.

Devonian, Carboniferous, Jurassic, Cretaceous, and Tertiary. Republished with illustrations in a quarto volume of Captain Simpson's Reports, in 1876.

DEVONIAN SPECIES.

	Page.
<i>Brachiopoda</i>	308
<i>Spirifera norwoodi</i> , n. s., Meek, 1860	308
<i>Spirifera engelmanni</i> , n. s., F. B. Meek, 1860.....	308-309
<i>Spirifera macra</i> , n. s., F. B. Meek, 1860.....	309

CARBONIFEROUS SPECIES.

<i>Brachiopoda</i>	309
<i>Productus semistriatus</i> , n. s., F. B. Meek, 1860.....	309
<i>Productus multistriatus</i> , n. s., F. B. Meek, 1860	309-310
<i>Spirifera scobina</i> , n. s., F. B. Meek, 1860.....	310
<i>Spirifera pulchra</i> , n. s., F. B. Meek, 1860	310
<i>Conchifera</i>	310
<i>Pecten utahensis</i> , n. s., F. B. Meek, 1860	310
<i>Cephalopoda</i>	
<i>Orthoceras baculum</i> , n. s., F. B. Meek, 1860	310-311

JURASSIC SPECIES.

<i>Conchifera</i>	311
<i>Ostrea engelmanni</i> , n. s., F. B. Meek, 1860	311
<i>Pecten bellistriata</i> , n. s., F. B. Meek, 1860	311
<i>Gasteropoda</i>	311
<i>Dentalium? subquadratum</i> , n. s., F. B. Meek, 1860.....	311

CRETACEOUS SPECIES.

<i>Conchifera</i>	311
<i>Anomia concentrica</i> , n. s., F. B. Meek, 1860.....	311-312
<i>Inoceramus simpsoni</i> , n. s., F. B. Meek, 1860	312

TERTIARY SPECIES.

<i>Conchifera</i>	312
<i>Unio vetusta</i> , n. s., Meek, 1860	312
<i>Unio haydeni</i> , n. s., Meek, 1860	312
<i>Corbula (Potamomya?) pyriformis</i> , n. s., Meek, 1860.....	312-313
<i>Corbula (Potamomya?) concentrica</i> , n. s., Meek, 1860	313
<i>Corbula (Potamomya?) engelmanni</i> , n. s., Meek, 1860.....	313
<i>Gasteropoda</i>	313
<i>Melania humerosa</i> , n. s., Meek, 1860.....	313
<i>Melania simpsoni</i> , n. s., Meek, 1860	313-314
<i>Melania arcta</i> , n. s., Meek, 1860.....	314
<i>Melania? nitidula</i> , n. s., Meek, 1860	314
<i>Planorbis spectabilis</i> , n. s., Meek, 1860.....	314
<i>Planorbis utahensis</i> , n. s., Meek, 1860	314
<i>Limnaea vetusta</i> , n. s., Meek, 1860.....	314
<i>Limnaea similis</i> , n. s., Meek, 1860	314
<i>Melampus priscus</i> , n. s., Meek, 1860.....	315

18.

MEEK, F. B., and HAYDEN, F. V. Systematic catalogue with synonymy, &c., of Jurassic, Cretaceous, and Tertiary fossils, collected in Nebraska by the exploring expeditions under the command of Lieut. G. K. Warren, of U. S. Topographical Engineers. <Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 417-432. 1860. Philadelphia, 1861.

Of the 276 species and varieties enumerated in the following catalogue, 25 are from Jurassic rocks, 194 from Cretaceous, and the remaining 57 from Tertiary strata.

	Page.
Jurassic species.....	417-419
Cretaceous species.....	419-430
Tertiary species.....	430-432

19.

MEEK, F. B., and WORTHEN, A. H. Descriptions of new species of Crinoidea and Echinoidea, from the Carboniferous rocks of Illinois and other western States. <Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 379-397. 1860. Philadelphia, 1861.

Afterward republished in the Illinois Geological Reports, vol. ii.

	Page.
<i>Platycrinus</i> , Miller.....	379
<i>P. prattenanus</i> , n. s., M. & W., 1860.....	379-380
<i>P. penicillus</i> , n. s., M. & W., 1860.....	380
<i>P. plenus</i> , n. s., M. & W., 1860.....	380-381
<i>Dichocrinus</i> , Munster.....	381
<i>D. constrictus</i> , n. s., M. & W., 1860.....	381
<i>D. conus</i> , n. s., M. & W., 1860.....	381-382
<i>D. (Pterotocrinus) crassus</i> , n. s., M. & W., 1860.....	382-383
<i>D. (Pterotocrinus) chesterensis</i> , n. s., M. & W., 1860.....	383
<i>Trematocrinus</i> , Hall, 1860.....	383
<i>T. fuscillus</i> , n. s., M. & W., 1860.....	383-384
<i>Actinocrinus</i> , Miller.....	384
<i>A. validus</i> , n. s., M. & W., 1860.....	384-385
<i>A. asteriscus</i> , n. s., M. & W., 1860.....	385-386
<i>A. speciosus</i> , n. s., M. & W., 1860.....	386
<i>A. scitulus</i> , n. s., M. & W., 1860.....	386-387
<i>A. araneolus</i> , n. s., M. & W., 1860.....	387-388
<i>A. (Amphoracrinus) subturbinatus</i> , n. s., M. & W., 1860.....	388-389
<i>Forbsiocrinus</i> , De Koninck & Le Hon.....	389
<i>F. ? norwoodi</i> , n. s., M. & W., 1860.....	389
<i>F. ? semiovatus</i> , n. s., M. & W., 1860.....	389-390
<i>Zeacrinus</i> , Troost.....	390
<i>Z. discus</i> , n. s., M. & W., 1860.....	390
<i>Z. troostanus</i> , n. s., M. & W., 1860.....	390-391
<i>Z. planobrachiatus</i> , n. s., M. & W., 1860.....	391
<i>Cyathocrinus</i> , Miller.....	391
<i>C. saffordi</i> , n. s., M. & W., 1860.....	391-392
<i>C. ? sangamonensis</i> , n. s., M. & W., 1860.....	392
<i>C. ? crassus</i> , n. s., M. & W., 1860.....	392-393
<i>C. scitulus</i> , n. s., M. & W., 1860.....	393
<i>C. angulatus</i> , n. s., M. & W., 1860.....	393-394
<i>Poteriocrinus</i> , Miller.....	394
<i>P. (Scaphiocrinus) decadactylus</i> , n. s., M. & W., 1860.....	394
<i>P. swallowi</i> , n. s., M. & W., 1860.....	394-395
<i>Echinoidea</i>	
<i>Archæocidaris</i> , McCoy.....	395
<i>A. mucronatus</i> , n. s., M. & W., 1860.....	395-396
<i>Paleechinus</i> , McCoy.....	396
<i>P. burlingtonensis</i> , n. s., M. & W., 1860.....	396
<i>Melonites</i> , Owen & Norwood.....	396-397
<i>M. danae</i> , n. s., M. & W., 1860.....	397

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Genera *Sphenopoterium*, *Soleniscus*. Afterward republished in the Illinois Geological Reports, vol. ii.

	Page.
<i>Zoophyta</i>	
<i>Sphenopoterium</i> ,* n. g., M. & W., 1860.....	447-448
<i>S. obtusum</i> , n. s., M. & W., 1860.....	448
<i>S. compressum</i> , n. s., M. & W., 1860.....	448
<i>S. enorme</i> , n. s., M. & W., 1860.....	448
<i>S. cuneatum</i> , n. s., M. & W., 1860.....	448
<i>Echinodermata</i>	449
<i>Asteridae</i>	449
<i>Palasterina</i> , McCoy.....	449
Subgenus <i>Schoenaster</i>	449
<i>Palasterina</i> (<i>Schoenaster</i>) <i>fimbriata</i> , n. s., M. & W., 1860.....	449
<i>Mollusca</i>	450
<i>Brachiopoda</i>	450
<i>Chonetes</i> , Fischer.....	450
<i>C. planumbona</i> , n. s., M. & W., 1860.....	450
<i>Productus</i> , Sowerby.....	450
<i>P. nanus</i> , n. s., M. & W., 1860.....	450
<i>P. parvus</i> , n. s., M. & W., 1860.....	450-451
<i>P. scitulus</i> , n. s., M. & W., 1860.....	451
<i>Rhynchonella</i> , Fischer.....	451
<i>R. subtrigona</i> , n. s., M. & W., 1860.....	451
<i>Athyris</i> , McCoy.....	451
<i>A. parvirostra</i> , n. s., M. & W., 1860.....	451-452
<i>Conchifera</i>	452
<i>Pecten</i> , Linnaeus.....	452
<i>P. tenuilineatus</i> , n. s., M. & W., 1860.....	452
<i>Aviculopecten</i> , McCoy.....	452
<i>A. oveni</i> , n. s., M. & W., 1860.....	452-453
<i>A. coxanus</i> , n. s., M. & W., 1860.....	453
<i>A. burlingtonensis</i> , n. s., M. & W., 1860.....	453
<i>A. koninckii</i> , n. s., M. & W., 1860.....	453-454
<i>A. interlineatus</i> , n. s., M. & W., 1860.....	454
<i>A. amplus</i> , n. s., M. & W., 1860.....	454-455
<i>A. pellucidus</i> , n. s., M. & W., 1860.....	455
<i>Avicula</i> , Klein.....	455
<i>A. oblonga</i> , n. s., M. & W., 1860.....	455
<i>Myalina</i> , Koninck.....	455
<i>M. angulata</i> , n. s., M. & W., 1860.....	455-456
<i>M. concentrica</i> , n. s., M. & W., 1860.....	456
<i>M. recurvirostra</i> , n. s., M. & W., 1860.....	456
<i>Solemya</i> , Lamarck.....	457
<i>S. radiata</i> , n. s., M. & W., 1860.....	457
<i>Leda</i> , Schumaker.....	457
<i>L. (Foldia?) levistriata</i> , n. s., M. & W., 1860.....	457
<i>Schizodus</i> , King.....	457
<i>S. chesterensis</i> , n. s., M. & W., 1860.....	457
<i>Cardiomorpha</i> , Koninck.....	458
<i>C. radiata</i> , n. s., M. & W., 1860.....	458
<i>Gasteropoda</i>	458
<i>Bellerophon</i> , Montfort.....	458
<i>B. crassus</i> , n. s., M. & W., 1860.....	458
<i>Pleurotomaria</i> , DeFrance.....	458
<i>P. subconstricta</i> , n. s., M. & W., 1860.....	458-459
<i>P. granulostriata</i> , n. s., M. & W., 1860.....	459
<i>P. tenuicincta</i> , n. s., M. & W., 1860.....	459

* Σφην, a wedge; ποτηριον, a cup.

	Page.
<i>P. pratteni</i> , n. s., M. & W., 1860.....	459-460
<i>P. subsinuata</i> , n. s., M. & W., 1860.....	460
<i>P. chesterensis</i> , n. s., M. & W., 1860.....	460
<i>P. subscalaris</i> , n. s., M. & W., 1860.....	460-461
<i>P. speciosa</i> , n. s., M. & W., 1860.....	461
<i>P. turbiniformis</i> , n. s., M. & W., 1860.....	461
<i>P. scitula</i> , n. s., M. & W., 1860.....	461-462
<i>P. shumardi</i> , n. s., M. & W., 1860.....	462
<i>Straparollus</i> , Montfort? = <i>Euomphalus</i> , Sowerby.....	462
<i>Euomphalus planodorsatus</i> , n. s., M. & W., 1860.....	462
<i>E. umbilicatus</i> , n. s., M. & W., 1860.....	462-463
<i>Naticopsis</i> , McCoy.....	463
<i>N. nodosus</i> , n. s., M. & W., 1860.....	463
<i>N. hollidayi</i> , n. s., M. & W., 1860.....	463
<i>Platyostoma</i> , Conrad.....	463
<i>P. nana</i> , n. s., M. & W., 1860.....	463
<i>P. ? tumida</i> , n. s., M. & W., 1860.....	463-464
<i>Eunema</i> , Salter.....	464
<i>E. ? salteri</i> , n. s., M. & W., 1860.....	464
<i>Loxonema</i> , Phillips.....	464
<i>L. scitula</i> , n. s., M. & W., 1860.....	464-465
<i>L. rugosa</i> , n. s., M. & W., 1860.....	465
<i>L. cerithiformis</i> , n. s., M. & W., 1860.....	465
<i>L. inornata</i> , n. s., M. & W., 1860.....	465
<i>L. nitidula</i> , n. s., M. & W., 1860.....	465-466
<i>Eulima</i> , Risso.....	466
<i>E. ? peracuta</i> , n. s., M. & W., 1860.....	466
<i>Macrocheilus</i> , Phillips.....	466
<i>M. medialis</i> , n. s., M. & W., 1860.....	466-467
<i>M. intercalaris</i> , n. s., M. & W., 1860.....	467
<i>M. pulchellus</i> , n. s., M. & W., 1860.....	467
<i>Soleniscus</i> , n. g., M. & W., 1860.....	467
<i>S. typicus</i> , n. s., M. & W., 1860.....	467-468
<i>Cephalopoda</i>	468
<i>Orthoceras</i> , Breynius.....	468
<i>O. expansum</i> , n. s., M. & W., 1860.....	468
<i>Cyrtoceras</i> , Goldfuss.....	468
<i>C. curtum</i> , n. s., M. & W., 1860.....	468
<i>C. ? dilatatum</i> , n. s., M. & W., 1860.....	468-469
<i>Nautilus</i> , Breynius.....	469
<i>N. subglobosus</i> , n. s., M. & W., 1860.....	469
<i>N. chesterensis</i> , n. s., M. & W., 1860.....	469
<i>N. spectabilis</i> , n. s., M. & W., 1860.....	469
<i>N. (Discus) planorbiformis</i> , n. s., M. & W., 1860.....	469-470
<i>N. (Discus) trisulcatus</i> , n. s., M. & W., 1860.....	470
<i>N. (Discus) digonus</i> , n. s., M. & W., 1860.....	470
<i>N. (Discus) sangamonensis</i> , n. s., M. & W., 1860.....	470-471
<i>Goniatites</i> , De Haan.....	471
<i>G. globulosus</i> , n. s., M. & W., 1860.....	471
<i>G. iowensis</i> , n. s., M. & W., 1860.....	471
<i>G. lyoni</i> , n. s., M. & W., 1860.....	471-472
Subgenus <i>Oligoporus</i> ,* n. s. g., M. & W., 1860.....	472

21.

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.

Genera Bursacrinus, Cardiopsis, Orthonema. Afterward republished in the Illinois Geological Reports, vol. ii.

	Page.
<i>Echinodermata:</i>	
<i>Crinoidea:</i>	
<i>Platycrinus</i> , Miller, 1821.	
<i>P. oweni</i> , n. s., M. & W., 1861	128-129
<i>P. scobina</i> , n. s., M. & W., 1861	129
<i>P. (Pleurocrinus) asper</i> , n. s., M. & W., 1861	129-130
<i>Forbesiocrinus</i> , Koninck & Le Hon	130
<i>F. monroensis</i> , n. s., M. & W., 1861	130-131
<i>F. agassizi</i> var. <i>giganteus</i> , n. s., M. & W., 1861	131
<i>Actinocrinus</i> , Miller, 1821	131
<i>A. dodecadactylus</i> , n. s., M. & W., 1861	131
<i>A. pyriformis</i> var. <i>rudis</i> , M. & W., 1861	131-132
<i>A. (Amphoracrinus ?) concavus</i> , n. s., M. & W., 1861	132-133
<i>A. (Pradocrinus ?) amplus</i> , n. s., M. & W., 1861	133-134
<i>A. sillimani</i> , n. s., M. & W., 1861	134-135
<i>Agariocrinus</i> , Troost	135
<i>A. gracilis</i> , n. s., M. & W., 1861	135
<i>Platycrinus multi-branchiatus</i> , n. s., M. & W., 1861	135-136
<i>Cyathocrinus</i> , Miller, 1821	136
<i>C. wachsmuthi</i> , n. s., M. & W., 1861	136
<i>Bursacrinus</i> , n. g., M. & W., 1861	136
<i>B. wachsmuthi</i> , n. s., M. & W., 1861	137
<i>Poteriocrinus</i> , Miller, 1821	137
<i>P. ? cnormis</i> , n. s., M. & W., 1861	137-138
<i>P. sub-impressus</i> , n. s., M. & W., 1861	138
<i>P. tenuibrachiatus</i> , n. s., M. & W., 1861	138-139
<i>P. carinatus</i> , n. s., M. & W., 1861	139-140
Subgenus <i>Scaphiocrinus</i> , Hall, 1858	140
<i>P. (Scaphiocrinus ?) carbonarius</i> , n. s., M. & W., 1861	140
<i>P. (Scaphiocrinus) solidus</i> , n. s., M. & W., 1861	140-141
<i>P. (Scaphiocrinus) wachsmuthi</i> , n. s., M. & W., 1861	141
<i>Blastoidea:</i>	
<i>Pentremites</i> , Say, 1820	141
<i>P. cornutus</i> , n. s., M. & W., 1861	141-142
<i>P. melo</i> var. <i>projectus</i> , n. s., M. & W., 1861	142
<i>Asteroidea:</i>	
<i>Petraster</i> , Billings, 1858	142
<i>P. wilberanus</i> , n. s., M. & W., 1861	142
<i>Mollusca:</i>	
<i>Brachiopoda:</i>	
<i>Productus</i> , Sowerby, 1812	142
<i>P. magnus</i> , n. s., M. & W., 1861	142-143
<i>Spirifera glabra</i> var. <i>contracta</i> , n. s., M. & W., 1861	143-144
<i>Lamellibranchiata:</i>	
* <i>Cardiopsis</i> , n. g., M. & W., 1861	144
<i>Leda</i> , Schumacher, 1817	144
<i>L. curta</i> , n. s., M. & W., 1861	144-145
<i>Gasteropoda:</i>	
<i>Dentalium</i> , Lin., 1740	145
<i>D. venustum</i> , n. s., M. & W., 1861	145
<i>Straparollus</i> , Montfort, 1810	145
<i>S. similis</i> , n. s., M. & W., 1861	145-146
<i>S. similis</i> var. <i>planus</i> , M. & W., 1861	146

* *Cardium* and *οφς*, from its resemblance to *Cardium*.

	Page.
† <i>Orthonema</i> , n. g., M. & W., 1861.....	146
<i>Loxonema</i> , Phillips, 1841.....	146
<i>L. multicostata</i> , n. s., M. & W., 1861.....	146-147
<i>Cephalopoda</i> :	
<i>Orthoceras</i> , Breynius, 1732.....	147
<i>O. annulocostatum</i> , n. s., M. & W., 1861.....	147
<i>Nautilus</i> , Breynius, 1732.....	147
† Subgenus <i>Trematodiscus</i> , n. s. g., M. & W., 1861.....	147

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

Cyathocrinus scitulus (September, 1860) should be *C. sculptilis*.
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 *Aploceras*.

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.

<i>Lamellibranchiata</i> :	Page.
<i>Inoceramus subundatus</i> , Meek, n. s., 1861.....	315
<i>Dosinia</i> ? <i>tenuis</i> , n. s., Meek, 1861.....	315
<i>Mastra gibbana</i> , n. s., Meek, 1861.....	315-316
<i>Cephalopoda</i> :	
<i>Baculites inornatus</i> , n. s., Meek, 1861.....	316
<i>Baculites occidentalis</i> , n. s., Meek, 1861.....	316-317
<i>Ammonites complexus</i> var. <i>suciaensis</i> , n. s., Meek, 1861.....	317
<i>Ammonites vancouverensis</i> , n. s., Meek, 1861.....	317-318
<i>Nautilus campbelli</i> , n. s., Meek, 1861.....	318

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.

	Page.
Lower Silurian (Primordial) rocks.....	415-416
Jurassic rocks.....	416-417
Cretaceous rocks.....	417-432
Lower series.....	417-424
General section of the Cretaceous rocks of Nebraska.....	419
Upper Cretaceous series of Nebraska.....	424-432
New Jersey section, compiled from the reports of that State.....	426
Fox Hill beds.....	427
Relations of the upper Cretaceous series of Nebraska to European divisions.....	428-432
Tertiary rocks.....	432-435
General section of the Tertiary rocks of Nebraska.....	433

SILURIAN (PRIMORDIAL) FOSSILS.

<i>Brachiopoda</i> :	
<i>Obolella</i> , Billings.....	435
<i>O. nana</i> , n. s., M. & H., 1861.....	435-436

† ὀρθος, straight; νῆμα, thread.

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

	Page.
<i>Pteropoda</i> ?	436
<i>Theca</i> , Morris	436
<i>Theca</i> (<i>Pugiunculus</i>) <i>gregarea</i> , n. s., M. & H., 1861	436
<i>Trilobites</i>	436
<i>Arionellus</i> , Barrande	436
<i>A. (Crepicephalus) owent</i> , n. s., M. & H., 1861	436-437

JURASSIC FOSSILS.

<i>Lamellibranchiata</i>	437
<i>Gryphaea</i> , Lamarck	437
<i>G. alceola</i> var. <i>nebrascensis</i> , M. & H., 1861	437-439
<i>Modiola</i> , Lamarck	439
<i>M. (Perna) formosa</i> , n. s., M. & H., 1861	439

CRETACEOUS FOSSILS.

<i>Lamellibranchiata</i>	440
<i>Ostrea</i> , Linnaeus	440
<i>O. gabbana</i> , n. s., M. & H., 1861	440
<i>Leda</i> , Schumacher	440
<i>L. bisulcata</i> , n. s., M. & H., 1861	440
<i>Gervillia</i> , DeFrance	441
<i>G. recta</i> , n. s., M. & H., 1861	441
<i>Crenella</i> , Brown	441
<i>C. elegantula</i> , n. s., M. & H., 1861	441-442
<i>Cardium</i> , Linnaeus	442
<i>C. (Hemicardium) ? curtum</i> , n. s., M. & H., 1861	442
<i>C. pertense</i> , n. s., M. & H., 1861	442
<i>Callista</i> , Poli	443
<i>O. deweyi</i> , M. & H., 1856	443
<i>Tellina</i> , Linnaeus	443
<i>T. nitidula</i> , n. s., M. & H., 1861	443
<i>Lingula</i> , Bruguiere	443
<i>L. nitida</i> , n. s., M. & H., 1861	443-444
<i>Gasteropoda</i>	444
<i>Neritella</i> , Humphrey	444
<i>N. nebrascensis</i> , n. s., M. & H., 1861	444
<i>Melania</i> , Lamarck	444
<i>M. (Potodoma) veterna</i> , n. s., M. & H., 1861	444-445
<i>Cephalopoda</i>	445
<i>Baculites</i> , Lamarck	445
<i>B. baculus</i> , n. s., M. & H., 1861	445

TERTIARY FOSSILS.

<i>Gasteropoda</i>	446
<i>Viripara</i> , Lamarck	446
<i>V. raynoldsana</i> , n. s., M. & H., 1861	446
<i>Helix</i> , Linnaeus	446
<i>H. spatiosa</i> , n. s., M. & H., 1861	446-447
<i>H. veterna</i> , n. s., M. & H., 1861	447
Correction, notes the omission of the name <i>Arcadæ</i> on p. 428 of the Proc. for 1860 ...	447

25.

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Cephalopoda:

	Page.
<i>Scaphites</i> , Parkinson	22
<i>S. ventricosus</i> , n. s., M. & H., 1862	22
<i>S. vermiformis</i> , n. s., M. & H., 1862	22-23
<i>Ammonites</i> , Bruguiere	23

	Page.
<i>A. mullanus</i> , n. s., M. & H., 1862.....	23-25
<i>Nautilus</i> , Breynius.....	25
<i>N. elegans</i> , Sowerby var. <i>nebrascensis</i> , M. & H., 1862.....	25
<i>Lamellibranchiata:</i>	
<i>Inoceramus</i> , Sowerby.....	26
<i>I. undabundus</i> , n. s., M. & H., 1862.....	26
<i>I. exogyroides</i> , n. s., M. & H., 1862.....	26-27
<i>I. tenuirostratus</i> , n. s., M. & H., 1862.....	27
<i>Venilia</i> , Morton.....	27
<i>V. mortoni</i> , n. s., M. & H., 1862.....	27-28
<i>Pholadomya</i> , Sowerby.....	28
<i>P. papyracea</i> , n. s., M. & H., 1862.....	28

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	Page.
<i>Actæoninæ:</i>	
<i>Actæonella</i> , d'Orbigny (as restricted).....	89
<i>Trochactæon</i> , Meek, 1863 (<i>Actæonella</i> (part) d'Orb.).....	89-90
Subgenus, <i>Spiractæon</i> Meek, 1863.....	90
<i>Cylindrites</i> (Auct.) Morris & Lycett (as restricted).....	90-91
Subgenus <i>Gonicylindrites</i>	91
<i>Actæonina</i> , d'Orbigny (as restricted).....	91
Subgenus, <i>Trochactæonina</i> Meek, 1863.....	91
<i>Euconactæon</i> , Meek, 1863 (<i>Actæonina</i> (part) d'Orb. & Alt.).....	91-92
Subgenus? <i>Conactæon</i> , Meek.....	92
<i>Ringiculinæ:</i>	
<i>Cinulia</i> , Gray.....	92
Subgenus <i>Avellana</i> , d'Orbigny.....	92
Subgenus <i>Euptycha</i> , Meek, 1863.....	93
<i>Aptycha</i> , Meek, 1863.....	93-94

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	Page.
<i>Pteriidæ</i> (or <i>Aviculidæ</i>).....	214-215
<i>Pteriniinæ</i> (or <i>Pterinia</i> group).....	215
<i>Pteriinæ</i> (or <i>Aviculinæ</i>).....	215
<i>Melininæ</i> (<i>Perna</i> or <i>Isognomen</i> group).....	215
<i>Gryphorhynchus</i> , n. g., Meek, 1864.....	217-218
<i>Eumicrotis</i> , n. g., Meek, 1864.....	218-220

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DESCRIPTION OF CARBONIFEROUS FOSSILS.

	Page.
<i>Foraminifera:</i>	
<i>Fusulina</i> , Fischer.....	3
<i>F. robusta</i> , n. s., Meek, 1864, pl. ii, figs. 3 and 3 a-c.....	3-4
<i>F. gracilis</i> , n. s., Meek, 1864, pl. ii, fig. 1 and 1 a-c.....	4
<i>F. cythindrica</i> , Fischer ?, 1837, pl. ii, figs. 2 and 2 a.....	4

	Page.
<i>Zoophyta.</i>	
<i>Lithostrotion</i> , Fleming	
<i>L. mamillare</i> (?), Castlenau (sp.), 1843, pl. i, figs. 4 and 4 <i>a</i> , <i>b</i>	5-6
<i>L. ? californiense</i> , n. s., Meek, 1864, pl. i, figs. 2 and 2 <i>a-c</i>	6-7
<i>Lithostrotion</i> ———, Meek, 1864, pl. i, figs. 3 and 3 <i>a</i>	7
<i>Clisiophyllum</i> , Dana	8
<i>C. gabbi</i> , n. s., Meek, 1864, pl. i, fig. 1 and 1 <i>a</i> , <i>b</i>	8-9
<i>Mollusca.</i>	
<i>Brachiopoda</i>	10
<i>Orthis</i> , Dalman	10
<i>Orthis</i> , sp. undt., 1864, pl. ii, figs. 5 and 5 <i>a-c</i>	10-11
<i>Productus</i> , Sowerby	11
<i>P. semireticulatus</i> , Martin (sp.), 1809, pl. ii, figs. 4 and 4 <i>a</i>	11
<i>Rhynchonella</i> , Fischer	12
<i>Rhynchonella</i> , sp. undt., 1864	12
<i>Spirifer</i> , Sowerby	13
Subgenus <i>Martinia</i> , McCoy	13
<i>S. (Martinia) lineatus</i> , Martin ? (sp.), 1809, pl. ii, figs. 6 and 6 <i>a-d</i>	13
<i>Spiriferina</i> , Davidson	14
<i>Spiriferina</i> , sp. undt., 1864	14
<i>Retzia</i> , King	14
<i>R. compressa</i> , n. s., Meek, 1864, pl. ii, figs. 7 and 7 <i>a-c</i>	14
<i>Gasteropoda</i>	15
<i>Euomphalus</i> , Sowerby = <i>Straparollus</i> , Montfort ?	15
Subgenus <i>Omphalotrochus</i> , Meek	15
<i>E. (Omphalotrochus) whitneyi</i> , n. s., Meek, 1864, pl. ii, figs. 8 and 8 <i>a</i>	15-16
DESCRIPTION OF THE JURASSIC FOSSILS.	
<i>Brachiopoda</i>	39
<i>Rhynchonellidæ</i>	39
<i>Rhynchonella</i> , Fischer, 1809	39
<i>R. gnathophora</i> , n. s., Meek, 1864, pl. viii, fig. 1 and 1 <i>a-f</i>	39-40
<i>Terebratulidæ</i>	41
<i>Terebratula</i> , Müller, 1776	41
<i>Terebratula</i> ———, 1864, pl. viii, figs. 2 and 2 <i>a</i> , <i>b</i>	41
<i>Lamellibranchiata</i>	42
<i>Ostreidæ</i>	42
<i>Gryphæa</i> , Lamareck, 1801	42
<i>Gryphæa</i> ———, 1864, pl. viii, figs. 4 and 4 <i>a</i>	42
<i>Limidæ</i>	43
<i>Lima</i> , Brugnière, 1792	43
<i>L. ? sinuata</i> , n. s., Meek, 1864, pl. vii, figs. 4 and 4 <i>a</i>	43
<i>L. recticostata</i> , n. s., Meek, 1864, pl. vii, fig. 5	44
<i>L. ? cuneata</i> , n. s., Meek, 1864, pl. vii, figs. 6 and 6 <i>a</i>	44-45
<i>Pectenidæ</i>	46
<i>Pecten</i> , Müller, 1776	46
<i>P. acutiplicatus</i> , n. s., Meek, 1864, pl. viii, fig. 3	46
<i>Pteriidæ</i>	47
<i>Inoceramus</i> , Sowerby, 1814	47
<i>I. ? obliquus</i> , n. s., Meek, 1864, pl. vii, figs. 2 and 2 <i>a</i>	47
<i>I. ? rectangulus</i> , n. s., Meek, 1864, pl. vii, figs. 1 and 1 <i>a</i>	47-48
<i>Trigoniidæ</i>	48
<i>Trigonia</i> , Bruguière, 1789	48
<i>T. pandicosta</i> , n. s., Meek, 1864, pl. viii, fig. 7	48-49
<i>Mytilidæ</i>	49
<i>Mytilus</i> , Linnaeus, 1758	49
<i>M. multistriatus</i> , n. s., Meek, 1864, pl. vii, figs. 7 and 7 <i>a</i>	49
<i>Crassatellidæ</i>	50
<i>Astarte</i> , Sowerby, 1816	50
<i>A. ventricosa</i> , n. s., Meek, 1864, pl. viii, figs. 5 and 5 <i>a</i>	50
<i>Lucinidæ</i>	50
<i>Unicardium</i> , d'Orbigny, 1852	50
<i>U. ? gibbosum</i> , n. s., Meek, 1864, pl. viii, figs. 8 and 8 <i>a</i>	50-51
<i>Anatinidæ</i>	51

	Page.
<i>Myacites</i> (Schlot.), Munster, 1840	51
<i>M. depressus</i> , n. s., Meek, 1864, pl. viii, figs. 6 and 6 a.....	51-52
<i>Cephalopoda</i>	53
<i>Belemnitidæ</i>	53
<i>Belemnites</i> , Auct.....	53
<i>Belemnites</i> , —, 1864, pl. viii, figs. 9 and 9 a.....	53

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	Page.
Introduction	VII-IX

SILURIAN AGE. (POTSDAM OR PRIMORDIAL PERIOD.)

Mollusca.

Brachiopoda.

<i>Lingulidæ</i>	1
<i>Lingulepis</i> , Hall, 1863.....	1-2
<i>L. pinniformis</i> , Owen, 1852, pl. i, figs. 1 a, b.....	2-3
<i>L. prima</i> (Conrad), Hall, 1847, pl. i, figs. 2 a, b.....	3
<i>Obolella</i> , Billings, 1861.....	3-4
<i>O. nana</i> , M. & H., 1861, pl. i, figs. 3 a-d.....	4

Gasteropoda.

Pteropoda.

Thecosomata

<i>Cavolinidæ</i>	4-5
<i>Theca</i> , Sowerby, 1845.....	5
<i>T. gregaria</i> , M. & H., 1861, figs. a-d, p. 5.....	5-6

Articulata.

Crustacea.

Trilobita.

<i>Paradoxidæ</i>	7
<i>Agraulos</i> , Corda, 1847.....	7-9
<i>A. oweni</i> , M. & H., 1861, figs. a-c, p. 9.....	9-10
<i>Agraulos</i> — ? pl. i, fig. 4.....	10

CARBONIFEROUS AGE. (CARBONIFEROUS PERIOD.)

Protozoa.

Rhizopoda.

Foraminifera.

<i>Camerinidæ</i>	11-13
<i>Fusulina</i> , Fischer, 1837.....	13-14
<i>F. cylindrica</i> , Fischer, 1837, pl. i, figs. 6 a-i.....	14-15

Mollusca.

Brachiopoda.

Spiriferidæ.....
 16 |

<i>Spirifer</i> , Sowerby, 1815.....	17-20
<i>Trigonotreta</i> , Koenig, = <i>Spirifer</i> of most authors.....	19
<i>Martinia</i> , McCoy, = <i>Ambocelia</i> , Hall.....	19
<i>S. (Martinia) plano-convexus</i> Shumard, 1855, figs. a-e, p. 21.....	20-21
<i>Productidæ</i>	21-22
<i>Chonetes</i> , Fischer, 1837.....	22
<i>C. mucronata</i> , M. & H., 1858, pl. i, fig. 5, a-e.....	22-23
<i>Strophomenidæ</i>	23
<i>Hemipronites</i> , Pander, 1830.....	24-26
<i>H. crassus</i> , M. & H., 1858, pl. i, fig. 7 a-d.....	26-27

	Page.
<i>Lamellibranchiata.</i>	
<i>Pteriidae</i> (= <i>Aviculidae</i>)	27-30
<i>Pteriniinae</i> (or <i>Pterinia</i> group)	28
<i>Pterinae</i> (or <i>Aviculinae</i>)	28
<i>Melininae</i> (<i>Perna</i> or <i>Isognomon</i> group)	28
<i>Pteriniinae</i>	30
<i>Myalina</i> , Koninek, 1842	30-32
Shell structure of <i>Myalina angulata</i> , fig. —	31
<i>M. perattenuata</i> , M. & H., 1858, pl. i, figs. 12 a, b	32
<i>M. subquadrata</i> , Shumard, figs. a, b, p. 33	32-33
<i>Orassatellidae</i>	34
<i>Pleurophorus</i> , King, 1844	34-35
Subgenus <i>Oleidophorus</i> , Hall, 1847	35
<i>P. occidentalis</i> , M. & H., pl. i, figs. 11 a, b	35
<i>Anatinidae</i>	36
<i>Allorisma</i> , King, 1844	36-37
<i>A. subcuneata</i> , M. & H., 1858, pl. i, figs. 10 a, b	37-38
<i>Sedgwickia</i> , McCoy, 1844	38-40
<i>S. topekaensis</i> ?, Shumard, 1858, figs. a, b, p. 40	40-41
<i>S.?</i> <i>concava</i> , M. & H., 1858, pl. i, figs. 8 a, b	41
<i>S.?</i> <i>altirostrata</i> , M. & H., 1858, pl. i, fig. 9	41-42
* <i>Chænomya</i> , n. g., Meek, 1865	42-43
<i>C. leavenworthensis</i> , M. & H., 1858, pl. ii, figs. 1 a-c	43-44
<i>C. cooperi</i> , M. & H., 1858, pl. ii, figs. 2 a, b	44
<i>Gasteropoda.</i>	
<i>Prosobranchiata.</i>	
<i>Rhipidoglossata.</i>	
<i>Podophthalma.</i>	
<i>Pleurotomariidae</i>	44-45
<i>Pleurotomaria</i> , DeFrance, 1826	45-46
<i>P. humerosa</i> , M. & H., 1858, pl. i, figs. 14 a, b	46-47
<i>P. subturbinata</i> , M. & H., 1858, pl. i, fig. 13	47
CARBONIFEROUS AGE. (PERMIAN PERIOD.)	
<i>Mollusca.</i>	
<i>Lamellibranchiata.</i>	
<i>Pectinidae</i>	48
<i>Pectininae</i>	48
<i>Aviculo-pectininae</i>	49
<i>Aviculopectininae</i>	49
<i>Aviculopecten</i> , McCoy, 1851	49
<i>A. amplus</i> , M. & W., fig. —, p. 50	50
<i>Aviculopecten</i> , —, pl. ii, fig. 10	50
<i>A. macoyi</i> , pl. ii, fig. 9	50-51
<i>Pteriidae.</i>	
<i>Pteriniinae</i>	51
<i>Myalina</i> , Koninek, 1842	51
<i>M. aviculoides</i> , M. & H., 1860, pl. ii, figs. 8 a-d	51-52
<i>M. permiana</i> , Swallow, 1858, pl. ii, figs. 7 a-c	52
<i>Pterinae.</i>	
<i>Eumicrotis</i> , Meek, 1864	53-54
<i>E. havani</i> , M. & H., pl. ii, figs. 5 a-c, and fig. 1, p. 54	54-55
Shell structure of <i>E. curta</i> , No. 2, p. —	54
<i>E. havani</i> var. <i>ovata</i> , pl. ii, figs. 5 a, b	55
<i>Melininae.</i>	
<i>Bakevellia</i> , King, 1848	57
<i>B. parva</i> , M. & H., 1858, pl. ii, figs. 12 a, b	57
<i>Trigoniidae</i>	57-58
<i>Schizodus</i> , King, 1846	58-59
<i>S. ovatus</i> , M. & H., 1858, pl. ii, figs. 11 a, b	59
<i>Nuculanidae</i>	59-60
<i>Nuculaninae</i>	60
<i>Malletinae</i>	60

* *Xaiw*, to open or gape; and *mya*.

	Page.
<i>Nuculaninæ</i>	60
<i>Foldia</i> , Möller, 1842	60
<i>F. ? subscitula</i> , M. & H., 1858, pl. ii, figs. 4 <i>a</i> , <i>b</i>	60-61
<i>Crassatellidæ</i>	61
<i>Pleurophorus</i> , King, 1844	61
<i>P. ? subcuneatus</i> , M. & H., 1858, pl. ii, fig. 3	61
<i>P. ? calhouni</i> , M. & H., 1858, pl. ii, figs. 13 <i>a</i> , <i>b</i>	62
<i>Cephalopoda</i> .	
<i>Tetrabanchiata</i> .	
<i>Nautilidæ</i>	63-64
<i>Nautilus</i> , Linnæus, 1758	64-65
<i>N. eccentricus</i> , M. & H., pl. ii, figs. 14 <i>a</i> , <i>b</i>	65
REPTILIAN AGE. (JURASSIC PERIOD.)	
<i>Radiata</i> .	
<i>Echinodermata</i> .	
<i>Crinoidea</i> .	
<i>Pentacrinidæ</i> .	
<i>Pentacrinites</i> , Miller, 1821	66
<i>Chladocrinus</i> or <i>Cladocrinus</i> [Agassiz]	66
<i>Pentacrinus asteriscus</i> , M. & H., 1858, pl. iii, figs. 2 <i>a</i> , <i>b</i> and fig. —. p. 67	67
<i>Mollusca</i> .	
<i>Brachiopoda</i> .	
<i>Lingulidæ</i>	68
<i>Lingula</i> , Bruguière, 1792	68-69
<i>L. brevirostris</i> , M. & H., 1858, pl. iii, figs. 3 <i>a</i> , <i>b</i>	69
<i>Rhynchonellidæ</i>	70
<i>Rhynchonella</i> , Fischer, 1809	70-71
<i>Rhynchonella</i> , ———, pl. iii, fig. 4	71-72
<i>Lamellibranchiata</i> .	
<i>Ostreidæ</i>	72
<i>Ostrea</i> , Linnæus, 1758	72-73
<i>O. engelmanni</i> , Meek, 1860, figs. A, B, p. 73	73-74
<i>Gryphæa</i> , Lamarck, 1801	74
<i>G. calceola</i> var. <i>nebrascensis</i> , M. & H., 1861, pl. iii, figs. 1 <i>a-e</i> and figs. A-E, p. 75.....	74-76
<i>Pectinidæ</i>	76
<i>Pectinivæ</i>	76
<i>Camptonectes</i> , Agassiz, 1865	76-77
<i>C. bellistriatus</i> , Meek, 1860, figs. A-D, p. 77	77-78
<i>C. ? extenuatus</i> , M. & H., 1860, pl. iii, fig. 6	78
<i>Pteriidæ</i>	79
<i>Pterinæ</i>	79
<i>Pteria</i> , Scopoli, 1777	79
Subgenus <i>Oxytoma</i> , n. s. g., Meek, 1865	79-80
<i>Pteria (Oxytoma) munsteri</i> , Bronn, 1829, figs. A, B, p. 80.....	80-81
<i>Eumicrotis</i> , Meek, 1864	81
<i>E. curta</i> , Hall, 1852, pl. iii, figs. 10 <i>a-d</i>	81
<i>Trigoniidæ</i>	82
<i>Trigonia</i> , Bruguière, 1789	82-83
Subdivisions:	
<i>Les Scaphoides</i> , Agassiz. (Jurassic and Cretaceous.)	
<i>Les Clavelles</i> , Agassiz. (Mainly Jurassic.)	
<i>Les Carrees</i> , Agassiz. (Upper Jurassic and Cretaceous.)	
<i>Les Scabres</i> , Agassiz. (Mainly Cretaceous.)	
<i>Les Ondules</i> , Agassiz. (Jurassic and Cretaceous.)	
<i>Les Costees</i> , Agassiz. (Jurassic and Cretaceous.)	
<i>Les Lissees</i> , Agassiz. (Jurassic and Cretaceous.)	
<i>Les Pectinacees</i> , Agassiz. (Existing seas.)	
<i>Trigonia conradi</i> , M. & H., 1860, pl. iii, fig. 11	83-84
<i>Mytilidæ</i>	84
<i>Folsella</i> , Scopoli, 1777	85-86
<i>V. pertenuis</i> , M. & H., 1858, pl. iii, figs. 5, 5 <i>a</i>	86
<i>V. formosa</i> , M. & H., 1861, figs. A, B, p. 87	86-87
<i>Arclidæ</i>	87-89
<i>Arcinæ</i>	88

	Page.
<i>Macrodontinae</i>	88
<i>Axinina</i>	88
<i>Macrodontinae</i>	89
<i>Grammatodon</i> , M. & H., 1858.....	89
<i>G. inornatus</i> , M. & H., 1858, pl. iii, figs. 9, 9 a, 9 b.....	90
<i>Unionidae</i>	90-91
<i>Unio</i> , Retzius, 1788.....	92
<i>U. nucalis</i> , M. & H., 1858, pl. iii, figs. 13 a-c.....	92-93
<i>Crassatellidae</i>	93
<i>Astarte</i> , Sowerby, 1816.....	93-94
<i>A. fragilis</i> , M. & H., 1860, pl. iv, fig. 7.....	94
<i>A. inornata</i> , M. & H., 1860, pl. iii, figs. 12 a, b.....	94
<i>Tancrediidae</i>	95
<i>Tancredia</i> , Lycett, 1850.....	95-96
<i>T. warrenana</i> , M. & H., 1860, pl. iii, fig. 7.....	96
<i>T. ? equilateralis</i> , M. & H., 1860, pl. iii, fig. 8.....	96-97
<i>Cardiidae</i>	97
<i>Protocardia</i> , Beyrich, 1845.....	97-98
<i>P. shumardi</i> , M. & H., 1860, figs. A, B on p. 98.....	98-99
<i>Anatinidae</i>	99
<i>Myacites</i> (Schlot.), Munster, 1840.....	99-100
<i>M. nebrascensis</i> , M. & H., 1860, pl. iv, fig. 5.....	100-101
<i>M. subellipticus</i> , M. & H., 1858, pl. iv, figs. 6 a-c.....	101
<i>Thracia</i> , Leach, 1819.....	101-102
<i>T. ? sublaevis</i> , M. & H., 1860, pl. iv, figs. 4, 4 a.....	102
<i>T. ? arcuata</i> , M. & H., 1860, pl. iv, fig. 8.....	102
<i>Pholadomya</i> , Sowerby, 1823.....	102-103

* Section I.—Species without a circumscribed cardinal area.

- Multicostata*, Agassiz. (Jurassic and Cretaceous.)
Trigonata, Agassiz. (Cretaceous, Tertiary, and Recent.)
Bucardinae, Agassiz. (Lias to Tertiary.)

Section II.—Species with a circumscribed cardinal area.

<i>Flabellatae</i> , Agassiz. (Jurassic.)	
<i>Ovales</i> , Agassiz. (Jurassic.)	
<i>Cardissoides</i> , Agassiz. (Jurassic.)	
<i>Pholadomya humilis</i> , M. & H., 1860, pl. iv, figs. 3, a, b.....	104
<i>Gasteropoda</i> .	
<i>Pulmonifera</i> .	
<i>Inoperculata</i> .	
<i>Limnophila</i> .	
<i>Limnæidae</i>	105-106
<i>Limnæinae</i>	105
<i>Physinae</i>	105
<i>Planorbinae</i>	105
<i>Planorbis</i> , Müller, 1774.....	106
<i>Planorbella</i> , Haldeman.....	106
<i>Helisoma</i> , Swainson.....	107
<i>Taphius</i> , H. & A. Adams.....	107
<i>Menetus</i> , H. & A. Adams.....	107
<i>Anisus</i> , Fitzinger.....	107
<i>Bathynophalus</i> , Agassiz (= <i>Spirorbis</i> , Swainson, not Lamk.).....	107
<i>Gyraulus</i> , Agassiz (= <i>Nautilina</i> , Stein).....	107
<i>Planorbis veteris</i> , M. & H., 1860, pl. iv, figs. 1 & 1 a, b.....	107
<i>Prosobranchiata</i> .	
<i>Rhipidoglossata</i> .	
<i>Podopthalma</i> .	
<i>Neritidae</i>	108
<i>Neritella</i> , Humphrey, 1797.....	108-109
<i>N. nebrascensis</i> , M. & H., 1861, figs. —, on p. 109.....	109-110
<i>Cyclobranchiata</i> .	
<i>Dentaliidae</i>	110
<i>Dentalium</i> , Lin., 1740.....	111
<i>D. subquadratum</i> , Meek, 1860, fig. —, p. 111.....	111
<i>Ctenobranchiata</i> (= <i>Pectinibranchiata</i>).	

Rostrifera.

Valvatidæ.

<i>Valvata</i> , Müller, 1774	112
<i>Valvata</i> (proper) = <i>Gyrorbis</i> , Fitzinger, = <i>Planella</i> , Schlut.	112
<i>Tropidina</i> , H. & A. Adams	112-113
Subgenus <i>Tropidina</i> , H. & A. Adams	113
<i>Valvata</i> ? (<i>Tropidina</i>) <i>scabrida</i> , M. & H., 1860, pl. iv, figs. 2 a, b	113
<i>Viviparidæ</i>	113-114
<i>Viviparus</i> , Montfort, 1810	114-115
<i>V. gilli</i> , pl. v, figs. 3 a, b	115
<i>Lioplacodes</i> , Meek, 1864	115-116
<i>L. veternus</i> , M. & H., 1861, figs. —, p. 116.	116

Cephalopoda.

Tetrabranchiata.

<i>Ammonitidæ</i>	116-118
<i>Trigonellites</i> , Parkinson, 1811, fig. 1, p. 119, figs. 2-4, p. 120	118-120
<i>Ammonites</i> , Bruguière, 1789	121-122
<i>A. cordiformis</i> , M. & H., 1858, pl. v, figs. 2 a-e	122-123
<i>A. henryi</i> , M. & H., 1858, pl. iv, figs. 9 a-c	123-124

Dibranchiata.

Decapoda.

<i>Belemnitidæ</i>	124
<i>Belemnites</i> , Auct.	124-125
<i>Acoeli</i> , Bronn	125
<i>Gastrocoeli</i> , D'Orbigny = <i>Notosiphites</i> , Duval	125
<i>Notocoeli</i> , D'Orbigny = <i>Gastrosiphites</i> , Duval	125
<i>Belemnites densus</i> , M. & H., 1858, pl. iv, figs. 10 a-c, and pl. v, figs. 1, 1 a-h	126-127

Articulata.

Annulata.

Tubicola.

<i>Serpulidæ</i>	137
<i>Serpula</i> , Linnæus, 1758	127-128
<i>Serpula</i> , undt. pl. v, fig. 4	128

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	Page.
<i>Amussium</i> (Klein), Bolton, 1798	478
Subgenus <i>Entolium</i> , Meek	478
<i>A. aurarium</i> , n. s., Meek, 1865, pl. i, figs. 6 and 6 a	478-479
<i>Aucella</i> , Keyserling, 1843	479
<i>A. erringtoni</i> , Gabb, sp., 1864, pl. i, figs. 2, 3, 7, 5, a-d	479-480
<i>A. erringtoni</i> , var. <i>linguiformis</i> , Meek, 1865, pl. i, figs. 1 and 1 a	481
<i>Pholadomya</i> , Sowerby, 1823	481
<i>Pholadomya</i> (?) <i>orbiculata</i> , Gabb, pl. i, fig. 4	481
<i>Belemnites</i> , Auct.	482
<i>Belemnites pacificus</i> , Gabb	482

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MEEK, F. B. Remarks on the Carboniferous and Cretaceous Rocks of Eastern Kansas and Nebraska, and their relations to those of the adjacent States, and other localities farther eastward, in connection with a review of a paper recently published on this subject by M. Jules Marcon, in the Bulletin of the Geological Society of France. <Am. Journ. Sci., vol. xxxix, 2d ser., pp. 157-174. 1865. New Haven, 1865.

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	Page.
<i>Erisocrinus</i> , n. g., M. & W., 1865	174
<i>Erisocrinus typus</i> , n. s., M. & W., 1865	174
<i>Erisocrinus nebrascensis</i> , n. s., M. & W., 1865	174

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Upper Silurian.

	Page.
<i>Zaphrentis haysii</i> , n. s., Meek, 1865.....	32
<i>Syringopora</i> , sp. undt.....	32
<i>Favosites</i> , sp. undt.....	32
<i>Strophomena rhomboidalis</i> , Wahlb.....	33
<i>Strophodonta headleyana</i> , Hall?.....	33
<i>Strophodonta beckii</i> , Hall?.....	33
<i>Rhynchonella</i> , sp. undt.....	33
<i>Coelospira concava</i> , Hall.....	33
<i>Spirifer</i> , sp. undt.....	33
<i>Loxonema? kanei</i> , n. s., 1865, Meek.....	33
<i>Orthoceras</i> , sp. undt.....	33
<i>Illeenus</i> , sp. undt.....	33

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CRUSTACEA.

Entomostraca.

Xyphosura.

	Page.
<i>Bellinurus</i> , Koenig.....	43
<i>B. danø</i> , M. & W., n. s., 1865.....	44-45

Tetradecapoda.

Isopoda.

(*Anisopoda*.)

Acanthotelsonidae.

<i>Acanthotelson</i> , n. g., M. & W., 1865.....	46-47
<i>A. stimpsonii</i> , n. s., M. & W., 1865.....	47-48
<i>A. inæqualis</i> , n. s., M. & W., 1865.....	48

	Page.
<i>Palæocaridae.</i>	
<i>Palæocaris</i> n. g., M. & W., 1865	48-49
<i>P. typus</i> , n. s., M. & W., 1865	49-50
<i>Decapoda,</i>	
<i>Macrura.</i>	
? <i>Anthrapalemon</i> , Salter, 1861	50
<i>A. gracilis</i> , n. s., M. & W., 1865	50-51
<i>Myriapoda.</i>	
? <i>Anthracerpes</i> , n. g., M. & W., 1865	51
<i>A. typus</i> , n. s., M. & W., 1865	51-52
<i>Insecta.</i>	
<i>Lepidoptera.</i>	
<i>Palæocampa</i> , n. g., M. & W., 1865	52
<i>P. anthrax</i> , n. s., M. & W., 1865	52-53

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Republished in vol. II of the Illinois Geological Reports.	Page.
<i>Taxocrinus</i> (Phillips) McCoy, 1844	138-142
Table showing the gradations of structure from <i>Taxocrinus</i> to <i>Forbesiocrinus</i>	140
<i>T. gracilis</i> , n. s., M. & W., 1865	142-143

38.

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Radiata.

Echinodermata.

Cystidea.

	Page.
<i>Comarocystites</i> , Billings, 1854	143
<i>C. shumardi</i> , n. s., M. & W., 1865	143-144
<i>C. shumardi</i> var. <i>obconicus</i> , n. s., M. & W., 1865	144-145

Crinoidea.

<i>Porocrinus</i> , Billings, 1856.	145
<i>P. crassus</i> , n. s., M. & W., 1865	145-146
<i>P. pentagonius</i> , n. s., M. & W., 1865	146-147
<i>Heterocrinus</i> , Hall, 1847	147
<i>H. crassus</i> , n. s., M. & W., 1865	147-148
<i>H. subcrassus</i> , n. s., M. & W., 1865	148, 149
Subgenus <i>Anomalocrinus</i> , M. & W.	148-149
<i>H. ? (Anomalocrinus) incurvus</i> , n. s., M. & W., 1865	148-149
<i>Erisocrinus</i> , n. g., M. & W., 1865	149
<i>E. conoideus</i> , n. s., M. & W., 1865	150
<i>E. tuberculatus</i> , n. s., M. & W., 1865	150
<i>Cyathocrinus</i> , Miller, 1821	150
<i>C. quinquelobus</i> , n. s., M. & W., 1865	150-151
<i>C. subtumidus</i> , n. s., M. & W., 1865	151-152
<i>C. enormis</i> , M. & W., 1861	152
<i>Potriocrinus</i> , Miller, 1821	152
<i>P. (Zeocrinus) carbonarius</i> , M. & W., 1861	152
<i>Actinocrinus</i> , Miller, 1821	152
<i>A. pistillus</i> , M. & W., n. s., 1865	152-154
Subgenus <i>Sphaerocrinus</i> , M. & W., 1865	154
<i>A. (Sphaerocrinus) concavus</i> , M. & W., 1861	154

Mollusca.

Cephalopoda.

<i>Goniatites compactus</i> , n. s., M. & W., 1865.....	154-155
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39.

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	Page.
<i>Poteriocrinus</i> , Miller, 1821	155
<i>P. indianensis</i> , n. s., M. & W., 1865	155-156
<i>P. (Scaphiocrinus) tenuidactylus</i> , n. s., M. & W., 1865	156-157
<i>P. (Scaphiocrinus) bayensis</i> , n. s., M. & W., 1865	157-158
<i>P. (Scaphiocrinus) ? norwoodi</i> , n. s., M. & W., 1865	158-159
<i>P. (Scaphiocrinus) subtumidus</i> , n. s., M. & W., 1865	159
<i>Cyathocrinus</i> , Miller, 1821	160
<i>C. arboreus</i> , n. s., M. & W., 1865	160
<i>Platycrinus</i> , Miller, 1821	160-162
<i>Centrocrinus</i> , Austin	161
<i>Cupellæocrinus</i> , Troost	161
<i>Pleurocrinus</i> , Austin	161
<i>Platycrinus niotensis</i> , n. s., M. & W., 1865	162
<i>P. hemisphaericus</i> , n. s., M. & W., 1865	162-163
<i>P. parvulus</i> , n. s., M. & W., 1865	163-164
<i>Actinocrinus</i> , Miller, 1821	164
Subgenus <i>Alloprosallocrinus</i> , Lyon & Casseday, 1860	164
<i>A. (Alloprosallocrinus) euconus</i> , n. s., M. & W., 1865	164-165
<i>Pentremites (Granatocrinus) granulosus</i> , n. s., M. & W., 1865	165

POLYZOA.

<i>Evactinopora</i> , n. g., M. & W., 1865	165
<i>E. radiata</i> , n. s., M. & W., 1865	165-166

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Mollusca.

Lamellibranchiata.

	Page.
<i>Lithophaga</i> , Bolten, 1798	245
(<i>Lithodomus</i> , Cuvier, 1817.)	245
<i>Lithophaga ? pertenuis</i> , n. s., M. & W., 1865	245
<i>L. ? lingualis</i> Phillips (?), sp.	245
<i>Modiolopsis</i> , Hall, 1847	246
<i>M. perovata</i> , n. s., M. & W., 1865	246
<i>Pleurophorus</i> , King, 1844	246
<i>P. subcostatus</i> , n. s., M. & W., 1865	246-247
<i>P. ? angulatus</i> , n. s., M. & W., 1865	247
<i>P. costatiformis</i> , n. s., M. & W., 1865	247-248
<i>Grammysia</i> , De Vernouil, 1847	248
<i>G. ? rhomboidalis</i> , n. s., M. & W., 1865	248-249
<i>Conocardium</i> , Bronn, 1837	249
<i>O. obliquum</i> , n. s., M. & W., 1865	249
<i>Edmondia</i> , De Koninck, 1842	249
<i>E. ? peroblonga</i> , n. s., M. & W., 1865	249-250
<i>Chænomys</i> , Meek, 1865	250
<i>C. ? rhomboidea</i> , n. s., M. & W., 1865	250
<i>C. ? hybrida</i> , n. s., M. & W., 1865	250-251
<i>Sedgwickia</i> , McCoy, 1844	251
<i>S. (Sanguinolites ?) subarcuata</i> , n. s., M. & W., 1865	251

	Page.
<i>Gasteropoda.</i>	
<i>Holopea</i> , Hall, 1847	251
Subgenus <i>Isonema</i> , M. & W.	221
<i>H. (Isonema) depressa</i> , n. s., M. & W., 1865	251-252
<i>Pleurotomaria</i> , DeFrance, 1825	252
<i>P. (Murchisonia?) meta</i> , n. s., M. & W., 1865	252
<i>Pteropoda.</i>	
<i>Conularia</i> , Miller, 1818	252
<i>C. multicostrata</i> , n. s., M. & W., 1865	252-253
<i>C. subcarbonaria</i> , n. s., M. & W., 1865	253
<i>C. whitei</i> , n. s., M. & W., 1865	253-254
<i>Tentaculites</i> , Schlotheim, 1820	254
<i>T. tenuistriatus</i> , n. s., M. & W., 1865	254
<i>T. oswegoensis</i> , n. s., M. & W., 1865	254-255
<i>T. sterlingensis</i> , n. s., M. & W., 1865	255
<i>Cephalopoda.</i>	
<i>Orthoceras</i> , Auct.	255
<i>O. crebristriatum</i> , n. s., M. & W., 1865	255-256
<i>O. subbaculum</i> , n. s., M. & W., 1865	256
<i>O. jolictense</i> , n. s., M. & W., 1865	256
<i>O. nobile</i> , n. s., M. & W., 1865	256-257
<i>O. winchellii</i> , n. s., M. & W., 1865	257
<i>Phragmoceras</i> , Broderip, 1834	257
<i>P. walshii</i> , n. s., M. & W., 1865	257
<i>Gomphoceras</i> , Sowerby, 1839	258
<i>G. sacculum</i> , n. s., M. & W., 1865	258
<i>G. (Apioceras) turbiniforme</i> , n. s., M. & W., 1865	258-259
<i>Nautilus</i> , Linnæus, 1758	259
Subgenus <i>Endolobus</i> , M. & W., 1865	259
<i>N. (Endolobus) peramplus</i> , n. s., M. & W., 1865	259
<i>N. (Temnocheilus) niotensis</i> , n. s., M. & W., 1865	260
Subgenus <i>Discites</i> , McCoy, 1844	260
<i>N. (Discites) ornatus</i> Hall, var. <i>amplus</i> , M. & W., 1865	260-261
<i>N. (Discites) disciformis</i> , n. s., M. & W., 1865	261
<i>N. lasallensis</i> , n. s., M. & W., 1865	261-262
Subgenus <i>Cryptoceras</i> , d'Orbigny, 1847	262
<i>N. (Cryptoceras) capax</i> , n. s., M. & W., 1865	262
<i>N. (Cryptoceras?) leidyi</i> , n. s., M. & W., 1865	262-263
<i>Trochoceras</i> , Barrande, 1847	263
<i>T. baeri</i> , n. s., M. & W., 1865	263-264
<i>Articulata.</i>	
<i>Crustacea.</i>	
<i>Trilobita.</i>	
<i>Dalmania</i> , Emmerich, 1845	264
<i>D. danae</i> , n. s., M. & W., 1865	264-266
<i>Lichas</i> , Dalman, 1827	266
<i>L. cucullus</i> , n. s., M. & W., 1865	266-267
<i>Prætus</i> Steininger, 1830	267
<i>P. ellipticus</i> , n. s., M. & W., 1865	267-268
<i>Phillipsia</i> , Portlock, 1843	268
Subgenus <i>Griffithides</i> , Portlock, 1843	268
<i>P. (Griffithides) portlockii</i> , n. s., M. & W., 1865	268-270
<i>P. (Griffithides) scitula</i> , n. s., M. & W., 1865	270-271
<i>P. (Griffithides?) sangamonensis</i> , n. s., M. & W., 1865	271-273

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Radiata.

Echinodermata.

Crinoidea.

	Page.
<i>Belemnocrinus whitii</i> , n. s., M. & W., 1866.....	251
Subgenus <i>Nematocrinus</i> , M. & W., 1866.....	251
<i>Synbathocrinus wachsmuthi</i> , n. s., M. & W., 1866.....	251-252
<i>Cyathocrinus farleyi</i> , n. s., M. & W., 1866.....	252-253
<i>Actinocrinus calyculus</i> var. <i>pardincensis</i> , M. & W.....	253
<i>Strotocrinus</i> , n. g., M. & W., 1866.....	253
<i>Steganoecrinus</i> , n. g., M. & W., 1866.....	253-254
<i>Rhodocrinus nanus</i> , n. s., M. & W., 1866.....	254
<i>Onychocrinus</i> , Lyon & Casseday.....	255-256
<i>Onychocrinus diversus</i> , n. s., M. & W., 1866.....	256-257
<i>Granatocrinus shumardi</i> , n. s., M. & W., 1866.....	257-258
<i>Granatocrinus noricoodi</i> , O. & S.? ¹	258-259

Asteroidea.

<i>Schænaster wachsmuthi</i> , n. s., M. & W., 1866.....	259
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Mollusca.

Lamellibranchiata.

<i>Pteria</i> (<i>Pterinea</i> ?) <i>morganensis</i> , n. s., M. & W., 1866.....	259-260
<i>Dolabra sterlingensis</i> , n. s., M. & W., 1866.....	260-261
<i>Macrodon micronema</i> , n. s., M. & W., 1866.....	261

Gasteropoda.

<i>Platyceras</i> , Conrad, 1840.....	262-263
Subgenus <i>Orthonychia</i> , Hall.....	263
Subgenus <i>Igoceras</i> , Hall.....	263
<i>P. lævigatum</i> , n. s., M. & W., 1866.....	263-264
<i>P. haliotoides</i> , n. s., M. & W., 1866.....	264
<i>P. unicum</i> , n. s., M. & W., 1866.....	264-265
<i>P. (Orthonychia) chesterense</i> , n. s., M. & W., 1866.....	265
<i>P. (Orthonychia) subplicatum</i> , n. s., M. & W., 1866.....	265-266
<i>P. (Orthonychia) infundibulum</i> , n. s., M. & W., 1866.....	266
<i>Metoptoma</i> , Phillips, 1836.....	266-267
<i>Metoptoma (Platyceras?) umbella</i> , n. s., M. & W., 1866.....	267
<i>Polyphenopsis chrysallisi</i> , n. s., M. & W., 1866.....	267-268
<i>Naticopsis littonana</i> var. <i>genèveensis</i> , M. & W.....	268
<i>Anomphalus</i> , n. g., M. & W., 1866.....	268
<i>A. rotulus</i> , n. s., M. & W., 1866.....	268-269
<i>Microdoma</i> , n. g., M. & W., 1866.....	269
<i>M. conica</i> , n. s., M. & W., 1866.....	269-270
<i>Orthonema conica</i> , n. s., M. & W., 1866.....	270
<i>Trochita?</i> <i>carbonaria</i> , n. s., M. & W., 1866.....	270-271
<i>Platyschisma pelicoides</i> , Sowerby? sp.....	271
<i>Pleurotomaria conoides</i> , n. s., M. & W., 1866.....	271-272
<i>Pleurotomaria coxana</i> , n. s., M. & W., 1866.....	272
<i>Pleurotomaria spironema</i> , n. s., M. & W., 1866.....	272-273
<i>Pleurotomaria valvatiiformis</i> , n. s., M. & W., 1866.....	273
<i>Murchisonia inornata</i> , n. s., M. & W., 1866.....	274

Cephalopoda.

<i>Nautilus (Trematodiscus) sulcatus</i> , Sowerby?.....	274
<i>Nautilus (Cryptoceras) rockfordensis</i> , n. s., M. & W., 1866.....	275

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

43.

MEEK, F. B., and WORTHEN, A. H. Descriptions of Paleozoic fossils from the Silurian, Devonian, and Carboniferous rocks of Illinois and other Western States. <Proc. Chicago Acad. Sci., pp. 11-23. 1866. Chicago, 1866.

Genera Monopteria Megaptera afterward republished in the Illinois Geological Reports, vol. ii.

Amorphozoa.

	Page.
<i>Astylospongia ? carbonaria</i> , n. s., M. & W., 1866	11-12
<i>Astroospongia hamiltonensis</i> , n. s., M. & W., 1866	12

*Mollusca.**Lamellibranchiata.*

<i>Placunopsis carbonaria</i> , n. s., M. & W., 1866	13
<i>Aviculopecten randolphensis</i> , n. s., M. & W., 1866	14
<i>A. indianensis</i> , n. s., M. & W., 1866	14-15
<i>A. fimbriatus</i> , n. s., M. & W., 1866	15-16
<i>Vanuzemia dixonensis</i> , n. s., M. & W., 1866	16-17
<i>Macrodon tenuistriatus</i> , n. s. g., M. & W., 1866	17
<i>Schizodus curtus</i> , n. s., M. & W., 1866	18
<i>Anthracopecten ? fragilis</i> , n. s., M. & W., 1866	18-19
<i>Myalina meliniiformis</i> , n. s., M. & W., 1866	19-20
<i>Monopteria</i> , n. s. g., M. & W., 1866	20
<i>Pterinea (Monopteria) gibbosa</i> , n. s., M. & W., 1866	20-21
<i>Pterinea ? subpapyracea</i> , n. s., M. & W., 1866	21-22
<i>Ambonychia (Megaptera) cascii</i> , n. s., M. & W., 1866	22-23

44.

MEEK, F. B., and WORTHEN, A. H. Descriptions of Invertebrates from the Carboniferous System. <Geological Survey of Illinois, vol. ii, pp. 145-411, plates, 14-20 and 23-32. 1866. Published by authority of the legislature of Illinois, Springfield, 1866.

Genera *Sphenopoterium*, *Cardiopsis*, *Trematodiscus*, *Strotocrinus*, *Steganocrinus*, *Cælocrinus*, *Oligoporus*, *Erisocrinus*, *Syntrielsasma*, *Enmicrotis*, *Trachydomia*, *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.

INVERTEBRATE FOSSILS OF THE KINDERHOOK GROUP.

*Protozoa.**Spongiæ.*

	Page.
* <i>Sphenopoterium</i> , M. & W., 1860	145-146
<i>S. enorme</i> , M. & W., 1860, pl. xiv, figs. 1 a, 1 b	146
<i>S. enorme</i> var. <i>depressum</i> , M. & W., 1866, pl. xiv, figs. 2 a, 2 b	146

*Radiata.**Echinodermata.**Crinoidea.*

<i>Actinocrinus</i> , Miller	147-149
<i>Batocrinus</i> , Casseday (<i>Eretmocrinus</i> Lyon?)	150-151
Subgenus <i>Batocrinus</i> , Casseday	151
Sec. C. (<i>Uperocrinus</i> , M. & W.)	151
<i>Actinocrinus (Batocrinus) pistilliformis</i> , M. & W., 1861, pl. xiv, fig. 8	151-153

*Mollusca.**Brachiopoda.*

<i>Rhynchonella</i> , Fischer, 1809	153
<i>R. missouriensis</i> , Shumard, 1855, pl. xiv, figs. 4 a, 4 b	153-154
<i>Spirifer</i> , Sowerby, 1815	155
Subgenus <i>Martinia</i> , McCoy, 1844	155
<i>S. (Martinia) cooperensis</i> , Swallow, 1860, pl. xiv, figs. 5 a, 5 b	155-156

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

	Page
<i>Lamellibranchiata.</i>	
<i>Cardiopsis</i> , M. & W., 1861.....	156-157
<i>C. radiata</i> , M. & W., 1860, pl. xiv, figs. 6 a, 6 b.....	157-158
<i>Gasteropoda.</i>	
<i>Straparollus</i> , Montfort, 1810.....	158-159
<i>S. lens</i> , Hall, sp., 1860, pl. xiv, figs. 7 a, 7 b.....	159-160
<i>Bellerophon</i> , Montfort, 1810.....	160
<i>B. cyrtolites</i> , Hall, 1860, pl. xiv, figs. 8 a, 8 b.....	160-161
<i>Cephalopoda.</i>	
<i>Nautilus</i> , Linnæus, 1758.....	161
Subgenus <i>Trematodiscus</i> , M. & W., 1861.....	161-162
<i>N. (Trematodiscus) trisulcatus</i> , M. & W., 1860, pl. xiv, figs. 10 a-c.....	162-163
<i>N. digonus</i> , M. & W., 1860, pl. xiv, figs. 9 a-d.....	163-164
<i>Goniattites</i> , de Haan, 1825.....	165
<i>G. lyoni</i> , M. & W., 1860, pl. xiv, figs. 11 a-c.....	165-166
INVERTEBRATE FOSSILS OF THE BURLINGTON GROUP.	
<i>Radiata.</i>	
<i>Echinodermata.</i>	
<i>Crinoidea.</i>	
<i>Dichocrinus</i> , Miller, 1821.....	167-169
<i>D. conus</i> , M. & W., 1860, pl. xvi, figs. 5 a, b.....	169-170
<i>Platyocrinus</i> , Miller, 1821.....	170-172
<i>Centrocrinus</i> , Austin.....	172
<i>Pleurocrinus</i> , Austin.....	172
<i>Marsupiocrinites</i> , Phillips.....	172
Subgenus <i>Pleurocrinus</i> , Austin.....	173
<i>Platyocrinus (Pleurocrinus) subspinosus</i> , Hall, 1858, pl. xv, fig. 6.....	173-175
<i>Cyathocrinus</i> , Miller, 1821.....	175-178
<i>C. sculptilis</i> , Hall, 1860, pl. xv, fig. 2 a, b.....	178-179
<i>Poteriocrinus</i> , Miller, 1821.....	179-182
<i>P. swallowi</i> , M. & W., 1860, pl. 16, figs. 4 a, b, and fig. 3, p. 184.....	183-184
<i>Zeacrinus</i> , Troost.....	185-186
<i>Z. troostianus</i> , M. & W., 1860, pl. xvi, fig. 2 and fig. 4, p. 187.....	186-187
<i>Strotocrinus</i> ,* M. & W., [1866].....	188-192
<i>S. perumbrosus</i> ?, Hall, fig. 5, p. 188.....	188
<i>S. regalis</i> , sp., Hall, 1860, pl. xvi, figs. 6 a, b, fig. 6, p. 191, fig. 7, p. 192, and fig. 8, p. 194.....	191-195
<i>Steganoocrinus</i> , n. g., M. & W. [1866].....	195
<i>S. pentagonus</i> ,† Hall, figs. 9 a, d.....	196
<i>S. sculptus</i> , Hall, figs. 10, a, b, and d. p. 197.....	197-198
<i>S. araneolus</i> , M. & W., 1860, pl. xv, figs. 1 a, b.....	198-200
<i>Actinoocrinus</i> , Miller, 1821.....	200
<i>A. concinnus</i> , Shumard, 1855, pl. xv, figs. 9 a, b, fig. 11, p. 202.....	200-202
<i>A. scitulus</i> , M. & W., 1860, pl. xv, figs. 7 a, b, and fig. 12, p. 204.....	202-205
<i>A. sillimani</i> , M. & W., 1860, fig. 13, p. 204.....	204-205
Subgenus <i>Batoocrinus</i> , Casseday.....	205
<i>A. (Batoocrinus) dodcadactylus</i> , M. & W., 1861, pl. xv, figs. 3 a-c, fig. 14, p. 206.....	205-207
<i>A. Batoocrinus asteriscus</i> , M. & W., 1860, pl. xv, figs. 8 a-c.....	207-209
<i>Amphorocrinus</i> , Austin, 1848.....	209-211
<i>A. subtrubrinatus</i> , M. & W., 1860, pl. xv, figs. 4 a, b, and fig. 15, p. 213.....	212-213
<i>Coelocrinus</i> , ‡ M. & W., 1865.....	214-215
<i>C. concavus</i> , M. & W., 1861, pl. xv, figs. 10 a-c, and fig. 16, p. 215.....	215-216
<i>Gilbertocrinus</i> , Phillips = <i>Ollacrinus</i> , Cumberland.....	217-219
Subgenus <i>Goniasteroidocrinus</i> , Lyon & Casseday = <i>Trematocrinus</i> , Hall.....	219
<i>Gilbertocrinus bursa</i> , Phillips, fig. 17, p. 217.....	217
<i>G. calcaratus</i> , Phillips, fig. 18 a-c, p. 217.....	217
<i>Goniasteroidocrinus tuberosus</i> , Lyon & Casseday, fig. 19 a-d, p. 220.....	220
<i>G. (Goniasteroidocrinus) fuscillus</i> , M. & W., 1860, pl. xv, fig. 5, and fig. 20, p. 224.....	222-225
<i>Echinoidea.</i>	
<i>Perischachinida.</i>	
<i>Melonites multipora</i> , figs. 21 and 22, pp. 227-228.....	227-228

* σπρωτος, spread; χρινον, a lily.

† στεγανος, covered; χρινον, a lily; in allusion to the covered free rays.

‡ χοιλος, hollow; χρινον, a lily.

	Page
<i>Palaeochinidae</i> , McCoy.	
<i>Archaeocidaridae</i> , McCoy.	
<i>Palaeochinus</i> , McCoy, 1844.....	225
<i>P. burlingtonensis</i> , M. & W., 1860, pl. xvi, figs. 3 <i>a-c</i> , and fig. 23, p. 231.....	230-231
Mollusca.	
<i>Lamellibranchiata</i> .	
<i>Aviculopecten</i> , McCoy, 1851.....	231
<i>A. burlingtonensis</i> , M. & W., 1860, pl. xvi, figs. 1 <i>a, b</i>	231-232
Protozoa.	
<i>Spongiae</i> .	
<i>Petrospongia</i> .	
<i>Sphenopoterium</i> , M. & W., 1860.....	233
<i>S. obtusum</i> , M. & W., 1860, pl. xvii, figs. 2 <i>a-d</i> (by error <i>a</i> on pl.), 2 <i>e</i>	233
<i>S. compressum</i> , M. & W., 1860, pl. xvii, figs. 1 <i>a-c</i>	234
Radiata.	
<i>Echinodermata</i> .	
<i>Crinoidea</i> .	
<i>Cyathocrinus</i> , Miller, 1821.....	234
<i>C. angulatus</i> , M. & W., 1860, pl. xvii, fig. 4.....	234-236
<i>C. saffordi</i> , M. & W., 1860, pl. xvii, figs. 5 <i>a</i> and <i>b</i> , and fig. 24, p. 237.....	236-237
<i>Potriocrinus</i> , Miller.....	237
Subgenus <i>Scaphiocrinus</i> , Hall, 1858.....	237
<i>P. (Scaphiocrinus) decadactylus</i> , M. & W., 1860, pl. xvii, fig. 6 and fig. 25, p. 240.....	238-240
<i>Zacrinus</i> , Troost.....	240
<i>Z. planibrachiatus</i> , M. & W., 1860, pl. xviii, fig. 5.....	240-241
<i>Onychocrinus</i> , Lyon & Casseday, 1859.....	242-244
<i>O. monroensis</i> , M. & W., 1861, pl. xvii, fig. 7.....	244-245
<i>O. norwoodi</i> , M. & W., 1860, pl. xvii, fig. 3, and fig. 26, p. 247.....	245-247
<i>Echinoidea</i> .	
<i>Perischachinidae</i> .	
* <i>Oligoporus</i> , M. & W., 1860.....	247
<i>Melonites multipora</i> , fig. 27.....	248
<i>Oligoporus danæ</i> , M. & W., 1860, pl. xvii, fig. 8 and fig. 28, p. 248.....	248-251
Mollusca.	
<i>Brachiopoda</i> .	
<i>Camarophoria</i> , King, 1844.	
<i>C. subtrigonia</i> , M. & W., 1860, pl. xviii, figs. 8 <i>a-c</i>	251-253
<i>Chonetes</i> , Fischer, 1837.	
<i>C. planumbona</i> , M. & W., 1860, pl. xviii, figs. 1 <i>a-d</i>	253-254
<i>Athyris</i> , McCoy, 1844.	
<i>A. planosulcata</i> , Phillips? (sp.), 1836, pl. xxii, figs. 8 <i>a-d</i>	254-255
<i>Lamellibranchiata</i> .	
<i>Aviculopecten</i> , McCoy, 1851.....	256
<i>A. oweni</i> , M. & W., 1860, pl. xviii, figs. 2 <i>a-c</i>	256
<i>A. amplus</i> , M. & W., 1860, pl. xviii, figs. 4 <i>a-c</i>	257-258
<i>A. oblongus</i> , M. & W., 1860, pl. xviii, figs. 3 <i>a</i> and <i>b</i>	258-259
<i>Gasteropoda</i> .	
<i>Pleurotomaria</i> , DeFrance, 1826.....	260
<i>P. shumardi</i> , M. & W., 1860, pl. xviii, figs. 6 <i>a</i> and <i>b</i>	260-261
INVERTEBRATE FOSSILS OF THE ST. LOUIS GROUP.	
Protozoa.	
<i>Spongiae</i> .	
<i>Petrospongia</i> .	
<i>Sphenopoterium</i> , M. & W.	
<i>S. cuneatum</i> , M. & W., 1860, pl. xix, figs. 1 <i>a-d</i>	262-263
Radiata.	
<i>Echinodermata</i> .	
<i>Crinoidea</i> .	
<i>Dichocrinus</i> , Munster.	
<i>D. constrictus</i> , M. & W., 1860, pl. xix, figs. 2 <i>a-c</i>	263-264
<i>Platycrinus</i> , Miller, 1821.....	264
<i>P. prattenanus</i> , M. & W., 1860, pl. xx, fig. 2.....	264-265

	Page.
<i>P. penicillus</i> , M. & W., 1860, pl. xix, figs. 6 <i>a-c</i>	266-267
<i>P. plenus</i> , M. & W., 1860, pl. xx, fig. 3	267-268
<i>Tazocrinus</i> , Phillips, 1843	268-270
<i>Forbesiocrinus</i> , de Koninck & Le Hon, 1854	270
<i>Tazocrinus semioratus</i> , M. & W., 1860, pl. xx, figs. 4 <i>a-b</i>	272-274
<i>Blastoidea</i> .	
<i>Granatocrinus</i> , Troost, 1850	274-275
<i>G. cornutus</i> , sp., M. & W., 1860, pl. xx, fig. 1	276
<i>Asteroidea</i> .	
* <i>Schœnaster</i> , M. & W. [1860]	277-278
<i>S. fimbriatus</i> , M. & W., 1860, pl. xix, figs. 7 <i>a-d</i>	278-280
<i>Mollusca</i> .	
<i>Brachiopoda</i> .	
<i>Productus</i> , Sowerby, 1814	280
<i>P. scitulus</i> , M. & W., 1860, pl. xx, figs. 5 <i>a-d</i>	280-281
<i>Lamellibranchiata</i> .	
<i>Myalina</i> , de Koninck, 1844	281
<i>M. concentrica</i> , M. & W., 1860, pl. xix, figs. 3 <i>a-c</i>	281-282
<i>Yoldia</i> , Møller, 1842	282
<i>Y. ? levistriata</i> , M. & W., 1860, pl. xx, figs. 7 <i>a</i> and <i>b</i>	282-283
<i>Nuculana</i> , Link, 1807	283
<i>N. ? curta</i> , M. & W., 1861, pl. xx, figs. 6 <i>a</i> and <i>b</i>	283-284
<i>Gasteropoda</i> .	
<i>Dentalium</i> , Linnaeus, 1758	284
<i>D. venustum</i> , M. & W., 1861, pl. xix, fig. 8	284
<i>Stroparollus</i> , Montfort, 1810	285
<i>S. similis</i> , M. & W., 1861, pl. xix, figs. 4 <i>a-b</i>	285-286
<i>S. similis</i> var. <i>planus</i> , M. & W., 1861, pl. xix, fig. 5 <i>a-c</i>	286
<i>Cephalopoda</i> .	
<i>Orthoceras</i> , Anct.	286
<i>O. expansum</i> , M. & W., 1860, pl. xx, figs. 8 <i>a-c</i>	286-287
INVERTEBRATE FOSSILS OF THE CHESTER GROUP.	
<i>Radiata</i> .	
<i>Echinodermata</i> .	
<i>Crinoidea</i> .	
<i>Pterotocrinus</i> , Lyon & Casseday, 1859	288-290
<i>P. crassus</i> , M. & W., 1860, pl. xxiii, figs. 2 <i>a, b</i> , and fig. xxix, p. 292	290-292
<i>P. chesterensis</i> , M. & W., 1860, pl. xxiii, figs. 1 <i>a-c</i> , and fig. 30, p. 293	292-293
<i>Echinoidea</i> .	
<i>Perischæchinida</i> .	
<i>Archæocidaris</i> , McCoy, 1844	294-295
<i>A. mucronata</i> , M. & W., 1860, pl. xxiii, figs. 3 <i>a-c</i>	295-296
<i>Mollusca</i> .	
<i>Brachiopoda</i> .	
<i>Productus</i> , Sowerby, 1812	297
<i>P. parvus</i> , M. & W., 1860, pl. xxiii, figs. 4 <i>a-e</i>	297-298
<i>Spirifer</i> , Sowerby, 1815	298
Subgenus <i>Martinia</i> , McCoy, 1844	298
<i>S. (Martinia) glaber</i> var. <i>contractus</i> , M. & W., pl. xxiii, figs. 5 <i>a, b</i>	298-299
<i>Lamellibranchiata</i> .	
<i>Myalina</i> de Koninck, 1844	300
<i>M. angulata</i> , M. & W., 1860, pl. xxiii, figs. 7 <i>a, b</i>	300-301
<i>Schizodus</i> , King, 1844	301
<i>S. chesterensis</i> , M. & W., 1865, pl. xxiii, figs. 6 <i>a, b</i>	301-302
<i>Gasteropoda</i> .	
<i>Stroparollus</i> , Montfort, 1810	302
<i>S. planidorsatus</i> , M. & W., 1860, pl. 24, figs. 2 <i>a-c</i>	302-303
<i>Pleurotomaria</i> , DeFrance, 1826	303
<i>P. chesterensis</i> , M. & W., 1860, pl. xxiv, figs. 1 <i>a-c</i>	303-304
<i>Cephalopoda</i> .	
<i>Orthoceras</i> , Anct.	304
<i>O. annulato-costatum</i> , M. W., 1861, pl. xxiv, figs. 3 <i>a, b</i>	304-305

* σχοινος, a rope; αστηρ, a star.

	Page.
<i>Nautilus</i> , Linnæus, 1758.....	305
<i>N. globatus</i> , Sowerby? 1825, pl. xxiv, figs. 5 <i>a</i> , <i>b</i>	305-306
<i>N. chesterensis</i> , M. & W., 1860, pl. xxiv, figs. 4 <i>a</i> , <i>b</i>	306-307
Subgenus <i>Endolobus</i> ,* M. & W., 1865.....	307-308
<i>N. (Endolobus) spectabilis</i> , M. & W., 1860, pl. xxv, figs. 1 <i>a</i> , <i>b</i>	308-309
INVERTEBRATE FOSSILS OF THE COAL MEASURES.	
<i>Radiata.</i>	
<i>Crinoidea.</i>	
<i>Cyathocrinus</i> , Miller, 1821.....	310
<i>C.? sangamonensis</i> , M. & W., 1861, pl. xxvi, figs. 1 <i>a</i> , <i>b</i> , and fig. 31, p. 311.....	310-312
<i>Zacrinus</i> , Troost.....	312
<i>Z. discus</i> , M. & W., 1860, pl. xxvi, figs. 3 <i>a</i> , <i>b</i>	312-313
<i>Z.? crassus</i> , M. & W., 1860, pl. xxvi, figs. 2 <i>a</i> , <i>b</i> , and fig. 32, p. 315.....	314-315
<i>Erisocrinus</i> , M. & W., 1865.....	315-317
<i>E. typus</i> , M. & W., 1865, fig. 33, p. 317, and fig. 34 <i>a-c</i> , p. 318.....	317-318
<i>E. conoideus</i> , M. & W., 1865, figs. 35 <i>a</i> , <i>b</i>	318-319
<i>E. tuberculatus</i> , M. & W., 1865.....	319-320
<i>Mollusca.</i>	
<i>Brachiopoda.</i>	
<i>Productus</i> , Sowerby, 1812.....	320
<i>P. nanus</i> , M. & W., 1860, pl. xxvi, figs. 4 <i>a-d</i>	320-321
<i>Syntrielasma</i> , M. & W., 1865.....	321-323
<i>S. hemiplicata</i> , Hall, (sp.), 1862, figs. 36 <i>a-c</i> , p. 322, and fig. 37 <i>a</i> , <i>b</i> , p. 324.....	322-325
<i>Lamellibranchiata.</i>	
<i>Aviculopecten</i> , McCoy, 1852.....	326
<i>A. coxanus</i> , M. & W., 1860, pl. xxvi, fig. 6 <i>a</i> , <i>b</i>	326-327
<i>A. pellucidus</i> , M. & W., 1860, pl. xxvi, fig. 5 <i>a</i> , <i>b</i>	327-328
<i>A. koninckii</i> , M. & W., 1860, pl. xxvi, fig. 8.....	328-329
<i>A. interlineatus</i> , M. & W., 1860, pl. xxvi, fig. 7 <i>a</i> , <i>b</i>	329-330
<i>A. occidentalis</i> , Shumard? 1855 pl. xxvii, figs. 4, 5, 5 <i>a</i>	331-332
<i>Streblopteria</i> , McCoy, 1851.....	332-334
<i>S.? tenuilineata</i> , M. & W., 1860, pl. xxvi, figs. 9 <i>a</i> , <i>b</i>	334-336
<i>Eumicrotis</i> , Meek, 1864.....	336-337
<i>E. hawni</i> var. <i>sinuata</i> , M. & W. [1866], pl. xxvii, figs. 12 <i>a</i> , 12 <i>b</i> , 13, 14.....	338-339
<i>Pterinea</i> , Goldfuss, 1833.....	339
Subgenus <i>Monopteria</i> ,† M. & W., 1866.....	339-340
<i>P. (Monopteria) gibbosa</i> , M. & W., 1866, pl. xxvii, figs. 11, 11 <i>a</i> , <i>b</i>	340-341
<i>Myalina</i> , de Koninck, 1844.....	341
<i>M. swallovi</i> , McChesney, 1860, pl. xxvii, figs. 1 <i>a-d</i>	341-342
<i>M. meliniformis</i> , M. & W., 1866, pl. xxvii, fig. 3.....	343-344
<i>M. recurvirostris</i> , M. & W., 1860, pl. xxvi, figs. 9 <i>a-c</i>	344-345
<i>Schizodus</i> , King, 1844.....	345
<i>Schizodus</i> , —, sp.?, pl. xxvii, fig. 7.....	345-346
<i>Edmondia</i> , de Koninck, 1844.....	346
<i>E. unioniformis</i> , sp., Phillips, 1836, pl. xxvii, figs. 6, 6 <i>a</i> and <i>b</i>	346-347
<i>Pleurophorus</i> , King, 1844.....	347
<i>P. subcostatus</i> , M. & W., 1865, pl. xxvii, figs. 2, 2 <i>a</i>	347-349
<i>Solenomya</i> , Lamarck, 1819.....	349
<i>S. radiata</i> , M. & W., 1860, pl. xxvi, fig. 10 <i>a</i> , <i>b</i>	349-350
<i>Allorisma</i> , King, 1844.....	350
<i>Allorisma</i> , sp. undt., pl. xxvii, figs. 9, 9 <i>a</i>	350
<i>Gasteropoda.</i>	
<i>Pleurotomaria</i> , DeFrance, 1836.....	351
<i>P. subconstricta</i> , M. & W., 1860, pl. xxviii, figs. 6 <i>a-c</i>	351-352
<i>P. speciosa</i> , M. & W., 1860, pl. xxviii, figs. 5 <i>a-c</i>	352-353
<i>P. scitula</i> , M. & W., 1860, pl. xxviii, figs. 9 <i>a-d</i>	353-354
<i>P. brazoensis</i> , Shumard? 1860, pl. xxviii, figs. 1 <i>a-d</i>	354-355
<i>P. tenuicincta</i> , M. & W., 1860, pl. xxviii, fig. 3 <i>a-d</i>	355-356
<i>P. granulo-striata</i> , M. & W., 1860, pl. xxviii, fig. 2 <i>a-d</i>	356-357
<i>P. pratensis</i> , M. & W., 1860, pl. xxviii, fig. 7 <i>a-d</i>	357-358
<i>P. subsinuata</i> , M. & W., 1860, pl. xxvii, figs. 4 <i>a-d</i>	358-359
<i>P. turbiniformis</i> , M. & W., 1860, pl. xxviii, figs. 8 <i>a-c</i>	359-360

* ενδον, within; λοβος, a lobe.

† μονος, solitary; πτερον, a wing.

	Page.
<i>P. subsularis</i> , M. & W., 1860, pl. xxviii, figs. 10 <i>a, b</i> (by error on pl., 9 <i>a, b</i>)	360-361
<i>P. ? tumida</i> , M. & W., 1860, pl. xxxi, figs. 1 <i>a, b</i>	361-362
<i>Straparollus</i> , Montfort, 1810	362
<i>S. umbilicatus</i> , M. & W., 1860, pl. xxix, figs. 1 <i>a-c</i>	362-363
<i>Naticopsis</i> , McCoy, 1844	363-365
<i>Naticopsis nana</i> , M. & W., 1860, pl. xxxi, figs. 4 <i>a, b</i>	365-366
Subgenus <i>Trachydomia</i> ,* M. & W., 1866	364
<i>N. (Trachydomia) nodosa</i> , M. & W., 1860, pl. xxxi, figs. 2 <i>a, b</i>	366-367
<i>N. (Trachydomia) nodosa</i> , var. <i>hollidayi</i> , M. & W., 1860, pl. xxxi, figs. 3 <i>a, b</i>	367
<i>Macrocheilus</i> , Phillips, 1841	367-369
<i>M. medialis</i> , M. & W., 1865, pl. xxxi, figs. 5 <i>a, b</i>	370
<i>M. intercalaris</i> , M. & W., 1860, pl. xxxi, figs. 6 <i>a, b</i>	371
<i>Macrocheilus</i> , sp. undt., pl. xxvii, fig. 10	372
<i>Polyphemopsis</i> , Portlock, 1843	372-373
<i>P. inornata</i> , H. & W., 1860, pl. xxxi, figs. 8 <i>a-c</i>	374
<i>P. nitidula</i> , M. & W., 1860, pl. xxxi, figs. 9 <i>a, b</i>	374-375
<i>P. peracuta</i> , M. & W., 1860, pl. xxxi, figs. 7 <i>a, b</i>	375-376
<i>Loxonema</i> , Phillips, 1841	377
<i>L. scitula</i> , M. & W., 1860, pl. xxxi, figs. 10 <i>a-c</i>	377
<i>L. rugosa</i> , M. & W., 1860, pl. xxxi, figs. 11 <i>a-c</i>	378
<i>L. multicostata</i> , n. s., M. & W., 1866, pl. xxxi, figs. 12 <i>a-c</i>	378-379
<i>L. cerithiformis</i> , M. & W., 1860, pl. xxxi, figs. 13 <i>a-c</i>	379-380
† <i>Orthonema</i> , M. & W., 1861	380-381
<i>O. salteri</i> , M. & W., 1860, pl. xxxi, figs. 14 <i>a-c</i>	381
<i>Turritella</i> , Lamarck, 1799	382
<i>T. ? stercoraria</i> , n. s., M. & W., 1860, pl. xxvii, figs. 8 and 8 <i>a</i>	382-383
‡ <i>Soleniscus</i> , M. & W., 1860	383-384
<i>S. typicus</i> , M. & W., 1860, pl. xxxi, figs. 15 <i>a</i> and <i>b</i>	384
<i>Bellerophon</i> , Montfort, 1808	385
<i>B. crassus</i> , M. & W., 1860, pl. xxxi, figs. 16 <i>a</i> and <i>b</i>	385
<i>Cephalopoda.</i>	
<i>Nautilus</i> , Linnaeus, 1758	386
<i>N. planorbiformis</i> , M. & W., 1860, pl. xxix, figs. 4 <i>a-c</i>	386
<i>N. sangamonensis</i> , M. & W., 1860, pl. xxix, figs. 3, 3 <i>a, b</i>	386-388
<i>Cyrtoceras</i> , Goldfuss, 1832	388
<i>C. (Aploceras) curtum</i> , M. & W., 1860, pl. xxx, figs. 1 <i>a-c</i>	388-389
<i>C. ? dilatatum</i> , M. & W., 1860, pl. xxix, fig. 2	389
<i>Goniatites</i> , de Haan, 1825	390
<i>G. globulosus</i> , M. & W., 1860, pl. xxx, figs. 2 <i>a-c</i> , and fig. 38, p. 390, and fig. 39, p. 391	390-392
<i>G. iowensis</i> , M. & W., 1860, pl. xxx, fig. 3 <i>a-c</i>	392-393
<i>Articulata.</i>	
<i>Crustacea.</i>	
<i>Entomostraca.</i>	
<i>Xiphosura.</i>	
<i>Bellimurus</i> , Koenig	393-395
<i>B. dance</i> , M. & W., 1865, pl. xxxii, figs. 2, 2 <i>a</i>	395-398
<i>Tetradecapoda.</i>	
<i>Isopoda.</i>	
<i>(Anisopoda.)</i>	
<i>Acanthotelson</i> , M. & W., 1860	399-401
<i>A. stimpsoni</i> , M. & W., 1865, pl. xxxii, figs. 6, 6 <i>a-f</i>	401-402
<i>A. inæqualis</i> , M. & W., 1865, pl. xxxii, figs. 7, 7 <i>a</i>	403
‡ <i>Palæocaris</i> , M. & W., 1865	403-404
<i>P. typus</i> , M. & W., 1865, pl. xxxii, figs. 5, 5 <i>a-d</i>	405-406
<i>Decapoda.</i>	
<i>Macrura.</i>	
<i>Anthropalæmon</i> , Salter, 1861	406
<i>A. gracilis</i> , M. & W., 1865, pl. xxxii, figs. 4, 4 <i>a-c</i>	407-408
<i>Myriapoda.</i>	
? <i>Anthracerpes</i> , M. & W. [1865]	409
<i>A. typus</i> , M. & W., 1865, pl. xxix, figs. 1, 1 <i>a</i>	409-410

* τραχος, rough; δωμα, a house.

‡ παλαιος, ancient; χερς, a shrimp.

† ορθος, straight; νημα, a thread.

§ σωληνισχος, a little channel or gutter.

|| ανθραξ, coal; 'ερπω, to creep.

Insecta.

Lepidoptera.

<i>Palacocampa</i> , 'M. & W. [1865].....	401
<i>P. anthrax</i> , M. & W., 1865, pl. xxxii, fig. 3.....	410-411

45.

MEEK, F. B. Check-lists of the Invertebrate fossils of North America. Cretaceous and Jurassic. < Smithsonian Miscellaneous Collections (No. 177), pp. 1-40. 1864. Washington, 1867.

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

The following species are discussed in the notes and explanations:

CRETACEOUS.

	Page.
<i>Planularia cuneata</i> , Mort. = <i>Phonemus (Flabellina) cuneatus</i> , (Mort.) Meek.....	31
<i>Palmula sagittaria</i> , Lea = <i>Phonemus (Flabellina) sagittarius</i> , (Lea) Meek.....	31
<i>Orbitulites texanus</i> , Rømer = <i>Tinoporus (Orbitolina) texanus</i> , (Rømer) Meek.....	31
<i>Grammostomum phyllodes</i> , Ehrenburg = <i>Textularia phyllodes</i> , (Ehrenburg) Meek.....	31
<i>Plagiostoma echinatum</i> , Mort. = <i>Spondylus echinatus</i> , (Mort.) Meek.....	31
<i>Otenoides acutilineata</i> , Con. = <i>Lima acutilineata</i> , (Con.) Meek.....	31
<i>Otenoides denticulata</i> , Gabb. = <i>Lima denticulata</i> , (Gabb.) Meek.....	31
<i>Plagiostoma pelagicum</i> , Mort. = <i>Lima pelagica</i> , (Mort.) Meek.....	31
<i>Otenoides squarrosa</i> , Gabb. = <i>Lima squarrosa</i> , (Gabb.) Meek.....	31
<i>Syncyclonema</i> , Meek.....	31
<i>Pecten rigida</i> , H. & M. = <i>Syncyclonema ? rigida</i> , (H. & M.) Meek.....	31
<i>Leda bisulcata</i> , M. & H. = <i>Nuculana bisulcata</i> , (M. & H.) Meek.....	31
<i>Leda longifrons</i> , Con. = <i>Nuculana longifrons</i> , (Con.) Meek.....	32
<i>Leda pinnaeformis</i> , Gabb. = <i>Nuculana pinnaeformis</i> , (Gabb.) Meek.....	32
<i>Leda protecta</i> , Gabb. = <i>Nuculana protecta</i> , (Gabb.) Meek.....	32
<i>Leda slackiana</i> , Gabb. = <i>Nuculana slackiana</i> , (Gabb.) Meek.....	32
<i>Leda subangulata</i> , Gabb. = <i>Nuculana subangulata</i> , (Gabb.) Meek.....	32
<i>Avicula abrupta</i> , Con. = <i>Pteria abrupta</i> , (Con.) Meek.....	32
<i>Avicula convexo-plano</i> , Rømer = <i>Pteria convexo-plano</i> , (Rømer) Meek.....	32
<i>Avicula cretacea</i> , Con. = <i>Pteria cretacea</i> , (Con.) Meek.....	32
<i>Avicula haydeni</i> , H. & M. = <i>Pteria haydeni</i> (H. & M.) Meek.....	32
<i>Avicula iridescens</i> , Shumard = <i>Pteria iridescens</i> , (Shum.) Meek.....	32
<i>Avicula laripes</i> , Mort. = <i>Pteria laripes</i> , (Morton) Meek.....	32
<i>Avicula linguiformis</i> , E. & S. = <i>Pteria linguiformis</i> , (E. & S.) Meek.....	32
<i>Avicula nebrascana</i> , E. & S. = <i>Pteria nebrascana</i> , (E. & S.) Meek.....	32
<i>Avicula pedernalis</i> , Rømer = <i>Pteria pedernalis</i> , (Rømer) Meek.....	32
<i>Avicula petrosa</i> , Conrad = <i>Pteria petrosa</i> , (Con.) Meek.....	32
<i>Avicula planisulca</i> , Rømer = <i>Pteria planisulca</i> , (Rømer) Meek.....	32
<i>Avicula subgibbosa</i> , M. & H. = <i>Pteria subgibbosa</i> , (M. & H.) Meek.....	32
<i>Avicula triangularis</i> , E. & S. = <i>Pteria triangularis</i> , (E. & S.) Meek.....	32
<i>Actinoceramus</i> , Meek.....	32
<i>Inoceramus sulcatus</i> , Parkinson = <i>Inoceramus (Actinoceramus) costellatus</i> , Con.....	32
<i>Volsella attenuata</i> , M. & H. = <i>Modiola attenuata</i> , M. & H.....	32
<i>Volsella concentrico-costellata</i> , Rømer = <i>Modiola concentrico-costellata</i> , Rømer.....	32
<i>Volsella cretacea</i> , Con. = <i>Modiola cretacea</i> , Conrad.....	32
<i>Volsella juliae</i> , Lea = <i>Modiola juliae</i> , Lea.....	32
<i>Volsella meekii</i> , Evans & Shumard = <i>Modiola meekii</i> , E. & S.....	32
<i>Volsella pedernalis</i> , Rømer = <i>Modiola pedernalis</i> , Rømer.....	32
<i>Volsella saffordi</i> , Gabb. = <i>Modiola saffordi</i> , Gabb.....	32
<i>Modiola granulato-cancellata</i> , Rømer = <i>Crenella granulato-cancellata</i> , (Rømer) Meek ..	32
<i>Liopistha</i> , Meek.....	32
<i>Cardium elegantulum</i> , Rømer = <i>Papyridea (Liopistha) elegantula</i> , (Rømer) Con.....	32
<i>Corbula</i> sp. ind., Owen = <i>Papyridea (Liopistha) rostrata</i> , Meek.....	33
<i>Cardium ? sancti-sabae</i> , Rømer = <i>Papyridea ? sancti-sabae</i> , (Rømer), Meek.....	33
<i>Cyprina arenaria</i> , M. & H. = <i>Cyrena arenaria</i> , (M. & H.) Meek.....	33
<i>Cyprina humilis</i> , M. & H. = <i>Venilia humilis</i> , (M. & H.) Meek.....	33
<i>Venilia quadrata</i> , Gabb. = <i>Venilia gabbana</i> Meek.....	33

* παλατος, ancient; χαμπη, a caterpillar.

	Page.
<i>Cyprina subtumida</i> , M. & H. = <i>Venilia subtumida</i> , (M. & H.) Meek.....	33
<i>Cyprina laphami</i> , Shumard = <i>Venilia laphami</i> , (Shum.) Meek.....	33
<i>Venus ? circularis</i> , M. & H. = <i>Cyclina ? circularis</i> , (M. & H.) Meek.....	33
<i>Callista eufalensis</i> , Con. = <i>Dione eufalensis</i> , (Con.) Meek.....	33
<i>Cytherea deweyi</i> , M. & H. = <i>Dione Deweyi</i> , (M. & H.) Meek.....	33
<i>Cytherea leonensis</i> , Con. = <i>Dione leonensis</i> , (Con.) Meek.....	33
<i>Cytherea lamarensis</i> , Shum. = <i>Dione lamarensis</i> , (Shumard) Meek.....	33
<i>Cytherea missouriana</i> , Mort. = <i>Dione missouriana</i> , (Morton) Meek.....	33
<i>Cytherea nebrascensis</i> , M. & H. = <i>Dione nebrascensis</i> , M. & H.....	33
<i>Cytherea orbiculata</i> , H. & M. = <i>Dione orbiculata</i> , (H. & M.) Meek.....	33
<i>Cytherea owenana</i> , M. & H. = <i>Dione owenana</i> , (Meek & Hayden) Meek.....	33
<i>Cytherea pellucida</i> , M. & H. = <i>Dione ? pellucida</i> , (M. & H.) Meek.....	33
<i>Cytherea texana</i> , Conrad = <i>Dione texana</i> , (Con.) Meek.....	33
<i>Cytherea tippiana</i> , Conrad = <i>Dione tippiana</i> , (Con.) Meek.....	33
<i>Venus meekiana</i> , Gabb. = <i>Dione [?] meekiana</i> , (Gabb) Meek.....	33
<i>Venus ripleyana</i> , Gabb. = <i>Dione [?] ripleyana</i> , (Gabb) Meek.....	33
<i>Cytherea tenuis</i> , H. & M. = <i>Dione [?] tenuis</i> , (H. & M.) Meek.....	34
<i>Tellina formosa</i> , M. & H. = <i>Abra ? formosa</i> , (M. & H.) Meek.....	34
<i>Solen irradians</i> , Römer = <i>Linearia irradians</i> , (Römer) Meek.....	34
<i>Psammobia cancellato-sculpta</i> , Römer = <i>Linearia cancellato-sculpta</i> , (Römer), Meek ..	34
<i>Cynella</i> , Meek.....	34
<i>Pholadomya undata</i> , M. & H. = <i>Pholadomya (Cynella) undata</i> , (M. & H.).....	34
<i>Leda fibrosa</i> , Evans & Shumard = <i>Neera fibrosa</i> , (E. & S.) Meek.....	34
<i>Goniocasma</i> , Meek.....	34
<i>Xylophaga stimpsoni</i> , M. & H. = <i>Goniocasma stimpsoni</i> , (M. & H.) Meek.....	34
<i>Xylophagella</i> , Meek.....	34
<i>Xylophaga elegantula</i> , M. & H. = <i>Xylophagella elegantula</i> , (M. & H.) Meek.....	34
<i>Ringicula pulchella</i> , Shumard = <i>Cinulia (Arellana) pulchella</i> , (Shum.) Meek.....	34
<i>Actæonina naticoides</i> , Gabb. = <i>Cinulia naticoides</i> , (Gabb) Meek.....	35
<i>Ringicula subpellucida</i> , Shumard = <i>Ringinella subpellucida</i> , (Shum.) Meek.....	35
<i>Ringicula acutispira</i> , Shumard = <i>Ringinella acutispira</i> , (Shum.) Meek.....	35
<i>Actæonina biplicata</i> , Gabb. = <i>Solidula biplicata</i> , (Gabb) Meek.....	35
<i>Scalpellum inequicostatum</i> , Shumard = <i>Anisomyon ? inæquicostatus</i> , (Shum.).....	35
<i>Capulus occidentalis</i> , H. & M. = <i>Tectura ? occidentalis</i> , (H. & M.) Meek.....	35
<i>Phasianella haleana</i> , d'Orbigny = <i>Eutropia haleana</i> , (d'Orb.) Meek.....	35
<i>Phasianella perovata</i> , Shumard = <i>Eutropia perovata</i> , Shumard.....	35
<i>Phasianella punctata</i> , Gabb. = <i>[Eutropia] punctata</i> , Gabb.....	35
<i>Architectonica abotti</i> , Gabb. = <i>Margaritella abotti</i> , (Gabb) Meek.....	35
<i>Solarium abyssinus</i> , Gabb. = <i>Margarita abyssinus</i> , (Gabb) Meek.....	35
<i>Nerita (Nereis) densata</i> , Conrad = <i>Neritella (Nereis) densata</i> , (Con.) Meek.....	35
<i>Natica ambigua</i> , M. & H. = <i>Vanikoro ambigua</i> , (M. & H.) Meek.....	35
<i>Natica tuomeyana</i> , M. & H. = <i>Neritopsis ? tuomeyana</i> , (M. & H.) Meek.....	35
<i>Spirocnema</i> , Meek.....	35
<i>Turbo tenuilineata</i> , M. & H. = <i>Spirocnema tenuilineata</i> , (M. & H.) Meek.....	35
<i>Tuba ? bella</i> , Conrad = <i>Spirocnema bella</i> , (Con.) Meek.....	35
<i>Rostellaria biangulata</i> , M. & H. = <i>Anchura ? biangulata</i> , (M. & H.) Meek.....	35
<i>Aporrhais parva</i> , M. & H. = <i>Anchura ? parva</i> , (M. & H.) Meek.....	35
<i>Aporrhais sublevis</i> , M. & H. = <i>Anchura ? sublevis</i> , (M. & H.) Meek.....	35
<i>Drepanocheilus</i> , Meek.....	35
<i>Rostellaria americana</i> , Evans & Shum. = <i>Anchura (Drepanoch[e]ilus) americana</i> , (Evans & Shumard) Meek.....	35-36
<i>Aporrhais decemlirata</i> , Conrad = <i>Anchura (Drepanoch[e]ilus) decemlirata</i> , (Con.) Meek.....	36
<i>Rostellaria nebrascensis</i> , Evans & Shumard = <i>Anchura (Drepanoch[e]ilus) nebrascensis</i> , (E. & S.) Meek.....	36
<i>Rostellaria rostrata</i> , Gabb. = <i>Anchura (Drepanoch[e]ilus) rostrata</i> , (Gabb) Meek.....	36
<i>Isopleura</i> , Meek.....	36
<i>Rimella curvilinearata</i> , Conrad = <i>Isopleurus curvilinearatus</i> , (Con.) Meek.....	36
<i>Chemnitzia meekiana</i> , Gabb. = <i>Isopleurus meekianus</i> , (Gabb) Meek.....	36
<i>Pterocerella</i> , Meek.....	36
<i>Harpago tippiana</i> = <i>Pterocerella tippiana</i> , (Con.) Meek.....	36
<i>Chemnitzia</i> , Conrad, 1860 (not d'Orb) = <i>Chemnitzia corona</i> (Con.), Meek.....	36
<i>Scalaria texana</i> , Römer = <i>Chemnitzia ? texana</i> , (Römer) Meek.....	36
<i>Scalaria forshayii</i> , Shumard = <i>Scala forshayii</i> , (Shumard) Meek.....	36
<i>Natica acutispira</i> , Shumard = <i>Lunatia ? acutispira</i> , (Shumard) Meek.....	36
<i>Volutilithes bella</i> , Gabb. = <i>Rostellites bellus</i> , (Gabb) Meek.....	36

	Page.
<i>Volutilithes buplicata</i> , Gabb.= <i>Rostellites buplicatus</i> , (Gabb) Meek	36
<i>Volutilithes conradi</i> , Gabb.= <i>Rostellites conradi</i> , (Gabb) Meek	36
<i>Volutilithes nasuta</i> , Gabb.= <i>Rostellites nasutus</i> , (Gabb), Meek	36
<i>Trachytriton</i> , Meek	37
<i>Fusus</i> ? <i>vinculum</i> , H. & M.= <i>Trachytriton vinculum</i> , (H. & M.) Meek	37
<i>Pleurotomaria texana</i> , Shumard = <i>Turris texanus</i> , (Shumard) Meek	37
<i>Piestochilus</i> , Meek, n. g. 1864	37
<i>Fusus scarboroughi</i> , M. & H.= <i>Clavellithes (Piestochilus) scarboroughi</i> , (M. & H.) Meek	37
<i>Fusus vaughani</i> , M. & H.= <i>Cantharus</i> ? <i>vaughani</i> , (M. & H.) Meek	37
<i>Fusus</i> ? <i>flexicostatus</i> , M. & H.= <i>Pyrifusus</i> ? <i>flexicostatus</i> , (M. & H.) Meek	37
<i>Fusus haleanus</i> , d'Orbigny = <i>Pyrifusus</i> ? <i>haleanus</i> , (d'Orb.) Meek	37
<i>Neptunea impressa</i> , Gabb.= <i>Pyrifusus</i> ? <i>impressus</i> , (Gabb) Meek	37
<i>Fusus intertextus</i> , M. & H.= <i>Pyrifusus intertextus</i> , (M. & H.) Meek	37
<i>Fusus newberryi</i> , M. & H.= <i>Pyrifusus newberryi</i> , (M. & H.) Meek	37-38
<i>Fusus subturritus</i> , M. & H.= <i>Pyrifusus subturritus</i> , (M. & H.) Meek	38
<i>Fusus</i> ? <i>tenuilineatus</i> , H. & M.= <i>Tritonifusus</i> ? <i>tenuilineatus</i> , (H. & M.) Meek	38
<i>Pleurotomaria mullicaensis</i> , Gabb = <i>Fusus mullicaensis</i> , Gabb.	38
<i>Pyrrula bairdi</i> , M. & H.= <i>Tudicla (Pyropsis) bairdi</i> , (M. & H.) Meek	38
<i>Fusus</i> ? <i>dakotensis</i> , M. & H.= <i>Tudicla</i> ? <i>dakotensis</i> , (M. & H.) Meek	38
<i>Hamites leai</i> , Troost = <i>Ptychoceras leai</i> , (Troost) Meek	38
<i>Hamites verneuili</i> , Troost = <i>Ptychoceras verneuili</i> , (Troost) Meek	38
<i>Turritiles</i> sp. undt. = <i>Heteroceras oweni</i> , Meek	38
<i>Helicoceras tortum</i> , M. & H.= <i>Heteroceras tortum</i> , (M. & H.) Meek	38
<i>Helicoceras</i> ? <i>angulatum</i> , M. & H.= <i>Heteroceras</i> ? <i>angulatum</i> , (M. & H.) Meek	38
<i>Turritiles cheyennensis</i> , M. & H.= <i>Heteroceras</i> ? <i>cheyennensis</i> , (M. & H.) Meek	38
<i>Nautilus orbiculatus</i> , Tuomey = ? <i>Aturia orbiculata</i> , (Tuomey) Meek	38
<i>Belemnites paxillosa</i> , Lamarck = <i>Belemnitella paxillosa</i> , (Lamarck) Meek	38
<i>Vermetus rotula</i> , Morton = <i>Spirulæa rotula</i> , (Morton) Meek	38

JURASSIC.

<i>Camptonectes</i> , Agassiz, MSS. [1864]	39
<i>Pecten bellistriatus</i> , Meek = <i>Camptonectes bellistriatus</i> , Meek	39
<i>Pecten extenuatus</i> , M. & H.= <i>Camptonectes</i> ? <i>extenuatus</i> , (M. & H.) Meek	39
<i>Avicula</i> ? <i>curta</i> , Hall = <i>Eumicrotis curta</i> , (Hall) Meek	39
<i>Oxytoma</i> , Meek	39
<i>Avicula munsteri</i> , Brown = <i>Pteria (Oxytoma) munsteri</i> , (Brown?) Meek	39
<i>Modiola pertenuis</i> , M. & H.= <i>Volsella pertenuis</i> , (M. & H.) Meek	40
<i>Modiola (Perna) formosa</i> , M. & H.= <i>Volsella formosa</i> , (M. & H.) Meek	40
<i>Venus unionides</i> , Rømer = <i>Myacites unionoides</i> , (Rømer) Meek	40
<i>Neritina nebrascensis</i> , Meek = <i>Neritella nebrascensis</i> , M. & H.	40
<i>Lioplacodes</i> , Meek	40
<i>Melania (Potadoma) veterna</i> , M. & H.= <i>Lioplacodes veterna</i> , (M. & H.) Meek	40

46.

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

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

MIOCENE.

	Page.
<i>Columnaria</i> ? <i>serradiata</i> , Lonsdale = <i>Septastrea</i> (?) <i>serradiata</i> , (Lonsd.) Meek	25
<i>Lithodendron lineata</i> , Conrad = <i>Cladocora</i> (?) <i>lineata</i> , (Con.) Meek	25
<i>Orbicula lugubris</i> , Conrad = <i>Discina lugubris</i> , (Con.) Meek	25
<i>Orbicula multilineata</i> , Conrad = <i>Discina multilineata</i> , (Con.) Meek	25
<i>Terebratula nitens</i> , Conrad = <i>Rhynchonella nitens</i> , (Con.) Meek	25
<i>Hinnites giganteus</i> , Gray = <i>Hinnites crassis</i> , Conrad	26
<i>Janira affinis</i> , Tuomey & Holmes = <i>Pecten affinis</i> , (T. & H.) Meek	26
<i>Janira bella</i> , Conrad = <i>Pecten bella</i> , (Con.) Meek	26
<i>Amussium propatulum</i> = <i>Pecten propatulus</i> , Conrad	26
<i>Nucula impressa</i> , Conrad = <i>Yoldia impressa</i> , (Con.) Meek	27
<i>Leda willamettensis</i> , Shumard = <i>Nuculana willamettensis</i> , (Shum.) Meek	27
<i>Nucula penita</i> , Conrad = <i>Nuculana penita</i> , (Con.) Meek	27
<i>Leda oregona</i> , Shumard = <i>Nuculana oregona</i> , (Shum.) Meek	27

	Page.
<i>Nucula divaricata</i> , Conrad = <i>Nucula (Acila) Conradi</i> , Meek	27
<i>Pectinocyclus nitens</i> , Conrad = <i>Limopsis nitens</i> , (Con.) Meek	27-28
<i>Arca canalis</i> , Conrad = <i>Anadara ? canalis</i> , (Con.) Meek	28
<i>Arca congesta</i> , Conrad = <i>Anadara ? congesta</i> , (Con.) Meek	28
<i>Arca incile</i> , Say = <i>Anadara incile</i> , (Say) Meek	28
<i>Arca microdonta</i> , Conrad = <i>Anadara microdonta</i> , (Con.) Meek	28
<i>Anomalocardia trigintinaria</i> , Conrad = <i>Anadara trigintinaria</i> , (Con.) Meek	28
<i>Arca protracta</i> , H. D. & W. B. Rogers = <i>Anadara protracta</i> , (Rogers) Meek	28
<i>Arca trilineata</i> , Conrad = <i>Anadara trilineata</i> , (Con.) Meek	28
<i>Avicula multangula</i> , H. C. Lea = <i>Pteria ? multangula</i> , (H. C. Lea) Meek	28
<i>Perna montana</i> , Conrad = <i>Melina montana</i> , (Con.) Meek	28
<i>Perna t[er]ta</i> , Say = <i>Melina torta</i> , (Say) Meek	28
<i>Modiola contracta</i> , Conrad = <i>Volbella contracta</i> , (Conrad) Meek	28
<i>Modiola spinigyr</i> , H. C. Lea = <i>Volbella ? spinigera</i> , (H. C. Lea) Meek	28
<i>Modiola ducatelli</i> , Conrad = <i>Volbella ducatelli</i> , (Conrad) Meek	28
<i>Mytilus inflatus</i> , Tuomey & Holmes = <i>Volbella inflata</i> , (T. & H.) Meek	28
<i>Cardita abbreviata</i> , Conrad = <i>Venericardia (Pteromeris) abbreviata</i> , (Con.) Meek	28
<i>Cardita radians</i> , Conrad = <i>Venericardia (Pteromeris) radians</i> , (Con.) Meek	29
<i>Cardita carinata</i> , Emmons = <i>Venericardia (Cardiocardites) carinata</i> , (Emm.) Meek	29
<i>Cardita subenta</i> , Conrad = <i>Venericardia (Cardiocardites) sub[en]ta</i> , (Con.) Meek	29
<i>Cardita monilicosta</i> , Gabb. = <i>Venericardia (Cardiocardites) monilicosta</i> , (Gabb.) Meek	29
<i>Cardita occidentalis</i> , Conrad = <i>Venericardia (Cardiocardites) occidentalis</i> , (Con.) Meek	29
<i>Lucina occidentalis</i> , Conrad	29
<i>Cyclus permacra</i> , Conrad = <i>Lucina permacra</i> , (Con.) Meek	29
<i>Venus bisecta</i> , Conrad = <i>Thyatira ? bisecta</i> , (Conrad) Meek	29-30
<i>Isoecardia fraterna</i> , Say = <i>Glossus fraterna</i> , (Say) Meek	30
<i>Isoecardia markoi</i> , Conrad = <i>Glossus markoei</i> , (Conrad) Meek	30
<i>Cardium modestum</i> , Conrad = <i>Cardium (Cerastoderma) modestum</i> , Conrad	30
<i>Venus (Trigona) tantilla</i> , Gould = <i>Psephis tantilla</i> , (Gould) Gabb	30
<i>Venus athleta</i> , Conrad = <i>Chione (Lirophora) athleta</i> , (Con.) Meek	30
<i>Venus alveata</i> , Conrad = <i>Chione (Lirophora) alveatus</i> , (Con.) Meek	30
<i>Venus latilirata</i> , Conrad = <i>Chione (Lirophora) latilirata</i> , (Con.) Meek	30
<i>Venus angustifrons</i> , Conrad = <i>Dione angustifrons</i> , (Con.) Meek	30
<i>Venus brevilineata</i> , Conrad = <i>Dione ? brevilineata</i> , (Con.) Meek	30
<i>Meretrix decisa</i> , Conrad = <i>Dione decisa</i> , (Conrad) Meek	30
<i>Cytherea oregonensis</i> , Conrad = <i>Dione oregonensis</i> , (Con.) Meek	30
<i>Meretrix tularana</i> , Conrad = <i>Dione tularana</i> , (Con.) Meek	30
<i>Meretrix unioimeris</i> , Conrad = <i>Dione unioimeris</i> , (Con.) Meek	30
<i>Cytherea vespertina</i> , Conrad = <i>Dione vespertina</i> , (Con.) Meek	30
<i>Solemya protecta</i> = <i>Donax protecta</i> , Conrad	30
<i>Glycymeris estrellanus</i> , Conrad = <i>Panopea estrellana</i> , (Con.) Meek	30
<i>Solen eurtus</i> , Conrad = <i>Ensis eurtus</i> , (Conrad) Meek	31
<i>Bulla petrosa</i> , Conrad = <i>Cylichna petrosa</i> , (Conrad) Meek	31
<i>Tornatella elliptica</i> , Trask = <i>Acteon ellipticus</i> , (Trask) Meek	31
<i>Helonyx thallus</i> , (Conrad) Meek = <i>Dentalium thallus</i> , Conrad	31
<i>Diodora crucibuliformis</i> , Conrad = <i>Cemoria crucibuliformis</i> , Conrad	31
<i>Narica diegoana</i> , Conrad = <i>Vanikoro diegoana</i> , (Con.) Meek	31
<i>Crepidula praeupta</i> , Conrad = <i>Crypta praeupta</i> , (Con.) Meek	31
<i>Turbo glabra</i> , H. C. Lea = <i>Viviparus glaber</i> , (H. C. Lea) Meek	31
<i>Natica inezana</i> , Conrad = <i>Natica inezana</i> , Conrad	31
<i>Sinum scopulosum</i> , Meek ? = <i>Sigaretus scopulosus</i> , Conrad	31-32
<i>Sycotypus ocyanus</i> , Conrad = <i>Ficus [?] ocyanus</i> , (Conrad) Meek	32
<i>Pyruia modesta</i> , Conrad = <i>Ficus modestus</i> , (Conrad) Meek	32
<i>Olivia ancillariaformis</i> , H. C. Lea = <i>Olivella ancillariaformis</i> , (H. C. Lea) Meek	32
<i>Fusus Oregonensis</i> , Conrad = <i>Busyon ? Oregonensis</i> , (Conrad) Meek	32
<i>Colus aretatus</i> , Conrad = <i>Fusus aretatus</i> , (Conrad) Meek	32
<i>Fusus migrans</i> , Conrad = <i>Tritonifusus migrans</i> , (Con.) Meek	32
<i>Nautilus angustatus</i> , Conrad = ? <i>Aturia angustatus</i> , (Con.) Meek	32

47.

MEEK, F. B. Note on *Bellinurus Danæ*, 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 danæ*, 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. xlii, 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:

	Page.
<i>Serpula (Spirorbis) planorbites</i> , Münster.....	177
<i>Euomphalus rugosus</i> , Hall.....	177
<i>Spirorbis helix</i> , King.....	178
<i>Murchisonia subtoeniata</i> , Geinitz.....	178
<i>Orthonema subtoeniata</i> , Geinitz, sp.....	178
<i>Bellerophon interlineatus</i> , Portlock.....	178
<i>Bellerophon marcouanus</i> , Geinitz.....	178
<i>Macrochilus pallianus</i> , Geinitz.....	178
<i>Allorisma elegans</i> , King.....	178
<i>Solenomya biarmica</i> , de Verneuil.....	178-179
<i>Astarte gibbosa</i> , McCoy.....	179
<i>Astarte nebrascensis</i> , Geinitz.....	179
<i>Astarte mortonensis</i> , Geinitz.....	179
<i>Astarte vallisnerianus</i> , King.....	179
<i>Schizodus obscurus</i> , Sowerby.....	179
<i>Schizodus rossicus</i> , de Verneuil.....	179
<i>Arca striata</i> , Schlotheim.....	179-180
<i>Macrodon tenuistriata</i> , M. & W.....	179-180
<i>Nucula kazanensis</i> , de Verneuil.....	180
<i>Leda bellistriata</i> , Stevens.....	180
<i>Nucula beyrichi</i> , Schlotheim.....	180
<i>Olidophorus pallasi</i> , M. V. & King.....	180-181
<i>Olidophorus (Pleurophorus) simplex</i> , Keyserling.....	181
<i>Pleurophorus subcuneatus</i> , M. & H.....	181
<i>Olidophorus solenoides</i> , Geinitz.....	181
<i>Aucella Hausmanni</i> (Goldf.), Geinitz.....	182
<i>Myalina swallowi</i> , McChesney.....	182
<i>Mytilus concavus</i> ? (Swallow), Geinitz.....	182
<i>Myalina perattenuata</i> (M. & H.), Geinitz.....	182
<i>Myalina subquadrata</i> (Shumard), Geinitz.....	182
<i>Avicula speluncaria</i> (Schlotheim), Geinitz.....	182
<i>Monotis hawni</i> , M. & H.....	182
<i>Pseudomonotis hawni</i> , M. & H.....	182
<i>Pseudomonotis sinuata</i>	182
<i>Avicula pinniformis</i> , Geinitz.....	182
<i>Gervillia parea</i> (M. & H.), Geinitz.....	182-183
<i>Gervillia longa</i> , Geinitz.....	183
<i>Gervillia (avicula) sulcata</i> , Geinitz.....	183
<i>Pecten neglectus</i> , Geinitz.....	183
<i>Pecten Missouriensis</i> ? (Shumard), Geinitz.....	183
<i>Pecten hawni</i> , Geinitz.....	183
<i>Pecten broadheadii</i> , Swallow.....	183
<i>Aviculopecten hawni</i>	183

	Page.
<i>Rhynchonella angulata</i> , (Linnaeus), Geinitz.....	183
<i>Cannaropharia globulina</i> , (Phillips), Geinitz.....	183
<i>Rhynchonella uta</i> , Marcon.....	183
<i>Retzia mormonii</i> (Marcon sp.), Geinitz.....	184
<i>Athyris subtilita</i> , Hall.....	184
<i>Spirifer moosakpaliensis</i> , Davidson.....	184
<i>Spirifer cameratus</i> (Morton), Geinitz.....	184
<i>Spirifer laminosus</i> (McCoy), Geinitz.....	184
<i>Spiriferina kentuckensis</i> , Shumard.....	184
<i>Orthisina missouriana</i> , Swallow.....	185
<i>Plicatula striato-costata</i> , Cox.....	185
<i>Productus horrescens</i>	185
<i>Productus rogersii</i>	185
<i>Productus nebrascensis</i> , Owen.....	185
<i>Productus flemingii</i>	185
<i>Productus prattenianus</i> , Norwood.....	185
<i>Productus koninckianus</i> (de Verneuil), Geinitz.....	185
<i>Productus cancerini</i> (de Verneuil), Geinitz.....	186
<i>Productus orbignianus</i> (de Koninck), Geinitz.....	186
<i>Productus longispinus</i> , Sowerby.....	186
<i>Productus horridus</i> (Sowerby), Geinitz.....	186
<i>Chonetes mucronata</i> (M. & W.), Geinitz.....	186
<i>Chonetes glabra</i> , Geinitz.....	186
<i>Cyathocrinus ramosus</i> (Schlotheim), Geinitz.....	186
<i>Cyathocrinus inflexus</i> , Geinitz.....	186
<i>Potriocrinus hemisphericus</i> , Shumard.....	186
<i>Eoeidaris hallianus</i> , Geinitz.....	187
<i>Polypora marginata</i> (McCoy), Geinitz.....	187
<i>Polypora biarmica</i> (Keyserling), Geinitz.....	187
<i>Syncladia virgulacea</i> (Phillips), Geinitz.....	187
<i>Aviculopinna pinniformis</i>	282
<i>Aviculopinna Americana</i> , n. s., Meek, 1867.....	283
<i>Cyathaxonia</i>	328
<i>Allorisma elegans</i> , King.....	328
<i>Schizodus rossicus</i> , de Verneuil.....	328
<i>Aucella hausmanni</i> , Goldf.....	329
<i>Spirifer laminosus</i> , McCoy.....	329
<i>Lima retifera</i> , Shumard.....	329
<i>Stenophora columnaris</i> , Schlot., sp.....	329-330
<i>Syncladia virgulacea</i> , Geinitz, not Phillips.....	330
<i>Syncladia biserialis</i> , Swallow.....	330

51.

MEEK, F. B. Note on the genus Palæacis, Haime, 1860 (=Sphenopoterium, M. & W., 1866.) <Am. Journ. Sci., vol. xlv, 2d ser., pp. 419, 420. 1867. New Haven, 1867.

The author here takes the view that Sphenopoterium, originally published in the Illinois Geol. Reports, is identical with Palæacis.

	Page.
<i>Palæacis obtusa</i> , M. & W.....	419-420
<i>Palæacis unbonata</i> , Seebach.....	420
<i>Palæacis cymbia</i> , Seebach.....	420

52.

MEEK, F. B. Fossils from the west coast of Kennedy Channel. <Hayes's "Open Polar Ocean," London, 1867, p. 34L.

Describes various fossils collected by Dr. Hayes on the west coast of Kennedy's Channel, from deposits of lower Heldberg age. *Zaphrentis hayesi* and *Loxonema ? kanci* are described as new species. A preliminary notice appeared in Am. Journ. Sci. and Arts, ser. 2, vol. xl, pp. 31-34. New Haven, 1865.

For list of species see entry number 33, p. 36.

53.

MEEK, F. B. Preliminary notice of a remarkable new genus of corals, probably typical of a new family; forwarded for study by Prof. J. D. Whitney, from the Silurian rocks of Nevada Territory. <Am. Journ. Sci., vol. xlv, 2d ser., pp. 62-64. 1868. New Haven.

	Page.
<i>Ethmophyllum</i> , n. g., Meek, 1868.....	62-64
<i>Ethmophyllum whitneyi</i> , n. s., Meek, 1868	64
<i>Ethmophyllum gracile</i> , n. s., ? Meek, 1868.....	64

54.

MEEK, F. B. Note on the shell-structure and family affinities of the genus *Aviculopecten*. <Am. Journ. Sci., vol. xlv, 2d ser., pp. 64, 65. 1868. New Haven, 1868.

The author shows that by the shell-structure the *Aviculopectens* are allied to *Avicula* rather than to *Pecten*.

55.

MEEK, F. B., and WORTHEN, A. H. Preliminary notice of a Scorpion, a *Eurypterus*? and other fossils, from the Coal-measures of Illinois. <Am. Jour. Sci., vol. xlv, 2d ser., pp. 19-28. 1868. New Haven, 1868.

Afterward fully described and illustrated in one of the Illinois Geological Reports, vol. iii.

	Page.
<i>Eurypterus (Anthraconectes) mazonensis</i> , n. s., M. & W., 1868.....	19-21
<i>Adelopthalmus mazonensis</i> ?	22
<i>Ceratiocaris</i> ? <i>sinuatus</i> , n. s., M. & W., 1868.....	22
<i>Buthus</i> ? <i>carbonarius</i> , n. s., M. & W., 1868	22-24
<i>Scorpio carbonarius</i> , n. s., M. & W., 1868.....	22-24
<i>Eoscorpius</i> , n. g.? M. & W., 1868.....	24-25
<i>Euphoberia</i> , n. g., M. & W., 1868.....	25-26
<i>Euphoberia armigera</i> , n. s., M. & W., 1868.....	26
<i>Euphoberia major</i> , n. s., M. & W., 1868.....	26
<i>Acanthotelson</i>	27-28
<i>Acanthotelson eveni</i> , n. s., M. & W., 1868.....	28
<i>Paleocaris</i>	28
<i>Gampsonyx</i>	28
<i>Anthracerpes</i>	28

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MEEK, F. B. Note on *Ethmophyllum* and *Archeocyathus*. <Am. Journ. Sci., vol. xlv, 2d ser., p. 144. 1868. New Haven, 1868.

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	Page.
<i>Synbathocrinus</i> , Phillips	323
<i>Goniasteroidocrinus</i> , Lyon & Casseday.....	323-324
<i>Cyathocrinus</i> , Miller	324-325
Convoluted support of the digestive sack, in the <i>Actinocrinidæ</i>	325-327
Ambulacral canals passing under the vault of the <i>Actinocrinidæ</i>	327-334

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	Page.
<i>Cyathocrinites</i> , Miller.....	336-337
<i>Cyathocrinites fragilis</i> , n. s., M. & W., 1868.....	337
<i>Cyathocrinites tenuidactylus</i> , n. s., M. & W., 1868.....	337-338
<i>Barycrinus</i> , [*] n. g., Wachsmuth MS.....	338-340
<i>Barycrinus magnificus</i> , n. s., M. & W., 1868.....	340-341
<i>Barycrinus hoveyi</i> var. <i>herculeus</i> , M. & W., 1868.....	341
<i>Nipterocrinus</i> , [†] n. g., Wachsmuth, MS.....	341-342
<i>Nipterocrinus wachsmuthi</i> , n. s., M. & W., 1868.....	342-343
<i>Catillocrinus</i> , Troost.....	343
<i>Catillocrinus bradleyi</i> , n. s., M. & W., 1868.....	343
<i>Dichocrinus</i> , Munster.....	343
<i>Dichocrinus expansus</i> , n. s., M. & W., 1868.....	343-344
<i>Dorycrinus</i> , Rømer.....	344-345
<i>Dorycrinus romeri</i> , n. s., M. & W., 1868.....	346
<i>Dorycrinus quinquelobus</i> , var. <i>intermedius</i> , M. & W., 1866.....	346-347
<i>Amphoracrinus</i> , Austin.....	347-348
<i>Amphoracrinus divergens</i> , Hall, sp., 1860.....	348-349
<i>Batocrinus</i> , Casseday.....	349-352
Subgenus <i>Eretmocrinus</i> , Lyon & Casseday.....	351
Subgenus <i>Alloprosallocrinus</i> , Casseday & Lyon.....	352
<i>Batocrinus quasillus</i> , n. s., M. & W., 1868.....	352-353
<i>Batocrinus casedayanus</i> , n. s., M. & W., 1868.....	353-354
<i>Batocrinus trochiscus</i> , n. s., M. & W., 1868.....	354-355
<i>Batocrinus</i> (<i>Eretmocrinus</i>) <i>neglectus</i> , n. s., M. & W., 1868.....	355-356
<i>Pentremites</i> , Say.....	356
<i>Pentremites</i> (<i>Troostocrinus</i> ?) <i>woodmani</i> , n. s., M. & W., 1868.....	356
<i>Agelacrinites</i> Vanuxem.....	357
<i>Agelacrinites</i> (<i>Lepidodiscus</i>) <i>squamosus</i> , n. s., M. & W., 1868.....	357-358
<i>Echinoidea</i>	358
<i>Oligoporus</i> , M. & W.....	358
<i>Oligoporus nobilis</i> , n. s., M. & W., 1868.....	358-359

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Silurian, Devonian, and Carboniferous.

LOWER SILURIAN SPECIES.

	Page.
<i>Radiata</i>	291
<i>Echinodermata</i>	291
<i>Cystoidea</i>	291
<i>Comarocystites</i> , Billings, 1854.....	291
<i>C. shumardi</i> , M. & W., 1865, fig. —, p. 292, and pl. i, figs. 1 <i>a, b</i>	292-294
<i>C. shumardi</i> , var. <i>obconicus</i> , M. & W., 1865, pl. i, figs. 2 <i>a, b</i>	294
<i>Mollusca</i>	294
<i>Lamellibranchiata</i>	294
<i>Modiolopsis</i> , Hall, 1847.....	294
<i>M. modioliformis</i> , n. s., M. & W., 1868, pl. i, figs. 7 <i>b</i> and 8.....	294-295
<i>M. orthonota</i> , n. s., M. & W., 1868, pl. i, fig. 7 <i>a</i>	295-296
<i>Cypriocardites</i> , Conrad, 1841.....	297
<i>Vanuxemia</i> , Billings, 1858.....	297
<i>V. ? dizionensis</i> , M. & W., 1866, pl. i, figs. 5 <i>a, b</i>	297-298

* βαρύς, heavy; κρίνον, a lily.

† νιπτήρ, a washing vessel; κρίνον, a lily.

Page.

<i>Cephalopoda</i>	298
<i>Orthoceras</i> , Auct	298
<i>O. (Ormoceras) backii</i> , Stokes? 1837, pl. i, fig. 4	298-299
<i>Articulata</i> :	
<i>Crustacea</i>	299
<i>Lichas</i> , Dalman, 1827	299
<i>L. cucullus</i> , M. & W., 1865	299-300
FOSSILS OF THE GALENA BEDS.	
<i>Protozoa</i>	301
<i>Receptaculites</i> , DeFrance, 1827	301
<i>R. globularis</i> , Hall, 1861, pl. ii, figs. 2 <i>a, b</i>	301
<i>R.</i> ——— ? pl. ii, figs. 1 <i>a, b</i>	301-302
<i>R. oweni</i> , Hall, 1861, pl. ii, fig. 3	302-303
<i>Radiata</i>	304
<i>Zoophyta</i>	304
? <i>Chaetetes</i> , Fischer, 1837	304
<i>C. petropolitanus</i> , Pander ? sp., 1830, pl. ii, figs. 8 <i>a, b</i>	304-305
<i>Mollusca</i>	305
<i>Brachiopoda</i>	305
<i>Lingula</i> , Brugiere, 1792	305
<i>L. quadrata</i> , Eichwald, 1829, pl. ii, fig. 4 <i>a-c</i>	305-306
<i>Lamellibranchiata</i>	306
<i>Ambonychia</i> , Hall, 1847	306
<i>A. intermedia</i> , n. s., M. & W., 1868, pl. ii, figs. 5 <i>a, b</i>	306-307
<i>Tellinomya</i> , Hall, 1847 (not <i>Tellinya</i> , Brown, 1827= <i>Tellinomya</i> , Agassiz, 1846)	307
<i>T. ventricosa</i> , Hall, 1861, pl. ii, figs. 7 <i>a, b, c</i>	307-308
<i>T. alta</i> , Hall, 1861, pl. ii, figs. 6 <i>a, b</i>	309
<i>Cypriocardites</i> , Conrad, 1841	309-310
<i>C.</i> ——— ? pl. iii, figs. 9 <i>a, b, c, d</i>	311
<i>C. obliquus</i> , n. s., M. & W., 1868, pl. ii, figs. 9 <i>a, b</i>	311-312
<i>Gastropoda</i>	312
<i>Bellerophon</i> , Montfort, 1808	312
<i>B. (Bucania?) platystoma</i> , n. s., M. & W., 1868, pl. iii, figs. 8 <i>a, b</i>	312-313
<i>Ophileta</i> , Vanuxem, 1842	313
<i>O. owenana</i> , n. s., M. & W., 1868, pl. iii, figs. 6 <i>a, b</i>	313-314
<i>Trochonema</i> , Salter, 1857	314
<i>T. umbilicata</i> , Hall? sp., 1847, pl. iii, figs. 5 <i>a, b</i>	314-315
<i>Raphistoma</i> , Hall, 1847	316
<i>R. lenticularis</i> , Conrad, sp., 1842, pl. iii, figs. 7 <i>b, (a, c?)</i>	316-317
<i>Murchisonia</i> , d'Archiac & d'Verneuil, 1841	317
<i>M. bicincta</i> , Hall? 1847, pl. iii, fig. 4	317-318
<i>Cephalopoda</i>	318
<i>Orthoceras</i> , Auct	318
<i>O. anellum</i> , Conrad, 1843, pl. iii, fig. 3	318-320
<i>Articulata</i>	320
<i>Crustacea</i>	320
<i>Ilænus</i> , Dalman, 1826	320
<i>I. taurus</i> , Hall, 1861, pl. iii, fig. 2	320-322
<i>I. crassicauda</i> , Wahlenb. ?? 1821, pl. iii, figs. 1 <i>a, b</i>	322-323
FOSSILS OF THE CINCINNATI GROUP.	
<i>Radiata</i>	324
<i>Echinodermata</i>	324
<i>Crinoidea</i>	324
<i>Heterocrinus</i> , Hall, 1847	324
<i>H. crassus</i> , M. & W., 1865, pl. iv, figs. 1 <i>a, b, c</i>	324-325
<i>H. subcrassus</i> , M. & W., 1865, pl. iv, figs. 5 <i>a-d</i>	325-326
<i>Hyboerinus</i> , Billings, 1866	327
Subgenus <i>Anomalocrinus</i> , M. & W.	328
<i>Hyboerinus? incurvus</i> , M. & W., 1865, pl. iv, fig. 3 <i>a, b</i> , and p. 327, fig. —	327-329
<i>Porocrinus</i> , Billings, 1856	329-330
<i>P. crassus</i> , M. & W., 1865, p. 330, fig. <i>a, b</i> , and pl. iv, figs. 2 <i>a, b</i>	330-332
<i>P. pentagonius</i> , M. & W., 1865, pl. i, fig. 3	332-333
<i>Dendrocrinus</i> , Hall, 1852	333
<i>D. oswegöensis</i> , n. s., M. & W., 1868, p. 333, fig. —, and pl. iv, fig. 4	333-334

	Page.
<i>Mollusca</i>	335
<i>Brachiopoda</i>	335
<i>Strophomena</i> , Rafinesque, 1820?	335
<i>S. uncostata</i> , n. s., M. & W., 1868, pl. iv, figs. 11 a, b.	335-337
<i>Lamellibranchiata</i>	337
<i>Ambonychia</i> , Hall, 1847	337
Subgenus <i>Megaptera</i> , M. & W., 1866	337
<i>Megaptera casei</i> , M. & W., 1866, pl. iv, figs. 9 a, b.	337-338
<i>Dolabra</i> , McCoy, 1844	339
<i>D. sterlingensis</i> , M. & W., 1866, pl. iv, figs. 10 a, b, c.	339-340
<i>Gasteropoda</i>	340
<i>Cyrtolites</i> , Conrad, 1838	340
<i>C. imbricatus</i> , n. s., M. & W., 1868, pl. iv, fig. 12.	340-341
<i>Pteropoda</i>	341
<i>Tentaculites</i> , Schlotheim, 1820	341
<i>T. tenuistriatus</i> , M. & W., 1865, pl. iv, figs. 7 a, b	341-342
<i>T. oswegoensis</i> , M. & W., 1865, pl. iv, fig. 6 a	342-343
<i>T. sterlingensis</i> , M. & W., 1865, pl. iv, fig. 8	343

UPPER SILURIAN SPECIES.

FOSSILS OF THE NIAGARA GROUP.

<i>Protozoa</i>	344
<i>Spongiae</i>	344
<i>Astylospongia</i> , Rømer	344
<i>A. ? christiani</i> , n. s., M. & W., 1868, pl. v, figs. 3 a, b, c.	344-345
<i>Pasceolus</i> , Billings, 1853	345
<i>P. ? dactylioides</i> , Owen, sp., 1844, pl. v, figs. 2 a, b, c	345-346
<i>Radiata</i>	347
<i>Echinodermata</i>	347
<i>Saccoerinus</i> , Hall, 1852	347
<i>S. christyi</i> , Hall? sp., 1863, pl. v, fig. 1	347-349
<i>Mollusca</i>	349
<i>Brachiopoda</i>	349
<i>Hemipronites</i> , Pander, 1830	349
<i>H. subplanus</i> , Conrad? sp., 1842, pl. vi, figs. 6 a, b.	349-351
<i>Obolus</i> , Eichwald, 1829	351
<i>O. [Trimerella] conradi</i> , Hall, 1868, pl. v, figs. 7 a, b.	351-352
<i>Centronella</i> , Billings, 1859	352
<i>C. billingsiana</i> , n. s., M. & W., 1868, p. 352, figs. a-c, and pl. vi, figs. 5 a-c.	352-353
<i>Meristella</i> , Hall, 1860	354
<i>Meristella</i> ? sp., pl. vi, figs. 4 a, b	354
<i>Lamellibranchiata</i>	354
<i>Pterinea</i> , Goldfuss, 1832	354
<i>P. thebesensis</i> , n. s., M. & W., 1868, page 354, fig. —, and pl. vi, fig. 3	354-355
<i>Ambonychia</i> , Hall, 1847	356
<i>A. acutirostris</i> , Hall? 1865, pl. v, figs. 8 a, b, and 9 c.	356-357
<i>Amphicælia</i> , Hall, 1864	357-358
<i>A. neglecta</i> , McChesney, 1861, pl. v, figs. 9 a, b (not c)	358-359
<i>Gasteropoda</i>	359
<i>Pleurotomaria</i> , DeFrance, 1824	359
<i>P. casti</i> , n. s., M. & W., 1868, pl. v, fig. 5	359-360
<i>P. cyclonemoides</i> , n. s., M. & W., 1868, pl. v, fig. 4	360-361
<i>Subulites</i> (Conrad), Emmons, 1842	361-362
<i>S. (Polypheopsis) brevis</i> , Winchell & Marcy, 1865, pl. v, fig. 6	352-363
<i>Articulata</i>	363
<i>Crustacea</i>	363
<i>Dalmanites</i> , Anct	363
<i>D. danæ</i> , M. & W., 1865, pl. vi, fig. 1 a-f	363-367

FOSSILS OF THE LOWER HELDENBERG GROUP.

<i>Radiata</i>	368
<i>Zoophyta</i>	368
<i>Striatopora</i> , Hall, 1852	368-369
<i>S. missouriensis</i> , n. s., M. & W., 1868, pl. vii, fig. 4	369-370
<i>Echinodermata</i>	370

Page.

<i>Edriocrinus</i> , Hall, 1859.....	370
<i>E. poeilliformis</i> , Hall, 1859, pl. vii, figs. 5 <i>a</i> , <i>b</i>	370-371
<i>Mollusca</i>	371
<i>Brachiopoda</i>	371
<i>Orthis</i> , Dalman, 1828.....	371
<i>O. hybrida</i> , Sowerby ? 1839, pl. vii, figs. 7 <i>a-d</i>	371-372
<i>O. subcarinata</i> , Hall, 1857, pl. vii, figs. 6 <i>a-d</i>	373-374
<i>Strophomena</i> , Rafinesque, 1820.....	374
<i>S. (Strophodonta) cavumbona</i> , Hall ? 1857, pl. vii, fig. 10 <i>a</i> , <i>b</i>	374-376
<i>Merista</i> , Suess, 1851.....	376
<i>M. laevis</i> , Vanuxem ? sp., 1843, pl. vii, figs. 8 <i>a</i> , <i>c</i>	376-377
<i>Zygospira</i> , Hall, 1862.....	377-380
<i>Z. subconca</i> , n. s., M. & W., 1868, pl. vii, fig. 1 <i>a-d</i>	380-301
<i>Trematospira</i> , Hall, 1859.....	381
<i>T. ? imbricata</i> , Hall, 1857, pl. vii, fig. 2 <i>a-e</i>	381-382
<i>Cyrtina</i> , Davidson, 1858.....	383
<i>C. dalmani</i> , Hall, sp., 1857, pl. vii, figs. 3 <i>a</i> , <i>b</i>	383
<i>Spirifer</i> , Sowerby, 1815.....	384
Subgenus <i>Trigonotreta</i> , Koenig, 1825.....	384
<i>S. perlamellosus</i> , Hall, 1857, pl. vii, figs. 9 <i>a</i> , <i>b</i>	384
<i>Gasteropoda</i>	384
<i>Platyceras</i> , Conrad, 1840.....	384-387
<i>P. subundatum</i> , n. s., M. & W., 1868, pl. vii, figs. 13 <i>a</i> , <i>b</i> , and 14 <i>a</i> , <i>b</i>	387-388
<i>P. spirale</i> , Hall, 1859, pl. vii, fig. 12 <i>a-c</i>	389
<i>P. (Orthonychia) pyramidalatum</i> , Hall ? 1859, pl. vii, fig. 11.....	389-390
<i>Articulata</i>	390
<i>Crustacea</i>	390
<i>Acidaspis</i> , Murchison, 1839.....	390
<i>Acidaspis hamata</i> , Conrad, sp., 1841, pl. vii, fig. 15.....	390-391
<i>Dalmanites</i> , Auct.....	391
<i>D. tridentiferus</i> , Shumard, 1855, pl. vii, fig. 16.....	391-392

DEVONIAN SPECIES.

FOSSILS OF THE ORISKANY GROUP.

<i>Mollusca</i>	393
<i>Brachiopoda</i>	393
<i>Leptaena</i> , Dalman, 1827.....	393
<i>L. ? nucleata</i> , Hall, 1859, pl. viii, figs. 8 <i>a-d</i>	393-394
<i>Rhynchonella</i> , Fischer, 1809.....	394
<i>R. speciosa</i> , Hall, 1857, pl. viii, fig. 9.....	394-395
<i>Eatonia</i> , Hall, 1857.....	395
<i>E. peculiaris</i> , Conrad, sp., 1841, pl. viii, figs. 2 <i>a-d</i>	395-396
<i>Leptocælia</i> , Hall, 1857.....	397
<i>L. flabellites</i> , Conrad, sp., 1841, pl. viii, figs. 3 <i>a-c</i>	397-398
<i>Spirifer</i> , Sowerby, 1815.....	398
Subgenus <i>Trigonotreta</i> , Koenig, 1825.....	398
<i>S. engelmanni</i> , n. s., M. & W., 1868, pl. viii, figs. 5 <i>a-d</i>	398-399
<i>S. henricus</i> , n. s., M. & W., 1868, pl. viii, figs. 6 <i>a-d</i> , and 7 <i>a</i> , <i>b</i> ?.....	399-401
<i>Renssæleria</i> , Hall, 1859.....	401
<i>R. condoni</i> , McChesney, 1861, pl. viii, figs. 4 <i>a</i> , <i>b</i>	401-402
<i>Stricklandinia</i> , Billings, 1863.....	402
<i>S. elongata</i> var. <i>curta</i> , M. & W., 1868, pl. viii, figs. 1 <i>a-c</i> , and pl. ix, fig. 5 ?.....	402-404
<i>Gasteropoda</i>	404
<i>Strophostylus</i> , Hall, 1857.....	404
<i>S. cancellatus</i> , n. s., M. & W., 1868, p. 404, figs. and pl. viii, fig. 12 (11 <i>a</i> , <i>b</i> ?).....	404-405
<i>Platyceras</i> , Conrad, 1840.....	406
<i>P. spirale</i> , Hall ? 1859, pl. viii, fig. 10.....	406

FOSSILS OF THE CORNIFEROUS GROUP.

<i>Radiata</i>	407
<i>Zoophyta</i>	407
<i>Pleurodictyum</i> , Goldfuss, 1829.....	407
<i>P. problematicum</i> , Goldf. ? 1859, pl. ix, figs. 1 <i>a-c</i>	407-409
<i>Baryphyllum</i> , E. & H., 1850.....	409

	Page.
<i>B. ?? arenarium</i> , n. s., M. & W., 1868, pl. ix, figs. 2 a, b	409-410
<i>Zaphrentis</i> , R. & C., 1820	410
<i>Zaphrentis</i> , sp. undt., pl. ix, fig. 3 a, b	410
Mollusca	410
<i>Brachiopoda</i>	410
<i>Orthis</i> , Dalman, 1828	410
<i>Orthis</i> , undt., pl. ix, fig. 4	410-411
<i>Strophomena</i> , Raf., 1820	411
<i>S. (Strophodonta)</i> , sp. ? pl. ix, figs. 9 (and 7 a?)	411-412
<i>S. (Strophodonta)</i> , sp., pl. vi, figs. 6 a, b	412
<i>Productus</i> , Sowerby, 1814	412
<i>P. exanthematus</i> , Hall ?? 1857, pl. x, figs. 3 a-c	412-413
<i>Spirifer</i> , Sowerby, 1815	414
Subgenus <i>Trigonotreta</i> , Koenig, 1825	414
<i>S. perextensus</i> , n. s., M. & W., 1868, pl. x, figs. 1 a-d	414-415
<i>S. paradoxus</i> , Schlot. ?? sp., 1813, pl. x, fig. 2	415-416
Articulata	416
Crustacea	416
<i>Dalmanites</i> , Auct.	416
Subgenus <i>Odontocephalus</i> , Conrad, 1840	416
<i>Odontocephalus</i> ——— ? pl. ix, fig. 10	416-417
<i>Dalmanites (Odontocephalus) egeria</i> , Hall? sp., 1861, pl. x, figs. 4 a-c	417-418
FOSSILS OF THE HAMILTON GROUP.	
Protozoa	419
Spongiae	419
<i>Astræospongia</i> , Rømer, 1854	419
<i>A. hamiltonensis</i> , M. & W., 1866, pl. x, fig. 6	419
Radiata	420
Zoophyta	420
<i>Microcyclus</i> ,* n. g., M. & W., 1866	420
<i>M. discus</i> , n. s., M. & W., 1868, pl. xi, figs. 7 a, b	420-421
Echinodermata	421
<i>Taxocrinus</i> , Phillips, 1843	421
<i>T. gracilis</i> , M. & W., 1865, page 421, fig. —, and pl. xiii, fig. 3	421-423
Mollusca	423
<i>Brachiopoda</i>	423
<i>Orthis</i> , Dalman, 1827	423
<i>O. mefarlanii</i> , Meek, 1868, pl. xiii, figs. 10 a-d	423-424
<i>O. iowensis</i> var. <i>furnarius</i> , Hall, pl. xiii, figs. 9 a, b	424-425
<i>Strophomena</i> , Raf. 1820	426
<i>S. rhomboidalis</i> , Wahlemb., sp., 1821, pl. x, fig. 7 a, b	426-427
<i>Tropidoleptus</i> , Hall, 1857	427
<i>T. carinatus</i> , Conrad, sp., 1839, pl. xiii, figs. 2 a-c	427-428
<i>Pentamerus</i> , Sowerby, 1813	428
<i>P. comis</i> , Owen? sp., 1855, pl. xiii, figs. 6 a-c	428-429
<i>P. subglobosus</i> , n. s., M. & W., 1868, pl. xiii, figs. 5 a-c	429-430
<i>Atrypa</i> , Dalman, 1827	430
<i>A. aspera</i> , Schlottheim, sp., 1813, pl. xiii, figs. 7 a-d	430-431
<i>A. reticularis</i> , Linnæus, sp., 1767, pl. xiii, fig. 11	432-433
<i>Spirifer</i> , Sowerby, 1815	433
Subgenus <i>Trigonotreta</i> , Koenig, 1825	433
<i>S. fornacula</i> , Hall, 1857, pl. xiii, figs. 8 a-c	433-434
<i>S. subundiferus</i> , n. s., M. & W., 1868, pl. x, fig. 5 a-e	434-435
<i>Cyrtina</i> , Davidson, 1858	436
<i>C. triquetra</i> , Hall, sp., 1858, pl. xiii, fig. 4 a-d	436
<i>Lingula</i> , Brugniere, 1792	437
<i>L. subpatulata</i> , n. s., M. & W., 1868, pl. xiii, fig. 1	437
Lamellibranchiata	437
<i>Pterinea</i> , Gohlf., 1832	437
<i>P. ? subpapyracea</i> , M. & W., 1866, pl. xi, fig. 5	437-438
<i>Modiolopsis</i> , Hall, 1847	438
<i>M. ? perovata</i> , M. & W., 1865, pl. xi, fig. 2	438-439

* μικρος, small; κύχλος, a circle.

	Page.
<i>Grammysia</i> , de Verneuil, 1847.....	439
<i>G. ? rhomboidalis</i> , M. & W., 1865, pl. xi, figs. 5 <i>a</i> , <i>b</i>	439-441
<i>Gasteropoda</i>	441
<i>Platyceras</i> , Conrad, 1840.....	441
<i>P. ventricosum</i> , Conrad, 1840, pl. xi, figs. 4 <i>a</i> , <i>b</i>	441-442
<i>Isanema</i> ,* M. & W., 1865.....	442-443
<i>I. depressa</i> , M. & W., 1865, p. 443, figs. A, B, and pl. xi, figs. 6 <i>a</i> , <i>b</i>	443
<i>Cephalopoda</i>	444
<i>Gomphoceras</i> , Sowerby, 1839.....	444
<i>G. turbiniforme</i> , M. & W., 1866, pl. xii, figs. 2 <i>a</i> , <i>b</i>	444
<i>Cyrtoceras</i> , Goldf. 1832.....	445
<i>C. sacculum</i> , M. & W., 1866, pl. xii, figs. 3 <i>a-c</i>	445-446
<i>Gyroceras</i> , de Koninck, 1844.....	446
<i>G. constrictum</i> , n. s., M. & W., 1866, pl. xii, figs. 1 <i>a</i> , <i>b</i>	446-447
<i>Articulata</i>	447
<i>Crustacea</i>	447
<i>Phacops</i> , Emmerich, 1839.....	447
<i>P. rana</i> , Green, sp., 1832, pl. xi, figs. 1 <i>a-c</i>	447-449

CARBONIFEROUS SPECIES.

FOSSILS OF THE KINDERHOOK GROUP.

<i>Mollusca</i>	450
<i>Brachiopoda</i>	450
<i>Rhynchonella</i> , Fisher, 1809.....	450
<i>R. missouriensis</i> , Shumard, 1855, pl. xiv, figs. 7 <i>a-d</i>	450-452
<i>Lamellibranchiata</i>	453
<i>Pernopecten</i> , Winchell, 1865.....	453
<i>P. shumardianus</i> , Winchell, 1865, pl. xiv, figs. 6 <i>a</i> , <i>b</i>	453-455
<i>Pterinea</i> , Goldf., 1832.....	456
<i>P. undulata</i> , n. s., M. & W., 1868, pl. xiv, fig. 5.....	456
<i>Gasteropoda</i>	457
<i>Platyceras</i> , Conrad, 1840.....	457
<i>P. (Orthonychia?) subplicatum</i> , M. & W., 1866, pl. 14, figs. 4 <i>a-c</i>	457
<i>P. haliotoides</i> , M. & W., 1866, pl. xiv, figs. 3 <i>a</i> , <i>b</i>	458
<i>Porellia</i> , Leveille, 1835.....	458
<i>P. nodosa</i> , Hall, 1860, pl. xiv, figs. 1 <i>a</i> , <i>b</i>	458-459
<i>Gyroceras</i> , de Koninck, 1844.....	459
<i>G. rockfordensis</i> , M. & W., 1866, pl. xiv, fig. 2 <i>a</i>	459-460
<i>Articulata</i>	460
<i>Crustacea</i>	460
<i>Proetus</i> , Steininger, 1830?.....	460
<i>P. ellipticus</i> , M. & W., 1865, pl. xiv, fig. 8.....	460-462

FOSSILS OF THE BURLINGTON GROUP.

<i>Radiata</i>	463
<i>Echinodermata</i>	463
<i>Belemnocrinus</i> , White, 1862.....	463
<i>B. whitii</i> , M. & W., 1866, p. 463, fig. —, and pl. xviii, fig. 4 <i>a-c</i>	463-464
<i>Catillocerinus</i> , Troost, 1850.....	465
<i>C. wachsmuthi</i> , M. & W., 1866, pl. xviii, fig. 5.....	465-466
<i>Platyerinus</i> , Miller, 1821.....	466
<i>P. scobina</i> , M. & W., 1861, p. 466, fig. —, and pl. xvi, fig. 9.....	466-467
<i>P. planus</i> , Owen & Shumard? 1850, pl. xvi, fig. 6.....	467-468
<i>P. (Pleurocerinus) asper</i> , M. & W., 1861, p. 468, fig. —, and pl. xviii, fig. 9.....	468-469
<i>Actinoecrinus</i> , Miller, 1821.....	470
<i>A. (Saccocrinus?) amplius</i> , M. & W., 1861, p. 470, fig. —, and pl. xvi, fig. 2.....	470-472
<i>A. (Batoecrinus) pistillus</i> , M. & W., 1865, pl. xvi, figs. 4 <i>a</i> , <i>b</i>	472-474
<i>Steganoecrinus</i> , M. & W., 1866.....	474
<i>S. pentagonus</i> , Hall, sp., 1858, pl. xvi, fig. 8.....	474-476
<i>Rhodoecrinus</i> , Miller, 1821.....	476
<i>R. nanus</i> , M. & W., 1866, p. 476, figs. —, and pl. xviii, figs. 2 <i>a</i> , <i>b</i>	476-478
<i>Bursacrinus</i> ,† M. & W., 1861.....	478
<i>B. wachsmuthi</i> , M. & W., 1861, pl. xvii, fig. 6, and p. 479, fig. —.....	479-480

* ισος, equal; νημα, a thread.

† βυρσα, a purse; χλωρ, a lily.

	Page.
<i>Cyathocrinus</i> , Miller, 1821	481
<i>C. enornis</i> , M. & W., 1865, pl. xvi, figs. 3 a, b	481-482
<i>C. wachsmuthi</i> , M. & W., 1861, p. 482, fig. —, and pl. xvi, fig. 5	482-484
<i>Poteriocrinus</i> , Miller, 1821	484
<i>P. tenuibrachiatus</i> , M. & W., 1861, p. 484, fig. —, and pl. xvi, fig. 1	484-485
<i>P. subimpressus</i> , M. & W., 1861, p. 485, fig. —, and pl. xviii, figs. 1 a, b	485-486
<i>P. carinatus</i> , M. & W., 1861, p. 486, fig. —, and pl. xvii, fig. 1	486-488
Subgenus <i>Scaphiocrinus</i> , Hall, 1858	488
<i>S. wachsmuthi</i> , M. & W., 1861, p. 488, fig. —, and pl. xvi, figs. 7 a, b	488-489
<i>Poteriocrinus (Scaphiocrinus) tenuidactylus</i> , M. & W., 1865, p. 490, fig. —, and pl. xviii, fig. 10	490-491
<i>Onychocrinus</i> , Lyon & Casseday, 1859	492
<i>O. diversus</i> , M. & W., 1866, page 492, fig. —, and pl. xvii, figs. 5 a, b	492-495
<i>Tazucrinus</i> , Phillips, 1843	495
<i>Forbesiocrinus</i> , de Kon. & Le Hon, 1854	495
<i>F. agassizi</i> , var. <i>giganteus</i> , M. & W., 1861, pl. xviii, fig. 3	495
<i>Granatocrinus</i> (Troost), Hall, 1852	496
<i>G. projectus</i> , M. & W., sp., 1861, page 496, fig. —, and pl. xviii, fig. 7	496
<i>G. norwoodi</i> , O. & S. ? sp., 1860, pl. xviii, fig. 8	496-497
<i>G. shumardi</i> , M. & W., 1866, page 498, fig. —, and pl. xviii, figs. 6 a, f b	498-499
<i>Asteroides</i>	499
<i>Schornaster</i> , M. & W., 1860	499
<i>S. wachsmuthi</i> , M. & W., 1866, pl. xvii, fig. 4	499-500
<i>Mollusca</i>	501
<i>Polyzoa</i>	501
<i>Evactinopora</i> , M. & W., 1865	501
<i>E. radiata</i> , M. & W., 1865, page 502, fig. —, and pl. xvii, figs. 2 a, b	502
<i>E. bezradiata</i> , n. s., M. & W., 1868, pl. xvii, fig. 3	502
<i>E. grandis</i> , n. s., M. & W., 1868, p. 503, fig. —, and pl. xv, figs. 2 a, b	503
<i>Fenestella</i> , Lonsdale, 1839	504
Subgenus <i>Lyropora</i> , Hall, 1856	504
<i>Fenestella (Lyropora) retrorsa</i> , n. s., M. & W., 1868, pl. xv, fig. 1	504
<i>Brachiopoda</i>	505
<i>Chonetes</i> , Fischer, 1837	505
<i>C. illinoisensis</i> , Worthen, 1860, pl. xv, figs. 8 a, b	505-506
<i>Gasteropoda</i>	506
<i>Metoptoma</i> , Phillips, 1836	506
<i>M. ? umbella</i> , M. & W., 1866, pl. xv, figs. 6 a, b, c; and 7	506-507
<i>Platyceras</i> , Conrad, 1840	508
<i>P. [?] reversum</i> , Hall, 1860, p. 508, fig. —, and pl. xv, figs. 4 a, b	508-509
<i>P. biserialis</i> , Hall, 1860, pl. xv, figs. 3 a, b	509
<i>P. (Orthonychia) quincyense</i> , McChesney, 1861, pl. xv, figs. 5 a, b	510

FOSSILS OF THE KEOKUK GROUP.

<i>Radiata</i>	511
<i>Echinodermata</i>	511
<i>Platycrinus</i> , Miller, 1821	511
<i>P. hemisphaericus</i> , M. & W., 1865, p. 511, fig. —, and pl. xx, figs. 2 a, b	511-513
<i>P. niotensis</i> , M. & W., 1865, p. 513, fig. —, and pl. xx, fig. 3	513-514
<i>Poteriocrinus</i> , Miller, 1821	515
<i>P. indianensis</i> , M. & W., 1865, pl. xx, fig. 4; and p. 515, fig. —	515-516
<i>Cyathocrinus</i> , Miller, 1821	517
<i>C. farleyi</i> , M. & W., 1866, p. 517, fig. —, and pl. xx, figs. 1 a, b, and 6 c	517-518
<i>C. ? sp. undt.</i> , pl. xx, figs. 5 a-c	518-519
<i>C. quinquelobus</i> , M. & W., 1865, p. 519, fig. —; and pl. xx, figs. 6 a, b (not c)	519-520
<i>C. arboreus</i> , M. & W., 1865, p. 520, fig. —	520-522
<i>Echinoidea</i>	522
<i>Perischoechinidae</i>	522
<i>Lepidesthes</i> ,* n. g., M. & W., 1868	522-524
<i>L. coreyi</i> , n. s., M. & W., 1868, p. 524, fig. A	524-525
<i>Melonites multipora</i> , p. 524, fig. B	524
<i>Oligoporus danæ</i> , p. 524, fig. C	524

* Λεπίς, a scale; εσθής, a garment.

	Page.
<i>Asteroides</i>	526
<i>Onychaster</i> ,* n. g., M. & W., 1868.....	526
<i>O. flexilis</i> , n. s., M. & W., 1863, p. 526, figs. A, B, C, D	526-528
<i>Mollusca</i>	528
<i>Brachiopoda</i>	528
<i>Productus</i> , Sowerby, 1814	528
<i>P. magnus</i> , M. & W., 1861, pl. xx, figs. 7 a-c.....	528-530
<i>Spirifer</i> , Sowerby, 1815	530
<i>S. propinquus</i> , Hall, 1858, pl. xix, figs. 8 a-c	530-532
<i>Lamellibranchiata</i>	532
<i>Aviculopecten</i> , McCoy, 1851	532
<i>A. indianensis</i> , M. & W., 1866, pl. xix, figs. 6a, b.....	532-534
<i>Anthracopectera</i> , Salter, 1862	534
<i>A. ? fragilis</i> , M. & W., 1866, pl. xix, fig. 4	534-535
<i>Pleurophorus</i> , King, 1844	535
<i>P. costatiformis</i> , M. & W., 1865, p. 535, fig. —, and pl. xix, fig. 8 ?	535-536
<i>Lithophaga</i> , Lamarek, 1812.....	536
<i>L. lingualis</i> , Phillips ² , sp., 1836, pl. xix, figs. 1, 2	536-537
<i>Sedgwickia</i> , McCoy, 1844.....	537
<i>S. (Sanguinolites) subarcuata</i> , M. & W., 1865, pl. xix, fig. 3 b (not 3 a).....	537-538
<i>Allorisma</i> , King, 1844	538
<i>A. (Chenomya ?) hybrida</i> , M. & W., 1865, pl. xix, fig. 3 a (not 3 b).....	538-539
ARTICULATE FOSSILS OF THE COAL MEASURES.	
<i>Crustacea</i>	540
<i>Entomostraca</i>	540
<i>Gnathostomata</i>	540
<i>Phyllopoda</i>	540
<i>Ceratiocaris</i> , McCoy, 1849	540
<i>C. ? sinuatus</i> , M. & W., 1868, p. 540, fig. A.....	540-541
<i>Leaia</i> , Jones, 1862.....	541
<i>L. tricarinata</i> , n. s. M. & W., 1868, woodcut, figs. B 1, 2, 3 (and C ?), p. 540	541-543
<i>Merostomata</i>	544
<i>Eurypteride</i>	544
<i>Eurypterus</i> , De Kay, 1825	544
<i>E. (Anthracoetes) mazonensis</i> , M. & W., 1868, figs. —, p. 544.....	544
<i>Ziphsura</i>	547
<i>Euproops</i> , Meek, 1867.....	547
<i>E. danoe</i> , M. & W., 1865, p. 547, figs. A, B	547-549
<i>Tetradecapoda</i>	549
<i>Isopoda</i>	549
<i>?Acanthotelson</i> , M. & W., 1860	549
<i>A. stimpsoni</i> , M. & W., 1860, p. 549, figs. A, B.....	549-550
<i>A. eveni</i> , M. & W., 1868, p. 551, figs. A, B, C, D.....	551
<i>Decapoda</i>	552
<i>Macrura</i>	552
<i>Palæocaris</i> , M. & W., 1865	552
<i>P. typus</i> , M. & W., 1865, p. 552, figs. A, B	552-553
<i>Gampsonix fimbriatus</i> , p. 552, figs. C, D	552
<i>Anthraxipalæmon</i> , Salter, 1861.....	554
<i>A. gracilis</i> , M. & W., 1865, p. 554, figs. A, B.....	554-555
<i>Myriapoda</i>	556
<i>Euphoberia</i> , M. & W., 1868	556
<i>E. armigera</i> , M. & W., 1865, p. 556, figs. A, B, C, D.....	556-558
<i>E. ?? major</i> , M. & W., 1868, p. 558, fig. —	558-559
<i>Arachnida</i>	560
<i>Pulmonaria</i>	560
<i>Eoscorpius</i> , M. & W., 1868.....	560
<i>E. carbonarius</i> , M. & W., 1868, p. 560, figs. a, c, d, m, p.....	560-562
<i>Mazonia</i> ,† n. g. M. & W., 1868	563
<i>M. woodiana</i> , M. & W., 1868, p. 563, figs. A, B, C, D	563-565
Note on the genus <i>Palæocampa</i>	565

* *ovvξ*, a claw; *αστηρ*, a star.

† Mazon, name of stream.

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.

CORALS.

<i>Cyathophyllidæ.</i>	Page.
<i>Cyathophyllum</i> , Goldfuss, 1826.....	79
<i>C. articum</i> , n. s., Meek, 1868, pl. xi, fig. 8.....	79-80
<i>Cystephyllum</i> , Lonsdale, 1839.....	80
<i>C. americanum</i> var. <i>articum</i> , Meek, pl. xi, fig. 6.....	80-81
<i>Aulophyllum</i> , Edwards & Haime, 1850.....	81
<i>A. ? richardsoni</i> , n. s., Meek, 1868, pl. xi, fig. 3.....	81-82
<i>Zaphrentis</i> , Rafinesque, 1820.....	82
<i>Z. recta</i> , n. s., Meek, 1868, pl. xi, fig. 1.....	82
<i>Z. mcfarlanei</i> , n. s., Meek, 1868, pl. xi, fig. 2.....	83
<i>Smithia</i> , Edwards & Haime, 1851.....	83
<i>S. verrilli</i> , n. s., Meek, 1868, pl. xi, fig. 7.....	83-84
<i>Combophyllum</i> , Edwards & Haime, 1858.....	84
<i>C. multiradiatum</i> , n. s., Meek, 1868, pl. xi, fig. 4.....	84-85
<i>Fungidæ.</i>	
<i>Palæocyclus</i> , Edwards & Haime, 1849.....	85
<i>P. kirbyi</i> , n. s., Meek, 1868, pl. xi, fig. 5.....	85
<i>Favositidæ.</i>	
<i>Favosites</i> , Lamarck, 1816.....	86
<i>F. polymorpha</i> , Goldfuss, sp., pl. xi, fig. 10.....	86
<i>Alveolites</i> , Lamarck, 1801.....	86
<i>A. vallorum</i> , n. s., Meek, 1868, pl. xi, fig. 9.....	86-87
<i>Brachiopoda.</i>	
<i>Lingulidæ.</i>	
<i>Lingula</i> , Bruguière.....	87
<i>L. minuta</i> , n. s., Meek, 1868, pl. xiii, fig. 1.....	87
<i>Strophomenidæ.</i>	
<i>Strophomena</i> , Rafinesque.....	87
<i>S. (Strophodonta) demissa</i> , Conrad, 1842, pl. xiii, fig. 6.....	87-88
<i>S. (Strophodonta) subdemissa</i> , Hall, 1856, pl. xiii, fig. 7.....	88
<i>Orthis</i> , Dalman, 1828.....	88
<i>O. mcfarlanei</i> , n. s., Meek, 1868, pl. xii, fig. 1.....	88-90
<i>O. iowensis</i> , Hall? 1853, pl. xii, fig. 2.....	90-91
<i>Productidæ.</i>	
<i>Productus</i> , Sowerby.....	91
<i>P. dissimilis</i> , Hall? 1853, pl. xiii, fig. 3.....	91
<i>Productus</i> ———? Meek, 1869, pl. xiii, fig. 4.....	91-92
<i>Productus</i> ———? Meek, 1869, pl. xiii, fig. 5.....	92
<i>Chonetes</i> , Fischer.....	93
<i>C. pusilla</i> , Hall? 1857, pl. xiii, fig. 2.....	93
<i>Rhynchonellidæ.</i>	
<i>Rhynchonella</i> , Fischer, 1809.....	93
<i>R. castanea</i> , n. s., Meek, 1868, pl. xiii, fig. 9.....	93-95
<i>Rhynchonella</i> ———? Meek, 1869, pl. xv, fig. 4.....	95
<i>Pentamerus</i> , Sowerby, 1812.....	95
<i>P. borealis</i> , n. s., Meek, 1868, pl. xiii, fig. 11.....	95-96
<i>Atrypa</i> , Dalman, 1827.....	96
<i>A. aspera</i> , Schlotheim, sp., 1820, pl. xiii, fig. 12.....	96-97
<i>A. reticularis</i> , Linn, sp., 1767, pl. xiii, fig. 13.....	97
<i>Spiriferidæ.</i>	
<i>Cyrtina</i> , Davidson, 1858.....	97
<i>C. billingsi</i> , n. s., Meek, 1868, pl. xiv, fig. 6.....	97-99
<i>C. hamiltonensis</i> , Hall, 1857, pl. xiv, fig. 10, and figs. 5 and 7.....	99-100
<i>C. panda</i> , n. s., Meek, 1868, pl. xiv, fig. 8.....	100-101
<i>Spirifer</i> , Sowerby, 1815.....	101
<i>S. kennicotti</i> , n. s., Meek, 1868, pl. xiv, fig. 9.....	101-102
<i>S. compactus</i> , n. s., Meek, 1868, pl. xiv, fig. 11.....	102-103

	Page.
Subgenus <i>Martinia</i> , McCoy, 1844.....	103
<i>S. (Martinia) sublineatus</i> , n. s., Meek, 1868, pl. xiv, fig. 1.....	103-104
<i>S. (Martinia) richardsoni</i> , n. s., Meek, 1868, pl. xiv, fig. 2.....	104-105
<i>S. (Martinia) meristoides</i> , n. s., Meek, 1868, pl. xiv, fig. 3.....	106-107
<i>S. (Martinia) franklinii</i> , n. s., Meek, 1868, pl. xiv, fig. 12.....	107-108
<i>Rensselaeria</i> , Hall, 1859.....	108
<i>R. laevis</i> , n. s., M. & W., 1868, pl. xiii, fig. 8, and pl. xiv, fig. 4.....	108-109
<i>Gasteropoda.</i>	
<i>Pleurotomariidae.</i>	
<i>Pleurotomaria</i> , DeFrance, 1826.....	110
<i>Pleurotomaria</i> ——— ? Meek, 1869, pl. xv, fig. 3.....	110
<i>Cephalopoda.</i>	
<i>Nautilidae.</i>	
<i>Gyroceras</i> , Koninck, 1844.....	110
<i>G. logani</i> , n. s., Meek, 1868.....	110-111

61.

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	Page.
<i>Synbathocrinus</i> , Phillips, 1836.....	67
<i>S. wachsmuthi</i> , M. & W., 1866.....	67-68
<i>S. brevis</i> , n. s., M. & W., 1869.....	68-69
<i>Dichocrinus</i> , Münster, 1839.....	69
<i>D. lineatus</i> , n. s., M. & W., 1869.....	69
<i>D. pisum</i> , n. s., M. & W., 1869.....	69-70
<i>Erisocrinus</i> , M. & W., 1865.....	70
<i>E. antiquus</i> , n. s., M. & W., 1869.....	71-72
<i>E. whitei</i> , n. s., M. & W., 1869.....	72
<i>Calceocrinus</i> , Hall, 1852.....	72-73
<i>C. ? bradleyi</i> , n. s., M. & W., 1869.....	73-74
<i>C. ? wachsmuthi</i> , n. s., M. & W., 1869.....	74-75
<i>Gilbertsocrinus</i> , Phillips.....	75
Subgenus <i>Goniasteroidocrinus</i> , Lyon & Casseday, 1859.....	75
<i>G. (Goniasteroidocrinus) tenuiradiatus</i> , n. s., M. & W., 1869.....	75-76
<i>G. (Goniasteroidocrinus) obovatus</i> , n. s., M. & W., 1869.....	76-77
<i>Lepidocentrus</i> , Müller (?), 1856.....	77-78
<i>L. irregularis</i> , n. s., M. & W., 1869.....	78-79
<i>Eocidaris ? squamosa</i> , n. s., M. & W., 1869.....	79-81
<i>Palechinus gracilis</i> , n. s., M. & W., 1869.....	82
<i>Onychaster</i> , M. & W.....	82-83

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	Page.
<i>Granatocrinus</i> , Troost	88
<i>G. melonoides</i> , n. s., M. & W., 1869	88-89
<i>G. pisum</i> , n. s., M. & W., 1869	89-90
<i>G. neglectus</i> , n. s., M. & W., 1869	90-91
<i>G. glaber</i> , n. s., M. & W., 1869	91

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The author regards these forms as congeneric.

66.

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	Page.
<i>Foraminifera.</i>	
<i>Receptaculites formosus</i> , n. s., M. & W., 1870	22-23
<i>Echinodermata.</i>	
<i>Barycrinus spectabilis</i> , n. s., M. & W., 1870	23-24
<i>Cyathocrinites? poterium</i> , n. s., M. & W., 1870	24-26
<i>Poteriocrinites (Zeacrinus?) concinnus</i> , n. s., M. & W., 1870	26-27
<i>Scaphiocrinus depressus</i> , n. s., M. & W., 1870	27
<i>Zeacrinus? armiger</i> , n. s., M. & W., 1870	27-28
<i>Zeacrinus (Hydreionocrinus?) acanthoporus</i> , n. s., M. & W., 1870	28-29
<i>Eupachyrcrinus boydii</i> , n. s., M. & W., 1870	30
<i>Homocrinus angustatus</i> , n. s., M. & W., 1870	30-31
<i>Codonites</i> , n. g., M. & W., 1869	31-32
<i>C. gracilis</i> , n. s., M. & W., 1870	32-33
<i>Pentremites burlingtonensis</i> , n. s., M. & W., 1870	33-34
<i>Oligoporus coreyi</i> , n. s., M. & W., 1870	34
<i>Brachiopoda.</i>	
<i>Chonetes? ? millipunctata</i> , n. s., M. & W., 1870	35-36
<i>Spirifer fastigatus</i> , n. s., M. & W., 1870	36-37
<i>Stricklandinia deformis</i> , n. s., M. & W., 1870	37-38
<i>Lamellibranchiata.</i>	
<i>Monotis? gregaria</i> , n. s., M. & W., 1870	38
<i>Ariculopecten spinuliferus</i> , n. s., M. & W., 1870	39
<i>Carbonarea</i> , n. g., M. & W., 1870	39
<i>C. gibbosa</i> , n. s., M. & W., 1870	40
<i>Macrodon delicatus</i> , n. s., M. & W., 1870	40
<i>Modiolopsis subnasuta</i> , n. s., M. & W., 1870	41
<i>Schizodus anplius</i> , n. s., M. & W., 1870	41-42
<i>Seacrinus (Priscaia) perelegans</i> , n. s., M. & W., 1870	42-43
<i>Clinopistha</i> , n. g., M. & W., 1870	43-44
<i>C. radiata</i> , var. <i>levis</i> , n. s., M. & W., 1870	44-45

	Page.
<i>Gasteropoda.</i>	
<i>Dentalium annulostriatum</i> , n. s., M. & W., 1870	45
<i>Straparollus (Euomphalus) pernodosus</i> , n. s., M. & W., 1870	45-46
<i>S. (Euomphalus) subquadratus</i> , n. s., M. & W., 1870	46-47
<i>Subulites inflatus</i> , n. s., M. & W., 1870	47
<i>Cephalopoda.</i>	
<i>Nautilus</i> , Auct.	48
Subgenus <i>Solenochilus</i> ,* M. & W., 1870	48
<i>N. (Solenochilus) collectus</i> , n. s., M. & W., 1870	48-49
Subgenus <i>Temnochilus</i> , McCoy	49
<i>N. (Temnochilus) latus</i> , n. s., M. & W., 1870	49
<i>N. (Temnochilus) winslowi</i> , n. s., M. & W., 1870	50
<i>N. (Temnochilus) coxanus</i> , n. s., M. & W., 1870	50-51
<i>Lituites graftonensis</i> , n. s., M. & W., 1870	51-52
<i>Crustacea.</i>	
<i>Phillipsia tuberculata</i> , n. s., M. & W., 1870	52
<i>Phillipsia (Griffithides) bufo</i> , n. s., M. & W., 1870	52-53
<i>Asaphus (Isotelus) vigilans</i> , n. s., M. & W., 1870	53-54
<i>Ilæenus (Bumastus) graftonensis</i> , n. s., M. & W., 1870	54-55
<i>Dithyrocaris carbonarius</i> , n. s., M. & W., 1870	55-56

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TERTIARY SPECIES.

	Page.
<i>Sphærium rugosum</i> , n. s., Meek, 1870	56-75
<i>S. idahoense</i> , n. s., Meek, 1870	57
<i>Ancyclus undulatus</i> , n. s., Meek, 1870	57-58
<i>Melania (Goniobasis?) sculptilis</i> , n. s., Meek, 1870	58
<i>Melania (Goniobasis) subsculptilis</i> , n. s., Meek, 1870	58-59
<i>Carinifex binneyi</i> , n. s., Meek, 1870	59
<i>Carinifex (Vorticifex) tryoni</i> , n. s., Meek, 1870	59-60
<i>Carinifex tryoni</i> var. <i>concava</i> , n. s., Meek, 1870	50

DEVONIAN SPECIES.

<i>Spirifer (Trigonotreta) pinonensis</i> , n. s., Meek, 1870	60-61
---	-------

LOWER SILURIAN SPECIES.

<i>Euomphalus (Raphistoma?) rotuliformis</i> , n. s., Meek, 1870	61
<i>E. (Raphistoma) trochiscus</i> , n. s., Meek, 1870	61-62
<i>Paradoxides? nevadensis</i> , n. s., Meek, 1870	62-63
<i>Conocoryphe (Conocephalites) kingii</i> , n. s., Meek, 1870	63-64

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

* σωλην, a channel; Χεῖλος, lip.

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SILURIAN SPECIES.

	Page.
<i>Orthis coloradoensis</i> , n. s., Meek, 1871	425-426
<i>Bucanella nana</i> , n. s., Meek, 1871	426

CRETACEOUS SPECIES.

<i>Ammonites serrato-carinatus</i> , n. s., Meek, 1871	429-430
--	---------

TERTIARY SPECIES.

<i>Ostrea soleniscus</i> , n. s., Meek, 1871	430
<i>Unio belliplicatus</i> , n. s., ? Meek, 1871	430
<i>Cyrcna</i> (<i>Corbicula</i>) <i>durkeei</i> , n. s., Meek, 1871	431

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MEEK, F. B. Preliminary notice of a new species of Trimerella from Ohio. <Am. Journ. Sci., vol. i, 3d ser., pp. 305-306. 1871. New Haven, 1871.

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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.

	Page.
<i>Dendrocrinus casei</i> , n. s., Meek, 1871	295-296
<i>Lepocrinites moorci</i> , n. s., Meek, 1871	296-297
<i>Anodontopsis</i> ? <i>milleri</i> , n. s., Meek, 1871	297-299
<i>Anodontopsis</i> ? <i>unionoides</i> , n. s., Meek, 1871	299
Remarks on the genus <i>Lichenocrinus</i>	299-302

72.

MEEK, F. B. Descriptions of new species of invertebrate fossils from the Carboniferous and Devonian rocks of Ohio. <Proc. Acad. Nat. Sci. Phila., vol. xxiii, pp. 57-93. 1871. Philadelphia, 1871.

Echinodermata.

	Page.
<i>Dolatocrinus ornatus</i> , n. s., Meek, 1871	57-59

Lamellibranchiata.

<i>Ariculopecten crenistriatus</i> , n. s., Meek, 1871	60-61
<i>Ariculopecten</i> (<i>streblopteria</i> ?) <i>hertzeri</i> , n. s., Meek, 1871	61-62
<i>Lucina</i> (<i>Paracyclas</i>) <i>ohioensis</i> , n. s., Meek, 1871	62-63
[<i>Ptilodictya</i> (<i>Stictopora</i>) <i>gilberti</i> ,* n. s., Meek, 1871	63-64]
<i>Conocardium ohioense</i> , n. s., Meek, 1871	65-66
<i>Solenomya</i> (<i>Jancia</i>) <i>retusta</i> , n. s., Meek, 1871	66-67
<i>Olinopistha antiqua</i> , n. s., Meek, 1871	67-68
<i>Sanguinolites</i> ? <i>sanduskyensis</i> , n. s., Meek, 1871	68-69
<i>Sanguinolites</i> ? <i>obliquus</i> , n. s., Meek, 1871	69-70
<i>Allorisma</i> (<i>Sedgwickia</i> ?) <i>pleuropistha</i> , n. s., Meek, 1871	70-71

* This description was accidentally inserted by Mr. Meek in this place

	Page.
<i>Grammysia? rhomboides</i> , n. s., Meek, 1871.....	72-73
<i>Grammysia ventricosa</i> , n. s., Meek, 1871.....	73
<i>Gasteropoda.</i>	
<i>Platyceras multispinosum</i> , n. s., Meek, 1871.....	73-75
<i>Platyceras attenuatum</i> , n. s., Meek, 1871.....	75-76
<i>Naticopsis levis</i> , n. s., Meek, 1871.....	76
<i>Naticopsis (Platystoma?) equistriata</i> , n. s., Meek, 1871.....	76-77
<i>Bellerophon newberryi</i> , n. s., Meek, 1871.....	77-78
<i>Bellerophon propinquus</i> , n. s., Meek, 1871.....	78
<i>Cyclonema crenulata</i> , n. s., Meek, 1871.....	79
<i>Isonema humilis</i> , n. s., Meek, 1871.....	79-80
<i>Orthonema newberryi</i> , n. s., Meek, 1871.....	81
<i>Trochita? antiqua</i> , n. s., Meek, 1871.....	82
<i>Trochonema triearinata</i> , n. s., Meek, 1871.....	82-84
<i>Pteropoda.</i>	
<i>Conularia micronema</i> , n. s., Meek, 1871.....	84
<i>Comularia elegantula</i> , n. s., Meek, 1871.....	85-86
<i>Cephalopoda.</i>	
<i>Cyrtoceras ohioense</i> , n. s., Meek, 1871.....	86-87
<i>Gyroceras (Trochoceras?) ohioense</i> , n. s., Meek, 1871.....	87-88
<i>Gyroceras (Nautilus?) inelegans</i> , n. s., Meek, 1871.....	89
<i>Crustacea.</i>	
<i>Proetus planimargitus</i> , n. s., Meek, 1871.....	89-91
<i>Dalmanites ohioensis</i> , n. s., Meek, 1871.....	91-93

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.

OHIO COLLECTIONS.

	Page.
<i>Fenestella delicata</i> , n. s., Meek, 1871.....	159-160
<i>Ptilodictya (Stictopora) carbonaria</i> , n. s., Meek, 1871.....	160-161
<i>Aviculopecten sanduskyensis</i> , n. s., Meek, 1871.....	161-162
<i>Pterinea (Pteronites?) newarkensis</i> , n. s., Meek, 1871.....	162-163
<i>Cypriocardina? carbonaria</i> , n. s., Meek, 1871.....	163-165
<i>Schizodus mediusensis</i> , n. s., Meek, 1871.....	165-166
<i>Schizodus subtrigonalis</i> , n. s., Meek, 1871.....	166
<i>Allorisma winchelli</i> , n. s., Meek, 1871.....	167-168
<i>Allorisma ventricosa</i> , n. s., Meek, 1871.....	168-169
<i>Platystoma? trigonostoma</i> , n. s., Meek, 1871.....	169-170
<i>Platyceras (Orthonychia?) lodiense</i> , n. s., Meek, 1871.....	170-171
<i>Platyceras tortum</i> , n. s., Meek, 1871.....	171-172
<i>Holopea (Cyclora) nana</i> , n. s., Meek, 1871.....	172
<i>Orthoceras? isogramma</i> , n. s., Meek, 1871.....	172-173

ILLINOIS COLLECTIONS.

<i>Streptacis whitfieldi</i> , n. s., Meek, 1871.....	173-174
<i>Loxonema attenuata</i> , var. <i>semicostata</i> , Meek, 1871.....	174-175
<i>Murchisonia obsoleta</i> , n. s., Meek, 1871.....	175
<i>Pleurotomaria textiliger</i> , n. s., Meek, 1871.....	176-177
<i>Pleurotomaria gurlayi</i> , n. s., Meek, 1871.....	177-178

COLLECTIONS FROM MISSOURI, WYOMING, TEXAS, ETC.

<i>Aviculopecten? williamsi</i> , n. s., Meek, 1871.....	178-179
<i>Spirifer (Trigonotreta?) texanus</i> , n. s., Meek, 1871.....	179-181

	Page.
<i>Campeloma (McLanthe) macrospira</i> , n. s., Meek, 1871	181-182
<i>Viviparus? wyomingensis</i> , n. s., Meek, 1871	182-183
<i>Isocardia? hodgsi</i> , n. s., Meek, 1871	183-184

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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.

	Page.
<i>Lingulella lamborni</i> , n. s., Meek, 1871, p. 185, fig. 1	185-187
<i>Lingulella davisi</i> (Salter), Davidson, figs. 2 and 3	185-187
<i>Lingulepis pinniformis</i> , Hall, fig. 4	185-187

75.

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.

Afterward redescribed and illustrated in the Paleontology of Ohio (Newberry).

Radiata.

Echinodermata.

	Page.
<i>Heterocrinus exiguus</i> , n. s., Meek, 1872	308-310
<i>Heterocrinus subcrassus</i> , M. & W., 1865	310
<i>Poteriocrinites (Dendrocrinus) dyeri</i> , n. s., Meek, 1872	310-312
<i>Poteriocrinites (Dendrocrinus) cincinnatiensis</i> , n. s., Meek, 1872	312-314
<i>Poteriocrinus (Dendrocrinus) polydactylus</i> , Shumard, sp., 1867	314
<i>Glyptocrinus dyeri</i> , n. s., Meek, 1872	314-316
<i>Glyptocrinus dyeri</i> , var. <i>subglobosus</i> , Meek, 1872	316-317

Mollusca.

Polyzoa.

<i>Ptilodictya (Stictopora) shafferi</i> , n. s., Meek, 1872	317-318
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Brachiopoda.

<i>Retzia (Trematospira) granulifera</i> , n. s., Meek, 1872	318-319
--	---------

Lanellibranchiata.

<i>Ambonychia (Megaptera) alata</i> , n. s., Meek, 1872	319-321
<i>Megambonia jamesi</i> , n. s., Meek, 1872	321-322
<i>Sedgwickia? fragilis</i> , n. s., Meek, 1872	323
<i>Sedgwickia? compressa</i> , n. s., Meek, 1872	324-325
<i>Sedgwickia (Grammysia?) neglecta</i> , n. s., Meek, 1872	325-326
<i>Dolabra? carinata</i> , n. s., Meek, 1872	326-327
<i>Cardiomorpha?? obliquata</i> , n. s., Meek, 1872	327-328

Gasteropoda.

<i>Macrocheilus klippiarti</i> , n. s., Meek, 1872	328-330
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Cephalopoda.

<i>Orthoceras ortonii</i> , n. s., Meek, 1872	330-331
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Articulata.

Crustacea.

<i>Cythere cincinnatiensis</i> , n. s., Meek, 1872	331-332
<i>Ceratiocaris (Colpocaris) bradleyi</i> , n. s., Meek, 1872	332-333
<i>Ceratiocaris (Colpocaris) elytroides</i> , n. s., Meek, 1872	334
<i>Ceratiocaris (Solcnocaris) strigata</i> , n. s., Meek, 1872	335
<i>Archæocaris vermiformis</i> , n. s., Meek, 1872	335-336

76.

MEEK, F. B. Descriptions of some new types of Paleozoic shells. <Am. Journ. Conch., vol. vii, pp. 4-10. 1 plate. 1871-1872. Philadelphia, 1872.

Carboniferous and Cretaceous† Genera *Promacrus*, *Prothyris*.

	Page.
<i>Sanguinolites</i> , McCoy	4
Subgenus <i>Promacrus</i> , Meek, 1871	4-5

Page.

<i>S. (Promacerus) nasutus</i> , n. s., Meek, 1871, pl. i, fig. 1	
<i>S. (Promacerus) missouriensis</i> , Swallow, 1860, pl. i, fig. 2.....	6-7
<i>Prothyris</i> , Meek, 1869	8
<i>P. elegans</i> , n. s., Meek, 1871, pl. i, fig. 3.....	8-9
<i>Martesia? ræssleri</i> , n. s., Meek, 1871, pl. i, figs. 4, 4 a	9-10

77.

MEEK, F. B. List of Carboniferous fossils from West Virginia, with descriptions of new species. <Appendix B, Report of Regents of West Virginia University for 1870, pp. 67-73 or 1-7. 1871. Wheeling, 1871.

Page.

<i>Macrodon obsoletus</i> , n. s., Meek, 1871	5
<i>Nucula? anodontoides</i> , n. s., Meek, 1871	5-6
<i>Foldia stevensoni</i> , n. s., Meek, 1871	6
<i>Foldia (Palæoneio?) carbonaria</i> , n. s., Meek	6-7
<i>Phillipsia stevensoni</i> , n. s., Meek, 1871.....	7

78.

MEEK, F. B. Remarks on the Genus *Lichenocrinus*. <Ann. and Mag. Nat. Hist., ser. 4, vol. viii, pp. 341-345. 1871. London, 1871.

A reprint from Amer. Journ. Sci. & Arts, 1871. See entry number 71.

79.

MEEK, F. B. Supplementary note on the Genus *Lichenocrinus*. <Ann. and Mag. Nat. Hist., ser. 4, vol. ix, pp. 247-248. 1872. London, 1872.

An additional description of the characters of *Lichenocrinus*, founded on a number of fresh specimens. The author concludes that it is an aberrant type of *Cystoidea*, representing a distinct family. See entry number 80.

80.

MEEK, F. B. Supplementary Note on the Genus *Lichenocrinus*. <Am. Journ. Sci., vol. iii, 3d ser., pp. 15-17. 1872. New Haven, 1872.

This is supplementary to the article at page 299 of vol. ii. See entry numbers 71 and 79.

81.

MEEK, F. B. Descriptions of two new starfishes, and a Crinoid, from the Cincinnati group of Ohio and Indiana. <Am. Journ. Sci., vol. iii, 3d ser., pp. 257-262. 1872. New Haven, 1872.

These descriptions, with illustrations, are republished in the *Paleontology of Ohio* (Newberry).

Page.

<i>Palæaster? dyeri</i> , n. s., Meek, 1872	257-258
<i>Stenaster grandis</i> , n. s., Meek, 1872	258-259
<i>Glyptocrinus baeri</i> , n. s., Meek, 1872	260-261
Note on the Genus <i>Lichenocrinus</i>	261-262

82.

MEEK, F. B. Descriptions of New Species of Fossils from the Cincinnati Group of Ohio. <Am. Journ. Sci., vol. iii, 3d ser., pp. 423-428. 1872. New Haven, 1872.

These have since been redescribed and figured in the *Paleontology of Ohio* (Newberry).

Page.

<i>Anomalocystites (Ateleocystites?) balanoides</i> , n. s., Meek, 1872	423-424
<i>Dalmanites carleyi</i> , n. s., Meek, 1872	424-426
<i>Proetus spurlocki</i> , n. s., Meek, 1872.....	426-428

83.

MEEK, F. B. Descriptions of a few new species and one new genus of Silurian fossils from Ohio. <Am. Journ. Sci., vol. iv, 3d ser., pp. 274-281 1872. New Haven, 1872.

Genus *Dicranisens*, afterward fully described and illustrated in the Paleontology of Ohio (Newberry).

	Page.
<i>Protaster? granuliferus</i> , n. s., Meek, 1872	274-275
<i>Palæaster incomptus</i> , n. s., Meek, 1872	275-277
<i>Rhynchonella neglecta</i> var. <i>scobina</i> , Meek, 1872	277-278
<i>Pleurotomaria (Scalitis?) tropidophora</i> , n. s., Meek, 1872	278-279
* <i>Dicraniscus</i> , n. g., Meek, 1872	279-280
<i>D. ortonii</i> , n. s., Meek, 1872	280-281

84.

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Silurian, Carboniferous, Jurassic, Cretaceous, and Tertiary, Genera *Arcopagella*, *Crassatellina*, *Leptesthes*, *Pyrgulifera*.

	Page.
General remarks	287-295
<i>Pyrgulifera</i> , n. g., Meek, 1871	294
Lists of fossils collected	295-299
Descriptions of new species and genera	299-318

CARBONIFEROUS SPECIES.

	Page.
<i>Edmondia aspenwallensis</i> , n. s., Meek, 1871	299-300

CRETACEOUS FORMS.

	Page.
<i>Crassatellina</i> , n. g., Meek, 1871	300, 301
<i>C. oblonga</i> , n. s., Meek, 1871, figs. A & B, p. 301	301
<i>Pachymya? truncata</i> , n. s., Meek, 1871	301-302
<i>Inoceramus altus</i> , n. s., Meek, 1871	302-303
<i>Unio (Baphia?) nebrascensis</i> , n. s., Meek, 1871	303
<i>Arca? parallela</i> , n. s., Meek, 1871	303-304
<i>Yoldia microdonta</i> , n. s., Meek, 1871	304
<i>Corbicula nucalis</i> , n. s., Meek, 1871	304-305
<i>Corbicula? subtrigonalis</i> , n. s., Meek, 1871	305-306
<i>Cardium pauperculum</i> , n. s., Meek, 1871	306
<i>Cardium (Protocardia) salinense</i> , n. s., Meek, 1871	306-307
<i>Cardium kansasense</i> , n. s., Meek, 1871	307-308
<i>Mactra? cañonensis</i> , n. s., Meek, 1871	308
<i>Arcopagella</i> , n. g., Meek, 1871	308
<i>A. mactroides</i> , n. s., Meek, 1871, figs. A and B, p. 309	309-310
<i>Tellina subscitula</i> , n. s., Meek, 1871	310
<i>Tapes toyominingensis</i> , n. s., Meek, 1871	310-311
<i>Leptokolen conradi</i> , n. s., Meek, 1871	311-312
<i>Anisomyon centrale</i> , n. s., Meek, 1871	312
<i>Turritella kansasensis</i> , n. s., Meek, 1871	312-313
<i>Turbo mudgeanus</i> , n. s., Meek, 1871	313

TERTIARY SPECIES.

	Page.
<i>Unio leanus</i> , n. s., Meek, 1871	313-314
<i>U. washakiensis</i> , n. s., Meek, 1871	314
<i>Corbicula? fracta</i> , n. s., Meek, 1871	314-315
<i>Corbicula crassatelliformis</i> , n. s., Meek, 1871	315-316
<i>Goniobasis chrysallis</i> , n. s., Meek, 1871	316
<i>Goniobasis nodulifera</i> , n. s., Meek, 1871	316-317
<i>Bythinella gregaria</i> , n. s., Meek, 1871	317-318

* Diminutive of *διπραρος* a two-pronged fork.

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	Page.
Silurian fossils.....	373
Carboniferous fossils.....	373-374
<i>Platycrinites (Eucladocrinus) montanaensis</i> , n. s., Meek, 1872.....	373-374
Jurassic species.....	374-375
<i>Aviculopecten (Pseudomonotis?) idahoensis</i> , n. s., Meek, 1872.....	374-375
Cretaceous species.....	375-376
<i>Ostrea idriaensis</i> , Gabb??.....	375
<i>Anomia? gryphorhynchus</i> , n. s., Meek, 1872.....	375-376
Tertiary species.....	376

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Carboniferous fossils only. Genus Rhombopora.

	Page.
Introductory remarks.....	83
Statement of a boring made in the Missouri Valley at Omaha City, by the Union Pacific Railroad Company, starting 22 feet above low-water mark of the Missouri.....	87-88
Section of beds exposed at Bellevue, with an enumeration of the fossils found in each..	89
Section of the beds exposed on the north side of Platte River, between three and four miles from its mouth, with an enumeration of the fossils found in each bed.....	90-91
Section of the beds exposed at Plattsmouth, with the names of the fossils found in each.....	93
Section of the beds exposed at Rock Bluff, on the Missouri, with a statement of the fossils found in each.....	95-96
Section of the rocks seen at Cedar Bluff.....	98
Section at Wyoming, with an enumeration of the imbedded fossils.....	99
Section at Bennett's mill.....	100
Section of beds exposed at the Nebraska City landing, with an enumeration of the fossils found in each.....	101-102
Section 1½ and 2½ miles due west of Nebraska City.....	103
Mr. Croxton's boring at Nebraska City.....	105-107
Section of the beds exposed at Otee City.....	107-108
Sections of the various beds exposed at Brownville.....	110
Sections one and a half miles below Brownville.....	111-112
Sections of beds exposed at Aspinwall.....	112-113
Section two miles above Rulo, on the Missouri.....	114
Shaft and boring one and one-fourth miles south of Rulo.....	115
Section of a boring two miles south of Saint Joseph, 60 feet above high water of the Missouri.....	117-118
Section of the rocks exposed at Riverside, Kansas, and along the river bluff between there and the Atchison Landing.....	119-120
Boring at Atchison, Kansas, commencing 22½ feet above high-water mark of the Missouri; made by the Atchison Coal Company, 1865-'66.....	121-122
Tabular list, illustrating the geological and geographical range of the fossils of Eastern Nebraska.....	124-127
Remarks on the probability of finding valuable beds of coal within profitable working distance of the surface in Eastern Nebraska.....	134-139

DESCRIPTIONS OF FOSSILS.

Protozoa.

Foraminifera.

Fusulina, Fischer.

F. cylindrica, Fischer, 1837, pl. i, fig. 2; pl. ii, fig. 1; pl. v, figs. 3 a, b; pl. vii, figs. 8 a, b.. 140-141

Radiata.

Polypi.

Rhombopora, Meek, n. g., 1872..... 141

R. lepidodendroides, n. s., Meek, 1872, pl. vii, figs. 2 a-f..... 141-143

Fistulipora, McCoy..... 143

	Page.
<i>F. nodulifera</i> , n. s., Meek, 1872, pl. v, figs. 5 <i>a-d</i>	143-144
<i>Syringopora</i> , Goldfuss	144
<i>S. multattenuata</i> , McChesney, 1860, pl. i, figs. 5 <i>a-d</i>	144
<i>Lophophyllum</i> , Edwards & Haimo	144
<i>L. proliferum</i> , McChesney, sp., 1860, pl. v, figs. 4 <i>a, b</i>	144-145
<i>Campophyllum</i> , Edwards & Haimo.....	145
<i>C. torquium</i> , Owen, sp., 1852, pl. i, figs. 1 <i>a-d</i>	145-146
<i>Echinodermata</i> .	
<i>Erisocrinus</i> , M. & W.....	146
<i>E. typus</i> , M. & W., 1865, pl. i, figs. 3 <i>a, b</i> , and fig. 1, p. 146	146-147
<i>Scaphiocrinus</i> , Hall	147
<i>S. ? hemisphaericus</i> , Shumard, sp., 1858, pl. v, figs. 1 <i>a, b</i> ; pl. vii, figs. 1 <i>a-c</i> , and fig. 2, p. 148	147-149
<i>Zeacrinus</i> , Troost	149
<i>Z. ? mucrospinus</i> , McChesney, 1860, pl. v, figs. 2 <i>a-c</i>	149-150
<i>Eupachycinus</i> , M. & W.....	150
<i>E. verrucosus</i> , White & St. John, 1869, figs. 3 and 4 <i>a-d</i> , p. 150	150-151
<i>Archæocidaris</i> , McCoy	151
<i>A. ? triseriata</i> , n. s., Meek, 1872, pl. i, figs. 6 <i>a-c</i>	151-152
<i>Eocidaris</i> , Desor	152
<i>E. hallianus</i> , Geinitz, 1866, pl. vii, figs. 9 <i>a-d</i>	152
<i>Mollusca</i> .	
<i>Polyzoa</i> .	
<i>Fenestella</i> , Lonsdale.....	152
<i>Fenestella</i> , sp., pl. i, figs. 4 <i>a, b</i>	152-153
<i>F. shumardi</i> , Prout ?, 1858, pl. vii, figs. 3 <i>a-c</i>	153-154
<i>Polypora</i> , McCoy	154
<i>P. submarginata</i> , n. s., Meek, 1872, pl. vii, figs. 7 <i>a, b</i>	154-155
<i>Polypora</i> , sp. undt., Meek, pl. vii, figs. 6.....	155
<i>Synocladia</i> , King	156
<i>S. biserialis</i> , Swallow, 1858, pl. vii, figs. 5 <i>a-e</i>	156-157
<i>Glaucanome</i> , Goldfuss	157
<i>G. trilineata</i> , Meek, n. s., 1872, pl. vii, figs. 4 <i>a-d</i>	157-158
<i>Brachiopoda</i> .	
<i>Lingula</i> , Bruguière	158
<i>L. scotica</i> , var. <i>nebrascensis</i> , Meek, 1872, pl. viii, figs. 3 <i>a, b</i>	158
<i>Orbiculoidea</i> , d'Orbigny	158
<i>Orbiculoidea</i> , sp., pl. iv, fig. 3.....	158-159
<i>Productus</i> , Sowerby	159
<i>P. costatus</i> , Sowerby?? sp., 1827, pl. vi, figs. 6 <i>a, b</i>	159-160
<i>P. semireticulatus</i> , Martin, sp., 1809, pl. v, figs. 7 <i>a, b</i>	160-161
<i>P. longispinus</i> , Sowerby, ? 1814, pl. vi, fig. 7, and pl. viii, figs. 6 <i>a-c</i>	161-163
<i>P. prattenianus</i> , Norwood, 1854, pl. ii, figs. 5 <i>a-c</i> , pl. v, fig. 13, and pl. viii, figs. 10 <i>a, b</i>	163-164
<i>P. pertenuis</i> , n. s., Meek, 1872, pl. i, figs. 14 <i>a-c</i> , and pl. viii, figs. 9 <i>a-d</i>	164-165
<i>P. nebrascensis</i> , Owen, 1852, pl. ii, fig. 2, pl. iv, fig. 6, and pl. v, figs. 11 <i>a-c</i>	165-167
<i>P. symmetricus</i> , McChesney, 1860, pl. v, figs. 6 <i>a, b</i> , and pl. viii, fig. 13.....	167-168
<i>P. punctatus</i> , Martin, sp., 1809, pl. ii, fig. 6, and pl. iv, fig. 5	169
<i>Chonetes</i> , Fischer	170
<i>C. verneuilliana</i> , Norwood & Pratten, 1854, pl. i, figs. 10 <i>a, b</i>	170
<i>C. granulifera</i> , Owen, 1855, pl. iv, fig. 9, pl. vi, fig. 10, pl. viii, fig. 7	170-171
<i>C. glabra</i> , Geinitz, 1866, pl. iv, fig. 10, pl. viii, figs. 8 <i>a, b</i>	171-172
<i>Orthis</i> , Dalman	173
<i>O. carbonaria</i> , Swallow, 1858, pl. i, figs. 8 <i>a-c</i>	173
<i>Hemipronites</i>	173
<i>H. crassus</i> , M. & H., 1858, pl. v, figs. 10 <i>a-c</i> , and pl. viii, fig. 1	174-175
<i>Meekella</i> , White & St. John	175
<i>M. striato-costata</i> , Cox, sp., 1857, pl. v, figs. 12 <i>a-c</i> , and figs. 5 <i>a, b</i> , and 6, p. 175	175-177
<i>Syntrielasma</i> , M. & W	177
<i>S. hemiplicata</i> , Hall, sp., 1852, pl. vi, figs. 1 <i>a, b</i> , and pl. viii, figs. 12 <i>a, b</i> , and figs. 7 <i>a-c</i> , figs. 8 <i>a, b</i> , p. 177	177-178
<i>Rhynchonella</i> , Fischer.....	179
<i>R. osagenis</i> , Swallow, 1858, pl. i, figs. 9 <i>a, b</i> , and pl. vi, figs. 2 <i>a, b</i>	179-180
<i>Athyris</i> , McCoy	180
<i>A. subtilita</i> , Hall, sp., 1852, pl. i, fig. 12, pl. v, fig. 8, and pl. viii, fig. 4	180-181
<i>Retzia</i> , King	181

	Page.
<i>R. punctulifera</i> , Shumard, 1858, pl. i, fig. 13, and pl. v, fig. 7.....	181-183
<i>Spirifer</i> , Sowerby	183
<i>S. cameratus</i> , Morton, 1836, pl. vi, fig. 12, and pl. viii, fig. 15.....	183-184
<i>S. (Martinia) planoconvexus</i> , Shumard, 1855, pl. iv, figs. 4 <i>a</i> , <i>b</i> , and pl. viii, figs. 2 <i>a</i> , <i>b</i>	184-185
<i>Spiriferina</i> , d'Orbigny.....	185
<i>S. kentuckensis</i> , Shumard, 1855, pl. vi, figs. 3 <i>a-d</i> , and pl. viii, figs. 11 <i>a</i> , <i>b</i>	185-186
<i>Terebratula</i> , Lihwyd	187
<i>T. boridensis</i> , Morton, 1836, pl. i, figs. 7 <i>a-d</i> , and pl. ii, fig. 4.....	187-188
<i>Lamellibranchiata</i> .	
<i>Lima</i> , Bruguière.....	188
<i>L. retifera</i> , Shumard, 1858, pl. ix, fig. 5.....	188-189
<i>Entolium</i> , Meek	189
<i>E. aviculatum</i> , Swallow, sp., 1858, pl. ix, figs. 11 <i>a-f</i>	189-191
<i>Aviculopecten</i> , McCoy	191
<i>A. occidentalis</i> , Shumard, sp., 1855, pl. ix, fig. 10.....	191-193
<i>A. neglectus</i> , Geinitz, sp., 1866, pl. ix, figs. 1 <i>a</i> , <i>b</i>	193
<i>A. carboniferus</i> , Stevens, sp., 1858, pl. iv, fig. 8 and pl. ix, figs. 4 <i>a</i> , <i>b</i>	193-195
<i>A. whitei</i> , n. s., Meek, 1872, pl. iv, figs. 11 <i>a-c</i>	195
<i>A. coranus</i> , M. & W., 1860, pl. ix, figs. 2 <i>a</i> , <i>b</i>	196
<i>Aviculopinna</i> , Meek	197
<i>A. americana</i> , Meek, 1867, pl. ix, figs. 12 <i>a-d</i>	197-198
<i>Pinna</i> , Linnaeus	198
<i>P. peracuta</i> , Shumard, 1858, pl. vi, fig. 11 <i>a</i> , <i>b</i>	198
<i>Avicula</i> (Klein), Brug	199
<i>A. longa</i> , Geinitz, sp., 1866, pl. ix, fig. 8.....	199
<i>A. ? sulcata</i> , Geinitz, 1866, pl. ix, fig. 9.....	200
<i>Pseudomonotis</i> , Beyrich.....	200
<i>Pseudomonotis</i> , sp., pl. ii, fig. 11	200-201
<i>P. radialis</i> , Phillips ?? sp., 1834, pl. ix, fig. 3.....	201
<i>Myalina</i> , de Koninck	201
<i>M. [?] swallowi</i> , McChesney, 1860, pl. ix, figs. 7 <i>a</i> , <i>b</i>	201-202
<i>M. subquadrata</i> , Shumard, 1855, pl. iv, fig. 12 and pl. ix, fig. 6.....	202-203
<i>Nucula</i> , Lamarck	203
<i>N. beyrichi</i> , v. Schauthroth ? 1854, pl. x, fig. 18	203-204
<i>N. ventricosa</i> , Hall, 1858, pl. x, figs. 17 <i>a-c</i>	204-205
<i>Foldia</i> , Möller	205
<i>Y. subscitula</i> , M. & H., ? 1858, pl. x, fig. 10.....	205-206
<i>Nuculana</i> , Link	206
<i>N. bellistriata</i> var. <i>attenuata</i> , pl. x, figs. 11 <i>a</i> , <i>b</i>	206-207
<i>Maerodon</i> , Lycett.....	207
<i>M. tenuistriata</i> , M. & W., 1867, pl. x, figs. 20, <i>a</i> , <i>b</i>	207-208
<i>Schizodus</i> , King	208
<i>S. curtus</i> , M. & W., ? 1866, pl. x, figs. 13 <i>a-c</i> (<i>d</i> ?), <i>e</i>	208-209
<i>S. wheeleri</i> , Swallow, sp., 1862, pl. x, figs. 1 <i>a-d</i> (and <i>e</i> , <i>f</i> ?).....	209-210
<i>Schizodus</i> , undt. pl. x, fig. 2.....	210-211
<i>Modiola</i> , Lamarck	211
<i>M. ? subelliptica</i> , Meek, 1867, pl. x, fig. 5.....	211-212
<i>Pleurophorus</i> , King	212
<i>P. oblongus</i> , n. s., Meeks, 1872, pl. x, fig. 4 <i>a-c</i>	212
<i>P. occidentalis</i> , M. & H., ? 1858, pl. x, fig. 12	212-213
<i>Edmondia</i> , de Koninck	213
<i>E. reflexa</i> , n. s., Meek, 1872, pl. x, figs. 6 <i>a</i> , <i>b</i> , and pl. iv, fig. 7 ?	213-214
<i>E. ? glabra</i> n. s., Meek, 1872, pl. x, figs. 7 <i>a</i> , <i>b</i>	214
<i>E. ? nebrascensis</i> , Geinitz, sp., 1866, pl. x, figs. 8 <i>a</i> , <i>b</i>	214-215
<i>E. subtruncata</i> n. s., Meek, 1872, pl. ii, fig. 7.....	215-216
<i>E. aspinwallensis</i> , Meek, 1871, pl. iv, figs. 2 <i>a-c</i>	216
<i>Chenomya</i> , M. & H.	216
<i>C. leavenworthensis</i> , M. & H., 1858, pl. ii, fig. 9	216-217
<i>C. minchaha</i> , Swallow, sp., 1858, pl. — figs. 13 <i>a</i> , <i>b</i>	217
<i>Allorisma</i> , King	217
<i>A. (Sedgwickia) reflexa</i> , n. s., Meek, 1872, pl. x, fig. 15.....	217-218
<i>A. (Sedgwickia) geinitzii</i> , Meek, 1867, pl. x, figs. 16 <i>a</i> , <i>b</i>	219
<i>A. (Sedgwickia) ? subelegans</i> n. s., Meek, 1872, pl. x, fig. 14.....	220
<i>A. (Sedgwickia) granosa</i> , Shumard, sp., 1858, pl. ii, fig. 8.....	220-221
<i>A. subcuneata</i> , M. & H., 1858, pl. ii, figs. 10 <i>a</i> , <i>b</i>	221-222

	Page.
<i>Prothyris</i> , Meek	223
<i>P. elegans</i> , Meek, 1871, pl. x, figs. 9 a, b	223
<i>Solenopsis</i> , McCoy	223
<i>S. solenoides</i> , Geinitz, sp., 1866, pl. x, fig. 3	223-224
<i>Gasteropoda</i> , Cuvier.	
<i>Dentalium</i> , Linnaeus	224
<i>D. meekianum</i> , Geinitz, 1866, pl. xi, figs. 16 a, b	224
<i>Belclerophon</i> , Montfort	224
<i>B. carbonarius</i> , Cox, 1857, pl. iv, fig. 16, pl. xi, figs. 11 a-c	224-225
<i>B. montfortianus</i> , Norwood & Pratten, 1855, pl. xi, fig. 15, and 12?	225-226
<i>B. marcovianus</i> , Geinitz, 1866, pl. iv, fig. 17, and pl. xi, figs. 13 a, b	226-227
<i>B. percarinatus</i> , Conrad, 1842, pl. xi, fig. 14	227
<i>Platyceras</i> , Conrad	227
<i>P. nebrascensis</i> , n. s., Meek, 1872, pl. iv, figs. 15 a, b	227-228
<i>Macrocheilus</i> , Phillips	228
<i>M. intercalaris</i> var. <i>pulchellus</i> , M. & W., 1860, pl. vi, fig. 8	228
<i>Orthonema</i> , M. & W	228
<i>O. subtaeniata</i> , Geinitz, sp., 1866, pl. xi, fig. 10	228-229
<i>Actis</i> , Loven	229
<i>A. swallowiana</i> , Geinitz, sp., 1866, pl. xi, figs. 7 a, b	229-230
<i>Straparollus</i> , Montfort	230
<i>S. (Euomphalus) rugosus</i> , Hall, 1858, pl. vi, figs. 5 a, b, and pl. xi, figs. 4 a, b	230-231
<i>Pleurotomaria</i> , DeFrance	231
<i>P. haydeniana</i> , Geinitz, 1866, pl. xi, fig. 5	231
<i>P. perhumerosa</i> , n. s., Meek, 1872, pl. iv, figs. 13 a, b	232
<i>P. inornata</i> , n. s., Meek, 1872, pl. iv, fig. 14	232-233
<i>P. grayvillensis</i> , Norwood & Pratten, 1855, pl. xi, fig. 9	233
<i>P. marcoviana</i> , Geinitz, 1866, pl. xi, fig. 8	233
<i>P. subdeussata</i> , Geinitz, 1866, pl. xi, fig. 19	233
<i>Murchisonia</i> , de Verneuil	234
<i>M. nebrascensis</i> , Geinitz, 1866, pl. xi, fig. 6	234
<i>Cephalopoda</i> .	
<i>Orthoceras</i> , Auct.	234
<i>O. cribratum</i> , Geinitz, 1866, pl. xi, figs. 18 a, b	234
<i>Nautilus</i> , Linn.	234
<i>N. occidentalis</i> , Swallow, 1858, pl. xi, fig. 17	234-236
<i>N. ponderosus</i> , White, M. S., 1872, pl. iii, figs. 7 a, b	236
<i>Articulata</i> .	
<i>Crustacea</i> .	
<i>Cythere</i> , Müller	237
<i>C. nebrascensis</i> , Geinitz, 1866, pl. xi, figs. 2; and 3 a, b?	237
<i>Cythere</i> , sp., pl. xi, figs. 1 a-d	237
<i>Phillipsia</i> , Portlock	237
<i>Phillipsia</i> , sp., Geinitz, 1866, pl. iii, figs. 1 a, b	237-238
<i>P. scitula</i> , M. & W., 1865, pl. vi, fig. 9	238
<i>P. major</i> , Shumard, 1858, pl. iii, figs. 2 a-c	238-239

MEEK, F. B. [Geological reports on Miller, Morgan, and Saline Counties, Missouri.]
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Geological maps of Miller and Morgan Counties accompany these reports.

CHAPTER VII.

	Page.
Miller County	112
Streams	112
Springs	114
Timber	115
Geological structure of Miller County	115
Quaternary system.—Alluvium	117
Carboniferous system	118
Lower Silurian rocks.—Sacharoidal sandstone	118

	Page.
Second magnesian limestone.....	118
Second sandstone.....	121
Third magnesian limestone.....	123
Third sandstone.....	127
Fourth magnesian limestone.....	127
Economical geology.....	128
Soil, clays for the manufacture of bricks.....	128
Building stones.....	128
Road material, limestone for quicklime, sand.....	129
Iron ore.....	130
Lead.....	131
Coal.....	132
Sulphate of baryta.....	133

CHAPTER VIII.

Morgan County.....	135
Springs.....	136
Streams.....	137
Timber.....	138
Geological structure.....	138
Quaternary system.—Alluvium.....	139
Carboniferous rocks.—Coal measures.....	140
Eucrinital limestone.....	140
Chouteau limestone.....	141
Silurian system.....	141
First magnesian limestone.....	141
Saccharoidal sandstone.....	142
Second magnesian limestone.....	143
Second sandstone.....	144
Third magnesian limestone.....	145
Third sandstone.....	147
Fourth magnesian limestone.....	148
Economical geology.....	149
Soils.....	149
Coal.....	149
Lead.....	152
Iron ore.....	155
Heavy spar.....	156
Building materiel.....	156

CHAPTER IX.

Saline County.....	157
Streams.....	158
Timber.....	159
Geological structure.....	160
Quaternary deposits.....	161
Alluvium of the Missouri Flats.....	161
Bluff or Loess Deposit.....	161
Drift.....	162
Carboniferous rocks.—Coal measures.....	163
Ferruginous sandstone.....	172
Archimedes limestone.....	172
Eucrinital limestone.....	173
Chouteau limestone.....	174
Cooper marble.....	176
Semi-crystalline limestone.....	176
Silurian system.....	178
Trenton limestone?.....	178
Saccharoidal sandstone.....	178
Economical geology.....	179
Soil.....	179
Coal.....	180
Building stone.....	180
Limestones for making lime, sand, clays for bricks, &c.....	181
Springs.....	181

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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 Spergen Hill, is noted. A list of the species identified is given, but no discussion of them is made.

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Genera Admetopsis, Velatella.

	Page.
General remarks.....	431
Silurian age.....	431-432
Carboniferous age.....	432-434
Jurassic age.....	434-435
Cretaceous age.....	435-438
Section from about $1\frac{1}{4}$ miles northeast of Coalville, in a northwesterly direction, to Echo Cañon, fig. 52.....	439-440
Section of the rocks exposed on Sulphur Creek, near Bear River, Wyoming, fig. 53.....	451-452
Tertiary age.....	462
Lists of fossils collected.....	463

Descriptions of new species of fossils.

SILURIAN FORMS.

<i>Iphidea</i> (?) <i>sculptilis</i> , n. s., Meek, 1873.....	479
<i>Asaphus</i> (<i>Megalaspis</i> ?) <i>goniocercus</i> , n. s., Meek, 1873.....	480
<i>Bathyrurus serratus</i> , n. s., Meek, 1873.....	480-482
<i>B. ? haydeni</i> , n. s., Meek, 1873.....	482-484
<i>Bathyrurellus</i> (<i>Aspiscus</i>) <i>bradleyi</i> , n. s., Meek, 1873.....	484-485
<i>Conocoryphe</i> (<i>Ptychoporia</i>) <i>gallatinensis</i> , n. s., Meek, 1873.....	485-487

CRETACEOUS FORMS.

<i>Ostrea soleniscus</i> , Meek, 1870.....	487-488
<i>Ostrea anominioides</i> , n. s., Meek, 1873.....	488
<i>Avicula</i> (<i>Pseudoptera</i>) <i>propleura</i> , n. s., Meek, 1873.....	489-490
<i>Avicula</i> (<i>Pseudoptera</i>) <i>rhynchophora</i> , n. s., Meek, 1873.....	490-491
<i>Avicula</i> (<i>Oxytoma</i>) <i>gastrodes</i> , n. s., Meek, 1873.....	491-492
<i>Modiola</i> (<i>Brachydontes</i>) <i>multilinigera</i> , n. s., Meek, 1873.....	492-493
<i>Trapezium micronema</i> , n. s., Meek, 1873.....	493
<i>Corbicula</i> (<i>Veloritina</i>) <i>inflexa</i> , n. s., Meek, 1873.....	493-494
<i>Corbicula</i> (<i>Cyrena</i> ?) <i>securis</i> , n. s., Meek, 1873.....	494-495
<i>Corbicula</i> <i>equilateralis</i> , n. s., Meek, 1873.....	495
<i>Cyrena carletoni</i> , n. s., Meek, 1873.....	495-496
<i>Pharella ? pealei</i> , n. s., Meek, 1873.....	496
<i>Corbula nematophora</i> , n. s., Meek, 1873.....	496-497
<i>Neritina</i> (<i>Dostia</i> ?) <i>bellatula</i> , n. s., Meek, 1873.....	497-498
<i>Neritina</i> (<i>Dostia</i> ?) <i>putelliformis</i> , n. s., Meek, 1873.....	498-499
<i>Neritina</i> (<i>Dostia</i> ?) <i>carditoides</i> , n. s., Meek, 1873.....	499
<i>Neritina</i> (<i>Neritella</i>) <i>bannisteri</i> , n. s., Meek, 1873.....	499-500
<i>Neritina</i> (<i>Neritella</i>) <i>pisum</i> , n. s., Meek, 1873.....	500
<i>Neritina</i> <i>pisiformis</i> , n. s., Meek, 1873.....	500-501
<i>Admete ? rhomboides</i> , n. s., Meek, 1873.....	501
<i>Admete ? gregaria</i> , n. s., Meek, 1873.....	501-502
<i>Admete ? subfusiformis</i> , n. s., Meek, 1873.....	502
<i>Turritella coalvillensis</i> , n. s., Meek, 1873.....	502-503
<i>Turritella spironema</i> , n. s., Meek, 1873.....	503-504
<i>Turritella</i> (<i>Aclis</i> ?) <i>micronema</i> , n. s., Meek, 1873.....	504
<i>Fusus</i> (<i>Neptunea</i> ?) <i>gabbi</i> , n. s., Meek, 1873.....	504-505
<i>Fusus</i> (<i>Neptunea</i> ?) <i>utahensis</i> , n. s., Meek, 1873.....	505

	Page.
<i>Turbonilla (Chemnitzia ?) coalvillensis</i> , n. s., Meek, 1873.....	505-506
<i>Eulina funicula</i> , n. s., Meek, 1873.....	506
<i>Eulina chrysalis</i> , n. s., Meek, 1873.....	506
<i>Eulina ? inconspicua</i> , n. s., Meek, 1873.....	507
<i>Melampus antiquus</i> , n. s., Meek, 1873.....	507
<i>Valvata nana</i> , n. s., Meek, 1873.....	507
<i>Physa carletoni</i> , n. s., Meek, 1873.....	508

Species from the Bitter Creek series.

<i>Ostrea wyomingensis</i> , Meek, 1872.....	508-509
<i>Anomia (Placunopsis ?) gryphorhyncus</i> , Meek, 1871.....	509-511
<i>Corbicula (Veloritina) cytheriformis</i> , M. & H., 1860.....	511
<i>Corbicula ? fracta</i> , var. <i>crassiuscula</i> , Meek, 1873.....	512-513
<i>Corbicula (Veloritina) bannisteri</i> , n. s., Meek, 1873.....	513
<i>Corbula undifera</i> , n. s., Meek, 1873.....	513-514
<i>Corbula tropidophora</i> , n. s., Meek, 1873.....	514-515
<i>Goniobasis ? insculpta</i> , n. s., Meek, 1873.....	515-516
<i>Melania (Goniobasis?) wyomingensis</i> , n. s., Meek, 1873.....	516

Tertiary forms.

<i>Physa bridgerensis</i> , n. s., Meek, 1873.....	516-517
<i>Limnæa (Limnophysa?) compactilis</i> , n. s., Meek, 1873.....	517
<i>Pupa ? leidyi</i> , n. s., Meek, 1873.....	517-518

90.

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FOSSILS OF THE CININNATI GROUP.

Radiata.

Echinodermata.

Crinoidea.

	Page.
<i>Heterocrinus</i> , Hall, 1847.....	1-2
<i>H. constrictus</i> , Hall, 1866, pl. i, figs. 10 <i>a</i> , <i>b</i> (and 11 ?).....	3-5
<i>H. exilis</i> , Hall? 1868, pl. i, fig. 12.....	5-7
<i>H. simplex</i> , Hall, 1847, pl. i, figs. 4 <i>a</i> , <i>b</i> ; 5 <i>a</i> , <i>b</i> (with 6 <i>a</i> , <i>b</i> and 7 <i>a-c</i> ?).....	7-10
<i>H. juvenis</i> , Hall, 1866, pl. i, figs. 3 <i>a-c</i>	10-12
<i>H. heterodactylus</i> , Hall? 1847, pl. i, figs. 1 <i>a</i> , <i>b</i> (and 2 <i>a</i> , <i>b</i> ?).....	12-14
<i>H. laxus</i> , Hall, 1872, pl. i, figs. 8 <i>a</i> , <i>b</i>	14, 15
<i>H. (Iocrinus) subcrassus</i> , M. and W., 1865, pl. i, figs. 9 <i>a</i> , <i>b</i>	15-17
<i>Anomalocrinus</i> , M. and W., 1868.....	17
<i>A. incurvus</i> , M. and W., 1865, pl. ii, figs. 6 <i>a-f</i>	17-20
<i>Potriocrinites</i> , Miller, 1821.....	20
Subgenus (<i>Dendrocrinus</i>) Hall, 1852.....	20
<i>P. (Dendrocrinus) cincinnatiensis</i> , Meek, 1872, pl. iii bis, figs. 5 <i>a</i> , <i>b</i>	20-22
<i>P. (Dendrocrinus) polydactylus</i> , Shumard, sp. 1867, pl. iii bis, fig. 9.....	22
<i>P. (Dendrocrinus) posticus</i> , Hall, 1872, pl. iii bis, figs. 4 <i>a-c</i>	22-24
<i>P. (Dendrocrinus) dyeri</i> , Meek, 1872, pl. iii bis, figs. 3 <i>a</i> , <i>b</i>	24-25
<i>P. (Dendrocrinus) caduceus</i> , Hall, 1866, pl. 3 bis, figs. i, <i>a-d</i>	26-27
<i>P. (Dendrocrinus) casei</i> , Meek, 1871, pl. iii bis, figs. 2 <i>a-c</i>	28-30
<i>Glyptocrinus</i> , Hall, 1847.....	30
<i>G. decadactylus</i> , Hall, 1847, pl. ii, figs. 5 <i>a</i> , <i>b</i>	30-32
<i>G. dyeri</i> , Meek, 1872, pl. ii, figs. <i>a</i> , <i>b</i>	32-34
<i>G. dyeri</i> var. <i>sub-globosus</i> , Meek, 1872, pl. ii, fig. 2, <i>c</i>	34
<i>G. nealli</i> , Hall, 1866, pl. ii, figs. 3 <i>a-c</i>	34-36
<i>G. parvus</i> , Hall, 1872, pl. ii, figs. 4 <i>a</i> , <i>b</i>	36-37
<i>G. bacri</i> , Meek, 1872, pl. ii, figs. 1 <i>a</i> , <i>b</i>	37-39

Cystoidea.

<i>Lepacrinites</i> , Conrad, 1840.....	39
<i>L. moorei</i> , Meek, 1871, pl. iii, figs. 4 <i>a-c</i>	39-41
<i>Anomalocystites</i> , Hall, 1859.....	41
<i>A. (Ateleocystites?) balanoides</i> , Meek, 1872, pl. iii bis, figs. 6 <i>a-c</i>	41-44
<i>Lichenocrinus</i> , Hall, 1866.....	44-51
<i>L. dyeri</i> , Hall, 1866, pl. iii, figs. 2 (and 3 <i>a</i> , <i>b</i> ?).....	51

	Page.
<i>L. crateriformis</i> , Hall, 1866, pl. iii, figs. 1 <i>a-l</i>	51-52
<i>Hemicystites</i> , Hall.....	52
<i>H. stellatus</i> , Hall, 1866, pl. iii, figs. 8 <i>a, b</i>	52-54
<i>H. (Cystaster) granulatus</i> , Hall, 1872, pl. iii, figs. 9 <i>a, b</i>	54
<i>Agelacrinites</i> , Vanuxem, 1842.....	55
<i>A. (Lepidodiscus) cincinnatiensis</i> , Remer, 1851, pl. iii, figs. 6 <i>a, b</i>	55-56
<i>A. pileus</i> , Hall, 1866, pl. iii, fig. 5.....	56-57
<i>A. vorticellata</i> , Hall, 1860, pl. iii, figs. 7 <i>a, b</i>	57-58
Asteroides.	
<i>Palaeaster</i> , Hall.....	58
<i>P. ? dyeri</i> , Meek, 1872, pl. iv, figs. 2 <i>a-f</i>	58-60
<i>P. granulatus</i> , Hall? 1866, pl. iv, figs. 3 <i>a-c</i>	60-61
<i>P. ? jamesii</i> , Dana, 1863, pl. iv, fig. 4.....	62-64
<i>P. incomptus</i> , Meek, 1872, pl. iv, figs. 5 <i>a, b</i>	64-65
<i>P. shaefferi</i> , Hall, 1868, pl. iv, fig. 1.....	66
<i>Stenaster</i> Billings, 1858.....	66
<i>S. grandis</i> , Meek, 1872, pl. iii bis, fig. 7 <i>a-c</i>	66-67
Ophiuroidea.	
<i>Protaster</i> ?, Forbes, 1849.....	68
<i>P. grandiferus</i> , Meek, 1872, pl. iii bis, figs. 8 <i>a, b</i>	68-69
Mollusca.	
Polyzoa.	
<i>Ptilodictya</i> , Lonsdale, 1839.....	69
<i>P. (Stictopora) shaefferi</i> , Meek, 1872, pl. v, figs. 1 <i>a-c</i>	69-70
Brachiopoda.	
<i>Leptaena</i> , Dalman, 1828.....	70
<i>L. sericea</i> , Sowerby ? 1839, pl. v, figs. 3 <i>a-h</i>	70-72
<i>Strophomena</i> , Rafinesque, 1827.....	73-75
<i>S. rhomboidalis</i> , Wilckens sp., 1769, pl. v, figs. 6 <i>a-e</i>	75-77
Subgenus <i>Hemipronites</i> , Pander.....	77
(Resupinate species.)	
<i>S. (Hemipronites) nutans</i> , James, 1871, pl. vi, figs. 1 <i>a-f</i>	77-79
<i>S. (Hemipronites) planumbona</i> , Hall, 1847, pl. vi, figs. 3 <i>a-h</i>	79-81
<i>S. (Hemipronites) plicata</i> , James, 1871, pl. vi, figs. 4 <i>a-h</i>	81-82
<i>S. (Hemipronites) plano-convexa</i> , Hall, 1847, pl. ii, figs. 2 <i>a-h</i>	82-83
<i>S. (Hemipronites) flitexta</i> , Hall, 1847, pl. vi, figs. 5 <i>a-d</i>	83-85
<i>S. (Hemipronites) sulcata</i> , de Verneuil, 1848, pl. v, figs. 4 <i>a-e</i>	85-86
<i>S. (Hemipronites) sinuata</i> , James, 1871, pl. v, figs. 5 <i>a-f</i>	87-88
(Non-resupinate species.)	
<i>S. (Hemipronites) alternata</i> (Conr.), Emmons, 1838, pl. vii, figs. 1 <i>a-g</i>	88-91
<i>Orthia</i> , Dalman, 1828.....	92
(Resupinate species.)	
<i>O. retrorsa</i> , Salter ? 1858, pl. xi, figs. 7 <i>a-e</i>	92-94
<i>O. subquadrata</i> , Hall, pl. ix, figs. 2 <i>b-g</i>	94-96
<i>O. occidentalis</i> , Hall, 1847, pl. ix, figs. 3 <i>a-h</i>	96-99
<i>O. insculpta</i> , Hall, 1847, pl. ix, figs. 1 <i>a-h</i>	99-101
<i>O. borealis</i> , Billings, 1859, pl. viii, figs. 4 <i>a-f</i>	101-103
<i>O. bellula</i> , James, 1871, pl. viii, figs. 5 <i>a-f</i>	103-104
<i>O. (?) ella</i> , Hall, 1861, pl. viii, figs. 9 <i>a-d</i>	105-106
(Non-resupinate species.)	
<i>O. fissicosta</i> , Hall, 1847, pl. viii, figs. 6 <i>a-h</i>	106-107
<i>O. plicatella</i> , Hall, 1847, pl. viii, figs. 7 <i>a-h</i>	108-109
<i>O. emacerata</i> , Hall, 1860, pl. viii, figs. 1 <i>a-d</i> , and figs. 2 <i>a-g</i>	109-111
<i>O. emacerata</i> var. <i>multisetata</i> , James, 1871, pl. viii, figs. 3 <i>a-d</i>	112
<i>O. (Platystrophia) bifurcata</i> , Schlotheim, sp., 1820, pl. x.....	112-114
Var. 1. <i>O. (Platystrophia) lynx</i> , Von Buch., pl. x, figs. 1 <i>a-e</i>	114-116
Var. 2. <i>O. (Platystrophia) laticosta</i> , James, 1871, pl. x, figs. 4 <i>a-f</i>	116-117
Var. 3. <i>O. (Platystrophia) dentata</i> , Pander ? ? James, 1871, pl. x, figs. 3 <i>a-d</i>	117-119
Var. 4. <i>O. (Platystrophia) acutilirata</i> , Conr., sp., 1842, pl. x, figs. 5 <i>a-g</i>	119-121
<i>Rhynchonella</i> , Fischer de Waldh., 1809.....	121
<i>R. dentata</i> , Hall, 1847, pl. xi, figs. 3 <i>a-d</i>	121-122
<i>R. capax</i> , Conrad, sp., 1842, pl. xi, figs. 6 <i>a-f</i>	123-124
<i>Zygospira</i> , Hall, 1862.....	125
<i>Z. modesta</i> , Say, sp., pl. xi, figs. 4 <i>a-d</i>	125-126
<i>Z. cincinnatiensis</i> , James, 1871, pl. xi, figs. 5 <i>a-c</i>	126

	Page.
<i>Z. headi</i> , Billings, sp., 1862, pl. xi, figs. 1 <i>a-d</i>	127-128
<i>Retzia</i> , King, 1850.....	128
<i>R. (Trematospira) granulifera</i> , Meek, 1872, pl. xi, figs. 6 <i>a-e</i>	128-129
<i>Pholidops</i> , Hall, 1860.....	130
<i>P. cincinnatiensis</i> , Hall, 1872, pl. v, figs. 2 <i>a, b</i>	130
<i>Lamellibranchiata.</i>	
<i>Ambonychia</i> , Hall, 1847.....	130
<i>A. costata</i> , James, 1871, pl. xii, figs. 5 <i>a-c</i>	130-131
<i>A. (Megaptera) alata</i> , Meek, 1872, pl. xi, fig. 9, and pl. xii, fig. 10.....	131-132
<i>A. (Megaptera) casei</i> , M. & W. ?, 1866, pl. xi, fig. 8.....	133
<i>Cypricardites</i> , Conrad, 1841.....	133
<i>C. sterlingensis</i> , M. & W. ? sp., 1866, pl. xi, figs. 12 <i>a, b</i>	133-135
<i>C. ? carinata</i> , Meek, 1872, pl. xii, figs. 6 <i>a, b</i>	135-136
<i>Megambonia</i> , Hall, 1859.....	136
<i>M. jamesi</i> , Meek, 1871, pl. xii, figs. 9 <i>a, b</i>	136-138
<i>Otidophorus</i> , Hall, 1847.....	138
<i>O. (Nuculites ?) fabula</i> , Hall, sp., 1845, pl. xi, figs. 10 <i>a, b</i>	138-139
<i>Tellinomya</i> , Hall, 1847.....	139
<i>T. ? obliqua</i> , Hall, sp., 1845, pl. xi, figs. 11 <i>a-c</i>	139
<i>Anodontopsis</i> , McCoy, 1851.....	140
<i>A. ? milleri</i> , Meek, 1871, pl. xii, figs. 1 <i>a-d</i>	140-141
<i>A. (Modiolopsis ?) unionoides</i> , Meek, 1871, pl. xii, figs. 2 <i>a, b</i>	141-142
<i>Sedgwickia</i> , McCoy, 1844.....	142
<i>S. (? Grammysia) neglecta</i> , Meek, 1872, pl. xii, fig. 8.....	142-143
<i>S. ? fragilis</i> , Meek, 1872, pl. xii, figs. 3 <i>a, b</i>	143-144
<i>S. ? compressa</i> , Meek, 1872, pl. xii, figs. 7 <i>a, b</i>	144-145
<i>Cardiomorpha</i> , de Koninck, 1844.....	146
<i>C. ? obliquata</i> , Meek, 1872, pl. xii, figs. 4 <i>a, b</i>	146-147
<i>Gasteropoda.</i>	
<i>Cyrtolites</i> , Conrad, 1838.....	147
<i>C. (Microceras) inornatus</i> , Hall, sp., 1845, pl. xiii, figs. 4 <i>a, b</i>	147-148
<i>C. ornatus</i> , Conrad, 1838, pl. xiii, figs. 3 <i>a, b</i>	148-149
<i>C. dyeri</i> , Hall, 1871, pl. xiii, figs. 2 <i>a-c</i>	149-150
<i>C. ? costatus</i> , James, 1872, pl. xiii, figs. 1 <i>a-c</i>	150
<i>Cyclonema</i> , Hall, 1852.....	151
<i>C. bilix</i> , Conrad sp., 1842, pl. xiii, figs. 5 <i>a, c, d, g</i> , and 5 <i>e, f ?</i>	151-152
<i>Cyclora</i> , Hall, 1845.....	152
<i>C. minuta</i> , Hall, 1845, pl. xiii, figs. 7 <i>a-c</i>	152-153
<i>C. ? parvula</i> , Hall, sp., 1845.....	154
<i>Pleurotomaria</i> , DeFrance, 1826.....	154
<i>P. (Scalites ?) tropidophora</i> , Meek, 1872, pl. xiii, figs. 6 <i>a-c</i>	154-155
<i>Cephalopoda.</i>	
<i>Orthoceras</i> , Auct.....	
<i>O. ortoni</i> , Meek, 1872, pl. xiii, fig. 8.....	155-156
<i>Trochoceras</i> , Barrande, 1847.....	157
<i>T. ? baeri</i> , M. & W., 1865, pl. xiii, fig. 9.....	157-158
<i>Articulata.</i>	
<i>Crustacea.</i>	
<i>Entomostraca.</i>	
<i>Cythere</i> , Muller, 1785.....	158
<i>C. cincinnatiensis</i> , Meek, 1872, pl. xiv, figs. 1 <i>a-d</i>	158-159
<i>Asaphus</i> , Brongniart, 1822.....	159
<i>A. (Isotelus) megistos</i> , Locke ? 1842, pl. xiv, fig. 13.....	159-160
<i>Proetus</i> , Steininger, 1831.....	
<i>P. spurlocki</i> , Meek, 1872, pl. xiv, fig. 12.....	161-162
<i>Ceraurus</i> , Green, 1833.....	622
<i>C. icarus</i> , Billings, 1859, pl. xiv, figs. 11 <i>a-c</i>	162-165
<i>Acidaspis</i> , Murchison, 1839.....	165
<i>A. crosotus</i> , Locke, ? 1842, pl. xiv, figs. 10 <i>a, b</i>	165-167
<i>A. cincinnatiensis</i> , Meek, n. sp., 1873, pl. xiv, fig. 3.....	167-169
<i>A. ceralepta</i> , Anthony, sp.?, 1838, pl. xiv, figs. 8, 9.....	169-170
<i>Dalmanites</i> , Barrande, 1852.....	170
<i>D. carleyi</i> , Meek, 1872, pl. xiv, figs. 2 <i>a-d</i>	170-173
<i>Calymene</i> , Brongniart, 1822.....	173
<i>C. senaria</i> , Conrad, 1841, pl. xiv, figs. 14 <i>a-f</i>	173-175

FOSSILS OF THE NIAGARA AND CLINTON GROUPS.

	Page.
<i>Mollusca.</i>	
<i>Brachiopoda.</i>	
<i>Triplexia</i> , Hall, 1859	176-177
<i>T. ortonii</i> , Meek, 1872, pl. xv, figs. 1 <i>a-k</i>	178-179
<i>Rhynchonella</i> , Fischer, 1809	179
<i>R. neglecta</i> , Hall, 1852, pl. xv, figs. 3 <i>a-d</i>	179-180
<i>Meristella</i> , Hall, 1860	180
<i>M. ? (Meristina) cylindrica</i> , Hall, sp., 1852, pl. xv, figs. 2 <i>a-d</i>	180-182
<i>Trimerella</i> , Billings, 1862	182
<i>T. grandis</i> , Billings, 1862, pl. xvi, figs. 2 <i>a, b</i>	182
<i>T. ohioensis</i> , Meek, 1871, pl. xvi, figs. 1 <i>a-c</i> , and figs. <i>a, b</i> , p. 183	183-185
<i>Gasteropoda.</i>	
<i>Platystoma</i> , Conrad, 1842	185
<i>P. niagarensis</i> var. <i>trigonoostoma</i> , pl. xvi, figs. 3 <i>a-c</i> , and fig. p. 186	185-186
<i>Cephalopoda.</i>	
<i>Lituites</i> , Montfort, 1808	186
<i>L. ? ortonii</i> , Meek, n. s., 1873, pl. xv, fig. 4	186-187
<i>Articulata.</i>	
<i>Crustacea.</i>	
<i>Leperditia</i> , Rouault, 1851	187
<i>L. alta</i> , Conrad, sp., 1843, pl. xvii, figs. 2 <i>a, b</i>	187-188
<i>Illaenus</i> , Dalman, 1826	189
<i>I. (Bumastus) insignis</i> , Hall, ? 1864, pl. xv, figs. 5 <i>a-c</i> , and figs. <i>a</i> and <i>b</i> , p. 189	189-193
FOSSILS OF THE CORNIFEROUS GROUP.	
<i>Mollusca.</i>	
<i>Polyzoa.</i>	
<i>Ptilodictya</i> , Lonsdale, 1839	194
<i>P. (Stictopora) gilberti</i> , Meek, 1871, pl. xviii, figs. 1 <i>a-c</i>	194-195
<i>Brachiopoda.</i>	
<i>Rhynchonella</i> , Fischer, 1809	196
<i>R. carolina</i> , Hall, 1867, pl. xviii, figs. 8 <i>a-e</i>	196-197
<i>Lamellibranchiata.</i>	
<i>Aviculopecten</i> , McCoy, 1851	197
<i>A. parilis</i> , Conrad, ? 1842, pl. xviii, figs. 6 <i>a, b</i>	197-199
<i>Lucina</i> , Bruguiere, 1792	199
<i>L. (Paracyclas) ohioensis</i> , Meek, 1871, pl. xviii, fig. 7 <i>a, b</i>	199-200
<i>L. lirata</i> , Conrad, sp., fig. --, p. 200	200
<i>Conocardium</i> , Brown, 1835. ?	201
<i>C. trigonale</i> , Hall, 1843, figs. <i>A-C</i> , p. 201, and figs. <i>A, B</i> , p. 204	201-203
<i>C. ohioense</i> , Meek, 1871, pl. xviii, fig. 9, and figs. <i>A</i> and <i>B</i> , p. 204	203-206
<i>Solemya</i> , Lamarck, 1818	206
<i>S. (Jania) vetusta</i> , Meek, 1871, pl. xviii, fig. 4	206-207
<i>Olinopistha</i> , M. and W., 1870	208
<i>C. antiqua</i> , Meek, 1871, pl. xviii, figs. 5 <i>a, b</i>	208
<i>Sanguinolites</i> , McCoy, 1844	209
<i>S. ? sanduskyensis</i> , Meek, 1871, pl. xviii, fig. 3	209
<i>Gasteropoda.</i>	
<i>Platyceras</i> , Conrad, 1842	210
<i>P. multispinosum</i> , Meek, 1871, pl. xx, figs. 7 <i>a, b</i>	210-211
<i>P. dunosum</i> var. <i>attenuatum</i> , Meek, 1871, pl. xx, figs. 2 <i>a, b</i>	212-213
<i>Cyclonema</i> , Hall, 1852	213
<i>C. crenulata</i> , Meek, 1871, pl. xix, figs. 2 <i>a-d</i>	213
<i>Naticopsis</i> , McCoy, 1844	214
<i>N. ? (Isomema) humilis</i> , Meek, 1871, pl. xix, figs. 1 <i>a-c</i> , and fig. p. 215	214-215
<i>N. levis</i> , Meek, 1871, pl. xix, figs. 4 <i>a, b</i>	215-216
<i>N. acquistriata</i> , Meek, n. s., 1873, figs. <i>a, b</i> , p. 216	216-217
<i>Orthonema</i> , M. and W., 1861	217
<i>O. newberryi</i> , Meek, 1871, pl. xx, figs. 3 <i>a, b</i>	217-218
<i>Trochonema</i> , Salter, 1859	218
<i>T. triearinata</i> , Meek, 1871, pl. xix, figs. 5 <i>a, b</i>	218-219
<i>Euomphalus</i> , Sowerby, 1814	220
<i>E. deccei</i> , Billings, 1861, pl. xix, figs. 3 <i>a, b</i> , and pl. xx, fig. 1	220-221
<i>Xenophora</i> , Fischer, 1806	221
<i>X. ? (Pseudophorus) antiqua</i> , Meek, 1871, pl. xvii, figs. 1 <i>a-e</i>	221-222

	Page.
<i>Bellerophon</i> , Montfort, 1808	222
<i>B. newberryi</i> , Meek, 1871, pl. xx, fig. 5, and fig. —, p. 223	222-225
<i>B. patulus</i> , Hall, fig. —, p. 223	223
<i>B. propinquus</i> , Meek, 1871, pl. xx, figs. 4 <i>a-b</i>	226
<i>Pleurotomaria</i> , DeFrance, 1826	226
<i>P. lucina</i> , Hall?, 1862, pl. xx, fig. 6	226-227
<i>Conularia</i> , Miller, 1818, MS	228
<i>C. elegantula</i> , Meek, 1871, pl. xxiii, fig. 4	228-229
<i>Cephalopoda</i> .	
<i>Cyrtoceratites</i> , Goldfuss, 1830?	229
<i>C. ohioensis</i> , Meek, 1871, pl. xxiii, figs. 2 and 2 <i>b</i>	229-230
<i>Gyroceratites</i> , Meyer, 1831	230
<i>G. (?) Trochoceras</i> <i>ohioensis</i> , Meek, 1871, pl. xxii	230-231
<i>G. (?) Nautilus</i> <i>inelegans</i> , Meek, pl. xxi	232
<i>Articulata</i> .	
<i>Crustacea</i> .	
<i>Proetus</i> , Steininger, 1831	233
<i>P. planimarginatus</i> , Meek, 1871, pl. xxiii, figs. 3 <i>a, b</i>	233-234
<i>Dalmanites</i> , Barrande, 1852	234
<i>D. ohioensis</i> , Meek, 1871, pl. xxiii, fig. 1	234-236

91.

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.

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LOWER CARBONIFEROUS SPECIES.

FOSSILS OF THE BURLINGTON GROUP.

	Page.
<i>Echinodermata</i>	323
Notes on the structure and habits of the Palaeozoic Crinoidea	323
<i>Synbathocrinus</i> , Phillips	324
<i>Goniasteroidocrinus</i> , Lyon & Casseday	324-325
<i>Cyathocrinus</i> , Miller	325-327
Convolved support of the digestive sack in the <i>Actinocrinidae</i>	327-329
Ambulacral canals passing under the vault in the <i>Actinocrinidae</i>	329-339
<i>Actinocrinites</i> , Miller	339-341
<i>Actinocrinites</i> . Section (<i>a</i>)	342
<i>A. penicillus</i> , M. & W., 1869, pl. viii, fig. 2	342-343
<i>A. sculptus</i> , Hall, 1858, pl. iv, fig. 2	343
<i>A. delicatus</i> , M. & W., 1869, pl. viii, fig. 2	343-345
<i>Actinocrinites</i> . Section (<i>b</i>)	345
<i>A. longus</i> , M. & W., 1869, pl. viii, fig. 1	345-347
<i>Strotocrinus</i> , M. & W., 1866	347-349
<i>S. ? asperrimus</i> , M. & W., 1869, pl. viii, fig. 3	349-351
Subgenus <i>Physetocrinus</i> , M. & W.	351
<i>S. (Physetocrinus ?) asper</i> , M. & W., 1869, pl. vii, fig. 1. Section (<i>b</i>), p. 253	351-353
<i>S. ectypus</i> , M. & W., 1869, pl. vii, fig. 5	353-355
<i>S. liratus</i> , Hall, sp., 1860, pl. vii, fig. 2	355-357
<i>S. perumbrosus</i> , Hall, sp., 1860, pl. viii, fig. 4	357-360
<i>S. umbrosus</i> , Hall, sp., 1858, pl. viii, fig. 5	360-362
<i>S. (Physetocrinus) dilatatus</i> , M. & W., 1869, pl. x, fig. 6	363-364
<i>Batoocrinus</i> , Casseday	364-368
<i>B. quasillus</i> , M. & W., 1869, pl. v, fig. 2	369-370
<i>B. (Eretmocrinus) remibrachiatus</i> , Hall's sp., 1861, pl. x, fig. 5	370
<i>B. cassedayanus</i> , M. & W., 1868, pl. v, fig. 1	370-372
<i>B. trochiscus</i> , M. & W., 1868, pl. v, fig. 6	372-374
<i>B. pyriformis</i> , Shumard sp., 1855, pl. v, fig. 5	375-377
<i>B. (Eretmocrinus ?) neglectus</i> , M. & W., 1868, pl. v, fig. 3	377-379
<i>B. christyi</i> , Shumard's sp., pl. v, fig. 4	379

	Page.
<i>B. verneulianus</i> , Shum. sp., 1855, pl. iv, figs. 3 and 4.....	370
<i>Dorycrinus</i> , Römer	379-380
<i>D. canaliculatus</i> , M. & W., 1869, pl. vi, fig. 4.....	381-383
<i>D. unicornis</i> , O. & S., sp., 1850, pl. vi, fig. 2.....	383
<i>D. ræmeri</i> , M. & W., 1868, pl. 10, fig. 3.....	383-385
<i>D. quinquelobus</i> var. <i>intermedius</i> , M. & W., 1868, pl. x, fig. 4.....	385-386
<i>Amphocrinus</i> , Austin	386-388
<i>A. divergens</i> , Hall, sp., 1860, pl. vi, fig. 6.....	388-389
<i>A. ? spinobrachiatus</i> , Hall, sp., 1860, pl. vi, fig. 5.....	389
<i>Gilbertocrinus</i> , Phillips	389
Subgenus <i>Goniasteroidocrinus</i> , Lyon & Casseday, 1859	389
<i>G. (Goniasteroidocrinus) tenuiradiatus</i> , M. & W., 1869, pl. xi, fig. 1.....	389-390
<i>G. (Goniasteroidocrinus) obovatus</i> , M. & W., 1868, pl. iv, fig. 6.....	391-392
<i>Megistocrinus</i> , O. & S., 1850	393-396
<i>M. parvirostris</i> , M. & W., 1869, pl. vi, fig. 7.....	396-397
<i>M. (Saccocrinus) whitei</i> , Hall, 1861, pl. vi, fig. 1.....	397
<i>Agaricocrinus</i> , Troost.....	397
<i>A. nodosus</i> , M. & W., 1869, pl. x, fig. 7.....	397-399
<i>Tazocrinus</i> , Phillips, 1843	399
<i>T. thiemei</i> , Hall, sp., 1861, pl. iv, fig. 1.....	399
<i>Cyathocrinites</i> , Miller, 1821	400-401
<i>C. sculptilis</i> , Hall, pl. iv, fig. 5.....	401
<i>C. fragilis</i> , M. & W., 1868, pl. ii, fig. 14.....	401-403
<i>C. tenuidactylus</i> , M. & W., 1868, pl. ii, fig. 15.....	403-405
<i>Poterocrinites</i> , Miller	405
<i>P. ? perplexus</i> , M. & W., 1869, pl. ii, fig. 12.....	405-406
<i>Scaphiocrinus</i> , Hall	407
<i>S. delicatus</i> , M. & W., 1869, pl. i, fig. 5.....	407-408
<i>S. elio</i> , M. & W., 1869, pl. i, fig. 10.....	408-409
<i>S. notabilis</i> , M. & W., 1869, pl. i, fig. 9.....	410-412
<i>S. rudis</i> , M. & W., 1869, pl. i, fig. 1.....	412-413
<i>S. penicillus</i> , M. & W., 1869, pl. ii, fig. 7.....	414-415
<i>S. macrodactylus</i> , M. & W., 1869, pl. ii, fig. 9.....	415-416
<i>S. juvenis</i> , M. & W., 1869, pl. ii, fig. 8.....	417-418
<i>S. striatus</i> , M. & W., 1869, pl. ii, fig. 11.....	418-419
<i>S. tethys</i> , M. & W., 1869, pl. ii, fig. 13.....	419-421
<i>S. scalaris</i> , M. & W., 1869, pl. ii, fig. 10.....	421-423
<i>S. nanus</i> , M. & W., 1869, pl. i, fig. 8.....	423-424
<i>S. fascellus</i> , M. & W., 1869, pl. i, fig. 3.....	424-426
Subgenus <i>Zeacrinus</i>	426
<i>S. (Zeacrinus) scobina</i> , M. & W., 1869, pl. i, fig. 2.....	426-428
<i>S. (Zeacrinus) serratus</i> , M. & W., 1869, pl. i, fig. 6.....	428-430
<i>S. (Zeacrinus) asper</i> , M. & W., 1869, pl. i, fig. 7.....	430-432
<i>S. (Zeacrinus) lyra</i> , M. & W., 1869, pl. i, fig. 11.....	432-433
<i>Nipterocrinus</i> , Wachsmuth.....	434-435
<i>N. wachsmuthi</i> , M. & W., 1868, pl. ii, fig. 4.....	435-436
<i>N. arboreus</i> , Worthen MSS., pl. iv, fig. 8.....	436-437
<i>Synbathocrinus</i> , Phillips, 1836	437
<i>S. wachsmuthi</i> , M. & W., 1869, pl. li, fig. 5.....	437-439
<i>S. brevis</i> , M. & W., 1869, pl. ii, fig. 6.....	439
<i>Dichocrinus</i> , Münster, 1839	440
<i>D. lineatus</i> , M. & W., 1869, pl. iii, fig. 1.....	440-441
<i>D. pisum</i> , M. & W., 1869, pl. iii, fig. 2.....	441-442
<i>Calceocrinus</i> , Hall, 1852	442-443
<i>C. ? wachsmuthi</i> , M. & W., 1869, pl. ii, fig. 1.....	444-445
<i>Eriocrinus</i> , M. & W., 1865	445-447
<i>E. antiquus</i> , M. & W., 1869, pl. ii, fig. 3.....	447-448
<i>E. whitei</i> , M. & W., 1869, pl. ii, fig. 2.....	448-449
<i>Platycrinites</i> , Miller	450
<i>P. tenuibrachiatus</i> , M. & W., 1869, pl. iii, fig. 4.....	450-452
<i>P. planus</i> , O. & S., 1852, pl. iii, fig. 5.....	452
<i>P. subepinosus</i> , Hall, 1858, pl. ii, fig. 2.....	452
<i>P. burlingtonensis</i> , O. & S., 1850, pl. iii, fig. 6.....	452-454
<i>P. halli</i> , Shumard ? 1866, pl. iii, fig. 3.....	454-456
<i>P. æqualis</i> , Hall, 1861, pl. iii, fig. 8.....	456-458

	Page.
<i>P. incomptus</i> , White, 1863, pl. iii, fig. 7	459-461
<i>Pentremites</i> , Say	461
<i>P. burlingtonensis</i> , M. & W., 1869, pl. viii, fig. 7	461-462
<i>Codonites</i> , M. & W., 1869	463-464
<i>C. stictiformis</i> , O. & S., sp., 1850, pl. ix, fig. 5, 5a, b	464-466
<i>C. gracilis</i> , n. s., M. & W., 1873, pl. viii, fig. 6	466-468
<i>Granatocrinus</i> , Troost	468
<i>G. melonoides</i> , M. & W., 1869, pl. ix, fig. 1	468-470
<i>G. pisum</i> , M. & W., 1869, pl. ix, fig. 4	470-471
<i>G. neglectus</i> , M. & W., 1869, pl. ix, fig. 3	471-473
<i>G. norwoodi</i> , O. & S., sp., 1850, pl. ix, fig. 2	473
<i>Palæchinus</i> , McCoy	473
<i>P. gracilis</i> , M. & W., 1869, pl. x, fig. 2	473-474
<i>Onychaster</i> , M. & W	474-475
<i>O. barrisi</i> , Hall, sp., 1861, pl. x, fig. 1	476
<i>Oligoporus</i> , Meek & Worthen	476
<i>O. nobilis</i> , M. & W., 1868, pl. xi, fig. 3	476-478
<i>Eocidaris</i>	478
<i>E. ? squamosus</i> , M. & W., 1869, pl. ix, fig. 15	478-482

FOSSILS OF THE KEOKUK GROUP.

<i>Barycrinus</i> , Wachs	483
<i>B. magnificus</i> , M. & W., 1868, pl. xii, fig. 2	483-485
<i>B. geometricus</i> , M. & W., pl. xii, fig. 3	485
<i>B. hoveyi</i> , var. <i>hurculeus</i> , M. & W., 1868, pl. xiii, fig. 2	485-486
<i>B. hoveyi</i> , Hall, sp., 1861, pl. xiii, fig. 1	486
<i>B. mannatus</i> , Worthen MSS., pl. xv, fig. 4	486
<i>B. pentagonus</i> , Worthen MSS., pl. xv, fig. 3	487
<i>B. subtumidus</i> , M. & W., pl. xiii, fig. 3	487-488
<i>Cyathocrinites ? poterium</i> , M. & W., 1870, pl. xii, fig. 4	489-490
<i>Poteriocrinites</i>	490
<i>P. (Zeacrinus ?) concinnus</i> , M. & W., 1870, pl. xiv, fig. 3	490-492
Subgenus <i>Scaphiocrinus</i>	492
<i>P. (Scaphiocrinus) depressus</i> , M. & W., 1870, pl. xiv, fig. 8	492-493
<i>P. (Scaphiocrinus) undecus</i> , Hall, 1861, pl. xv, fig. 5	493
<i>P. (Scaphiocrinus) aequalis</i> , Hall, 1861, pl. xv, fig. 6	494
<i>P. (Scaphiocrinus) coreyi</i> , M. & W., 1869, pl. xv, fig. 1	494-495
<i>P. (Scaphiocrinus) meadamsi</i> , Worthen MSS., pl. xv, fig. 2	495-496
<i>Forbesiocrinus wortheni</i> , Hall, 1858, pl. xiv, fig. 2, and pl. xv, fig. 7	496-498
<i>Onychocrinus exculptus</i> , L. & C., 1859, pl. xiv, fig. 4	498
<i>Agaricocrinus</i> , Troost	499
<i>A. whitfieldi</i> , Hall, 1868, pl. xii, figs. 1 a, b, and pl. xv, fig. 8	499-500
<i>Dichocrinus</i> , Munster	500
<i>D. expansus</i> , M. & W., 1868, pl. xiv, fig. 1	500-502
<i>D. ficus</i> , C. & L., 1860, pl. xiv, fig. 5	502
<i>Calceocrinus</i> , Hall	502
<i>C. bradleyi</i> , M. & W., 1869, pl. xiv, fig. 9	502-504
<i>Catillocrinus</i> , Troost	504
<i>C. bradleyi</i> , M. & W., 1868, pl. xiv, fig. 10	504-505
<i>Platyrcrinites</i>	506
<i>P. hemisphericus</i> , M. & W., 1865, pl. xvi, figs. 6 a-c	506
<i>Pentremites</i>	506
<i>P. wortheni</i> , Hall ? 1858, pl. xiv, fig. 11	506
<i>P. (Troostocrinus ?) woodmani</i> , M. & W., 1868, pl. xvi, fig. 4	506-508
<i>Granatocrinus</i>	508
<i>G. granulosus</i> , M. & W., 1865, pl. xv, fig. 10	508-509
<i>Protaster</i> , Forbes	509
<i>P. ? gregarius</i> , M. & W., 1869, pl. xvi, fig. 5	509-510
<i>Onychaster</i> , M. & W	510
<i>O. flexilis</i> , M. & W., pl. xvi, fig. 3	510
<i>Pholidocidaris</i> , M. & W., 1869	510-511
<i>P. irregularis</i> , M. & W., 1869, pl. xv, fig. 9	512-513
<i>Agelacrinites</i> , Vanuxem	513
<i>A. (Lepidodiscus) squamosus</i> , M. & W., 1868, pl. xvi, fig. 1	513-515

	Page.
<i>Mollusca.</i>	
<i>Gastropoda.</i>	
<i>Platyceras</i> , Conrad	516
<i>P. unicum</i> , M. & W., 1866, pl. xvii, fig. 1	516-517
<i>P. infundibulum</i> , M. & W., 1866, pl. xvii, fig. 3	517-518
<i>P. equilatera</i> , Hall, 1860, pl. xvii, fig. 2	518-519
<i>P. fissurella</i> , Hall, 1859, pl. xvii, fig. 4	519-520
<i>Pteropoda.</i>	
<i>Conularia.</i>	
<i>Conularia subcarbonaria</i> , M. & W., 1865, pl. xix, fig. 4	520-522
<i>Cephalopoda.</i>	
<i>Nautilus</i> , Linn	522
<i>N. (Discites) disciformis</i> , M. & W., 1865, pl. xviii, fig. 1	522-523
<i>N. (Tenuocheilus) notensis</i> , M. & W., 1865, pl. xix, fig. 3	523-524
<i>N. (Solenocoeilus) leidyi</i> , M. & W., 1865, pl. xviii, fig. 2	524-525
<i>Articulata.</i>	
<i>Phillipsia</i> , Portlock	525
<i>P. (Griffithides) portlockii</i> , M. & W., 1865, pl. xix, fig. 6	525-528
<i>P. (Griffithides) bufo</i> , M. & W., 1870, pl. xv, fig. 10	528-529
FOSSILS OF THE SAINT LOUIS GROUP.	
<i>Echinodermata.</i>	
<i>Barycrinus</i>	530
<i>B. spectabilis</i> , M. & W., 1869, pl. xx, fig. 8	530-533
<i>Poteriocrinites</i>	533
<i>P. hardinensis</i> , Worthen MSS., pl. xx, fig. 10	533
Subgenus <i>Scaphiocrinus</i>	534
<i>P. (Scaphiocrinus) huntsvillae</i> , Worthen MSS., pl. xx, fig. 1	534
Subgenus <i>Zecrinus</i>	534
<i>P. (Zecrinus) arboreus</i> , Worthen MSS., pl. xx, fig. 5	534-535
<i>P. (Zecrinus) cariniferous</i> , Worthen MSS., pl. xx, fig. 4	535-536
<i>P. (Zecrinus) compactilis</i> , Worthen MSS., pl. xxi, fig. 5	536-537
<i>Dichocrinus</i> , Munster	537
<i>D. cornigerus</i> , Shumard ? 1860, pl. xx, fig. 6	537
<i>Granatocrinus</i>	537
<i>G. glaber</i> , M. & W., 1869, pl. xx, fig. 11	537-539
<i>Mollusca.</i>	
<i>Lamellibranchiata.</i>	
<i>Lithophaga ? pertenuis</i> , M. & W., 1865, pl. xxii, fig. 1	539-540
<i>Myalina</i>	540
<i>M. St. ludovici</i> , Worthen MSS., pl. xxii, fig. 3	540
<i>Charnomya</i> , M. & W.	540
<i>C. ? rhomboidea</i> , M. & W., 1865, pl. xxii, fig. 4	540-541
<i>Pteropoda.</i>	
<i>Conularia</i>	541
<i>C. missouriensis</i> , Swallow ? 1860, pl. xxii, fig. 5	541-542
<i>Cephalopoda.</i>	
<i>Nautilus</i>	543
<i>N. (Tenuocheilus) coxanus</i> , M. & W., 1869, pl. xxiii, fig. 1	543-544
<i>N. (Solenocoeilus) collectus</i> , M. & W., 1870, pl. xxiii, figs. 3 and 4	544-545

FOSSILS OF THE CHESTER GROUP.

<i>Echinodermata.</i>	
<i>Poteriocrinites</i>	546
<i>P. bisselli</i> , Worthen MSS., pl. xxi, fig. 4	546-547
Subgenus <i>Zecrinus</i>	547
<i>P. (Zecrinus ?) armiger</i> , M. & W., 1870, pl. xxi, fig. 3	547-548
<i>P. (Zecrinus) subtumidus</i> , Worthen MSS., pl. xxi, fig. 1	548-549
<i>P. (Zecrinus) formosus</i> , Worthen MSS., pl. xxi, fig. 2	549
Subgenus <i>Scaphiocrinus</i>	550
<i>P. (Scaphiocrinus) bayensis</i> , M. & W., 1865, pl. xx, fig. 2	550-551
<i>P. (Scaphiocrinus) randolphensis</i> , Worthen MSS., pl. xxi, fig. 14	551-552
<i>Onychocrinus</i>	552
<i>O. whitfieldi</i> , Hall sp., 1858, pl. xx, fig. 3	552-554
<i>Eupachyrinus</i>	554

	Page
<i>E. boydii</i> , M. & W., 1870, pl. xxi, fig. 6.....	554-555
<i>Platycrinites</i>	555
<i>P. parvulus</i> , M. & W., 1865, pl. xx, fig. 7.....	555-556
<i>Agassizocrinus</i>	556
<i>A. pentagonus</i> , Worthen MSS., pl. xxi, fig. 10.....	556-557
<i>A. conicus</i> , O. & S., 1851, pl. xxi, fig. 8.....	557
<i>A. gibbosus</i> , Worthen MSS., pl. xxi, fig. 12.....	557-558
<i>A. gibbosus</i> , Hall, 1858, pl. xxi, fig. 11.....	558
<i>A. chesterensis</i> , Worthen MSS., pl. xxi, fig. 9.....	558
<i>Pterotocrinus</i> , L. & C.....	559
<i>P. depressus</i> , L. & C. ? 1860, pl. xxi, fig. 13.....	559
<i>Graphiocrinus</i>	559
<i>G. dactylus</i> , Hall, 1860, pl. xx, fig. 9.....	559
FOSSILS OF THE COAL-MEASURES.	
<i>Foraminifera.</i>	
<i>Fusulina</i> , Fischer.....	560
<i>F. gracilis</i> , Meek ? 1864, pl. xxiv, fig. 7.....	560
<i>F. ventricosa</i> , M. & H., 1864, pl. xxiv, fig. 8.....	560
<i>Radiata.</i>	
<i>Lophophyllum</i> , Edwards & Haimé.....	560
<i>L. proliferum</i> , McC. sp., 1860, pl. xxiv, fig. 1.....	560
<i>Erisocrinus</i>	561
<i>E. typus</i> , M. & W., 1865, pl. xxiv, fig. 6.....	561
<i>Poteriocrinites</i>	561
<i>P. macropinensis</i> , Worthen MSS., pl. xxiv, fig. 3.....	561
Subgenus <i>Scaphiocrinus</i>	561
<i>P. (Scaphiocrinus?) hemisphericus</i> , Shum. sp., 1858, pl. xxiv, fig. 5.....	561
<i>P. (Scaphiocrinus) carbonarius</i> , M. & W., 1861, pl. xxiv, fig. 2.....	562
Subgenus <i>Zeacrinus</i>	563
<i>P. (Zeacrinus?) mucrospinus</i> , McC., 1859, pl. xxiv, fig. 12.....	563
<i>P. (Zeacrinus [Hydreionocrinus?]) acanthophorus</i> , M. & W., 1870, pl. xxiv, fig. 11.....	563-565
<i>Eupachyerinus</i>	565
<i>E. fayettensis</i> , Worthen MSS., pl. xxiv, fig. 10.....	565-566
<i>E. tuberculatus</i> , M. & W., 1866, pl. xxiv, fig. 9.....	566
<i>Agassizocrinus carbonarius</i> , Worthen MSS., pl. xxiv, fig. 4.....	566
<i>Mollusca.</i>	
<i>Brachipoda.</i>	
<i>Chonetes</i> , Fischer.....	566
<i>C. millepunctata</i> , M. & W., 1870, pl. xxv, fig. 3.....	566-569
<i>Productus</i> , Sowerby.....	569
<i>P. nebrascensis</i> , Owen, 1852, pl. xxv, fig. 8.....	569
<i>P. longispinus</i> , Sowerby ? 1814, pl. xxv, fig. 10.....	569
<i>P. punctatus</i> , Martin, 1809, pl. xxv, fig. 13.....	569
<i>P. lasallensis</i> , Worthen MSS., pl. xxv, fig. 9.....	569-570
<i>Chonetes smithii</i> , N. & P., 1855, pl. xxv, fig. 11.....	570
<i>Hemipronites</i> , Pander.....	570
<i>H. crassus</i> , M. & W., 1858, pl. xxv, fig. 12.....	570
<i>Athyris</i> , McCoy.....	570
<i>A. subtilita</i> , Hall's sp., pl. xxv, fig. 14.....	571
<i>Syntrielasma</i> , M. & W.....	571
<i>S. hemiplicata</i> , Hall's sp., 1852, pl. xxvi, fig. 20.....	571
<i>Meekella</i> , White & St. John.....	571
<i>M. striato-costata</i> , Cox sp., 1857, pl. xxvi, fig. 21.....	571
<i>Rhynchonella</i> , Fischer.....	571
<i>R. osagensis</i> , Swallow, 1858, pl. xxvi, fig. 22.....	571
<i>Orthis</i> , Dalman.....	571
<i>O. carbonaria</i> , Swallow.....	571
<i>Terebratula</i> , Lhwyd.....	572
<i>T. boidens</i> , Morton, 1836, pl. xxv, fig. 15.....	572
<i>Discina</i> , Lamarek, 1819.....	572
<i>D. nitida</i> , Phillips sp. ? pl. xxv, fig. 1.....	572
<i>Lingula</i> , Bruguière, 1789.....	572
<i>L. mytiloides</i> , Sowerby ? 1813, pl. xxv, fig. 2.....	572
<i>Spirifer fultonensis</i> , Worthen, MSS. pl. xxv, fig. 5.....	572-573
<i>Spirifer cameratus</i> , Morton, pl. xxv, fig. 7.....	573

	Page.
<i>Lamellibranchiata.</i>	
<i>Monotis</i>	573
<i>M. ? gregaria</i> , M. & W., 1870, pl. xxvi, fig. 5	573-574
<i>Macrodon</i> , Lycett	575
<i>M. ? delicatus</i> , M. & W., 1870, pl. xxvi, fig. 3	575
<i>M. ? tenuistriatus</i> , M. & W., 1867, pl. xxvi, fig. 4	576
<i>Aracula</i>	576
<i>A. morganensis</i> , M. & W., 1866, pl. xxvi, fig. 14	570-578
<i>A. longa</i> , Geinitz sp., 1866, pl. xxvi, fig. 1	578
<i>Placunopsis</i>	578
<i>P. carbonaria</i> , M. & W., 1866, pl. xxvii, fig. 2	578-579
<i>Schizodus</i> , King	579
<i>S. amplus</i> , M. & W., 1870, pl. xxvii, fig. 6	579-580
<i>S. (Prisconia) percleans</i> , M. & W., 1870, pl. xxvi, fig. 19	581
<i>S. curtus</i> , M. & W., 1866, pl. xxvi, fig. 16	582
<i>Myalina</i> , de Koninck	582
<i>M. perattenuata</i> , M. & W., 1858, pl. xxvi, fig. 11	582
<i>Edmondia</i>	583
<i>E. ? peroblonga</i> , M. & W., 1866, pl. xxvii, fig. 4	583-584
<i>Olinopistha</i> , M. & W.	584
<i>C. radiata</i> , var. <i>levis</i> , M. & W., 1870, pl. xxvii, fig. 7	584-585
<i>Allorisma</i> , King	585
<i>A. costata</i> , M. & W., 1869, pl. xxvi, fig. 15	585-586
<i>A. geinitzii</i> , Meek, 1867, pl. xxvi, fig. 23	586
<i>Chenocardia</i> , M. & W.	586
<i>C. ovata</i> , M. & W., 1869, pl. xxvii, fig. 5	586-587
<i>Chanomya</i> , M. & W.	588
<i>C. minnehaha</i> , Swallow sp., 1858, pl. xxvii, fig. 3	588
<i>Cardiomorpha</i>	588
<i>C. missouriensis</i> , Shum., 1860, pl. xxvii, fig. 8	588
<i>Entolium</i> , Meek	588
<i>E. aviculatum</i> , Swallow sp., 1858, pl. xxvi, fig. 12	588
<i>Lima</i> , Bruguière	588
<i>L. retifera</i> , Shum., 1858, pl. xxvi, fig. 2	588
<i>Aviculopecten neglectus</i> , Geinitz sp., 1866, pl. xxvi, fig. 7	589
<i>Pleurophorus</i> , King	589
<i>P. oblongus</i> , Meek ? 1872, pl. xxvi, fig. 6	589
<i>Nucula</i> , Lamarek	589
<i>N. parva</i> , McC., 1860, pl. xxvi, fig. 8	589
<i>N. beyrichi</i> , v. Schauroth, 1854, pl. xxvi, fig. 9	589
<i>Gasteropoda.</i>	
<i>Dentalium</i> , Linnæus	589
<i>D. ? annulostriatum</i> , M. & W., 1870, pl. xxix, fig. 7	589-590
<i>D. meekianum</i> , Geinitz ? 1866, pl. xxix, fig. 8	590
<i>Orthonema</i> , M. & W., 1861	590
<i>O. conica</i> , M. & W., 1866, pl. xxix, fig. 5	590-591
<i>Naticopsis</i> , McCoy	592
<i>N. ventrica</i> , N. & P., 1855, sp., pl. xxviii, fig. 13	592-593
<i>Macrocheilus</i> , Phillips	593
<i>M. altonensis</i> , Worthen MSS., pl. xxviii, fig. 8	593-594
<i>M. newberryi</i> , Stevens sp., pl. xxviii, fig. 14	594
<i>Actæonina</i> , d'Orbigny	594
<i>A. minuta</i> , Stevens sp., pl. xxix, fig. 2	594
<i>Platyceras</i> , Conrad	594
<i>P. spinigerum</i> , Worthen MSS., pl. xxviii, fig. 4	594-595
<i>Naticopsis subovatus</i> , Worthen MSS., pl. xxviii, fig. 9	595
<i>Naticopsis wheeleri</i> , Swallow sp., 1860, pl. xxviii, fig. 3	595
<i>Naticopsis altonensis</i> , McC., 1865, pl. xxviii, fig. 11	595
<i>Streptaxis</i>	596
<i>S. whitfieldi</i> , Meek, 1871, pl. xxix, fig. 1	596
<i>Loxonema</i>	596
<i>L. semicostata</i> , Meek, 1871, pl. xxix, fig. 2	596
<i>Actis</i> , Loven	596
<i>A. robusta</i> , Stevens, 1858, pl. xxix, fig. 6	596
<i>Polyphemopsis</i> , Portlock	596
<i>P. chrysallis</i> , M. & W., 1865, pl. xxviii, fig. 7	596-597

	Page.
<i>Anomphalus</i> , M. & W.....	597
<i>A. rotulus</i> , M. & W., 1866, pl. xxix, fig. 10.....	597
<i>Microdoma</i> , M. & W.....	598
<i>M. conica</i> , M. & W., 1866, pl. xxviii, fig. 2.....	598
<i>Murchisonia inornata</i> , M. & W., 1866, pl. xxviii, fig. 8.....	599-600
<i>Pleurotomaria coxana</i> , M. & W., 1866, pl. xxviii, fig. 15.....	600
<i>Pleurotomaria spironema</i> , M. & W., 1866, pl. xxviii, fig. 5.....	601-602
<i>Pleurotomaria valvatiformis</i> , M. & W., 1866, pl. xxix, fig. 9.....	602-603
<i>Pleurotomaria conoides</i> , M. & W., 1866, pl. xxviii, fig. 1.....	603-604
<i>Straparollus</i> , Montfort.....	604
<i>S. (Euomphalus) pernodosus</i> , M. & W., 1870, pl. xxix, fig. 14.....	604-605
<i>S. (Euomphalus) subquadratus</i> , M. & W., 1870, pl. xxix, figs. 12 and 13.....	605-607
<i>S. (Euomphalus) subrugosus</i> , M. & W., pl. xxix, fig. 11.....	607
<i>Chiton</i> , Linnæus.....	608
<i>C. carbonarius</i> , Stevens, 1859, pl. xxix, fig. 15.....	608
<i>Cephalopoda.</i>	
<i>Nautilus (Temnocheilus) latus</i> , M. & W., 1870, pl. xxx, fig. 2.....	608-609
<i>N. (Temnocheilus) winslowi</i> , M. & W., 1870, pl. xxxii, fig. 2.....	609-610
<i>N. lasallensis</i> , M. & W., 1866, pl. xxxi, fig. 1.....	610-611
<i>Goniatis compactus</i> , M. & W., 1865, pl. xxxi, fig. 2.....	611-612
<i>Orthoceras</i>	612
<i>O. rushensis</i> , McC. 1860, pl. xxx, fig. 4.....	612
<i>Articulata.</i>	
<i>Phillipsia</i> , Portlock.....	612
<i>P. (Griffithides) scitula</i> , M. & W., 1865, pl. xxxii, fig. 3.....	612-615
<i>P. (Griffithides?) sangamonensis</i> , M. & W., 1865, pl. xxxii, fig. 4.....	615-618
<i>Dithyrocaris</i> , Scouler.....	618
<i>D. carbonarius</i> , M. & W., 1869, pl. xxxii, fig. 1.....	618-619

92.

MEEK, F. B. Notes on some of the Fossils figured in the recently issued Fifth volume of the Illinois State Geological Report. <Am. Jour. Sci., vol. vii, 3d ser., pp. 189-193; continued on pp. 369-376 and 484-490 and 580-584. 1874. New Haven, 1874.

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.

	Page.
<i>Actinocrinites sculptilis</i> , Hall.....	190-191
<i>Tazocrinus thiemei</i> , Hall.....	191-192
<i>Batocrinus pyriformis</i> , Shumard.....	192
<i>Actinocrinites delicatus</i> , M. & W.....	192-193
<i>Actinocrinites Cyathocrinites</i> , Codonites, etc.....	369-374
<i>Codonites stelliformis</i>	374-375
<i>Pholidocidaris irregularis</i> , M. & W.....	375
<i>Pentremites (Troostocrinus?) woodmani</i> , M. & W.....	375-376
<i>Agassizocrinus</i> , Troost.....	484
<i>Fusulina gracilis</i>	484
<i>Fusulina ventricosa</i>	484
<i>Zeacrinus (Hydreionocrinus?) acanthophorus</i> , M. & W.....	485-486
<i>Archæocidaris?</i> , sp. undt.....	486
<i>Septopora cestriensis</i> , Prout.....	486-488
<i>Synocladia virgulacea</i> var. <i>biserialis</i> , Swallow.....	486-488
<i>Aviculopecten neglectus</i> , Geinitz.....	488-489
<i>Aviculopecten carboniferus</i> , Stevens sp.....	489
<i>Nuculana</i> , sp. undt., Meek, 1874.....	489-490
<i>Edmondia ovata</i> ,.....	580
<i>Schizodus rossicus</i> , de Verneuil.....	580-580
<i>Solenomya</i> sp. undt., Meek, 1874.....	582-583
<i>Placunopsis carbonaria</i> , M. & W.....	583
<i>Anomphalus rotulus</i> , M. & W.....	583
<i>Euomphalus rugosus</i> , Hall.....	583-584
<i>Pleurotomaria gurleyi</i>	584

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MEEK, F. B. The new genus *Euchondria*. < Am. Journ. Sci., vol. vii, 3d ser., p. 445. 1874. New Haven, 1874.

Mr. Meek, in a brief note, proposes the generic name *Euchondria*, of which the *Pecten neglectus* of Geinitz is the type.

94.

MEEK, F. B. [Descriptions of] *Pleurotomaria taggarti*. < Hayden's Ann. Rep. U. S. Geol. and Geog. Surv. of the Terr. for 1873, p. 231, foot-note. Washington, 1874.

Carboniferous.

	Page.
<i>Pleurotomaria taggarti</i> , n. s., Meek, 1874.....	231

95.

MEEK, F. B. Notes on some fossils from near the eastern base of the Rocky Mountains, west of Greeley and Evans, Colorado, and others from about two hundred miles farther eastward, with descriptions of a few new species. < Bulletin U. S. Geol. and Geog. Surv. of the Terr., 2d ser., No. 1, pp. 39-47. 1875. Washington, 1875.

These fossils are from the Fox Hills and Laramie (Lignitic) Group.

	Page.
<i>Anomia micronema</i> , n. s., Meek, 1875	43
<i>Corbicula</i> ? (<i>Leptesthes</i>) <i>planumbona</i> , n. s., Meek, 1875	43-45
<i>Cyrena</i> ? <i>holmesi</i> , n. s., Meek, 1875	45-46
<i>Sphaeriola</i> ? <i>obliqua</i> , n. s., Meek, 1875	46
<i>Rhynchonella endlichi</i> , n. s., Meek, 1875	46-47

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MEEK, F. B. Description of *Unio* supposed to be of Triassic age. < Ann. Rep. Geogr. Expls. and Survs. West of the 100th Merid., by G. M. Wheeler, Appendix L L of the Ann. Rep. Chief of Engineers for 1875, pp. 83, 84. Washington, 1875.

	Page.
<i>Unio cristenensis</i> , n. s., Meek, 1875.....	83-84
<i>Unio gallinensis</i> , n. s., Meek, 1875.....	84
<i>Unio terra-rubra</i> , n. s., Meek, 1875.....	84

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MEEK, F. B. Description of *Olenellus gilberti* and *O. howelli*. < Rep. Geogr. and Geol. Expls. and Survs. West of the 100th Merid., 4th, vol. iii, Geology, pp. 182, 183. 1875. Washington, 1875.

These two species are fully described and illustrated in White's Report on Invertebrate Paleontology, part i, Vol. iv, Wheeler's Expl. and Surv. West of the 100th Meridian.

	Page.
<i>Olenus</i> (<i>Olenellus</i>) <i>gilberti</i> , n. s., Meek, 1875.....	182-183
<i>Olenus</i> (<i>Olenellus</i>) <i>howelli</i> , n. s., Meek, 1875.....	183

98.

MEEK, F. B. A report on some of the Invertebrate fossils of the Waverly group and Coal-Measures of Ohio. < Rep. Geol. Surv. of Ohio, vol. ii, part ii, Palæontology, pp. 269-347, plates x-xx. 1875. Columbus, 1875.

WAVERLY GROUP SPECIES.

Mollusca.		Page.
Polyzoa.		
	<i>Fenestella</i> , Lonsdale, 1837.....	273
	<i>F. delicata</i> , Meek, 1871, pl. x, figs. 2 a, d	273-274
	<i>F. multiporata</i> ? var. <i>lodiensis</i> , Meek, pl. x, figs. 1 a, c.....	274-275

Brachiopoda.

<i>Lingula</i> , Bruguière, 1792	275
<i>L. (Lingulella?) membranacea</i> , Winchell, 1863, pl. xiv, fig. 4.....	275
<i>L. melie</i> , Hall? 1864, pl. xiv, fig. 3.....	276
<i>L. scotica</i> , Davidson? 1868, pl. xiv, fig. 9.....	276-277
<i>Discina</i> , Lamarck, 1819	277
Subgenus <i>Orbiculoidea</i> , d'Orbigny, 1847.....	277
<i>D. (Orbiculoidea) newberryi</i> , Hall, 1864, pl. xiv, figs. 1 <i>a-d</i>	277-278
<i>D. (Orbiculoidea?) pleurites</i> , Meek, n. s., 1875, pl. xiv, figs. 2 <i>a, b</i>	278-279
<i>Strophomena</i> , Rafinesque, 1827	279
Subgenus <i>Hemipronites</i> , Pander, 1830	279
<i>S. (Hemipronites) crenistria</i> , Phillips? sp., 1836, pl. x, figs. 5 <i>a-d</i>	279-283
<i>Productus</i> , Sowerby, 1814	
<i>Productus</i> sp., Meek, 1875, pl. x, figs. 4 <i>a-d</i>	282-283
<i>Productus</i> sp., Meek, 1875, pl. x, fig. 3.....	283
<i>Athyris</i> , McCoy, 1844	283
<i>A. lamellosa</i> , Leveillé? sp., 1835, pl. xiv, figs. 6 <i>a, b</i>	283-285
<i>Spirifer</i> , Sowerby, 1815.....	285
<i>S. carteri</i> , Hall, 1857, pl. xiv, figs. 7 <i>a-c, (d?)</i>	285-288
Subgenus <i>Trigonotreta</i> , King, 1825	289
<i>S. (Trigonotreta) striatiformis</i> , n. s., Meek, 1875, pl. xiv, figs. 8 <i>a-e</i>	289-290
<i>S. (Trigonotreta) bicipitatus</i> , Hall?? 1858, pl. xiv, fig. 5	290-292

Lamellibranchiata.

<i>Entolium</i> , Meek	292
<i>E. shumardianum</i> Winchell? sp., 1865, pl. xv, figs. 4 <i>a, b</i>	292-294
<i>Aviculopecten</i> , McCoy, 1851	295
<i>A. crenistriatus</i> , Meek, 1871, pl. xv, figs. 7 <i>a, b</i>	295-296
<i>A. winchelli</i> n. s., Meek, 1875, pl. xv, figs. 5 <i>a</i> and 5 <i>b?</i>	296-298
<i>Palæoneilo</i> , Hall, 1870?	298
<i>P. bedfordensis</i> n. s., Meek, 1875, pl. xv, figs. 3 <i>a-c</i>	298
<i>Schizodus</i> , King, 1844	299
<i>S. medinaensis</i> , Meek, 1871, pl. xv, figs. 1 <i>a-c</i>	299-300
<i>Grammysia</i> , De Verneuil, 1847.....	300
<i>G.?</i> <i>hannibalensis</i> , Shumard sp., 1855, pl. xvi, figs. 5 <i>a-e</i>	300-301
<i>G.?</i> <i>rhomboides</i> , Meek, 1871, pl. xvi, figs. 7 <i>a, b</i>	302-303
<i>G. ventricosa</i> , Meek, 1871, pl. xvi, figs. 6 <i>a, b</i> (and pl. xiii, figs. 5 <i>a, b, var.</i>).....	303
<i>Edmondia</i> , De Koninck, 1844	304
<i>E. tapesiformis</i> n. s., Meek, 1875, pl. xiii, fig. 6.....	304
<i>Cardiomorpha</i> , De Koninck, 1844.....	304
<i>C. subglobosa</i> n. s., Meek, 1875, pl. xv, figs. 6 <i>a, b</i>	304-305
<i>Prothyris</i> , Meek, 1869.....	305
<i>P. meeki</i> , Winchell, MS., 1872, pl. xv, fig. 2.....	305-306
<i>Sanguinolites</i> , McCoy, 1844	306
<i>S.?</i> <i>obliquus</i> , Meek, 1871, pl. xvi, figs. 2 <i>a, b</i>	306-307
<i>S. aeolus</i> , Hall, Whitfield, 1870?, pl. xvi, figs. 1 <i>a-c</i>	307-308
<i>Promacrus</i> , Meek, 1871	308
<i>P. andrewsi</i> , Meek, 1871, pl. xvii, figs. 1 <i>a, b</i>	308-309
<i>Allorisma</i> , King, 1844	309
<i>A. (Cercomyopsis) pleuropistha</i> , Meek, 1871, pl. xiii, figs. 4 <i>a-c</i>	309-311
<i>A. winchelli</i> , Meek, 1871, pl. xvi, figs. 3 <i>a-c</i>	311-312
<i>A. ventricosa</i> , Meek, 1871, pl. xvi, figs. 4 <i>a, b</i>	312-313

Gastropoda.

<i>Platyceras</i> , Conrad, 1840	313
<i>P. (Orthonychia?) lodiense</i> , Meek, 1871, pl. xiii, figs. 1 <i>a, b</i>	313-314
<i>Pleurotomaria</i> , DeFrance, 1826	314
<i>P. textiliger</i> , Meek, 1871, pl. xiii, figs. 7 <i>a, b</i>	314-315

Pteropoda.

<i>Conularia</i> , Miller, 1818.....	316
<i>C. micronema</i> , Meek, 1871, pl. xviii, figs. 1 <i>a-d</i>	316
<i>C. newberryi</i> , Hall, pl. xviii, figs. 2 <i>a, b</i>	316-317

Crustacea.

Entomostraca.

<i>Ceratiocaris</i> , McCoy.....	317
? Subgenus <i>Colpocaris</i> , Meek, 1872	317
<i>C. (Colpocaris) bradleyi</i> , Meek, 1872, pl. xviii, figs. 6 <i>a-e</i>	318-319

	Page.
<i>C. (Colpocaris) clytroides</i> , Meek, 1872, pl. xviii, figs. 5 <i>a-c</i>	319-320
Subgenus <i>Solenocaris</i> , Meek, 1872.....	320-321
<i>C. (Solenocaris) strigata</i> , Meek 1872, pl. xviii, figs. 4 <i>a-c</i>	321
<i>Tetradecopoda</i> .	
? <i>Archæocaris</i> , Meek, 1872.....	321
<i>A. vermiformis</i> , Meek, 1872, pl. xviii, fig. 7.....	321-322
<i>Trilobita</i> .	
<i>Phillipsia</i> , Portlock, 1843.....	323
<i>P. (Griffithides?) lodiensis</i> , n. s., Meek, 1875, pl. xviii, fig. 3.....	323-325
COAL MEASURE SPECIES.	
<i>Mollusca</i> .	
<i>Polyzoa</i> .	
<i>Synocladia</i> , King, 1849.....	326
<i>S. biserialis</i> , Swallow, 1858, pl. xx, figs. 5 <i>a, b</i>	326-327
<i>Ptilodictya</i> , Lonsdale, 1839.....	327
<i>P. (Stictopora) sereata</i> , n. s., Meek, 1875, pl. xx, fig. 4.....	327-328
<i>P. (Stictopora) carbonaria</i> , Meek, 1871, pl. xx, figs. 3 <i>a, b</i>	328
<i>Brachiopoda</i> .	
<i>Spirifer</i> , Sowerby, 1815.....	329
<i>S. (Trigonotreta) opinus</i> , Hall? 1858, pl. xix, figs. 14 <i>a-d</i> (<i>e?</i>).....	329-330
<i>Mollusca (Proper)</i> .	
<i>Lamellibranchiata</i> .	
<i>Aviculopecten</i> , McCoy, 1851.....	330
<i>A. (Streblopteria?) hertzeri</i> , n. s., Meek, 1875, pl. xix, figs. 13 <i>a-c</i>	330-331
<i>Placunopsis</i> , Morris & Lycett, 1853.....	331
<i>P. recticardinalis</i> , n. s., Meek, 1875, pl. xix, fig. 12.....	331-333
<i>Posidonomya</i> , Brown, 1837.....	333
<i>P. fracta</i> , n. s., Meek, 1875, pl. xix, figs. 7 <i>a, b</i>	333-334
<i>Macrodon</i> , Lycett, 1845.....	334
<i>M. obsoletus</i> , Meek, 1871, pl. xix, fig. 9.....	334-335
<i>Foldia</i> , Möller, 1842.....	335
<i>Y. stevensoni</i> , Meek, 1871, pl. xix, figs. 4 <i>a, b</i>	335
<i>Y. (Palæoneilo?) carbonaria</i> , Meek, 1871, pl. xix, fig. 5.....	336
<i>Schizodus</i> , King, 1844.....	336
<i>S. cuneatus</i> , n. s., Meek, 1875, pl. xx, fig. 7.....	336-337
<i>Aviculopinna americana</i> , Meek, 1867, pl. xx, fig. 2.....	337-338
<i>Pleurophorus</i> , King, 1844.....	338
<i>P. tropidophorus</i> , n. s., Meek, 1875, pl. xix, figs. 10 <i>a, b</i>	338-339
<i>Solenomya</i> , Lamarek, 1818.....	339
<i>S. ? anodontoides</i> , n. s., Meek, 1875, pl. xix, fig. 11.....	339-340
<i>Astartella</i> , Hall, 1858.....	340
<i>A. newberryi</i> , n. s., Meek, 1875, pl. xix, fig. 3.....	340-341
<i>A. varica</i> , McChesney, 1860, pl. xix, fig. 2.....	341
<i>Astartella</i> , sp., Meek, pl. xix, fig. 1 <i>a, b</i>	341-342
<i>Cypricardina</i> , Hall, 1860.....	342
<i>C. ? carbonaria</i> , Meek, 1871, pl. xix, fig. 8 <i>a, b</i>	342-343
<i>Allorisma</i> , King, 1844.....	343
<i>A. costata</i> , M. & W., 1869, pl. xix, figs. 6 <i>a, b</i>	344-345
<i>Gasteropoda</i> .	
<i>Platyceras</i> , Conrad, 1840.....	345
<i>P. tortum</i> , Meek, 1871, pl. xx, figs. 1 <i>a-c</i>	345
<i>Macrocheilus</i> , Phillips, 1841.....	346
<i>M. klippiarti</i> , Meek, 1872, pl. xx, figs. 6 <i>a-c</i>	346-347

MEEK, F. B., and A. H. WORTHEN. Paleontology of Illinois. Descriptions of Invertebrates. <Geological Survey of Illinois, vol. vi, section ii, pp. 491-532, plates 23-32. 1875. Springfield, 1875.

Published by authority of the legislature, 1875.

Genus *Carbonarca*. A portion of these descriptions are by Mr. Worthen alone, and are not mentioned in the following list:

LOWER SILURIAN SPECIES.

Echinodermata.	Page.
<i>Homocrinus</i> , Hall.....	492
<i>H. angustatus</i> , M. & W., 1870, pl. xxiii, fig. 8.....	492-493
<i>Heterocrinus crassus</i> , M. & W., 1865, pl. xxiii, fig. 1.....	493
Mollusca.	
Lamellibranchiata.	
<i>Modiolopsis subnasuta</i> , M. & W., 1870, pl. xxiii, figs. 9 a, b.....	494-495
Gasteropoda.	
<i>Subulites</i> , Conrad.....	495
<i>S. inflatus</i> , M. & W., 1869, pl. xxiii, fig. 5.....	495-496
Articulata.	
<i>Asaphus</i> , Brongniart.....	497
<i>A. (Isotelus) vigilans</i> , M. & W., 1870, pl. xxiii, fig. 6.....	497-498

UPPER SILURIAN SPECIES.

Spongiæ.	
<i>Astylospongia præmorsa</i> , Goldf. ? sp., 1826, pl. xxv, figs. 2, 2 a.....	499
Foraminifera ?	
<i>Receptaculites</i> , DeFrance.....	500
<i>R. formosus</i> , M. & W., 1870, pl. xxiv, fig. 1.....	500
Brachiopoda.	
<i>Stricklandinia</i> , Billings.....	502
<i>S. deformis</i> , M. & W., 1870, pl. xxiv, figs. 5 a, b.....	502-503
Cephalopoda.	
<i>Orthoceras</i> , Auct.....	503
<i>O. crebristriatum</i> , M. & W., 1865, pl. xxvi, fig. 2.....	503-504
<i>O. medullare</i> , Hall ? 1860, pl. xxvi, fig. 1.....	504
<i>O. angulatum</i> , Wahl, 1827, pl. xxiv, fig. 8.....	504
<i>O. jolietensis</i> , M. & W., 1865, pl. xxvi, fig. 5.....	505
<i>Cyrtoceras</i> , Goldfuss.....	506
<i>C. dardanus</i> , Hall ? 1861, pl. xxv, fig. 6.....	506
<i>Lituites</i> , Breyn.....	507
<i>L. graftonensis</i> , M. & W., 1869, pl. xxv, fig. 1.....	507-508
Crustacea.	
<i>Lichas</i> , Dalman.....	508
<i>L. boltoni</i> , Bigsby, sp., 1825, pl. xxv, fig. 5.....	508
<i>Illaenus</i> , Dalman.....	508
<i>I. (Bumastus) graftonensis</i> , M. & W., 1869, pl. xxv, fig. 4.....	508-510
<i>Sphærezochus</i> , Beyrich.....	510
<i>S. romingeri</i> , Hall, 1862, pl. xxiv, fig. 4.....	510
Mollusca.	
Cephalopoda.	
<i>Phragmoceras</i>	511
<i>P. walshii</i> , M. & W., 1866, pl. xxviii, figs. 2 a, b.....	511-512
<i>Orthoceras</i>	512
<i>O. winchelli</i> , M. & W., 1866, pl. xxviii, fig. 1.....	512-513

LOWER CARBONIFEROUS SPECIES.

Echinodermata.	
<i>Synbathocrinus</i> , Phillips.....	514
<i>S. robustus</i> , Shumard, 1866, pl. xxix, fig. 4.....	514
<i>Dichocrinus</i> , Muuster.....	515
<i>D. ficus</i> , Casseday & Lyon, 1860, pl. xxix, fig. 7.....	515
<i>Poterocrinus</i>	516
Subgenus <i>Scaphiocrinus</i> , Hall.....	519
<i>P. (Scaphiocrinus) unicus</i> , Hall, 1861, pl. xxix, fig. 1.....	519
<i>Pentrenites</i> , Say.....	521
<i>P. (Tricoelocrinus), obliquatus</i> Roemer, sp., 1852, pl. xxxi, fig. 4.....	521
<i>Spirifer</i> , Sowerby.....	521
<i>S. fastigatus</i> , M. & W., 1870, pl. xxx, fig. 3.....	521-523
<i>S. neglectus</i> , Hall, 1858, pl. xxx, figs. 2 a, and 1 c.....	523
<i>S. suborbicularis</i> , Hall, 1858, pl. xxx, fig. 1.....	523-524

COAL MEASURE SPECIES.

	Page.
<i>Azophyllum</i> , Edwards & Haime.....	525
<i>A. rudis</i> , White & St. John, pl. xxxii, figs. 6 a-c.....	525
<i>Conocardium</i> , Brown.....	529
<i>C. obliquum</i> , M. & W., 1865, pl. xxxiii, fig. 4.....	529
<i>Pleurophorus</i> ? King.....	529
<i>P. ? angulatus</i> , M. & W., 1865, pl. xxxiii, fig. 5.....	529-530
<i>Carbonarca</i> , Meek & Worthen, 1870.....	530
<i>C. gibbosa</i> , M. & W., 1876, pl. xxxiii, fig. 6.....	531
<i>Nautilus</i> , Linnaeus.....	531
<i>N. (Cryptoceras) capax</i> , M. & W., 1865, pl. xxxiii, fig. 1.....	532

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.

	Page.
<i>Goniatites globulosus</i> var. <i>excelsus</i> , Meek, 1875.....	445

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.

CARBONIFEROUS SPECIES.

	Page.
<i>Brachiopoda.</i>	
<i>Productus</i> , Sowerby.....	354
<i>P. latissimus</i> , Sowerby, 1822, pl. i, fig. 1.....	354-355
<i>Spirifer</i> , Sowerby.....	355
<i>S. keokuk</i> , Hall? 1858, pl. i, figs. 3 and 3 a.....	355
<i>Athyris</i> , McCoy, 1844.....	355
<i>A. subtilita</i> , Hall, sp., 1852, pl. i, figs. 2 and 2 a.....	355-356

CRETACEOUS SPECIES.

	Page.
<i>Lamellibranchiata.</i>	
<i>Nucula</i> , Lamarck.....	356
<i>N. traskana</i> , Meek, 1857.....	356
<i>Grammatodon</i> , Meek.....	356
<i>G. ? vancouverensis</i> , Meek, 1857, pl. iii, figs. 5 and 5 a.....	356-357
<i>Area</i> , Sin.....	357
<i>A. ? equilateralis</i> , Meek, 1857, pl. ii, figs. 6, 6 a.....	357
<i>Inoceramus</i> , Sowerby.....	358
<i>I. crispus</i> ? var. <i>subundatus</i> , Meek, 1861, pl. iii, figs. 1, 1 a and 3, 3 a.....	358-359
<i>I. barabini</i> , Morton, 1834, fig. —.....	358
<i>Inoceramus</i> ———?, pl. i, fig. 6.....	359
<i>Trigonia</i> , Bruguière.....	359
<i>T. evansi</i> , Meek, 1857, pl. ii, figs. 7 a, b.....	359-360
<i>Protocardia</i> , Beyrich.....	360
<i>P. scitula</i> , Meek, 1857, pl. iii, figs. 4 and 4 a.....	360-361
<i>Cyprineria</i> , Conrad.....	361
<i>C. ? tenuis</i> , Meek, 1861, pl. ii, figs. 5 a, b.....	361
<i>Pholadomya</i> , Sowerby.....	362
<i>P. subelongata</i> , Meek, 1857, pl. ii, figs. 1 a.....	362
<i>Goniomya</i> , Agassiz.....	362
<i>G. borealis</i> , Meek, 1857, pl. ii, fig. 2.....	362-363
<i>Thracia</i> , Leach.....	363
<i>T. ? occidentalis</i> , Meek, 1857, pl. ii, figs. 3 a.....	363
<i>T. ? subtruncata</i> , Meek, 1857, pl. ii, figs. 4 and 4 a.....	363-364

	Page.
<i>Gastropoda.</i>	
<i>Dentalium</i> , Linnæus.....	364
<i>D. komooksense</i> , Meek, 1857, pl. iii, fig. 6.....	364
<i>Cephalopoda.</i>	
<i>Baculites</i> , Lamarek.....	364
<i>B. chicoensis</i> , Trask? 1856, pl. iv, figs. 2 <i>a-c</i>	364-365
<i>B. occidentalis</i> , Meek, 1861, pl. iv, figs. 1 <i>a-b</i>	366-367
<i>Heterocerat</i> , d'Orbigny.....	367
<i>H. cooperi</i> , Gabb sp., 1864, pl. iii, figs. 7 <i>a</i>	367
<i>Ammonites</i> , Bruguière.....	367
<i>A. newberryanus</i> , Meek, 1857, pl. iv, figs. 3 <i>a, b</i>	367-368
<i>A. complexus</i> var. <i>suciensis</i> , Meek, 1861, pl. v, figs. 2 <i>a-c</i>	369-370
<i>Placenticeras</i> , Meek.....	370
<i>P. ? vancouverense</i> , Meek, 1861, pl. vi, figs. 1 <i>a-c</i>	370-371
<i>Phylloceras</i> , Suess.....	371
<i>P. ? ramosus</i> , Meek, 1857, pl. v, figs. 1 <i>a-b</i>	371-373
<i>Nautilus</i> , Linnæus.....	373
<i>N. campbelli</i> , Meek, 1861, pl. vi, figs. 2, 2 <i>a</i>	373

TERTIARY SPECIES. ?

<i>Mactra</i> , Linnæus.....	374
<i>M. gibbsana</i> , Meek, 1861, pl. ii, figs. 8 <i>a-b</i>	374

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.

	Page.
<i>Uintacrinus</i> , n. g., Grinnell, 1876.....	375-378
<i>U. socialis</i> , n. s., Grinnell, 1876?, figs. A, B, p. 375.....	375

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.

<i>Lamellibranchiata.</i>	Page.
<i>Ostrea</i> , Linnæus.....	123
<i>O. lugubris</i> , Conrad, 1857, pl. i, figs. 1 <i>a-d</i>	123-124
<i>O. (Gryphæa ?) uniformis</i> , n. s., Meek, 1876, pl. i, figs. 2 <i>a-c</i>	124
<i>Exogyra</i> , Say.....	124
<i>E. columbella</i> , n. s., Meek, 1876, pl. i, figs. 3 <i>a-d</i>	124-125
<i>Anomia</i> , Linnæus.....	125
<i>A. nitida</i> , n. s., Meek, 1876, pl. i, figs. 4 <i>a-b</i>	125
<i>Caprotina</i> , d'Orbigny.....	126
<i>C. (Requienia ?) bicornis</i> , Meek, 1876, pl. i, figs. 7 <i>a-b</i>	126
<i>Plicatula</i> , Lamarek.....	126
<i>P. arenaria</i> , n. s., Meek, 1876, pl. i, figs. 5 <i>a-c</i>	126-127
<i>Inoceramus</i> , Sowerby.....	127
<i>I. fragilis</i> , H. & M., 1856?, pl. i, fig. 6.....	127
<i>Crassatella</i> , Lamarek.....	127
<i>C. shumardi</i> , n. s., Meek, 1876, pl. ii, figs. 7 <i>a-c</i>	127-128
<i>Cyprenæria</i> , Conrad.....	128
<i>C. ? crassa</i> , n. s., Meek, 1876, pl. i, figs. 8 <i>a-d</i>	128
<i>Cardium</i> , Linnæus.....	128
<i>C. bellulum</i> , n. s., Meek, 1876, pl. ii, figs. 6 <i>a, b</i>	128-129

	Page.
<i>Gasteropoda.</i>	
<i>Actæon</i> , Montfort	129
<i>A. intercalaris</i> , n. s., Meek, 1876, pl. ii, figs. 4 <i>a-c</i>	129
<i>Anchura</i> , Conrad	129
<i>A. ? newberryi</i> , n. s., Meek, 1876, pl. ii, fig. 5	129-130
<i>Cephalopoda.</i>	
<i>Baculites</i> , Lamarck	130
<i>B. anceps</i> var. <i>obtusius</i> , Meek, 1876, pl. ii, figs. 1 <i>a-h</i>	130-132
<i>Prionocyclus</i> , Meek	132
<i>P. ? macombi</i> , n. s., Meek, 1876, pl. ii, figs. 3 <i>a-d</i>	132-133

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.

Descriptions of new species.

DEVONIAN FOSSILS.

<i>Mollusca.</i>	
<i>Brachiopoda.</i>	
<i>Productus</i> , Sowerby	Page. 345
<i>P. subaculeatus</i> , Murchison ? 1840, pl. i, figs. 3 <i>a-c</i>	345
<i>Spirifer</i> , Sowerby	345
<i>S. utahensis</i> , Meek, 1860, pl. i, figs. 4 <i>a-c</i>	345-346
<i>S. engelmanni</i> , Meek, 1860, pl. i, figs. 1 <i>a-c</i>	346-347
<i>S. strigosus</i> , Meek, 1860, pl. i, figs. 5 <i>a-d</i>	347
<i>Atrypa</i> , Dalman	347
<i>A. reticularis</i> (Lin.) Dalm., 1767, pl. i, figs. 6 <i>a-b</i>	347-348
<i>A. aspera</i> , Schloth, 1813, pl. i, figs. 2 <i>a-b</i>	348

CARBONIFEROUS FOSSILS.

<i>Mollusca.</i>	
<i>Polyzoa.</i>	
<i>Archimediopora</i> , D'Orbigny	348
<i>Archimediopora</i> , — ? Meek, pl. i, fig. 11	348
<i>Brachiopoda.</i>	
<i>Chonetes</i> , Fischer	348
<i>C. verneuilliana</i> var. <i>utahensis</i> , Meek, 1876, pl. ii, figs. 2 <i>a-c</i>	348-349
<i>Productus</i> , Sowerby	349
<i>P. semistriatus</i> , Meek, 1860, pl. i, figs. 7 <i>a-b</i>	349
<i>P. multistriatus</i> , Meek, 1860, pl. i, figs. 8 <i>a-b</i>	350
<i>Athyris</i> , McCoy	350
<i>A. subtilita</i> , Hall, sp., 1852, pl. ii, figs. 4 <i>a-b</i>	350-351
<i>Spirifer</i> , Sowerby	351
<i>S. (Spiriferina ?) scobina</i> , Meek, 1860, pl. ii, figs. 5 <i>a-c</i>	351-352
<i>S. (Spiriferina) pulcher</i> , Meek, 1860, pl. ii, figs. 1 <i>a-h</i>	352
<i>S. camcratus</i> , Morton, 1836, pl. ii, figs. 3 <i>a, b</i>	353
<i>Lamellibranchiata.</i>	
<i>Aviculopecten</i> , McCoy	354
<i>A. utahensis</i> , Meek, 1860, pl. i, figs. 9 <i>a-c</i>	354
<i>Cephalopoda.</i>	
<i>Orthoceras</i> , Auct.	354
<i>O. baculum</i> , Meek, 1860, pl. i, figs. 10 <i>a-b</i>	254-355

JURASSIC SPECIES.

<i>Radiata.</i>	
<i>Echinodermata.</i>	
<i>Pentacrinites</i> , Miller	355
<i>Pentacrinites</i> , undt. sp., Meek, pl. iii, figs. 5 <i>a-c</i>	355
<i>Mollusca.</i>	
<i>Lamellibranchiata.</i>	
<i>Ostrea</i> , Linnaeus	355

	Page.
<i>O. engelmanni</i> , Meek, 1860, pl. iii, fig. 6	355-356
<i>Gryphæa calceola</i> , Quenstedt? 1856, pl. iii, fig. 2	356
<i>Camptonectes</i> , Agassiz	356
<i>C. bellistriata</i> , Meek, 1860, pl. iii, figs. 3 <i>a-d</i>	356-357
<i>Gasteropoda.</i>	
<i>Dentalium</i> , Linn	357
<i>D. ? subquadratum</i> , Meek, 1860, pl. iii, figs. 1 <i>a-c</i>	357
<i>Cephalopoda.</i>	
<i>Belemnites</i> , Lamarck	358
<i>B. densus</i> , M. & H., 1858, pl. iii, figs. 4 <i>a, b</i>	358

CRETACEOUS FOSSILS.

Lamellibranchiata.

<i>Inoceramus</i> , Sowerby	358
<i>I. problematicus</i> , Schloth., 1820, pl. iv, figs. 1 <i>a</i> and 1 <i>b, c (?)</i>	358-359
<i>Anomia</i> , Linn	359
<i>A. concentrica</i> , Meek, 1860, pl. iv, fig. 3	359
<i>Inoceramus simpsoni</i> , Meek, 1860, pl. iv, fig. 4	360

BEAR RIVER FRESH-WATER OR ESTUARY BEDS.

Mollusca.

Lamellibranchiata.

<i>Unio</i> , Retzius	361
<i>U. vetustus</i> , Meek, 1860, pl. v, figs. 12 <i>a, b</i>	361
<i>Corbula</i> , Bruguière	361
<i>C. (Anisorhynchus) pyriformis</i> , Meek, 1860, pl. v, figs. 9 and 10	361-362
<i>C. engelmanni</i> , Meek, 1860, pl. v, figs. 13 <i>a, b</i>	362

Gasteropoda.

<i>Pyrgulifera</i> , 1871, Meek	363
<i>P. humerosa</i> , Meek, 1860, pl. v, figs. 6 <i>a-c</i>	363
<i>Limnæa nitidula</i> , Meek, 1860, pl. v, fig. 14	363-364
<i>Rhytrophorus</i>	364
<i>R. priscus</i> , Meek, 1860, pl. v, figs. 4 <i>a, b</i>	364

TERTIARY FOSSILS.

Mollusca.

Lamellibranchiata.

<i>Unio</i> , Retzius	364
<i>U. haydeni</i> , Meek, 1860, pl. v, figs. 11 <i>a, b</i>	364-365
<i>Goniobasis</i> , Lea	365
<i>G. simpsoni</i> , Meek, 1860, pl. v, figs. 1 <i>a-c</i>	365-366
<i>G. arcta</i> , Meek, 1860, pl. v, fig. 5	366
<i>Planorbis</i> , Müller	366
<i>P. spectabilis</i> , Meek, 1860, pl. v, figs. 7 <i>a-d</i>	366-367
<i>P. spectabilis</i> var. <i>utahensis</i> , Meek, 1860, pl. v, figs. 8 <i>a-c</i>	367
<i>Limnæa retusta</i> , Meek, 1860, pl. v, figs. 3 <i>a, b</i>	367
<i>L. similis</i> , Meek, 1860, pl. v, figs. 2 <i>a, b</i>	367

Catalogue of the organic remains contained in the collection	368-373
Devonian species	368
Carboniferous species	368-371
Permian forms	371-372
Jurassic species	372
Cretaceous species	372-373
Fossils of the Bear River Fresh or Brackish water beds	373
Tertiary species	373

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.

CONTENTS.

	Page.
List of wood-cuts	xiii
List of errata	xv
Letter of Dr. F. V. Hayden	xvii
Introductory remarks	xix
Cretaceous formation	xxi
Section of Cretaceous formation on the Missouri	xxiii
General section of the Cretaceous rocks of Nebraska	xxiv
Subdivisions of the Upper Missouri undoubted Cretaceous series, and their geographical extension west of the Mississippi, individually considered	xxvi
Dakota group	xxvi
Fort Benton group	xxviii
Niobrara group	xxx
Fort Pierre group	xxxi
Fox Hills group	xxxv
New Mexican Cretaceous section	xxxvii
Relations of the Upper Missouri Cretaceous beds to those east of the Mississippi	xxxviii
Section of Cretaceous rocks of Mississippi	xxxviii
Alabama section	xxxix
New Jersey section	xli
Parallelism of the subdivisions of the Upper Missouri Cretaceous series with those of the same in Europe	xliii
Fresh and brackish water lignite deposits of the Upper Missouri	xlvi
Judith River group	xlvi
Section of the Judith River group	xlvi
Fort Union group	lv
Section of the Fort Union	lix
Tertiary rocks of the Wind River and White River groups	lxi
Wind River group	lxi
White River group	lxi
Section of the White River group	lxii
Invertebrate paleontology	1
Cretaceous species	1
Species of the fresh and brackish water lignite beds	509
Fossils of the Wind River Tertiary	593
Fossils of the White River Tertiary	598
Appendix	607

CRETACEOUS.

*Radiata.**Polypi.**Actinaria.**Fungiida.*

<i>Micrabacia</i> , Edwards & Haime, 1849	1
<i>M. americana</i> , M. & H., 1860, pl. xxviii, figs. 1 <i>a-d</i>	1-2

*Alcyonaria.**Gorgoniida.*

<i>Websteria</i> , Edwards & Haime, 1854	2-3
<i>W. cretacea</i> , Meek, 1864, pl. xxviii, figs. 3 <i>a-c</i>	3-4
<i>Microstizia</i> , n. g., Meek, 1876	4
<i>M. millepunctata</i> , n. s., Meek, 1876, pl. xxviii, figs. 2 <i>a-c</i>	4

*Echinodermata.**Echinoidea.**Spatangida.*

<i>Hemiaster</i> , Desor., 1847	5
<i>H. humphreysanus</i> , M. & H., 1857, pl. x, figs. 1 <i>a-g</i>	5-6

*Mollusca.**Brachiopoda.**Lycopmata.**Lingulida.*

<i>Lingula</i> , Bruguière, 1792	7-9
<i>L. nitida</i> , M. & H., 1861, pl. xxviii, figs. 18 <i>a, b</i>	9-10

Lamellibranchiata.

Monomyaria.

Ostreidae.

<i>Ostrea</i> , Linnæus, 1758	10-12
<i>Aléctryonia</i> , Fischer	11
<i>Gryphæostrea</i> , Conrad	11
<i>Ostrea</i> , sp. undt., pl. ii, figs. viii <i>a</i> and <i>b</i>	12-13
<i>O. congesta</i> , Conrad, 1843, pl. ix, figs. 1 <i>a-f</i>	13-14
<i>O. inornata</i> , M. & H., 1860, pl. x, fig. 4	14
<i>O. pellucida</i> , M. & H., 1860, pl. xxviii, figs. 4 <i>a</i> and <i>b</i>	15
<i>O. (Gryphæostrea?) scæolata</i> , Meek, pl. xxviii, fig. 5	15-16
<i>O. (Gryphæa?) patina</i> , M. & H., 1856, pl. x, figs. 2 <i>a, b</i> ; <i>a, b</i> (bis), and 3 <i>e, f</i> ; also pl. xi varieties	16-18
<i>Gryphæa</i> , Lamarek, 1801	19
<i>G. vesicularis</i> , Lam. ? 1806, pl. xi, figs. 2 <i>a-c</i> , and pl. xvi, figs. 8 <i>a, b</i>	20-21

Anomiida.

<i>Anomia</i> , Linnæus, 1767	21-22
<i>A. ? obliqua</i> , M. & H., 1860, pl. ix, fig. 2	22
<i>A. ? subtrigonalis</i> , M. & H., 1860, pl. xvi, figs. 4 <i>a, b</i>	22-23

Pectinidae.

<i>Chlamys</i> , Bolten, 1798	23-25
<i>C. nebrascensis</i> , M. & H., 1856, pl. xvi, figs. 6 <i>a-c</i>	25-26
<i>Syneclonema</i> , Meek, 1864	26-27
<i>S. rigida</i> , H. & M., 1854, pl. xvi, figs. 5 <i>a, b</i>	27-28

Heteromyaria.

Pterida.

<i>Pteria</i> , Scopoli, 1777	28-32
<i>Electroma</i> , Stoliczka	29
<i>Pseudoptera</i> , Meek	29
<i>Oxytoma</i> , Meek	29
<i>P. linguiformis</i> , Evans & Shumard, sp., 1854, pl. xvi, figs. 1 <i>a-d</i>	32-33
<i>P. linguiformis</i> var. <i>subgibbosa</i> , pl. xxviii, fig. 12	33
<i>P. haydeni</i> , H. & M., 1854, pl. xvi, figs. 2 <i>a, b</i>	33-34
<i>P. (Oxytoma) nebrascana</i> , E. & S., 1857, pl. xvi, figs. 3 <i>a, b</i> , and pl. xxviii, fig. 11 ..	34-36
<i>P. (Pseudoptera) fibrosa</i> , M. & H., 1856, pl. xvii, figs. 17 <i>a-d</i>	36-37
<i>Inoceramus</i> , Sowerby, 1819	38-41
Subgenus <i>Inoceramus</i>	38-39
<i>Mytiloides</i> , Brongniart	39
<i>Catillus</i> (Brongniart ?), Chenu	39
<i>Actinoceramus</i> , Meek	39
<i>Volciceramus</i> , Stoliczka	40
<i>I. (Inoceramus) fragilis</i> , H. & M., 1854, pl. v, fig. 5, and figs. 1 and 2, p. 42	42-43
<i>I. (Inoceramus) altus</i> , Meek, 1871, pl. xiv, figs. 1 <i>a, b</i>	43-44
<i>I. (Volciceramus) umbonatus</i> , M. & H., 1858, pl. iii, figs. 1 <i>a-c</i> , and pl. iv, figs. 1 <i>a-b</i> and 2 <i>a, b</i>	44-46
<i>I. (Volciceramus) exogyroides</i> , M. & H., 1862, pl. v, figs. 3 <i>a-c</i>	46-47
Subgenus <i>Catillus</i> , Brong.	
<i>I. (Catillus) pertenuis</i> , M. & H., 1856, pl. xxxvii, figs. 3 <i>a, b</i> , and pl. xxxviii, figs. 3 <i>a, b</i>	47-48
<i>I. (Catillus) crispus</i> ? var. <i>subcompressus</i> , M. & H., pl. xxxviii, fig. 2 <i>bis</i>	48-49
<i>I. (Catillus) crispus</i> ? var. <i>barabini</i> , Morton, 1834, pl. xiii, figs. 1 <i>a-c</i> , and pl. xii, fig. 3, figs. 1-4	49-50
<i>I. (Catillus) convexus</i> , H. & M., 1854, pl. xii, figs. 5 <i>a</i> and <i>b</i>	51-52
<i>I. (Catillus) sogensis</i> var. <i>nebrascensis</i> , Owen, 1852, pl. xiii, figs. 2 <i>a, b</i>	52-53
<i>I. (Catillus) proximus</i> , Tuomey? 1854, pl. xii, figs. 7 <i>a, b</i>	53-55
<i>I. (Catillus) proximus</i> ? var. <i>subcircularis</i> , Meek, pl. xii, figs. 2 <i>a, b</i>	55-56
<i>I. (Catillus) balchii</i> , M. & H., 1860, pl. xv, figs. 1 <i>a, b</i>	56
<i>I. (Catillus) tenuilineatus</i> , H. & M., 1854, pl. xii, fig. 6	57
<i>I. (Catillus) ranuncemi</i> , M. & H., 1860, pl. xiv, figs. 2 <i>a, b</i>	57-58
<i>I. (Catillus) sublaris</i> , H. & M., 1854, pl. xii, figs. 1 <i>a</i> and <i>b</i>	58-59
<i>I. (Catillus) tenuirostris</i> , M. & H., 1862, fig. 5	59
<i>I. (Catillus) undabundus</i> , M. & H., 1862, pl. iii, figs. 2 <i>a, b</i>	60-61
<i>I. (Catillus) incurvatus</i> , M. & H., 1856, pl. xii, figs. 4 <i>a</i> and <i>b</i>	61
Subgenus <i>Mytiloides</i> , Brong.	
<i>I. (Mytiloides) problematicus</i> , Schlot., pl. ix, figs. 3 <i>a, b</i>	62

	Page.
<i>I. (Mytiloides) problematicus</i> var. <i>ariculoides</i> , M. & H., 1860, pl. ix, fig. 4	63-64
<i>Gervillia</i> , DeFrance.	
<i>G. subrotunda</i> , M. & H., 1856, pl. xvi, figs. 7 <i>a-c</i>	65-66
<i>G. recta</i> , M. & H., 1861, pl. xxix, figs. 1 <i>a, b</i>	66-67
<i>Mytilidae</i> .	
<i>Mytilus</i> , Linnaeus, 1758	67-68
<i>Aulacomya</i> , Mörch (= <i>Hormomya</i> , Mörch)	68
<i>Stavelia</i> , Gray	68
<i>M. subarcuatus</i> , M. & H., 1856, pl. xxxviii, figs. 2 <i>a, b</i>	69
<i>Folsella</i> , Scopoli, 1777	69-71
<i>Brachydontes</i> , Swainson	70
<i>V. meekii</i> , E. & S., sp., 1857, pl. xv, figs. 3 <i>a-c</i>	72
<i>V. galpiniana</i> , E. & S., sp., 1854, pl. xxviii, figs. 7 <i>a, b</i>	73
<i>V. attenuata</i> , M. & H., 1856, pl. xxviii, figs. 8 <i>a, b</i>	74
<i>Crenella</i> , Brown, 1827	74-75
<i>Modiolaria</i> , Beek	75
<i>C. elegantula</i> , M. & H., 1861, pl. xxviii, figs. 6 <i>a-c</i>	75-76
<i>Dimyaria</i> .	
<i>Arcidae</i> .	
<i>Barbatia</i> , Gray, 1840	76-80
<i>Polynema</i> , Conrad	78
<i>Acar</i> , Gray	78
<i>Calloarca</i> , Gray	78
<i>Striarca</i> , Conrad	78
<i>Plagiarca</i> , Conrad	78
? <i>Granoarca</i> , Conrad (= ? <i>Cucullæarca</i> , Conrad)	78
<i>B. (Polynema) parallela</i> , Meek, 1872, pl. ii, fig. 10	80-81
<i>Nemodon</i> , Conrad, 1870	81-82
<i>N. sulcatus</i> , Evans & Shum., sp., 1857, pl. xv, figs. 6 <i>a, b</i>	82-83
<i>Cuculla</i> , Lamarck, 1801	83-85
<i>Idonearca</i> , Conrad	84
<i>Latiarca</i> , Conrad	84
<i>C. (Idonearca) shumardi</i> , M. & H., 1856, pl. xxviii, figs. 15, <i>a-g</i> , and pl. xxix, fig. 4	86-87
<i>C. (Idonearca) nebrascensis</i> , Owen, 1852, pl. xxix, figs. 5 <i>a, b</i>	88-89
<i>C. (Idonearca) cordata</i> , M. & H., 1856, pl. xxix, figs. 6 <i>a, b</i>	89-90
<i>Trigonarca</i> , Conrad, 1862	90-91
<i>Breviarca</i> , Conrad	91
<i>T. (Breviarca) sinuensis</i> , H. & M., 1854, pl. i, fig. 6	92
<i>T. (Breviarca) salinensis</i> , Meek, pl. ii, figs. 1 <i>a-c</i>	92-93
<i>T. (Breviarca) exigua</i> , M. & H., 1856, pl. xv, figs. 2 <i>a-f</i>	93-94
<i>Azinara</i> , Poli, 1791	94-95
<i>A. subimbricata</i> , M. & H., 1860, pl. xxviii, figs. 14 <i>a-c</i>	95-96
<i>Limopsis</i> , Sassi, 1827	96
<i>L. parvula</i> , M. & H., 1856, pl. xxviii, figs. 17 <i>a-c</i>	97-98
<i>Nuculidae</i> .	
<i>Nucula</i> , Lamarck, 1799	98-99
<i>Acala</i> , H. & A., Ad	98
<i>N. subplana</i> , M. & H., 1856, pl. xvii, figs. 7 <i>a, b</i>	99-100
<i>N. obsoletistriata</i> , M. & H., 1856, pl. xv, figs. 10 <i>a, b</i>	100-101
<i>N. planimarginata</i> , M. & H., 1856, pl. xv, figs. 8 <i>a, b</i> , and pl. xxviii, fig. 16	101-102
<i>N. cancellata</i> , M. & H., 1856, pl. xxviii, figs. 13 <i>a-e</i>	102-103
<i>Ledidae</i> .	
<i>Nuculana</i> , Link, 1807	103-104
<i>N. bisulcata</i> , M. & H., 1864, pl. xv, figs. 4 <i>a, b</i>	104-105
<i>N. subnasuta</i> , H. & M., 1854, pl. xv, fig. 9	105-106
<i>N. ? equilateralis</i> , M. & H., 1856, pl. xv, figs. 7 <i>a, b</i>	106
<i>Yoldia</i> , Müller, 1842	107-108
<i>Portlandia</i> , Mörch	
<i>Y. microdonta</i> , Meek, 1872, pl. ii, fig. 2	109
<i>Y. scitula</i> , M. & H., 1856, pl. xxviii, fig. 9	110
<i>Y. evansi</i> , M. & H., 1856, pl. xxviii, figs. 10 <i>a-c</i>	111
<i>Y. ventricosa</i> , H. & M., 1854, pl. xv, figs. 5 <i>a, b</i>	112
<i>Unionidae</i> .	
<i>Margaritana</i> , Schumacher, 1817	112-114
<i>Alaxmodonta</i> , Say	113

	Page.
<i>Complanaria</i> , Swainson	113
<i>Unionopsis</i> , Swainson (= <i>Calceola</i> , Swainson, 1840; not Lam., 1799)	113
<i>M. nebrascensis</i> , Meek, 1871, pl. i, figs. 5 <i>a-c</i>	114-115
<i>Crassatellidae</i> .	
<i>Crassatella</i> , Lamarck, 1801	115-117
Subgenus <i>Pachytherus</i> , Conrad, 1870	116
<i>C. (Pachytherus) evansi</i> , H. & M., 1854, pl. xvii, figs. 6 <i>a-d</i>	117-118
<i>Crassatellina</i> , Meek, 1871	118-120
<i>C. oblonga</i> , Meek, 1871, pl. ii, figs. 3 <i>a-e</i>	120-121
<i>Eriphyla</i> , Gabb, 1864	121-124
<i>E. gregaria</i> , M. & H., 1856, pl. xvii, figs. 9 <i>a, b</i> , figs. 6 and 7, p. 124	124-126
<i>Solemyidae</i> .	
<i>Solemya</i> , Lamarck, 1818	126-129
<i>S. subplicata</i> , M. & H., 1856, pl. xxxviii, fig. 19	129
<i>Lucinidae</i> .	
<i>Lucina</i> , Brugnière, 1792	130-133
<i>Myrtea</i> , Turton, 1822	130
<i>Cyclas</i> , H. & A. Adams, 1857 (not Brug.)	131
<i>Mithea</i> , H. & A. Adams, 1857	131
<i>L. subundata</i> , Hall & Meek, 1854, pl. xvii, figs. 2 <i>a-e</i>	133-134
<i>L. occidentalis</i> , Morton, 1842, pl. xvii, figs. 4 <i>a-d</i>	134-135
<i>L. occidentalis</i> var. <i>ventricosa</i> , M. & H., 1860, pl. xvii, figs. 3 <i>a-c</i>	135-136
<i>Sphæriola</i> , Stoliczka, 1871	136-137
<i>S. ? cordata</i> , M. & H., 1857, pl. xxix, figs. 3 <i>a-c</i>	137-138
<i>S. ? warrenana</i> , Meek	138
<i>S. ? endotrachys</i> , Meek, pl. xxix, fig. 2	139
<i>Tancredidae</i> .	
<i>Tancredia</i> , Lycett, 1850	140-142
<i>T. americana</i> , M. & H., 1856, pl. xxxviii, figs. 1 <i>a-h</i>	142-144
<i>Glossidae</i> .	
<i>Cyprina</i> , Lamarck, 1812	144-146
<i>C. ovata</i> , M. & H., 1857, pl. xxix, figs. 7 <i>a-c</i> , and fig. 8, p. 146	146-147
<i>C. ovata</i> var. <i>compressa</i> , M. & H., pl. xxx, fig. 11	147
<i>Veniella</i> , Stoliczka, 1870 (= <i>Veniella</i> , Morton; not of Duponchel, or Alder & Hancock)	147-152
<i>Veniliocardia</i> , Stoliczka, 1870	149
<i>V. conradi</i> , Morton, figs. 9-11	148
<i>V. goniophora</i> , n. s., Meek, 1876, pl. iv, fig. 4 and fig. 12, p. 152	152-153
<i>V. mortoni</i> , M. & H., 1862, pl. iv, figs. 3 <i>a, b</i>	154
<i>V. subtumida</i> , M. & H., 1857, pl. xvii, figs. 5 <i>a, b</i>	154-150
<i>V. (Veniliocardia ?) humilis</i> , M. & H., 1860, pl. xxx, figs. 5 <i>a-c</i>	155-156
<i>Cyrenidae</i> .	
<i>Cyrena</i> , Lamarck, 1818	157-158
<i>Egeta</i> , H. & A. Adams, 1858	157
<i>Cyrena dakotensis</i> , M. & H., pl. i, figs. 1 <i>a-f</i>	159-160
<i>Corbicula</i> , Mühlfeldt, 1811	160-163
<i>Veloritina</i> , Meek	161
<i>Leptesthes</i> , Meek	161
<i>C. ? nucalis</i> , Meek, 1872, pl. ii, figs. 5 <i>a, c</i>	163-164
<i>C. ? subtrigonalis</i> , Meek, 1872, pl. ii, fig. 6	164-165
<i>Cardiidae</i> .	
<i>Cardium</i> , Linnaeus, 1758 (= <i>Acanthocardium</i> , Gray)	165-168
<i>Pectunculus</i> (Adanson), Stoliczka; but not H. & A. Adams and others	166
<i>Trachycardium</i> , Mörch	166
<i>Criocardium</i> , Conrad	166
<i>Tropidocardium</i> , Roemer (<i>Cardium</i> proper of most authors)	166
<i>Cerastoderma</i> (Poli), Mörch	166
<i>Nemocardium</i> , Meek	167
<i>C. (Criocardium) speciosum</i> , M. & H., 1856, pl. xxxvii, figs. 4 <i>a-c</i>	169-170
<i>C. kanasense</i> , Meek, 1871, pl. ii, figs. 14 <i>a-d</i>	170-171
<i>Protocardia</i> , Beyrich, 1845	171
<i>Pachycardium</i> , Conrad	172
<i>Leptocardia</i> , Meek	172
Subgenus, <i>Protocardia</i>	172
<i>P. (Protocardia) salinensis</i> , Meek, 1871, pl. ii, figs. 13 <i>a-c</i>	174

	Page.
Subgenus, <i>Leptocardia</i> , Meek, Section (a)	175
<i>P. (Leptocardia) subquadrata</i> , E. & S., sp., 1857, pl. xxix, figs. 8 <i>a-e</i>	175
<i>P. (Leptocardia) rara</i> , E. & S. sp., 1857, pl. xvii, figs. 1 <i>a-c</i>	176
<i>P. (Leptocardia) ? pertenuis</i> , M. & H., 1861, figs. 13 and 14, p. 176	176-177
Veneridae.	
<i>Callista</i> , Poli, 1791	177
<i>Callista</i> , Poli, typical (= <i>Chione</i> Gray: not of Mühlfeldt)	178
<i>Chione</i> , Gray	178
<i>Macrocallista</i> , Meek	179
<i>Pitar</i> , Roem. (= <i>Caryatis</i> , Roemer)	179
<i>Aphrodina</i> , Conrad	179
? <i>Dosiniopsis</i> , Conrad	179
<i>C. (Dosiniopsis) deveyi</i> , M. & H., 1856, pl. xvii, figs. 15 <i>a-e</i>	182-183
<i>C. (Dosiniopsis) oregonana</i> , M. & H., 1856, pl. xxxvii, fig. 1	183-184
<i>C. (Dosiniopsis) nebrascensis</i> , M. & H., 1856, figs. 15-17, p. 184	184-186
<i>C. (Dosiniopsis) orbiculata</i> , H. & M., 1854, pl. v, figs. 2 <i>a-c</i>	186-187
<i>C. ? pellucida</i> , M. & H., 1856, pl. xvii, figs. 10 <i>a-e</i> and figs. 12 <i>a-c</i>	187-188
<i>C. (Aphrodina ?) tenuis</i> , H. & M., pl. v, figs. 1 <i>a-d</i>	188-189
<i>Thetis</i> , Sowerby, 1826	189-190
<i>T. ? circularis</i> , M. & H., 1856, pl. xvii, figs. 8 <i>a-c</i> and figs. 18, 19, p. 190	190-191
Tellinidae.	
<i>Tellina</i> , Linnaeus, 1758	192-193
<i>Tellinella</i> , Gray	193
<i>Peronotoderma</i> (Poli), Mörch	193
<i>Mora</i> , H. & A. Adams (= <i>Donacilla</i> , Gray: not Lam)	193
<i>Palaeomorra</i> , Stoliczka	193
<i>Phylloda</i> , Schumacher	193
<i>Angulus</i> , Schumacher (= <i>Tellinula</i> , Chem., <i>Fabulina</i> , Gray)	193
<i>Tellinides</i> , Lam	193
<i>Homalina</i> , Stoliczka	194
<i>Peronca</i> , Poli (= <i>Omala</i> , Schum., corrected <i>Homala</i> , by Agassiz; also <i>Homala</i> , H. & A. Adams)	194
<i>Metis</i> , H. & A. Adams	194-195
<i>T. (Cene ?) subscitula</i> , Meek, 1871, pl. ii, figs. 11 <i>a</i> and <i>b</i>	195-196
<i>T. (Peronca ?) equilateralis</i> , M. & H., 1856, pl. xxxix, figs. 5 <i>a-c</i>	196-197
<i>T. (Peronca ?) scitula</i> , M. & H., 1856, pl. xxx, figs. 1 <i>a, b</i>	197-198
<i>Linearia</i> , Conrad, 1860	198-199
<i>L. ? formosa</i> , M. & H., 1860, pl. xxx, fig. 2	199-200
<i>Arcopagella</i> , Meek, 1871	200-202
<i>A. mactroides</i> , Meek, 1871, pl. ii, figs. 4 <i>a-d</i>	202
<i>A. ? macrodonta</i> , n. s., Meek, 1876, pl. i, fig. 2	202-203
Mactridae.	
<i>Mactra</i> , Linnaeus, 1767	203-204
<i>Mactra</i> , Linu. (typical = <i>Trigonella</i> , da Costa)	204
<i>Cymbophora</i> , Gabb	204
<i>Schizodesma</i> , Gray	204-206
<i>Mactra (Cymbophora) ? siouxensis</i> , M. & H., 1860, pl. i, figs. 7 <i>a-c</i>	206
<i>M. (Cymbophora ?) formosa</i> , M. & H., 1856, pl. xxxix, fig. 7	207
<i>M. (Cymbophora ?) warreniana</i> , M. & H., 1856, pl. xxx, figs. 7 <i>a-d</i>	208
<i>M. (Cymbophora ?) gracilis</i> , M. & H., 1860, pl. xvii, figs. 18 <i>a, b</i>	209
<i>M. (Cymbophora) alta</i> , M. & H., 1856, pl. xxxvii, figs. 2 <i>a, b</i>	210
<i>M. (Cymbophora ?) nitidula</i> , M. & H., 1861, pl. xxx, figs. 6 <i>a-c</i>	211-213
Pholadomyidae.	
<i>Pholadomya</i> , Sowerby, 1823	213-214
<i>Procardia</i> , Meek	215-216
<i>P. papiracea</i> , M. & H., 1862, pl. v, figs. 4 <i>a, b</i>	217
<i>P. subcentricosa</i> , M. & H., 1857, pl. xxxix, figs. 8 <i>a, b</i>	217-218
Subgenus <i>Procardia</i>	219
<i>P. (Procardia) hodgii</i> , Meek, 1871, pl. xii, figs. 3 <i>a, b</i>	219
<i>Goniomya</i> , Agassiz, 1838	220-221
<i>G. americana</i> , M. & H., 1856, pl. xxx, figs. 12 <i>a, b</i>	121-122
Astartinidae.	
<i>Thracia</i> , Lench 1819	222-223
<i>T. ? subrotunda</i> , M. & H., 1856, pl. xxxvii, fig. 5	223-224
<i>T. gracilis</i> , M. & H., 1856, pl. xxxix, figs. 6 <i>a, b</i>	224-225

	Pago.
<i>T. ? prouti</i> , M. & H., 1860, pl. xxxvii, figs. 6 <i>a, b</i>	225-226
<i>Liopistha</i> , Meek, 1864	227-236
<i>Cymella</i> , Meek	229
<i>Psilomya</i> , Meek	229
<i>L. protexta</i> , Conrad, figs. 20-24	227
<i>Cymella bella</i> , Conrad, figs. 25-30	228
Subgenus <i>Cymella</i> , Meek	236
<i>Liopistha (Cymella) undata</i> , M. & H., 1856, pl. xxxix, figs. 1 <i>a, b</i>	236-237
<i>Neaera</i> , Gray, 1834	237-238
<i>N. ventricosa</i> , M. & H., 1856, pl. xxx, figs. 3 <i>a-e</i>	238-239
<i>N. moreauensis</i> , M. & H., 1856, pl. xvii, figs. 11 <i>a-c</i>	239-240
<i>Corbulidae</i> .	
<i>Corbula</i> , Bruguière, 1792	240-244
<i>Anisorhynchus</i> , Conrad	241
<i>Pachyodon</i> (= <i>Pachydon</i> , Gabb. and <i>Anisothyrus</i> , Conrad)	241
<i>Corbula crassimarginata</i> , M. & H., 1860, pl. xvii, figs. 14 <i>a-c</i>	244-245
<i>C. inornata</i> , M. & H., 1856, pl. xxx, figs. 4 <i>a-d</i>	245-246
<i>Corbulamella</i> , M. & H., 1857	246
<i>C. gregaria</i> , M. & H., 1857, pl. xvii, figs. 13 <i>a-d</i>	247
<i>Saxicavidae</i> .	
<i>Glycimeris</i> , Lamarck, 1799	248-249
<i>G. occidentalis</i> , M. & H., 1856, pl. xxxix, figs. 9 <i>a, b</i>	250
<i>Solenidae</i> .	
<i>Pharella</i> , Gray, 1854	250-251
<i>P. ? dakotensis</i> , M. & H., 1860, pl. i, fig. 3	251-252
<i>Leptosolen</i> , Conrad, 1867	252-253
<i>L. conradi</i> , Meek, 1872, pl. ii, figs. 12 <i>a, b</i>	253-254
<i>Pholadidae</i> .	
<i>Turnus</i> , Gabb., 1864	254-256
<i>Goniochasma</i> , Meek	255
<i>Xylophagella</i> , Meek	255
<i>T. (Goniochasma) stimpsoni</i> , M. & H., 1857, pl. xxx, figs. 9 <i>a, b</i>	256-257
<i>T. (Xylophagella) elegantulus</i> , M. & H., 1857, pl. xxx, figs. 10 <i>a-e</i>	257-258
<i>Martesia</i> , Leach, 1824	258-259
<i>M. cuneata</i> , M. & H., 1858, pl. xxx, figs. 8 <i>a, b</i>	259-260
<i>Teredidae</i> .	
<i>Teredo</i> , Linnaeus, 1758	260-262
<i>Calobates</i> , Gould	261
<i>T. selliformis</i> , M. & H., 1860, pl. xvii, figs. 19 <i>a-d</i>	262-263
<i>T. globosa</i> , M. & H., 1858, pl. xxx, fig. 13 (burrows), figs. 31, 32, p. 264	264-265
<i>Gasteropoda</i> .	
<i>Solenogonidae</i> .	
<i>Dentaliidae</i> .	
<i>Dentalium</i> , Linn., 1758	266
<i>D. gracile</i> , H. & M., 1854, pl. xviii, figs. 13 <i>a-d</i>	266-267
<i>Entalis</i> , Sowerby, 1839	267-268
<i>E. pauperula</i> , M. & H., 1863, pl. xviii, fig. 14	269
<i>Tectibranchiata</i> .	
<i>Bullidae</i> .	
<i>Haminea</i> , Leach, 1847	270-271
<i>H. occidentalis</i> , M. & H., 1856, pl. xviii, figs. 11 <i>a, b</i> , and 12 <i>a, b</i>	271-272
<i>H. subcylindrica</i> , M. & H., 1856, pl. xviii, figs. 10 <i>a, b</i>	272-273
<i>H. minor</i> , M. & H., 1856, pl. xxxi, figs. 1 <i>a, b</i>	273
<i>Cylichnidae</i> .	
<i>Cylichna</i> , Lovén, 1846	274-275
<i>Mnestia</i> , H. & A. Adams	274
<i>C. ? volvaria</i> , M. & H., 1856, pl. xxxi, figs. 2 <i>a, b</i>	275-276
<i>C. scitula</i> , M. & H., 1860, pl. xxxi, figs. 3 <i>a, b</i>	276-277
<i>Actæonidae</i> .	
<i>Actæon</i> , Montfort, 1810	277-280
<i>A. subellipticus</i> , M. & H., 1856, pl. xix, fig. 16	280-281
<i>A. attenuatus</i> , M. & H., 1858, pl. xix, figs. 17 <i>a, b</i>	281-282
<i>Ringiculidae</i> .	
<i>Cinulia</i> , Gray, 1840	282-283
<i>Oligoptycha</i> , Meek	283

	Page.
<i>Arellana</i> , d'Orbigny, 1843	283
<i>Cinulia</i> (<i>Oligoptycha</i>) <i>concinna</i> , H. & M., sp., 1854, pl. xxxi, 6 bis. <i>a-c</i>	284
<i>Pulmonata</i> .	
<i>Siphonariidae</i> .	
<i>Anisomyon</i> , M. & H., 1860	285-288
<i>A. borealis</i> , M. & H., 1860, pl. xviii, figs. 9 <i>a-e</i>	288-289
<i>A. shumardi</i> , M. & H., 1860, pl. xviii, figs. 7 <i>a-c</i>	289-290
<i>A. patelliformis</i> , M. & H., 1860, pl. xviii, figs. 5 <i>a-f</i> (not <i>d</i> and <i>e</i>)	290-291
<i>A. suboratus</i> , M. & H., 1856, pl. xviii, figs. 5 <i>d</i> and 6	291-292
<i>A. alveolus</i> , M. & H., 1860, pl. xviii, figs. 4 <i>a, b</i>	292
<i>A. sexsulcatus</i> , M. & H., 1860, pl. xviii, figs. 8 <i>a, b</i>	293
<i>Dicoglossa</i> .	
<i>Acmaeidae</i> .	
<i>Acmaea</i> , Esch.	.
<i>A. occidentalis</i> , M. & H., 1860, pl. xviii, figs. 3 <i>a, b</i>	295-296
<i>A. ? parva</i> , M. & H., 1860, pl. xviii, figs. 1 <i>a-c</i> , and fig. 2	296
<i>A. ? papillata</i> , M. & H., 1860, pl. xxxi, figs. 4 <i>a, b</i>	296-297
<i>Rhipidoglossa</i> .	
<i>Trochidae</i> .	
<i>Margarita</i> , Leach, 1819	298
<i>M. nebrascensis</i> , M. & H., 1860, pl. xix, figs. 8 <i>a, b</i> , 9 <i>a, b</i>	298, 299
<i>M. mudgeana</i> , Meek, 1871, pl. ii, figs. 9 <i>a, b</i>	300
<i>Margaritella</i> , M. & H., 1860	300-302
<i>M. flexistriata</i> , E. & S., 1854, pl. xix, figs. 11 <i>a-d</i>	302
<i>Pectinibranchiata</i> .	
<i>Tritonidae</i> .	
<i>Trachyruton</i> , Meek, 1864	303-304
<i>T. vinculum</i> , H. & M., sp., 1856, pl. xix, figs. 7 <i>a-d</i>	304-306
* <i>Closteriscus</i> , n. g., Meek, 1876	306-307
<i>C. tenuilineatus</i> , H. & M., sp., 1856, pl. xix, figs. 10 <i>a, b</i> , and 9 <i>c</i>	308-309
<i>Naticidae</i> .	
<i>Gyrodus</i> , Conrad, 1860	309-310
<i>G. conradi</i> , Meek, figs. 33-36, p. 310	310-311
<i>Lunatia</i> , Gray, 1847	311-314
<i>L. concinna</i> , H. & M., sp., 1854, pl. xxxii, figs. 11 <i>a-c</i>	314-315
<i>L. occidentalis</i> , M. & H., 1856, pl. xxxii, figs. 12 <i>a-c</i>	315-316
<i>L. suberassa</i> , M. & H., 1856, pl. xxxix, figs. 3 <i>a-c</i>	316-317
<i>Amauropsis</i> , Mörch, 1857	317-318
<i>A. paludinaformis</i> , H. & M., sp., 1854, pl. xix, figs. 15 <i>a-c</i>	318-319
<i>Aporrhaidae</i> .	
<i>Aporrhais</i> , Dillwyn, 1823	320-322
<i>Alipes</i> , Conrad, 1865 (= <i>Goniocheila</i> , Gabb)	320
<i>Arrhages</i> , Gabb, 1868	321
<i>Aporrhais biangulata</i> , M. & H., 1856, pl. xix, figs. 6 <i>a-c</i>	322-323
<i>Anchura</i> , Conrad, 1860	324
<i>Drepanochilus</i> , Meek, 1864 (= <i>Perissoptera</i> , Tate, in part)	324
<i>A. (Drepanochilus) americana</i> , E. & S., sp., 1857, pl. xxxii, figs. 8 <i>a, b</i>	325-326
<i>A. (Drepanochilus) nebrascensis</i> , E. & S., sp., 1854, pl. xix, figs. 5 <i>a-c</i>	326-327
<i>A. ? sublevis</i> , M. & H., 1860, pl. xix, figs. 3 <i>a, b</i>	327-328
<i>A. ? parva</i> , M. & H., 1860, pl. xix, figs. 4 <i>a, b</i>	328
<i>Vanikoridae</i> .	
<i>Vanikoro</i> , Quoy & Gaim. 1832	329
<i>V. ambigua</i> , M. & H., 1856, pl. xix, figs. 12 <i>a-d</i>	330, 331
<i>Vanikoropsis</i> , f. n. g., Meek, 1876	331
<i>V. tuomeyana</i> , M. & H., sp., 1856, pl. xxxix, figs. 2 <i>a, b</i>	332
<i>Turritellidae</i> .	
<i>Mesalia</i> , Gray, 1842	332-333
<i>M. kansanensis</i> , Meek, 1871, pl. ii, figs. 7 <i>a, b</i>	333-334
<i>Cerithiopsidae</i> .	
<i>Cerithiopsis</i> , Forbes & Hanley, 1849	334-335
<i>Alaba</i> , H. & A. Adams, 1853	335
<i>Seila</i> , A. Adams, 1861	335
<i>Cerithiopsis moreauensis</i> , M. & H., 1856, pl. xxxi, fig. 4 (not 4 <i>a, b</i>), fig. 38, p. 336	336-337

* κλωστήρ, a spindle (diminutive of).

† Vanikoro; ὄψις, form.

	Page
<i>Pyramidellidae.</i>	
<i>Ohemnitzia</i> , d'Orbigny, 1850.....	337-339
<i>O. cerithiformis</i> , M. & H., sp., 1856, pl. xxxii, figs. 10 a, b.....	339-341
<i>Littorinidae.</i>	
<i>Spironema</i> , Meek, 1864.....	341-342
<i>S. tenuilineata</i> , M. & H., sp., 1856, pl. xxxii, figs. 9 a-c.....	342-343
<i>Muricidae.</i>	
<i>Pyrifusus</i> , Conrad, 1858.....	343-345
<i>Neptunella</i> , Meek, 1864 (not Gray).....	344
<i>Pyrifusus</i> (<i>Neptunella</i>) <i>newberryi</i> , M. & H., 1856, pl. xxxi, fig. 6 a-f, fig. 39, p. 346.....	346-347
<i>P. (Neptunella) subturritus</i> , M. & H., sp., 1857, pl. xxxii, figs. 3 a, b, and fig. 40, p. 347.....	347-348
<i>P. (Neptunella) intertextus</i> , M. & H., sp., 1857, pl. xix, figs. 14 a, b.....	348-349
<i>Buccinidae.</i>	
? <i>Pseudobuccinum</i> , M. & H., 1856.....	349-350
<i>P. nebruscense</i> , M. & H., 1856, pl. xxxi, figs. 5 a-d.....	350-351
? <i>Odontobasis</i> ,* n. g., Meek, 1876.....	351-352
<i>O. constricta</i> , H. & M., sp., 1856, figs. 41, 42, p. 353.....	352-354
<i>Fasciolaridae.</i>	
<i>Fasciolaria</i> , Lamarck, 1799.....	355-358
<i>Terebrispira</i> , Conrad, 1862.....	356
<i>Piestochilus</i> , Meek, 1864.....	356
<i>Mesorhytis</i> , Meek.....	356
<i>Cryptorhytis</i> , Meek.....	356
<i>Fasciolaria buccinoides</i> , M. & H., 1856, pl. xxxi, figs. 8 a-d.....	358-359
<i>F. (Piestochilus) scarboroughi</i> , M. & H., 1857, pl. xxxii, figs. 4 a-d.....	359-360
<i>F. (Piestochilus) culbertsoni</i> , M. & H., 1856, pl. xxxii, figs. 1 a-f, fig. 44, p. 360.....	360-362
<i>F. (Piestochilus) gulpiniana</i> , M. & H., sp., 1856, pl. xxxii, figs. 2 a, b.....	362-363
<i>F. (Piestochilus) cretacea</i> , M. & H., 1856, pl. xxxi, figs. 11 a, b.....	363-364
<i>F. ? (Mesorhytis) gracilenta</i> , Meek, fig. 45, p. 364.....	364-365
<i>F. ? (Cryptorhytis) cheyennensis</i> , M. & H., sp., 1860, pl. xix, figs. 13 a, b.....	365-366
<i>F. ? (Cryptorhytis) flexicostata</i> , M. & H., sp., pl. xix, fig. 2 and fig. 46, p. 367.....	367-368
<i>Pyropsis</i> , Conrad, 1860.....	368-35
<i>P. bairdi</i> , M. & H., sp., 1856, pl. xxxi, figs. 10 a, b.....	369-379
<i>P. bairdi</i> var. <i>rotula</i> , Meek, pl. xxxi, fig. 10 and fig. 47, p. 371.....	371-372
<i>Fusus</i> , Brugniere, 1789.....	372-374
<i>Serrifusus</i> , Meek.....	373
<i>Sinistralia</i> , H. & A. Adams, 1853.....	373
<i>Fusus ? (Serrifusus) dakotensis</i> , M. & H., 1856, pl. xxxi, fig. 11 and pl. 32, figs. 6 a, b.....	374, 375
<i>F. ? (Serrifusus) dakotensis</i> , var., pl. xxxii, fig. 7 a and 7 b ?.....	375-377
<i>Cantharus</i> , Bolten, 1798.....	377-379
<i>Tritonidea</i> , Swainson, 1840.....	378
<i>Cantharulus</i> , Meek.....	378
<i>C. (Cantharulus) vaughani</i> , M. & H., sp., pl. xxxii, figs. 5 a, b, and fig. 48, p. 379.....	379-380
<i>Pleurotomidae.</i>	
<i>Turris</i> , Bolten, 1798.....	380-384
<i>Surcula</i> , H. & A. Adams, 1853 (= <i>Turricula</i> , Schum.; not of others).....	381
<i>Surculites</i> , Conrad, 1865.....	382
<i>Genota</i> , H. & A. Adams, 1853 (not Adanson).....	382
<i>T. minor</i> , E. & S., sp. 1857, pl. xxxi, figs. 9 a-c.....	384-385
<i>T. (Surcula) ? contortus</i> , M. & H., 1856, pl. xxxi, figs. 7 a-c, fig. 49, p. 385.....	385-386
<i>T. (Surcula) ? hitzi</i> , Meek, fig. 50, p. 387.....	386-388
<i>Cephalopoda.</i>	
<i>Tetrabranchiata.</i>	
<i>Baculitidae.</i>	
<i>Baculites</i> , Lamarck, 1799.....	388-391
<i>Cyrtochilus</i> , Meek.....	391-394
<i>B. ovatus</i> , Say, 1821, pl. xx, figs. 2 a, b, d, and 1 a, b, and fig. 52, p. 397.....	394-397
<i>B. grandis</i> , H. & M., 1854, pl. xxxiii, figs. 1 a-c and fig. 53, p. 399 and fig. 54, p. 400.....	398-400
<i>B. compressus</i> , Say, 1821, pl. xx, figs. 3 a-c and figs. 55, 56, p. 403.....	400-404
<i>B. asper</i> , Morton ? 1824, pl. xxxix, figs. 10 a, d (not b, c).....	404-405
<i>B. anceps</i> var. <i>obtusus</i> , figs. 57-60, p. 406.....	406-408

* ὀδούς, a tooth; βάσις, a base.

	Page.
<i>Ancyloceratidae.</i>	
<i>Ancyloceras</i> , d'Orbigny, 1841.....	408-409
<i>A. ? unicum</i> , M. & H., 1858, pl. xxi, figs. 1 <i>a, b</i>	409-410
<i>Ptychoceratidae.</i>	
<i>Ptychoceras</i> , d'Orbigny, 1841.....	410-412
<i>P. mortoni</i> , M. & H., 1857, pl. xx, figs. 4, <i>a-c</i>	412-413
<i>Scaphitidae.</i>	
<i>Scaphites</i> , Parkinson, 1811.....	413-418
<i>Macroscephites</i> , Meek.....	414
<i>Scaphites</i> , Parkinson.....	414
<i>Discoscaphites</i> , Meek, 1872.....	15
<i>S. laræiformis</i> , M. & H., 1856, pl. vi, figs. 6 <i>a-c</i>	418-419
<i>S. warreni</i> , M. & H., 1860, pl. vi, fig. 5 and figs. 61, 62, p. 421.....	420-423
<i>S. vermiformis</i> , M. & H., 1862, pl. vi, figs. 4 <i>a, b</i>	423-425
<i>S. ventricosus</i> , M. & H., 1862, pl. vi, figs. 7 <i>a, b</i> , and figs. 8 <i>a, b</i>	425-426
<i>S. nodosus</i> var. <i>brevis</i> , pl. xxv, figs. 1 <i>a-c</i>	426-428
<i>S. nodosus</i> var. <i>quadrangularis</i> , pl. xxv, figs. 3 <i>a-c</i> , 2 <i>a-c</i> and fig. 4.....	428-429
<i>S. nodosus</i> var. <i>plenus</i> , pl. xxvi, figs. 1 <i>a-c</i>	429-430
<i>S. (Discoscaphites) conradi</i> , Morton, sp., 1834, pl. xxxvi, figs. 2 <i>a-e</i>	430-432
<i>S. (Discoscaphites) conradi</i> , var. <i>gulosus</i> , Morton, 1834, pl. xxxvi, fig. 1.....	432-433
<i>S. (Discoscaphites) conradi</i> , var. <i>intermedius</i> , pl. xxxiv, figs. 3 <i>a-c</i>	433-435
<i>S. (Discoscaphites) nicolei</i> , Morton, sp., 1841, pl. xxxiv, figs. 4 <i>a-c</i> and 2 <i>a-b</i>	435-436
<i>S. (Discoscaphites) cheyennensis</i> , Owen, sp., 1852, pl. xxxv, figs. 3 <i>a-i</i>	437-441
<i>S. (Discoscaphites) abyssinus</i> , Morton, sp., 1841, pl. xxxv, figs. 2 <i>a, b</i> and 4.....	441-443
<i>S. (Discoscaphites) mandanensis</i> , Morton, sp., 1841, pl. xxxv, figs. 1 <i>a-c</i>	443-444
<i>Ammonitidae.</i>	
<i>Ammonites</i> , Brug., 1789.....	445-447
<i>A. complexus</i> , H. & M., 1854, pl. xxiv, figs. 1 <i>a-c</i>	447-448
<i>Mortoniceras</i> , n. g., Meek, 1876.....	448-449
<i>M. shoshonense</i> , Meek, pl. vi, figs. 3 <i>a, c</i> and 6 <i>b</i>	449-450
<i>M. ? vermillionense</i> , M. & H., 1860, pl. vii, fig. 2 <i>a, b</i>	450-452
<i>Prionocyclus</i> , Meek, 1872.....	452-455
<i>Prionotropis</i> , Meek.....	453
<i>P. (Prionotropis) woolgari</i> , Mantell, sp., 1822, pl. vii, figs. 1 <i>a-h</i> , and pl. vi, fig. 2.....	455-457
<i>Phylloceras</i> , Sness, 1865.....	458
<i>P. ? halli</i> , M. & H., 1856, pl. xxiv, figs. 3 <i>a-c</i> and fig. 64, p. 458.....	458-462
<i>Placenticeras</i> , Meek, 1870.....	462-464
<i>Sphenodiscus</i> , Meek, 1872.....	463
<i>P. placenta</i> , DeKay, sp., 1828, pl. xxiv, figs. 2 <i>a, b</i> and fig. 65, p. 466.....	465-468
<i>P. placenta</i> var. <i>intercalare</i> , pl. xxiii, figs. 1 <i>a-c</i>	468-472
<i>P. (Sphenodiscus) lenticulare</i> , Owen, sp., 1852, pl. xxxiv, figs. 1 <i>a-c</i> , fig. 66, p. 473.....	473-476
<i>Turrilitidae.</i>	
<i>Heteroceras</i> , d'Orbigny, 1849.....	477-478
<i>H. ? cochleatum</i> , H. & M., pl. xxii, figs. 2 <i>a, b</i>	478-479
<i>H. ? nebrascense</i> , M. & H., 1856, pl. xxii, figs. 1 <i>a-c</i>	480-481
<i>H. tortum</i> , M. & H., 1858, pl. xxii, figs. 4 <i>a-c</i>	481-482
<i>H. ? umbilicatum</i> , M. & H., 1858, pl. xxii, fig. 5.....	482-483
<i>H. ? cheyennense</i> , M. & H., 1856, pl. xxi, figs. 2 <i>a, b</i>	483-484
<i>H. ? angulatum</i> , M. & H., 1860, pl. xxi, figs. 3 <i>a-c</i>	484-485
<i>Helicoceras</i> , d'Orbigny, 1840.....	485-487
<i>Patoceras</i> , Meek.....	485
<i>Helicoceras mortoni</i> var. <i>tenuicostatum</i> , pl. xxii, figs. 3 <i>a-c</i>	487-489
<i>Nautilidae.</i>	
<i>Nautilus</i> , Linnaeus, 1758.....	489-495
<i>Tennochilus</i> , McCoy, 1844.....	490
<i>Trematodiscus</i> , M. & W., 1861.....	491
<i>Discites</i> (De Hann), McCoy, 1825.....	491
<i>Solenochilus</i> , M. & W., 1870 (= <i>Cryptoceras</i> , d'Orbigny).....	491
<i>Hercoglossa</i> , Conrad, 1866 (= <i>Aganides</i> , Montfort l).....	491
<i>Pseudonautilus</i> , Meek.....	491
<i>N. dekayi</i> , Morton, 1834, pl. xxvii, figs. 1 <i>a-c</i> and fig. 67, p. 496.....	496-498
<i>N. dekayi</i> var. <i>moanoensis</i> , pl. xxvii, figs. 2 <i>a-c</i>	498
<i>N. elegans</i> , Suweryby, 1816, pl. viii, figs. 2 <i>a-c</i>	499-501

	Page.
<i>Dibranchiata.</i>	
<i>Belemnitidae.</i>	
<i>Belemnitella</i> , d'Orbigny, 1840	501-503
<i>B. bulbosa</i> , M. & H., 1856, pl. xxxiii, figs. 2 <i>a-e</i>	504
<i>Teuthidae.</i>	
<i>Phylloteuthis</i> , M. & H., 1860.	505
<i>P. subovata</i> , M. & H., 1860, pl. xxxiii, fig. 3.	505-506
<i>Articulata.</i>	
<i>Annulata.</i>	
<i>Tubicola.</i>	
<i>Serpulidae.</i>	
<i>Serpula</i> , Linnaeus, 1758	506-507
<i>S. ? tenuicarinata</i> , M. & H., 1857, pl. vi, fig. 1.	507-508
SPECIES OF THE FRESH AND BRACKISH WATER LIGNITE BEDS.	
<i>Mollusca.</i>	
<i>Lamellibranchiata.</i>	
<i>Monomyaria.</i>	
<i>Ostreidae.</i>	
<i>O-trea</i> , Linnaeus	509
<i>O. subtrigonalis</i> , E. & S. ? 1857, pl. xl, figs. 1 <i>a-d</i> ..	510
<i>Dimyaria.</i>	
<i>Unionidae.</i>	
<i>Unio</i> , Retzius, 1788	511-515
<i>Bariosta</i> , Raf., 1820 (= <i>Potamida</i> , Swainson)	513
<i>Naidea</i> , Swainson, 1840	514
<i>Obovaria</i> , Raf., 1819 (= <i>Rhipidodonta</i> , Mörch)	514
<i>Nicea</i> , Swainson, 1837	514
<i>Hyridella</i> , Swainson	514
<i>Lampsilis</i> , Raf., 1820 (= <i>Truncilla</i> , <i>Pleurobena</i> , <i>Syntoxia</i> , <i>Scalenaria</i> , and <i>Plagiola</i> , Raf. : <i>Crenodonta</i> , Schlüt. : <i>Eglia</i> , Swainson)	514
<i>Canthyrta</i> , Swainson, 1840	514
<i>Iridea</i> , Swainson, 1840 (= <i>Tritigonia</i> and <i>Orthonymus</i> , Agassiz) ..	514
<i>Rotundaria</i> , Raf., 1820 (= <i>Cyprogenia</i> , Agassiz)	514
<i>Quadrula</i> , Raf., 1820 (= <i>Theliderma</i> , Swainson)	514
<i>Diplodon</i> , Spix, 1827 (= <i>Cucumaria</i> , Conrad, and <i>Naia</i> , Swainson) ..	514
<i>Dysnomys</i> , Agassiz, 1852	514
<i>Metaptera</i> , Raf., 1820 (= <i>Proptera</i> , Raf. and <i>Lymnadia</i> and <i>Megadomus</i> , Swain- son)	515
<i>U. priscus</i> , M. & H., 1856, pl. xliii, figs. 8 <i>a-d</i>	516-517
<i>U. danca</i> , M. & H., 1857, pl. xli, figs. 3 <i>a-c</i>	517-518
<i>U. subapiculatus</i> , M. & H., 1857, pl. xli, figs. 1 <i>a, b</i>	518-519
<i>U. deweyanus</i> , M. & H., 1857, pl. xli, figs. 2 <i>a-c</i>	519
<i>Cyrenidae.</i>	
<i>Corbicula</i> , Mühlfeldt	520
<i>C. cytheriformis</i> , M. & H., 1860, pl. xl, figs. 5 <i>a-e</i>	520-521
<i>C. occidentalis</i> , M. & H., 1856, pl. xl, figs. 6 <i>a-c</i>	521-522
<i>C. nebrascensis</i> , M. & H., 1860, pl. lxiii, figs. 2 <i>a, b</i> (not 2 <i>c</i>)	522
Subgenus <i>Leptesthes</i>	523
<i>C. (Leptesthes) subelliptica</i> , M. & H., 1856, pl. xliii, figs. 9 <i>a-c</i> ..	523-524
<i>C. (Leptesthes) subelliptica</i> var. <i>moreauensis</i> , pl. xliii, figs. 1 <i>a, b</i> and 2 <i>c</i> ..	524
<i>Sphaerium</i> , Scopoli, 1777	525
<i>S. planum</i> , M. & H., 1860, pl. xliii, figs. 6 <i>a, b</i>	526
<i>S. formosum</i> , M. & H., 1860, pl. xliii, figs. 4 <i>a-c</i>	526-527
<i>S. subellipticum</i> , M. & H., 1860, pl. xliii, figs. 5 <i>a, b</i>	527
<i>S. recticardinale</i> , M. & H., 1860, pl. xliii, figs. 3 <i>a, b</i>	527-528
<i>Corbulidae.</i>	
<i>Corbula</i> , Bruguière	528
<i>Pachyodon</i> , Gabb	528
<i>C. (Pachyodon) mactriformis</i> , M. & H., 1856, pl. xliii, figs. 7 <i>a-f</i>	528-529
<i>C. (Pachyodon) subtrigonalis</i> , M. & H., 1856, pl. xl, figs. 3 <i>a, b</i>	529-530
<i>C. (Pachyodon) perundata</i> , M. & H., 1856, pl. xl, figs. 4 <i>a-d</i> ..	530-531
<i>Gasteropoda.</i>	
<i>Pulmonata.</i>	
<i>Limnoida.</i>	
<i>Limnæa</i> , Lamarck, 1799	531-533
<i>Radix</i> , Montfort, 1810 (= <i>Gulnaria</i> , Leach)	532

	Page.
<i>Polyrhysis</i> , Meek	532
<i>Limnæa</i> , Haldeman, 1842	532
<i>Limnophysa</i> , Fitzinger, 1833 (= <i>Stagnicola</i> , Leach & Galba, Schranck)	533
<i>Omphiscola</i> , Raf. (= <i>Leptolimnæa</i> , Swainson)	533
<i>Acella</i> , Haldeman, 1842	533
<i>Pleurolimnæa</i> , Meek, 1866	533
<i>L.</i> (<i>Pleurolimnæa</i>) <i>tenuicostata</i> , M. & H., 1856, pl. xlv, figs. 13 a-c	534
<i>Planorbis</i> , Müller, 1776	534-536
<i>Helisoma</i> , Swainson, 1840	535
<i>Planorbella</i> , Haldeman, 1842	536
<i>Taphius</i> , H. & A. Adams, 1856	536
<i>Menetus</i> , H. & A. Adams, 1856 (= <i>Anisus</i> , Beck, not Fitz.)	536
<i>Anisus</i> , Fitzinger, 1833 (= <i>Tropidiscus</i> , Stein.)	536
<i>Bathymorphus</i> , Agassiz, 1837 (= <i>Spirorbis</i> , Swainson, not Lamarck)	536
<i>Gyraulus</i> , Agassiz (= <i>Nautilina</i> , Stein.)	536
<i>P. convolutus</i> , M. & H., 1856, pl. xlii, figs. 12 a, b	536-537
<i>P. convolutus</i> var., pl. xlii, figs. 11 a-e	538
<i>P. (Bathymorphus) planoconvexus</i> , M. & H., 1857, pl. xlv, figs. 9 a-c	538-539
<i>P. (Bathymorphus) amplexus</i> , M. & H., 1857, pl. lxii, figs. 16 a-e	539
<i>Physidæ.</i>	
<i>Bulinus</i> , O. F. Müller, 1781	540
<i>B. subelongatus</i> , M. & H., 1856, pl. lxii, figs. 13 a, b	540-541
<i>B. longiusculus</i> , M. & H., 1856, pl. lxiii, figs. 16 a, b	541-542
<i>B. rhomboideus</i> , M. & H., 1856, pl. lxiii, fig. 17	542
<i>Ancylidæ.</i>	
<i>Aceroloxus</i> , Beck, 1837	543
<i>A. minutus</i> , M. & H., 1856, pl. xlv, fig. 10	543-544
<i>Vitrinidæ.</i>	
<i>Vitina</i> , Draparnaud, 1801	544
<i>V. ? obliqua</i> , M. & H., 1857, pl. xlii, figs. 10 a, b	545
<i>Hyalina</i> , Péruze, 1819	545-547
<i>H. ? occidentalis</i> , M. & H., 1857, pl. xlii, figs. 6 a-d	547-548
<i>H. ? evansi</i> , M. & H., 1860, figs. 68, 69, 70, p. 548	548-549
<i>Helicidæ.</i>	
<i>Helix</i> , Linnaeus, 1758	549-551
<i>Galaxias</i> , Beck, 1837	549
<i>Camæna</i> , Albers, 1850	550
<i>Helix vetusta</i> , M. & H., 1860, pl. xlii, figs. 7 a, b	552
<i>Thaumastus</i> , Albers, 1860	553
<i>T. linnaeiiformis</i> , M. & H., 1856, pl. xlv, figs. 8, a-d	553-554
<i>Columna</i> , Perry, 1811	554
<i>Rhoda</i> , H. & A. Adams, 1855	555
<i>Columna teres</i> , M. & H., 1856, pl. xlv, figs. 11 a, b	555-556
<i>O. vermicula</i> , M. & H., 1856, pl. xlv, figs. 12 a, b	556-557
<i>O. vermicula</i> var. <i>contraria</i> , Meek, 1866	557
<i>Pectinibranchiata.</i>	
<i>Cerithiidæ.</i>	
<i>Cerithidea</i> , Swainson, 1840	558
<i>Pirenella</i> , Gray, 1847	558
<i>Cerithidea</i> (<i>Pirenella</i> ?) <i>nebrascensis</i> , M. & H., 1856, pl. lxiii, figs. 9 a-c (bis)	559
<i>Ceriphasiidae.</i>	
<i>Goniobasis</i> , Lea, 1862	560-561
<i>G. convexa</i> , M. & H., 1856, pl. xlii, figs. 2 a, b, and figs. 71, p. 562 and 72, p. 563	562-563
<i>G. convexa</i> var. <i>impressa</i> , M. & H., 1857, pl. xlii, figs. 2 c, d	563-564
<i>G. invenusta</i> , M. & H., 1857, pl. xlii, figs. 1 a-e	564-565
<i>G. nebrascensis</i> , M. & H., 1856, pl. lxiii, figs. 12 a-h, and fig. 73, p. 565	565-566
<i>G. tenuicarinata</i> , M. & H., 1857, pl. lxiii, figs. 14 a-c	566-567
<i>G. sublarvis</i> , M. & H., 1857, pl. xlii, figs. 5 a, b	567
<i>G. ? omitta</i> , M. & H., 1857, pl. xlii, figs. 4 a-c	568
<i>G. gracilior</i> , Meek, pl. xlii, fig. 3 and fig. 74, p. 569	568-569
<i>G. ? subrotunda</i> , M. & H., 1857, pl. xlii, figs. 17, a-b, and figs. 75, 76, p. 569	569-570
<i>Rissoiidae.</i>	
<i>Hydrobia</i> , Hartmann, 1821	571
<i>H. anthonyi</i> , M. & H., 1856, pl. lxiii, figs. 10 a-d	571-572
<i>H. warrenana</i> , M. & H., 1857, pl. lxiii, figs. 1 a-c	572-573

	Page.
<i>H. subconica</i> , Meek, fig. 77, p. 573.....	573
<i>H. ? eulimoides</i> , Meek, fig. 78, p. 573.....	573-574
<i>Micropyrgus</i> , Meek, 1866	574-575
<i>M. minutulus</i> , M. & H., 1856, pl. xliii, figs. 18 <i>a, b</i>	575
<i>Viviparidæ</i> .	
<i>Viviparus</i> , Montfort, 1810	576-577
<i>V. levi</i> , M. & H., 1856, pl. xlv, figs. 6 <i>a-d</i>	577-578
<i>V. retusus</i> , M. & H., 1856, pl. xlv, figs. 5 <i>a-f</i>	578-579
<i>V. conradi</i> , M. & H., 1856, pl. xlii, figs. 15 <i>a-d</i>	579-580
<i>V. peculiaris</i> , M. & H., 1856 fig. 79.	580
<i>V. trochiformis</i> , M. & H., 1856, pl. xlv, fig. 2 <i>a-e</i>	580-582
<i>V. leidyi</i> , M. & H., 1856, pl. xlv, fig. 4.	582-583
<i>V. leidyi</i> var. <i>formosus</i> , pl. xlv, figs. 3 <i>a, b</i>	583
<i>V. raynoldsanus</i> , M. & H., 1861, pl. xlv, figs. 7 <i>a, b</i>	584-585
<i>Campeloma</i> , Rafinesque	
<i>C. multilincata</i> , M. & H., 1856, pl. xlv, figs. 1 <i>a, b</i>	586-587
<i>C. retula</i> , M. & H., 1856 pl. xlv, figs. 14 <i>a, b</i>	587-588
<i>C. multistriata</i> , M. & H., 1856, pl. xliii, figs. 15 <i>a-c</i> , and fig. 80, p. 588.....	588-589
<i>Valvatidæ</i> .	
<i>Valvata</i> , Müller, 1774	589-590
<i>Tropidina</i> , H. & A. Adams, 1856	590
<i>V. subumbilicata</i> , M. & H., 1856, pl. xliii, figs. 13 <i>a-c</i>	590-591
<i>V. parrula</i> , M. & H., 1856	591
<i>V. ? montanaensis</i> , Meek, figs. 81, 82, 83, p. 591	591-592

FOSSILS OF THE WIND RIVER TERTIARY.

Mollusca.

Gasteropoda.

Pulmonata.

Vitrinidæ.

<i>Macrocyelis</i> , Beck, 1837	593-594
<i>Ampelita</i> , Beck, 1837	594
<i>M. spatiosa</i> , M. & H., 1861, pl. xlii, figs. 9 <i>a-c</i>	594-595
<i>Helicidæ</i> .	
<i>Helix</i> , Linn	596
<i>H. ? veterna</i> , M. & H., 1861, pl. xlii, figs. 8 <i>a, b</i> , and figs. 84, 85, p. 596	596-597

FOSSILS OF THE WHITE RIVER TERTIARY.

Mollusca.

Gasteropoda.

Pulmonata.

Limnæidæ.

<i>Limnæa</i> , Lamarck	598
<i>L. meekiana</i> , E. & S., pl. xlv, figs. 5 <i>a-c</i>	598-599
<i>L. shumardi</i> , Meek, pl. xlv, figs. 6 <i>a, b</i>	599
<i>Planorbis</i> , Müller	599
<i>P. leidyi</i> , M. & H., 1860, pl. xlv, figs. 3 <i>a-d</i>	599-600
Subgenus <i>Menetus</i> , H. & A. Adams ?	600
<i>P. (Menetus) nebrascensis</i> , E. & S., 1854, pl. xlv, figs. 2 <i>a, b</i>	600-601
<i>P. (Menetus) retustus</i> , M. & H., 1860, pl. xlv, figs. 1 <i>a-c</i>	601-602

Physidæ.

<i>Physa</i> , Draparnaud, 1801	603-604
<i>Physella</i> , Haldeman, 1842	603
<i>Physodon</i> , Haldeman, 1842	603
<i>Isidora</i> , Ehrenb., 1831 (= <i>Diastrophia</i> , Guilding)	604
<i>Costella</i> , Dall, 1870	604
<i>P. secalina</i> , E. & S., 1854, pl. xlv, figs. 4 <i>a, b</i>	604

Helicidæ.

<i>Helix</i> , Linn	604
<i>H. leidyi</i> , H. & M., 1854, pl. xlv, figs. 7 <i>a, b</i>	604-605

APPENDIX.

<i>Tellina</i> (<i>Arcopagia</i>) ? <i>cheyennensis</i> , M. & H., 1856, pl. xvii, fig. 16	607
<i>Ammonites</i> ? ? <i>mullananus</i> , M. & H., 1862, pl. viii, figs. 1 <i>a-c</i>	607-609

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-*
moceras (Hyatt), *Eudisoceras* (Hyatt), *Polyrhytis*, *Rhytophorus*, *Pyrgulifera*.

DESCRIPTIONS OF FOSSILS.

	SILURIAN SPECIES.	Page.
<i>Mollusca.</i>		
<i>Gastropoda.</i>		
<i>Solariidae.</i>		
<i>? Ophileta</i> , Vanuxem		17
<i>O. complanata</i> var. <i>nana</i> , Meek, 1870, pl. i, figs. 1, 1 a, 1 b		17-18
<i>Raphistoma</i> , Hall		18
<i>R. ? rotuliformis</i> , Meek, 1870, pl. i, figs. 2, 2 a, b		18-19
<i>R. ? trochiscus</i> , Meek, 1870, pl. i, figs. 3, 3 a, b		19
<i>Articulata.</i>		
<i>Crustacea.</i>		
<i>Paradoxida.</i>		
<i>Conocoryphe</i> , Corda		20
<i>C. (Ptychoparia) kingii</i> , Meek, 1870, pl. i, fig. 4		20-23
<i>Paradoxides</i> , Brongniart		23
<i>P. ? nevadensis</i> , Meek, 1870, pl. i, fig. 5		23-25
<i>Radiata.</i>		
<i>Polypi.</i>		
<i>Favositidae.</i>		
<i>Alveolites</i> , Lamarck		25
<i>A. multilamella</i> , n. s., Meek, 1877, pl. ii, figs. 7, 7 a, b		25-26
<i>Alveolites</i> , undt. sp., Meek, 1877		26-27
<i>Favosites</i> , Lamarck		27
<i>Favosites</i> , undt. sp., Meek, 1877, pl. i, fig. 6		27
<i>F. polymorpha</i> , Goldf. ? var. Meek, 1877, pl. ii, fig. 3		27-28
<i>Syringopora</i> , Goldfuss		28
<i>Syringopora</i> , undt. sp., Meek, 1877		28
<i>Cyathophyllidae.</i>		
<i>Ptychophyllum</i> , E. & H.		28
<i>P. ? infundibulum</i> , n. s., Meek, 1877, pl. ii, figs. 1, 1 a, b		28-29
<i>Diphyphyllum</i> , Lonsdale		29
<i>D. fasciculatum</i> , n. s., Meek, 1877, pl. ii, figs. 4, 4 a, b		29-31
<i>Acervularia</i> , Schweigger		31
<i>A. pentagona</i> , Goldfuss, sp., 1826, pl. ii, figs. 5, 5 a		31-32
<i>Smithia</i> , E. & H.		32
<i>S. hennahii</i> , Lonsdale, sp., 1840, pl. 2, figs. 6, 6 a		32-33
<i>Cyathophyllum</i> , Goldfuss		33
<i>C. palmeri</i> , n. s., Meek, 1877, pl. ii, fig. 2		33-34
<i>Mollusca.</i>		
<i>Brachiopoda.</i>		
<i>Strophomenidae.</i>		
<i>Hemipronites</i> , Pander		35
<i>H. chemungensis</i> var. <i>arctostriata</i> , Conrad, sp., pl. iii, fig. 2		35-36
<i>Productidae.</i>		
<i>Productus</i> , Sowerby		36
<i>P. subaculeatus</i> , Murchison ? 1840, pl. iii, figs. 7, 7 a, b		36-37
<i>Rhynchonellidae.</i>		
<i>? Atrypa</i> , Dahuan		38
<i>A. reticularis</i> , Linnaeus, sp., 1767, pl. i, figs. 7 and 7 a, and pl. 3, figs. 6 ? 6 a		38, 39
<i>Spiriferidae.</i>		
<i>Spirifer</i> , Sowerby		39
<i>S. utahensis</i> , Meek, 1860, pl. iii, figs. 1, 1 a-e		39-41
<i>S. engelmanni</i> , Meek, 1860, pl. iii, figs. 3 a-c (and 3 d-f ?)		41-42
<i>S. (Trigonotreta) argentarius</i> , n. s., Meek, 1877, pl. iii, figs. 4 and 4 a, b		42-43
<i>S. (Trigonotreta) strigosus</i> , Meek, 1860, pl. iii, figs. 5, 5 a, b		43-45
<i>S. (Trigonotreta) pinonensis</i> , Meek, 1870, pl. i, figs. 9, 9 a, b		45-46
<i>Lanellibranchiata.</i>		

<i>Anatinidæ.</i>	Page.
<i>Edmondia</i> , de Koninck	46
<i>E. ? piñonensis</i> , n. s., Meek, 1877, pl. i, figs. 8, 8 <i>a</i>	46-47
<i>Cephalopoda.</i>	
<i>Orthoceratitidæ.</i>	
<i>Orthoceras</i> , Auct.	
<i>O. kingii</i> , n. s., Meek, 1877, pl. ii, fig. 8	47-48
<i>Orthoceras</i> , undt. sp., Meek, 1877, pl. ii, fig. 9	48
<i>Articulata.</i>	
<i>Crustacea.</i>	
<i>Phacopsidæ.</i>	
<i>Dalmanites</i> , Auct.	48
<i>Dalmanites</i> , sp. undt., Meek, 1877, pl. i, figs. 11, 11 <i>a</i>	48-49
<i>Proetidæ.</i>	
<i>Proetus</i> , Steininger	49
<i>P. (Phæton) denticulatus</i> , n. s., Meek, 1877, pl. i, figs. 10, 10 <i>a</i> and <i>b</i>	49-50
CARBONIFEROUS SPECIES.	
<i>Radiata.</i>	
<i>Polypi.</i>	
<i>Favositidæ.</i>	
<i>Syringopora</i> , Goldfuss	50
<i>Syringopora</i> , undt. sp., Meek, 1877, pl. vi, figs. 2, 2 <i>a</i>	50-51
<i>Cyathophyllidæ.</i>	
<i>Zaphrentis</i> , Rafinesque & Clifford	52
<i>Z. excentrica</i> , n. s., Meek, 1877, pl. iv, figs. 1, 1 <i>a-d</i>	52-53
<i>Z. ? multilamella</i> , Hall ? 1852, pl. vi, figs. 4, 4 <i>a</i> and <i>b</i>	53-54
<i>Z. ? stansburii</i> , Hall ? 1852, pl. vi, figs. 3, 3 <i>a-c</i>	54-56
<i>Campophyllum</i> , E. & H	57
<i>Campophyllum</i> , undt. sp., Meek, 1877, pl. v, figs. 2, 2 <i>a</i> and <i>b</i>	57-58
<i>Lithostrotion</i> , Fleming	58
<i>L. whitneyi</i> , Meek, n. s., 1875, pl. vi, figs. 1, 1 <i>a-c</i>	58-59
<i>Cyathophyllum</i> , Goldfuss	60
<i>C. (Campophyllum ?) nevadense</i> , n. s., Meek, 1877, pl. v, figs. 3, 3 <i>a</i> and <i>b</i>	60
<i>C. subcespitosum</i> , n. s., Meek, 1877, pl. v, figs. 4, 4 <i>a</i> and <i>b</i>	60-61
<i>Mollusca.</i>	
<i>Brachiopoda.</i>	
<i>Strophomenidæ.</i>	
<i>Hemipronites</i> , Pander	62
<i>H. crenistria</i> , Phillips, sp., 1836, pl. vii, fig. 2	62
<i>Orthis</i> , Dalman	63
<i>O. michelini</i> , L'Éveillé, var. Meek, 1877, pl. vii, figs. 1, 1 <i>a-c</i>	63-64
<i>Productidæ.</i>	
<i>Productus</i> , Sowerby	64
<i>P. nevadensis</i> , n. s., Meek, 1877, pl. viii, figs. 2, 2 <i>a-e</i>	64-67
<i>Productus</i> , undt. sp., Meek, 1877, pl. vii, figs. 6, 6 <i>a</i> and <i>b</i>	67-68
<i>P. semireticulatus</i> , Martin, 1709, pl. vii, fig. 5	69
<i>P. costatus</i> , Sowerby ? var. Meek, 1877, pl. vii, figs. 4, 4 <i>a</i> and <i>b</i>	69-72
<i>P. prattianus</i> , Norwood, 1854, pl. vii, fig. 7	72-73
<i>P. semistriatus</i> , Meek, 1860, pl. vii, figs. 8, 8 <i>a</i>	74-75
<i>P. subhorridus</i> , n. s., Meek, 1877, pl. vii, figs. 3, 3 <i>a</i> and <i>b</i>	75-76
<i>P. multistriatus</i> , Meek, 1860, pl. viii, figs. 3, 3 <i>a-e</i>	76-78
<i>P. longispinus</i> , Sowerby, 1814, pl. viii, figs. 4, 4 <i>a</i>	78-79
<i>Rhynchonellidæ.</i>	
<i>Leiorhynchus</i> , Hall	79
<i>L. quadricostatus</i> , Vanuxem ? sp., 1842, pl. iii, figs. 9, 9 <i>a</i> and <i>b</i>	79-80
<i>Spiriferidæ.</i>	
<i>Athyris</i> , McCoy	81
<i>A. ? persinuata</i> , n. s., Meek, 1877, pl. ix, figs. 4, 4 <i>a</i> and <i>b</i>	81-82
<i>A. roissyi</i> , l'Éveillé, sp., 1835, pl. ix, figs. 3, 3 <i>a</i> and <i>b</i>	82-83
<i>A. subtilata</i> , Hall, 1852, pl. viii, figs. 6, 6 <i>a</i>	83-84
<i>Spiriferina</i> d'Orbigny	84
<i>Spiriferina</i> , undt. sp., Meek, 1877, pl. viii, figs. 5, 5 <i>a, b</i>	84-85
<i>S. pulchra</i> , Meek, 1860, pl. viii, figs. 1, 1 <i>a-e</i> , and pl. xii, figs. 12, 12 <i>a-d</i> ?	85-87
<i>Spirifer</i> , Sowerby	87
<i>S. cuspidatus</i> , Martin ? sp., 1796, pl. iii, figs. 11, 11 <i>a</i>	87-88
<i>Spirifer (Trigonotreta) opimus</i> , Hall ? 1858, pl. ix, fig. 6	88-90
<i>S. (Trigonotreta) scobina</i> , Meek, 1860, pl. ix, figs. 1, 1 <i>a-d</i>	90-91
<i>S. (Trigonotreta) cameratus</i> , Morton, 1836, pl. ix, figs. 2, 2 <i>a</i>	91-92

	Page.
<i>Lamellibranchiata.</i>	
<i>Pteriidae.</i>	
? <i>Posidonomya</i> , Bronn.....	92
<i>P. ? fragosa</i> , n. s., Meek, 1877, pl. iii, figs. 8, 8 a.....	92-93
<i>Ariculopecten</i> , McCoy.....	93
<i>A. catactus</i> , n. s., Meek, 1877, pl. iii, figs. 10, 10 a, and 10 b1.....	93-95
<i>A. utahensis</i> , Meek, 1860, pl. ix, figs. 7, 7 a and b (and 7 c, and d ?).....	95-96
<i>A. occidentaneus</i> , n. s., Meek, 1877, pl. xii, figs. 13, 13 a and b.....	96-97

Cephalopoda.

Goniatitidae.

<i>Goniatites</i> , De Haan.....	98
<i>G. goniatolobus</i> , n. s., Meek, 1877, pl. ix, figs. 5, 5 a, b.....	98-99

UPPER TRIASSIC SPECIES.

Mollusca.

Brachiopoda.

Discinidae.

<i>Discina</i> , Lamarek.....	99
<i>Discina</i> , sp. undt., Meek, 1877, pl. x, figs. 3, 3 a.....	99-100

Lamellibranchiata.

Pteriidae.

<i>Halobia</i> , Bronn.....	100
<i>H. (Daonella) lommeli</i> , Wissmann, 1841, pl. x, fig. 5.....	100-102

Lucinidae.

<i>Sphaera</i> , Sowerby.....	102
<i>S. whitneyi</i> , n. s., Meek, 1877, pl. x, figs. 4, 4 a-c.....	102

Mytilidae.

? <i>Modiomorpha</i> , H. & W.....	
<i>M. ? orata</i> , n. s., Meek, 1877, pl. x, figs. 1, 1 a.....	103
<i>M. ? lata</i> , n. s., Meek, 1877, pl. x, fig. 2.....	103-104

Cephalopoda.

Orthoceratitidae.

<i>Orthoceras</i> , Auct.....	104
<i>O. blakei</i> , Gabb? 1864, pl. x, fig. 11.....	104-105

AMMONITOID FORMS OF THE UPPER TRIAS OF NEVADA.

<i>Clydonitidae</i> , n. f., Hyatt, 1877.....	107
* <i>Coroceras</i> , n. g., Hyatt, 1877.....	107-108
<i>Clydonites</i> , Hauser.....	109
<i>C. laevigatus</i> , Hauser, sp., 1860, pl. x, fig. 7.....	109-110
<i>Trachyceratidae.</i>	
† <i>Gymnotoceras</i> , n. g., Hyatt, 1877.....	110-111
<i>G. rotelliforme</i> , n. s., Meek, 1877, pl. x, figs. 9, and 9 a.....	111-113
<i>G. blakei</i> , Gabb, sp., 1864, pl. x, figs. 10, 10 a-c, and pl. xi, figs. 6, 6 a.....	113-116
<i>Trachyceras</i> , Laube.....	116
<i>T. whitneyi</i> , Gabb, sp., 1864, pl. xi, figs. 3, 3 a.....	116-118
<i>T. judicarium</i> , Mojsisovics, 1869, pl. xi, figs. 1, 1 a.....	118
<i>T. judicarium</i> , var. <i>subasperum</i> , Meek, 1877, pl. xi, figs. 2, 2 a and b.....	118-119

Arcestidae.

<i>Arcestes</i> , Sness.....	119-120
<i>A. ? perplanus</i> , n. s., Meek, 1877, pl. xi, figs. 7 and 7 a.....	120-121
<i>A. gabbi</i> , n. s., Meek, 1877, pl. x, figs. 6, 6 a and b.....	121-123

Physanoidae.

† <i>Acrochordiceras</i> , n. g., Hyatt, 1877.....	124
<i>A. hyatti</i> , n. s., Meek, 1877, pl. xi, figs. 5 and 5 a.....	124-126
<i>Eutomoceras</i> , n. g., Hyatt, 1877.....	126
<i>E. laubei</i> , n. s., Meek, 1877, pl. 10, figs. 8, 8 a.....	126-128
<i>Eudiscoceras</i> , n. g., Hyatt, 1877.....	128
<i>E. gabbi</i> , n. s., Meek, 1877, pl. xi, figs. 3 and 3 a.....	128-129

JURASSIC SPECIES.

Mollusca.

Lamellibranchiata.

Limidae.

<i>Lima</i> , Brugnière.....	130
<i>L. (Limatula) erecta</i> , n. s., Meek, 1877, pl. xii, fig. 2.....	130

* κόρυς, a helmet; κερας, a horn.

† ακροχορδών, a wart; κερας, a horn.

‡ γυμνός, naked; ὠτός, back; κερας, a horn.

	Page.
<i>Pinnidae.</i>	
<i>Pinna</i> , Linnaeus	131
<i>P. kingii</i> , n. s., Meek, 1877, pl. xii, figs. 9, 9 a	131-132
<i>Mytilidae.</i>	
<i>Yolsella</i> , Scopoli	132
<i>V. scalprum</i> , var. <i>isonema</i> , Meek, 1877, pl. xii, figs. 4, 4 a	132-133
<i>Trigoniidae.</i>	
<i>Myophoria</i> , Bröm	133
<i>M. lineata</i> , Münster? 1834, pl. xii, figs. 3, 3 a	133-134
<i>Arcidae.</i>	
<i>Cucullæa</i> , Lamarck	134
<i>C. haguei</i> , n. s., Meek, 1877, pl. xii, figs. 1, 1 a, b	134-135
<i>Anatinidae.</i>	
<i>Myacites</i> , Auct	136
<i>M. (Pleuromya) subcompressa</i> , Meek, 1873, pl. xii, figs. 6, 6 a	136-137
<i>M. inconspicuus</i> , n. s., Meek, 1877, pl. xii, fig. 10	137
<i>M. (Pleuromya) weberensis</i> , n. s., Meek, 1877, pl. xii, figs. 11, 11 a	137-138
<i>Cephalopoda.</i>	
<i>Belemnitidae.</i>	
<i>Belemnites</i> , Auct	138
<i>B. nevadensis</i> , n. s., Meek, 1877, pl. xii, figs. 7, 7 a, b (and 8 a, b ?)	138-136
CRETACEOUS FOSSILS.	
<i>Mollusca.</i>	
<i>Ostreidae.</i>	
<i>Ostrea</i> , Linn	140
<i>Ostrea</i> , undt. sp., Meek, 1877, pl. xv, figs. 10, 10 a-c	140-141
<i>Anomiidae.</i>	
<i>Anomia rætifformis</i> , n. s., Meek, 1877, fig. i, p. 141	141
<i>Pteriidae.</i>	
<i>Inoceramus</i> , Sowerby	142
<i>I. simpsoni</i> , Meek, 1860, pl. xiii, fig. 3	142-143
<i>I. problematicus</i> , Schlot? 1820, pl. xiii, figs. 2 and 2 a	143-144
<i>Inoceramus</i> , sp. undt., Meek, 1877, pl. xiii, figs. 4, 4 a	144
<i>I. erectus</i> , n. s., Meek, 1877, pl. xiii, figs. 1, 1 a, and pl. xiv, fig. 3	145
<i>I. deformis</i> , Meek, 1872, pl. xiv, figs. 4, 4 a	146-148
<i>Arceidae.</i>	
<i>Cucullæa</i> , Lamarck	148
<i>O. (Trigonarea?) obliqua</i> , n. s., Meek, 1877, pl. xiv, figs. 1, 1 a-b	148-149
<i>Arinæa</i> , Poli	149
<i>A. wyomihjensis</i> , n. s., Meek, 1877, figs. 2 and 3, p. 150	149-150
<i>Corbulidae.</i>	
<i>Corbula</i> , Bruguière	150
<i>Corbula</i> , undt. sp., Meek, 1877, pl. xiv, fig. 2	150-151
<i>Cardiidae.</i>	
<i>Cardium</i> , Linnaeus	151
<i>C. curtum</i> , M. & H.? 1861, pl. xv, fig. 3 (not 3 a)	151-152
<i>C. subcurtum</i> , Meek, 1873, pl. xv, fig. 3 a (not 3)	152-153
<i>Macluridae.</i>	
<i>Maclura</i> , Linnaeus	153
<i>M. ? emmonsi</i> , n. s., Meek, 1877, pl. xv, fig. 8	153-154
<i>M. (Trigonella?) arenaria</i> , n. s., Meek, 1877, pl. xiv, fig. 5	154-155
<i>M. (Cymbophora?) utahensis</i> , n. s., Meek, 1877, pl. xv, figs. 9, 9 a, b	155-156
<i>Tellinidae.</i>	
<i>Tellina</i> , Linnaeus	156
<i>T. ? isonema</i> , n. s., Meek, 1877, pl. xv, fig. 6	156-157
<i>T. modesta</i> , n. s., Meek, 1877, pl. xv, figs. 4-5	157-158
<i>Veneridae.</i>	
<i>Cyprimeria</i> , Conrad	158
<i>C. ? subalata</i> , Meek, 1873, pl. xv, fig. 7	158-159
<i>Gastropoda.</i>	
<i>Naticidae.</i>	
<i>Gyrodes</i> , Conrad	159
<i>G. depressa</i> , n. s., Meek, 1877, pl. xv, figs. 1, 1 a	159-160
<i>Aporrhaidæ.</i>	
<i>Anchura</i> , Conrad	160
<i>A. ? fusiformis</i> , n. s., Meek, 1877, pl. xv, figs. 2, 2 a	160-161

	Page.
<i>Siphonariidae.</i>	
? <i>Anisomyon</i> , M. & H.	162
<i>A. sexsulcatus</i> , M. & H. 1856, figs. 4 and 5, p. 162	162
FOSSILS OF THE BEAR RIVER FRESH OR BRACKISH WATER BEDS.	
<i>Mollusca.</i>	
<i>Lamellibranchiata.</i>	
<i>Unionidae.</i>	
<i>Unio</i> , Retzius	164
<i>U. retusus</i> , Meek, 1860, pl. xvi, figs. 5, 5 <i>a-c</i>	164-165
<i>U. belliplicatus</i> , Meek, 1870, pl. xvi, figs. 4, 4 <i>a</i>	165-167
<i>Cyrenidae.</i>	
<i>Corbicula</i> , Benson	167
<i>C. (Veloritina) durkei</i> , Meek, 1870, pl. xvi, figs. 6 <i>a-g</i>	167-170
<i>Corbulidae.</i>	
<i>Corbula</i> , Brug	170
<i>C. (Anisorhynchus) pyriformis</i> , Meek, 1860, pl. xvii, figs. 2, 2 <i>a-d</i>	170-174
<i>C. (Anisorhynchus) engelmanni</i> , Meek, 1860, pl. xvii, figs. 1, 1 <i>a</i>	174-175
<i>Gasteropoda.</i>	
<i>Auriculidae.</i>	
<i>Rhytiphorus</i> , Meek, 1873	175
<i>R. priscus</i> , Meek, 1860, pl. xvii, figs. 6 and 6 <i>a</i>	175-176
<i>Ceriphasiidae.</i>	
<i>Pyrgulifera humerosa</i> , Meek, 1860, pl. xvii, figs. 19, 19 <i>a</i> , and fig. 6, p. 177	176-178
<i>Viviparidae.</i>	
<i>Viviparus</i> , Montfort	178
<i>V. conradi</i> , M. & H., 1856, pl. xvii, figs. 18, 18 <i>a</i>	178-179
<i>Campeloma</i> , Rafinesque	179
<i>C. macrospira</i> , Meek ? 1872, pl. xvii, figs. 17 <i>a, b</i>	179-181
<i>Campeloma</i> (undt. sp.), Meek, 1877, pl. xvii, figs. 15 <i>a, b</i> , and fig. 16 <i>a-c</i>	181
<i>Limnæidae.</i>	
<i>Limnæa</i> , Lamarck	181
<i>L. (Limnophysa) nitidula</i> , Meek, 1860, pl. xvii, figs. 5, 5 <i>a</i>	181-182
SPECIES OF UNDOUBTED TERTIARY AGE.	
<i>Mollusca.</i>	
<i>Lamellibranchiata.</i>	
<i>Cyrenidae.</i>	
<i>Sphaerium</i> , Scopoli	
<i>S. rugosum</i> , Meek, 1870, pl. xvi, figs. 2, 2 <i>a, b</i>	182-183
<i>S. ? idahoense</i> , Meek, 1870, pl. xvi, fig. 1, 1 <i>a</i>	183-184
<i>Unionidae.</i>	
<i>Unio</i> , Retzius	184
<i>U. haydeni</i> , Meek, 1860, pl. xvi, figs. 3, 3 <i>a, b</i>	184-185
<i>Gasteropoda.</i>	
<i>Limnæidae.</i>	
<i>Ancylus</i> , Geoffroy	186
<i>A. undulatus</i> , Meek, 1870, pl. xvii, figs. 12 <i>a, b</i>	186
<i>Carinifex</i> , Binney	187
Subgenus <i>Vorticifex</i> , Meek, 1870	187
<i>C. (Vorticifex) binneyi</i> , Meek, 1870, pl. xvii, figs. 11, 11 <i>a</i>	187-188
<i>C. (Vorticifex) tryoni</i> , Meek, 1870, pl. xvii, figs. 10, 10 <i>a-c</i>	188-189
<i>Planorbis</i> , Guettard	189
<i>P. spectabilis</i> , Meek, 1860, pl. xvii, figs. 13, 13 <i>a-f</i>	189
<i>P. spectabilis</i> var. <i>utahensis</i> , Meek, 1860, pl. xvii, figs. 14, 14 <i>a-c</i>	190-191
<i>Limnæa</i> , Lamarck	191
<i>L. (Limnophysa) retusta</i> , Meek, 1860, pl. xvii, figs. 4, 4 <i>a, b</i>	191
<i>L. similis</i> , Meek, 1860, pl. xvii, figs. 3, 3 <i>a</i>	191-192
<i>L. (Polyrhytis) kingii</i> , n. s., Meek, 1877, figs. 6 and 7, p. 192	192-193
<i>Ceriphasiidae.</i>	
<i>Gomobasis</i> , Lea	193
<i>G. sinuiponi</i> , Meek, 1860, pl. xvii, figs. 7, 7 <i>a-d</i>	193-195
<i>Melaniidae.</i>	
<i>Melania</i> , Auct	195
<i>M. ? sculptilis</i> , Meek, 1870, pl. xvii, fig. 8	195-196
<i>M. ? subsculptilis</i> , Meek, 1870, pl. xvii, fig. 9	196-197

PART II.

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

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

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.

	Page.
<i>Rhynchonella pustulosa</i> , n. s., White, 1860	226
<i>Nucleospira barrisii</i> , n. s., White, 1860	227-228
<i>Terebratula burlingtonensis</i> , n. s., White, 1860	228-229
<i>Athyris crassicaudalis</i> , n. s., White, 1860	229-230
<i>Productus levicostus</i> , n. s. White, 1860.....	230-231
<i>Orthis thiemei</i> , n. s., White, 1860	231-232
<i>Spirifer solidirostris</i> , n. s., White, 1860	232-233

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.

	Page.
<i>Brachiopoda.</i>	
<i>Orthis</i> , Dalman	292
<i>O. subelliptica</i> , n. s., White & Whitfield, 1862	292-293
<i>Streptorhynchus</i> , King	293
<i>S. inflatus</i> , n. s., White & Whitfield, 1862	293
<i>Spirifer</i> , Sowerby	293
<i>S. hirtus</i> , n. s., White & Whitfield, 1862.....	293-294
<i>Retzia</i> , King	294
<i>R. sexplicata</i> , n. s., White & Whitfield, 1862	294
<i>Rhynchonella</i> , Fischer	294
<i>R. opposita</i> , n. s., White & Whitfield, 1862.....	294-295
<i>Pentamerus</i> , Sowerby	295
<i>P. lenticularis</i> , n. s., White & Whitfield, 1862	295
<i>Conchifera.</i>	
<i>Aviculapecten</i> , McCoy	295
<i>A. limaformis</i> , n. s., White & Whitfield, 1862	295-296
<i>A. nodocostatus</i> , n. s., White & Whitfield, 1862.....	296
<i>Mytilus</i> , Linn	296
<i>M. febristriatus</i> , n. s., White & Whitfield, 1862	296-297
<i>M. occidentalis</i> , n. s., White & Whitfield, 1862	297
Subgenus <i>Orthonota</i> , Conrad	297
<i>M. (Orthonota) ventricosa</i> , n. s., White & Whitfield, 1862	297-298
<i>Nucula</i> , Lamarek	298
<i>N. iowensis</i> , n. s., White & Whitfield, 1862	298
<i>Leda</i> , Schum	298
<i>L. barrisii</i> , n. s., White & Whitfield, 1862	298

	Page.
<i>Macrodon</i> , Lycett.....	298
<i>M. parvus</i> , n. s., White & Whitfield, 1862.....	299
<i>Conocardium</i> , Bronn.....	299
<i>C. pulcellum</i> , n. s., White & Whitfield, 1862.....	299
<i>Cypricardia? rigida</i> , n. s., White & Whitfield, 1862.....	300
<i>Cypricardella</i> , Hall.....	300
<i>C. quadrata</i> , n. s., White & Whitfield, 1862.....	300-301
<i>Edmondia</i> , Koninek.....	301
<i>E. burlingtonensis</i> , n. s., White & Whitfield, 1862.....	301
<i>Gasteropoda</i> .	
<i>Euomphalus</i> , Sowerby.....	301
<i>E. ammon</i> , n. s., White & Whitfield, 1862.....	301
<i>Platyceras</i> , Conrad.....	302
<i>P. paralum</i> , n. s., White & Whitfield, 1862.....	302
<i>P. bivalve</i> , n. s., White & Whitfield, 1862.....	302
<i>Pleurotomaria</i> , Defrance.....	302
<i>P. mississippiensis</i> , n. s., White & Whitfield, 1862.....	302
<i>Murchisonia</i> , D'Archiac.....	303
<i>M.? proluxa</i> , n. s., White & Whitfield, 1862.....	303
<i>Porcellia</i> , Léveillé.....	303
<i>P. crassinoda</i> , n. s., White & Whitfield, 1862.....	303
<i>Bellerophon</i> , Montfort.....	304
<i>B. vinculatus</i> , n. s., White & Whitfield, 1862.....	304
<i>B. perelegans</i> , n. s., White & Whitfield, 1862.....	304
<i>B. bilabiatu</i> , n. s., White & Whitfield, 1862.....	304-305
<i>Cephalopoda</i> .	
<i>Goniatites</i> , De Haan.....	305
<i>G. opimus</i> , n. s., White & Whitfield, 1862.....	305
<i>Radiata</i> .	
<i>Lophophyllum</i> , Edwards & Haime.....	305
<i>L. calceola</i> , n. s., White & Whitfield, 1862.....	305-306
<i>Zaphrentis</i> , Rafinesque.....	306
<i>Z. acutus</i> , n. s., White & Whitfield, 1862.....	306
<i>Favosites</i> , Lam.....	306
<i>F.—[Whitfieldi]</i>	306

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 *Cœliocrinus* 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.

	Page.
<i>Cœliocrinus*</i> , n. g., White, 1863.....	499-501
<i>C. subspinosus</i> , n. s., White, 1863.....	501-502
<i>Platycrinus</i> , Miller.....	502
<i>P. verrucosus</i> , n. s., White, 1863.....	502-503
<i>P. incomptus</i> , n. s., White, 1863.....	503-504
<i>Cyathocrinus</i> , Miller.....	504
<i>C. lamellosus</i> , n. s., White, 1863.....	504-505
<i>Scaphiocrinus</i> , Hall.....	505
<i>S. rusticellus</i> , n. s., White, 1863.....	505-506

* Κοιλία, venter; κρίνον, lilium.

4.

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.

Page.

Crinoidea.

<i>Cyathocrinus</i> , Miller	8
<i>C. rigidus</i> , n. s., White, 1862	8
<i>C. kelloggi</i> , n. s., White, 1862	8-9
<i>Poteriocrinus</i> , Miller	9
<i>P. ob-uncus</i> , n. s., White, 1862	9
<i>P. salignoides</i> , n. s., White, 1862	10
<i>P. bursiformis</i> , n. s., White, 1862	10-11
<i>Bursacrinus</i> , Meek & Worthen	11
<i>B. confirmatus</i> , n. s., White, 1862	11
<i>Zeaerinus</i> , Troost	11
<i>Z. pcrangulatus</i> , n. s., White, 1862	11-12
<i>Z. sacculus</i> , n. s., White, 1862	12-13
<i>Z. sacculus</i> var. <i>concinuus</i> , White, 1862	13
* <i>Belemnocrinus</i> , n. g., White, 1862	14
<i>B. typus</i> , n. s., White, 1862, figs. 1 and 2, p. 13	14-15
<i>Actinocrinus</i> , Miller	15
<i>A. quadrispinus</i> , n. s., White, 1862	15
<i>A. wachsmuthi</i> , n. s., White, 1862	15-16
<i>A. nashville</i> , Troost, var. <i>subtractus</i> , White, 1862	16
<i>Megistocrinus</i> , Owen & Shumard	16
<i>M. plenus</i> , n. s., White, 1862	16-17
<i>M. crassus</i> , n. s., White, 1862	17
<i>Platycrinus</i> , Miller	17
<i>P. pleurovimenus</i> , n. s., White, 1862	17-18
<i>P. quinquenodus</i> , n. s., White, 1862	18-19
<i>Dichocrinus</i> , Munster	19
<i>D. angustus</i> , n. s., White, 1862	19
<i>D. crassitestus</i> , n. s., White, 1862	19-20
<i>Pentremites</i> , Say	20
<i>P. sirius</i> , n. s., White, 1862, fig. 3, p. 20	20-21

*Mollusca.**Gasteropoda.*

<i>Porcellia</i> , Léveillé	21
<i>P. obliquinoda</i> , n. s., White, 1862	21
<i>Bellerophon</i> , Montfort	21
<i>B. panneus</i> , n. s., White, 1862	21
<i>B. scriptiferus</i> , n. s., White, 1862	21-22
<i>Euomphalus</i> , Sowerby	22
<i>E. roberti</i> , n. s., White, 1862	22

Pteropoda.

<i>Conularia</i> , Miller	22
<i>C. byblis</i> , n. s., White, 1862	22
<i>C. victa</i> , n. s., White, 1862	22-23

Brachiopoda.

<i>Rhynchonella</i> , Fischer	23
<i>R. caput-testudinis</i> , n. s., White, 1862	23
<i>R. ottumwa</i> , n. s., White, 1862	23-24
<i>Spirifer</i> , Sowerby	24
<i>S. glans-cerasus</i> , n. s., White, 1862	24
Observations on the genus <i>Spiriferina</i> , d'Orbigny	24-25

* *Βελεμων*, a dart; *κρινον*, a lily.

	Page.
<i>S. ? subtexta</i> , n. s., White, 1862	25
<i>Cyrtia</i> , Dalman	25
<i>C. curvilineata</i> , n. s., White, 1862	25-26
<i>Ambocelia</i> , Hall	26
<i>A. (Spirifer?) minuta</i> , n. s., White, 1862	26
* <i>Acambona</i> , n. g., White, 1872	27
<i>A. prima</i> , n. s., White, 1862, figs. 1 & 2, p. 27	27-28
<i>Retzia</i> , King, <i>Acambona</i> , White	28
<i>R. (Acambona?) altirostris</i> , n. s., White, 1862	28
<i>Streptorhynchus</i> , King	28
<i>S. lens</i> , n. s., White, 1862	28-29
<i>Productus</i> , Sowerby	29
<i>P. viminalis</i> , n. s., White, 1862	29
<i>Chonetes</i> , Fischer	29
<i>C. geniculata</i> , n. s., White, 1862	29
<i>Crania</i> , Retzius	29
<i>C. sheldoni</i> , n. s., White, 1862	29-30
<i>C. reposita</i> , n. s., White, 1862	30
<i>Discina</i> , Lamarck	30
<i>D. capax</i> , n. s., White, 1862	30
<i>Lingula</i> , Bruguière	30
<i>L. halli</i> , n. s., White, 1862	30
<i>Conchifera.</i>	
<i>Aviculopecten</i> , McCoy	31
<i>A. gradocostus</i> , n. s., White, 1862	31
<i>Cardiomorpha</i> , de Koninck, <i>Cardiopsis</i> , Meek & Worthen	31
<i>C. (Cardiopsis?) parvirostris</i> , n. s., White, 1862	31
<i>Gervillia</i> , DeFrance	31
<i>G. strigosa</i> , n. s., White, 1862	31
<i>Zoophyta.</i>	
<i>Zaphrentis</i> , Rafinesque et Clifford	31
<i>Z. elliptica</i> , n. s., White, 1862	31-32
<i>Z. glans</i> , n. s., White, 1862	32
<i>Syringopora</i> , Goldfuss	32
<i>S. harveyi</i> , n. s., White, 1862	32
<i>Striatopora</i> , Hall	32
<i>S. carbonaria</i> , n. s., White, 1862	32
<i>Nullipora? obtecta</i> , n. s., White, 1862	33

5.

WHITE, C. A. Fœtal 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.

*ἀχγ, 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 striae upon rocks *in situ*.

12.

WHITE, C. A. A Sketch of the Geology of Southwestern Iowa. <Amer. Jour. Sci., 2d ser., vol. xliii, 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. xliii, 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. xliii, 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.

Page.

Protozoa.

Polypi.

Cyathophyllidæ.

<i>Azophyllum</i> , Edwards & Haime.....	115
<i>A. rudis</i> , n. s., White & St. John, 1867.....	115-116
<i>Amplexus</i> , Sowerby.....	116
<i>A. fragilis</i> , n. s., White & St. John, 1867.....	116

Crinoidea.

<i>Hydreinocrinus</i> , De Koninck.....	117
<i>H. verrucosus</i> , n. s., White & St. John, 1867, fig. 1, p. 117.....	117-118

Brachiopoda.

Craniidæ.

<i>Crania</i> , Retzius.....	118
<i>C. modesta</i> , n. s., White & St. John, 1867.....	118

Productidæ.

<i>Aulosteges</i> , Helmersen.....	118
<i>A. spondyliiformis</i> , n. s., White & St. John, 1867, fig. 2, p. 118.....	118

Terebratulidæ.

<i>Waldheimia</i> , King.....	119
<i>W. ? compacta</i> , White & St. John, 1867, fig. 3, p. 119.....	119
<i>Meekella</i> , White & St. John, 1867.....	120
<i>M. striatocostata</i> , White & St. John, figs. 4 and 5, p. 120, fig. 6, p. 121.....	120-122

Pinnidæ.

<i>Pinna</i> , Linnæus.....	122
<i>P. hinrichsiana</i> , n. s., White & St. John, 1867, fig. 7, a b, p. 122.....	122-123

Gasteropoda.

Atlantidæ.

<i>Cyrtolites</i> , Conrad.....	123
<i>C. ? gillianus</i> , n. s., White & St. John, 1867, fig. 8, p. 123.....	123

Cephalopoda.

Nautilidæ.

<i>Nautilus divisus</i> , n. s., White & St. John, 1867, fig. 9, p. 124.....	124
<i>Nautilus (Cryptoceras) springeri</i> , n. s., White & St. John, 1867, fig. 10, p. 124.....	124, 125

Crustacea.

Cypridinidæ.

<i>Beyrichia</i> , McCoy.....	125
<i>B. petrifactor</i> , n. s., White & St. John, 1867.....	125
<i>B. petrifactor</i> var. <i>velata</i> , White & St. John, 1867.....	126
<i>B. foetideia</i> , n. s., White & St. John, 1867, fig. 11, a b, p. 126.....	126, 127

Cypridæ.

<i>Cythere</i> , Mueller.....	127
<i>C. simplex</i> , n. s., White & St. John, 1867.....	127

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. 1-284. 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,

CONTENTS OF VOLUME I.

	Page.
Introduction, including popular explanation of geological subjects	7-27
Part First: Physical Geography and Surface Geology; Four plates and two maps ..	28-166
Chapter I. Surface features	28-81
Chapter II. Surface deposits	82-121
Chapter III. Soils, &c.	122-138
Chapter IV. Climate (by T. S. Parvin)	139-164
Part Second: General Geology; Three plates and three sections	165-294
Chapter I. Azoic, Lower Silurian, Upper Silurian, and Devonian systems	167-188
(<i>Smithia [Pachyphyllum] woodmani</i> [n. s., White, 1870] is described on p. 188.)	
Chapter II. Carboniferous system	189-230
Chapter III. Carboniferous system continued	231-263
Chapter IV. Carboniferous system concluded	264-284
Chapter V. Cretaceous system	285-294
Part Third: County and Regional Geology	295-381
Chapter I. Geology of Southwestern Iowa; and one section	296-381
Glossary	383-386
Index	387-391

CONTENTS OF VOLUME II.

Part First: County and Regional Geology	1-274
Chapter I. Geology of the Middle Region of Western Iowa and other counties (by O. H. St. John); with one plate and one section	1-200
Chapter II. Northwestern Iowa; One plate	201-232
Chapter III. Middle Region of Northern Iowa	233-253
Chapter IV. Geology of the Coal counties; One plate	254-274
Part Second: Mineralogy, Lithology, and Chemistry	275-402
Chapter I. Peat and Petroleum; One plate	275-292
Chapter II. Gypsum and other sulphates of the Alkaline Earths	293-306
Chapter III. Building materials, metals, and miscellaneous substances	307-342
Chapter IV. Chemist's Report (by Rush Emery).	
Section I. Rocks and minerals	345-354
Section II. Waters	354-357
Section III. Coals	357-397
Section IV. Peats	397-402
Appendices:	
Appendix A. Elevation in feet of points along the lines of Iowa railroads, both completed and projected (by the chief engineers of the respective roads	405-418
Appendix B. Catalogue of the Birds of Iowa (by J. A. Allen)	419-427
Appendix C. Government Surveys of the Public Lands (by C. W. Irish)	428-435
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. Kjøkkenmøddings 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 kjøkkenmøddings.

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. Kjøkkenmøddings 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 redescribed 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.

LOWER SILURIAN

PRIMORDIAL PERIOD.

Plantæ.

	Page.
<i>Oruziana</i> , d'Orbigny	5
<i>O. linnarsoni</i> , n. s., White, 1874	5
<i>O. rustica</i> , n. s., White, 1874	5-6

*Animalia.**Brachiopoda.*

<i>Acrotreta</i> , Kutorga	6
<i>A. ? subsidua</i> , n. s., White, 1874	6
<i>Trematis</i> , Sharpe	6
<i>T. pannulus</i> , n. s., White, 1874	6

Pteropoda.

<i>Hyolithes</i> , Eichwald	6
<i>H. primordialis</i> , Hall?	6

Crustacea.

<i>Agnostus</i> , Brongniart	7
<i>A. interstricta</i> , n. s., White, 1874	7
<i>Olenellus</i> , Hall	7
<i>O. gilberti</i> , Meek MSS.	7-8
<i>O. powelli</i> , Meek MSS.	8

CANADIAN PERIOD.

Hydrozoa.

<i>Phyllograptus</i> , Hall	9
<i>P. loringi</i> , n. s., White, 1874	9

Brachiopoda.

<i>Acrotreta</i> , Kutorga	9
<i>A. pyssidicula</i> , n. s., White, 1874	9
<i>Lingula</i> , Bruguière	9
<i>L. ? manticula</i> , n. s., White, 1874	9-10
<i>Strophomena</i> , Rafinesque	10
<i>S. fontinalis</i> , n. s., White, 1874	10

Gastropoda.

<i>Bellerophon</i> , Montfort	10
<i>B. allegoricus</i> , n. s., White, 1874	10

Cephalopoda.

<i>Orthoceras</i> , Breynius	10
<i>O. colon</i> , n. s., White, 1874	10-11

Crustacea.

<i>Leperditia</i> , Rouault	11
<i>L. bivia</i> , n. s., White, 1874	11
<i>Megalaspis</i> , Angelin	11
<i>M. belemnurus</i> , n. s., White, 1874	11-12
<i>Dicellocephalus</i> , Owen	12
<i>D. flagricaudus</i> , n. s., White, 1874	12

TRENTON PERIOD.

Hydrozoa.

<i>Graptolithus</i> , Linnæus	12
<i>G. (Diplograptus) hypniformis</i> , n. s., White, 1874	12-13
<i>G. qua(r)drinucronatus</i> , Hall?	13
<i>G. (Clinacograptus?) ramulus</i> , n. s., White, 1874	13
<i>Rhynchonella</i> , Fischer	14
<i>R. argenturica</i> , n. s., White, 1874	14

CARBONIFEROUS.

SUBCARBONIFEROUS PERIOD.

Polypi.

<i>Favosites</i> , Lamarck	15
<i>F. whitfieldi</i> , White & Whitfield MSS	15

Blastoidea.

<i>Granatocrinus</i> , Troost	15
<i>G. lotoblastus</i> , n. s., White, 1874	15

	Page.
<i>Crinoidea.</i>	
<i>Platycrinus</i> , Miller	15
<i>Platycrinus</i> , ——— ? White, 1874	15-16
<i>Actinocrinus</i> , Miller	16
<i>A. viaticus</i> , n. s., White, 1874	16
<i>Brachiopoda.</i>	
<i>Spirigera</i> , d'Orbigny	16
<i>S. monticola</i> , n. s., White, 1874	16
CARBONIFEROUS PERIOD.	
<i>Echinodermata.</i>	
<i>Archæocidaris</i> , McCoy	17
<i>A. tridifer</i> , n. s., White, 1874	17-18
<i>Polyzoa.</i>	
<i>Glauconome</i> , Goldfuss	18
<i>G. nereidis</i> , n. s., White, 1874	18-19
<i>Polypora</i> , McCoy	19
<i>P. stragula</i> , n. s., White, 1874	19
<i>Brachiopoda.</i>	
<i>Chonetes</i> , Fischer	19
<i>C. platynota</i> , n. s., White, 1874	19
<i>Rhynchonella</i> , Fischer	19
<i>R. wasatchensis</i> , n. s., White, 1874	19-20
<i>R. metallica</i> , n. s., White, 1874	20
<i>Spirifer</i> , Sowerby	20
<i>S. (Martinia) glaber</i> var. <i>contracta</i> , Meek & Worthen	20-21
<i>Spiriferina</i> , d'Orbigny	21
<i>S. spinosa</i> , Norwood & Pratten, var. <i>campestris</i> , White, 1874	21
<i>Dielasma</i> , King	21
<i>D. ? bovidens</i> , Morton, sp	21
<i>Conchifera.</i>	
<i>Aviculopecten</i> , McCoy	21
<i>A. coreyana</i> , n. s., White, 1874	21-22
<i>Monopteria</i> , Meek & Worthen	22
<i>M. marian</i> , n. s., White, 1874	22
<i>Gasteropoda.</i>	
<i>Macrochilus</i> , Phillips	22
<i>M. angulifera</i> , n. s., White, 1874	22-23
<i>Dentalium</i> , Linnæus	23
<i>D. canna</i> , n. s., White, 1874	23

MESOZOIC.

JURASSIC PERIOD.

<i>Conchifera.</i>	
<i>Camptonectes</i> , Agassiz	23
<i>C. stygius</i> , n. s., White, 1874	23
<i>Gasteropoda.</i>	
<i>Neritina</i> , Lamarck	24
<i>N. phaseolaris</i> , n. s., White, 1874	24
<i>Ankura</i> , Conrad	24
<i>A. nuptialis</i> , n. s., White, 1874	24

CRETACEOUS PERIOD.

<i>Conchifera.</i>	
<i>Pinna</i> , Linnæus	24
<i>P. petrina</i> , n. s., White, 1874	24-25
<i>Camptonectes</i> , Agassiz	26
<i>C. platessa</i> , n. s., White, 1874	25
<i>Inoceramus</i> , Sowerby	25
<i>I. dimidius</i> , n. s., White, 1874	25-26
<i>Leiopistha</i> , Meek	26
Subgenus <i>Psilomya</i> , Meek	26
<i>L. (Psilomya) meekii</i> , n. s., White, 1874	26
<i>Gasteropoda.</i>	
<i>Cassiope</i> , Coquand	27
<i>C. whitfieldi</i> , n. s., White, 1874	27

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.

LOWER SILURIAN AGE.

PRIMORDIAL PERIOD.

*Plantæ.**Cryptogamia.**Thallogenes.*

<i>Cruziana</i> , d'Orbigny, 1842.....	32
<i>C. linnaeae</i> , White, 1874, pl. i, figs. 2 a-c.....	32-33
<i>C. rustica</i> , White, 1874, pl. i, figs. 1 a, b.....	33-34

	Page.
<i>Brachiopoda.</i>	
<i>Aerotreta</i> , Kutorga, 1848	34
<i>A. ? subsidua</i> , White, 1874, pl. i, figs. 3 <i>a-d</i>	34-36
<i>Trematis</i> , Sharpe, 1847	36
<i>T. pannulus</i> , White, 1874, pl. i, figs. 4 <i>a</i> and <i>b</i>	36-37
<i>Gasteropoda.</i>	
<i>Hyolithes</i> , Eichwald, 1840	37
<i>H. primordialis</i> ? Hall? 1861, pl. i, figs. 5 <i>a-e</i>	37-38
<i>Crustacea.</i>	
<i>Agnostus</i> , Brongniart, 1821	38
<i>A. interstrictus</i> , White, 1874, pl. ii, figs. 5 <i>a</i> and <i>b</i>	38-40
<i>Conocoryphe</i> , Corda, 1847	40
Subgenus <i>Ptychoparia</i> , Corda, 1847	40
<i>C. (Ptychoparia) kingii</i> , Meek, 1870, pl. ii, figs. 2 <i>a-c</i>	40-43
<i>Asaphiscus</i> , Meek, 1872	43
<i>A. wheeleri</i> , Meek, 1872, pl. ii, figs. 1 <i>a-f</i>	43-44
<i>Olenellus</i> , Hall, 1861	44
<i>O. gilberti</i> , Meek, MSS., 1874, pl. ii, figs. 3 <i>a-e</i>	44-46
<i>O. howelli</i> , Meek, MSS., 1874, pl. ii, figs. 4 <i>a</i> and <i>b</i>	47-48
<i>Vestigia</i> , White, 1875, pl. i, figs. 6, <i>a</i> and <i>b</i>	49
CANADIAN PERIOD.	
<i>Rhizopoda.</i>	
<i>Receptaculites</i> , DeFrance, 1827	50
<i>Receptaculites</i> ——— (?)	50
<i>Hydrozoa.</i>	
<i>Phyllograptus</i> , Hall, 1858	51
<i>P. loringi</i> , White, 1874, pl. iii, figs. 1 <i>a</i> and <i>b</i>	51-52
<i>Brachiopoda.</i>	
<i>Lingula</i> , Bruguère, 1789	52
<i>L. ? manticlea</i> , White, 1874, pl. iii, figs. 2 <i>a</i> and <i>b</i>	52-53
<i>Aerotreta</i> , Kutorga, 1848	53
<i>A. pyxidiclea</i> , White, 1874, pl. iii, figs. 3 <i>a</i> and <i>b</i>	53-54
<i>Strophomena</i> , Rafinesque, 1827	54
<i>S. fontinalis</i> , White, 1874, pl. iii, figs. 4 <i>a-c</i>	54-55
<i>Orthis</i> , Dalman, 1828	55
<i>O. electra</i> , Billings (?)	55
<i>Gasteropoda.</i>	
<i>Bellerophon</i> , Montfort, 1808	55
<i>B. allegoricus</i> , White, 1874, pl. iii, figs. 6 <i>a-c</i>	55-56
<i>Cephalopoda.</i>	
<i>Orthoceras</i> , Breynius, 1732	56
Subgenus <i>Camaroceras</i> , Conrad, 1842	56
<i>O. (Camaroceras) eolon</i> , White, 1874, pl. iii, figs. 5 <i>a-d</i>	56-57
<i>Cyrtoceras</i> , Goldfuss, 1833	57
<i>C. ——— (?)</i> , White, 1875	57-58
<i>Crustacea.</i>	
<i>Leperditia</i> , Rouault, 1851	58
<i>L. bivia</i> , White, 1874, pl. iii, figs. 7 <i>a-d</i>	58-59
<i>Megalaspis</i> , Angelin, 1854	59
<i>M. belemnurus</i> , White, 1874, pl. iii, fig. 9	59-60
<i>Dicelloccephalus</i> , Owen, 1852	60
<i>D. ? flagricaudus</i> , White, 1874, pl. iii, figs. 8 <i>a</i> and <i>b</i>	60-61
TRENTON PERIOD.	
<i>Hydrozoa.</i>	
<i>Graptolithus</i> , Linnæus, 1736	62
Subgenus <i>Climacograptus</i> , Hall, 1865	62
<i>G. (Climacograptus) ramulus</i> , White, 1874, pl. iv, figs. 3 <i>a-c</i>	62-63
Subgenus <i>Diplograptus</i> , McCoy, 1850	63
<i>G. (Diplograptus) hypniformis</i> , White, 1874, pl. iv, figs. 4 <i>a</i> and <i>b</i>	63-64
<i>G. (Diplograptus) pristis</i> , Hall (?), 1847, pl. iv, figs. 2 <i>a</i> and <i>b</i>	65
<i>G. quadrimucronatus</i> , Hall (?), 1865, pl. iv, figs. 1 <i>a</i> and <i>b</i>	65-66
<i>Actinozoa.</i>	
<i>Monticulipora</i> , d'Orbigny, 1850	66
<i>M. dalii</i> , Edwards & Haime, 1851, pl. iv, fig. 5	66-67

	Page.
<i>Favosites</i> , Lamarck, 1816.....	67
<i>F.</i> ——— (?) White, 1875.....	67
<i>Favistella</i> , Hall, 1847.....	67
<i>F. stellata</i> , Hall, 1847, pl. iv, figs. 6 <i>a-c</i>	67-68
<i>Zaphrentis</i> , Rafinesque et Clifford, 1820.....	68
<i>Z.</i> ——— (?) White, 1875.....	68
<i>Brachiopoda.</i>	
• <i>Strophomena</i> , Rafinesque, 1827.....	69
<i>S. filitexta</i> , Hall, 1847, pl. iv, fig. 8.....	69-70
<i>Leptæna</i> , Dalman, 1828.....	70
<i>L. sericea</i> , Sowerby (?) pl. iv, fig. 7.....	70
<i>Orthis</i> , Dalman, 1828.....	70
<i>O. occidentalis</i> , Hall, 1847, pl. iv, figs. 2 <i>a</i> and <i>b</i>	70-72
<i>O. testudinaria</i> , Dalman (?).....	72
<i>O. plicatella</i> , Hall (?) 1847, pl. iv, figs. 10 <i>a-d</i>	72-74
<i>O. biforata</i> , Schlotheim, var. <i>lynx</i> , White, 1875, pl. iv, figs. 9 <i>a</i> and <i>b</i>	74-75
<i>Rhynchonella</i> , Fischer, 1809.....	75
<i>R. argenturica</i> , White, 1874, pl. iv, figs. 12 <i>a-e</i>	75-76
<i>Onchifera.</i>	
<i>Modiolopsis</i> , Hall, 1847.....	76
<i>M.</i> ——— (?) White, 1875.....	76
<i>Gasteropoda.</i>	
• <i>Machurea</i> , Le Sueur, 1818.....	77
<i>M.</i> ——— (?) White, 1875.....	77
<i>Raphistoma</i> , Hall, 1847.....	77
<i>R. trochiscus</i> , Meek, 1870, pl. iv, figs. 13 <i>a-c</i>	77-78
CARBONIFEROUS AGE.	
SUBCARBONIFEROUS PERIOD.	
<i>Actinozoa.</i>	
<i>Favosites</i> , Lamarck, 1816.....	79
<i>F. divergens</i> , White & Whitfield, 1862, pl. v, fig. 4.....	79-80
<i>Syringopora</i> , Goldfuss, 1826.....	80
<i>S. harveyi</i> , White (?).....	80
<i>Echinodermata.</i>	
<i>Gratocrinus</i> , Troost, 1850.....	80
<i>G. lotoblastus</i> , White, 1874, pl. v, figs. 3 <i>a</i> and <i>b</i>	80-81
<i>Platycrinus</i> , Miller, 1821.....	81
<i>P.</i> ——— (?) White, 1875, pl. v, fig. 2.....	81-82
<i>Actinocrinus</i> , Miller, 1821.....	82
<i>A. viaticus</i> , White, 1874, pl. v, fig. 1.....	82-83
<i>Brachiopoda.</i>	
<i>Productus</i> , Sowerby, 1812.....	83
<i>P. parvus</i> , M. & W., 1866, pl. v, figs. 6 <i>a</i> and <i>b</i>	83-84
<i>Strophomena</i> , Rafinesque, 1827.....	85
<i>S. rhomboidalis</i> , Wilckins, sp., 1767, pl. v, fig. 5.....	85-86
<i>Spirifer</i> , Sowerby, 1815.....	86
<i>S. centronatus</i> , Winchell, 1865, pl. v, figs. 8 <i>a-c</i>	86-87
<i>S. striatus</i> , Martin, sp., pl. v, fig. 10 <i>a</i>	88
<i>S. extenuatus</i> , Hall, 1858, pl. v, figs. 9 <i>a-d</i>	88-90
Subgenus <i>Martinia</i> , McCoy, 1844.....	90
<i>S. (Martinia) peculiaris</i> , Shumard, 1855, pl. v, figs. 7 <i>a</i> and <i>b</i>	90-91
<i>Spirigera</i> , d'Orbigny, 1847.....	91
<i>S. monticola</i> , White, 1874, pl. v, figs. 11 <i>a-d</i>	91-92
<i>S. obmaxima</i> , McChesney, 1860, pl. v, fig. 12.....	92-93
<i>Terebratula</i> , Lillwhyd, 1698.....	93
Subgenus <i>Dielasma</i> , King, 1859.....	93
<i>T. (Dielasma) burlingtonensis</i> , White, 1860.....	93
<i>Conchifera.</i>	
<i>Conocardium</i> , Brown, 1835.....	94
<i>C.</i> ——— (?) White, 1875.....	94
<i>Gasteropoda.</i>	
<i>Euomphalus</i> , Sowerby, 1815.....	94
<i>E. luzus</i> , n. s., White, 1875, pl. v, figs. 13 <i>a</i> and <i>b</i>	94-95

	Page.
Protozoa.	
Rhizopoda.	
<i>Fusulina</i> , Fischer, 1837.....	96
<i>F. cylindrica</i> , Fischer, 1837, pl. vi, figs. 6 <i>a</i> and <i>b</i>	96-98
Actinozoa.	
<i>Chaetetes</i> , Fischer, 1837.....	98
<i>C. milleporaceus</i> , Troost, sp., 1849?, pl. vi, fig. 2 <i>a</i>	98-99
<i>Rhombipora</i> , Meek, 1872.....	99
<i>R. lepidodendroides</i> , Meek, 1872, pl. vi, figs. 5 <i>a-d</i>	99-100
<i>Syringopora</i> , Goldfuss, 1826.....	100
<i>S. multattenuata</i> , McChesney (?).....	100-101
<i>Zaphrentis</i> , Rafinesque & Clifford.....	101
<i>Z. excentrica</i> , Meek, 1872, pl. vi, fig. 3 <i>a</i>	101
<i>Lophophyllum</i> , Edwards & Haime, 1850.....	101
<i>L. proliferum</i> , McChesney, sp., var. <i>sauridens</i> , White, 1875, pl. vi, figs. 4 <i>a-d</i>	101-103
<i>Lithostrotion</i> , Fleming, 1828.....	103
<i>L. whitneyi</i> , Meek, 1875, pl. vi, figs. 1 <i>a-c</i>	103
Echinodermata.	
<i>Archæocidaris</i> , McCoy, 1844.....	104
<i>A. ornatus</i> , Newberry, 1861, pl. vi, fig. 7.....	104
<i>A. tridifer</i> , White, 1874, pl. vi, figs. 8 <i>a</i> and <i>b</i>	104-105
Polyzoa.	
<i>Glauconome</i> , Goldfuss, 1826.....	105
<i>G. nereidis</i> , White, 1874, pl. vii, figs. 5 <i>a-c</i>	105-107
<i>Synocladia</i> , King, 1849.....	107
<i>S. biserialis</i> , Swallow, 1858, pl. vii, figs. 3 <i>a-c</i>	107-108
<i>Polypora</i> , McCoy, 1844.....	108
<i>P. stragula</i> , White, 1874, pl. vii, figs. 4 <i>a</i> and <i>b</i>	108-109
Brachiopoda.	
<i>Productus</i> , Sowerby, 1812.....	109
<i>P. costatus</i> , Sowerby (?), 1827, pl. viii, figs. 2 <i>a-d</i>	109-111
<i>P. semireticulatus</i> , Martin, sp., 1809, pl. viii, figs. 1 <i>a-c</i>	111-113
<i>P. prattianus</i> , Norwood, 1854, pl. vii, figs. 1 <i>a-c</i>	113-114
<i>P. punctatus</i> , Martin, sp., 1809, pl. vii, figs. 2 <i>a-c</i>	114-116
<i>P. nebrascensis</i> , Owen, 1852, pl. viii, figs. 3 <i>a-d</i>	116-117
<i>P. longispinus</i> , Sowerby, 1814, pl. viii, figs. 5 <i>a-d</i>	118-119
<i>P. muriceus</i> , Norwood & Pratt, 1854, pl. viii, figs. 4 <i>a-c</i>	120
<i>P. mexicanus</i> , Shumard (?), 1858, pl. viii, figs. 6 <i>a-c</i>	120-121
<i>Chonetes</i> , Fischer, 1837.....	121
<i>C. platynota</i> , White, 1874, pl. ix, figs. 6 <i>a-e</i>	121-122
<i>C. granulifera</i> , Owen, 1855, pl. ix, figs. 8 <i>a-e</i>	122-123
<i>C. mesoloba</i> , Norwood & Pratt, 1854, pl. ix, fig. 7 <i>a</i>	123
<i>Hemipronites</i> , Pander, 1830.....	124
<i>H. crinistria</i> , Phillips, sp., pl. x, fig. 9 <i>a</i>	124-125
<i>Orthis</i> , Dalman, 1828.....	125
<i>O. pecosii</i> , Marcou, 1858, pl. ix, figs. 5 <i>a-e</i>	125-126
<i>Meckella</i> , White & St. John, 1867.....	126
<i>M. striatocostata</i> , Cox, sp., 1857, pl. ix, figs. 4 <i>a-e</i>	126-128
Rhynchonellida.	
<i>Rhynchonella</i> , Fischer, 1809.....	128
<i>R. uta</i> , Marcou, sp., 1858, pl. ix, figs. 2 <i>a-c</i>	128-129
<i>R. metallica</i> , White, 1874, pl. x, figs. 10 <i>a-d</i>	129-130
<i>R. wasatchensis</i> , White, 1874, pl. ix, figs. 3 <i>a-d</i>	130-131
<i>R. rockymontana</i> , Marcou, 1858, pl. ix, figs. 1 <i>a-d</i>	131-132
<i>Spirifer</i> , Sowerby, 1815.....	132
<i>S. cameratus</i> , Morton, 1836, pl. x, figs. 1 <i>a-d</i>	132-134
<i>S. striatus</i> , Martin, sp.....	134
<i>S. rockymontanus</i> , Marcou, 1858, pl. xi, figs. 9 <i>a-d</i>	134-135
Subgenus <i>Martinia</i> , McCoy, 1844.....	135
<i>S. (Martinia) planoconvexus</i> , Shumard, 1855, pl. x, figs. 3 <i>a-c</i>	135-136
<i>S. (Martinia) glaber</i> var. <i>contracta</i> , Meek & Worthen, 1866, pl. x, figs. 2 <i>a-c</i>	136-138
<i>Spiriferina</i> , d'Orbigny, 1847.....	138
<i>S. kentuckensis</i> , Shumard, 1855, pl. x, figs. 4 <i>a-c</i>	138-139
<i>S. octoplicata</i> , Sowerby, 1827, pl. x, figs. 8 <i>a-c</i>	139-140
<i>Retzia</i> , King, 1850.....	141
<i>R. mormonii</i> , Marcou, 1858, pl. x, figs. 7 <i>a-c</i>	141

	Page.
<i>Spirigera</i> , d'Orbigny, 1847.....	141
<i>S. subtilita</i> , Hall, 1852, pl. x, figs. 6 <i>a-c</i>	141-143
<i>S. planosulcata</i> , Phillips, sp. 1836, pl. x, figs. 5 <i>a-d</i>	143-144
<i>Terebratulidæ</i> .	
<i>Terebratula</i> Llhwyd, 1698.....	144
Subgenus <i>Dielsma</i> , King, 1859.....	144
<i>T. (Dielsma) bovidens</i> , Morton, 1836, pl. xi, figs. 10 <i>a-c</i>	144-146
<i>Mollusca vera</i> .	
<i>Conchifera</i> .	
<i>Monomyaria</i> .	
<i>Pectinidæ</i> .	
<i>Ariculopecten</i> , McCoy, 1852.....	146
<i>A. occidentalis</i> , Shumard, 1855, pl. xii, figs. 8 <i>a</i> and <i>b</i>	146-147
<i>A. coreyanus</i> , White, 1874, pl. xi, figs. 1 <i>a</i> and <i>b</i>	147-148
<i>A. mccoyni</i> , M. & H., 1864, pl. xi, fig. 2 <i>a</i>	149
<i>A. interlineatus</i> , M. & W., 1860, pl. xi, fig. 3 <i>a</i>	149-150
<i>Pinnidæ</i> .	
<i>Pinna</i> , Linnæus, 1758.....	151
<i>P. peracuta</i> , Shumard (?), pl. xi, fig. 5 <i>a</i>	151
<i>Pteriidæ</i> .	
<i>Monopteria</i> , M. & W., 1866.....	151
<i>M. marian</i> , White, 1874, pl. xi, figs. 4 <i>a-c</i>	151-152
<i>Myalina</i> , de Koninck, 1844.....	152
<i>Myalina</i> (?), White, 1875.....	152
<i>M. ? swallovi</i> , McChesney, pl. xi, fig. 8 <i>a</i>	152
<i>Bakerellia</i> , King, 1848.....	153
<i>B. parva</i> , M. & H., 1858, pl. xi, figs. 7 <i>a</i> and <i>b</i>	153
<i>Dymyaria</i> .	
<i>Trigonidæ</i> .	
<i>Schizodus</i> , King, 1844.....	154
<i>S. wheeleri</i> , Swallow, 1862, pl. xi, figs. 6 <i>a</i> and <i>b</i>	154
<i>Alorisma</i> , King, 1859.....	155
<i>A. subcuneata</i> , var. M. & H., pl. xii, figs. 7 <i>a</i> and <i>b</i>	155
<i>Gasteropoda</i> .	
<i>Prosopoccephala</i> .	
<i>Solenocoencha</i> .	
<i>Dentaliidae</i> .	
<i>Dentalium</i> , Linnæus, 1740.....	156
<i>D. canna</i> , White, 1874, pl. xii, figs. 6 <i>a</i> and <i>b</i>	156
<i>Diaca</i> .	
<i>Rhipidoglossa</i> .	
<i>Dicranobranchia</i> .	
<i>Bellerophonitidæ</i> .	
<i>Bellerophon</i> , Montfort, 1808.....	157
<i>B. crassus</i> , M. & W., 1860, pl. xii, fig. 1 <i>a</i>	157
<i>Podophthalma</i> .	
<i>Euomphalidæ</i> .	
<i>Euomphalus</i> , Sowerby, 1815.....	158
<i>E. pernodus</i> , M. & W., 1870, pl. xii, figs. 2 <i>a</i> and <i>b</i>	158
<i>Pectinibranchiata</i> .	
<i>Tænioglossa</i> .	
<i>Naticidæ</i> .	
<i>Naticopsis</i> , McCoy, 1844.....	159
<i>N. nana</i> , M. & W., 1866, pl. xii, figs. 4 <i>a</i> and <i>b</i>	159
<i>Copulidæ</i> .	
<i>Platyceras</i> , Conrad, 1840.....	159
<i>P. nebrascense</i> , Meek, 1872, pl. xii, figs. 5 <i>a-d</i>	159-160
<i>Macrocheilidæ</i> .	
<i>Macrocheilus</i> , Phillips, 1841.....	160
<i>M. anguliferus</i> , White, 1874, pl. xii, figs. 3 <i>a-f</i>	160-161
<i>Cephalopoda</i> .	
<i>Tetrabranchiata</i> .	
<i>Goniatiidæ</i> .	
<i>Goniatites</i> , de Haan, 1825.....	161
<i>Nautilidæ</i> .	
<i>Nautilus</i> , Breynius, 1732.....	161

MESOZOIC AGE.

JURASSIC PERIOD.

Radiata.

Echinodermata.

Orinoidea.

Pentacrinidae.

<i>Pentacrinus</i> , Miller, 1821	162
<i>P. asteriscus</i> , M. & H., 1864, pl. xiii, figs. 6 <i>a, b</i>	162-163

Mollusca.

Conchifera.

Monomyaria.

Ostreidae.

<i>Ostrea</i> , Linnæus, 1758	163
<i>O. strigillicula</i> , n. s., White, 1875, pl. xiii, figs. 3 <i>a-d</i>	163-164

Pectinidae.

<i>Camptonectes</i> , Meek (Agassiz), 1864	164
<i>C. stygius</i> , White, 1874, pl. xiii, figs. 2 <i>a-c</i>	164-165
<i>C. bellistriatus</i> , M. & H.	165

Pteridae.

<i>Inoceramus</i> , Sowerby, 1814	166
<i>I. crassalatus</i> , n. s., White, 1875, pl. xiii, figs. 4 <i>a-c</i>	166

Dinomyaria.

Trigoniidae.

<i>Myophoria</i> , Brown, 1830.	
<i>M. ambilincata</i> , n. s., White, 1875, pl. xiii, figs. 5 <i>a</i> and <i>b</i>	166-167
<i>Trigonia</i> , Bruguière, 1789	167
<i>T. ———</i> (?), White, 1875	167

Gasteropoda.

Diæa.

Rhipidoglossa.

Podophthalma.

Neritidae.

<i>Neritina</i> , Lamarck, 1809	167
<i>N. ? phascolaris</i> , White, 1874, pl. xiii, figs. 1 <i>a-e</i>	167-168

CRETACEOUS PERIOD.

Mollusca.

Molluscoidea.

Brachiopoda.

Lyopomata.

Lingulidae.

<i>Lingula</i> , Bruguière, 1792	169
<i>L. subspatulata</i> , H. & M., 1856, pl. xv, fig. 4 <i>a</i>	169

Mollusca vera.

Conchifera.

Monomyaria.

Ostreidae.

<i>Ostrea</i> , Linnæus, 1[7]58	170
<i>O. cortex</i> , Conrad, 1857, pl. xv, figs. 2 <i>a-c</i>	170
<i>O. prudentia</i> , n. s., White, 1875, pl. xiv, figs. 2 <i>a-d</i>	171
<i>Gryphea</i> , Lamarck, 1801	171
<i>G. pitcheri</i> , var. Morton, pl. xvii, figs. 1 <i>a-f</i>	171-172
<i>Eogyra</i> , Say, 1819	172
<i>E. ponderosa</i> , Rømer, 1852, pl. xiv, figs. 1 <i>a-c</i>	172-173
<i>E. leviuscula</i> , Rømer, 1852, pl. xvii, figs. 2 <i>a-d</i>	173-174
<i>E. costata</i> , Say, var. <i>fluminis</i> , White, 1875, pl. xvii, figs. 3 <i>a-d</i>	174-175

Pectinidae.

<i>Camptonectes</i> , Meek (Agassiz), 1864	176
<i>C. platessa</i> , White, 1874, pl. xvii, fig. 5 <i>a</i>	176

Limidae.

<i>Lima</i> , Bruguière, 1791	176
<i>L. vacoensis</i> , Rømer, 1852, pl. xvii, figs. 4 <i>a-c</i>	176-177

Pteriidae.

<i>Inoceramus</i> , Sowerby, 1814	177
<i>I. problematicus</i> , Schlotheim sp., 1820, pl. xvi, fig. 3 <i>a</i>	177-178
<i>I. fragilis</i> , Hall & Meek, 1856, pl. xv, fig. 3 <i>a</i>	178

	Page.
<i>I. flaccidus</i> , n. s., White, 1875, pl. xvi, figs. 1 <i>a</i> and <i>b</i>	178-179
<i>I. deformis</i> , Meek, 1872, pl. xv, figs. 1 <i>a</i> and <i>b</i>	179-180
<i>I. barabini</i> , Morton, 1834, pl. xvi, fig. 4 <i>a</i>	180-181
<i>I. dimidiatus</i> , White, 1874, pl. xvi, figs. 2 <i>a-d</i>	181-182
<i>Pinnidae</i> .	
<i>Pinna</i> , Linnæus, 1758	182
<i>P. petrina</i> , White, 1874, pl. xiii, figs. 7 <i>a</i> and <i>b</i>	182-183
<i>Dynmyaria</i> .	
<i>Arcidae</i> .	
<i>Idonearca</i> , Conrad, 1862	183
<i>I. depressa</i> , n. s., White, 1875, pl. xviii, figs. 13 <i>a</i> and <i>b</i>	183-184
<i>Lucinidae</i> .	
<i>Lucina</i> , Bruguière, 1792	184
<i>L. subundata</i> , Hall & Meek, 1856, pl. xviii, fig. 12 <i>a</i>	184
<i>Glossidae</i> .	
<i>Veniella</i> , Stoliczka, 1870	185
<i>V. gonitophora</i> , Meek, 1875	185
<i>Mactridæ</i> .	
<i>Mactra</i> , Linnæus	185
<i>M. ? incompta</i> , n. s., White, 1875, pl. xvii, fig. 6 <i>a</i> and <i>b</i>	185
<i>Anatinidae</i> .	
<i>Leiopistha</i> , Meek, 1864	186
Subgenus <i>Psilomya</i> , Meek, MSS., 1874	186
<i>L. (Psilomya) meeki</i> , White, 1874, pl. xviii, figs. 14 <i>a-d</i>	186-187
Subgenus <i>Cymella</i> , Meek, 1864	187
<i>L. (Cymella) undata</i> , M. & H., sp., 1856, pl. xviii, fig. 15 <i>a</i>	187
<i>Corbulidae</i> .	
<i>Corbula</i> , Bruguière, 1792	188
<i>C. nematophora</i> , Meek, 1872, pl. xvii, figs. 7 <i>a-c</i>	188-189
<i>Gasteropoda</i> .	
<i>Diæca</i> .	
<i>Rhiphidoglossa</i> .	
<i>Neritidae</i> .	
<i>Neritina</i> , Lamarck, 1809	189
Subgenus (<i>Velatella</i>) Meek, 1872	189
<i>N. (Velatella) carditoides</i> , Meek, 1872, pl. xviii, figs. 7 <i>a-c</i>	189-190
<i>Pectinibranchiata</i> .	
<i>Tænioglossa</i> .	
<i>Aporrhaidæ</i> .	
<i>Anchura</i> , Conrad, 1860	190
<i>A. ? fusiformis</i> , Meek, MSS., 1874, pl. xviii, fig. 4 <i>a</i>	190-191
* <i>Lispodesthes</i> , n. g., White, 1875	191
<i>L. nuptialis</i> , White, 1874, pl. xviii, figs. 3 <i>a</i> and <i>b</i>	192
<i>L. lingulifera</i> , n. s., White, 1875, pl. xviii, figs. 2 <i>a</i> and <i>b</i>	192-193
<i>Tecturidae</i> .	
<i>Anisomyon</i> , M. & H., 1860	193
<i>A. borealis</i> , Morton, sp., 1842, pl. xviii, figs. 9 <i>a</i> and <i>b</i>	193-194
<i>A. centrale</i> , Meek, 1870, pl. xviii, figs. 8 <i>a</i> and <i>b</i>	194-195
<i>Turritellidae</i> .	
<i>Turritella</i> , Lamarck, 1801	195
<i>T. uvasano</i> , Conrad, 1856, pl. xviii, figs. 11 <i>a</i> and <i>b</i>	195
<i>Cassiope</i> , Coquand, 1865	196
<i>C. whitfieldi</i> , White, 1874, pl. xviii, fig. 1 <i>a</i>	196
<i>Eulimella</i> , Forbes, 1846	197
<i>E. funicula</i> , Meek, 1872, pl. xviii, fig. 6 <i>a</i>	197
<i>Pyramidellidae</i> .	
<i>Turbonilla</i> , Leach, 1825	197
Subgenus <i>Chemnitzia</i> , Conrad, 1860	197
<i>T. (Chemnitzia) melanopsis</i> , Conrad ? pl. xviii, fig. 10 <i>a</i>	197-198
<i>Toxoglossa</i> .	
<i>Admetidae</i> .	
<i>Admete</i> , Möller, 1842	198
Subgenus <i>Admetopsis</i> , Meek, 1872	198
<i>A. (Admetopsis) gregaria</i> , Meek, 1872, pl. xviii, figs. 5 <i>a</i> and <i>b</i>	198-199

* λισπος, smooth, and εσθος, a garment.

	Page.
<i>Cephalopoda.</i>	
<i>Tetrabranchiata.</i>	
<i>Baculitidæ.</i>	
<i>Baculites</i> , Lamarck, 1801	199
<i>B. ovatus</i> , Say, pl. xix, figs. 4 <i>a-c</i> , and 5 <i>a-c</i>	199-200
<i>Scaphitidæ.</i>	
<i>Scaphites</i> , Parkinson, 1811.....	200
<i>S. warreni</i> , M. & H., 1860, pl. xix, fig. 3 <i>a</i>	200-201
<i>Ammonitidæ.</i>	
<i>Ammonites</i> , Bruguière, 1789.....	201
<i>A. lævianus</i> , n. s., White, 1875, pl. xix, figs. 1 <i>a</i> and <i>b</i>	201-202
<i>A. placenta</i> , DeKay, var. <i>intercalaris</i> M. & H.....	202
<i>Buchiceras</i> , Hyatt, 1875.....	202
<i>B. swallovi</i> , Shumard, 1860, pl. xx, figs. 1 <i>a-c</i>	202-203
<i>Turritidæ.</i>	
<i>Helicoceras</i> , d'Orbigny, 1842	203
<i>H. pariense</i> , n. s., White, 1875, pl. xix, figs. 2 <i>a-d</i>	203-204
<i>Articulata.</i>	
<i>Vermes.</i>	
<i>Tubicola.</i>	
<i>Serpulidæ.</i>	
<i>Serpula</i> , Linnæus, 1758	205
<i>S. intricata</i> , n. s., White, 1875, pl. xv, fig. 5 <i>a</i>	205
	CENOZOIC AGE.
	TERTIARY PERIOD.
<i>Mollusca.</i>	
<i>Conchifera.</i>	
<i>Dimyaria.</i>	
<i>Unionidæ.</i>	
<i>Unio</i> , Retzius, 1788	206
<i>U. vetustus</i> , Meek, 1860, pl. xxi, figs. 12 <i>a-d</i>	206-207
<i>Cyrenidæ.</i>	
<i>Cyrena</i> , Lamarck, 1818.....	207
Subgenus <i>Veloritina</i> , Meek, 1872	207
<i>C. (Veloritina) durkeei</i> , Meek, 1870, pl. xxi, figs. 13 <i>a</i> and <i>b</i>	207-208
<i>Sphærium</i> , Scopoli, 1777	208
<i>Sphærium</i> — (?) , White, 1875.....	208
<i>Gastropoda.</i>	
<i>Pulmonifera.</i>	
<i>Basommatophora.</i>	
<i>Limnæidæ.</i>	
<i>Planorbis</i> , Guettard, 1756	209
<i>P. utahensis</i> , Meek, 1860, pl. xxi, fig. 8 <i>a</i>	209
<i>Planorbis</i> — (?) , White, 1875	210
<i>Physidæ.</i>	
<i>Physa</i> , Draparnaud, 1801	210
<i>P. bridgerensis</i> , Meek? 1872, pl. xxi, fig. 2 <i>a</i>	210
<i>P. pleromatis</i> , n. s., White, 1875, pl. xxi, figs. 1 <i>a</i> and <i>b</i>	211
<i>Geophila.</i>	
<i>Helicidæ.</i>	
<i>Helix</i> , Linnæus, 1758	211
<i>H. leidyi</i> , H. & M., 1856, pl. xxi, figs. 3 <i>a-c</i>	211
<i>Diœca.</i>	
<i>Pectinibranchiata.</i>	
<i>Tænioglossa.</i>	
<i>Melanitidæ.</i>	
<i>Goniobasis</i> , Lea, 1862.....	212
<i>G. tenuicarinata</i> , M. & H., 1857, pl. xxi, figs. 10 <i>a</i> and <i>b</i>	212
<i>G. tenera</i> , Hall, sp., 1845, pl. xxi, figs. 11 <i>a-c</i>	212-213
<i>G. nebrascensis</i> , M. & H., 1856, pl. xxi, figs. 9 <i>a-c</i>	213-214
<i>Viviparidæ.</i>	
<i>Viviparus</i> , Montfort, 1810	214
<i>V. trochiformis</i> , M. & H., 1856, pl. xxi, figs. 4 <i>a-c</i>	214
<i>V. trochiformis</i> , var. White, 1875, pl. xxi, figs. 5 <i>a</i> and <i>b</i>	214-215

	Page.
<i>V. ionicus</i> , n. s., White, 1875, pl. xxi, figs. 6 <i>a</i> and <i>b</i>	215
<i>Viviparus</i> — (?), White, 1875, pl. xxi, figs. 7 <i>a</i> and <i>b</i>	215
<i>Articulata.</i>	
<i>Crustacea.</i>	
<i>Ostracoda.</i>	
<i>Cypridinidæ.</i>	
<i>Cypris</i> , Müller, 1785.....	216
<i>Cypris</i> — (?), White, 1875	216

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.

Descriptions of new species of Invertebrate fossils from strata of the Carboniferous, Jurassic, Cretaceous, and Tertiary Periods, pp. 107-135.

CARBONIFEROUS PERIOD.

<i>Radiata.</i>	
<i>Actinozoa.</i>	
<i>Amplexus</i> , Sowerby	107
<i>A. zaphrentiformis</i> , n. s., White, 1876.....	107-108
<i>Echinodermata.</i>	
<i>Eupachyrcinus</i> , M. & W	108
<i>E. platybasis</i> , n. s., White, 1876.....	108
<i>Archæocidaris</i> , McCoy	109
<i>A. eratis</i> , n. s., White, 1876	109
<i>Mollusca.</i>	
<i>Gasteropoda.</i>	
<i>Naticopsis</i> , McCoy	109
<i>N. remex</i> , n. s., White, 1876	109

JURASSIC PERIOD.

<i>Mollusca.</i>	
<i>Conchifera.</i>	
<i>Unio</i> , Retzius	110
<i>U. stewardi</i> , n. s., White, 1876.....	110
<i>Gasteropoda.</i>	
<i>Neritina</i> , Lamarck	110
<i>N. ? powelli</i> , n. s., White, 1876.....	110-111

CRETACEOUS PERIOD.

<i>Mollusca.</i>	
<i>Conchifera.</i>	
<i>Ostrea</i> , Linnaeus	112
Subgenus <i>Alectryonia</i> , Fischer.....	112
<i>O. (Alectryonia) sannionis</i> , n. s., White, 1876.....	112
<i>O. inscura</i> , n. s., White, 1876	112-113
<i>Plicatula</i> , Lamarck	113
<i>P. hydrotheca</i> , n. s., White, 1876	113
<i>Inoceramus</i> , Sowerby.....	113
<i>I. gilberti</i> , n. s., White, 1876.....	113-114
<i>I. howelli</i> , n. s., White, 1876	114-115
<i>Aricula</i> , Klein	115
<i>A. parkensis</i> , n. s., White, 1876	115

	Page.
<i>Arca</i> , Linnæus.....	115
<i>A. ? calvillensis</i> , n. s., White, 1876.....	115-116
<i>Unio</i> , Retzius.....	116
<i>U. gonionotus</i> , n. s., White, 1876.....	116-117
<i>Cyrena</i> , Lamarck.....	117
Subgenus <i>Veloritina</i> , Meek.....	117
<i>C. (Veloritina) erecta</i> , n. s., White, 1876.....	117
<i>Turnus</i> , Gabb.....	117
<i>T. spheenoideus</i> , n. s., White, 1876.....	117-118
<i>Gastropoda</i> .	
<i>Rhytophorus</i> , Meek.....	118
<i>R. meekii</i> , n. s., White, 1876.....	118-119
<i>Planorbis</i> , Guettard.....	119
Subgenus <i>Bathyomphalus</i> , Agassiz.....	119
<i>P. (Bathyomphalus) kanabensis</i> , n. s., White, 1876.....	119
<i>Physa</i> , Draparnaud.....	119
<i>P. kanabensis</i> , n. s., White, 1876.....	119
<i>Helix</i> , Linnæus.....	120
<i>H. kanabensis</i> , n. s., White, 1876.....	120
<i>Anchura</i> , Conrad.....	120
<i>A. ruida</i> , n. s., White, 1876.....	120-121
<i>A. prolabiata</i> , n. s., White, 1876.....	121-122
<i>Lunatia</i> , Gray.....	122
<i>L. utahensis</i> , n. s., White, 1876.....	122
<i>Goniobasis</i> , Lea.....	122
<i>G. cleburni</i> , n. s., White, 1876.....	122-123
<i>G. chrysaloidea</i> , n. s., White, 1876.....	123
<i>Viviparus</i> , Montfort.....	123
<i>V. panguit-chensis</i> , n. s., White, 1876.....	123-124
<i>Odontobasis</i> , Meek.....	124
<i>O. buccinoidea</i> , n. s., White, 1876.....	124

TERTIARY PERIOD.

Mollusca.

Conchifera.

<i>Unio</i> , Retzius.....	125
<i>U. petrinus</i> , n. s., White, 1876.....	125
<i>U. propheticus</i> , n. s., White, 1876.....	125-126
<i>U. brachyopisthus</i> , n. s., White, 1876.....	126
<i>U. shoshonensis</i> , n. s., White, 1876.....	126-127
<i>Corbicula</i> , Mühlfeldt.....	127
<i>C. powelli</i> , n. s., White, 1876.....	127-128
<i>Pisidium</i> , Pfeiffer.....	128
<i>P. saginatum</i> , n. s., White, 1876.....	128
<i>Mesodesma</i> , Deshayes.....	128
<i>M. bishopi</i> , n. s., White, 1876.....	128
<i>Corbula</i> , Bruguière.....	129
<i>C. subundifera</i> , n. s., White, 1876.....	129

Gasteropoda.

<i>Succinea</i> , Draparnaud.....	129
<i>S. papillispira</i> , n. s., White, 1876.....	129-130
<i>Helix</i> , Linnæus.....	130
<i>H. riparia</i> , n. s., White, 1876.....	130
<i>H. peripheria</i> , n. s., White, 1876.....	130
<i>Pupa</i> , Lamarck.....	130
<i>P. incolata</i> , n. s., White, 1876.....	130-131
<i>P. arenula</i> , n. s., White, 1876.....	131
<i>Neritina</i> , Lamarck.....	131
<i>N. volvilineata</i> , n. s., White, 1876.....	131
<i>Melania</i> , Lamarck.....	131
<i>M. larunda</i> , n. s., White, 1876.....	131-132
<i>Hydrobia</i> , Hartmann.....	132
<i>H. recta</i> , n. s., White, 1876.....	132
<i>H. utahensis</i> , n. s., White, 1876.....	132-133
<i>Viviparus</i> , Montfort.....	133

	Page.
<i>V. plicapressus</i> , n. s., White, 1876	133
<i>Leioptax</i> , Troschel	133
<i>L. ? turricula</i> , n. s., White, 1876.....	133-134
<i>Tulotoma</i> , Haldeman	134
<i>T. thompsoni</i> , n. s., White, 1876	134
<i>Phorus</i> , Montfort	134
<i>P. exoneratus</i> , n. s., White, 1876.....	134-135

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.

*Radiata.**Actinozoa.*

	Page.
<i>Chaetetes</i> , Fischer	27
<i>C. muscatinensis</i> , n. s., White, 1877	27
<i>Monticulipora</i> , d'Orbigny	27
<i>M. monticula</i> , n. s., White, 1877.....	27
<i>Lophophyllum</i> , E. & H., 1877.....	27
<i>L. expansum</i> , n. s., White, 1877	27-28

Echinodermata.

<i>Strobilocystites</i> , n. g., White, 1877	28
<i>S. calvini</i> , n. s., White, 1877	28-29
<i>Megistocrinus</i> , Owen	29
<i>M. farnsworthi</i> , n. s., White, 1877	29-30

*Mollusca.**Brachiopoda.*

<i>Stricklandinia</i> , Billings	30
<i>S. castellana</i> , n. s., White, 1877	30

Conchifera.

<i>Paracyclas</i> , Hall	31
<i>P. sabini</i> , n. s., White, 1877	31
<i>Allorisma</i> , King	31
<i>A. marionensis</i> , n. s., White, 1877....	31-32

Gasteropoda.

<i>Bellerophon</i> , Montfort.....	32
<i>B. bowmani</i> , n. s., White, 1877.....	32
<i>Euomphalus</i> , Sowerby	32
<i>E. springvalensis</i> , n. s., White, 1877	32-33

Pteropoda.

<i>Conularia</i> , Miller	33
<i>C. molaris</i> , n. s., White, 1877	33

Cephalopoda.

<i>Cyrtoceras</i> , Goldfuss	33
<i>C. dictyurn</i> , n. s., White, 1877	33-34

*Articulata.**Vermes.*

<i>Tentaculites</i> , Schlotheim.....	34
<i>T. hoyti</i> , n. s., White, 1877	34

52.

WHITE, C. A. Paleontological papers, No. 1: Descriptions of Unionidae and Physidae, 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.

	Page.
<i>Unionidae.</i>	
<i>Unio primævus</i> , n. s., White, 1877.....	599-600
<i>Unio cryptorhynchus</i> , n. s., White, 1877	600
<i>Unio senectus</i> , n. s., White, 1877	600-601
<i>Anodonta propatoris</i> , n. s., White, 1877.....	601
<i>Physidae.</i>	
<i>Bulinus atavus</i> , n. s., White, 1877.....	601-602
<i>Physa copei</i> , n. s., White, 1877.....	602

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 *Cassiope* proposed.

	Page.
<i>Unionidae.</i>	
<i>Unio proavitus</i> , n. s., White, 1877	603-604
<i>U. holmesianus</i> , n. s., White, 1877	604
<i>U. endlichii</i> , n. s., White, 1877	604-605
<i>U. couesi</i> , [n. s.,] White, 1877	605
<i>U. meeki</i> , [n. s.,] White, 1877	605
<i>U. mendax</i> , n. s., White, 1877	605-606
<i>Ceriphasiidae.</i>	
<i>Cassiope</i> , n. g., White, 1877	606

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.

Conchifera.

	Page.
<i>Volsella</i> , Scopoli	707
Subgenus <i>Brachydontes</i> , Swainson.....	707
<i>V. (Brachydontes) regularis</i> , n. s., White, 1877.....	707-708
<i>V. (Brachydontes) luteicostata</i> , n. s., White, 1877	708
<i>Nuculana</i> , Link	708
<i>N. inclara</i> , n. s., White, 1877.....	708-709
<i>Anodonta</i> , Cuvier.....	709
<i>A. parallela</i> , n. s., White, 1877	709
<i>Unio</i> , Retzius.....	709
<i>U. goniambonatus</i> , n. s., White, 1877	709-710
<i>U. aldrichi</i> , n. s., White, 1877.....	710-711
<i>Corbicula</i> , Mergelo	711
<i>C. cleburni</i> , n. s., White, 1877.....	711
<i>C. cardiniaformis</i> , n. s., White, 1877	711-712
<i>C. obesa</i> , n. s., White, 1877.....	712-713

	Page.
Subgenus <i>Leptesthes</i> , Meek	713
<i>C. (Leptesthes) macropistha</i> , n. s., White, 1877	713
<i>Acella</i> , Haldeman	714
<i>A. haldemani</i> , n. s., White, 1877	714
<i>Physa</i> , Draparnand	714
<i>P. felix</i> , n. s., White, 1877	714
<i>Helix</i> , Linnaeus	714
<i>H. evarstonensis</i> , n. s., White, 1877	714
<i>Neritina</i> , Lamarck	715
<i>N. naticiformis</i> , n. s., White, 1877	715
Subgenus <i>Velatella</i> , Meek	715
<i>N. (Velatella) baptista</i> , n. s., White, 1877	715-716
<i>Goniobasis</i> , Lea	716
<i>G. endlichi</i> , n. s., White, 1877	716
<i>Viviparus</i> , Lamarck	716
<i>V. prudentia</i> , n. s., White, 1877	716-717
<i>V. couesi</i> , n. s., White, 1877	717-718
<i>Odontobasis</i> , Meek	718
<i>O. ? formosa</i> , n. s., White, 1877	718-719

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.

CONTENTS.

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. 323. 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 Géology of a portion of Northwestern Colorado. <Tenth Annual Report U. S. Géol. 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 "partiversal," 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 Palaeontology, 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.

Radiata.

Actinaria.

Caryophyllia, Lamarek.

O. johannis, n. s., White, 1879, pl. vi, figs. 6 a, b. 274-275

O. egeria, n. s., White, 1879, pl. vi, figs. 7 a, b 275

Mollusca.

Conchifera.

Ostrea, Linnaeus. 275

O. quadruplicata, Shumard, 1860, pl. v, fig. 6 a, pl. viii, figs. 3 a, b. 275-276

O. (Alectryonia) bellaplicata, Shumard, 1860, pl. iv, figs. 3 a, b, pl. viii, figs. 2 a, b. 276-277

O. (Alectryonia) sannionis, White, 1876, pl. ii, figs. 2 a-e. 277-278

Exogyra, Say. 278

E. valkeri, n. s., White, 1879, pl. i, figs. 1 a, b. 278

Placunopsis, Morris & Lycett 278

P. hilliardensis, n. s., White, 1879, pl. vii, fig. 14 a 278-279

Plicatula, Lamarek 279

P. hydrotheca, White, 1876, pl. vi, figs. 3 a, b. 279

Pteria, Scopoli 279

P. parkensis, White, 1876, pl. iii, fig. 3 a. 279-280

Subgenus, *Oxytoma*, Meek 280

	Page.
<i>P. (Oxytoma?) gastrodes</i> , Meek, 1873, pl. x, fig. 1 <i>a</i>	280-281
Subgenus <i>Pseudoptera</i> , Meek	281
<i>P. (Pseudoptera) propleura</i> , Meek, 1873, pl. x, figs. 2 <i>a-c</i>	281-284
<i>Inoceramus</i> , Sowerby	284
<i>I. howelli</i> , White, 1876, pl. iv, figs. 1 <i>a-c</i>	284-285
<i>I. gilberti</i> , White, 1876, pl. iii, figs. 1 <i>a-c</i>	285
<i>I. oblongus</i> , Meek, 1871, pl. ii, figs. 1 <i>a, b</i>	285-286
<i>Barbatia</i> , Gray	286
<i>B. coalvillensis</i> , White, 1876, pl. vi, figs. 2 <i>a, b</i>	286-287
<i>Crassatella</i> , Lamarck	287
<i>C. cimarronensis</i> , n. s., White, 1879, pl. v, figs. 3 <i>a-c</i>	287-288
<i>Tauredia</i> , Lycett	288
<i>T. ? cælionotus</i> , n. s., White, 1879, pl. v, figs. 2 <i>a-d</i>	288
<i>Cyrena</i> , Lamarck	289
<i>C. securis</i> , Meek, 1873, pl. iii, figs. 2 <i>a-c</i>	289
<i>C. inflexa</i> , Meek, 1871, pl. x, figs. 7 <i>a, b</i>	290
<i>Oorbula</i> , Bruguière	290
<i>C. nematophora</i> , Meek, 1873, pl. iii, figs. 4 <i>a-d</i>	290-291
<i>Cardium</i> , Linnæus	291
<i>C. pauperculum</i> , Meek, 1872, pl. ix, fig. 3 <i>a</i>	291
<i>C. trite</i> , n. s., White, 1879, pl. v, figs. 4 <i>a, b</i>	291-292
<i>Cardium</i> — ? , White, 1879, pl. ix, figs. 2 <i>a-c</i>	292
<i>Trapezium truncatum</i> , Meek, 1871, pl. x, figs. 6 <i>a, b</i>	292-293
<i>Trapezium ? micronema</i> , Meek, 1873, pl. x, figs. 5 <i>a</i>	293
<i>Baroda wyomingensis</i> , Meek, 1871, pl. x, figs. 3 <i>a, b</i>	293-294
<i>Baroda subelliptica</i> , n. s., White, 1879, pl. x, figs. 4 <i>a-d</i>	294-295
<i>Mactra ? holmesi</i> , Meek, 1875, pl. vi, figs. 4 <i>a-c</i>	295-297
<i>Mactra ? cañonensis</i> , Meek, 1871, pl. ix, figs. 11 <i>a-c</i>	297-298
<i>Pachymya</i> , Sowerby	298
<i>P. austinensis</i> , Shumard, pl. viii, figs. 1 <i>a, b</i> , and pl. v, figs. 7 <i>a, b</i>	298
<i>P. ? herseyi</i> , n. s., White, 1879, pl. v, figs. 5 <i>a, b</i>	298-299
<i>Glycimeris</i> , Lamarck	299
<i>G. berthoudi</i> , n. s., White, 1879, pl. vi, figs. 1 <i>a, b</i>	299-300
<i>Parapholas</i> , Conrad	300
<i>P. sphenoides</i> , White, 1876, pl. v, figs. 1 <i>a-d</i>	300-302
<i>Gasteropoda.</i>	
<i>Paliurus</i> , Gabb	302
<i>P. pentangulatus</i> , n. s., White, 1879, pl. iv, figs. 4 <i>a, b</i>	302-303
<i>Anisomyon</i> , M. & H.	303
<i>A. centrale</i> , Meek, 1872, pl. ix, figs. 1 <i>a-d</i>	303-304
<i>Actæon</i> , Montfort	304
<i>A. woosteri</i> , n. s., White, 1879, pl. vii, figs. 9 <i>a-c</i>	304
<i>Actæonina</i> , d'Orbigny	305
<i>A. prosocheila</i> , n. s., White, 1879, pl. vii, figs. 10 <i>a, b</i>	305
<i>Turbonilla</i> , Risso	305
<i>T. (Chemnitzia) coalvillensis</i> , Meek, 1873, pl. ix, figs. 5 <i>a, b</i>	305-306
<i>Physa</i> , Draparnaud	306
<i>P. carletoni</i> , Meek, 1873, pl. vii, fig. 12 <i>a</i>	306-307
<i>Physa</i> — ? , White, 1879, pl. vii, fig. 13 <i>a</i>	307-308
<i>Neritina</i> , Lamarck	308
<i>N. pisum</i> , Meek, 1873, pl. vii, figs. 11 <i>a-c</i>	308
<i>N. incompta</i> , White, 1876, pl. vii, figs. 6 <i>a-c</i>	308-309
<i>N. (Velatella) patelliformis</i> , Meek, 1873, pl. vii, figs. 7 <i>a-d</i>	309
<i>N. (Velatella) patelliformis</i> var. <i>weberensis</i> , White, 1879, pl. vii, figs. 8 <i>a</i> and <i>b</i>	309-310
<i>Euspira</i> , Agassiz	310
<i>E. coalvillensis</i> , White, 1876, pl. iv, figs. 2 <i>a</i> and <i>b</i>	310
<i>Anchura</i> , Conrad	311
<i>A. haydeni</i> , n. s., White, 1879, pl. vii, fig. 1 <i>a</i>	311-312
<i>A. (Drepanocheilus) ruida</i> , White, 1876, pl. vii, figs. 4 <i>a, b</i>	312
<i>A. (Drepanocheilus) mudgeana</i> , n. s., White, 1879, pl. vii, figs. 3 <i>a, b</i>	312-313
<i>A. (Drepanocheilus) prolabiata</i> , White, 1876, pl. vii, fig. 2 <i>a</i>	313-314
<i>Turritella</i> , Lamarck	314
<i>T. marnochi</i> , n. s., White, 1879, pl. vii, figs. 5 <i>a, b</i>	314-315
<i>T. coalvillensis</i> , Meek, 1873, pl. ix, fig. 4 <i>a</i>	315-316
<i>T. (Aclis?) micronema</i> , Meek, 1873, pl. ix, fig. 8 <i>a</i>	316

	Page.
<i>Eulimella</i> , Forbes.....	316
<i>E. r. funicula</i> , Meek, 1873, pl. ix, fig. 10 <i>a</i>	316-317
<i>Fusus</i> , Lamarck	317
<i>F.</i> (<i>Neptunea</i> ?) <i>gabbii</i> , Meek, 1873, pl. ix, fig. 9 <i>a</i>	317
<i>Admetopsis</i> , Meek	317
<i>A. rhomboides</i> , Meek, 1873, pl. ix, figs. 6 <i>a</i> , <i>b</i>	317-318
<i>A. subfusiformis</i> , Meek, 1873, pl. ix, fig. 7 <i>a</i>	318-319

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.

Nine species are described as new.	Page.
<i>Radiata</i> .	
<i>Actinozoa</i> .	
<i>Baryphyllum</i> , Edwards & Haime	29
<i>B. fungulus</i> , n. s., White, 1878.....	29-30
<i>Echinodermata</i> .	
<i>Platycrinus</i> , Miller.....	30
<i>P. bonocensis</i> , n. s., White, 1878	30-31
<i>Scaphiocrinus</i> , Hall	31
<i>S. gibsoni</i> , n. s., White, 1878	31-32
<i>S. gurleyi</i> , n. s., White, 1878.....	32-33
<i>Lepidesthes</i> , M. & W.....	33
<i>L. colletti</i> , n. s., White, 1878.....	33-34
<i>Mollusca</i> .	
<i>Polyzoa</i> .	
<i>Ptilodyctia</i> , Lonsdale.....	35
<i>P. triangulata</i> , n. s., White, 1878.....	35
<i>Conchifera</i> .	
<i>Astartella</i> , Hall.....	35
<i>A. gurleyi</i> , n. s., White, 1878	35-36
<i>Cephalopoda</i> .	
<i>Nautilus</i> , Breynius.....	36
<i>N. danvillensis</i> , n. s., White, 1878.....	36-37
<i>Articulata</i> .	
<i>Vermes</i> .	
<i>Serpula</i> , Linnæus	37
<i>S. insita</i> , n. s., White, 1878	37

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.

	Page.
<i>Bulinus disjunctus</i> , n. s., White, 1879.....	170
<i>Pinna lakesi</i> , n. s., White, 1879.....	181
<i>Corbula dubiosa</i> , n. s., White, 1879.....	249
Crow Creek section.....	164
List of fossils from the valley of Crow Creek, Colorado.....	165
Notes on the Laramie fossils obtained in the valley of Crow Creek, Colorado.....	165-175
List of the fossils collected from Cretaceous strata in the valley of the Cache à la Poudre, from five to twelve miles west of Greeley, Colo.....	175-176
List of Cretaceous fossils collected at Fossil Ridge, three miles southeastward from Spring cañon, and about six miles south of Fort Collins, Colorado.....	176-177
List of fossils collected in the valley of Little Thompson Creek.....	177-178
List of the fossils collected at the mouth of Saint Vrain River, Colorado.....	178-179
Notes on the fossils of the Fox Hills group as developed in Colorado, east of the Rocky Mountains.....	179-189
Bijou Creek section.....	189
List of fossils from the valley of Bijou Creek, Colorado.....	190
Notes on the Laramie fossils collected in the valley of Bijou Creek, Colorado.....	190-197
List of Cretaceous fossils from the vicinity of Golden City and Morrison, Colo.....	197
Notes on the fossils from the vicinity of Golden City and Morrison.....	179-204
List of Cretaceous fossils collected on Sago Creek, an upper tributary of Yampa River, Colorado.....	205
Notes on the Cretaceous fossils of Sage Creek.....	205-207
List of Laramie fossils collected in Yampa valley, near Cañon Park, Northwestern Colorado.....	207
Notes on the Laramie fossils of Yampa valley.....	208-211
List of the Laramie fossils found in the Danforth Hills, Northwestern Colorado.....	211
Notes on the Laramie fossils of Danforth Hills.....	211-215
List of Laramie fossils collected at Rock Springs, Wyoming.....	215
List of Laramie fossils from Bitter Creek valley, two miles west of Point of Rocks station, Wyoming.....	215-216
List of the Laramie fossils collected at Point of Rocks Station, Wyoming.....	216
List of the Laramie fossils collected at Black Buttes Station, Wyoming.....	216-217
Notes on the Laramie fossils of Bitter Creek valley.....	217-222
Section of Laramie strata at Black Butte Station.....	222
List of Cretaceous fossils from a cañon six miles northwest from White River Indian Agency, Northwestern Colorado.....	224
Notes on the Cretaceous fossils from near White River Indian Agency.....	224-226
List of fossils of the Wasatch group collected in White River valley, Colorado.....	226
Notes on the Wasatch fossils of White River valley.....	226-229
List of Cretaceous fossils at Dodd's Ranch on Ashley's Fork, Utah.....	229
Notes on the Cretaceous fossils from Ashley's Fork.....	229-232
List of fossils from the Cretaceous series at Coalville, Utah.....	232-233
Notes on the Cretaceous fossils of Coalville, Utah.....	233-241
List of Laramie fossils from Bear River valley, Wyoming.....	241-242
Notes on Laramie fossils of Bear River valley, Wyoming.....	242-248
List of Cretaceous fossils from the valley of Bear River, Wyoming.....	248
Notes on the Cretaceous fossils of Bear River valley.....	248-249
List of Cretaceous fossils collected at Hilliard Station, Wyoming.....	249
Notes on the Cretaceous fossils of Hilliard Station.....	249-251
General discussion.....	251-265
Table showing the geographical distribution of the Cretaceous species collected during the season of 1877.....	252-253
Fox Hills Group.....	252-253
Colorado Group.....	253
Table showing the geographical distribution of the fossils of the Laramie Group, collected during the season of 1877.....	255
Catalogue of fossils.....	265

	Page.
List of Cretaceous fossils sent by Mr. Arthur Lakes from Bear Creek valley, near Morrison, Colorado	265-266
List of fossils sent by Mr. L. C. Wooster from the vicinity of Greeley, Colo	266
List of Cretaceous fossils sent by Mr. J. C. Hersey from Colorado	266-267
List of Cretaceous fossils sent by Capt. E. L. Berthoud from Colorado	267-268
List of Cretaceous fossils sent by Prof. B. F. Mudge from Dennison, Tex.	268
List of Cretaceous fossils sent by Mr. G. W. Marnoch from Helotes, Bexar County, Texas	268-269
List of Cretaceous fossils sent by D. H. Walker to the Smithsonian Institution from near Salado, Bell County, Texas	269-270
Concluding remarks	270-271

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.

	Page.
<i>Brachiopoda.</i>	
<i>Terebratulula</i> , Llhwyd	108
<i>T. semisimplex</i> , n. s., White, 1879	108
<i>T. augusta</i> , Hall & Whitfield	108-109
<i>Conchifera.</i>	
<i>Aviculepecten</i> , McCoy	109
<i>A. pealei</i> , n. s., White, 1879	109-110
<i>A. altus</i> , n. s., White, 1879	110
<i>A. idahoensis</i> , Meek	110-111
<i>Cephalopoda.</i>	
<i>Meekoceras</i> , n. g., Hyatt, 1879	111-112
<i>M. aplanatum</i> , n. s., White, 1879	112-113
<i>M. mushbachanus</i> , n. s., White, 1879	113-114
<i>M. gracilitatis</i> , n. s., White, 1879	114-116
<i>M. gracilitatis</i> var., White, 1879	116
<i>Arcestes</i> , Suess	116
<i>A. ? cirratus</i> , n. s., White, 1879	116-117
<i>Arcestes</i> ? ——— ? White, 1879	117
<i>Arcestes</i> ? ——— ? White, 1879	117

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.

CARBONIFEROUS.

	Page.
<i>Actinozoa.</i>	
<i>Leptopora</i> , Winchell.....	211
<i>L. winchelli</i> , n. s., White, 1879.....	211-212
<i>Echinodermata.</i>	
<i>Granatocrinus</i> , Troost.....	212
<i>G. lotoblastus</i> , White ? 1879.....	212-213
<i>Polyzoa.</i>	
<i>Archimedes</i> , Lesueur.....	213
<i>Archimedes</i> , ——— ? , White, 1879.....	213-214
<i>Ptilodyctia</i> , Lonsdale.....	214
<i>P. triangulata</i> , White, 1879.....	214-215
<i>Brachiopoda.</i>	
<i>Retzia</i> , King.....	215
<i>R. woosteri</i> , n. s., White, 1879.....	215-216
<i>Conchifera.</i>	
<i>Nuculana</i> , Link.....	217
<i>N. obesa</i> , n. s., White, 1879.....	216-216
<i>Nucula</i> , Lamarck.....	217
<i>N. perumbonata</i> , n. s., White, 1879.....	217
<i>Allorisma</i> , King.....	217
<i>A. ? gilberti</i> , n. s., White, 1879.....	217-218
<i>Gasteropoda.</i>	
<i>Bellerophon</i> , Menfort.....	218
<i>B. subpapillosus</i> , White, 1879.....	218-219
<i>Murchisonia</i> , D'Archiac.....	219
<i>M. terebra</i> , n. s., White, 1879.....	219
<i>Pleurotomaria</i> , DeFrance.....	219
<i>P. grayvillensis</i> , Nerwood & Pratten.....	219-220

CRETACEOUS FORMS.

<i>Actinozoa.</i>	
<i>Chaetetes</i> , Fischer.....	220
<i>C. ? ? dimissus</i> , n. s., White, 1879.....	220-221
<i>Beaumontia</i> , Edwards & Haime.....	221
<i>B. ? solitaria</i> , n. s., White, 1879.....	221

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.

LOWER SILURIAN.		Page.
<i>Mollusca.</i>		
<i>Brachiopoda.</i>		
<i>Strophomena</i> , Rafinesque		481
<i>S. alternata</i> , Conrad, pl. i, figs. 6 and 7		481-482
<i>S. planumbona</i> , Hall, pl. ii, figs. 13 and 14		483-484
<i>Orthis</i> , Dalman		484
<i>O. subquadrata</i> , Hall, pl. i, figs. 3-5		484-485
<i>O. occidentalis</i> , Hall, pl. ii, figs. 10-12		485-487
<i>O. bifurcata</i> , Schlotheim var. <i>acutilirata</i> , Conrad, pl. ii, figs. 5-9		487-489
<i>Rhynchonella</i> , Fischer		489
<i>R. capax</i> , Conrad, pl. i, figs. 9-11		489-490
<i>R. dentata</i> , Hall, pl. i, figs. 12-14		490-491
<i>Lamellibranchiata.</i>		
<i>Megaptera</i> , M. & W		491
<i>Ambonychia</i> (<i>Megaptera</i>) <i>casei</i> , M. & W., pl. i, figs. 1 and 2		491-492
<i>Gasteropoda.</i>		
<i>Cyclonema</i> , Hall		492
<i>C. biliz</i> , Conrad, pl. ii, figs. 3 and 4		492-493
<i>Crustacea.</i>		
<i>Trilobites.</i>		
<i>Calymene</i> , Brongniart		493
<i>C. senaria</i> , Conrad, pl. ii, figs. 1 and 2		493-495
UPPER SILURIAN.		
<i>Echinodermata.</i>		
<i>Eucalyptocrinus</i> , Goldfuss		495
<i>E. crassus</i> , Hall, pl. iii, fig. 1		495-496
<i>Brachiopoda.</i>		
<i>Rhynchonella</i> , Fischer		496
<i>R. tennesseensis</i> , Roemer, pl. iii, figs. 2-4		496-497
<i>Spirifer</i> , Sowerby		497
<i>S. radiata</i> , Sowerby, pl. iii, figs. 5 and 6		497
<i>Gasteropoda.</i>		
<i>Platystoma</i> , Conrad		497
<i>P. niagarensis</i> , Hall, pl. iii, figs. 7 and 8		497-498
<i>Crustacea.</i>		
<i>Trilobites.</i>		
<i>Cyphaspis</i> , Brummeister		498
<i>C. christyi</i> , Hall, pl. iii, fig. 9		498-499
DEVONIAN.		
<i>Polypi.</i>		
<i>Zaphrentis</i> , Rafinesque & Clifford		499
<i>Zaphrentis</i> — ? White, 1880, pl. v, figs. 3 and 4		499
<i>Favosites</i> , Lamarck		499
<i>Favosites</i> — ? White, 1880, pl. v, figs. 1 and 2		499
<i>Brachiopoda.</i>		
<i>Strophodonta</i> , Hall		500
<i>S. demissa</i> , Conrad, pl. iv, figs. 6 and 7		500-501
<i>Orthis</i> , Dalman		501
<i>O. iowensis</i> , Hall (?), pl. v, figs. 10-12		501-502
<i>Atrypa</i> , Dalman		502
<i>A. reticularis</i> , Linnaeus, pl. v, figs. 7-9		502
<i>Athyris</i> , McCoy		502
<i>A. vittata</i> , Hall, pl. iv, figs. 8 and 9		502-503
<i>Spirifer</i> , Sowerby		503

	Page.	
<i>S. acuminata</i> , Conrad, pl. iv, figs. 1-3	503-504	
<i>S. euritines</i> , Owen, pl. iv, figs. 4 and 5	504	
<i>S. gregaria</i> , Clapp, pl. iv, figs. 10 and 11	504-505	
<i>Lamellibranchiata.</i>		
<i>Paracyclas</i> , Hall	505	
<i>P. cliptieua</i> var. <i>occidentalis</i> , Hall, pl. v, figs. 5 and 6	505	
SUB-CARBONIFEROUS.		
<i>Polypi.</i>		
<i>Lithostrotion</i> , Fleming		
<i>L. mamillare</i> , Castelnau, pl. vi, figs. 1 and 2	506	
(<i>L. canadense</i> , Castelnau), pl. vi, figs. 1 and 2	506	
<i>Echinodermata.</i>		
<i>Taxocrinus</i> , Phillips	506	
<i>T. multibrachiatus</i> , Lyon & Cassady var. <i>colletti</i> , White, 1880, pl. vii, fig. 3.	506-507	
<i>Scaphiocrinus</i> , Hall	507	
<i>S. gibsoni</i> , White, 1878, pl. vii, fig. 7	507-508	
<i>S. gurleyi</i> , White, 1878, pl. vii, fig. 8	509	
<i>Actinocrinus</i> , Miller	510	
<i>A. wachsmuthi</i> , White, 1878, pl. vii, fig. 6	510	
<i>Pentremites</i> , Say	511	
<i>P. pyriformis</i> , Say, pl. vii, fig. 9	511	
<i>P. godoni</i> , DeFrance, pl. vii, figs. 10 and 11	511	
<i>P. conoides</i> , Hall, pl. vii, fig. 12	512	
<i>Brachiopoda.</i>		
<i>Spirifer</i> , Sowerby	512	
<i>S. textus</i> , Hall, pl. vii, figs. 1 and 2	512-513	
<i>Pteropoda.</i>		
<i>Conularia</i> , Miller	513	
<i>C. missouriensis</i> , Swallow? pl. vi, fig. 4	513	
<i>Gasteropoda.</i>		
<i>Platyceras</i> , Conrad	514	
<i>P. equilatera</i> , Hall, pl. vii, fig. 5	514	
<i>Cephalopoda.</i>		
<i>Goniatites</i> , De Haan	514	
<i>G. oweni</i> , Hall, pl. vii, figs. 3 and 4	515	
<i>Crustacea.</i>		
<i>Trilobites.</i>		
<i>Phillipsia</i> , Portlock	515	
<i>P. bufo</i> , M. & W., pl. vi, fig. 5	515-516	
COAL MEASURES.		
<i>Brachiopoda.</i>		
<i>Productus</i> , Sowerby	516	
<i>P. costatus</i> , Sowerby, pl. viii, figs. 7 and 8	516-517	
<i>Spirifer</i> , Sowerby	517	
<i>S. cameratus</i> , Morton, pl. viii, fig. 3	517-518	
<i>Lamellibranchiata.</i>		
<i>Allorisma</i> , King	518	
<i>A. subeuneata</i> , M. & H.? pl. viii, figs. 1 and 2	518-519	
<i>Gastropoda.</i>		
<i>Polyphenopsis</i> , Portlock	519	
<i>P. fusiformis</i> , Hall, pl. viii, fig. 6	519	
<i>Pleurotomaria</i> , DeFrance	519	
<i>P. tabulata</i> , Hall, pl. viii, figs. 4 and 5	519-520	
FOSSIL PLANTS.		
<i>Neuropteris</i>		520
<i>N. hirsuta</i> , Lesqx. pl. ix, figs. 1-3	520	
<i>N. rarineris</i> , Bunbury, pl. x, figs. 1-3	520-521	
<i>Callipteris</i>	521	
<i>C. sullivanti</i> , Lesqx. pl. ix, fig. 4	521	
<i>Annularia</i>	521	
<i>A. longifolia</i> , Brongniart? pl. xi, figs. 1 and 2	521-522	
<i>Odontopteris</i>	522	
<i>O. subcuneata</i> , Bunbury? pl. xi, fig. 3	522	
<i>Sphenopteris</i>	522	
<i>S. acuta</i> , Brongniart? pl. xi, fig. 4	522	

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 *Lecythocrinus* is proposed.

	Page.
<i>Actinozoa.</i>	
<i>Acerularia</i> , Schweigger	255
<i>A. adjunctiva</i> , n. s., White, 1879, plate i, figs. 1-3.....	255
<i>Echinodermata.</i>	
* <i>Lecythocrinus</i> , n. g., White, 1879	256-257
<i>L. olliculaformis</i> , n. s., White, 1879, pl. i, figs. 4 and 5.....	257
<i>Erisocrinus</i> , M. & W.	257
<i>E. planus</i> , n. s., White, 1879, pl. i, figs. 6 and 7	257-258
<i>Cyathocrinus</i> , Miller.....	258
<i>C. stillaticus</i> , n. s., White, 1879, pl. i, figs. 9 and 10	258-259
<i>Rhodocrinus</i> , Miller.....	259
<i>R. vesperalis</i> , n. s., White, 1879, pl. i, figs. 11 and 12.....	259-260
<i>Archaeocidaris</i> , McCoy.....	260
<i>A. diminnii</i> , n. s., White, 1879, pl. i, figs. 13 and 14.....	260

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.

* *Δγκύθιον*, 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.

	Page.
<i>Mollusca.</i>	
<i>Ostrea</i> , Linnaeus	293
Subgenus <i>Alectryonia</i> , Fischer	293
<i>O. (Alectryonia) blackii</i> , n. s., White, 1879, pl. iv, figs. 1 and 2	293
<i>Exogyra</i> , Say	293
<i>E. forniculata</i> , n. s., White, 1879, pl. iv, figs. 3 and 4	293-294
<i>E. winchelli</i> , n. s., White, 1879, pl. ii, figs. 1 and 2, and pl. iii, figs. 1 and 2	294-295
<i>Gervillia</i> , Defrance	295
<i>G. mudgeana</i> , n. s., White, 1879, pl. v, figs. 3 and 4	295-296
<i>Pteria</i> , Scopoli	296
Subgenus <i>Oxytoma</i> , Meek	296
<i>P. (Oxytoma) salinensis</i> , n. s., White, 1879, pl. v, figs. 1 and 2	296-297
<i>Pachymya</i> , Sowerby	297
<i>P. compacta</i> , n. s., White, 1879, pl. vi, figs. 3 and 4	297
<i>Thracia</i> , Leach	297
<i>T. myæformis</i> , n. s., White, 1879, pl. vi, figs. 1 and 2	297-298

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.

DESCRIPTIONS OF SPECIES.

<i>Echinodermata.</i>	
<i>Archæocidaris</i> , McCoy	xxii
<i>A. triplex</i> , n. s., White, 1881, pl. iv, figs. 3 <i>a-c</i>	xxii-xxiii
<i>Brachiopoda.</i>	
<i>Orthis</i> , Dalman	xxiii
<i>O. resupinoides</i> , Cox ? 1857, pl. iii, figs. 2 <i>a, b</i>	xxiii-xxiv
<i>Polyzoa.</i>	
<i>Ptilodictia</i> , Lonsdale	xxiv
<i>P. triangulata</i> , White, 1878, pl. iv, figs. 2 <i>a-e</i>	xxiv-xxv
<i>Conchifera.</i>	
<i>Myalina</i> , de Koninck	xxv
<i>M. permiana</i> , Swallow, 1[8]58, pl. iii, figs. 1 <i>a-d</i>	xxv-xxvii
<i>Pleurophorus</i> , King	xxvii
<i>P. subcostatus</i> , M. & W., 1866, pl. iii, fig. 8 <i>a</i>	xxvii
<i>Pteropoda.</i>	
<i>Conularia</i> , Miller	xxviii
<i>C. crustula</i> , White, 1880, pl. iii, figs. 4 <i>a, b</i>	xxviii
<i>Gasteropoda.</i>	
<i>Soleniscus</i> , M. & W.	xxviii
<i>S. brevis</i> , n. s., White, 1881, pl. iv, figs. 5 <i>a-c</i>	xxviii-xxix
<i>S. planus</i> , n. s., White, 1881, pl. iv, figs. 4 <i>a-c</i>	xxix-xxx
<i>Bellerophon</i> , Montfort	xxx
<i>B. inspeciosus</i> , n. s., White, 1881, pl. iv, figs. 1 <i>a-d</i>	xxx-xxxi
<i>Pleurotonaria</i> , Defrance	xxxi
<i>P. perizonata</i> , n. s., White, 1881, pl. iii, figs. 5 <i>a-c</i>	xxxi
<i>Murchisonia</i> , d'Archiac	xxxi
<i>M. copei</i> , n. s., White, 1881, pl. iii, figs. 10 <i>a, b</i>	xxxi-xxxii

	Page.
<i>Kotella</i> , Lamarek.....	xxxii
<i>R. verruculifera</i> , n. s., White, 1881, pl. iv, figs. 7 <i>a-d</i>	xxxii-xxxiii
<i>Naticopsis</i> , McCoy.....	xxxiii
<i>N. wheeleri</i> , Swallow, var. White, 1881, pl. iv, figs. 6 <i>a, b</i>	xxxiii-xxxiv
<i>N. monilifera</i> , White, 1880, pl. iii, figs. 3 <i>a-d</i>	xxxiv-xxxv
<i>N. altonensis</i> , McChesney, pl. iii, fig. 6 <i>a</i>	xxxv
<i>Loxonema</i> , Phillips.....	xxxv
<i>L. rugosa</i> , M. & W., pl. iii, fig. 7 <i>a</i>	xxxv
<i>Aelis</i> , Loven.....	xxxv
<i>A. ? stervensoni</i> , n. s., White, 1881, pl. iii, figs. 9 <i>a, b</i>	xxxv-xxxvi

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 *Acrothele*. <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 *Acrotrreta subsidua*, White, from Southern Utah, really belongs to the genus *Acrothele*, 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 stervensoni*) is only a variety of *P. petrina*, White.

	Page.
<i>Pinna stervensoni</i> , n. s., White, 1880.....	47-48

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.

Page.

<i>Tylostoma</i> , Sharpe.....	141
<i>T. princeps</i> , n. s., White, 1880, pl. ii, figs. 1 and 2.....	141-142

90.

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.

Page.

<i>Mollusca.</i>	
<i>Conchifera.</i>	
<i>Pteria</i> , Scopoli	157
Subgenus <i>Oxytoma</i> , Meek	157
<i>P. (Oxytoma) erecta</i> , n. s., White, 1880	157-158
<i>Solemya</i> , Lamarck	158
<i>S. bilix</i> , n. s., White, 1880	158
<i>Lucina</i> , Bruguière	158
<i>L. profunda</i> , n. s., White, 1880.....	158-159
<i>Gasteropoda.</i>	
<i>Planorbis</i> , Guettard.....	159
<i>P. æqualis</i> , n. s., White, 1880.....	159
Subgenus <i>Gyraulus</i> , Agassiz	159
<i>Planorbis (Gyraulus) militaris</i> , n. s., White, 1880.....	159-160
<i>Limnæa</i> , Lamarck	160
Subgenus <i>Leptolimnæa</i> , Swainson.....	160
<i>Limnæa (Leptolimnæa) minuscula</i> , n. s., White, 1880.....	160
<i>Helix</i> , Linnæus	160
Subgenus <i>Patula</i> , Haldeman.....	160
<i>H. (Patula) sepulta</i> , n. s., White, 1880.....	160
<i>Articulata.</i>	
<i>Vermes.</i>	
<i>Spirorbis</i> , Lamarck	161
<i>S. ? dickhauti</i> , n. s., White, 1880	161
<i>Crustacea.</i>	
<i>Callianassa</i> , Leach.....	161
<i>C. ulrichi</i> , n. s., White, 1880.....	161-162

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. ii.) <Neues Jahrbuch für Mineralogie, Geologie, und Palæontologie, ii Band, p. 403. 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-lv. Indianapolis, 1882.

Same. Indianapolis, 1882; svo, 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.

Description of fossils.

UPPER SILURIAN.

Mollusca.

Cephalopoda.

	Page.
<i>Gyroceras</i> , Meyer	356
<i>G. elrodi</i> , n. s., White, 1882, pl. xxxvii, fig. 1, and pl. xxxviii, figs. 2-4.....	356-358
<i>Orthoceras</i> , Breynius	358
<i>O. annulatum</i> , Sowerby, 1818, pl. xxxviii, fig. 1.....	358

SUBCARBONIFEROUS.

Gasteropoda.

<i>Patella</i> , Linnæus.....	359
<i>P. levettei</i> , n. s., White, 1882, pl. xxxix, figs. 4 and 5.....	359
<i>Bellerophon</i> , Montfort.....	359
<i>B. sublevis</i> , Hall, 1858, pl. xl, figs. 5-7	359-360
<i>B. gibsoni</i> , n. s., White, 1882, pl. xli, figs. 4-6.....	360-361

Brachiopoda.

<i>Terebratulula</i> , Lhwyd	361
<i>T. formosa</i> , Hall, 1858, pl. xxxix, figs. 6-8.....	361

Bryozoa.

<i>Archimedes</i> , Lesueur.....	361
<i>A. laxa</i> , Hall, 1857, pl. xli, fig. 7.....	361-362

Radiata.

Echinodermata.

<i>Lepidæsthes</i> , M. & W.....	362
<i>L. colletti</i> , White, 1878, pl. xli, figs. 2 and 3.....	362-363
<i>Agaricoerinus</i> , Troost.....	363
<i>A. springeri</i> , n. s., White, 1882, pl. xl, figs. 2-4.....	363-364
<i>Onychoerinus</i> , Lyon & Casseday	365
<i>O. excelsus</i> , Lyon & Casseday, 1860, pl. xl, fig. 1	365-366
<i>O. ramulosus</i> , Lyon & Casseday, 1859, pl. xxxix, figs. 2 and 3	366-367
<i>Cyathocrinus</i> , Miller.....	367
<i>C. multibrachiatus</i> , Lyon & Casseday, 1859, pl. xxxix, fig. 1.....	367
<i>Platycrinus</i> , Miller.....	368
<i>P. hemisphericus</i> , M. & W., 1865, pl. xli, fig. 1.....	368-369

Protista.

Porifera.

<i>Palæracis</i> , Haine.....	369
<i>P. cuneatus</i> , M. & W., 1860, pl. xli, figs. 8 and 9	369-370

COAL-MEASURES.

Mollusca.

Gasteropoda.

<i>Polyphcmopsis</i> , Portlock	370
<i>P. nitidula</i> , M. & W., pl. xlii, figs. 7 and 8	370-371

Conchifera.

<i>Nucula</i> , Lamarck	371
<i>N. ventricosa</i> , Hall, 1858, pl. xlii, figs. 9 and 10	371-372

Brachiopoda.

<i>Spirifer</i> , Sowerby	372
Subgenus <i>Martinia</i> , McCoy	372
<i>S. (Martinia) lineatus</i> , Martin, pl. xlii, figs. 4-6	372-373
<i>Productus</i> , Sowerby	373
<i>P. punctatus</i> , Martin, pl. xlii, figs. 1-3	373

FOSSIL PLANTS.

Taonurus.

<i>T. colleti</i> , Lesquereux, 1870, pl. xliii, fig. 1	374
<i>Sphenophyllum</i> , Brongniart	374
<i>S. schlotheimii</i> , Brongniart, pl. xliii, fig. 2	374-375
<i>S. emarginatum</i> , Brongniart, pl. xliii, fig. 3	375
Van Cleve's Fossil Corals, identified by C. A. White, M. D.	375

LOWER SILURIAN.

<i>Streptelasma</i> , Hall	376
<i>S. corniculum</i> , Hall, pl. li, figs. 2-4	376
<i>Palæophyllum</i> , Billings	377
<i>P. divaricans</i> , Nicholson, pl. lii, fig. 4	377-378
<i>Favistella</i> , Hall	378
<i>F. stellata</i> , Hall, pl. xliv, figs. 1 and 2	378
<i>Protarea</i> , Edwards & Haime	378
<i>P. vetusta</i> , Edwards & Haime, pl. xlix, fig. 4	378-379
<i>Constellaria</i> , Dana	379
<i>C. antheloidea</i> , Hall, pl. xlv, figs. 1-3	379-380
<i>Monticulipora</i> , d'Orbigny	380
<i>M. frondosa</i> , d'Orbigny, pl. xlviii, figs. 2 and 3	380-381

UPPER SILURIAN.

<i>Lyellia</i> , Edwards & Haime	381
<i>L. americana</i> , Edwards & Haime, pl. xlvii, fig. 5	381-382
<i>Halysites</i> , Fischer	382
<i>H. catenulata</i> , Linnaeus, pl. xlv, figs. 4-7	382
<i>Helolites</i> , Dana	383
<i>H. elegans</i> , Hall, pl. xlviii, fig. 4	383
<i>Favosites</i> , Lamarck	383
<i>F. favosus</i> , Goldfuss, pl. lii, figs. 1 and 2	383-384
<i>Cladopora</i> , Hall	384
<i>C. reticulata</i> , Hall, pl. xlvii, fig. 6	384-385
<i>Clathropora</i> , Hall	385
<i>C. frondosa</i> , Hall, pl. lv, fig. 3	385-386

DEVONIAN.

<i>Acerularia</i> , Schweigger	386
<i>A. davidsoni</i> , Edwards & Haime, pl. xlix, fig. 2	386
<i>Diphyphyllum</i> , Lonsdale	387
<i>D. archiaci</i> , Billings, pl. i, fig. 1	387
<i>D. stramineum</i> , Billings, pl. xlviii, fig. 1	388
<i>D. arundinaceum</i> , Billings, pl. li, fig. 1	389-390
<i>Eridophyllum</i> , Edwards & Haime	390
<i>E. strictum</i> , Edwards & Haime, pl. xlix, fig. 1	390-391
<i>Cystiphyllum</i> , Lonsdale	391
<i>C. vesiculosum</i> , Goldfuss, pl. lv, figs. 1 and 2	391-392
<i>Zaphrentis</i> , Rafinesque	393
<i>Z. rafinesquii</i> , Edwards & Haime, pl. xlv, figs. 3-5	393
<i>Amplexus</i> , Sowerby	393

	Page
<i>A. yandelli</i> , Edwards & Haime, pl. xlv, figs. 1 and 2.....	393-394
<i>Favosites</i> , Lamarck	394
<i>F. basaltica</i> , Goldfuss, pl. liv, fig. 1	394-395
<i>F. polymorpha</i> , Goldfuss, pl. l, fig. 2, pl. liii, figs. 1 and 2	395
<i>F. polymorpha</i> var. <i>dubia</i> , Nicholson, 1874, pl. liii, fig. 3	396
<i>Favosites</i> — (?) White, 1882, pl. liv, fig. 2	396
<i>Fistulipora</i> , McCoy	396
<i>F. canadensis</i> , Billings, pl. xlvii, figs. 1 and 2.....	396-397
<i>Alveolites</i> .	
<i>A. goldfussi</i> , Billings, pl. liv, fig. 3.....	397-398
<i>Striatopora</i> , Hall	398
<i>S. linnaeana</i> , Billings, pl. xlvii, fig. 7.....	398
<i>Syringopora</i> , Goldfuss	398
<i>S. perelegans</i> , Billings, pl. xlix, fig. 3	398-399
<i>S. maclurei</i> , Billings, pl. xlvii, fig. 3.....	399-400
<i>Stromatopora</i> , Blainville	400
<i>S. pustulifera</i> , Winchell ? pl. liii, figs. 4 and 5	400

SUBCARBONIFEROUS.

<i>Lithostroton</i> , Fleming	401
<i>L. mamillare</i> , Castelnaud, pl. lii, fig. 3.....	401

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.

	Page.
<i>Callianassa ulrichi</i> , White, 1880, pl. i, figs. 10 and 11.....	137
<i>Tubulostium dickhauti</i> , White, 1880, pl. i, figs. 12 and 13.....	138
<i>Cantharus? julesburgensis</i> , n. s., White, 1882, pl. i, figs. 1 and 2.....	138
<i>Lucina profunda</i> , White, 1880, pl. i, figs. 5 and 6.....	138
<i>Lucina cleburni</i> , n. s., White, 1882, pl. i, figs. 3 and 4.....	139
<i>Solemya bilix</i> , White, 1880, pl. i, fig. 9.....	139
<i>Pteria (Oxytoma) erecta</i> , White, 1880, pl. i, figs. 7 and 8.....	139

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. Jemey, 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. 1-33; 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.

CRETACEOUS.

	Page.
Actinozoa.	
<i>Chaetetes</i> Fischer.....	7
<i>C. ? dimissus</i> , White, 1879, pl. xii, fig. 14 a.....	7
<i>Beaumontia</i> , Edwards & Haime.....	8
<i>B. ? solitaria</i> , n. s., White, 1880, pl. xii, figs. 13 a-c.....	8
Echinodermata.	
<i>Ophioderma</i>	8
<i>O. ? bridgerensis</i> , Meek, 1873, pl. xii, fig. 12 a.....	8-9
Conchifera.	
<i>Ostrea</i> , Linnæus.....	9
<i>O. soleniscus</i> , Meek, 1873, pl. xi, figs. 2 a, b.....	9-10
<i>O. anomioides</i> , Meek, 1873, pl. xi, figs. 4 a, b.....	10-11
Subgenus <i>Alectryonia</i> , Fischer.....	11
<i>O. (Alectryonia) blackii</i> , White, 1880, pl. xiv, figs. 1 a, b; pl. xvii, fig. 4 a.....	11-12
<i>Exogyra</i> , Say.....	12
<i>E. winchelli</i> , White, 1880, pl. xiii, figs. 1 a-d.....	12
<i>E. forniculata</i> , White, 1880, pl. xiv, figs. 2 a, b.....	13-14
<i>Anomia</i> , Linnæus.....	14
<i>A. propatoris</i> , n. s., White, 1880, pl. xii, figs. 15 a, b.....	14-15
<i>Pteria</i> , Scopoli.....	15
<i>P. ? ? stabilitatis</i> , n. s., White, 1880, pl. xvii, fig. 3 a.....	15
Subgenus <i>Oxytoma</i> , Meek.....	15
<i>P. (Oxytoma) salinensis</i> , White, 1880, pl. xvi, figs. 2 a, b.....	15-16
<i>Gervillia</i> , DeFrance.....	16
<i>G. mudgeana</i> , White, 1880, pl. xiv, figs. 3 a, b.....	16-17
<i>Pinna</i> , Linnæus.....	17
<i>P. lakesii</i> , White, 1879, pl. xi, figs. 1 a, b.....	17-18
<i>Volzella</i> , Scopoli.....	18
Subgenus <i>Brachydontes</i> , Swainson.....	18
<i>V. (Brachydontes) multinigera</i> , Meek, 1873, pl. xi, fig. 3 a.....	18-19
<i>Barbatia</i> , Gray.....	19
<i>B. barbulata</i> , n. s., White, 1880, pl. xi, fig. 5 a.....	19
<i>Cyrena</i> , Lamarck.....	20
<i>C. carletoni</i> , Meek, 1873, pl. xii, figs. 16 a, b.....	20-21
<i>Pharella</i> , Gray.....	21
<i>P. ? pealei</i> , Meek, 1873, pl. xi, figs. 6 a, b.....	21-22
<i>Tapes</i> , Mühlfeldt.....	22
<i>T. hilgardi</i> , Shumard, 1860, pl. xvi, figs. 3 a-c.....	22
<i>Pachymya</i> , Sowerby.....	22
<i>P. ? compacta</i> , White, 1880, pl. xvii, figs. 4 a, b.....	22-23
<i>Thracia</i> , Leach.....	23
<i>T. myaformis</i> , White, 1880, pl. xvii, figs. 2 a, b.....	23
Gasteropoda.	
<i>Melampus</i> , Montfort.....	23
<i>M. ? antiquus</i> , Meek, 1873, pl. xii, figs. 11 a-d.....	23-25
<i>Melampus</i> — ? Meek, 1873, pl. xii, fig. 6 a.....	25
<i>Neritina</i> , Lamarck.....	25
<i>N. bannisteri</i> , Meek, 1873, pl. xii, figs. 10 a-c.....	25-26
<i>N. pisiformis</i> , Meek, 1873, pl. xii, figs. 9 a-c.....	26-27
Subgenus <i>Velatella</i> , Meek.....	27
<i>N. (Velatella) bellatula</i> , Meek, 1873, pl. xii, figs. 8 a, b.....	27-28
<i>N. (Velatella) carditoides</i> , Meek, 1873, pl. xii, fig. 7 a.....	28-29
<i>Euspira</i> , Agassiz.....	29
<i>E. utahensis</i> , White.....	29
<i>Tessarolax</i> , Gabb.....	29
<i>T. hirtzii</i> , n. s., White, 1880, pl. xv, fig. 2 a.....	29-30
<i>Lispedesthes</i> , White.....	30
<i>L. ? obscurata</i> , n. s., White, 1880, pl. xi, figs. 7 a, b.....	30-31
<i>Turritella</i> , Lamarck.....	31
<i>T. spironema</i> , Meek, 1873, pl. xii, fig. 3 a.....	31-32
<i>Eulimella</i> , Forbes.....	32
<i>E. ? chrysallis</i> , Meek, 1873, pl. xii, fig. 4 a.....	32-33
<i>E. ? inconspicua</i> , Meek, 1873, pl. xii, fig. 5 a.....	33
<i>Valvata</i> Müller.....	33
<i>V. nana</i> , Meek, 1873, pl. xii, figs. 17 a, b.....	33-34

	Page.
<i>Fusus</i> , Lamarck	34
<i>F. ? utahensis</i> , Meek, 1873, pl. xii, fig. 2 <i>a</i>	34
<i>Fasciolaria</i> , Lamarck	34
Subgenus <i>Piostocheilus</i> , Meek	34
<i>F. (Piostocheilus) alleni</i> , n. s., White, 1880, pl. xii, fig. 1 <i>a</i>	34-35
<i>Cephalopoda</i> .	
<i>Prionocyclus</i> , Meek	35
<i>P. wyomingensis</i> , Meek, 1876, pl. xv, figs. 1 <i>a-e</i>	35-36
<i>Articulata</i> .	
<i>Crustacea</i> .	
<i>Paramithrax</i> , Milne-Edwards	37
<i>P. ? walkeri</i> , n. s., 1880, Whitfield, pl. xvi, fig. 1 <i>a</i> , and pl. xvii, fig. 1 <i>a</i>	37-38

Appendix to Contributions to Invertebrate Paleontology No. 2.

<i>Cidarid hemigranosus</i> , Shumard, pl. xviii, figs. 2 <i>a, b</i>	38
<i>Gervillia gregaria</i> , Shumard, pl. xviii, fig. 3 <i>a</i>	38
<i>Nucula bellastrata</i> , Shumard, pl. xviii, figs. 5 <i>a-c</i>	38
<i>Nucula haydeni</i> , Shumard, pl. xviii, figs. 6 <i>a, b</i>	38
<i>Cardium choctawense</i> , Shumard, pl. xviii, figs. 7 <i>a-c</i>	38
<i>Cytheria lamarensis</i> , Shumard, pl. xviii, figs. 4 <i>a, b</i>	39
<i>Ancyloceras annulatum</i> , Shumard, pl. xviii, figs. 10 <i>a, b</i>	39
<i>Scaphites vermiculus</i> , Shumard, pl. xviii, fig. 8 <i>a</i>	39
<i>Ammonites graysonensis</i> , Shumard, pl. xviii, figs. 9 <i>a, b</i>	39
<i>Ammonites swallowii</i> , Shumard, pl. xviii, fig. 1 <i>a</i>	39

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.

	Page.
<i>Conchifera</i> .	
<i>Unio</i> , Retzius	41
<i>U. shoshonensis</i> , White, 1876, pl. xix, figs. 2 <i>a, b</i>	41-42
<i>U. washakiensis</i> , Meek, 1871, pl. xix, figs. 3 <i>a, b</i>	42-43
<i>U. meeki</i> , White, 1877, pl. xix, fig. 1 <i>a</i>	43-44
<i>Gasteropoda</i> .	
<i>Planorbis</i> , Müller	44
<i>P. cirratus</i> , White, 1879, pl. xix, figs. 5 <i>a-c</i>	44-45
<i>Physa</i> , Draparnaud	45
<i>P. bridgerensis</i> , Meek, 1873, pl. xix, figs. 10 <i>a, b</i>	45
<i>Succinea</i> , Draparnaud	45
Subgenus <i>Brachyspira</i> , Pfeiffer	45
<i>S. (Brachyspira) papillispira</i> , White, 1876, pl. xix, fig. 4 <i>a</i>	45-46
<i>Pupa</i> , Lamarck	46
<i>P. arenula</i> , White, 1876, pl. xix, figs. 8 <i>a, b</i>	46
<i>P. atavuncula</i> , n. s., White, 1880, pl. xix, fig. 9 <i>a</i>	46-47
Subgenus <i>Leucocheila</i> , Albers	47
<i>P. (Leucocheila) incolata</i> , White, 1876, pl. xix, figs. 7 <i>a-c</i>	47
<i>Bythinella</i> , Moquin-Tandon	48
<i>B. gregaria</i> , Meek, 1871, pl. xix, figs. 6 <i>a, b</i>	48

106.

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.

	Page.
<i>Conchifera.</i>	
<i>Ostrea</i> , Linnaeus.....	56
<i>O. glabra</i> , M. & H., 1857.....	56
<i>Anomia</i> , Linnaeus.....	57
<i>A. gryphorhynchus</i> , Meek, 1872, pl. xxv, figs. 1 <i>c-c</i>	57
<i>A. micronema</i> , Meek, 1875, pl. xxv, figs. 2 <i>a-d</i>	57-58
<i>Volseia</i> , Scopoli.....	58
Subgenus <i>Brachydontes</i> , Swainson.....	58
<i>V. (Brachydontes) regularis</i> , White, 1878, pl. xxv, fig. 3 <i>a</i>	58-59
<i>V. (Brachydontes) laticostata</i> , White, 1878, pl. xxv, fig. 4 <i>a</i>	59
<i>Azinea</i> , Poli.....	59
<i>A. hobbesiana</i> , n. s., White, 1880, pl. xx, figs. 2 <i>a, b</i>	59-60
<i>Nuculana</i> , Link.....	60
<i>N. inclara</i> , White, 1878, pl. xxv, fig. 7 <i>a</i>	60, 61
<i>Anodonta</i> , Cuvier.....	61
<i>A. propatoris</i> , White, 1877, pl. xxiv, figs. 2 <i>a-d</i>	61-62
<i>A. parallela</i> , White, 1878, pl. xxiv, fig. 3 <i>a</i>	62
<i>Unio</i> , Retzius.....	62
<i>U. aldrichi</i> , White, 1878, pl. xxix, figs. 2 <i>a, b</i>	62-63
<i>U. goniambonatus</i> , White, 1878, pl. xxix, figs. 1 <i>a, b</i>	63-64
<i>U. brachyopisthus</i> , White, 1876, pl. xxii, figs. 2 <i>a, b</i>	64
<i>U. conesi</i> , White, 1877, pl. xxvii, fig. 1 <i>a</i>	64, 65
<i>U. propheticus</i> , White, 1876, pl. xxii, fig. 5 <i>a</i>	65
<i>U. proavitus</i> , White, 1877, pl. xxii, figs. 3 <i>a-d</i>	65-66
<i>U. enilichi</i> , White, 1877, pl. xxvi, figs. 1 <i>a, b</i>	66-67
<i>U. hobbesianus</i> , White, 1877, pl. xxii, figs. 4 <i>a-e</i>	67-68
<i>U. danov</i> , M. & H. ? pl. xxvii, figs. 2 <i>a, b</i>	68
<i>U. cryptorhynchus</i> , White, 1877, pl. xxiv, figs. 1 <i>a, b</i>	68-69
<i>U. senectus</i> , White, 1877, pl. xxviii, figs. 1 <i>a-c</i>	69
<i>U. primævus</i> , White, 1877, pl. xxix, figs. 3 <i>a, b</i>	70
<i>U. priscus</i> , M. & H.....	70
<i>U. subspatulatus</i> , M. & H.....	71
<i>U. deweyanus</i> , M. & H.....	71
<i>U. vetustus</i> , Meek.....	71
<i>U. belliplicatus</i> , Meek.....	71
<i>U. gonionotus</i> , White, 1876, pl. xxvi, figs. 2 <i>a-e</i>	71-72
<i>Sphærium</i> , Scopoli.....	72
<i>S. planum</i> , M. & H.....	72
<i>S. recticardinale</i> , M. & H.....	72
<i>S. formosum</i> , M. & H.....	72
<i>S. subellipticum</i> , M. & H.....	72
<i>Corbicula</i> , Megerle.....	72
<i>C. obesa</i> , White, 1878, pl. xxiii, figs. 3 <i>a-e</i>	72-73
<i>C. cardiniiformis</i> , White, 1878, pl. xxv, figs. 5 <i>a, b</i>	73
<i>C. cleburni</i> , White, 1878, pl. xxiii, figs. 1 <i>a-e</i>	73-74
<i>C. cytheriformis</i> , M. & H., pl. xxi, figs. 4 <i>a-d</i>	74
<i>C. nebrascensis</i> , M. & H.....	74
<i>C. occidentalis</i> , M. & H., 1856, pl. xxi, figs. 3 <i>a-c</i>	75
Subgenus <i>Leptesthes</i> , Meek.....	75
<i>C. (Leptesthes) fracta</i> , Meek, 1871, pl. xxiii, figs. 2 <i>a-e</i> and pl. xxi, fig. 5 <i>a</i>	75-77
<i>C. (Leptesthes) planumbona</i> , Meek, 1875, pl. xxi, figs. 2 <i>a-d</i>	77-78
<i>C. (Leptesthes) macropistha</i> , White, 1878, pl. xxiii, figs. 4 <i>a-f</i>	78-79
<i>C. (Leptesthes) subelliptica</i> , M. & H.....	79
Subgenus <i>Veloritina</i> , Meek.....	79
<i>C. (Veloritina) durkei</i> , Meek.....	79-80
<i>Corbula</i> , Bruguière.....	80
<i>C. subtrigonalis</i> , M. & H.....	80
<i>C. perundata</i> , M. & H.....	80
<i>C. crassatelliformis</i> , Meek.....	80
<i>C. tropidophora</i> , Meek.....	80

	Page.
<i>C. mactriiformis</i> , M. & H.	80
<i>C. undifera</i> , Meek, 1873, pl. xxix, figs. 4 <i>a-f</i>	80-81
<i>C. undifera</i> var. <i>subundifera</i> , White, 1880, pl. xxix, figs. 5 <i>a-c</i>	81-82
<i>C. pyriformis</i> , Meek	82
<i>Gasteropoda.</i>	
<i>Rhytrophorus</i> , Meek	82
<i>R. priscus</i> , Meek	82
<i>R. meekii</i> , n. s., White, 1880, pl. xxx, figs. 8 <i>a, b</i>	82-83
<i>Acroloxus</i> , Beck	83
<i>A. minutus</i> , M. & H.	83
<i>Planorbis</i> , Müller	83
<i>P. convolutus</i> , M. & H.	83
Subgenus <i>Bathyomphalus</i> , Agassiz	83
<i>P. (Bathyomphalus) amplexus</i> , M. & H.	83
<i>P. (Bathyomphalus) planoconvexus</i> , M. & H.	83
<i>Linnaea</i> , Lamarck	84
<i>L. nitidula</i> , Meek	84
Subgenus <i>Pleurolinnæa</i> , Meek	84
<i>L. (Pleurolinnæa) tenuicostata</i> , M. & H.	84
<i>Acella</i> , Haldeman	84
<i>A. haldemani</i> , White, 1878, pl. xxx, figs. 9 <i>a, b</i>	84
<i>Physa</i> , Draparnaud	84
<i>P. felix</i> , White, 1878, pl. xxii, fig. 1 <i>a</i>	84-85
<i>P. copei</i> , White, 1877, pl. xxiv, figs. 4 <i>a, b</i>	85
<i>Physa</i> .——? White, 1883, pl. xxx, fig. 11 <i>a</i>	85
<i>Bulinus</i> , Adanson	86
<i>B. atuvus</i> , White, 1877, pl. xxiv, figs. 5 <i>a, b</i>	86
<i>B. disjunctus</i> , White, 1879, pl. xxiv, figs. 6 <i>a, b</i>	86-87
<i>B. longiusculus</i> , M. & H.	87
<i>B. ? rhomboideus</i> , M. & H.	87
<i>B. subelongatus</i> M. & H.	87
<i>Vitrina</i> , Draparnaud	87
<i>V. ? obliqua</i> , M. & H.	87
<i>Hyalina</i> , Férussac	87
<i>H. ? occidentalis</i> , M. & H.	87
<i>H. ? evansi</i> , M. & H.	87-88
<i>Helix</i> , Linnaeus	88
<i>H. vetusta</i> , M. & H.	88
<i>Thaumastus</i> , Albers	88
<i>T. limnæiformis</i> , M. & H.	88
<i>Columna</i> , Perry	88
<i>C. teres</i> , M. & H.	88
<i>C. vermicula</i> , M. & H.	88
<i>Neritina</i> , Lamarck	88
<i>N. volvilineata</i> , White, 1876, pl. xxi, figs. 6 <i>a, b</i>	88-89
<i>N. naticiformis</i> , White, 1878, pl. xxx, figs. 3 <i>a, b</i>	89
Subgenus <i>Velatella</i> , Meek	89
<i>N. (Velatella) baptista</i> , White, 1878, pl. xxix, figs. 6 <i>a, b</i>	89-90
<i>Cerithidea</i> , Swainson	90
Subgenus <i>Pirenella</i> , Gray	90
<i>C. (Pirenella) nebrascensis</i> , M. & H.	90
<i>Goniobasis</i> , Lea	90
<i>G. cleburni</i> , White, 1876, pl. xxx, figs. 4 <i>a-d</i>	91
<i>G. chrysallis</i> , Meek, 1871, pl. xxx, figs. 6 <i>a, b</i>	91-92
<i>G. chrysalloidea</i> , White, 1876, pl. xxx, figs. 5 <i>a, b</i>	92
<i>G. endlichi</i> , White, 1878, pl. xxx, figs. 7 <i>a-c</i>	92-93
<i>G. macilenta</i> , White, 1879, pl. xxx, fig. 10 <i>a</i>	93
<i>G. gracilenta</i> , M. & H.	94
<i>G. convexa</i> , M. & H.	94
<i>G. invcnusta</i> , M. & H.	94
<i>G. sublaevis</i> , M. & H.	94
<i>G. ? omitta</i> , M. & H.	94
<i>G. ? subtortuosa</i> , M. & H.	94
<i>G. nebrascensis</i> , M. & H.	94

	Page.
<i>G. tenuicarinata</i> , M. & H.	94
<i>Melania</i> , Lamarck	94
<i>M. ? insculpta</i> , Meek, 1873, pl. xx, fig. 4 a	94-95
<i>M. wyomingensis</i> , Meek, 1873, pl. xxviii, figs. 6 a, b	95-96
<i>Pyrgulifera</i> , Meek	96
<i>P. humerosa</i> , Meek	96
<i>Cassiopella</i> , White	96-97
<i>C. turricula</i> , White, 1876, pl. xxvii, figs. 3 a-g	97
<i>Hydrobia</i> , Hartmann	97
<i>H. anthonyi</i> , M. & H.	97
<i>H. warrenana</i> , M. & H.	97
<i>H. subconica</i> , M. & H.	97
<i>H. ? culmoides</i> , M. & H.	97
<i>Micropyrgus</i> , Meek	98
<i>M. minutulus</i> , M. & H.	98
<i>Viviparus</i> , Montfort	98
<i>V. plicapressus</i> , White, 1876, pl. xxviii, figs. 3 a, b	98
<i>V. prudentius</i> , White, 1878, pl. xxviii, figs. 5 a, b	98-99
<i>V. couesi</i> , White, 1878, pl. xxx, fig. 1 a	99
<i>V. lei</i> , M. & H.	100
<i>V. retusus</i> , M. & H.	100
<i>V. peculiaris</i> , M. & H.	100
<i>V. trochiformis</i> , M. & H.	100
<i>V. reynoldsianus</i> , M. & H.	100
<i>V. leidy</i> , M. & H.	100
<i>V. conradi</i> , M. & H.	100
<i>Tulotoma</i> , Haldeman	100
<i>T. thompsoni</i> , White, 1876, pl. xxviii, figs. 2 a-h	100-101
<i>Campeloma</i> , Rafinesque	101
<i>C. vetula</i> , M. & H.	101
<i>C. multistriata</i> , M. & H.	101
<i>C. multilincata</i> , M. & H.	101
<i>C. macrospira</i> , Meek, pl. xxx, fig. 2 a	102
<i>Valvata</i> , Müller	102
<i>V. subumbilicata</i> , M. & H.	102
<i>V. parvula</i> , M. & H.	102
<i>V. ? montanaensis</i> , Meek	102
<i>Odontobasis</i> , Meek	102
<i>O. buccinoides</i> , White, 1876, pl. xx, figs. 3 a, b	102-103
<i>O. ? formosa</i> , White, 1878, pl. xxviii, fig. 7 a	103

107.

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.)

	Page.
<i>Brachiopoda</i> .	
<i>Terebratula</i> , Lliwyd	108
<i>T. semisimplex</i> , White, 1879, pl. xxxi, figs. 3 a-c	108-109
<i>T. augusta</i> , H. & Whitf. ?	109
<i>Conchifera</i> .	
<i>Aviculopecten</i> , McCoy	109
<i>A. ? pealei</i> , White, 1879, pl. xxxii, fig. 4 a	109-110
<i>A. ? altus</i> , White, 1879, pl. xxxii, fig. 3 a	110
<i>A. ? idahoensis</i> , Meek, 1872, pl. xxxii, fig. 2 a	110-111
<i>Cephalopoda</i> .	
<i>Meekoceras</i> , Hyatt	112
<i>M. apian[?]um</i> , White, 1879, pl. xxxi, figs. 1 a-d	112-113
<i>M. mushbachianum</i> , White, 1879, pl. xxxii, figs. 1 a-d	114

	Page.
<i>M. gracilitatis</i> , White, 1879, pl. xxxi, figs. 2 <i>a-d</i>	115-116
<i>M. gracilitatis</i> var., White, 1880	116
<i>Arcestes</i> , Suess	116
<i>A. ? cirratus</i> , White, 1879	116-117
<i>Arcestes</i> ——— ? White? 1880	117-118

108.

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.

	Page.
Actinozoa.	
<i>Amplexus</i> , Sowerby	120
<i>A. zaphrentiformis</i> , White, 1876, pl. xxxiii, figs. 1 <i>a-d</i>	120
<i>Acercularia</i> , Schweigger	120
<i>A. adjunctiva</i> , White, 1880, pl. xxxv, figs. 1 <i>a-d</i>	120-121
<i>Leptopora</i> , Winchell	121
<i>L. winchelli</i> , White, 1879, pl. xxxiv, fig. 11 <i>a</i>	121-122
Echinodermata.	
<i>Platycrinus</i> , Miller	122
<i>P. haydeni</i> , Meek, 1873, pl. xxxiii, fig. 7 <i>a</i>	122-123
<i>Lecythocrinus</i> , White	123
<i>L. olliculæformis</i> , White, 1880, pl. xxxv, figs. 2 <i>a, b</i>	124
<i>Eupachycrinus</i> , M. & W.	124
<i>E. platybasis</i> , White, 1876, pl. xxxiii, fig. 8 <i>a</i>	124-125
<i>Cyathocrinus</i> , Miller	125
<i>C. stillativus</i> , White, 1880, pl. xxxv, figs. 3 <i>a, b</i>	125
<i>Erisocrinus</i> , M. & W.	126
<i>E. typus</i> , M. & W., 1866, pl. xxxiii, fig. 5 <i>a</i>	126-127
<i>E. (Ceriocrinus) planus</i> , White, 1880, pl. xxxv, figs. 5 <i>a, b</i>	127-128
<i>E. (Ceriocrinus) inflexus</i> , Geinitz, 1866, pl. xxxiv, figs. 9 <i>a, b</i>	128
<i>Poteriocrinus</i> , Miller	128
<i>P. montanaensis</i> , Meek, 1873, pl. xxxiii, fig. 6 <i>a</i>	128-129
<i>Rhodocrinus</i> , Miller	129
<i>R. vespertilis</i> , White, 1880, pl. xxxv, figs. 4 <i>a, b</i>	129-130
<i>Archæocidaris</i> , McCoy	130
<i>A. eratis</i> , White, 1876, pl. xxxiii, fig. 2 <i>a</i>	130
<i>A. diminnii</i> , White, 1880, pl. xxxv, figs. 6 <i>a-c</i>	131
Polyzoa.	
<i>Ptilodictia</i> , Lonsdale	131
<i>P. triangulata</i> , White, 1878, pl. xxxiii, figs. 3 <i>a-e</i>	131-132
Brachiopoda.	
<i>Productus</i> , Sowerby	132
<i>P. giganteus</i> , Martin, pl. xxxvi, figs. 1 <i>a-c</i>	132
<i>Rhynchonella</i> , Fischer	133
<i>R. eadlachi</i> , Meek, 1875, pl. xxxiii, figs. 4 <i>a, b</i> , and pl. xxxvi, figs. 2 <i>a, b</i>	133-134
<i>Retzia</i> , King	134
<i>R. woosteri</i> , White, 1879, pl. xxxiv, figs. 8 <i>a, b</i>	134
<i>Spirifer</i> , Sowerby	135
<i>S. agelaius</i> , Meek, 1873, pl. xxxiv, figs. 10 <i>a, b</i>	135
Conchifera.	
<i>Nucula</i> , Lamarck	136
<i>N. perumbonata</i> , White, 1879, pl. xxxiv, figs. 7 <i>a, b</i>	136
<i>Nuculana</i> , Link	136
<i>N. obesa</i> , White, 1879, pl. xxxiv, figs. 2 <i>a-c</i>	136-137
<i>Allorisma</i> , King	137
<i>A. ? gilberti</i> , White, 1879, pl. xxxiii, figs. 9 <i>a, b</i>	137-138

<i>Gastropoda.</i>	Page.
<i>Bellerophon</i> , Montfort.....	138
<i>B. subpapillosus</i> , White, 1879, pl. xxxiv, fig. 3 a.....	138
<i>Naticopsis</i> , McCoy.....	139
<i>N. remex</i> , White, 1876, pl. xxxiv, fig. 6 a.....	139
<i>Murchisonia</i> , d'Archiac.....	139
<i>M. terebra</i> , White, 1879, pl. xxxiv, fig. 4 a.....	139-140
<i>Pleurotomaria</i> , DeFrance.....	140
<i>P. taggerti</i> , Meek, 1874, pl. xxxiv, figs. 1 a, b.....	140
<i>P. grayvillensis</i> , Norwood & Pratten, 1855, pl. xxxiv, fig. 5 a.....	140-141

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.

	Page.
<i>Camptoneetes</i> (Agassiz), Meek.....	143
<i>C. platessiformis</i> , White, 1876, pl. xxxvii, fig. 5 a.....	143-144
<i>Ariculopecten</i> , McCoy.....	144
<i>A. ? superstrictus</i> , n. s., White, 1880, pl. xxxvii, figs. 4 a, b.....	144
<i>Gervillia</i> , DeFrance.....	145
<i>G. montanaensis</i> , Meek, 1873, pl. xxxvii, figs. 1 a, b.....	145
<i>Volsella</i> , Seepoli.....	145
<i>V. subimbricata</i> , Meek, 1873, pl. xxxvii, figs. 2 a-c.....	145-146
<i>V. (Modiolina) platynota</i> , n. s., White, 1880, pl. xxxvii, figs. 3 a, b.....	146-147
<i>Mytilus</i> , Linnæus.....	147
<i>M. whitei</i> , Whitfield, 1877, pl. xxxvii, fig. 9 a.....	147
<i>Trigonia</i> , Bruguière.....	147
<i>T. montanaensis</i> , Meek, 1873, pl. xxxviii, fig. 2 a.....	147-148
<i>T. americana</i> , Meek, 1873, pl. xxxviii, figs. 1 a, b.....	148
<i>Astarte</i> , Sowerby.....	149
<i>A. packardii</i> , n. s., White, 1880, pl. xxxvii, figs. 6 a, b.....	149
<i>Cardinia</i> , Agassiz.....	149
<i>C. præcisæ</i> , n. s., White, 1880, pl. xxxvii, figs. 7 a, b.....	149-150
<i>Taneredia</i> , Lycett.....	150
<i>T. extensa</i> , White, 1880, pl. xxxviii, fig. 4 a.....	150
<i>Pholadomya</i> , Sowerby.....	150
<i>P. kingii</i> , Meek, 1873, pl. xxxviii, figs. 3 a, b.....	150-151
<i>Goniomya</i> , Agassiz.....	151
<i>G. montanaensis</i> , Meek, 1873, pl. xxxvii, fig. 8 a.....	151
<i>Myacites</i> (Schlottheim), Munster.....	151
<i>M. subcompressus</i> , Meek, 1873, pl. xxxviii, figs. 5 a-e.....	151-152
* <i>Lyosoma</i> , n. g., White, 1880.....	152-153
<i>L. porcelli</i> , White, 1876, pl. xxxviii, figs. 6 a-d.....	153

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.

	Page.
<i>Radiata.</i>	
<i>Actinaria.</i>	
<i>Zaphrentis</i> , Rafinesque.....	155
<i>Z. elliptica</i> , White, 1862, pl. xxxix, figs. 4 <i>a</i> , <i>b</i>	155-156
<i>Z. calcicola</i> , White & Whitf., 1862, pl. xxxix, figs. 6 <i>a-d</i>	156
<i>Hadrophyllyum</i> , Edwards & Haine.....	156
<i>H. glans</i> , White, 1862, pl. xxxix, figs. 5 <i>a</i> , <i>b</i>	156-157
<i>Lophophyllum</i> , Edwards & Haine.....	157
<i>L. expansum</i> , White, 1876, pl. xxxix, figs. 4 <i>a</i> , <i>b</i>	157
<i>Chonophyllum</i> , Edwards & Haine.....	157
<i>C. sedaliense</i> , n. s., White, 1880, pl. xxxix, fig. 1 <i>a</i>	157
<i>Michilina</i> , De Koninck.....	157
<i>M. ? placenta</i> , n. s., White, 1880, pl. xxxix, figs. 1 <i>a-d</i>	157-158
<i>M. expansa</i> , n. s., White, 1880, pl. xxxix, figs. 2 <i>a</i> , <i>b</i>	158
<i>Lithostrotion</i> , Fleming.....	159
<i>L. microstylum</i> , n. s., White, 1880, pl. xl, fig. 7 <i>a</i>	159
<i>L. mamillare</i> , Castelnau, pl. xl, figs. 6 <i>a</i> , <i>b</i>	159-160
<i>Echinodermata.</i>	
<i>Platycrinus</i> , Miller.....	160
<i>P. bonoensis</i> , White, 1878, pl. xl, fig. 5 <i>a</i>	160-161
<i>Scaphiocrinus</i> , Hall.....	161
<i>S. gibsoni</i> , White, 1878, pl. xl, fig. 4 <i>a</i>	161-162
<i>S. gurlayi</i> , White, 1878, pl. xl, fig. 3 <i>a</i>	162
<i>Actinoecrinus</i> , Miller.....	162
<i>A. wachsmuthi</i> , n. s., White, 1880, pl. xl, figs. 1 <i>a</i> , <i>b</i>	162-163
<i>Lepidesthes</i> , M. & W.....	163
<i>L. colleti</i> , White, 1878, pl. xl, figs. 2 <i>a</i> , <i>b</i>	163-164
<i>Mollusca.</i>	
<i>Molluscoidea.</i>	
<i>Brachiopoda.</i>	
<i>Orthis</i> , Dalman.....	164
<i>O. thiemci</i> , White, 1860, pl. xli, figs. 4 <i>a-d</i>	164-165
<i>Rhynchonella</i> , Fischer.....	165
<i>R. ottumwa</i> , White, 1862, pl. xli, figs. 5 <i>a-c</i>	165
<i>Spirifer</i> , Sowerby.....	165
<i>S. subcardiiformis</i> , Hall, 1858, pl. xli, figs. 2 <i>a-c</i>	165-166
<i>Mollusca, vera.</i>	
<i>Conchifera.</i>	
<i>Anthracopectera</i> , Salter.....	166
<i>A. polita</i> , n. s., White, 1880, pl. xlii, figs. 5 <i>a</i> , <i>b</i>	166
<i>Astartella</i> , Hall.....	166
<i>A. gurlayi</i> , White, 1878, pl. xlii, figs. 6 <i>a</i> , <i>b</i>	166-167
<i>Allorisma</i> , King.....	167
<i>A. marionensis</i> , White, 1876, pl. xli, figs. 1 <i>a</i> , <i>b</i>	167-168
<i>Gasteropoda.</i>	
<i>Euomphalus</i> , Sowerby.....	167
<i>E. springvalensis</i> , White, 1876, pl. xli, figs. 1 <i>a</i> , <i>b</i>	167-168
<i>Platyceras</i> , Conrad.....	168
<i>P. tribulosum</i> , n. s., White, 1880, pl. xli, figs. 6 <i>a</i> , <i>b</i>	168
<i>Naticopsis</i> , McCoy.....	168
<i>N. monilifera</i> , n. s., White, 1880, pl. xlii, figs. 3 <i>a-c</i>	168
<i>Pleurotomaria</i> , DeFrance.....	169
<i>P. broadheadi</i> , n. s., White, 1880, pl. xlii, figs. 1 <i>a</i> , <i>b</i>	169
<i>P. newportensis</i> , n. s., White, 1880, pl. xlii, figs. 2 <i>a</i> , <i>b</i>	169
<i>Pteropoda.</i>	
<i>Conularia</i> , Miller.....	170
<i>C. crustula</i> , n. s., White, 1880, pl. xlii, fig. 4 <i>a</i>	170
<i>Cephalopoda.</i>	
<i>Nautilus</i> , Breynius.....	170
<i>N. danvillensis</i> , White, 1878, pl. xlii, fig. 7 <i>a</i>	170-171
<i>Articulata.</i>	
<i>Vermes.</i>	
<i>Serpula</i> , Linnæus.....	171
<i>S. insita</i> , White, 1878, pl. xlii, fig. 8 <i>a</i>	171

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 mironema* is announced and figured; and the prismatic structure of that valve suggested as the cause that it has so generally been destroyed.

	Page.
<i>Unio</i> , Retzius	94
<i>U. clinopisthus</i> , n. s., White, 1882, pl. iii, figs. 1 and 2	94
<i>Corbicula</i> , Mühlfeldt	94
<i>C. berthoudi</i> , n. s., White, 1882, pl. iv, figs. 1-3	91-95
<i>C. augheyi</i> , n. s., White, 1882, pl. iv, figs. 4-6	95
<i>Neritina</i> , Lamarck	95
<i>N. bruneri</i> , n. s., White, 1882, pl. iv, figs. 7 and 8	95-96
<i>Melanopsis</i> , Lamarck	96
<i>M. americana</i> , n. s., White, 1882, pl. iv, figs. 9 and 10	96
<i>Campeloma</i> , Rafinesque	97
<i>C. producta</i> , n. s., White, 1882, pl. iii, figs. 7-9	97

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.

	Page.
<i>Melania sculptilis</i> , Meek, pl. v, fig. 1	100
<i>Melania subsculptilis</i> , Meek, pl. v, fig. 2	100
<i>Melania taylori</i> , Gabb, pl. v, fig. 3	100
<i>Lithasia antiqua</i> , Gabb, pl. v, fig. 4	100
<i>Carinifex</i> (<i>Vorticifex</i>) <i>tryoni</i> , Meek, pl. v, figs. 5-7	100
<i>Carinifex</i> (<i>Vorticifex</i>) <i>binneyi</i> , Meek, pl. v, figs. 8 and 9	100
<i>Ancylus undulatus</i> , Meek, pl. v, figs. 10 and 11	100
<i>Sphaerium rugosum</i> , Meek, pl. v, figs. 14-16	100
<i>Sphaerium</i> ? <i>idahoense</i> , Meek, pl. v, figs. 12 and 13	100
<i>Latia dallii</i> , n. s., White, 1882, pl. v, figs. 17-20	100-101

115.

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.

[The pagination in the separates is different from that in the volume. Both are referred to.]

DEVONIAN.	Page.
<i>Strophites grandaeva</i> , Dawson, pl. i, fig. 1.....	49, 455
<i>Anodonta? angustata</i> (Vanuxem), Hall, pl. i, figs. 2 and 3.....	18, 424
<i>Anodonta? catskillensis</i> (Vanuxem), Hall, pl. i, fig. 4.....	18, 424

CARBONIFEROUS.

<i>Pupa vetusta</i> , Dawson, pl. ii, figs. 1 and 2.....	50, 456
<i>Dawsonella meeki</i> , Bradley, pl. ii, figs. 3 and 4.....	47, 453
<i>Anthracopupa ohioensis</i> , Whitfield, pl. ii, figs. 5-8.....	50, 456
<i>Pupa bigsbyi</i> , Dawson, pl. ii, figs. 9 and 10.....	50, 456
<i>Pupa vermillionensis</i> , Bradley, pl. ii, figs. 13 and 14.....	50, 456
<i>Zonites priscus</i> , Dawson, pl. ii, figs. 11 and 12.....	47, 453
<i>Naiadites carbonaria</i> , Dawson, pl. ii, fig. 15.....	19, 425
<i>Naiadites elongata</i> , Dawson, pl. ii, fig. 16.....	19, 425
<i>Naiadites levis</i> , Dawson, pl. ii, fig. 17.....	19, 425

JURASSIC AND TRIASSIC. (?)

<i>Unio stewardii</i> , White, pl. iii, fig. 1.....	20, 426
<i>Unio nucalis</i> , M. & H., pl. iii, figs. 2-4.....	20, 426
<i>Unio cristenensis</i> , Meek, pl. iii, fig. 5.....	19, 425
<i>Planorbis reternus</i> , M. & H., pl. iii, fig. 6.....	40, 446
<i>Valvata scabrida</i> , M. & H., pl. iii, fig. 7.....	64, 470
<i>Viriparus gilliamus</i> , M. & H., pl. iii, fig. 8.....	60, 470
<i>Lioplacodes reternus</i> , M. & H., pl. iii, fig. 9.....	60, 470
<i>Neritina nebrascensis</i> , M. & H., pl. iii, figs. 10, 11.....	51, 457

CRETACEOUS.

<i>Margaritana nebrascensis</i> , M. & H., pl. iv, figs. 1 and 2.....	21, 427
<i>Cyrena dakotensis</i> , M. & H., pl. iv, figs. 3 and 4.....	30, 436
<i>Physa</i> — ? White, 1879, pl. iv, fig. 5.....	38, 444
<i>Unio penultimus</i> , Gabb, pl. v, fig. 1.....	21, 427
<i>Unio hubbardi</i> , Gabb, pl. v, figs. 2 and 3.....	21, 477
<i>Cyrena carletoni</i> , Meek, pl. v, figs. 4 and 5.....	30, 436
<i>Anomia propatoris</i> , White, pl. v, figs. 6 and 7.....	16, 422
<i>Neritina (Velatella) bellatula</i> , Meek, pl. v, figs. 8 and 9.....	52, 458
<i>Neritina (Velatella) carditoides</i> , Meek, pl. v, fig. 10.....	52, 458
<i>Neritina banisteri</i> , Meek, pl. v, figs. 11 and 12.....	52, 458
<i>Melampus? antiquus</i> , Meek, pl. v, figs. 13-16.....	38, 444
<i>Melampus?</i> — —, Meek, 1873, pl. v, fig. 17.....	38, 444
<i>Physa carletoni</i> , Meek, pl. v, fig. 18.....	43, 449
<i>Valvata nana</i> , Meek, pl. v, figs. 19 and 20.....	64, 470

BEAR RIVER, LARAMIE.

	Page.
<i>Unio belliplicatus</i> , Meek, pl. vi, figs. 1-3	24, 430
<i>Pyrgulifera humerosa</i> , Meek, pl. vi, figs. 4-6.....	54, 460
<i>Goniobasis cleburni</i> , White, pl. vi, figs. 7-9	56, 462
<i>Goniobasis chrysalloidea</i> , White, pl. vi, figs. 10 and 11	56, 462
<i>Goniobasis macilenta</i> , White, pl. vi, fig. 12	56, 462
<i>Goniobasis chrysalis</i> , Meek, pl. vi, figs. 13 and 14	56, 462
<i>Limnæa</i> (<i>Limnophysa</i>) <i>nitidula</i> , Meek, pl. vi, figs. 15 and 16.....	39, 445
<i>Physa</i> — ? White, 1880, pl. vi, fig. 17	43, 449
<i>Limnæa</i> (<i>Acella</i>) <i>haldemani</i> , White, pl. vi, figs. 19 and 20.....	39, 445
<i>Unio retusus</i> , Meek, pl. vii, figs. 1-4	24, 430
<i>Neritina naticiformis</i> , White, pl. vii, figs. 5 and 6.....	52, 458
<i>Goniobasis endlichi</i> , White, pl. vii, figs. 7-9	57, 463
<i>Viviparus couesii</i> , White, pl. viii, fig. 1	61, 467
<i>Rhytophorus priscus</i> , Meek, pl. viii, figs. 2 and 3	38, 444
<i>Rhytophorus meekii</i> , White, pl. viii, figs. 4 and 5.....	38, 444
<i>Campyloma macropsira</i> , Meek, pl. viii, figs. 6 and 7	63, 469
<i>Corbicula</i> (<i>Veloritina</i>) <i>durkeei</i> , Meek, pl. viii, figs. 8-11	31, 437
<i>Corbicula pyriformis</i> , Meek, pl. viii, figs. 12-16	35, 441

LARAMIE.

<i>Ostrea glabra</i> , M. & H., pls. ix-xi, and pl. xii, fig. 1	15, 421
<i>Ostrea subtrigonalis</i> , Evans & Shumard, pl. xii, figs. 2-5.....	15, 421
<i>Anomia micromma</i> , Meek, pl. xii, figs. 6-11	16, 422
<i>Anomia gryphorhynchus</i> , Meek, pl. xii, figs. 12-15	16, 422
<i>Folsella</i> (<i>Brachydontes</i>) <i>regularis</i> , White, pl. xiii, fig. 1	17, 423
<i>Folsella</i> (<i>Brachydontes</i>) <i>laticostata</i> , White, pl. xiii, fig. 2	17, 423
<i>Unio proarctus</i> , White, pl. xiii, figs. 3-6	27, 433
<i>Unio gonionotus</i> , White, pl. xiii, figs. 7-10.....	27, 433
<i>Unio priscus</i> , M. & H., pl. xiv, fig. 1	26, 432
<i>Unio subspatulatus</i> , Meek, pl. xiv, figs. 2 and 3.....	25, 431
<i>Unio primævus</i> , White, pl. xiv, figs. 4 and 5	26, 432
<i>Unio cryptorhynchus</i> , White, pl. xiv, figs. 6 and 7	25, 431
<i>Unio endlichi</i> , White, pl. xv, figs. 1 and 2	26, 432
<i>Unio propheticus</i> , White, pl. xv, fig. 3	27, 433
<i>Unio aldrichi</i> , White, pl. xv, figs. 4, 5	27, 433
<i>Unio couesii</i> , White, pl. xvi, fig. 1	26, 432
<i>Unio holmesianus</i> , White, pl. xvi, figs. 2-6	27, 433
<i>Unio brachyopisthus</i> , White, pl. xvi, figs. 7 and 8.....	27, 433
<i>Unio danæ</i> , M. & H., pl. xvii, figs. 1-3	25, 431
<i>Unio deweyanus</i> , M. & H., pl. xvii, figs. 4 and 5	25, 431
<i>Corbicula occidentalis</i> , M. & H., pl. xvii, figs. 6 and 7, pl. xxiii, figs. 1-6.....	31, 437
<i>Sphærium planum</i> , M. & H., pl. xvii, fig. 8	33, 439
<i>Sphærium recticardinale</i> , M. & H., pl. xvii, fig. 9	33, 439
<i>S. subellipticum</i> , M. & H., pl. xvii, fig. 10.....	33, 439
<i>S. formosum</i> , M. & H., pl. xvii, fig. 11	33, 439
<i>Unio mendax</i> , White, pl. xviii, figs. 3-5	27, 433
<i>Unio danæ</i> , M. & H., ? pl. xviii, figs. 1 and 2.....	27, 433
<i>Corbula undifera</i> , Meek, pl. xviii, figs. 6-9	36, 440
<i>Corbula undifera</i> var. <i>subundifera</i> , White, pl. xviii, figs. 10 and 11.....	36, 440
<i>Corbula macriformis</i> , M. & H., pl. xviii, figs. 12-15	36, 440
<i>Unio senectus</i> , White, pl. xix, figs. 1 and 2	26, 432
<i>Unio goniambonatus</i> , White, pl. xix, figs. 3 and 4	27, 433
<i>Anodonta parallela</i> , White, pl. xix, fig. 5	23, 429
<i>Anodonta propaloris</i> , White, pl. xix, figs. 6-9	23, 429
<i>Corbula subtrigonalis</i> , M. & H., pl. xix, figs. 10-17	36, 442
<i>Corbicula</i> (<i>Leptesthes</i>) <i>fracta</i> , Meek, pl. xx, figs. 1-6	33, 436
<i>Corbicula cleburni</i> , White, pl. xx, figs. 7-9	31, 437
<i>Corbicula subelliptica</i> , M. & H., pl. xx, figs. 10 and 11	31, 437
<i>Corbicula nebrascensis</i> , M. & H., pl. xx, figs. 12 and 13	31, 437
<i>Pisidium sagittatum</i> , White, pl. xx, figs. 14 and 15	34, 440
<i>Corbicula berthoudi</i> , White, pl. xxi, figs. 1-3	32, 438
<i>Corbicula oahceyi</i> , n. s., White, 1883, pl. xxi, figs. 4-6.....	32, 438
<i>Corbicula umbonella</i> , Meek, pl. xxi, figs. 7-10	32, 438
<i>Corbicula</i> (<i>Leptesthes</i>) <i>macropistha</i> , White, pl. xxi, figs. 11-14	31, 437

<i>Corbicula cytheriformis</i> , M. & H., pl. xxii, figs. 1-6.....	31, 437
<i>Corbicula (Leptesthes) planumbona</i> , Meek, pl. xxii, figs. 7-9.....	31, 437
<i>Corbicula (Leptesthes) cardiniiformis</i> , White, pl. xxii, figs. 10-15.....	31, 437
<i>Corbicula obesa</i> , White, pl. xxiii, figs. 7-11.....	31, 437
<i>Neritina volvilineata</i> , White, pl. xxiii, figs. 12 and 13.....	52, 458
<i>Neritina bruneri</i> , White, pl. xxiii, figs. 14 and 15.....	53, 459
<i>Neritina (Velatella) baptista</i> , White, pl. xxiii, figs. 16-20.....	52, 458
<i>Melanopsis americana</i> , n. g., White, 1883, pl. xxiii, figs. 21-23.....	55, 461
<i>Limnæa (Pleurolimnæa) tenuicostata</i> , M. & H., pl. xxiii, fig. 24.....	39, 445
<i>Cassiopella turricula</i> , White, pl. xxiii, figs. 25-29.....	58, 464
<i>Viviparus retusus</i> , M. & H., pl. xxiv, figs. 1-3.....	61, 467
<i>Viviparus conradi</i> , M. & H., pl. xxiv, figs. 4-6.....	61, 467
<i>Viviparus leidy</i> , M. & H., pl. xxiv, fig. 7.....	61, 467
<i>Viviparus leidy</i> var. <i>formosus</i> , M. & H., pl. xxiv, figs. 8 and 9.....	61, 467
<i>Viviparus trochiformis</i> , M. & H., pl. xxiv, figs. 10-16.....	61-467
<i>Tulotoma thompsoni</i> , White, pl. xxiv, figs. 17-22.....	61, 467
<i>Viviparus peculiaris</i> , M. & H., pl. xxiv, figs. 23 and 24.....	61, 467
<i>Viviparus plicapressus</i> , White, pl. xxiv, figs. 25 and 26.....	61, 467
<i>Acroloxus minutus</i> , M. & H., pl. xxiv, fig. 27.....	45, 451
<i>Physa copei</i> , White, pl. xxv, figs. 1 and 2.....	44, 450
<i>Physa felix</i> , White, pl. xxv, fig. 3.....	44, 450
<i>Bulinus disjunctus</i> , White, pl. xxv, figs. 4 and 5.....	45, 451
<i>Bulinus atavus</i> , White, pl. xxv, figs. 6 and 7.....	44, 450
<i>Bulinus longiusculus</i> , M. & H., pl. xxv, fig. 8.....	45, 451
<i>Bulinus rhomboideus</i> , M. & H., pl. xxv, fig. 9.....	45, 451
<i>Bulinus subelongatus</i> , M. & H., pl. xxv, figs. 10 and 11.....	44, 450
<i>Helix kanabensis</i> , White, pl. xxv, figs. 12-14.....	48, 454
<i>Columna teres</i> , M. & H., pl. xxv, fig. 15.....	48, 454
<i>Columna vernicula</i> , M. & H., pl. xxv, fig. 16.....	48, 454
<i>Viviparus prudentius</i> , White, pl. xxv, figs. 17 and 18.....	61, 467
<i>Viviparus pangitchensis</i> , White, pl. xxv, figs. 19-21.....	61, 467
<i>Viviparus reynoldstanus</i> , M. & H., pl. xxv, figs. 22 and 23.....	61, 467
<i>Thaumastus limnæiformis</i> , M. & H., pl. xxv, fig. 24.....	48, 454
<i>Melania wyomingensis</i> , Meek, pl. xxvi, figs. 1-3.....	54, 460
<i>Melania insculpta</i> , Meek, pl. xxvi, figs. 4 and 5.....	54, 460
<i>Goniobasis convexa</i> , M. & H., pl. xxvi, figs. 6 and 7.....	57, 463
<i>Goniobasis convexa</i> var. <i>impressa</i> , M. & H., pl. xxvi, figs. 8 and 9.....	57, 463
<i>Goniobasis?</i> <i>omitta</i> , M. & H., pl. xxvi, fig. 10.....	57, 463
<i>Goniobasis tenuicarinata</i> , M. & H., pl. xxvi, fig. 11.....	57, 463
<i>Goniobasis gracilentia</i> , Meek, pl. xxvi, figs. 12 and 13.....	57, 463
<i>Goniobasis nebrascensis</i> , M. & H., pl. xxvi, figs. 15 and 16.....	57, 463
<i>Goniobasis invenusta</i> , M. & H., pl. xxvi, fig. 17.....	57, 463
<i>Goniobasis sublevis</i> , M. & H., pl. xxvi, fig. 18.....	57, 463
<i>Limnæa?</i> <i>compactilis</i> , Meek, pl. xxvi, fig. 14.....	39, 445
<i>Cerithidea?</i> <i>nebrascensis</i> , M. & H., pl. xxvi, fig. 19.....	57, 463
<i>Micropyrgus minutulus</i> , M. & H., pl. xxvi, fig. 20.....	59, 465
<i>Campeloma producta</i> , White, pl. xxvi, figs. 21-27.....	63, 469
<i>Campeloma multilineata</i> , M. & H., pl. xxvii, figs. 1-7.....	63, 469
<i>Campeloma vetula</i> , M. & H., pl. xxvii, figs. 8 and 9.....	63, 469
<i>Campeloma multistriata</i> , M. & H., pl. xxvii, fig. 15.....	63, 469
<i>Viviparus leai</i> , M. & H., pl. xxvii, figs. 10-14.....	61, 467
<i>Planorbis convolutus</i> , M. & H., pl. xxvii, fig. 16.....	41, 447
<i>Planorbis (Bathynomphalus) planoconvexus</i> , M. & H., pl. xxvii, figs. 17 and 18.....	41, 447
<i>Planorbis (Bathynomphalus) amplexus</i> , M. & H., pl. xxvii, figs. 19 and 20.....	41, 447
<i>Planorbis (Bathynomphalus) kanabensis</i> , M. & H., pl. xxvii, figs. 21-23.....	41, 447
<i>Valvata?</i> <i>montanaensis</i> , Meek, pl. xxvii, fig. 24.....	64, 470
<i>Valvata subumbilicata</i> , M. & H., pl. xxvii, fig. 25.....	64, 470
<i>Hyalina?</i> <i>evansi</i> , M. & H., pl. xxvii, fig. 26.....	46, 452
<i>Hyalina?</i> <i>occidentalis</i> , M. & H., pl. xxvii, fig. 27.....	46, 452
<i>Helix?</i> <i>vetusta</i> , M. & H., pl. xxvii, fig. 28.....	48, 454
<i>Helix evanstonensis</i> , White, pl. xxvii, figs. 29-31.....	48, 454
<i>Helix sepulta</i> , White.....	48, 454
<i>Vitrina obliqua</i> , M. & H., pl. xxvii, figs. 32 and 33.....	46, 452
<i>Goniobasis?</i> <i>subtortuosa</i> , M. & H., pl. xxvii, fig. 34.....	57, 463
<i>Hydrobia utahensis</i> , White, pl. xxvii, fig. 35.....	60, 466

	Page.
<i>Hydrobia subconica</i> , Meek, pl. xxvii, fig. 36.....	59, 465
<i>Hydrobia</i> ? <i>culimoides</i> , Meek, pl. xxvii, fig. 37.....	59, 465
<i>Hydrobia recta</i> , White, pl. xxvii, fig. 38.....	60, 466
<i>Hydrobia anthonyi</i> , M. & H., pl. xxvii, fig. 39.....	59, 465
<i>Hydrobia warrenana</i> , M. & H., pl. xxvii, fig. 40.....	59, 465

EOCENE.

<i>Unio clinopisthus</i> , White, pl. xxviii, figs. 1 and 2.....	28, 434
<i>Unio shoshonensis</i> , White, pl. xxviii, fig. 3.....	29, 435
<i>Unio haydeni</i> , Meek, pl. xxviii, figs. 4 and 5.....	29, 435
<i>Unio washakiensis</i> , Meek, pl. xxviii, fig. 6-8.....	29, 435
<i>Unio tellinoides</i> , Hall, pl. xxviii, fig. 9.....	29, 435
<i>Planorbis (Gyraulus) militaris</i> , White, pl. xxviii, figs. 10 and 11.....	41, 447
<i>Bythinella gregaria</i> , Meek, pl. xxviii, figs. 12 and 13.....	60, 466
<i>Bulinus floridanus</i> , Conrad, pl. xxviii, fig. 14.....	48, 454
<i>Melania clabornensis</i> , Heilprin, pl. xxviii, fig. 15.....	54, 460
<i>Planorbis utahensis</i> , Meek, pl. xxix, figs. 1-3.....	41, 447
<i>Planorbis utahensis</i> var. <i>spectabilis</i> , Meek, pl. xxix, figs. 4-6.....	41, 447
<i>Planorbis cirratus</i> , White, pl. xxix, fig. 7.....	42, 448
<i>Planorbis aequalis</i> , White, pl. xxix, figs. 8-10.....	42, 448
<i>Helix peripheria</i> , White, pl. xxix, figs. 11 and 12.....	49, 455
<i>Helix riparia</i> , White, pl. xxix, figs. 13 and 14.....	49, 455
<i>Pupa incolata</i> , White, pl. xxix, figs. 15-17.....	50, 456
<i>Pupa atavuncula</i> , White, pl. xxix, fig. 18.....	50, 456
<i>Pupa arenula</i> , White, pl. xxix, fig. 19.....	50, 456
<i>Limnaea similis</i> , Meek, pl. xxix, figs. 20 and 21.....	39, 445
<i>Limnaea vetusta</i> , Meek, pl. xxix, figs. 22 and 23.....	39, 445
<i>Limnaea minuscula</i> , White, pl. xxix, figs. 24 and 25.....	40, 446
<i>Succinea (Brachyspira) papillispira</i> , White, pl. xxix, fig. 26.....	51, 457
<i>Anodonta decurtata</i> , Conrad, pl. xxix, figs. 27 and 28.....	73, 479
<i>Macrocyclus spatiosa</i> , M. & H., pl. xxx, figs. 1-3.....	46, 452
<i>Helix</i> ? <i>veterna</i> , M. & H., pl. xxx, figs. 4 and 5.....	48, 454
<i>Physa pleromatis</i> , White, pl. xxx, figs. 6-8.....	44, 450
<i>Physa bridgeensis</i> , Meek, pl. xxx, figs. 9 and 10.....	44, 450
<i>Viviparus paludinaeformis</i> , Hall, pl. xxx, figs. 11 and 12.....	62, 468
<i>Viviparus wyomingensis</i> , Meek, pl. xxx, figs. 13 and 14.....	62, 468
<i>Goniobasis tenera</i> , Hall, and varieties, pl. xxxi.....	58, 464

MIOCENE AND PLIOCENE?

<i>Melania sculptilis</i> , Meek, pl. xxxii, fig. 1.....	55, 461
<i>Melania subsculptilis</i> , Meek, pl. xxxii, fig. 2.....	55, 461
<i>Melania taylori</i> , Gabb, pl. xxxii, fig. 3.....	55, 461
<i>Lithasia antiqua</i> , Gabb, pl. xxxii, fig. 4.....	59, 465
<i>Carinifex (Vorticifex) binneyi</i> , Meek, pl. xxxii, figs. 5 and 6.....	42, 448
<i>Carinifex (Vorticifex) tryoni</i> , Meek, pl. xxxii, figs. 7-9.....	42, 448
<i>Ancylus undulatus</i> , Meek, pl. xxxii, fig. 10.....	45, 451
<i>Sphaerium rugosum</i> , Meek, pl. xxxii, figs. 11-13.....	34, 440
<i>Sphaerium idahoense</i> , Meek, pl. xxxii, figs. 14 and 15.....	34, 440
<i>Planorbis retustus</i> , M. & H., pl. xxxii, figs. 16-18.....	42, 448
<i>Planorbis leidyi</i> , M. & H., pl. xxxii, figs. 19-21.....	42, 448
<i>Planorbis nebrascensis</i> , Evans & Shumard, pl. xxxii, figs. 22 and 23.....	42, 448
<i>Planorbis lunata</i> , Conrad, pl. xxxii, figs. 24 and 25.....	42, 448
<i>Limnaea meeki</i> , Evans & Shumard, pl. xxxii, figs. 26 and 27.....	40, 446
<i>Limnaea shumardi</i> , M. & H., pl. xxxii, figs. 28 and 29.....	40, 446
<i>Limnaea (Polyrhysis) kungii</i> , Meek, pl. xxxii, figs. 30 and 31.....	40, 446
<i>Helix leidyi</i> , Hall & Meek, pl. xxxii, figs. 32 and 33.....	49, 455
<i>Helix (Zonites) marginicola</i> , Conrad, pl. xxxii, fig. 34.....	47, 453
<i>Physa scutina</i> , Evans & Shumard, pl. xxxii, figs. 35 and 36.....	44, 450
<i>Latia dallii</i> , n. s. White, 1883, pl. xxxii, figs. 37-40.....	45, 451
<i>Unio meeki</i> , White.....	28, 434
<i>Unio lei</i> , Meek.....	28, 434
<i>Viviparus ionicus</i> , White.....	62, 468

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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. Maccon.

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.

CARBONIFEROUS.

	Page.
<i>Ostrea</i> , Linnaeus.....	288
<i>O. patercula</i> , Winchell, pl. xxxiv, figs. 1 and 2.....	288

JURASSIC.

<i>Ostrea</i> , Linnaeus.....	289
<i>O. engelmanni</i> , Meek, pl. xxxiv, figs. 3 and 4.....	289
<i>O. strigilecula</i> , White, pl. xxxv, figs. 9-11.....	289-290
<i>O. (Alectryonia) procumbens</i> , White, pl. xxxv, figs. 6-8.....	290
<i>Gryphaea</i> , Lamarck.....	290
<i>G. calceola</i> , Quenstedt, var. <i>nebrascensis</i> , M. & H., pl. xxxv, figs. 1-5.....	290

CRETACEOUS.

<i>Ostrea</i> , Linnaeus.....	291
<i>O. americana</i> , Deshayes, pl. lvi, figs. 1 and 2, pl. lvii, figs. 1 and 2.....	291
<i>O. anomiaformis</i> , Roemer.....	291
<i>O. anomioides</i> , Meek, pl. xxxix.....	291
<i>O. appressa</i> , Gabb, pl. xxxix, fig. 9.....	291-292
<i>O. bella</i> , Conrad, pl. xxxix, fig. 6.....	292
<i>O. bellarugosa</i> , Shumard.....	292
<i>O. belliplicata</i> , Shumard, pl. lxxviii, figs. 1-3.....	292
<i>O. blackii</i> , White, pl. xlv, fig. 1, and pl. xlv, fig. 2.....	292
<i>O. barrandei</i> , Coquand, pl. xlv, figs. 1 and 2, pl. xlv, fig. 2, and pl. xlv, fig. 1.....	292-293
<i>O. breweri</i> , Gabb.....	293
<i>O. bryani</i> , Gabb.....	293
<i>O. carinata</i> (Lamarck), Roemer, pl. xliii, figs. 1-4.....	293
<i>O. coalvillensis</i> , Meek, pl. xxxvi, figs. 1-4.....	293
<i>O. confragosa</i> , Conrad.....	293
<i>O. congesta</i> , Conrad, pl. xxxix, figs. 11-13.....	294
<i>O. convexa</i> , Say, pl. xviii, figs. 1-5.....	294
<i>O. cortex</i> , Conrad, pl. xxxvii, figs. 3 and 4.....	294
<i>O. crenulata</i> , Thomey.....	294
<i>O. crenulimargo</i> , Roemer, pl. xliii, figs. 8, 9.....	294
<i>O. crenulimarginata</i> , Gabb, pl. xl, fig. 2.....	294
<i>O. cretacea</i> , Morton, Owen, pl. xxxix, figs. 1-3.....	294-295
<i>O. denticulifera</i> , Conrad.....	295
<i>O. diluviana</i> , Linnaeus, pl. xl, fig. 1, pl. xli, figs. 1 and 2.....	295
<i>O. elegantula</i> , Newberry, pl. xxxvi, figs. 5-7.....	295
<i>O. exogyrella</i> , Gabb.....	296
<i>O. falcata</i> , Morton, pl. xlii, figs. 2-9.....	296
<i>O. franklini</i> , Coquand, pl. xxxix, figs. 1-3.....	296
<i>O. gabbanna</i> , M. & H.....	296

<i>O. inornata</i> , Meek	296
<i>O. idriensis</i> , Gabb, pl. xxxiv, figs. 7 and 8	296
<i>O. (Alectryonia) larva</i> , Lamarek, pl. xlii, figs. 2-9	296
<i>O. lateralis</i> , Nilsson	297
<i>O. littlei</i> , Gabb	297
<i>O. lugubris</i> , Conrad, pl. xli, fig. 3	297
<i>O. lyoni</i> , Shumard	297
<i>O. malleiformis</i> , Gabb, pl. l, fig. 8	297
<i>O. mesenterica</i> , Morton, pl. xlii, figs. 2-9	297
<i>O. mortoni</i> , Gabb	297
<i>O. multilirata</i> , Conrad, pl. xxxviii, figs. 1 and 2	298
<i>O. nasuta</i> , Morton, pl. xlii, figs. 2-9	298
<i>O. owenana</i> , Shumard	298
<i>O. panda</i> , Morton	298
<i>O. pandæformis</i> , Gabb	298
<i>O. patina</i> , M. & H., pl. xlvii, figs. 4-6	298
<i>O. peculiaris</i> , Conrad	298
<i>O. pellucida</i> , M. & H., pl. l, figs. 6 and 7	299
<i>O. planovata</i> , Shumard	299
<i>O. plumosa</i> , Morton, pl. xxxvii, figs. 5 and 6	299
<i>O. prudentia</i> , White, pl. xl, figs. 5 and 6	299
<i>O. quadruplicata</i> , Shumard, pl. xliii, figs. 5-7	299-300
<i>O. robusta</i> , Conrad, pl. xl, figs. 3 and 4	300
<i>O. sannionis</i> , White, pl. xlv, figs. 3-7	300
<i>O. soleniscus</i> , Meek, pl. xlii, fig. 1	300
<i>O. subalata</i> , Meek, pl. xxxix, fig. 10	300
<i>O. subovata</i> , Shumard	301
<i>O. subspatulata</i> , Forbes, pl. xxxvii, figs. 1 and 2	301
<i>O. tecticostata</i> , Gabb, pl. l, figs. 3 and 4	301
<i>O. torosa</i> , Morton	301
<i>O. translucida</i> , M. & H.	301
<i>O. tuomeyi</i> , Coquand	301-302
<i>O. uniformis</i> , Meek, pl. xlvii, figs. 6 and 7	302
<i>O. velicata</i> , Conrad	302
<i>O. vomer</i> , Morton, pl. xlviii, figs. 8-10	302
<i>Gryphæa</i> , Lamarek	302
<i>G. mucronata</i> , Gabb	302
<i>G. mutabilis</i> , Morton, pl. xlviii, figs. 1-5	302
<i>G. navia</i> , Conrad	302
<i>G. pitcheri</i> , Morton, pl. xlix, figs. 1-6	302-303
<i>G. thürsa</i> , Gabb	303
<i>G. vesicularis</i> , Lamarek, pl. xlviii, figs. 1-5	303
<i>G. vomer</i> , Morton	303
<i>Exogyra</i> , Say	303
<i>E. arietina</i> , Roemer, pl. lvi, figs. 3-5	303-304
<i>E. aquila</i> , Goldfuss, pl. liii, figs. 1 and 2	304
<i>E. columbella</i> , Meek, pl. lv, figs. 5 and 6	304
<i>E. costata</i> , Say, pl. lvi, figs. 1 and 2, and pl. lvii, figs. 1 and 2	304
<i>E. fimbriata</i> , Conrad	305
<i>E. forniculata</i> , White, pl. lii, figs. 1 and 2	305
<i>E. fragosa</i> , Conrad	305
<i>E. interrupta</i> , Conrad	305
<i>E. lævinæcula</i> , Roemer, pl. lii, figs. 3-5	305-306
<i>E. matheroniana</i> , d'Orbigny	306
<i>E. plicata</i> , Lamarek	306
<i>E. ponderosa</i> , Roemer, pl. l, figs. 1 and 2	306
<i>E. parasitica</i> , Gabb, pl. lv, figs. 3 and 4	306
<i>E. texana</i> , Roemer, pl. li, figs. 1-5	306
<i>E. walkeri</i> , White, pl. liv, figs. 1 and 2	307
<i>E. winchelli</i> , White, pl. lv, figs. 6 and 7; pl. lvi, figs. 1 and 2	307

LARAMIE GROUP.

<i>Ostrea</i> Linnæus.	
<i>O. glabra</i> , M. & H., pls. lviii, lix, lx, lxi	307-308
<i>O. subtrigonalis</i> , Evans & Shumard, pl. lxi, figs. 4-7	308

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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.

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128.

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129.

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130.

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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.

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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, *Pleetostylus* 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*.

	Page.
<i>Soleniscus</i> ? (<i>Macrocheilus</i>) <i>ponderosus</i> , Swallow ? pl. viii, figs. 1 and 2.....	187
<i>Soleniscus</i> ? (<i>Macrocheilus</i>) <i>primigenius</i> , Conrad, pl. viii, fig. 3.....	187
<i>Soleniscus</i> (<i>Macrocheilus</i>) <i>fusiformis</i> , Hall, pl. viii, figs. 4-6.....	187
<i>Soleniscus</i> (<i>Macrocheilus</i>) <i>neuberryi</i> , Hall, pl. viii, figs. 7 and 8.....	187
<i>Soleniscus planus</i> , White, pl. viii, figs. 9, 10.....	187
<i>Soleniscus</i> (<i>Macrocheilus</i>) <i>ventricosus</i> , Hall, pl. viii, figs. 11 and 12.....	187
<i>Soleniscus</i> (<i>Macrocheilus</i>) <i>texensis</i> , Shumard, pl. viii, figs. 13 and 14.....	187
<i>Soleniscus</i> ? (<i>Macrocheilus</i>) <i>medialis</i> M. & W., pl. viii, figs. 15 and 16.....	187
<i>Soleniscus</i> (<i>Macrocheilus</i>) <i>paludinae formis</i> , Hall, pl. viii, fig. 17.....	187
<i>Soleniscus typicus</i> , M. & W., pl. viii, figs. 18 and 19.....	187

137

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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.

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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.

	Page
<i>Requienia</i> , Matheron	6
<i>R. patagiata</i> , n. s., White, 1884, pl. i, figs. 1-8, and pl. ii, figs. 1-4	6-7
<i>R. texana</i> , Reemer, 1852, pl. ii, figs. 5-7	7
<i>Monopleura</i> , Matheron	8
<i>M. marcida</i> , n. s., White, 1884, pls. iii and iv	8
<i>M. pinguiscula</i> , n. s., White, 1884, pl. v	8-9

141.

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	Page
<i>Mollusca</i> .	
<i>Aucella</i> , Keyserling	13
<i>A. concentrica</i> , Fischer var. White, 1884, pl. vi, figs. 2-12	13-14
<i>Cyprina</i> , Lamarck	14
<i>C. ? dallii</i> , n. s., White, 1884, pl. vi, fig. 1	14
<i>Belemnites</i> , Lamarck	14
<i>B. macritatis</i> , n. s., White, 1884, pl. vi, figs. 13-14	14-15

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.

	Page
<i>Enclimatoceras</i> , n. g., Hyatt, 1884	16-17
<i>E. (Nautilus) ulrichi</i> , n. s., White, 1884, pls. vii, viii, and ix	17

143.

WHITE, C. A. On the adaptability of the prairies for artificial forestry. <Science, 4^o, 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.

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

FAUNA OF THE COAL-MEASURES.

Description of species.

Protozoa.	Page.
Foraminifera.	
<i>Fusulina</i> , Fischer	116
<i>F. cylindrica</i> , Fischer, pl. xxiii, figs. 1-3.....	116-117
Cœlenterata.	
Polypi.	
<i>Zaphrentis</i> , Rafinesque.....	117
<i>Z. gibsoni</i> , n. s., White, 1884, pl. xxiii, figs. 4 and 5.....	117-118
<i>Lophophyllum</i> , Edwards & Haime.....	118
<i>L. proliferum</i> , McChesney, pl. xxiii, figs. 6 and 7.....	118
<i>Azophyllum</i> , Edwards & Haime.....	118
<i>A. rudis</i> , White & St. John, 1867, pl. xxiii, figs. 8 and 9.....	118-119
<i>Campophyllum</i> , Edwards & Haime.....	119
<i>C. torquim</i> , Owen, 1852, pl. xxiii, figs. 10-13.....	119
<i>Michelinia</i> , de Koninck.....	119
<i>M. eugeneæ</i> , n. s., White, 1884, pl. xxiii, figs. 14-16.....	119-120
Brachiopoda.	
<i>Lingula</i> , Brugnière.....	120
<i>L. umbonata</i> , Cox, 1857, pl. xxv, fig. 14.....	120
<i>Discina</i> , Lamarck.....	121
<i>D. nitida</i> , Phillips, pl. xxv, fig. 10.....	121
<i>D. convexa</i> , Shumard, 1858, pl. xxv, fig. 9.....	121
<i>Crania</i> , Retzius.....	121
<i>C. modesta</i> , White & St. John, 1867, pl. xxxv, fig. 9, and pl. xxxvi, fig. 5.....	121-122
<i>Productus</i> , Sowerby.....	122
<i>P. nebrascensis</i> , Owen, 1852, pl. xxiv, figs. 7-9.....	122-123
<i>P. symmetricus</i> , McChesney, 1866, pl. xxv, figs. 1 and 2.....	123
<i>P. punctatus</i> , Martin, pl. xxvii, figs. 1-3.....	124
<i>P. costatus</i> , Sowerby, pl. xxiv, figs. 4-6, and pl. xxv, figs. 3-5.....	124-125
<i>P. semireticulatus</i> , Martin, pl. xxiv, figs. 1-3.....	125-126
<i>P. cora</i> , d'Orbigny pl. xxvi, figs. 1-3.....	126-127
<i>P. longispinus</i> , Sowerby, pl. xxiv, figs. 10 and 11.....	127-128
<i>Chonetes</i> , Fischer.....	128
<i>C. verneuilliana</i> , Norwood & Pratten, 1854, pl. xxv, figs. 7 and 8.....	128
<i>Orthis</i> , Dalman.....	129
<i>O. pecosi</i> , Marcon, 1858, pl. xxxii, figs. 20-22.....	129
<i>Hemipronites</i> , Pander.....	129
<i>Streptorhynchus</i> , King.....	129
<i>Hemipronites crassus</i> , M. & H., pl. xxvi, figs. 4-11.....	129-130
<i>Meekella</i> , White & St. John.....	130
<i>M. striatocostata</i> , Cox, 1857, pl. xxvi, figs. 12-14.....	130-131
<i>Syntriclasma</i> , M. & W.....	131
<i>S. hemiplicata</i> , Hall, 1852, pl. xxvi, figs. 15-18.....	131-132
<i>Rhynchonella</i> , Fischer.....	132
<i>R. uta</i> , Marcon, 1858, pl. xxv, fig. 6.....	132

	Page.
<i>Spirifer</i> , Sowerby	132
<i>S. cameratus</i> , Morton, 1836, pl. xxxv, figs. 3-5	132-133
<i>S. (Martinia) lineatus</i> , Martin, pl. xxvii, figs. 4-6	133-134
<i>S. (Martinia) planoconvexa</i> , Shumard, 1855, pl. xxxii, figs. 23 and 24	134-135
<i>Spiriferina</i> , d'Orbigny	135
<i>S. kentuckensis</i> , Shumard, 1855, pl. xxxv, figs. 13 and 14	135
<i>Athyris</i> , McCoy	136
<i>A. subtilita</i> , Hall, pl. xxxv, figs. 6-9	136
<i>Retzia</i> , King	136
<i>R. mormonii</i> , Marcou, 1858, pl. xxxv, figs. 10-12	136-137
<i>Terebratula</i> , Lihwyd	137
<i>T. bovidens</i> , Morton, 1836, pl. xxxii, figs. 17-19	137
Polyzoa.	
<i>Synocladia</i> , King	138
<i>S. biserialis</i> , Swallow, 1858, pl. xxv, figs. 11-13	138
Conchifera.	
<i>Lima</i> , Brugnière	138
<i>L. retifera</i> , Shumard, 1858, pl. xxviii, fig. 4	138-139
<i>Monopteria</i> , M. & W.	139
<i>M. gibbosa</i> , M. & W., 1866, pl. xxx, figs. 11 and 12	139
<i>Myalina</i> , de Koninck	140
<i>M. subquadrata</i> , Shumard, 1855, pl. xxix, figs. 1 and 2, and pl. xxx, figs. 1 and 2 ..	140
<i>M. recurvirostris</i> , M. & W., 1866, pl. xxix, figs. 3 and 4	140-141
<i>M. ? swallowi</i> , McChesney, 1860, pl. xxx, figs. 6-8	141
<i>Entolium</i> , Meek	142
<i>E. aviculatum</i> , Swallow, 1858, pl. xxviii, figs. 7 and 8	142
<i>Eumicrotis</i> , Meek	142
<i>E. hawni</i> , M. & H., 1866, pl. xxx, fig. 10	142-143
<i>Aviculopecten</i> , McCoy	143
<i>A. occidentalis</i> , Shumard, 1855, pl. xxviii, fig. 3	143
<i>A. carboniferus</i> , Stevens, 1858, pl. xxviii, figs. 5 and 6	144
<i>A. ? interlineatus</i> , M. & W., pl. xxx, fig. 9	145
<i>Pinna</i> , Linnæus	145
<i>P. peracuta</i> , Shumard, 1858, pl. xxviii, figs. 1 and 2	145-146
<i>Nuculana</i> , Link	146
<i>N. bellistriata</i> , Stevens, 1858, pl. xxxi, figs. 8 and 9	146
<i>Nucula</i> , Lamarck	146
<i>N. ventricosa</i> , Hall, 1858, pl. xxvii, figs. 9 and 10	146-147
<i>Schizodus</i> , King	147
<i>S. wheeleri</i> , Swallow, 1862, pl. xxx, figs. 3-5	147
<i>Clinopistha</i> , M. & W.	147
<i>C. radiata</i> , Hall, 1858, pl. xxxi, figs. 6 and 7	147-148
<i>Edmondia</i> , de Koninck	148
<i>E. aspinwallensis</i> , Meek, 1872, pl. xxxi, figs. 4 and 5	148
<i>Allorisma</i> , King	148
<i>A. subcuneata</i> , M. & H., 1864, pl. xxxi, figs. 1-3	148-149
Gasteropoda.	
The genera <i>Macrocheilus</i> and <i>Soleniscus</i>	149-152
<i>Soleniscus</i> , M. & W.	152
<i>S. typicus</i> , M. & W., 1866, pl. xxxiv, figs. 18, 19	152
<i>S. (Macrocheilus) newberryi</i> , Stevens, 1858, pl. xxxiv, figs. 7 and 8	153
<i>S. planus</i> , White, 1881, pl. xxxiv, figs. 9 and 10	153-154
<i>S. (Macrocheilus) fusiformis</i> , Hall, 1858, pl. xxxiv, figs. 4-6	154
<i>S. (Macrocheilus) paludinaformis</i> , Hall, 1858, pl. xxxiv, fig. 17	154-155
<i>S. (Macrocheilus) ventricosus</i> , Hall, 1858, pl. xxxiv, figs. 11 and 12	155
<i>S. (Macrocheilus) texanus</i> , Shumard? 1859, pl. xxxiv, figs. 13 and 14	155-156
<i>S. (Macrocheilus) medialis</i> , M. & W., 1866, pl. xxxiv, figs. 15 and 16	156
<i>S. (Macrocheilus) ponderosus</i> , Swallow?, 1858, pl. xxxiv, figs. 1 and 2	156
<i>S. (Macrocheilus) primigenius</i> , Conrad, 1835, pl. xxxiv, fig. 3	157
<i>Bellerophon</i> , Montfort	157
<i>B. crassus</i> , M. & W., 1866, pl. xxxiii, figs. 1 and 2	157
<i>B. percarinatus</i> , Conrad, 1842, pl. xxxiii, figs. 9-14	157
<i>B. carbonarius</i> , Cox, 1857, pl. xxxiii, figs. 6-8	158-154
<i>B. nodocarinatus</i> , Hall, 1858, pl. xxxiii, figs. 3-5	159
<i>Platyceras</i> , Conrad	159

<i>P. nebrascense</i> , Meek, 1872, pl. xxxii, figs. 15 and 16.....	159-160
<i>Pleurotomaria</i> , DeFrance.....	160
<i>P. turbiniformis</i> , M. & W., 1866, pl. xxxii, figs. 7 and 8.....	160
<i>P. tabulata</i> , Hall, pl. xxxii, figs. 4 and 5.....	160-161
<i>P. sphaerulata</i> , Conrad, 1842, pl. xxxii, figs. 1-3.....	161
<i>Euomphalus</i> , Sowerby.....	161
<i>E. rugosus</i> , Hall, 1858, pl. xxxii, figs. 11 and 12.....	161-162
<i>Naticopsis</i> , McCoy.....	162
<i>N. nana</i> , M. & W., 1866, pl. xxxvi, figs. 6 and 7.....	162
<i>N. wheeleri</i> , Swallow, 1860, pl. xxxii, figs. 13 and 14.....	162-163
<i>Polyphemopsis</i> , Portlock.....	163
<i>P. peracuta</i> , M. & W., pl. xxxii, figs. 9 and 10.....	163
<i>P. nitidula</i> , M. & W., 1866, pl. xxvii, figs. 7 and 8.....	163
<i>Polyphemopsis?</i> ——— (?) White, 1884, pl. xxxii, fig. 6.....	164
Cephalopoda.	
<i>Orthoceras</i> , Breynius.....	164
<i>O. rushensis</i> , McChesney, pl. xxxvi, fig. 5.....	164
<i>Nautilus</i> , Breynius.....	165
<i>N. winslowi</i> , M. & W., 1873, pl. xxxvi, figs. 1 and 2.....	165
<i>N. forbesianus</i> , McChesney, pl. xxxvi, figs. 3 and 4.....	165
<i>N. missouriensis</i> , Swallow? 1857, pl. xxxv, figs. 1 and 2.....	166
Orustacea.	
Gnathostomata.	
<i>Leaia</i> , Jones.....	167
<i>L. tricarinata</i> , M. & W., 1868, pl. xxxix, figs. 10-13.....	167-168
Merostomata.	
<i>Eurypterus</i> , DeKay.....	168
<i>E. (Anthracoetes) mazonensis</i> , M. & W., 1868, pl. xxxvii, figs. 1-3.....	168-170
<i>Euproops</i> , M. & W.....	170
<i>E. dance</i> , M. & W., 1866, pl. xxxix, fig. 1.....	170-172
<i>E. colletti</i> , n. s., White, 1884, pl. xxxix, fig. 2.....	172
Trilobita.	
<i>Phillipsia</i> , Portlock.....	173
<i>P. (Griffithides?) scitula</i> , M. & W., 1873, pl. xxxix, figs. 6-9.....	173-174
<i>P. (Griffithides?) sangamonensis</i> , M. & W., 1873, pl. xxxix, figs. 4 and 5.....	174-176
Isopoda.	
<i>Acanthotelson</i> , M. & W.....	176
<i>A. stimpsoni</i> , M. & W., 1866, pl. xxxvii, figs. 4 and 5.....	176-177
<i>A. eveni</i> , M. & W., 1868, pl. xxxviii, figs. 4-7.....	177-178
<i>Dithyrocaris</i> , Scouler.....	178
<i>D. carbonarius</i> , M. & W., 1873, pl. xxxix, fig. 3.....	178
Macroura.	
<i>Palæocaris</i> , M. & W.....	179
<i>P. typus</i> , M. & W., pl. xxxviii, figs. 1-3.....	179-180
<i>Anthraxalemon</i> , Salter.....	180
<i>A. gracilis</i> , M. & W., 1865, pl. xxxviii, figs. 8 and 9.....	180

147.

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148.

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:

<i>Belemnites densus</i> , M. & H.....	229
<i>Lyosoma Powellii</i> , White.....	230
<i>Myacites (Pleuromya) subcompressa</i> , Meek.....	230

	Page.
<i>Astarte Packardii</i> , White	230
<i>Arca</i> (<i>Cucullaea</i>) <i>inornata</i> , M. & H.	230
<i>Modiola</i> (<i>Volsella</i>) <i>subimbricata</i> , M. & H.	230
<i>Pteria</i> (<i>Oxytoma</i>) <i>mucronata</i> , M. & H.	230
<i>Camptonectes extenuatus</i> , M. & H.	230-231
<i>Gryphæa nebrascensis</i> , M. & H.	231

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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:

	Page.
<i>Unio condoni</i> , n. s., White, 1885, pl. ii, figs. 1-3	13-14
<i>Helicida</i>	14
<i>Helix</i> (<i>Aglaia</i>) <i>fidelis</i> , Gray, pl. iii, figs. 1-3	14
<i>Helix</i> (<i>Patula</i>) <i>perspectiva</i> , Say, pl. iii, fig. 7	14
<i>Helix</i> (<i>Monodon</i> ?) <i>dallii</i> , Stearns, MS., 1885, pl. iii, figs. 4-6	14-15
<i>Gonostoma yatesii</i> , Cooper, pl. iii, figs. 8-12	16

The third part contains "Supplementary notes on the non-marine fossil mollusca of North America.

	Page.
<i>Ampullaria powelli</i>	18
<i>Cerithidea nebrascensis</i>	19
<i>Dreissena leucopheata</i>	19
<i>Physa prisca</i>	18
<i>Unio martini</i>	18
<i>Zapytychius carbonaria</i>	18

151.

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.

	Page.
<i>Chamidae</i> .	
<i>Coralliochama</i> , n. g., White, 1885	9-10
<i>C. oreutti</i> , n. s., White, 1885, pls. i-iv	10-12
<i>Trochidae</i> .	
<i>Trochus</i> , Linnæus	12
Subgenus <i>Oxysteles</i> , Philippi	12
<i>T. (Oxysteles) euryostomus</i> , n. s., White, 1885, pl. v, figs. 9-11	12
<i>Neritidae</i> .	
<i>Nerita</i> , Linnæus	12
<i>Nerita</i> , — ? White, 1885	12
<i>Cerithiidae</i> .	
<i>Cerithium</i> , Bruguière	13
<i>C. pillingi</i> , n. s., White, 1885, pl. v, figs. 3-6	13
<i>C. totium sanctorum</i> , n. s., White, 1885, pl. v, figs. 12 and 13	13
<i>Solariidae</i> .	
<i>Solarium</i> , Lamarck	14
<i>S. wallalense</i> , n. s., White, 1885, pl. v, figs. 1 and 2	14

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. Conchiferos Cretaceos.

No. 2. Gasteropodes Cretaceos.

No. 3. Cephalopodes Cretaceos.

No. 4. Molluseos 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.

PART III.

THE PUBLISHED WRITINGS OF CHARLES DOOLITTLE WALCOTT.

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.

Page.

Spheroecoryphe, Angelin.

S. robustus, n. s., Walcott, 1875, p. 274, figs. 18 a, b..... 273-274

2.

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.

Page.

Remopleurides, Portlock.

R. striatulus, n. s., Walcott, 1875, fig. 27 a, b, and A..... 347-349

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

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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.

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Page.

Conularia, Miller, MS., 1818..... 93

C. quadrata, n. s., Walcott, 1877..... 93

**Conchopeltis*, n. g., Walcott, 1877... 93

C. alternata, n. s., Walcott, 1877..... 93-94

C. minnesotensis, n. s., Walcott, 1877..... 94

Bathyurus, Billings..... 94

B. longispinus, n. s., Walcott, 1877..... 94-96

Asaphus, Brongniart, 1822..... 96

A. romingeri, n. s., Walcott, 1877..... 96-97

A. wisconsinensis, n. s., Walcott, 1877..... 97

6.

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.

* κορυχη, shell; πελτη, 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.

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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.

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	Page.
<i>Arionellus</i> , Barrande, 1846.....	15, 68
<i>A. pustulatus</i> , n. s., Walcott, 1877.....	15, 68
<i>Oeraurus</i> , Green, 1832.....	15, 68
<i>C. rarus</i> , n. s., Walcott, 1877.....	15-16, 68
<i>Encrinurus</i> , Emmerich, 1845.....	16, 68
<i>E. trentonensis</i> , n. s., Walcott, 1877.....	16, 68
<i>E. varicosatus</i> , n. s., Walcott, 1877.....	16, 69
<i>Acidaspis</i> , Murchison, 1839.....	16, 69
<i>A. parvula</i> , n. s., Walcott, 1877.....	16, 17, 69
<i>Dalmanites</i> , Barrande, 1852.....	17, 69
<i>D. intermedius</i> , n. s., Walcott, 1877.....	17-18, 69-70
<i>Ilænus</i> , Dalman, 1826.....	19, 70
<i>I. indeterminatus</i> , n. s., Walcott, 1877.....	19-20, 70-71
<i>I. milleri</i> , Billings.....	20, 71
<i>Asaphus</i> , Brongniart, 1822.....	20, 71
<i>A. homalonotoides</i> , n. s., Walcott, 1877.....	20-21, 71

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	Page.
<i>Platyceras</i> , Conrad, 1840.....	1
<i>P. minutissimum</i> , n. s., Walcott, 1879.....	1
<i>Metoptoma</i> , Phillips, 1836.....	1
<i>M. cornutaforme</i> , n. s., Walcott, 1879.....	1
<i>Conocephalites</i> , Adams, 1848.....	1
<i>O. calciferus</i> , n. s., Walcott, 1879.....	1, 2
<i>O. hartii</i> , n. s., Walcott, 1879.....	2, 3
<i>Ptychaspis</i> , Hall, 1863.....	3
<i>P. speciosus</i> , n. s., Walcott, 1879.....	3
<i>Bathyurus armatus</i> , Billings.....	3, 4

10.

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	Page.
* <i>Cyathophycus</i> , n. g., Walcott, 1879.....	18
<i>C. reticulatus</i> , n. s., Walcott, 1879, pl. ii, figs. 16, 16 a-d.....	19
<i>C. subaphericus</i> , n. s., Walcott, 1879, pl. ii, fig. 17.....	19
† <i>Discophycus</i> , n. g., Walcott, 1879.....	19
<i>D. typicalis</i> , n. s., Walcott, 1879, pl. ii, figs. 18, 18a.....	19

* Κυαθος, a cup; φύκος, a weed.

† Δισκος, a disk; φύκος, a sea-weed.

	Page.
<i>Graptolithus</i> , Linnæus, 1736	20
<i>G. annectans</i> , n. s., Walcott, 1879	20
<i>Dendrograptus</i> , Hall, 1865	20
<i>D. simplex</i> , n. s., Walcott, 1879, pl. i, figs. 5, 5 a, b, and 6	20
<i>D. tenuiramosus</i> , n. s., Walcott, 1879, pl. i, fig. 4	21
<i>D. compactus</i> , n. s., Walcott, 1879, pl. i, fig. 1	21
<i>Sagenella</i> , Hall, 1852	22
<i>S. ambigua</i> , n. s., Walcott, 1879, pl. i, figs. 3, 3 a	22
<i>Modiolopsis</i> , Hall, 1847	22
<i>M. cancellata</i> , n. s., Walcott, 1879, pl. i, figs. 8, 8 a	22
<i>Orthoceras</i> , Breynius, 1732	22
<i>O. oneidaense</i> , n. s., Walcott, 1879, pl. i, figs. 7, 7 a	22-23
<i>Beyrichia cincinnatiensis</i> , Miller	23
<i>Triarthrus becki</i> , Green, 1832	23-24
Metamorphoses of <i>Triarthrus becki</i>	24-26
Degree of development	26-29
Periods of development	29-30
Comparison of parts during development	30-31
Table of development	31-32
Ornamentation	32-33
Catalogue of fossils occurring in the Utica slate	34-38

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Page.

<i>Echinognathus</i> , n. g., Walcott, 1882.	
<i>E. clevelandi</i> , n. s., Walcott, fig. 1, p. 213; fig. 2, p. 214	213-216

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Page.

<i>Glyptocrinus</i> , Hall	1, 207
<i>G. argutus</i> , n. s., Walcott, 1883, pl. xvii, fig. 9	1, 207
<i>G. ? subnodosus</i> , n. s., Walcott, 1883, pl. xvii, fig. 3	2, 208
<i>Merocrinus</i> , n. g., Walcott, 1883	2-3, 208-209
<i>M. typus</i> , n. s., Walcott, 1883, pl. xvii, fig. 5	3, 209

	Page.
<i>M. corroboratus</i> , n. s., Walcott, 1883, pl. xvii, fig. 6	4, 210
<i>Iocrinus</i> , Hall	4, 210
<i>I. trentonensis</i> , n. s., Walcott, 1883, pl. xvii, figs. 7, 8.	4-5, 210-211
<i>Dendrocrinus</i> , Hall	5, 211
<i>D. retractilis</i> , n. s., Walcott, 1883, pl. xvii, fig. 4	5, 211
<i>Calceocrinus</i> , Hall	6, 212
<i>O. barrandii</i> , n. s., Walcott, 1883, pl. xvii, figs. 1, 2	6, 212
<i>Metoptoma</i> , Phillips	6, 212
<i>M. billingsi</i> , n. s., Walcott, 1883, pl. xvii, figs. 12, 12 a	6-7, 212-213
<i>Beyrichia</i> , McCoy	7, 213
<i>B. bella</i> , n. s., Walcott, 1883, pl. xvii, figs. 11, 11 a	7, 213
<i>Leperditia</i> , Ronault	7, 213
Subgenus <i>Isochilina</i> , Jones	7, 213
<i>S. (Isochilina) armata</i> , n. s., Walcott, 1883, pl. xvii, fig. 10	7-8, 213-214

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	Page.
<i>Zptychius</i> , n. g., Walcott, 1883	808
<i>Zptychius carbonaria</i> , n. s., Walcott, 1883, fig. 1	808
<i>Physa prisca</i> , n. s., Walcott, 1883, fig. 2	809
<i>Ampullaria powelli</i> , n. s., Walcott, 1883, fig. 3	809

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CONTENTS.

	Page.
Letter of transmittal to Mr. Arnold Hague, by the author	v
Letter of transmittal to the director, by Mr. Arnold Hague	vii
Preface	ix

	Page.
Summary of results.....	1-9
Fossils of the Cambrian.....	11-64
Observations on <i>Olenellus howelli</i>	32-39
Fossils of the Lower Silurian.....	65-98
Fossils of the Devonian.....	99-211
Fossils of the Carboniferous.....	212-267
Systematic list of species.....	268-281
Paleozoic section in Central Nevada.....	283-285
Index.....	287-298

FOSSILS OF THE CAMBRIAN.

Prospect Mountain Group.

Porifera.

<i>Protaspongia</i> , Salter.....	11
<i>P. fenestrata</i> , Salter, 1864, pl. ix, figs. 5, 5 a, b.....	11-12

Brachiopoda.

<i>Lingulepis</i> , Hall.....	12
<i>L. mæra</i> , H. & W., 1877.....	12-13
<i>L. ? minuta</i> , H. & W., 1877.....	13
<i>Lingula</i> , Bruguière.....	13
<i>L. ? manticula</i> , White, 1874, pl. ix, figs. 3 and pl. xi, fig. 2.....	13-14
<i>Obolella</i> , Billings.....	14
<i>O. discoidea</i> , H. & W., 1877.....	14
<i>Acrothele</i> , Linnarsson.....	14
<i>A. ? dichotoma</i> , n. s., Walcott, 1884, pl. ix, fig. 11.....	14-15
<i>Scenella</i> , Billings.....	15
<i>S. ? conula</i> , n. s., Walcott, 1884, pl. ix, fig. 6.....	15-16
<i>Aerotretra</i> , Kutorga.....	16-17
<i>A. gemma</i> , Billings, 1865, pl. i, figs. 1 a, 1 b, 1 d-f; pl. ix, figs. 9, 9 a.....	17-18
<i>Kutorgina</i> , Billings.....	18
<i>K. whitfieldi</i> , n. s., Walcott, 1884, pl. ix, figs. 4, 4 a.....	18-19
<i>K. prospectensis</i> , n. s., Walcott, 1884, pl. ix, figs. 1 a, b.....	19
<i>K. sculptilis</i> , Meek sp., 1873, pl. i, figs. 7, 7 a, b; pl. ix, fig. 7.....	20-21
<i>Leptæna</i> , Dalman.....	22
<i>L. melita</i> , H. & W., 1877.....	22
<i>Orthis</i> , Dalman.....	22
<i>O. eurekaensis</i> , n. s., Walcott, 1884, pl. ix, figs. 8, 8 a.....	22-23

Pteropoda.

<i>Stenotheca</i> , Salter.....	23
<i>S. elongata</i> , n. s., Walcott, 1884, pl. ix, figs. 2, 2 a.....	23
<i>Hyolithes</i> , Eichwald.....	23
<i>H. primordialis</i> , Hall sp., 1861.....	23-24

Pœcilopoda.

<i>Agnostus</i> , Brongniart.....	24
<i>A. richmondensis</i> , n. s., Walcott, 1884, pl. ix, fig. 10.....	24-25
<i>A. seelusus</i> , n. s., Walcott, 1884, pl. ix, fig. 14.....	25
<i>A. bidens</i> , Meek, 1873, pl. ix, figs. 13, 13 a.....	26, 27
<i>A. communis</i> , H. & W., 1877.....	27
<i>A. neon</i> , H. & W., 1877.....	27
<i>A. prolongus</i> , H. & W., 1877.....	28
<i>Olenellus</i> , Hall.....	28
<i>O. iddingsi</i> , n. s., Walcott, 1884, pl. ix, fig. 12.....	28
<i>O. gilberti</i> , Meek, MSS., 1874, pl. ix, figs. 16, 16 a; pl. xxi, fig. 13.....	29
<i>O. howelli</i> , Meek, MSS., 1874, pl. ix, figs. 15, 15 a, b, and pl. xxi, figs. 1-9.....	30-31
Observations on <i>Olenellus howelli</i> , pl. xxi, figs. 1-7.....	32-39
<i>Dicelloccephalus</i> , Owen.....	40
<i>D. bilobatus</i> , H. & W., 1877.....	40
<i>D. osceola</i> , Hall, 1863, pl. ix, fig. 25.....	40
<i>D. nasutus</i> , n. s., Walcott, 1884, pl. x, fig. 15.....	40-41
<i>D. richmondensis</i> , n. s., Walcott, 1884, pl. x, fig. 7.....	41-42
<i>D. ? angustifrons</i> , n. s., Walcott, 1884, pl. x, figs. 1, 1 a, b.....	42-43
<i>D. iole</i> , n. s., Walcott, 1884, pl. x, fig. 19.....	43-44
<i>D. marica</i> , n. s., Walcott, 1884, pl. x, fig. 13.....	44-45
<i>D. ? quadriceps</i> , H. & W., 1879, pl. ix, fig. 24.....	45

	Page.
<i>D. ? expansus</i> , n. s., Walcott, 1884, pl. ix, fig. 19.....	45-46
<i>Ptychoparia</i> , Corda	46
<i>P. ? prospectensis</i> , n. s., Walcott, 1884, pl. ix, fig. 20	46-47
<i>P. ? linnarssoni</i> , n. s., Walcott, 1884, pl. ix, figs. 18, 18 a	47-48
<i>P. (Solenopleura ?) breviceps</i> , n. s., Walcott, 1884, pl. x, fig. 9	49
<i>P. ? pernasutus</i> , n. s., Walcott, 1884, pl. x, figs. 8, 8 a, b	49-50
<i>P. (Euloma ?) dissimilis</i> , n. s., Walcott, 1884, pl. ix, fig. 28	51
<i>P. occidentalis</i> , n. s., Walcott, 1884, pl. x, fig. 5	51-52
<i>P. similis</i> , n. s., Walcott, 1884, pl. x, fig. 10	52-53
<i>P. similis</i> var. <i>robustus</i> , n. var., Walcott, 1884, pl. i, figs. 9, 9 a	53
<i>P. (Euloma ?) affinis</i> , n. s., Walcott, 1884, pl. x, fig. 12	54
<i>P. laeviceps</i> , n. s., Walcott, 1884, pl. x, figs. 17, 18	54-55
<i>P. oweni</i> , M. & H., 1861, pl. x, figs. 3, 3 a	55-56
<i>P. anytus</i> , H. & W., 1877, pl. ix, fig. 26	56
<i>P. granulosus</i> , H. & W., 1877	57
<i>P. haguci</i> , H. & W., 1877	57
<i>P. nitidus</i> , H. & W., 1877	57-58
<i>P. unisulcatus</i> , H. & W., 1877	58
Subgenus <i>Pteroccephalus</i> , Rømer	58
<i>P. (Pteroccephalus) occidentis</i> , n. s., Walcott, 1884, pl. ix, fig. 21	58-59
<i>P. (Pteroccephalus) laticeps</i> , H. & W., 1877	59
<i>Anonocare</i> , Angelin	59
<i>A. ? parvum</i> , n. s., Walcott, 1884, pl. ix, fig. 17	59-60
<i>Ptychaspis</i> , Hall	60
<i>P. minuta</i> , Whitfield ? 1878, pl. x, fig. 23	60-61
<i>Chariocephalus</i> , Hall	61
<i>C. ? tumifrons</i> , H. & W., 1877, pl. x, fig. 16	61
<i>Agraulos</i> , Corda	61
<i>A. ? globosus</i> , n. s., Walcott, 1884, pl. ix, fig. 23	61-62
<i>Arethusiana</i> , Barrande	62
<i>A. americana</i> , n. s., Walcott, 1884, pl. ix, fig. 27	62-63
<i>Ogygia</i> , Brongniart	63
<i>O. ? spinosa</i> , n. s., Walcott, 1884, pl. ix, fig. 22	63
<i>O. ? problematica</i> , n. s., Walcott, 1884, pl. x, figs. 2 a, b, and 4	63-64

FOSSILS OF THE LOWER SILURIAN.

Pogonip Group.

<i>Rhizopoda</i> .	
<i>Receptaculites</i> DeFrance	65
<i>R. mammillaris</i> , MSS., Newberry, 1880, pl. xi, fig. 11	65-66
<i>R. elongatus</i> , n. s., Walcott, 1884	66-67
<i>R. ellipticus</i> , n. s., Walcott, 1884, pl. xi, fig. 12	67
<i>Brachiopoda</i> .	
<i>Obolella</i> , Billings	67
<i>O. ? ambigua</i> , n. s., Walcott, 1884, pl. i, figs. 2 a-c	67-68
<i>Schizambon</i> , n. g., Walcott, 1884	69-70
<i>S. typicalis</i> , n. s., Walcott, 1884, pl. i, figs. 3 a-d	70-71
<i>Strophomena</i> , Rafinesque	71
<i>S. nemea</i> , H. & W., 1877	71
<i>Orthis</i> , Dalman	72
<i>O. perversa</i> , Conrad, 1843, pl. xi, figs. 3 a, b	72
<i>O. testudinaria</i> , Dalman, 1827, pl. xi, figs. 10, 10 a	72-73
<i>O. hamburgensis</i> , n. s., Walcott, 1884, pl. xi, figs. 5, 5 a	73
<i>O. lunensis</i> , n. s., Walcott, 1884, pl. xi, figs. 6, 6 a	74
<i>O. tricrenaria</i> , Conrad, 1843, pl. xi, figs. 4, 4 a	74-75
<i>Streptorhynchus</i> , King	75
<i>S. minor</i> , n. s., Walcott, 1884, pl. xi, fig. 9	75
<i>Triplexia</i> , Hall	75
<i>T. calcifera</i> , Billings, 1861, pl. xi, figs. 7, 8	75-76
<i>Lamellibranchiata</i> .	
<i>Tellinonaya</i> , Hall	76
<i>T. contracta</i> , Salter ? 1859, pl. xi, figs. 15, 15 a	76
<i>T. ? hamburgensis</i> , n. s., Walcott, 1884, pl. xi, figs. 1, 1 a	76-77
<i>Modiolopsis</i> , Hall	77

<i>M. occidentis</i> , n. s., Walcott, 1884, pl. i, fig. 5, and pl. xi, figs. 14, 14 <i>a</i>	77-78
<i>M. pogonipensis</i> , n. s., Walcott, 1884, pl. i, fig. 6, and pl. xi, fig. 13.....	78
<i>Gasteropoda</i> .	
<i>Raphistoma</i> , Hall.....	78
<i>R. nasoni</i> , Hall, 1861, pl. xi, figs. 21, 21 <i>a</i>	78-79
<i>Murchisonia</i> , D'Archiac and De Vernenil.....	79
<i>M. milleri</i> , Hall? 1877, pl. i, figs. 12, 12 <i>a</i> , <i>b</i>	79-80
<i>Pleurotomaria</i> , DeFrance.....	80
<i>P. lonensis</i> , n. s., Walcott, 1884, pl. xi, fig. 22.....	80
<i>Helicotoma</i> , Salter.....	81
<i>Helicotoma</i> , sp.? Walcott, 1884.....	81
<i>Maclurea</i> , Le Sueur.....	81
<i>M. annulata</i> , n. s., Walcott, 1884, pl. xi, figs. 19, 19 <i>a</i>	81-82
<i>M. subannulata</i> , n. s., Walcott, 1884, pl. xi, figs. 18, 18 <i>a</i> , <i>b</i>	82
<i>M. carinata</i> , n. s., Walcott, 1884, pl. xi, figs. 20, 20 <i>a</i>	82-83
<i>Maclurea</i> , sp.? Walcott, 1884.....	83
<i>Metoptoma</i> , Phillips.....	83
<i>M. philipsi</i> , n. s., Walcott, 1884, pl. i, figs. 4, 4 <i>a</i>	83-84
<i>M. ? analoga</i> , n. s., Walcott, 1884, pl. i, figs. 11, 11 <i>a</i>	84
<i>Cyrtolites</i> , Conrad.....	84
<i>C. sinuatus</i> , H. & W., 1877.....	84
<i>Iteropoda</i> .	
<i>Coleoprion</i> , Sandberger.....	85
<i>C. minuta</i> , n. s., Walcott, 1884, pl. xi, figs. 17, 17 <i>a</i> , and pl. xii, fig. 21.....	85
<i>Hyolithes</i> , Eichwald.....	85
<i>H. vanuxemi</i> , n. s., Walcott, 1884, pl. xi, figs. 16, 16 <i>a</i> , <i>b</i>	85-86
<i>Cephalopoda</i> .	
<i>Orthoceras</i> , pl. xii, figs. 1, 1 <i>a-c</i> , 2, 3.....	86
<i>Endoceras proteiforme</i> , Hall? 1847, pl. xii, figs. 1, 1 <i>a-c</i>	86
<i>Orthoceras multicameratum</i> , Hall? 1847, pl. xii, fig. 3.....	86
<i>Orthoceras</i> , sp.? Walcott, 1884, pl. xii, fig. 2.....	86
<i>Endoceras multitubulatum</i> , Hall? 1847.....	87
<i>Orthoceras</i> , Walcott, 1884, pl. xii, fig. 1 <i>b</i> and figs. 1, 2, p. 87.....	87
<i>Crustacea</i> .	
<i>Leperditia</i> , Rouault.....	88
<i>L. bivia</i> , White, 1874.....	88
<i>Beyrichia</i> , McCoy.....	88
<i>Beyrichia</i> , sp.? Walcott, 1884.....	88
<i>Plumulites</i> , Barrande.....	88
<i>Pæcilopoda</i> .	
<i>Dicelloccephalus</i> , Owen.....	89
<i>D. finalis</i> , n. s., Walcott, 1884, pl. xii, figs. 12, 12 <i>a</i> , <i>b</i>	89-90
<i>D. inexpectans</i> , n. s., Walcott, 1884, pl. i, fig. 10.....	90
<i>Ptychoparia</i> , Corda.....	91
<i>P. ? annectans</i> , n. s., Walcott, 1884, pl. xii, fig. 18.....	91
<i>Bathyrurus</i> , Billings.....	91
<i>B. ? tuberculatus</i> , n. s., Walcott, 1884, pl. xii, fig. 9.....	91-92
<i>B. ? congeneris</i> , n. s., Walcott, 1884, pl. xii, fig. 8.....	92-93
<i>B. ? similimus</i> , n. s., Walcott, 1884, pl. xii, fig. 11.....	93
<i>Cyphaspis</i> , Burmeister.....	93
<i>C. ? brevimarginatus</i> , n. s., Walcott, 1884, pl. xii, fig. 10.....	93-94
<i>Amphion</i> , Pander.....	94
<i>A. nevadensis</i> , n. s., Walcott, 1884, pl. xii, fig. 13.....	94
<i>Ceraurus</i> , Green.....	95
<i>Ceraurus</i> — ? Walcott, 1884, pl. xii, fig. 17.....	95
<i>Symphysurus</i> , Goldfuss.....	95
<i>S. ? goldfussi</i> , n. s., Walcott, 1884, pl. xii, fig. 16.....	95
<i>Barrandia</i> , McCoy.....	96
<i>B. mccoii</i> , n. s., Walcott, 1884, pl. xii, fig. 5.....	96
<i>Barrandia</i> ? sp.? Walcott, 1884, pl. xii, fig. 6.....	96-97
<i>Ilænurus</i> , Hall.....	97
<i>I. eurekensis</i> , n. s., Walcott, 1884, pl. xii, figs. 4, 4 <i>a</i>	97-98
<i>Asaphus</i> , Brongniart.....	98
<i>A. caribouensis</i> , n. s., Walcott, 1884, pl. xii, figs. 7, 7 <i>a</i> , <i>b</i>	98
<i>A. ? curiosa</i> , Billings, 1865, pl. xii, fig. 15.....	98

FOSSILS OF THE DEVONIAN.

Page.

Porifera.

<i>Palæomanon</i> , Roemer	99
<i>P. roemeri</i> , n. s., Walcott, 1884, pl. xiii, fig. 12	99
<i>Astylospongia</i> , Roemer	99
<i>Astylospongia</i> , sp. ? Walcott, 1884	99
<i>Stromatopora</i> , Goldfuss	100

Actinozoa.

<i>Favosites hemispherica</i> , Yandell & Shumard, 1876	100
<i>Favosites basaltico</i> , Goldfuss, 1829	100-101
<i>Favosites</i> , n. sp., Walcott, 1884	101
<i>Fistulipora</i> , sp. ? Walcott, 1884	101
<i>Alveolites rockfordensis</i> , Hall ? 1864	102
<i>Cladopora pulchra</i> , Rominger ? 1876	102
<i>Cladopora</i> , sp. nndt., Walcott, 1884	102
<i>Thecia ramosa</i> , Rominger ? 1876	102-103
<i>Syringopora hisingeri</i> , Billings, 1859	103
<i>Syringopora perelegans</i> , Billings, 1859	103
<i>Aulopora serpens</i> , Goldfuss ?	103
<i>Cyathophyllum corniculum</i> , Milne-Edwards ?	104
<i>Cyathophyllum rugosum</i> , Edwards and Haime, 1876	104
<i>Cyathophyllum davidsoni</i> , Milne-Edwards, 1876	105
<i>Cyathophyllum</i> , n. s., Walcott, 1884	104-105
<i>Cyathophyllum</i> , n. s., Walcott, 1884	105
<i>Acervularia pentagona</i> , Goldfuss, 1877	105
<i>Pachyphyllum woodmani</i> (White), H. & W., 1864	105
<i>Diphyphyllum simcoense</i> , Billings, 1876	105-106
<i>Cystiphyllum americanum</i> , Milne-Edwards, 1876	106
<i>Cystiphyllum</i> , n. s., Walcott, 1884	106

Brachiopoda.

<i>Lingula</i> , Bruguière	106
<i>L. lena</i> , Hall, 1867, pl. xiii, fig. 2	106-107
<i>L. ligea</i> , Hall, 1860, pl. ii, fig. 2	107
<i>L. ligea</i> , var. <i>nevadensis</i> , n. var., Walcott, 1884, pl. ii, fig. 3	107
<i>L. alba-pinensis</i> , n. s., Walcott, 1884, pl. ii, figs. 1, 1 a	108
<i>L. lonensis</i> , n. s., Walcott, 1884, pl. xiii, figs. 1, 1 a	108-109
<i>L. whitei</i> , n. s., Walcott, 1884, pl. xiii, fig. 3	109-111
<i>Discina</i> , Lamarck	112
<i>D. minuta</i> , Hall, 1843, pl. xiii, fig. 5	112
<i>Discina</i> , sp. ? Walcott, 1884	112
<i>D. lodensis</i> , Hall, 1843, pl. ii, figs. 5, 5 a	112-113
<i>Pholidops</i> , Hall	113
<i>P. bellula</i> , n. s., Walcott, 1884, pl. ii, figs. 6, 6 a, b	113-114
<i>P. quadrangularis</i> , n. s., Walcott, 1884, pl. ii, fig. 7	114
<i>Orthis</i> , Dalman	114
<i>O. mcFarlanei</i> , Meek, 1868	114
<i>O. impressa</i> , Hall, 1843, pl. xiii, fig. 13	115
<i>O. tulliensis</i> , Vanuxem, 1842, pl. ii, figs. 12, 12 a	115-116
<i>Skenidium</i> , Hall	116
<i>S. devonicum</i> , n. s., Walcott, 1884, pl. xiii, figs. 4, 4 a	116
<i>Streptorhynchus</i> , King	117
<i>S. chemungensis</i> , Conrad sp., 1842, pl. xiii, figs. 7 and 16	117-118
<i>Strophomena</i> , Blainville	118
<i>S. rhomboidalis</i> , Wilckens, sp	118
<i>Strophodonta</i> , Hall	118
<i>S. demissa</i> , Conrad, sp., 1842, pl. ii, figs. 9, 9 a, b	118-119
<i>S. pateroni</i> , Hall, 1857	119
<i>S. inequiradiata</i> , Hall, 1857, pl. xi, figs. 11, 11 a	120
<i>S. perplana</i> , Conrad, sp., 1842, pl. xiii, fig. 11	120-121
<i>S. punctulifera</i> , Conrad, sp., pl. xiii, fig. 10	121
<i>S. arcuata</i> , Hall ? 1858	121
<i>S. calvini</i> , Miller, 1883, pl. xiii, fig. 6	122
<i>Chonetes</i> , Fischer	122-123
<i>C. hemispherica</i> , Hall, 1857	123
<i>C. deflecta</i> , Hall, 1857, pl. ii, figs. 8, 8 a, b	124

	Page.
<i>C. mucronata</i> , Hall?, 1843	124-125
<i>C. setigera</i> , Hall, 1843	125
<i>C. macrostriata</i> , n. s., Walcott, 1884, pl. ii, fig. 13, pl. xiii, figs. 14, 14 a-c	126-127
<i>C. filistriata</i> , n. s., Walcott, 1884, pl. xiii, figs. 15, 15 a	127-128
<i>Productus</i> , Sowerby	128
Subgenus <i>Productella</i> , Hall, 1867	128
<i>P. (Productella) subaculeatus</i> , Mureb, pl. vii, fig. 2, pl. xiii, figs. 19, 19 a, 20, 20 a	128-129
<i>P. (Productella) shumardianus</i> , Hall, 1858, pl. xiv, fig. 1	129-130
<i>P. (Productella) hallanus</i> , n. s., Walcott, 1884, pl. xiii, figs. 17, 17 a	130-131
<i>P. (Productella) navicella</i> , Hall, 1857, pl. xiii, fig. 9	131
<i>P. (Productella) truncatus</i> , Hall, 1857, pl. xiv, fig. 2	131-132
<i>P. (Productella) lachrymosus</i> var. <i>linus</i> , Conrad, sp., 1842, pl. xiii, figs. 18, 18 a	132
<i>P. (Productella) lachrymosus</i> var. <i>stigmatus</i> , Hall, 1867	132-133
<i>P. (Productella) speciosus</i> , Hall, 1857, pl. xiii, fig. 8	133
<i>P. hirsutiforme</i> , n. s., Walcott, 1884, pl. ii, figs. 10, 10 a	133-134
<i>Spirifera</i> , Sowerby	134
<i>S. disjuncta</i> , Sowerby, 1840	134-135
<i>S. varicosta</i> , Conrad, sp., 1842, pl. iv, figs. 2, 2 a, pl. xiv, fig. 12	135
<i>S. varicosa</i> , Hall, 1857	136
<i>S. parryana</i> , Hall?, 1858, pl. xiv, fig. 10	137
<i>Spirifera</i> (sp. undt.), Walcott, 1884	137
<i>S. englemanni</i> , Meek, 1860	138
<i>S. pinonensis</i> , Meek, 1870, pl. iv, figs. 1, 1 a-f	138
Subgenus <i>Martinia</i> , McCoy	139
<i>S. (Martinia) glabra</i> , Martin	139
<i>S. (Martinia) glabra</i> var. <i>nevadensis</i> , n. var. Walcott, 1884, pl. iii, fig. 5, pl. xiv, figs. 14, 14 a, b	139-140
<i>S. (Martinia) maia</i> , Billings, 1860, pl. iii, figs. 1, 1 a-e, pl. xiv, figs. 13, 13 a	141-142
<i>S. (Martinia) undifera</i> , Roemer, 1844, pl. iii, figs. 3, 3 a, b; 6, 6 a, pl. xiv, figs. 11, 11 a, b	143-146
<i>Cyrtina</i> , Davidson	146
<i>C. davidsoni</i> , n. s., Walcott, 1884, pl. iii, figs. 2, 2 a-e	146-147
<i>C. hamiltonensis</i> , Hall, 1857	147
<i>Nucleospira</i> , Hall	147
<i>N. concinni</i> , Hall, 1843	147
<i>Athyris</i> , McCoy	148
<i>A. angelica</i> , Hall, 1861	148
<i>Athyris</i> (sp. undt.), Walcott, 1884	148
<i>Meristella</i> , Hall	148
<i>Whitfieldia</i> , Davidson	148
<i>M. (Whitfieldia) nasuta</i> , Conrad, sp., 1842, pl. iii, fig. 8, 8 a, b	148-149
<i>Atrypa</i> , Dalman	150
<i>A. reticularis</i> (Linnaeus, sp.), Dalman, pl. xiv, figs. 6, 6 a, b	150
<i>A. desquamata</i> , Sowerby, pl. xiv, figs. 4, 4 a	150-151
<i>Trematospira</i> , Hall	151
<i>T. infrequens</i> , Hall, n. s., Walcott, 1884, pl. iv, figs. 3, 3 a, b	151
<i>Rhynchonella</i> , Fischer	152
<i>R. harsfordi</i> , Hall, 1860, pl. xiv, fig. 3; pl. xv, fig. 6	152
<i>R. tethys</i> , Billings, 1860	152
<i>R. ? occidens</i> , n. s., Walcott, 1884, pl. xv, figs. 3, 3 a, b	152-153
<i>R. castanea</i> , Meek, 1868, pl. xv, figs. 1, 1 a; 4, 4 a	153-155
<i>R. duplicata</i> , Hall, 1843, pl. xiv, fig. 8	155
<i>R. pugnis</i> , Martin, 1809, pl. xiv, figs. 7, 7 a	155-157
<i>R. emmonsii</i> , H. & W., 1877	157
Subgenus <i>Leiorhynchus</i> , Hall	157
<i>R. (Leiorhynchus) nevadensis</i> , n. s., Walcott, 1884, pl. xiv, figs. 9, 9 a, b	157-158
<i>R. (Leiorhynchus) sinuatus</i> , Hall, 1867, pl. xiv, fig. 5	158-159
<i>R. (Leiorhynchus) leura</i> , Billings, 1860	159
<i>Pentamerus</i> , Sowerby	159
Subgenus <i>Gypidula</i> Hall	159
<i>P. comis</i> , Owen, 1852, pl. iii, figs. 4, 7; pl. xiv, figs. 15, 15 a, b; pl. xv, figs. 5, 5 a, b	159-161
<i>P. lotis</i> , n. s., Walcott, 1884, pl. iii, figs. 9, 9 a-c	161-162
<i>Cryptonella</i> , Hall	163
<i>C. ? circula</i> , n. s., Walcott, 1884, pl. xv, figs. 2, 2 a, b	163
<i>C. pinonensis</i> , n. s., Walcott, 1884, pl. iv, figs. 4, 4 a, b	163-164

	Page.
<i>Lamellibranchiata.</i>	
<i>Pterino</i> , Goldfuss	165
<i>P. glabella</i> , Conrad, sp. 1842, pl. xv, fig. 12; pl. v, fig. 6	165
<i>P. newarkensis</i> , n. s., Walcott, 1884, pl. v, fig. 12	165-166
<i>Actinopteria</i> , Hall	166
<i>A. boydi</i> , Conrad, sp., 1842, pl. v, fig. 2	166
<i>Leopteria</i> , Hall, 1883, pl. v, figs. 10, 10 a	166
<i>L. rajinespai</i> , Hall, 1883, pl. v, figs. 10, 10 a	166
<i>Leptodesma</i> , Hall	167
<i>L. transeversa</i> , n. s., Walcott, 1884, pl. v, fig. 13	167
<i>Limoptera</i> , Hall	167
<i>L. sarnenticia</i> , n. s., Walcott, 1884, pl. v, figs. 3, 3 a, b	167-168
<i>Mytilarca</i> , Hall	168
<i>M. dubia</i> , n. s., Walcott, 1884, pl. iv, fig. 5	168
<i>M. chemungensis</i> , Conrad, 1842, pl. iv, fig. 9	168-169
Subgenus <i>Plethomytilus</i> , Hall	169
<i>M. (Plethomytilus) oviformis</i> , Conrad, 1842, pl. v, fig. 11	169
<i>Modiomorpha</i> , Hall	169
<i>M. altiforme</i> , n. s., Walcott, 1884, pl. v, fig. 9	169-170
<i>M. oblonga</i> , n. s., Walcott, 1884, pl. v, fig. 7	170
<i>M. obtusa</i> , n. s., Walcott, 1884, pl. iv, figs. 8, 8 a	171
<i>Goniophora</i> , Phillips	171
<i>G. perangulata</i> , Hall, 1870, pl. xv, fig. 10	171
<i>Nucula</i> , Lamarek	172
<i>N. rescuensis</i> , n. s., Walcott, 1884, pl. xv, fig. 9	172
<i>Nucula</i> , sp. ? Walcott, 1884	172
<i>Dystactella</i> , Hall	172
<i>D. insularis</i> , n. s., Walcott, 1884, pl. xv, fig. 8	172, 173
<i>Megambonia</i> , Hall	173
<i>M. occidua</i> , n. s., Walcott, 1884, pl. v, fig. 1	173
<i>Nyassa</i> , Hall	173
<i>N. parva</i> , n. s., Walcott, 1884, pl. xv, figs. 14, 14 a	173, 174
<i>Grammysia</i> , De Verneuil	174
<i>G. minor</i> , n. s., Walcott, 1884, pl. xv, figs. 15, 15 a	174-175
<i>Sanguinolites</i> , McCoy	175
<i>S. ? conabensis</i> , n. s., Walcott, 1884, pl. xv, fig. 16	175
<i>S. ? gracilis</i> , n. s., Walcott, 1884, pl. iv, fig. 10	175-176
<i>S. rigidus</i> , White & Whitfield, 1862, pl. xvi, fig. 6	176
<i>S. ? sanduskyensis</i> , Meek, 1871, pl. v, fig. 4	176-177
<i>S. ventricosus</i> , White & Whitfield, sp., 1862, pl. xv, fig. 13	177
<i>Conocardium</i> , Brown	177
<i>C. newarkensis</i> , n. s., Walcott, 1884, pl. xvi, figs. 4, 4 a	177-178
<i>Paraceras</i> , Hall	178
<i>P. occidentalis</i> , H. & W., 1872	178
<i>Posidonomya</i> , Bronn	178
<i>P. laevis</i> , n. s., Walcott, 1884, pl. iv, fig. 6	178-179
<i>P. devonica</i> , n. s., Walcott, 1884, pl. iv, fig. 7	179-180
<i>Microdon</i> , Conrad	180
Subgenus <i>Cypricardella</i> , Hall	180
<i>M. (Cypricardella) macrostriatus</i> , n. s., Walcott, 1884, pl. v, fig. 5	180
<i>Anodontopsis</i> , McCoy	180
<i>A. amygdaliformis</i> , n. s., Walcott, 1884, pl. xv, figs. 7, 7 a, b	180-181
<i>Schizodus</i> , King	181
Subgenus <i>Cytherodon</i> , Hall	181
<i>S. (Cytherodon) orbicularis</i> , n. s., Walcott, 1884, pl. v, figs. 8, 8 a	181
<i>Cypricardina</i> , Hall	182
<i>C. indenta</i> , Conrad, sp., 1842, pl. v, fig. 14; pl. xv, fig. 11	182
<i>Gasteropoda.</i>	
<i>Platyceras</i> , Conrad	182
<i>P. conradi</i> , n. s., Walcott, 1884, pl. xvi, figs. 1, 1 a	182-183
<i>P. nodosum</i> , Conrad, 1841, pl. vi, figs. 5, 5 a, b	183
<i>P. undulatum</i> , n. s., Walcott, 1884, pl. vi, figs. 2, 2 a	184
<i>P. thetiforme</i> , n. s., Walcott, 1884, pl. vi, figs. 4, 4 a, b	184
<i>Platystrophia</i> , Conrad	185
<i>P. lineatum</i> , Conrad, 1842	185

	Page.
<i>Euomphalus</i> , Sowerby	185
<i>E. eurekaensis</i> , n. s., Walcott, 1884, pl. xvi, figs. 2, 2 a	185-186
<i>E. (Phanerotinus) laxus</i> , Hall, 1861, pl. vi, fig. 3	186
<i>Eccliomphalus</i> , Portlock	187
<i>E. devonicus</i> , n. s., Walcott, 1884, pl. vi, figs. 6, 6 a	187
<i>Straparollus</i> , Montfort	187
<i>S. newarkensis</i> , n. s., Walcott, 1884, pl. xvi, figs. 7, 7 a	187-188
<i>Platyschisma</i> , McCoy	188
<i>P. ? mcroyi</i> , n. s., Walcott, 1884, pl. xvii, figs. 1, 1 a-c	188
<i>P. ? ambiguum</i> , n. s., Walcott, 1884, pl. xvii, figs. 3, 3 a	188-189
<i>Callonema</i> , Hall	189
<i>C. occidentalis</i> , n. s., Walcott, 1884, pl. xvi, figs. 3, 3 a	189
<i>Loxonema</i> , Phillips	190
<i>L. eurekaensis</i> , n. s., Walcott, 1884, pl. xvi, fig. 8	190
<i>L. nobile</i> , n. s., Walcott, 1884, pl. xvi, fig. 9	190-191
<i>L. ? subattenuatum</i> , Hall ? 1861	191
<i>L. approximatum</i> , n. s., Walcott, 1884, pl. vi, fig. 7	191-192
<i>Loxonema ?</i> sp. undt., Walcott, 1884	192
<i>Loxonema</i> , sp. undt., Walcott, 1884	192
<i>Bellerophon</i> , Montfort	192
<i>B. perplexa</i> , n. s., Walcott, 1884, pl. xvii, figs. 6, 6 a, b	193
<i>B. combsi</i> , n. s., Walcott, 1884, pl. xvii, figs. 9, 9 a, b	193-194
<i>B. lyra</i> , Hall	194
<i>B. leda</i> , Hall	194
<i>B. mæra</i> , Hall ?	194
<i>B. pelops</i> , Hall ?	194
<i>Scolioptoma</i> , Braun	195
<i>S. americana</i> , n. s., Walcott, 1884, pl. vi, figs. 1, 1 a-e	195
<i>Metoptoma</i> , Phillips	195
<i>M. ? devonica</i> , n. s., Walcott, 1884, pl. xvii, figs. 2, 2 a	195-196
<i>Pteropoda.</i>	
<i>Tentaculites</i> , Schlotheim	196
<i>T. gracilistriatus</i> , Hall	196-197
<i>T. scalariformis</i> , Hall	197
<i>T. attenuatus</i> , Hall	197
<i>T. bellulus</i> , Hall ?	197
<i>Styliola</i> , Le Sueur	197
<i>S. fissurella</i> , Hall	197
<i>S. fissurella</i> var. <i>intermittens</i> , Hall	197-198
<i>Conularia</i> , Miller	198
<i>Conularia</i> , sp. undt., Walcott, 1884	198
<i>Hyolithes</i> , Eichwald	199
<i>Hyolithes</i> , sp. (?), Walcott, 1884, pl. vi, figs. 8, 8 a	199
<i>Coleolus</i> , Hall	199
<i>C. lævis</i> , n. s., Walcott, 1884, pl. vi, fig. 9	199-200
<i>Cephalopoda.</i>	
<i>Orthoceras</i> , Breynius	200-202
<i>Gomphoceras</i> , Sowerby	202
<i>G. suboviforme</i> , n. s., Walcott, 1884, pl. xvii, figs. 8, 8 a	202-203
<i>Cyrtoceras</i> , Goldfuss	203
<i>C. nevadense</i> , n. s., Walcott, 1884, pl. xvii, figs. 7, 7 a	203
<i>Goniatites</i> , De Haan	203
<i>G. desideratus</i> , n. s., Walcott, 1884, pl. xvii, fig. 10	203-204
<i>Crustacea.</i>	
<i>Beyrichia</i> , McCoy	204
<i>B. (Primitia) occidentalis</i> , n. s., Walcott, 1884, pl. xvii, figs. 4, 4 a	204-206
<i>Leperditia</i> , Rouault	206
<i>L. rotundata</i> , n. s., Walcott, 1884, pl. xvi, fig. 5	206
<i>Pœcilopoda.</i>	
<i>Phacops</i> , Emmerich	207
<i>P. rana</i> , Green, sp., 1832	207
<i>Dalmanites</i> , Emmerich	207
<i>D. meeki</i> , n. s., Walcott, 1884, pl. xvii, figs. 5, 5 a-c	207-209
<i>Dalmanites</i> , undt. sp., Walcott, 1884	210
<i>Præetus</i> , Steinger	210

	Page.
<i>P. haldemani</i> , Hall, 1861	210
<i>P. marginalis</i> , Conrad, sp., 1839	210-211
<i>Phillipsia</i> , Portlock	211
<i>P. coronata</i> , Hall? 1876	211
Supposed eggs of the Trilobite	211
FOSSILS OF THE CARBONIFEROUS.	
<i>Echinodermata.</i>	
<i>Arehuocidaris</i> , McCoy	212
<i>Arehuocidaris</i> , sp., ? Walcott, 1884	212-213
<i>Brachiopoda.</i>	
<i>Discina</i> , Lamarck	213
<i>D. newberryi</i> , Hall, 1863, pl. xviii, figs. 3, 2, 2 a?	213
<i>D. nitida</i> , Phillips, 1836, pl. vii, figs. 4, 4 a	213-214
<i>D. connata</i> , n. s., Walcott, 1884, pl. vii, fig. 3, 3 a	214
<i>Productus</i> , Sowerby	214
<i>P. subaculeatus</i> , Murch., pl. vii, fig. 2	214-215
<i>Spirifera</i> , Sowerby	215
<i>S. trigonalis</i> , Martin, sp., 1809, pl. xviii, fig. 11	215-216
<i>S. leidyi</i> , N. & P., 1855, pl. xviii, figs. 4, 4 a	216
<i>S. annectans</i> , n. s., Walcott, 1884, pl. xviii, figs. 7, 7 a	216-217
<i>S. neglecta</i> , Hall, 1858, pl. xviii, fig. 10	217
<i>S. desiderata</i> , n. s., Walcott, 1884, pl. vii, fig. 8	217-218
Subgenus <i>Spiriferina</i> , D'Orbigny	218
<i>S. (Spiriferina) cristata</i> , Schlotheim, 1816, pl. xviii, figs. 12, 13	218-219
<i>Syringothyris</i> , Winchell	219
<i>S. cuspidata</i> , Martin, sp., 1796	219-220
<i>Retzia</i> , King	220
<i>R. radialis</i> , Phillips, sp., 1836, pl. vii, figs. 5, 5 a-h	220-222
<i>Athyris</i> , McCoy	222
<i>A. hirsuta</i> , Hall, 1857, pl. xviii, fig. 5	222
<i>Rhynehonella</i> , Fischer	223
<i>R. eurekaensis</i> , n. s., Walcott, 1884, pl. xviii, figs. 8, 8 a-c	223
<i>R. thera</i> , n. s., Walcott, 1884, pl. vii, figs. 6, 6 a-c	223-224
<i>Canarophoria</i> , King	224
<i>C. cooperensis</i> , Shumard, 1855, pl. xviii, fig. 6	224
<i>Terebratula</i> , Lhwyd	224
<i>T. hastata</i> , Sowerby	224
<i>Lamellibranchiata.</i>	
<i>Ariculopecten</i> , McCoy	226
<i>A. haynei</i> , n. s., Walcott, 1884, pl. xix, fig. 4	226-227
<i>A. eurekaensis</i> , n. s., Walcott, 1884, pl. xix, figs. 2, 3	227
<i>A. perocidens</i> , n. s., Walcott, 1884, pl. viii, fig. 8	227-228
<i>A. pintöensis</i> , n. s., Walcott, 1884, pl. viii, fig. 6	228
<i>A. affinis</i> , n. s., Walcott, 1884, pl. xix, figs. 1, 1 a	229-230
<i>Ariculopecten</i> , sp.? Walcott, 1884	230
<i>Streblopteria</i> , McCoy	230
<i>S. similis</i> , n. s., Walcott, 1884, pl. viii, figs. 4, 4 a-d, and pl. xix, fig. 7	230-231
<i>Crenipecten</i> , Hall	231
<i>C. hallanus</i> , n. s., Walcott, 1884, pl. viii, figs. 7, 7 a-c	231-232
<i>Pterinopecten</i> , Hall	232
<i>P. hoosacensis</i> , n. s., Walcott, 1884, pl. viii, fig. 9	232-233
<i>P. spio</i> , n. s., Walcott, 1884, pl. viii, figs. 1, 1 a	233
<i>Pterinea</i> , Goldfuss	234
<i>P. pintöensis</i> , n. s., Walcott, 1884, pl. xix, fig. 10	234
<i>Leptodesma</i> , Hall	234
<i>Leptodesma</i> , sp.? Walcott, 1884	234
<i>Ptychopteria</i> , Hall	235
<i>P. protiforme</i> , n. s., Walcott, 1884, pl. viii, fig. 5	235
<i>Pinna</i> , Linnaeus	235
<i>P. inexpectans</i> , n. s., Walcott, 1884, pl. xix, fig. 11	235-236
<i>P. consimilis</i> , n. s., Walcott, 1884, pl. xx, fig. 13	236
<i>Myalina</i> , De Koninck	237
<i>M. congeneris</i> , n. s., Walcott, 1884, pl. xix, fig. 6, and pl. xxii, fig. 10	237
<i>M. nemesis</i> , n. s., Walcott, 1884, pl. xix, fig. 5, and pl. xxii, fig. 7	237-238
<i>M. nebus</i> , n. s., Walcott, 1884, pl. xxii, figs. 8, 8 a	238

	Page.
<i>Modiola</i> , Lamarck	239
<i>M. ? nevadensis</i> , n. s., Walcott, 1884, pl. xix, fig. 8	239
<i>Modiomorpha</i> , Hall	239
<i>M. ambigua</i> , n. s., Walcott, 1884, pl. xx, fig. 1	239-240
<i>M. ? desiderata</i> , n. s., Walcott, 1884, pl. xx, fig. 3	240
<i>M. ? pintoensis</i> , n. s., Walcott, 1884, pl. xx, fig. 2	240-241
<i>Nucula</i> , Lamarck	241
<i>N. insularis</i> , n. s., Walcott, 1884, pl. xx, fig. 14	240
<i>N. levatiforme</i> , n. s., Walcott, 1884, pl. xxii, figs. 1, 1 a	241-242
<i>Solenomya</i> , Lamarck	242
<i>S. curta</i> , n. s., Walcott, 1884, pl. xxii, figs. 6, 11	242
<i>Macrodon</i> , Lycett	243
<i>M. hamiltonæ</i> , Hall, 1870, pl. xxiii, figs. 5, 5 a-c	243
<i>M. truncatus</i> , n. s., Walcott, 1884, pl. viii, fig. 2	243-244
<i>Grammysia</i> , De Verneuil	244
<i>G. hannibalensis</i> , Shumard, sp., 1855, pl. xx, fig. 4	244
<i>G. arcuata</i> , Conrad, sp., 1841, pl. xx, fig. 5	245
<i>Edmondia</i> , De Koninck	245
<i>E. medon</i> , n. s., Walcott, 1884, pl. xxiii, fig. 6	245
<i>E. ? circularis</i> , n. s., Walcott, 1884, pl. xxii, fig. 9	246
<i>Pleurophorus</i> , King	246
<i>P. meeki</i> , n. s., Walcott, 1884, pl. viii, fig. 3	246
<i>Sanguinolites</i> , McCoy	247
<i>S. æolus</i> , H. & W., 1870, pl. xx, figs. 6, 7, 9	247
<i>S. retusus</i> , n. s., Walcott, 1884, pl. xx, fig. 10	247-248
<i>S. simplex</i> , n. s., Walcott, 1884, pl. xx, fig. 11	248
<i>S. salteri</i> , n. s., Walcott, 1884, pl. xx, fig. 12	248-249
<i>S. ? uenia</i> , n. s., Walcott, 1884, pl. xix, fig. 9	249
<i>S. striatus</i> , n. s., Walcott, 1884, pl. xxiii, fig. 7	249-250
<i>Microdon</i> , Conrad	250
Subgenus <i>Cypricardella</i> , Hall	250
<i>M. (Cypricardella) connatus</i> , n. s., Walcott, 1884, pl. xxiv, figs. 5, 5 a	250-251
<i>Cardiola</i> , Broderip	251
<i>C. ? filicostata</i> , n. s., Walcott, 1884, pl. xxii, figs. 4, 4 a	251
<i>Schizodus</i> , King	252
<i>S. cuneatus</i> , Meek, 1875, pl. xx, fig. 8	252
<i>S. depareus</i> , n. s., Walcott, 1884, pl. xxii, fig. 5	252
<i>S. curtiforme</i> , n. s., Walcott, 1884, pl. xxii, figs. 3, 3 a	253
<i>S. pintoensis</i> , n. s., Walcott, 1884, pl. xxii, figs. 2, 2 a	253-254
<i>Gasteropoda.</i>	
<i>Platyceras</i> , Conrad	254
<i>P. occidens</i> , n. s., Walcott, 1884, pl. xxiv, figs. 9, 9 a	254
<i>P. piso</i> , n. s., Walcott, 1884, pl. xxiv, figs. 7, 7 a, b	254-255
<i>Platystoma</i> , Conrad	255
<i>P. inornatum</i> , n. s., Walcott, 1884, pl. xxiv, figs. 3, 3 a	255
<i>Euomphalus</i> , Sowerby	255
<i>E. (Straparollus) subrugosus</i> , M. & W., 1873, pl. xviii, fig. 19	255-256
<i>Bellerophon</i> , Montfort	256
<i>B. majusculus</i> , n. s., Walcott, 1884, pl. xxiii, figs. 1, 1 a; pl. xxiv, fig. 6, and fig. 3, p. 257.	256-257
<i>B. textilis</i> , Hall, ? 1877, pl. xviii, fig. 18	257-258
<i>Lozonema</i> , Phillips	258
<i>L. bella</i> , n. s., Walcott, 1884, pl. xxiv, figs. 1, 1 a	258-259
<i>Pleurotomaria</i> , DeFrance	259
<i>P. nodomarginata</i> , McChesney, 1860, pl. xviii, fig. 15	259
<i>P. nevadensis</i> , n. s., Walcott, 1884, pl. xxiv, figs. 2, 2 a	259-260
<i>Macrocheilus</i> , Phillips	260
<i>Macrocheilus</i> , sp., ? Walcott, 1884, pl. xxiv, fig. 8	260
<i>Metoptoma</i> , Phillips	260
<i>M. peroccidens</i> , n. s., Walcott, 1844, pl. xviii, fig. 16	260
<i>Ampullaria</i> , Lamarck	261
<i>A. ? powelli</i> , Walcott, 1883, figs. 4, 5, p. 261	261
<i>Pulmonifera.</i>	
<i>Physa</i> , Draparnaud	262
<i>P. prisea</i> , Walcott, 1883, fig. 6, p. 262	262
<i>Zapychius</i> , Walcott, 1883	263
<i>Z. carbonaria</i> , Walcott, 1883, fig. 7, p. 263	263

	Page.
<i>Pteropoda.</i>	
<i>Conularia</i> , Miller	264
<i>C. missouriensis</i> , Swallow, ? 1860, pl. xxiii, fig. 4	264
<i>Hyolithes</i> , Eichwald	264
<i>H. carbonaria</i> , n. s., Walcott, 1884, pl. xxiii, fig. 3	264
<i>Cephalopoda.</i>	
<i>Orthoceras</i> , Breynius	265
<i>O. randolphensis</i> , Worthen, ? 1882, pl. xviii, fig. 17	265
<i>O. eurekaensis</i> , n. s., Walcott, 1884, pl. xxiii, figs 2, 2 a	265-266
<i>Orthoceras</i> , sp., ? Walcott, 1884	266
<i>Pecilopoda.</i>	
<i>Griffithides</i> , Portlock	266
<i>G. portlocki</i> , M. & W., 1865, pl. xxiv, figs 4, 4 a, b	266-267
Systematic list of fossils of each geologic formation	268-281
Paleozoic section in Central Nevada	283-285

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 *Conocephalites* and refers its different species to some of *Ptychoparia* and one of *Conocoryphe*. The following species are mentioned:

	Page.
<i>Eocystites</i> , Billings	14, 294
<i>E. primævus</i> , Billings, 1868, pl. i, fig. 2	14-15, 294-295
<i>Limula</i> , Bruguière	15, 295
<i>L. ? dawsoni</i> , n. s., Matthew, MSS., 1884, pl. v, fig. 8	15, 295
<i>Acrothele</i> , Linnarson	15, 295
<i>A. matthewi</i> , Hartt, sp., 1868, pl. i, figs. 4, 4 a	15-16, 295-296
<i>Obolella</i> , Billings	16, 296
<i>O. transversa</i> , Hartt, 1868, pl. i, figs. 5, 5 a	16, 299
<i>Obolella</i> , sp., undt., Walcott, 1884	16-17, 296-297
<i>Orthis</i> , Dalman	17, 297
<i>O. billingsi</i> , Hartt, 1868, pl. i, figs. 1, 1 b-d	17-18, 297-298
<i>Orthis</i> , ? sp., Walcott, 1884, pl. i, fig. 1 a	18, 298
<i>Harttia</i> , n. g., Walcott, 1884	18-19, 298-299
<i>H. matthewi</i> , n. s., Walcott, 1884, pl. i, fig. 3	19, 299
<i>Palæacmea</i> , H. and W. (<i>Stenotheca</i>)	19, 299
<i>Stenotheca acadica</i> , Hartt, sp., 1868, pl. i, fig. 6	19, 299
<i>Hyolithes</i> , Eichwald	20, 300
<i>H. acadica</i> , n. s., Hartt, sp., MSS., 1884, pl. ii, fig. 5	20, 300
<i>H. danianus</i> , n. s., Matthew, MSS., 1884, pl. ii, figs. 7 a, b	20-21, 300-301
<i>H. micnac</i> , n. s., Matthew, MSS., 1884, pl. ii, fig. 6	21-22, 301-302
<i>Agnostus</i> , Brongniart	22, 302
<i>A. acadicus</i> , Hartt, 1868, pl. ii, figs. 2 2 a-c	22-23, 302-303
<i>Microdiscus</i> , Emmons	23, 303
<i>M. dawsoni</i> , Hartt, 1868, pl. ii, figs. 3, 3 a	23, 303
<i>M. punctatus</i> , Salter, 1864, pl. ii, figs. 1, 1 a-c	24-25, 303-304
<i>Paradoxides</i> , Brongniart	25, 305
<i>P. lamellatus</i> , Hartt, 1868, pl. iii, figs. 2, 2 a	25, 305
<i>P. acadicus</i> , Matthew, 1882, pl. iii, figs. 3, 3 a	25-27, 305-307
<i>P. etemivicus</i> , Matthew, 1883, pl. iii, figs. 1, 1 a-g	27, 307
<i>Conocoryphe</i> , Corda	28, 308
<i>C.</i> (Subgenus?), <i>matthewi</i> , Hartt, sp., 1868, pl. iv, figs. 1, 1 a, b	28-30, 308-310
<i>C. walcotti</i> , Matthew (in lit.), 1884	30-31, 310-311
<i>Bailiella</i> (new subgenus), Matthew, 1884	31-32, 311-312
<i>C. (Bailiella)</i> , <i>baileyi</i> , Hartt, sp., 1868, pl. iv, figs. 3, 3 a; pl. v, figs. 7, 7 a	32-33, 312-313
<i>C. elegans</i> , Hartt, sp., 1868, pl. iv, figs. 2, 2 a, b	33-34, 313-314
<i>Ptychoparia</i> , Corda	34-36, 314-316
<i>P. robbi</i> , Hartt, sp., 1868, pl. vi, figs. 1, 1 a	36-37, 316-317
<i>P. cuangondiana</i> , Hartt, sp., 1868, pl. v, figs. 4, 4 a-f	37-38, 317-318

	Page.
<i>P. ouangondiana</i> var. <i>aurora</i> , Hartt, sp., 1868, pl. v, fig. 5.....	38-39, 318-319
<i>P. quadrata</i> , Hartt, sp., 1868, pl. v, fig. 1.....	39, 319
<i>P. orestes</i> , Hartt, sp., 1868, pl. v, figs. 3, 3 a.....	39-40, 319-320
<i>P. orestes</i> var. <i>thersites</i> , Hartt, sp., 1868, pl. v, fig. 2.....	40-41, 320-321
<i>P. tener</i> , Hartt, sp., 1868, pl. v, figs. 6, 6 a, b.....	41-42, 321-322

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

	Page.
<i>Hyolithes</i> , Eichwald.....	44, 324
<i>H. shaleri</i> , n. s., Walcott, 1884, pl. vii, figs. 4, 4 a-c.....	44-45, 324-325
<i>Paradoxides</i> , Brongniart.....	45, 325
<i>P. harlani</i> , Green, 1834, pl. vii, fig. 3; pl. viii, figs. 1, 1 a-e; pl. ix, fig. 1.....	45-47, 325-327
<i>Ptychoparia</i> , Corda.....	47, 327
<i>P. rogersi</i> , n. s., Walcott, 1884, pl. vii, fig. 2.....	47-48, 327-328
<i>Agraulos</i> , Corda.....	48, 328
<i>A. quadrangularis</i> , Whitfield, sp., 1884, pl. vii, fig. 1.....	48-49, 328-329

The third part is "On a new genus and species of Phyllopoda from the middle Cambrian."

	Page.
<i>Protocaris</i> , n. g., Walcott, 1884.....	50, 330
<i>P. marshi</i> , n. s., Walcott, 1884, pl. x, fig. 1.....	50-51, 350-351

25.

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

OBOLIDÆ.

	Page
<i>Linnarssonina</i> , n. g., Walcott, 1885.....	115
<i>Obolella chromatica</i> , figs. 1, 2, p. 116.....	116
<i>Linnarssonina transversa</i> , Hartt, sp., figs. 3, 4, p. 116.....	116
<i>L. sagittatis</i> , figs. 5-8, p. 116.....	116
<i>L. transversa</i> , figs. 6, 7, p. 116.....	116

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.

	Page.
<i>Mesonacis</i> , n. g., Walcott, 1885, figs. 1, 2, p. 329.....	328-330

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.

	Page.
<i>Matthevia</i> , n. g., Walcott, 1885.....	17-18
<i>M. variabilis</i> , n. s., Walcott, 1885, figs. 1-6, p. 20.....	18-19
Note on <i>Hyolithes</i> (<i>Camarotheca</i>) <i>emmonsii</i> , Ford.....	19-21

PART IV.

PUBLICATIONS BASED UPON THE PALEONTOLOGICAL COLLECTIONS OF THE UNITED STATES GOVERNMENT

BY

JACOB WHITMAN BAILEY,
TIMOTHY ABBOTT CONRAD,
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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.

	Page.
<i>Eunotia librice</i> , Ehrenberg, pl. v, figs. 1, 2, 3	302
<i>Eunotia gibba</i> , Ehr., pl. v, figs. 4, 5	302
<i>Pinnularia pachyptera</i> ?, Ehr., pl. v, figs. 6	302
<i>Cocconeina cymbiforme</i> ?, Ehr., pl. v, figs. 7, 8, 9	302
<i>Gomphonema clavatum</i> ?, Ehr., pl. v, figs. 10, 11	302
<i>Gomphonema minutissimum</i> , Ehr., pl. v, fig. 12	302
<i>Gallionella</i> ——, n. s., J. W. Bailey, 1845, pl. v, figs. 13, 14, 15	302
<i>Gallionella distans</i> ?, J. W. Bailey, pl. v, fig. 16	302
<i>Cocconeis preactexta</i> , Ehr., pl. v, figs. 17, 18	302
<i>Fragillaria</i> , J. W. Bailey, 1845, pl. v, fig. 19	302
<i>Surirella</i> , J. W. Bailey, 1845, pl. v, fig. 20	302
<i>Fragillaria rhabdosoma</i> ?, J. W. Bailey, 1845, pl. v, fig. 21	302
Spiculæ of fresh-water sponges, pl. v, figs. 22, 23	302
———?, pl. v, fig. 24	302
Scale = 10–100ths of millimeter magnified equally with drawings, pl. v, fig. 25	302

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.

	Page.
<i>Epithemia</i> , pl. iii, figs. 5, 6	111
<i>Cocconeina asperum</i> , Ehr	111
<i>Cocconeina cymbiforme</i> , Ehr	111
<i>Discoplea atmospherica</i> , Ehr	111
<i>Surirella campylodiscus</i> ?, Ehr., pl. iii, fig. 4	111
<i>Cocconeis</i> , pl. iii, fig. 3	111
<i>Cymbella gibba</i> , n. s., Bailey, 1855, pl. iii, fig. 1	111
<i>Cymatopleura</i> ? <i>campylodiscus</i> , n. s., Bailey, 1855, pl. iii, figs. 2 a, b	111
<i>Galleinella</i> , pl. iii, figs. 7 a, b	112
<i>Galleinella varians</i>	112
<i>Stephanodiscus</i> ——?	112
<i>Pennularia nobilis</i> , Ehr.	112
<i>Pennularia viridis</i>	112
<i>Epithemia</i>	112
<i>Surirella splendida</i> (?) Ehr.)	112
Pollen of pine	112
<i>Spongiolites</i>	112

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.

	Page.
Section of the cliff at Claiborne.....	174
Classification of Tertiary formations.....	176
Table of Atlantic supracretaceous deposits.....	177
Geographical range of Lower Tertiary.....	178
Geographical range of Medial Tertiary.....	179
Localities of the Upper Tertiary.....	176
Medial Tertiary period.....	180
Section at Fair Haven.....	181
List of species obtained.....	181-182
(Section) Cliff near Beckett's.....	182
(List of fossils).....	185
(Section) Saint Mary's River.....	185
Organic remains found on Saint Mary's River.....	186-187
Post-Pliocene period.....	187
Upper Tertiary formation.....	187
(Sections near Patuxent River).....	188
Section near the mouth of Potomac.....	189
(List of species).....	190
List of Fossil shells at Benner's.....	191-192
Descriptions of new Tertiary fossils.....	192
Lower Tertiary or Eocene fossils.....	192
<i>Ostrea</i> , Linnaeus.....	192
<i>O. selloformis</i> , n. s., Conrad, 1842, pl. i, fig. 1.....	192-193
<i>Pholadomya</i>	193
<i>P. marylandica</i> , n. s., Conrad, 1842, pl. i, fig. 3.....	193
<i>Pholas</i>	193
<i>P. petrosa</i> , n. s., Conrad, 1842, pl. ii, fig. 4.....	193
<i>Isocardia</i> , Lamarck.....	193
<i>I. markoči</i> , n. s., Conrad, 1842, pl. ii, fig. 1.....	193
<i>Pecten</i> , Lamarck.....	194
<i>P. humphreysii</i> , n. s., Conrad, 1842, pl. ii, fig. 2.....	194
<i>Dispotæa</i> , Say.....	194
<i>D. constricta</i> , n. s., Conrad, 1842, pl. i, fig. 2.....	194
<i>Scalaria</i> , Lamarck.....	194
<i>S. expansa</i> , n. s., Conrad, 1842, pl. ii, fig. 3.....	194
<i>Buccinum</i> , Lamarck.....	194
<i>B. integrum</i> , n. s., Conrad, 1842, pl. ii, fig. 5.....	194
<i>Scutella</i> , Lamarck.....	194
<i>S. aberti</i> , n. s., Conrad, 1842.....	194

2.

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.

	Page.
<i>Mya abrupta</i> , n. s., Conrad, 1849, pl. xvii, figs. 5, 5 a.....	723
<i>Thracia trapezoides</i> , n. s., Conrad, 1849, pl. xvii, figs. 6 a, b.....	723
<i>Solemya ventricosa</i> , n. s., Conrad, 1849, pl. xvii, figs. 7, 8.....	723

	Page.
<i>Donax? protexta</i> , n. s., Conrad, 1849, pl. xvii, fig. 9.....	723-724
<i>Venus bisecta</i> , n. s., Conrad, 1849, pl. xvii, figs. 10, 10 <i>a</i>	724
<i>Venus angustifrons</i> , n. s., Conrad, 1849, pl. xvii, fig. 11.....	724
<i>Venus lamellifera</i> , n. s., Conrad, 1849, pl. xvii, figs. 12, 12 <i>a</i>	724
<i>Venus brevilineata</i> , n. s., Conrad, 1849, pl. xvii, fig. 13.....	724
<i>Venus</i> ———, sp., Conrad, 1849, pl. xviii, figs. 1, 1 <i>a</i>	724
<i>Lucina acutilineata</i> , n. s., Conrad, 1849, pl. xviii, figs. 2, 2 <i>a</i> , <i>b</i>	725
<i>Tellina areolata</i> , n. s., Conrad, 1849, pl. xviii, figs. 3, 3 <i>a</i>	725
<i>Tellina emacerata</i> , n. s., Conrad, 1849, pl. xviii, fig. 4.....	725
<i>Tellina albaria</i> , n. s., Conrad, 1849, pl. xviii, fig. 5.....	725
<i>Tellina nasuta</i> , n. s., Conrad, 1849.....	725
<i>Tellina bitruncata</i> , n. s., Conrad, 1849.....	725
<i>Nucula divaricata</i> , n. s., Conrad, 1849, pl. xviii, figs. 6, 6 <i>a</i>	725-726
<i>Nucula impressa</i> , n. s., Conrad, 1849, pl. xviii, figs. 7 <i>a-e</i>	726
<i>Pectunculus patulus</i> , n. s., Conrad, 1849, pl. xviii, figs. 8, 8 <i>a</i>	726
<i>Pectunculus nitens</i> , n. s., Conrad, 1849, pl. xviii, figs. 9 <i>a</i> , <i>b</i>	726
<i>Arca devincta</i> , n. s., Conrad, 1849, pl. xviii, figs. 10 <i>a</i>	726
<i>Arca</i> ———, Conrad, 1849, pl. xviii, figs. 11 <i>a</i> , <i>b</i>	726
<i>Cardita subenta</i> , n. s., Conrad, 1849, pl. xviii, figs. 12, 12 <i>a</i>	726
<i>Pecten propatulus</i> , n. s., Conrad, 1849, pl. xviii, figs. 13, 13 <i>a</i>	726
<i>Terebratula nitens</i> , n. s., Conrad, 1849, pl. xix, figs. 1, 1 <i>a</i>	726-727
———? Conrad, 1849, pl. xix, fig. 2.....	727
<i>Dolium petrosum</i> , n. s., Conrad, 1849, pl. xix, figs. 3 <i>a</i> , <i>b</i> , 4 <i>a</i> , <i>b</i> , and 5 <i>a</i> , <i>b</i>	727
<i>Sigaretus scopulosus</i> , n. s., Conrad, 1849, pl. xix, figs. 6, 6 <i>a-d</i>	727
<i>Natica saxea</i> , n. s., Conrad, 1849, pl. xix, figs. 7 <i>a</i> , <i>b</i>	727
<i>Bulla petrosa</i> , n. s., Conrad, 1849, pl. xix, fig. 8.....	727
<i>Crepidula praerupta</i> , n. s., Conrad, 1849, pl. xix, figs. 9 <i>a</i> , and 10 <i>a</i> , <i>b</i>	727
<i>Crepidula</i> ———? Conrad, 1849, pl. xix, figs. 11 <i>a</i> , <i>b</i>	727
<i>Rostellaria indurata</i> , n. s., Conrad, 1849, pl. xix, fig. 12.....	727-728
<i>Cerithium mediale</i> , n. s., Conrad, 1849, pl. xx, figs. 1 <i>a</i>	728
<i>Buccinum? devinctum</i> , n. s., Conrad, 1849, pl. xx, figs. 2, 2 <i>a</i>	728
<i>Fusus geniculus</i> , n. s., Conrad, 1849, pl. xx, fig. 3.....	728
<i>Fusus corpulentus</i> , n. s., Conrad, 1849, pl. xx, fig. 4.....	728
<i>Nautilus angustatus</i> , n. s., Conrad, 1849, pl. xx, figs. 5, 6.....	728
<i>Teredo substriata</i> , pl. xx, figs. 7 <i>a</i> , <i>b</i>	728

The figures from 8 to 13, inclusive, on pl. xx, representing species from Astoria, are given of natural size, without names.

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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The plates are numbered in a very irregular manner.

	Page.
<i>Echinodermata.</i>	
<i>Echinus</i> , Lin., Lam.....	212
<i>E. syriacus</i> , n. s., Conrad, 1852, pl. i, fig. 1, and pl. xxii, fig. 127.....	212
<i>Holaster</i> , Agassiz.....	212
<i>H. syriacus</i> , n. s., Conrad, 1852, pl. i, fig. 2.....	212
<i>Cidaris</i> , Lam.....	212
Spines of <i>Cidaris</i> , Conrad, 1852, pl. i, figs. 3-5.....	212
<i>Testacea.</i>	
<i>Bivalves.</i>	
<i>Ostrea</i> , Lin., Lam.....	212
<i>O. virgata</i> , Goldfuss, Nyst., pl. i, figs. 6-8.....	212
<i>O. syriaca</i> , n. s., Conrad, 1852, pl. ii, fig. 12.....	212
<i>O. linguloides</i> , n. s., Conrad, 1852, pl. ii, fig. 13.....	212
<i>O. scapha</i> , Ramer, pl. xv, figs. 78, 79.....	213
<i>Exogyra</i> , Say.....	213
<i>Ostrea boussingaultii</i> , d'Orbigny.....	213
<i>E. boussingaultii</i> , d'Orbigny, pl. i, fig. 9, and pl. ii, figs. 10, 11.....	213

	Page.
<i>Pecten</i> , Gault., Lam.	213
<i>Pecten</i> , ———, Conrad, 1852	213
<i>Nucula</i> , Lam.	213
<i>N. submucronata</i> , n. s., Conrad, 1852, pl. ii, fig. 14	213
<i>N. parallela</i> , n. s., Conrad, 1852, pl. ii, fig. 15	214
<i>N. syriaca</i> , n. s., Conrad, 1852, pl. iii, fig. 16	214
<i>N. myiformis</i> , n. s., Conrad, 1852, pl. iii, fig. 17	214
<i>N. perobliqua</i> , n. s., Conrad, pl. iii, fig. 18	214
<i>Trigonia</i> , Brug.	214
<i>T. syriaca</i> , n. s., Conrad, 1852, pl. iii, figs. 19-23	214
<i>T. alta</i> , n. s., Conrad, 1852, pl. iv, fig. 24	214
<i>T. cuneiformis</i> , n. s., Conrad, 1852, pl. iii, fig. 22	214-215
<i>Isocardia</i> , Lam.	215
<i>I. crenulata</i> , n. s., Conrad, 1852, pl. iv, fig. 26	215
<i>Astarte</i> , Sow.	215
<i>A. syriaca</i> , n. s., Conrad, 1852, pl. iv, fig. 25	215
<i>A. orientalis</i> , n. s., Conrad, 1852, pl. iv, fig. 27	215
<i>A. pervetus</i> , n. s., Conrad, 1852, pl. iv, fig. 28	215
<i>A. engonata</i> , n. s., Conrad, 1852, pl. iv, fig. 29	215
<i>A. areolata</i> , n. s., Conrad, 1852, pl. xx, fig. 119	215
<i>Arca</i> , Lin.	215
<i>A. syriaca</i> , n. s., Conrad, 1852, pl. v, fig. 30	215
<i>A. brevifrons</i> , n. s., Conrad, 1852, pl. v, fig. 31	215
<i>A. indurata</i> , n. s., Conrad, 1852, pl. v, fig. 33	216
<i>A. orientalis</i> , n. s., Conrad, 1852, pl. v, fig. 36	216
<i>A. declivis</i> , n. s., Conrad, 1852, pl. v, fig. 32	216
<i>A. subrotunda</i> , n. s., Conrad, 1852, pl. v, fig. 34	216
<i>A. acclivis</i> , n. s., Conrad, 1852, pl. v, fig. 35	216
<i>Corbula</i> , Brug.	216
<i>C. congesta</i> , n. s., Conrad, 1852, pl. v, fig. 37, and pl. xxii, fig. 130	216
<i>Cardium</i> , Lin., Lam.	219
<i>C. biserialium</i> , n. s., Conrad, 1852, pl. vi, figs. 38-40	216-217
<i>C. crebriechinatum</i> , n. s., Conrad, 1852, pl. vi, figs. 41-43, and pl. xv, fig. 77; Appendix, pl. ii, fig. 16	217
<i>C. syriacum</i> , n. s., Conrad, 1852, pl. vii, fig. 45	217
<i>C. hermonense</i> , n. s., Conrad, 1852, pl. xxii, fig. 129	217
<i>Ordium</i> ? Conrad, 1852, pl. xv, fig. 76	217
<i>Pholadomya</i> , Sow.	217
<i>P. decisa</i> , n. s., Conrad, 1852, pl. vii, fig. 44	217
<i>Panopea</i> , Ménéard	217
<i>P. pectorosa</i> , n. s., Conrad, 1852, pl. vii, fig. 46	217
<i>Inoceramus</i> , Sow.	218
<i>I. lynckii</i> , n. s., Conrad, 1852, pl. viii, fig. 47	218
<i>Mactra</i> , Lin., Lam.	218
<i>M. petrosa</i> , n. s., Conrad, 1852, pl. viii, fig. 48	218
<i>M. pervetus</i> , n. s., Conrad, 1852, pl. viii, fig. 49	218
<i>M. arciformis</i> , n. s., Conrad, 1852, pl. viii, fig. 50	218
<i>M. syriaca</i> , n. s., Conrad, pl. viii, fig. 51	218
<i>Venus</i> , Lin., Lam.	218
<i>V. syriaca</i> , n. s., Conrad, 1852, pl. ix, fig. 52	218
<i>V. indurata</i> , n. s., Conrad, 1852, pl. ix, fig. 53	219
<i>Cytherea</i> , Lam.	219
<i>C. syriaca</i> , n. s., Conrad, 1852, pl. ix, figs. 54-56	219
<i>Lucina</i> , Lam.	219
<i>L. syriaca</i> , n. s., Conrad, 1852, pl. x, fig. 57	219
<i>L. ? subtruncata</i> , n. s., Conrad, 1852, pl. xv, fig. 76	219
<i>Tellina</i> , Lin., Lam.	219
<i>T. syriaca</i> , n. s., Conrad, 1852, pl. x, figs. 59-61	219
<i>T. obruta</i> , n. s., Conrad, 1852, pl. x, fig. 58	219
<i>Orbicula</i> ? Lam.	219
<i>O. subobliqua</i> , n. s., Conrad, 1852, pl. x, fig. 61½	219
Univalves:	
<i>Oenopus</i> , Phill.	220
<i>O. turriculoides</i> , n. s., Conrad, 1852, pl. x, fig. 62	220
<i>O. induratus</i> , n. s., Conrad, 1852, pl. xi, fig. 69	220

	Page.
<i>O. syriacus</i> , n. s., Conrad, pl. xil, fig. 71	220
<i>Natica</i> , Lam	220
<i>N. indurata</i> , n. s., Conrad, 1852, pl. xi, figs. 65 and 68	220
<i>N. syriaca</i> , n. s., Conrad, 1852, pl. xil, fig. 70	220
<i>Phorus</i> , Montf.	220
<i>P. syriacus</i> , n. s., Conrad, 1852, pl. xi, fig. 66	220
<i>Turritella</i> , Lam	220
<i>T. syriaca</i> , n. s., Conrad, 1852, pl. xv, fig. 75	220-221
<i>T. magnicostata</i> , n. s., Conrad, 1852, pl. x, fig. 63-64	221
<i>T. peralveata</i> , n. s., Conrad, 1852, pl. xx, fig. 120	221
<i>Nerinea</i> , Deufr.	221
<i>N. syriaca</i> , n. s., Conrad, 1852, pl. xii, fig. 72; pl. xi, fig. 67	221
<i>N. rhamdunensis</i> , n. s., Conrad, 1852, pl. xxii, fig. 132	221
<i>Strombus</i> , Lin., Lam.	221
<i>S. peretius</i> , n. s., Conrad, 1852, pl. xiii, fig. 73	221
<i>Ammonites</i>	221
<i>A. syriacus</i> , n. s., Conrad, 1852, pl. xiv, fig. 74	221

ORGANIC REMAINS OF THE CHALK.

<i>Astarte</i> , Sow	222
<i>A. undulosa</i> , n. s., Conrad, 1852, pl. xvi, figs. 81, and 86; pl. xvii, figs. 89, 90, 99	222
<i>A. mucronata</i> , n. s., Conrad, pl. xvii, fig. 88	222
<i>Corbula</i> , Lam.	222
<i>C. sublineolata</i> , n. s., Conrad, 1852, pl. xvi, fig. 83	222
<i>C. syriaca</i> , n. s., Conrad, 1852, pl. xxi, fig. 125	222
<i>Opis</i> , Deufr.	222
<i>O. undatus</i> , n. s., Conrad, 1852, pl. xvii, fig. 87	222
<i>Nucula</i> , Lam.	222
<i>N. perovata</i> , n. s., Conrad, 1852, pl. xvii, fig. 91	222
<i>N. crebrilineata</i> , n. s., Conrad, 1852, pl. xvii, fig. 92-93	223
<i>N. ———</i> , Conrad, 1852, Appendix, pl. i, fig. 5	223
<i>N. perdita</i> , n. s., Conrad, 1852, pl. xvii, fig. 96	223
<i>N. ———</i> , Conrad, 1852, pl. xix, fig. 111	223
<i>Oucullæa</i> , Lam.	223
<i>O. subrotunda</i> , n. s., Conrad, 1852, pl. xvii, fig. 94	223
<i>O. linteæ</i> , n. s., Conrad, 1852, pl. xvii, fig. 95	223
<i>O. parallela</i> , n. s., Conrad, 1852, pl. xvii, fig. 98	223
<i>Arca</i> , Lin.	223
<i>A. fabiformis</i> , n. s., Conrad, 1852, pl. xvii, fig. 97	223
<i>Crassatella</i> , Lam.	223
<i>C. syriaca</i> , n. s., Conrad, 1852, pl. xvii, fig. 100	223-224
<i>Lithodomus</i> , Cuv.	224
<i>L. cretaceus</i> , n. s., Conrad, 1852, pl. xvii, fig. 101	224
<i>Gryphæa</i> , Lam.	224
<i>G. capuloides</i> , n. s., Conrad, 1852, pl. xviii, figs. 103 and 104	224
<i>G. vesicularis</i> , Brown, pl. xviii, fig. 105	224
<i>Exogyra</i> , Say	224
<i>E. densata</i> , n. s., Conrad, pl. xviii, fig. 102	224
<i>E. densata</i> , var., Conrad, 1852, pl. xviii, fig. 106	224
<i>Avicula</i> , Lam.	225
<i>A. samariensis</i> , n. s., Conrad, 1852, pl. xix, fig. 107	225
<i>Pecten</i> , Lin., Lam.	225
<i>P. delumbis</i> , n. s., Conrad, 1852, pl. xix, fig. 110, and Appendix, pl. i, fig. 4	225
<i>P. obrutus</i> , n. s., Conrad, 1852, pl. xix, fig. 114	225
<i>Cardium</i> , Lin., Lam.	225
<i>C. bellum</i> , n. s., Conrad, 1852, Appendix, pl. i, fig. 3	225
<i>C. ovulum</i> , n. s., Conrad, 1852, pl. xix, fig. 108	225
<i>Astarte</i> , Sow.	225
<i>A. linteæ</i> , n. s., Conrad, 1852, pl. xix, fig. 109	225
<i>A. sublineolata</i> , n. s., Conrad, pl. xix, fig. 112	225
<i>Venus</i> , Lin., Lam.	225
<i>V. perovatis</i> , n. s., Conrad, Appendix, pl. i, fig. 2	225
<i>Inoceramus</i> , Sow.	226
<i>I. aratus</i> , n. s., Conrad, 1852, pl. xix, fig. 113	226
<i>Lucina</i> , Lam.	226

	Page.
<i>L. safedensis</i> , n. s., Conrad, 1852, pl. ix, fig. 115.....	226
<i>Terebratula</i> , Lam.	226
<i>T. hermonensis</i> , n. s., Conrad, 1852, pl. xx, fig. 123	226
Univalves:	
<i>Fusus</i> , Lam.	226
<i>F. ellerii</i> , n. s., Conrad, 1852, pl. xvi, fig. 82.....	226
<i>Chenopus</i> , Phillipi	226
<i>Chenopus</i> , Conrad, 1852	226
<i>Hippurites</i> , Lam.	226
<i>H. syriacus</i> , n. s., Conrad, 1852, pl. xvi, fig. 84	226
<i>Nerinea</i> , DeFr.	227
<i>N. cretacea</i> , n. s., Conrad, 1852, pl. xvi, fig. 85	227
<i>Ancylloceras</i> , d'Orbigny	227
<i>A. safedensis</i> , n. s., Conrad, 1852, pl. xx, figs. 117-118.....	227
<i>Baculites</i> , Lam.	227
<i>B. syriacus</i> , n. s., Conrad, 1852, pl. xx, fig. 121	227
<i>B</i> ———, Conrad, 1852, pl. xx, fig. 122	227
<i>Ammonites</i> , Brug.	227
<i>A. safedensis</i> , n. s., Conrad, 1852, pl. xxi, fig. 124.....	227
<i>Nummulites</i>	227
<i>N. arbiensis</i> , n. s., Conrad, 1852, pl. xxii, fig. 127	227
<i>Dentalium</i> , Lin.	228
<i>D. cretaceum</i> , n. s., Conrad, 1852, Appendix, pl. i, fig. 1.....	228
<i>Echinodermata</i>	
<i>Echinus</i> , Lin.	228
<i>E. kerakensis</i> , n. s., Conrad, 1852, pl. xix, fig. 116	228

APPENDIX.

JURASSIC FORMS,

Bivalves:

<i>Janira</i> , Shum.....	230
<i>J. syriaca</i> , n. s., Conrad, 1852, pl. i, fig. 6	230
<i>Ostræa</i> , Lin., Lam.	230
<i>O. corticosa</i> , n. s., Conrad, 1852, pl. i, fig. 7.....	230
<i>O. virgata</i> ? n. s., Conrad, pl. i, fig. 8.....	230
<i>Opis</i> , DeFr.	231
<i>O. equalis</i> , n. s., Conrad, 1852, pl. ii, fig. 9.....	231
<i>O. orientalis</i> , n. s., Conrad, 1852, pl. ii, fig. 10	231
<i>O. obrutus</i> , n. s., Conrad, 1852, pl. ii, fig. 12.....	231
<i>Astarte</i> , Sow.	231
<i>A. lucinoides</i> , n. s., Conrad, 1852, pl. ii, fig. 11	231
<i>A. subcordata</i> , n. s., Conrad, 1852, pl. ii, fig. 13.....	231
<i>Inoceramus</i> , Sow.....	231
<i>I. syriacus</i> , n. s., Conrad, 1852, pl. ii, fig. 14	231
<i>I. elevatus</i> , n. s., Conrad, 1852, pl. ii, fig. 15	231
<i>Pholadomya</i> , Sow.	231
<i>P. syriaca</i> , n. s., Conrad, 1852, pl. ii, fig. 17.....	231
<i>Cardium</i> , Lin.	231
<i>C. crebricchinatum</i> , n. s., Conrad, 1852, pl. ii, fig. 16	231
<i>Arca</i> , Lin.	231
<i>A. longa</i> , n. s., Conrad, 1852, pl. iii, fig. 18.....	231
<i>A. bhamdunensis</i> , n. s., Conrad, 1852, pl. iii, fig. 19	232
<i>A. cuneus</i> , n. s., Conrad, 1852, pl. iii, fig. 22	232
<i>Oucullæa</i> , Lam.	232
<i>C. opiformis</i> , n. s., Conrad, 1852, pl. iii, fig. 21.....	232
<i>Nucula</i> , Lam.	232
<i>N. abrupta</i> , n. s., Conrad, 1852, pl. iii, fig. 20.....	232
<i>N. ? obtenta</i> , n. s., Conrad, 1852, pl. iii, fig. 23.....	232
<i>Tellina</i> , Lin.	232
<i>T. syriaca</i> ?, Conrad, 1852, pl. iii, fig. 25, and pl. x, figs. 59-61.....	232
<i>Orbicula</i> , Cuv	232
<i>O. ? syriaca</i> , n. s., Conrad, 1852, pl. iii, fig. 24	232
<i>Trigonia</i> , Brug.....	232
<i>T. syriaca</i> , n. s., Conrad, 1852, pl. iv, fig. 26	232

	Page.
<i>T. distans</i> , n. s., Conrad, 1852, pl. iv, fig. 27.....	232
<i>Panopæa</i> , Mén.....	232
<i>P. orientalis</i> , n. s., Conrad, 1852, pl. iv, fig. 28.....	232-233
Univalves:	
<i>Nerinea</i> , DeFrance.....	233
<i>N. ? cochleariformis</i> , n. s., Conrad, 1852, pl. iv, fig. 29.....	233
<i>N. —</i> , Conrad, 1852, pl. iv, figs. 30, 31.....	233
<i>N. ? orientalis</i> , n. s., Conrad, 1852, pl. v, fig. 32.....	233
<i>N. syriaca</i> , n. s., Conrad, 1852, pl. v, figs. 33, 34, 35, 37, 38.....	233
<i>N. abbreviata</i> , n. s., Conrad, 1862, pl. v, fig. 36.....	233
<i>N. —</i> , Conrad, 1852.....	233
<i>Actæonella</i> , d'Orb.....	233
<i>A. syriaca</i> , n. s., Conrad, 1852, pl. v, fig. 40.....	233
<i>Cerithium</i> , Adans., Lam.....	233
<i>C. bilineatum</i> , n. s., Conrad, 1852, pl. v, fig. 39.....	233
<i>Natica</i> , Lam.....	233
<i>N. orientalis</i> , n. s., Conrad, 1852, pl. v, fig. 41.....	233
<i>Turritella</i> , Lam.....	234
<i>T. syriaca</i> , n. s., Conrad, 1852, pl. v, fig. 42.....	234
<i>Cancellaria</i> , Lam.....	234
<i>C. petrosa</i> , n. s., Conrad, 1852, pl. v, fig. 43.....	234
Bivalves:	
<i>Lithodomus</i> , Cuv.....	234
<i>L. stamineus</i> , n. s., Conrad, 1852, pl. v, fig. 44.....	234
<i>Cardium</i> , Lin.....	234
<i>C. biserialatum</i> , n. s., Conrad, 1852, pl. v, fig. 45.....	234
Univalves:	
<i>Ammonites</i>	234
<i>A. libanensis</i> , n. s., Conrad, 1852, pl. vi, fig. 46.....	234
<i>Hippurites</i> , Lam.....	234
<i>H. liratus</i> , n. s., Conrad, 1852, pl. vii, figs. 47, 48.....	234
<i>H. plicatus</i> , n. s., Conrad, 1852, pl. vii, fig. 49.....	234
<i>Natica</i> , Lam.....	234
<i>N. ? scalaris</i> , n. s., Conrad, 1852, pl. vii, fig. 50.....	234
<i>Chenopus</i>	235
<i>C. —</i> , Conrad, pl. viii, figs. 51, 52.....	235
Bivalves:	
<i>Corbula</i> , Lam.....	235
<i>C. aleihensis</i> , n. s., Conrad, 1852, pl. viii, fig. 53.....	235
<i>Orbicula</i> , Lam.....	235
<i>Orbicula ? —</i> , Conrad, 1852, pl. viii, fig. 55.....	235
<i>Echinodermata</i>	235
<i>Echinus</i> , Lin.....	235
<i>E. libanensis</i> , n. s., Conrad, 1852, pl. viii, fig. 54.....	235
<i>E. bullatus</i> , n. s., Conrad, 1852, pl. viii, fig. 56.....	235

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CATALOGUE.

	Page.
Eocene.....	7
Miocene and recent formations.....	7-8

DESCRIPTIONS OF FOSSIL SHELLS FROM THE EOCENE AND MIOCENE FORMATIONS OF CALIFORNIA.

Eocene.	
<i>Cardium</i> , Lin.....	9
<i>C. linteum</i> , n. s., Conrad, 1855, pl. I, fig. 1.....	9

	Page.
<i>Dosinia</i> , Scopoli	9
<i>D. alta</i> , n. s., Conrad, 1855, pl. i, fig. 2	9
<i>Meretrix</i> , Lam.— <i>Cytherea</i> , Lam.	9
<i>M. uvasana</i> , n. s., Conrad, 1855, pl. i, fig. 3	9
<i>M. californiana</i> , n. s., Conrad, 1855, pl. i, fig. 4	9
<i>Crassatella</i> , Lam.	9
<i>C. uvasana</i> , n. s., Conrad, 1855, pl. i, fig. 5	9
<i>C. alta</i> , n. s., Conrad, 1855	9
<i>Mytilus</i> , Lin.	10
<i>M. humerus</i> , n. s., Conrad, 1855, pl. i, fig. 10	10
<i>Cardita</i> , Brug.	10
<i>C. planicosta</i> , n. s., Conrad, pl. i, fig. 6	10
<i>Natica</i> , Adanson	10
<i>N. ætites</i> ?, Conrad, 1833, pl. i, fig. 7	10
<i>N. gibbosa</i> and <i>semilunata</i> , Lea	10
<i>N. alveata</i> , n. s., Conrad, 1855, pl. i, figs. 8, 8 a	10
<i>Turritella</i> , Lam.	10
<i>T. uvasana</i> , n. s., Conrad, 1855, pl. i, fig. 12	10-11
<i>Voluta</i> [<i>Uthys</i> , Swains. [e]	11
<i>V. californiana</i> , n. s., Conrad, 1855, pl. i, fig. 9	11
<i>Busycon</i> , ?	11
<i>B. ? blakei</i> , n. s., Conrad, 1855, pl. i, fig. 13	11
<i>Clavatula</i> , ? Swains.	11
<i>C. ? californica</i> , n. s., Conrad, 1855, pl. i, fig. 11	11

FOSSILS OF THE MIOCENE AND RECENT FORMATIONS OF CALIFORNIA.

<i>Cardium</i> , Lin.	11
<i>C. modestum</i> , n. s., Conrad, 1855, pl. ii, fig. 15	11
<i>Nuculana</i> , Lam.	11
<i>N. decisa</i> , n. s., Conrad, 1855, pl. ii, fig. 19	11-12
<i>Corbula</i>	12
<i>C. diegoana</i> , n. s., Conrad, 1855, pl. ii, fig. 16	12
<i>Meretrix</i> , Lam.	12
<i>M. uniomeris</i> , n. s., Conrad, 1855, pl. ii, fig. 20	12
<i>M. decisa</i> , n. s., Conrad, 1855, pl. ii, fig. 27	12
<i>M. tularana</i> , n. s., Conrad, 1855, pl. ii, figs. 22, 22 a	12
<i>Tellina</i> , Lin.	12
<i>T. diegoana</i> , n. s., Conrad, 1855, pl. ii, fig. 28	12
<i>T. congesta</i> , n. s., Conrad, 1855, pl. ii, figs. 14, 18, 21	12-13
<i>T. pedroana</i> , n. s., Conrad, 1855, pl. ii, fig. 17	13
<i>Arca</i> , Lin.	13
<i>A. microdonta</i> , n. s., Conrad, 1855, pl. ii, fig. 29	12
<i>Tapes</i>	13
<i>T. diversum</i> , Sow., pl. ii, figs. 24, a, and 26	13
<i>Saxicava</i> Fleur de Bell	13
<i>S. abrupta</i> , n. s., Conrad, 1855, pl. ii, figs. 25, 25 a	13
<i>Petricola</i> , Lam.	13
<i>P. pedroana</i> , n. s., Conrad, pl. ii, fig. 23	13-14
<i>Schizothærus</i> , Conrad.	14
<i>S. nuttalli</i> , n. s., Conrad, 1855, pl. iii, figs. 33, 33 a	14
<i>Lutraria</i> ?, Lam.	14
<i>L. traskei</i> , n. s., Conrad, 1855, pl. iii, fig. 30	14
<i>Maetra</i> , Lin.	14
<i>M. diegoana</i> , n. s., Conrad, 1855, pl. iv, fig. 35	14
<i>Modiola</i> , Lam.	14
<i>M. contracta</i> , n. s., Conrad, 1855, pl. iv, fig. 35	14
<i>Mytilus</i> , Lin.	15
<i>M. pedroanus</i> , n. s., Conrad, 1855, pl. —, fig. 40	15
<i>Pecten</i> , Lin.	15
<i>P. deserti</i> , n. s., Conrad, 1855, pl. —, fig. 41	15
<i>Anomia</i> , Lin.	15
<i>A. subcostata</i> , n. s., Conrad, 1855, pl. —, fig. 34	15
<i>Ostrea</i> , Lin.	15
<i>O. vespertina</i> , Conrad, 1855, pl. —, fig. 36-38	15

	Page.
<i>O. heermanni</i> , Conrad	15-16
<i>Penitella</i>	16
<i>P. spelorum</i> , n. s., Conrad, 1855, pl. —, figs. 43, 43 <i>a, b</i>	16
<i>Fissurella</i> , Lam.	16
<i>F. crenulata</i> , Sow., pl. —, fig. 44	16
<i>Orepidula</i> , Lam., <i>Crypta</i> , Humph.	16
<i>C. princeps</i> , n. s., Conrad, 1855, pl. —, fig. 52	16
<i>Narica</i>	16
<i>N. diegoana</i> , n. s., Conrad, 1855, pl. —, fig. 39	16
<i>Trochita</i> , Schum.	17
<i>T. diegoana</i> , n. s., Conrad, 1855, pl. —, fig. 42	17
<i>Crucibulum</i> , Shum.	17
<i>C. spinosum</i> , n. s., Conrad, 1855, pl. —, fig. 46	17
<i>Nassa</i> , Lam.	17
<i>N. [inter]striata</i> , n. s., Conrad, 1855, pl. —, fig. 49	17
<i>N. pedroana</i> , n. s., Conrad, 1855, pl. —, fig. 48	17
<i>Strophona</i> , Browne, <i>Oliva</i> , Lam.	17
<i>S. pedroana</i> , n. s., Conrad, 1855, pl. —, fig. 51	17
<i>Littorina</i> , Ferr.	17
<i>L. pedroana</i> , n. s., Conrad, 1855, pl. —, fig. 50	17
<i>Stramonita</i> , Shum., <i>Purpura</i> , Lam.	17
<i>S. petrosa</i> , n. s., Conrad, 1855, pl. —, fig. 47, 47 <i>a</i>	17-18

TERTIARY SHELLS OF THE Isthmus of DARIEN.

Miocene?

<i>Gratelupia?</i> Desmoulins	18
<i>G. mactropsis</i> , n. s., Conrad, 1855, pl. —, fig. 54	18
<i>Meretrix</i>	18
<i>M. dariena</i> , n. s., Conrad, 1855, pl. —, fig. 55	18
<i>Tellina</i> , Lin.	18
<i>T. dariena</i> , n. s., Conrad, 1855, pl. —, fig. 53	19

MIOCENE FOSSILS FROM OCOYA CREEK.

<i>Natica</i>	18
<i>N. ocoyana</i> , n. s., Conrad, 1855, pl. vi, fig. 57	18
<i>N. geniculata</i> , n. s., Conrad, 1855, pl. vi, fig. 67	18-19
<i>Bulla</i>	19
<i>B. jugularis</i> , n. s., Conrad, 1855, pl. vi, figs. 62, 62 <i>a, b</i>	19
<i>Pleurotoma</i>	19
<i>P. transmontana</i> , n. s., Conrad, 1855, pl. vi, fig. 69	19
<i>P. ocoyana</i> , n. s., Conrad, 1855, pl. vi, fig. 71	19
<i>Sycotopus</i>	19
<i>S. ocoyanus</i> , n. s., Conrad, 1855, pl. vi, fig. 72	19
<i>Turritella</i>	19
<i>T. ocoyana</i> , n. s., Conrad, 1855, pl. vii, figs. 73, 73 <i>a, b</i>	19
<i>Colus</i>	19
<i>C. arcatus</i> , n. s., Conrad, 1855, pl. vii, fig. 76	19
<i>Tellina</i>	19
<i>T. ocoyana</i> , n. s., Conrad, 1855, pl. vii, fig. 75	19
<i>Pecten</i>	19
<i>P. nevadanus</i> , n. s., Conrad, 1855, pl. vii, fig. 77	16
<i>P. catilliformis</i> , n. s., Conrad, 1855, pl. viii, fig. 83	20

5.

CONRAD, T. A. Descriptions of the Fossil Shells. <Reports of Expls. & Survs. from the Mississippi River to the Pacific Ocean. Vol. v, part ii, appendix, article ii, pp. 317-329, pls. ii-ix. Washington, 1856.

Catalogue	Page. 318-320
-----------	------------------

DESCRIPTIONS OF FOSSIL SHELLS FROM THE EOCENE AND MIOCENE FORMATIONS OF CALIFORNIA.

Eocene.

<i>Cardium</i> , Lin.	320
<i>C. luteum</i> , Conrad, 1855, pl. ii, fig. 1	320
<i>Dosinia</i> , Scopoli	320

	Page.
<i>D. alta</i> , Conrad, 1855, pl. ii, fig. 2	320
<i>Meretrix</i> , Lam.— <i>Cytherca</i> , Lam.	320
<i>M. wasana</i> , Conrad, 1855, pl. ii, fig. 3	320
<i>M. californiana</i> , Conrad, 1855, pl. ii, fig. 4	320
<i>Crassatella</i> , Lam.	320
<i>C. wasana</i> , Conrad, 1855, pl. ii, fig. 5	320-321
<i>C. alta</i> , Conrad, 1855	321
<i>Mytilus</i> , Lin.	321
<i>M. humerus</i> , Conrad, 1855, pl. ii, fig. 10	321
<i>Cardita</i> , Brug.	321
<i>C. planicosta</i> , Conrad, 1855, pl. ii, fig. 6	321
<i>Natica</i> , Adamson	321
<i>N. atites</i> ? Conrad, 1833, pl. ii, fig. 7	321
<i>N. gibbosa</i> and <i>semilunata</i> , Lea, 1833	321
<i>N. alveata</i> , Conrad, pl. ii, figs. 8, 8 a	321
<i>Turritella</i> , Lam.	321
<i>T. wasana</i> , Conrad, 1855, pl. ii, fig. 12	321-322
<i>Voluta</i> [<i>l</i>] <i>ithes</i> , Swains.	322
<i>V. californiana</i> , Conrad, 1855, pl. ii, fig. 9	322
<i>Busycon</i> ?	322
<i>B.?</i> <i>blakei</i> , Conrad, 1855, pl. ii, fig. 13	322
<i>Clavatula</i> ? Swains.	322
<i>C.?</i> <i>californica</i> , Conrad, 1855, pl. ii, fig. 11	322

FOSSILS OF THE MIOCENE AND RECENT FORMATIONS OF CALIFORNIA.

<i>Cardium</i> , Lin.	322
<i>C. modestum</i> , Conrad, 1855, pl. iii, fig. 15	322
<i>Nucula</i> , Lam.	322
<i>N. decisa</i> , Conrad, 1855, pl. iii, fig. 19	322
<i>Corbula</i>	322
<i>C. diegoana</i> , Conrad, 1855, pl. iii, fig. 16	322-323
<i>Meretrix</i> , Lam.	323
<i>M. uniomeris</i> , Conrad, 1855, pl. iii, fig. 20	323
<i>M. decisa</i> , Conrad, 1855, pl. iii, fig. 27	323
<i>M. tularana</i> , Conrad, 1855, pl. iii, fig. 22, 22 a	323
<i>Tellina</i> , Lin.	323
<i>T. diegoana</i> , Conrad, 1855, pl. iii, fig. 28	323
<i>T. congesta</i> , Conrad, 1855, pl. iii, figs. 14, 18, 21, 21 a	323
<i>T. pedroana</i> , Conrad, 1855, pl. iii, fig. 17	323
<i>Arca</i> , Lin.	323
<i>A. microdonta</i> , Conrad, 1855, pl. iii, fig. 29	323-324
<i>Tapes</i>	324
<i>T. diversum</i> , Sow., pl. iv, figs. 31, 32 a, b	324
<i>Saxicava</i> , Fleur de Bell	324
<i>S. abrupta</i> , Conrad, 1855, pl. iii, figs. 25, 25 a	324
<i>Petricola</i> , Lam.	324
<i>P. pedroana</i> , Conrad, 1855, pl. iii, fig. 24	324
<i>Schizothorus</i> , Conrad	324
<i>S. nuttall</i> , Conrad, 1855, pl. iv, figs. 23, 23 a	324
<i>Lutraria</i> ? Lam.	324
<i>L. traski</i> , Conrad, 1855, pl. iii, fig. 23	324-325
<i>Mactra</i> , Lin.	325
<i>M. diegoana</i> , Conrad, 1855, pl. v, fig. 45	325
<i>Modiola</i> , Lam.	325
<i>M. contracta</i> , Conrad, pl. v, fig. 35	325
<i>Mytilus</i> , Lin.	325
<i>M. pedroanus</i> , Conrad, 1855, pl. v, fig. 40	325
<i>Pecten</i> , Lin.	325
<i>P. deserti</i> , Conrad, 1855, pl. v, fig. 41	325
<i>Anomia</i>	325
<i>A. subcostata</i> , Conrad, 1855, pl. v, fig. 34	325
<i>Ostrea</i> , Lin.	325
<i>O. vespertina</i> , Conrad, 1855, pl. v, figs. 36-38	325-326
<i>O. heermanni</i> , Conrad, 1855, pl. —, figs. —	326

	Page.
<i>Penitella</i>	326
<i>P. spelæa</i> , Conrad, 1855, pl. v, figs. 43, 43 <i>a</i> , <i>b</i>	326
<i>Fissurella</i> , Lam.	326
<i>F. crenulata</i> , Sow., pl. v, fig. 44	326
<i>Crepidula</i> , Lam., <i>Crypta</i> , Humph.	326
<i>C. princeps</i> , Conrad, 1855, pl. v, figs. 52, 52 <i>a</i>	326
<i>Narica</i>	326
<i>N. diegoana</i> , Conrad, 1855, pl. v, fig. 39	326
<i>Trochita</i> , Shum.	327
<i>T. diegoana</i> , Conrad, 1855, pl. v, fig. 42	327
<i>Crucibulum</i> , Shum.	327
<i>C. spinosum</i> , Conrad, 1855, pl. v, figs. 46, 46 <i>a</i>	327
<i>Nassa</i> , Lam.	327
<i>N. interstriata</i> , Conrad, 1855, pl. vi, fig. 49	327
<i>N. pedroana</i> , Conrad, 1855, pl. vi, fig. 48	327
<i>Strophona</i> , Browne, <i>Olivæ</i> , Lam.	327
<i>S. pedroana</i> , Conrad, 1855, pl. vi, fig. 51	327
<i>Littorina</i> , Ferr.	327
<i>L. pedroana</i> , Conrad, 1855, pl. vi, fig. 50	327
<i>Stramonita</i> , Shum., <i>Purpura</i> , Lam.	327
<i>S. petrosa</i> , Conrad, 1855, pl. vi, figs. 47, 47 <i>a</i>	327

TERTIARY SHELLS OF THE ISTHMUS OF DARIEN.

*Miocene.**Gratelupia*? Desmoulins.

<i>G. † macrostypis</i> , Conrad, 1855, pl. vi, fig. 54	328
<i>Meretrix</i>	328
<i>M. dariena</i> , Conrad, 1855, pl. vi, fig. 55	328
<i>Tellina</i> , Lin.	328
<i>T. dariena</i> , Conrad, 1855, pl. vi, fig. 53	328

MIOCENE FOSSILS FROM OCOYA CREEK.

<i>Natica</i>	328
<i>N. ocoyana</i> , Conrad, 1855, pl. vii, figs. 57, 57 <i>a</i>	328
<i>N. geniculata</i> , Conrad, 1855, pl. vii, fig. 67	328
<i>Bulla</i>	328
<i>B. jugularis</i> , Conrad, 1856, pl. vii, figs. 62, 62 <i>a</i> , <i>b</i>	328
<i>Pleurotoma</i>	328
<i>P. transmontana</i> , Conrad, 1855, pl. vi, fig. 69	328-329
<i>Syetopus</i>	329
<i>S. ocoyanus</i> , Conrad, 1855, pl. vii, figs. 72, 72 <i>a</i>	329
<i>Turritella</i>	329
<i>T. ocoyana</i> , Conrad, 1855, pl. viii, figs. 73, 73 <i>a</i> , <i>b</i>	329
<i>Colus</i>	329
<i>C. arcatus</i> , Conrad, 1855, pl. viii, fig. 76	329
<i>Tellina</i>	329
<i>T. ocoyana</i> , Conrad, 1855, pl. viii, figs. 75, 75 <i>a</i>	329
<i>Pecten</i>	329
<i>P. nevadanus</i> , Conrad, 1855, pl. viii, fig. 77	329
<i>P. catilliformis</i> , Conrad, 1855, pl. ix, fig. 83	329

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	Page.
<i>Rostellites</i> , Conrad	268
<i>R. texanus</i> , n. s., Conrad, 1856	268
<i>Turritella</i> , Lam.	268

	Page.
<i>T. irrorata</i> , Conrad, n. s., 1856	268
<i>Caprina</i>	268
<i>C. planata</i> , n. s., Conrad, 1856	268
<i>C. occidentalis</i> , n. s., Conrad, 1856	268
<i>Neithea</i> , Drouet	269
<i>N. occidentalis</i> , n. s., Conrad, 1856	269
<i>Mactra</i> , Lin.	269
<i>M. texana</i> , n. s. Conrad, 1856	269
<i>Exogyra</i> , Say	269
<i>E. fragosa</i> , n. s., Conrad, 1856	269
<i>E. fimbriata</i> , n. s., Conrad, 1856	296
Tertiary species :	
<i>Ostrea contracta</i> , n. s., Conrad, 1856	269

7.

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	Page.
<i>Janira</i> , Shum.	312
<i>J. bella</i> , n. s., Conrad, 1857	312-313
<i>Pallium</i> , Klein	313
<i>P. estrellanum</i> , n. s., Conrad, 1857	313
<i>P. crassicardo</i> , n. s., Conrad, 1857	313
<i>Pecten</i> , Lin.	313
<i>P. meekii</i> , n. s., Conrad, 1857	313
<i>P. altiplectus</i> , n. s., Conrad, 1857	313
<i>Pachydesma</i> , Conrad	313
<i>P. inezana</i> , n. s., Conrad, 1857	313
<i>Mulinia</i> , Gray	313
<i>M. densata</i> , n. s., Conrad, 1857	313
<i>Thracia</i> , Leach	313
<i>T. mactropis</i> , n. s., Conrad, 1857	313
<i>Mya</i> , Lin.	313
<i>M. montereyana</i> , n. s., Conrad, 1857	313-314
<i>Arca</i> , Lin.	314
<i>A. canalis</i> , n. s., Conrad, 1857	314
<i>A. trilineata</i> , n. s., Conrad, 1857	314
<i>A. congesta</i> , n. s., Conrad, 1857	314
<i>Azinca</i> , Poli, <i>Pectunculus</i> , Lam.	314
<i>Azinca barbarensis</i> , n. s., Conrad, 1857	314
<i>Arcopagia</i>	314
<i>A. medialis</i> , n. s., Conrad, 1857	314
<i>Tapes</i> , Sowerby	314
<i>T. linteatum</i> , n. s., Conrad, 1857	314
<i>Cryptomya</i> , Conrad	314
<i>C. ovalis</i> , n. s., Conrad, 1857	314
<i>Cyclas</i> , Klein, <i>Lucina</i> , Lam. . .	314
<i>Cyclas tetrica</i> , n. s., Conrad, 1857	314
<i>Spondylus estrallensis</i> , n. s., Conrad, 1857	315
<i>Dosinia</i> , Scopoli	315
<i>D. longula</i> , n. s., Conrad, 1857	315
<i>D. alta</i> , n. s., Conrad, 1857	315
<i>Lutraria</i>	315
<i>L. transmontana</i> , n. s., Conrad, 1857	315
<i>Schizopyga</i> , n. g., Conrad, 1857	315
<i>S. californiana</i> , n. s., Conrad, 1857	315
<i>Tamiosoma</i> , n. g., Conrad, 1857	315
<i>T. gregaria</i> , n. s., Conrad, 1857	315

ECHINODERMS.

	Page.
<i>Astrodapsis</i> , n. g., Conrad, 1857	315
<i>A. antiselli</i> , n. s., Conrad, 1857	315
<i>Mellita texana</i> , n. s., Conrad, 1857	316

B.

CONRAD, T. A. Description of the Tertiary Fossils collected on the Survey. <Reports of Explorations and Surveys from the Mississippi River to the Pacific Ocean. Vol. vi, part ii, No. 2, pp. 69-73, pls. ii-v. Washington, 1857.

CALIFORNIA FOSSILS.

Univalves.	Page.
<i>Schizopyga</i> , n. s., Conrad, 1857	69
<i>S. californiana</i> , n. s., Conrad, 1857, pl. ii, fig. 1	69
Bivalves.	
<i>Cryptomya</i> , Conrad, 1857	69
<i>C. ovalis</i> , Conrad, 1856, pl. ii, fig. 2	69
<i>Thracia</i> , Leach	69
<i>T. mactropis</i> , Conrad, 1856, pl. ii, fig. 3	69-70
<i>Mya</i> , Lin.	70
<i>M. montereyana</i> , Conrad, 1856, pl. ii, fig. 4	70
<i>M. ? subsinuata</i> , n. s., Conrad, 1857, pl. ii, fig. 5	70
<i>Arcopecten</i> , Leach	70
<i>A. medialis</i> , Conrad, 1856, pl. ii, fig. 6	70
<i>Tapes</i> , Sowerby	70
<i>T. unteatum</i> , Conrad, 1856, pl. ii, fig. 7	70
<i>Arca</i> , Lin.	70
<i>A. canalis</i> , Conrad, 1856, pl. ii, fig. 8	70
<i>A. trilineata</i> , Conrad, 1856, pl. ii, fig. 9	70
<i>A. congesta</i> , Conrad, 1856, pl. ii, fig. 10	70-71
<i>Arxinea</i> , Poli, <i>Pectunculus</i> , Lam.	71
<i>A. barbarensis</i> , n. s., Conrad, 1857, pl. iii, fig. 11	71
<i>Mulinia</i> , Gray	71
<i>M. densata</i> , Conrad, 1856, pl. iii, fig. 12	71
<i>Dosinia</i> , Scopoli	71
<i>D. longula</i> , Conrad, 1856	71
<i>D. alta</i> , Conrad, 1856, pl. iii, figs. 13 a, b	71
<i>Pecten</i> , Lin.	71
<i>P. pabloensis</i> , n. s., Conrad, 1857, pl. iii, fig. 14	71
<i>Pallium</i> , Klein	71
<i>P. estrellanum</i> , Conrad, 1856, pl. iii, fig. 15	71
<i>Janira</i> , Shum.	71
<i>J. bella</i> , Conrad, 1856, pl. i, fig. 16	71-72
<i>Ostrea</i> , Linn.	72
<i>O. titan</i> , Conrad, 1855, pl. iv, fig. 17, and pl. v, fig. 17 a	72

FOSSILS OF GATUN, Isthmus of Darien.

<i>Malea</i> , Valenc.	72
<i>M. ringens</i> , n. s., Conrad, 1857, pl. v, fig. 22	72
<i>Turritella</i> , Lam.	72
<i>T. altilira</i> , n. s., Conrad, 1857, pl. v, fig. 19	72
<i>T. gatunensis</i> , n. s., Conrad, 1857, pl. v, fig. 20	72
<i>Triton</i> , Lam.	72
<i>Cytherea</i> ? Lam.	72
<i>C. ? (Meretrix) daricna</i> , ? n. s., Conrad, 1857, pl. v, fig. 21	72
<i>Tamiosoma</i> , n. g., Conrad, 1857	72
<i>T. gregaria</i> , n. s., Conrad, 1857, pl. iv, fig. 18	72-73
<i>Pandora</i> , Lam.	73
<i>P. bitirata</i> , Conrad, 1855, pl. v, fig. 25	73
<i>Cardita</i> , Brug.	73
<i>C. occidentalis</i> , Conrad, 1855, pl. v, fig. 24	73
<i>Diadora</i> , Gray	73
<i>D. cruciiformis</i> , Conrad, 1855, pl. v, fig. 23	73

9.

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	Page.
<i>Hinnites</i> , DeFrance.....	190
<i>H. crassa</i> , n. s., Conrad, 1857, pl. ii, figs. 1, 2.....	190
<i>Pecten</i> , Lin.	190
<i>P. meekii</i> , n. s., Conrad, 1857, pl. i, fig. 1.....	190
<i>P. deserti</i> , Conrad.....	190
<i>P. discus</i> , n. s., Conrad, 1857, pl. iii, fig. 1.....	190-191
<i>P. magnolia</i> , n. s., Conrad, 1857, pl. i, fig. 2.....	191
<i>P. altiplicatus</i> , n. s., Conrad, 1857, pl. iii, fig. 2.....	191
<i>Pallium</i> , Conrad.....	191
<i>P. estrellanum</i> , n. s., Conrad, 1857, pl. iii, figs. 3, 4.....	191
<i>Spondylus</i> , Rond., Lam.	191
<i>S. estrellanus</i> , n. s., Conrad, 1857, pl. i, fig. 3.....	191
<i>Tapes</i> ? Mühlf.	192
<i>T. montana</i> , n. s., Conrad, 1857, pl. v, figs. 3, 5.....	192
<i>T. inezensis</i> , n. s., Conrad, 1857, pl. vii, fig. 1.....	192
<i>Venus</i> , Lin.	192
<i>V. pajaroana</i> , n. s., Conrad, 1857, pl. iv, figs. 1, 2.....	192
<i>Arcopagia</i> , Brown.....	192
<i>A. unda</i> , n. s., Conrad, 1857, pl. iv, figs. 3, 4.....	192
<i>Cyclas</i> , Kleu, <i>Lucina</i> , Lam.	192
<i>C. permacra</i> , n. s., Conrad, 1857, pl. vii, fig. 4.....	192
<i>C. estrellana</i> , n. s., Conrad, 1857, pl. vi, fig. 6.....	192
<i>Arca</i> , Lin.	192
<i>A. obispoana</i> , n. s., Conrad, 1857, pl. v, fig. 1.....	192
<i>Pachydesma</i> , Conrad.....	193
<i>P. inezana</i> , n. s., Conrad, 1857, pl. v, figs. 2, 4.....	193
<i>Crassatella</i> , Lam.	193
<i>C. collina</i> , n. s., Conrad, 1857, pl. vi, figs. 1, 2.....	193
<i>Ostrea</i> , Lin.	193
<i>O. subjecta</i> , n. s., Conrad, 1857, pl. ii, fig. 3.....	193
<i>O. panzana</i> , n. s., Conrad, 1857, pl. ii, fig. 4.....	193
<i>Dosinia</i> Scopoli, <i>Athemis</i> Poli.....	193
<i>D. alta</i> , n. s., Conrad, 1857, pl. —, fig. —.....	193
<i>D. longula</i> , n. s., Conrad, 1857, pl. vii, fig. 2.....	193-194
<i>D. montana</i> , n. s., Conrad, 1857, pl. vi, fig. 4.....	194
<i>D. subobliqua</i> , n. s., Conrad, 1857, pl. vi, fig. 5.....	194
<i>Mytilus</i> , Lin.	194
<i>M. inezensis</i> , n. s., Conrad, 1857, pl. viii, figs. 2, 3.....	194
<i>Lutaria</i> , Lam.	194
<i>L. transmontana</i> , n. s., Conrad, 1857, pl. v, fig. 6.....	194
<i>Azinea</i> , Sow., <i>Pectunculus</i> , Lam.	194
<i>A. barbarensis</i> , n. s., Conrad, 1857, pl. vi, fig. 3.....	194
<i>Maetra</i> ?.....	194
<i>M. ? gobiensis</i> , n. s., Conrad, 1857, pl. vii, fig. 4.....	194
<i>Glycimeris</i> , Lam., <i>Panopæa</i> , Menard.....	194
<i>G. estrellanus</i> , n. s., Conrad, 1857, pl. vii, fig. 5.....	194
<i>Perna</i> , Lam.	195
<i>P. montana</i> , n. s., Conrad, 1857, pl. —, fig. —.....	195
Univalves.	
<i>Trochita</i>	195
<i>T. costellata</i> , n. s., Conrad, 1857, pl. vii, fig. 3.....	195
<i>Turritella</i> , Lam.	195
<i>T. inezana</i> , n. s., Conrad, 1857, pl. viii, fig. 4.....	195
<i>T. variata</i> , n. s., Conrad, 1857, pl. viii, fig. 5.....	195
<i>Natica</i>	195
<i>N. inezana</i> , n. s., Conrad, 1857, pl. x, figs. 5, 6.....	195
Multivalves.	
<i>Balanus estrellanus</i> , n. s., Conrad, 1857, pl. viii, fig. 1.....	195
Echinoderm.	
<i>Astrodapsis</i> , Conrad.....	196
<i>A. antisclli</i> , n. s., Conrad, 1857, pl. x, figs. 1, 2.....	196

10.

CONRAD, T. A. Descriptions of Cretaceous and Tertiary fossils. <United States and Mexican Boundary Survey. Report of William H. Emory. Vol. i, part ii, pp. 141-174, pls. i-xxi. Washington, 1857.

	Page.
Eocene species.....	141
Cretaceous fossils from Oak Creek, Texas	141
Cretaceous fossils from between Rio San Pedro and Rio Puercos	142
Cretaceous fossils from between El Paso and Frontera	142
Cretaceous fossils from Leon Springs.....	142
Cretaceous fossils from Jacun, 3 miles below Laredo	143
Cretaceous fossils from Lepan Hills	143
Cretaceous ? fossils from Dry Creek, Mexico.....	143
Cretaceous fossils from various localities	143
<i>Polypi:</i>	
<i>Turbinolia</i> , Lam	144
<i>T. texana</i> , n. s., Conrad, 1857, pl. ii, figs. 3 <i>a, b</i>	144
<i>Bivalves:</i>	
<i>Caprina</i> , D'Orbigny	147
<i>C. occidentalis</i> , Conrad, pl. ii, figs. 1 <i>a-c</i>	147
<i>C. planata</i> , Conrad, pl. ii, figs. 2 <i>a, b</i>	147
<i>Terebratula</i> , Lhwyd., Lam	147
<i>T. wacoensis</i> , Roemer, pl. iii, fig. 1.....	147
<i>T. choctawensis</i> , Shumard	147
<i>Trigonia</i> , Lam	147
<i>T. emoryi</i> , Conrad, pl. iii, fig. 2 <i>a-c</i>	148
<i>T. texana</i> , n. s., Conrad, 1857, pl. iii, figs. 3 <i>a-c</i>	148
<i>Mactra</i> , Lin., Lam	148
<i>M. texana</i> , Conrad, pl. iv, figs. 1 <i>a, b</i>	148
<i>Cueullera</i> , Lam	148
<i>C. terminalis</i> , n. s., Conrad, 1857, pl. iv, figs. 2 <i>a, b</i>	148
<i>Area</i> , Lin	148
<i>A. subelongata</i> , n. s., Conrad, 1857, pl. vi, figs. 3 <i>a, b</i>	148
<i>Arceopagia</i>	149
<i>A. texana</i> , Roemer, pl. iv, figs. 3 <i>a, b</i>	149
<i>Cardium</i> , Lin., Lam	149
<i>C. mediale</i> , n. s., Conrad, 1857, pl. iv, figs. 4 <i>a, b</i>	149
<i>C. congestum</i> , n. s., Conrad, 1857, pl. vi, figs. 5 <i>a-d</i>	149
Subgenus <i>Protoecardia</i> , Beyrich	149
<i>C. (Protoecardia) multistriatum</i> , Shumard, pl. vi, figs. 4 <i>a-c</i>	149
<i>C. (Protoecardia) texanum</i> , n. s., Conrad, 1857, pl. v, figs. 6 <i>a-c</i>	150
<i>C. (Protoecardia) fitosum</i> , n. s., Conrad, 1857, pl. vi, figs. 7 <i>a, b</i>	150
<i>Cardita</i> , Lam., Blainville.....	150
<i>C. eminula</i> , n. s., Conrad, 1857, pl. vi, fig. 8.....	150
<i>Corbula</i>	150
<i>C. occidentalis</i> , n. s., Conrad, 1857, pl. vi, fig. 9	150
<i>Neithea</i> , Drouet	150
<i>N. occidentalis</i> , Conrad, pl. v, figs. 1 <i>a, b</i>	150-151
<i>N. texana</i> , Roemer, sp., pl. v, figs. 2 <i>a, b</i>	151
<i>Lima</i>	151
<i>L. wacoensis</i> , Roemer, sp., pl. v, figs. 4 <i>a, b</i>	151
<i>L. leonensis</i> , n. s., Conrad, 1857, pl. v, figs. 3 <i>a-c</i>	151
<i>Inoceramus</i> , Sowerby	151
<i>I. confertim-annulatus</i> , Roemer, sp., pl. v, fig. 5	151
<i>I. mytilopsis</i> , n. s., Conrad, 1857, pl. v, figs. 6 <i>a, b</i>	152
<i>I. texanus</i> , n. s., Conrad, 1857, pl. v, fig. 7	152
<i>I. crispus</i> , Mantell, pl. v, fig. 8	152
<i>Pholadomya</i> , Sowerby	152
<i>P. texana</i> , n. s., Conrad, 1857, pl. xix, fig. 3	152
<i>Astarte</i> , Sowerby	152
<i>A. texana</i> , n. s., Conrad, 1857, pl. v, fig. 9	152
<i>Cytherea</i> , Lam	153
<i>C. leonensis</i> , n. s., Conrad, 1857, pl. vi, fig. 1	153
<i>C. texana</i> , n. s., Conrad, 1857, pl. vi, fig. 2.....	153
<i>Plicatula</i> , Lam	153

	Page.
<i>P. incongrua</i> , n. s., Conrad, 1857, pl. vi, figs. 10 <i>a</i> , <i>b</i>	153
<i>Exogyra</i> , Say	153
<i>E. arietina</i> , Rømer, pl. vii, figs. 1 <i>a-e</i>	153
<i>E. fimbriata</i> , Conrad, pl. vii, figs. 2 <i>a</i> , <i>b</i>	154
<i>E. læviuscula</i> , Rømer, pl. vii, figs. 4 <i>a</i> , <i>b</i>	154
<i>E. matheroniana</i> , d'Orbigny, pl. viii, figs. 1 <i>a-c</i> , and pl. xi, figs. 1 <i>a</i> , <i>b</i>	154
<i>E. costata</i> var. Conrad, 1857, pl. viii, fig. 2	154
<i>E. costata</i> , Say, pl. ix, figs. 1 and 2, and pl. x, fig. 1, and pl. viii, fig. 3	154-155
<i>E. fragosa</i> , Conrad, pl. viii, figs. 2 <i>a</i> , <i>b</i>	155
<i>Gryphea</i> , Lam	155
<i>G. pücheri</i> , Morton, pl. vii, fig. 3, and pl. x, figs. 2 <i>a</i> , <i>b</i>	155
<i>Ostrea</i> , Linn	150
<i>O. subspatulata</i> , Lyell & Sowerby, pl. x, figs. 3 <i>a</i> , <i>b</i>	155-156
<i>O. bella</i> , n. s., Conrad, 1857, pl. x, figs. 4 <i>a</i> , <i>b</i>	156
<i>O. lugubris</i> , n. s., Conrad, 1857, pl. x, figs. 5 <i>a</i> , <i>b</i>	156
<i>O. carinata</i> , Lam., pl. x, fig. 6	156
<i>O. vellicata</i> , n. s., Conrad, 1857, pl. xi, figs. 2 <i>a</i> , <i>b</i>	156
<i>O. robusta</i> , n. s., Conrad, 1857, pl. xi, figs. 3 <i>a</i> , <i>b</i>	156-157
<i>O. cortex</i> , n. s., Conrad, 1857, pl. xi, figs. 4 <i>a-d</i>	157
<i>O. multilirata</i> , n. s., Conrad, 1857, pl. xii, figs. 1 <i>a-d</i>	157
Univalves :	
<i>Natica</i> , Lam	157
<i>N. texana</i> , n. s., Conrad, 1857, pl. xiii, figs. 1 <i>a</i> , <i>b</i>	157
<i>N. collina</i> , n. s., Conrad, 1857, pl. xiii, figs. 2 <i>a</i> , <i>b</i>	157
<i>Rostellaria</i> ? Lam	157
<i>R. ? collina</i> , n. s., Conrad, 1857, pl. xiii, figs. 3 <i>a</i> , <i>b</i>	157
<i>R. ? collina</i> [<i>texana</i>], n. s., Conrad, 1857, pl. xiii, figs. 4 <i>a</i> , <i>b</i>	158
<i>Buccinopsis</i>	158
<i>B. parryi</i> , n. s., Conrad, 1857, pl. xiii, figs. 5 <i>a</i> , <i>b</i>	158
<i>Turritella</i> , Lam	158
<i>T. planilatis</i> , n. s., Conrad, 1857, pl. xiv, figs. 1 <i>a</i> , <i>b</i>	158
<i>Rostellites</i> , Conrad	158
<i>R. texana</i> , Conrad, pl. xiv, figs. 2 <i>a</i> , <i>b</i>	158
<i>Nerinea</i> , DeFrance	158
<i>N. schottii</i> , n. s., Conrad, 1857, pl. xiv, figs. 3 <i>a</i> , <i>b</i>	158-159
<i>Nodosaria</i> , Lam	159
<i>N. texana</i> , n. s., Conrad, 1857, pl. xiv, figs. 4 <i>a-c</i>	159
<i>Ammonites</i> , Lam	159
<i>A. pleurisepia</i> , n. s., Conrad, 1857, pl. xv, figs. 1 <i>a-c</i>	159
<i>A. geniculatus</i> , n. s., Conrad, 1857, pl. xv, figs. 2 <i>a</i> , <i>b</i>	159
<i>A. texanus</i> , Rømer, pl. xvi, figs. 1 <i>a-d</i>	159-160
<i>A. leonensis</i> , n. s., Conrad, 1857, pl. xvi, figs. 2 <i>a</i> , <i>b</i>	160
TERTIARY FOSSILS.	
<i>Ostrea</i> , Lin	160
<i>O. vespertina</i> , Conrad, pl. xvii, figs. 1 <i>a-d</i>	160
<i>O. veleniana</i> , n. s., Conrad, 1857, pl. xvii, figs. 2 <i>a</i> , <i>b</i>	160
<i>O. contracta</i> , Conrad, pl. xviii, <i>a-d</i>	160-161
<i>Anomia</i> , Lin	161
<i>A. subcostata</i> , Conrad, pl. xix, figs. 1 <i>a</i> , <i>b</i>	161
<i>Cardita</i> , (Lam.) Blain	161
<i>C. planicosta</i> , Lam., pl. xix, figs. 2, <i>a</i> , <i>b</i>	161
<i>Corbula</i> , Lam	161
<i>C. nasuta</i> , Conrad, pl. xix, fig. 4	161
<i>Venus vespertina</i> , n. s., Conrad, 1857, pl. xix, figs. 5 <i>a</i> , <i>b</i>	162
<i>Cytherea</i> , Lam	162
<i>C. nuttali</i> , Conrad, pl. iv, fig. 5	162
<i>Volutalites</i> , Swainson	162
<i>V. sayana</i> , Conrad, pl. xix, fig. 6	162
<i>Natica</i> , Lam	162
<i>N. limula</i> , Conrad, pl. xix, fig. 7	162
<i>Turritella</i> , Lam	163
<i>Turritella</i> , —, Conrad, 1857, pl. xix, fig. 8	163
<i>Cassidula</i> , Humphreys	163
Subgenus <i>Lacinia</i> , Conrad	163
<i>C. (Lacinia) alveata</i> , Conrad, pl. xix, fig. 9	163

APPENDIX.

Cretaceous fossils.

	Page.
<i>Cardita subtetrica</i> , n. s., Conrad, 1857, pl. xxi, fig. 5	164
<i>Pholadomya sancti-sabae</i> , Rømer, pl. xxi, fig. 4	164
<i>Capsa</i> , Lam.	164
<i>C. texana</i> , n. s., Conrad, 1857, pl. xxi, fig. 6 ..	164
<i>Terebratula leonensis</i> , n. s., Conrad, 1857, pl. xxi, fig. 2	164
<i>Turritella leonensis</i> , n. s., Conrad, 1857, pl. xxi, figs. 7 a, b	165
<i>Hamites larvatus</i> , Conrad, pl. xxi, fig. 8	165

11.

Conrad, T. A. Check list of the Invertebrate Fossils of North America. Eocene and Oligocene. <Smithsonian miscellaneous collections, 200 pp., i-iv, and 1-41. Washington, 1866.

NOTES AND EXPLANATIONS.

	Page.
<i>Nummulites floridana</i> , Conrad= <i>Nemophora floridana</i> , Con.	33
<i>Turbinolia goldfussii</i> , Lea= <i>Platytrochus goldfussii</i> (Lea), Edwards	33
<i>Turbinolia stokesii</i> , Lea= <i>Platytrochus stokesii</i> (Lea), Edwards	33
<i>Anthophyllum cuneiforme</i> , Conrad= <i>Flabellum cuneiforme</i> (Con.), Lonsdale	33
<i>Turbonillia maclurii</i> , Lea= <i>Endopachys maclurii</i> (Lea), Conrad	33
<i>Scutella lyelli</i> , Conrad= <i>Mortonia</i> (<i>Periarchus</i>) <i>lyelli</i> , Conrad	33
<i>Orbitolites interstitia</i> (Lea), <i>Lunulites</i> Gabb & Horn= <i>Lunulites interstitia</i> , Lea	33
<i>Lunulites bouci</i> , Lea= <i>Discofustrellaria bouei</i> (Lea), Gabb & Horn	33
<i>Orbitolites discoidea</i> Lea= <i>Capularia discoidea</i> (Lea), Gabb & Horn	33
<i>Lunulites duclosii</i> , Lea= <i>Heteractis duclosii</i> (Lea), Gabb & Horn	33
<i>Terebratula wilmingttonensis</i> , Lyell & Sowerby= <i>Rhynchonella wilmingttonensis</i> (Lyell & Sowerby), Conrad	33
<i>Ostrea eversa</i> , Deshayes= <i>Gryphostrea eversa</i> (Deshayes), Conrad	33
<i>Pecten calvatus</i> , Morton= <i>Camptonectes calvatus</i> (Morton), Conrad	33
<i>Leda compsa</i> , Gabb= <i>Nuculana compsa</i> (Gabb), Conrad	33
<i>Nucula cultelliformis</i> , Rogers= <i>Nuculana cultelliformis</i> (Rogers), Conrad	33
<i>Nucula magna</i> , Lea= <i>Nuculana magna</i> (Lea), Conrad	33
<i>Nucula media</i> , Lea= <i>Nuculana media</i> (Lea), Conrad	33
<i>Leda Oregona</i> , Shumard= <i>Nuculana Oregona</i> (Shumard), Conrad	33
<i>Nucula ovula</i> , Lea= <i>Nuculana ovula</i> (Lea), Conrad	33
<i>Nucula parva</i> , Rogers= <i>Nuculana parva</i> (Rogers), Conrad	33
<i>Nucula plana</i> , Lea= <i>Nuculana plana</i> (Lea), Conrad	33
<i>Nucula plicata</i> , Lea= <i>Nuculana plicata</i> (Lea), Conrad	33
<i>Nucula pulcherrima</i> , Lea= <i>Nuculana pulcherrima</i> (Lea), Conrad	33
<i>Nucula semen</i> , Lea= <i>Nuculana semen</i> . (Lea) Conrad	33
<i>Cucullea ononcheila</i> , Rogers= <i>Latiarca ononcheila</i> , (Rogers) Conrad	33
<i>Cucullea transversa</i> , Rogers= <i>Latiarca transversa</i> , (Rogers) Conrad	33
<i>Arca rhomboidella</i> , Lea= <i>Anomolocardia rhomboidella</i> , (Lea) Conrad	33
<i>Pectunculus ellipsis</i> , Lea= <i>Limopsis ellipsis</i> , (Lea) Conrad	33
<i>Nucula pectuncularis</i> , Lea= <i>Limopsis pectuncularis</i> , (Lea) Conrad	33
<i>Crenella concentrica</i> , Gabb= <i>Staligmium concentricum</i> , (Gabb) Conrad	33
<i>Astarte minutissima</i> , Lea= <i>Micromeris minutissima</i> , (Lea) Conrad	34
<i>Astarte parva</i> , Lea= <i>Micromeris parva</i> , (Lea) Conrad	34
<i>Egeria inflata</i> , Lea= <i>Spharrella inflata</i> , (Lea) Conrad	34
<i>Dosinia gyrata</i> , Gabb= <i>Lucina gyrata</i> , (Gabb) Conrad	34
<i>Corbis lamellosa</i> , Conrad (not Lam.)= <i>Gafrarium liratum</i> , Conrad	34
<i>Cytherea lenticularis</i> , Rogers= <i>Dosiniopsis lenticularis</i> , (Rogers) Conrad	34
<i>Venus floridana</i> , Conrad= <i>Cryptogramma floridana</i> , Conrad	34
<i>Venus penita</i> , Conrad= <i>Cryptogramma</i> ? <i>penita</i> , Conrad	34
? <i>Cytherea ovata</i> , Rogers= <i>Dione ovata</i> , (Rogers) Conrad	34
<i>Egeria plana</i> , Lea= <i>Tellina plana</i> , (Lea) Conrad	34
<i>Anatina clabornensis</i> , Lea= <i>Periploma clabornensis</i> , (Lea) Conrad	34
<i>Solen diegoensis</i> , Gabb= <i>Plectosolen</i> ? <i>diegoensis</i> , (Gabb) Conrad	34
<i>Solen parallelus</i> , Gabb= <i>Plectosolen parallelus</i> , (Gabb) Conrad	34
<i>Bulla dekayi</i> , Lea= <i>Cylichna dekayi</i> , (Lea) Conrad	34
<i>Acteon impressa</i> , Gabb= <i>Tornatella impressa</i> , (Gabb) Conrad	34
<i>Pasithea striata</i> , Lea= <i>Acteonema striata</i> , (Lea) Conrad	34
<i>Pasithea sulcata</i> , Lea= <i>Acteonema sulcata</i> , (Lea) Conrad	34

	Page.
<i>Marginella biplicata</i> , Lea= <i>Ringicula biplicata</i> , (Lea) Conrad.....	34
<i>Melinia nitidula</i> , Meek= <i>Limnæa nitidula</i> , Meek.....	34
<i>Limnæa tenuicostata</i> , M. & H.= <i>Limnæa (Pleurolimnæa) tenuicostata</i> , M. & H.	34
<i>Bulinus limnceiformis</i> , M. & H.= <i>Spiraxis hayana</i> , M. & H.	34
<i>Helix spatiosa</i> , Meek= <i>Macrocyclus spatiosa</i> , (M. & H.) Meek.....	34
<i>Bulinus perversus</i> , M. & H.= <i>Clausilia contraria</i> , (M. & H.) Meek.....	34
<i>Bulinus teres</i> , M. & H.= <i>Clausilia teres</i> , (M. & H.) Meek.....	34
<i>Bulinus vermiculus</i> , M. & H.= <i>Clausilia vermicula</i> , (M. & H.) Meek.....	34
<i>Dentalium (Ditrupe) pusillum</i> , Gabb= <i>Gadus pusillus</i> , (Gabb) Conrad.....	34
<i>Ditrupe subcoarctata</i> , Gabb= <i>Gadus subcoarctatus</i> , (Gabb) Conrad.....	34
<i>Rotella nana</i> , Lea= <i>Umbonium nana</i> , (Lea) Conrad.....	34
<i>Natica diegoana</i> , Conrad= <i>Vanikoro diegoana</i> , (Conrad) Meek.....	34
<i>Hipponyx pygmæa</i> , Lea= <i>Concholepas pygmæa</i> , (Lea) Conrad.....	34
<i>Calyptraea trochiformis</i> , Lea= <i>Trochita trochiformis</i> , (Lea) Conrad.....	34
<i>Galerus excentricus</i> , Gabb= <i>Galeropsis excentricus</i> , (Gabb) Conrad.....	34
<i>Turritella striata</i> , Lea= <i>Mesalia striata</i> , (Lea) Conrad.....	34
<i>Melanina? multistriata</i> , M. & H.= <i>Campeloma multistriata</i> , (M. & H.) Meek.....	34
<i>Paludina multilineata</i> , M. & H.= <i>Campeloma multilineatum</i> , (M. & H.) Meek.....	35
<i>Paludina vetula</i> , M. & H.= <i>Campeloma vetulum</i> , (M. & H.) Meek.....	35
<i>Melanina anthonii</i> , M. & H.= <i>Hydrobia anthonii</i> , M. & H.	35
<i>Melanina minutula</i> , M. & H.= <i>Micropurpus minutulus</i> , M. & H.	35
<i>Natica alabamensis</i> , Whitfield= <i>Lacunaria alabamensis</i> , (Whitfield) Conrad.....	35
<i>Natica erecta</i> , Whitfield= <i>Lacunaria erecta</i> , (Whitfield) Conrad.....	35
<i>Melanina humerosa</i> , M. & H.= <i>Tiara humerosa</i> , Meek.....	35
<i>Cerithium nodulosum</i> , Hall= <i>Goniobasis? nodulosa</i> , (Hall) Meek.....	35
<i>Melanina arcta</i> , M. & H.= <i>Goniobasis? arcta</i> , Meek.....	35
<i>Cerithium fremontii</i> , Hall= <i>Goniobasis? fremontii</i> , (Hall) Meek.....	35
<i>Melanina simpsoni</i> , Meek= <i>Goniobasis? simpsoni</i> , Meek.....	35
<i>Melanina sublevis</i> , M. & H.= <i>Goniobasis? sublevis</i> , (M. & H.) Meek.....	35
<i>Melanina subtortuosa</i> , M. & H.= <i>Goniobasis? subtortuosa</i> , (M. & H.) Meek.....	35
<i>Melanina tenuicarinata</i> , M. & H.= <i>Goniobasis? tenuicarinata</i> , (M. & H.) Meek.....	35
<i>Cerithium tenerum</i> , Hall= <i>Goniobasis? tenera</i> , (Hall) Meek.....	35
<i>Solarium henrici</i> , Lea= <i>Architectonica henrici</i> , (Lea) Conrad.....	35
<i>Solarium ornatum</i> , Lea= <i>Architectonica ornata</i> , (Lea) Conrad.....	35
<i>Delphinula plana</i> , Lea= <i>Architectonica plana</i> , (Lea) Conrad.....	35
<i>Solarium pseudogranulatum</i> , d'Orbigny= <i>Architectonica pseudogranulata</i> , (d'Orbigny) Conrad.....	35
<i>Delphinula depressa</i> , Lea= <i>Solariorbis depressus</i> , (Lea) Conrad.....	35
<i>Turbo lineatus</i> , Lea= <i>Solariorbis lineatus</i> , (Lea) Conrad.....	35
<i>Planaria nitens</i> , Lea= <i>Solariorbis nitens</i> , (Lea) Conrad.....	35
<i>Pasithea acciculata</i> , Lea= <i>Eulima aciculata</i> , (Lea) Conrad.....	35
<i>Pasithea lugubris</i> , Lea= <i>Eulima lugubris</i> , (Lea) Conrad.....	35
<i>Pasithea notata</i> , Lea= <i>Eulima notata</i> , (Lea) Conrad.....	35
<i>Pasithea scale</i> , Lea= <i>Eulima scale</i> , (Lea) Conrad.....	35
<i>Acteon melanellus</i> , Lea= <i>Obeliscus melanellus</i> , (Lea) Conrad.....	35
<i>Acteon pygmaeus</i> , Lea= <i>Obeliscus pygmaeus</i> , (Lea) Conrad.....	35
<i>Acteon striatus</i> , Lea= <i>Obeliscus striatus</i> , (Lea) Conrad.....	35
<i>Mitra costata</i> , Lea= <i>Pyramimitra costata</i> , (Lea) Conrad.....	35
<i>Natica minima</i> , Lea= <i>Lunatia minima</i> , (Lea) Conrad.....	35
<i>Natica alveata</i> , Conrad= <i>Ampullina alveata</i> , Conrad.....	35
<i>Natica gibbosa</i> , Lea= <i>Neverita gibbosa</i> , (Lea) Conrad.....	35
<i>Naticina obliqua</i> , Gabb= <i>Catinus obliquus</i> , (Gabb) Conrad.....	35
<i>Sycotypus penitus</i> , Conrad= <i>Ficopsis penitus</i> , Conrad.....	35
<i>Buccinum sowerbii</i> , Lea= <i>Semicassis sowerbii</i> , (Lea) Conrad.....	35
<i>Fusus remondii</i> , Gabb= <i>Ficopsis remondii</i> , (Gabb) Conrad.....	36
<i>Fusus cooperi</i> , Gabb= <i>Ficopsis cooperi</i> , (Gabb) Conrad.....	36
<i>Ficus mammillatus</i> , Gabb= <i>Ficopsis mammillatus</i> , (Gabb) Conrad.....	36
<i>Heimifusus hornii</i> , Gabb= <i>Prisoficus hornii</i> , (Gabb) Conrad.....	36
<i>Mitra flemingii</i> , Lea= <i>Caricella flemingii</i> , (Lea) Conrad.....	36
<i>Mitra fusoides</i> , Lea= <i>Conomitra fusoides</i> , (Lea) Conrad.....	36
<i>Mitra mooreana</i> , Gabb= <i>Lapparia mooreana</i> , (Gabb) Conrad.....	36
<i>Mitra lineata</i> , Lea= <i>Fusimitra? lineata</i> , (Lea) Conrad.....	36
<i>Mitra minima</i> , Lea= <i>Fusimitra? minima</i> , (Lea) Conrad.....	36
<i>Fasciolaria moorei</i> , Gabb= <i>Cordieria moorei</i> , (Gabb) Conrad.....	36
<i>Fasciolaria plicata</i> , Lea= <i>Latirus (Peristernia) plicatus</i> , (Lea) Conrad.....	36

	Page.
<i>Ancillaria elongata</i> , Gabb = <i>Lamprodona elongata</i> , (Gabb) Conrad	36
<i>Oliva gracilis</i> , Lea = <i>Lamprodona gracilis</i> , (Lea) Conrad	36
<i>Olivia philipsii</i> , Lea = <i>Lamprodona philipsii</i> , (Lea) Conrad	36
<i>Anolax gigantea</i> , Lea = <i>Ancillopsis altile</i> , Conrad	36
<i>Anolax plicata</i> , Lea = <i>Olivula? plicata</i> , (Lea) Conrad	36
<i>Agaronia punctulifera</i> , Gabb = <i>Olivula punctulifera</i> , (Gabb) Conrad	36
<i>Fusus taitii</i> , Lea = <i>Cornulina armigera</i> , Conrad	36
<i>Monoceras suleatum</i> , Lea = <i>Pseudoliva suleata</i> , (Lea) Conrad	36
<i>Tritonium diegoensis</i> , Gabb = <i>Buccinofusus diegoensis</i> , (Gabb) Conrad	36
<i>Pleurotoma beaumontii</i> , Lea = <i>Surecula beaumontii</i> , (Lea) Conrad	36
<i>Pleurotoma celata</i> , Lea = <i>Surcula celata</i> , (Lea) Conrad	36
<i>Pleurotoma childreni</i> , Lea = <i>Surecula childreni</i> , (Lea) Conrad	36
<i>Pleurotoma desnoyersii</i> , Lea = <i>Surcula desnoyersii</i> , (Lea) Conrad	36
<i>Pleurotoma kellogii</i> , Gabb = <i>Surcula kellogii</i> , (Gabb) Conrad	36
<i>Pleurotoma monilifera</i> , Lea = <i>Surcula monilifera</i> , (Lea) Conrad	36
<i>Pleurotoma nodocarinata</i> , Gabb = <i>Surcula nodocarinata</i> , (Gabb) Conrad	36
<i>Pleurotoma obliqua</i> , Lea = <i>Surcula obliqua</i> , (Lea) Conrad	36
<i>Pleurotoma rugosa</i> , Lea = <i>Surcula rugosa</i> , (Lea) Conrad	36
<i>Pleurotoma sayi</i> , Lea = <i>Surcula sayi</i> , (Lea) Conrad	36
<i>Pleurotoma varicostata</i> , Gabb = <i>Surcula varicostata</i> , (Gabb) Conrad	36
<i>Pleurotoma lonsdalei</i> , Lea = <i>Drillia lonsdalei</i> , (Lea) Conrad	36
<i>Pleurotoma tezana</i> , Gabb = <i>Drillia tezana</i> , (Gabb) Conrad	36
<i>Papillina altilis</i> , Conrad = <i>Clavifusus altile</i> , Conrad	36
<i>Fusus cooperi</i> , Conrad = <i>Clavifusus cooperi</i> , Conrad	36
<i>Fusus conybearii</i> , Lea = <i>Strepsidura conybearii</i> , (Lea) Conrad	36
<i>Pelagus vanuxemi</i> , Conrad = <i>Aturia vanuxemi</i> , Conrad	36
<i>Nautilus lamarekii</i> , Deshayes = <i>Cymomia lamarekii</i> , (Deshayes) Conrad	37
<i>Clavella Vicksburgensis</i> , Conrad = <i>Pleistocheilus Vicksburgensis</i> , (Con.) Meek	37
<i>Nummulites mantelli</i> , Morton = <i>Orbitolites (Orbitoides) mantelli</i> , Morton	37
<i>Scutella crustuloides</i> , Morton = <i>Mortonia (Periarchus) crustuloides</i> , (Mort.) Conrad	37
<i>Scutella pileus-sinensis</i> , Ravenel = <i>Mortonia (Periarchus) pileus-sinensis</i> , (Rav.) Conrad	37
<i>Echinus inflatus</i> , Morton = <i>Celopleurus inflatus</i> , (Morton) Desor	37
<i>Scutella jonesii</i> , Forbes = <i>Clypeaster jonesii</i> , (Forbes) Desor	37
<i>Scutella rogersi</i> , Morton = <i>Clypeaster rogersi</i> , (Morton) Conrad	37
<i>Mortonia tumida</i> , Conrad = <i>Clypeaster tumidus</i> , Conrad	37
<i>Pyrgorhynchus mortoni</i> , Mich. = <i>Echinianthus mortoni</i> , (Mich.) Desor	37
<i>Catopogus patelleformis</i> , Bouvé = <i>Cassidulus patelliformis</i> , (Bouvé) Desor	37
<i>Cellepora tubulata</i> , Lonsdale = <i>Eschara tubulata</i> , (Lonsd.) Gabb & Horn	37
<i>Terebratula lachryma</i> , Morton = <i>Terebratulina lachryma</i> , (Mort.) Conrad	37
<i>Plagiostoma dumosa</i> , Morton = <i>Spondylus dumosus</i> , (Morton) Conrad	37
<i>Umbrella planulata</i> , Conrad = <i>Operculatum planulatum</i> , Conrad	37
<i>Doliopsis</i> , n. g., Conrad = <i>Galeodea (Galcodaria) quinquecostata</i> , Conrad	37

12.

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.

	Page.
<i>Haploscapha</i> , n. g., Conrad, 1875	23
<i>H. grandis</i> , n. s., Conrad, 1875	23-24
<i>Cucullifera</i> , n. s. g., Conrad, 1875	24
<i>H. (Cucullifera) eccentrica</i> , n. s., Conrad, 1875	24

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.

	Page.
Family <i>Cyathophyllidæ</i>	179-182
<i>Cyathophyllum</i>	182-183
<i>Calophyllum</i> , n. g., Dana, 1846	183-184
<i>Amplexus</i> , Sowerby	184
<i>Caninia</i> , Michelin	184
<i>Acerularia</i> , Schweigger	184-186
<i>Arachnophyllum</i> , n. g., Dana, 1846, fig. 1, p. 186	186
<i>Cystiophyllum</i> , Lonsdale	186
<i>Clisiophyllum</i> , n. g., Dana, 1846, figs. 2 and 3, p. 187	187
<i>Michelinia</i> , Koninek	187
<i>Columnaria</i> , Goldfuss, fig. 4, p. 188	188
<i>Sarcinula</i> , Lamarck	188-189

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 Illawara, 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.

	Page.
<i>Bellerophon undulatus</i> , n. s., Dana, 1847	151
<i>Bellerophon strictus</i> , n. s., Dana, 1847	151
<i>Platyschisma ? depressum</i> , n. s., Dana, 1847	151
<i>Pleurotomaria tri-filata</i> , n. s., Dana, 1847	151
<i>Pleurotomaria nuda</i> , n. s., Dana, 1847	151
<i>Natica</i> — ? Dana, 1847	151
<i>Patella tenella</i> , n. s., Dana, 1847	151-152
<i>Pentadia</i> , n. g., Dana, 1847	152
<i>P. spatangus</i> , n. s., Dana, 1847	152
<i>P. reniformis</i> , n. s., Dana, 1847	152
<i>P. trigonia</i> , n. s., Dana, 1847	152
<i>Lingula ovata</i> , n. s., Dana, 1847	152
<i>Terebratula amygdala</i> , n. s., Dana, 1847	152
<i>Terebratula elongata</i> , n. s., Dana, 1847	152
<i>Productus fragilis</i> , n. s., Dana, 1847	153
<i>Solen (Solecuretus ?) ellipticus</i> , n. s., Dana, 1847	153
<i>Solen (Solecuretus ?) planulatus</i> , n. s., Dana, 1847	153
<i>Pholadomya undata</i> , n. s., Dana, 1847	153
<i>Allorisma audax</i> , n. s., Dana, 1847	153
<i>Oleobis</i> , n. g., Dana, 1847	154
<i>C. grandis</i> , n. s., Dana, 1847	154

	Page.
<i>C. gracilis</i> , n. s., Dana, 1847	154
<i>C. ? recta</i> , n. s., Dana, 1847	154
<i>Astarte gemma</i> , n. s., Dana, 1847	154-155
<i>Astartila</i> , n. g., Dana, 1847	155
<i>A. intrcpida</i> , n. s., Dana, 1847	155
<i>A. cyprina</i> , n. s., Dana, 1847	155
<i>A. cytherea</i> , n. s., Dana, 1847	155
<i>A. polita</i> , n. s., Dana, 1847	155
<i>A. cyclos</i> , n. s., Dana, 1847	155
<i>A. transversa</i> , n. s., Dana, 1847	155-156
<i>Cardinia</i> , Agassiz	156
<i>C. recta</i> , n. s., Dana, 1847	156
<i>C. cuneata</i> , n. s., Dana, 1847	156
<i>Pyramus</i> , n. g., Dana, 1847	156-157
<i>P. ellipticus</i> , n. s., Dana, 1847	157
<i>P. myiformis</i> , n. s., Dana, 1847	157
<i>Nucula abrupta</i> , n. s., Dana, 1847	157
<i>Nucula</i> — ? Dana, 1847	157
<i>Cypricardia rugulosa</i> , n. s., Dana, 1847	157
<i>Cypricardia sinuosa</i> , n. s., Dana, 1847	157-158
<i>Myrcia</i> , n. g., Dana, 1847	158
<i>M. elongata</i> , n. s., Dana, 1847	158
<i>M. valida</i> , n. s., Dana, 1847	158
<i>Eurydesma elliptica</i> , n. s., Dana, 1847	158
<i>Eurydesma globosa</i> , n. s., Dana, 1847	158
<i>Modiolopsis simplex</i> , n. s., Dana, 1847	158
<i>Modiolopsis siliqua</i> , n. s., Dana, 1847	159
<i>Modiolopsis praerupta</i> , n. s., Dana, 1847	159
<i>Modiolopsis imbricata</i> , n. s., Dana, 1847	159
<i>Modiolopsis arcodes</i> , n. s., Dana, 1847	159
<i>Modiolopsis acutifrons</i> , n. s., Dana, 1847	159-160
<i>Avicula</i> — ? Dana, 1847	160
<i>Pecten comptus</i> , n. s., Dana, 1847	160
<i>Pecten tenuicollis</i> , n. s., Dana, 1847	160
<i>Pecten leniusculus</i> , n. s., Dana, 1847	160

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.

	Page.
<i>Urosthene</i> s, n. g., Dana, 1848	433-434
<i>U. australis</i> , n. s., Dana, 1848	434
<i>Helicocrus</i> , n. g., Dana, 1848	434
<i>H. fuegiensis</i> , n. s., Dana, 1848	434
<i>Cardinia ? exilis</i> , McCoy= <i>Cardinia recta</i> , Dana	434
<i>Pleurotomaria morrisiana</i> , McCoy= <i>Pleurotomaria trifilata</i> , Dana	434
<i>Pachydorus ovalis</i> , McCoy	434
<i>Pachydorus pusillus</i> , McCoy	434
<i>Pachydorus sacculus</i> , McCoy	434
<i>Eurydesma cordata ? Morris</i>	434
<i>Natomya</i> , McCoy= <i>Pyramus</i> , Dana	434

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. 681-729, *pars*. Atlas, xxi, pls. *pars*. Philadelphia, 1849.

APPENDIX I.

FOSSILS OF NEW SOUTH WALES.

	Page.
<i>Pisces</i>	681
<i>Urosthene</i> s, Dana, 1848	681
<i>Urosthene</i> s <i>australis</i> , Dana, 1848	681-682

	Page.
<i>Mollusca</i>	682
<i>Brachiopoda</i>	682
<i>Torebratula amygdala</i> , Dana, 1847.....	682
<i>Terebratula elongata</i> , Dana, 1847, pl. i, figs. 3 <i>a, b</i>	682-683
<i>Terebratula</i> ———?, Dana, 1849, pl. i, figs. 4 <i>a, b</i>	683
<i>Terebratula</i> ? ———, Dana, 1849, pl. i, fig. 5.....	683
<i>Spirifer glaber</i> , pl. i, fig. 6 <i>a, b</i>	683
<i>Spirifer darwini</i> (J. Morris), pl. i, fig. 7 <i>a</i>	684
<i>Spirifer duodecostatus</i> (McCoy), pl. ii, figs. 1 <i>a, 1 b</i>	684
<i>Spirifer</i> ———, Dana, 1849, pl. ii, fig. 2.....	684
<i>Spirifer respertilio</i> (G. Sowerby), pl. ii, figs. 3 <i>a-c</i>	685
<i>Spirifer phalarus</i> , n. s., Dana, 1849, pl. ii, fig. 4.....	685
<i>Siphonotreta</i> ? <i>curta</i> , n. s., Dana, 1849, pl. ii, figs. 5 <i>a, b</i>	685
<i>Lingula onata</i> , n. s., Dana, 1849, pl. ii, figs. 6 <i>a, b</i>	685-686
<i>Productus fragilis</i> , Dana, pl. vii, figs. 7 <i>a-c</i>	686
<i>Productus brachytherus</i> (G. Sowerby), pl. ii, fig. 8.....	686
<i>Acephala</i>	686
<i>Solecurtus</i> ? <i>ellipticus</i> , Dana, pl. ii, fig. 9.....	686
<i>Solecurtus</i> (<i>Psammobia</i> ?) <i>planulatus</i> , Dana, pl. ii, fig. 10.....	686-687
<i>Pholadomya</i> (<i>Platymya</i>) <i>undata</i> , Dana, pl. ii, figs. 11 <i>a, b</i>	687
<i>Pholadomya</i> (<i>Homomya</i>) <i>glendonensis</i> , n. s., Dana, 1849, pl. ii, fig. 12.....	687
<i>Pholadomya</i> (<i>Homomya</i>) <i>audax</i> , Dana, pl. iii, figs. 1 <i>a-c</i>	687
<i>Pholadomya</i> (<i>Homomya</i>) <i>curvata</i> [?] (J. Morris), Dana, pl. iii, figs. 2 <i>a, b</i>	687
<i>Astarte gemina</i> , Dana, pl. iii, figs. 4 <i>a, b</i>	688
<i>Astartila</i> , Dana, 1847.....	688
<i>A. intrcipida</i> , Dana, 1847, pl. iii, figs. 5, 5 <i>a</i>	689
<i>A. cyprina</i> , Dana, 1847, pl. iii, figs. 6, 6 <i>a</i>	689
<i>A. cytherea</i> , Dana, 1847, pl. iv, figs. 1, 1 <i>a</i>	689
<i>A. polita</i> , Dana, 1847, pl. iv, figs. 2 <i>a-c</i>	690
<i>A. cyclas</i> , Dana, 1847, pl. iv, figs. 3, 3 <i>a</i>	690
<i>A. transversa</i> Dana, 1847, pl. iv, figs. 4 <i>a, b</i>	690
<i>A. ? corpulenta</i> , n. s., Dana, 1849, pl. iii, figs. 3 <i>a-c</i>	691
<i>Cardinia recta</i> , Dana, pl. iv, figs. 5 <i>a, b</i>	691
<i>Cardinia</i> ? <i>cuneata</i> , Dana, pl. iv, figs. 6, 6 <i>a-c</i>	692
<i>Cardinia</i> ? <i>costata</i> (J. Morris), Dana, pl. iv, figs. 8 <i>a-c</i>	692
<i>Pachydorus</i>	692-693
<i>P. cuneatus</i> (J. D. Sowerby), Morris, pl. v, figs. 1, 1 <i>a</i>	693
<i>P. antiquatus</i> , (J. D. Sowerby), Morris, pl. v, fig. 2.....	693-694
<i>P. levis</i> (J. D. Sowerby), Morris.....	694
<i>Meonia</i> , Dana.....	694
<i>Meonia</i> , Dana.....	694
<i>Pyramia</i> , Dana.....	695
<i>Cleobis</i> , Dana.....	695
<i>Meonia elongata</i> , Dana, 1847, pl. v, figs. 3 <i>a-c</i>	695
<i>M. valida</i> , Dana, 1847, pl. v, figs. 4 <i>a-b</i>	695
<i>M. axinia</i> , Dana, 1847, pl. v, figs. 5 <i>a, b</i>	696
<i>M. ? carinata</i> (J. Morris), Dana, pl. vi, figs. 1 <i>a, b</i>	696
<i>M. fragilis</i> , n. s., Dana, 1849, pl. vi, figs. 2, 3.....	696-697
<i>M. myiformis</i> , Dana, 1847, pl. vi, fig. 4 <i>a</i>	697
? <i>M. elliptica</i> , Dana, 1849, pl. vi, fig. 5 <i>a, c</i>	697
<i>M. gigas</i> (M'Coy), Dana.....	697
<i>M. grandis</i> , Dana, 1847, pl. vi, fig. 7.....	697-698
<i>M. gracilis</i> , Dana, 1847, pl. vii, figs. 1 <i>a, c</i>	698
<i>M. ? recta</i> , Dana, 1847, pl. vii, fig. 2.....	698
<i>Nucula abrupta</i> , Dana, 1847, pl. vii, fig. 3.....	698
<i>Nucula concinna</i> , n. s., Dana, 1849, pl. vii, fig. 4.....	699
<i>Nucula glendonensis</i> , n. s., Dana, 1849, pl. vii, fig. 5.....	699
<i>Eurydesma</i> , Morris.....	699
<i>E. elliptica</i> , Dana, 1847, pl. vii, figs. 6 <i>a-d</i>	700
<i>E. globosa</i> , Dana, 1847, pl. vii, figs. 7, 7 <i>a</i>	700
<i>E. sacculus</i> (M'Coy), Dana, pl. vii, figs. 8 <i>a, b</i>	700
<i>E. cordata</i> (Morris).....	700-701
<i>Cardium australe</i> (M'Coy), Dana, pl. viii, fig. 2.....	701
<i>Cardium ferox</i> , n. s., Dana, 1849, pl. viii, fig. 3.....	701
<i>Cypicardia</i>	701-702

	Page.
<i>C. acutifrons</i> , Dana, 1847, pl. viii, figs. 4 <i>a, b</i>	702
<i>C. imbricata</i> , Dana, 1847, pl. viii, fig. 5.....	702
<i>C. arcodes</i> , Dana, 1847, pl. viii, figs. 8 <i>a, b</i>	702-703
<i>C. prorupta</i> , Dana, 1847, pl. viii, fig. 10.....	703
<i>C. siliqua</i> , Dana, 1847, pl. ix, figs. 1 <i>a, b</i>	703
<i>C. simplex</i> , Dana, 1847, pl. ix, fig. 2.....	703-704
<i>C. (Aricula?) veneris</i> , Dana, 1847, pl. ix, figs. 3 <i>a, b</i>	704
<i>Aricula valgensis?</i> (Verneuil), pl. ix, fig. 4.....	704
<i>Pterinea macroptera</i> (J. Morris).....	704
<i>Pecten comptus</i> , Dana, 1847, pl. ix, fig. 5.....	704
<i>Pecten tenuisculus</i> , Dana, 1847, pl. ix, figs. 6 <i>a, b</i>	704-705
<i>Pecten tenuicollis</i> , Dana, 1847, pl. ix, fig. 7.....	705
<i>Pecten mitis</i> , n. s., Dana, 1849, pl. ix, figs. 8 <i>a, b</i>	705
<i>Pecten illawarrensis</i> (J. Morris), pl. ix, fig. 9.....	705
<i>Pecten squamuliferus</i> (!), Morris.....	705
———?, pl. ix, fig. 10, Dana, 1849.....	705-706
<i>Gasteropoda</i> .	
<i>Pileopsis tenella</i> , Dana, 1847, pl. ix, figs. 13 <i>a, b</i>	706
<i>Pileopsis alta</i> , n. s., Dana, 1849, pl. ix, fig. 14 <i>a</i>	706
<i>Pleurotomaria morrisiana</i> , McCoy, pl. ix, figs. 15, 15 <i>a, 16</i>	706
<i>Pleurotomaria nuda</i> , Dana, 1847, pl. ix, figs. 17 <i>a-c</i>	706
<i>Pleurotomaria strzeleckiana</i> , Morris.....	707
<i>Platychisma oculus</i> (Morris), pl. x, fig. 1.....	707
<i>Platychisma rotundatum</i> , Morris.....	707
<i>Platychisma depressum</i> , Dana, 1847, pl. x, figs. 2 <i>a, b</i>	707
<i>Natica</i> ———? Dana, 1847, pl. x, figs. 2 <i>a, b</i>	707
<i>Bellerophon undulatus</i> Dana, 1847, pl. x, figs. 4 <i>a, b</i>	707
<i>Bellerophon strictus</i> , Dana, 1847, pl. x, figs. 5 <i>a, b</i>	707-708
<i>Bellerophon micromphalus</i> , Morris, pl. x, figs. 6 <i>a, b</i>	708
<i>Cephalopoda</i> .	
<i>Theca lanceolata</i> (Morris), pl. x, figs. 7 <i>a, b</i>	708
<i>Conularia</i>	708-709
<i>C. inornata</i> , n. s., Dana, 1849, pl. x, fig. 8.....	709-710
<i>C. levigata</i> , Morris, pl. x, fig. 9.....	710
<i>C. tenuistriata?</i> (McCoy).....	710
<i>Radiata</i> .	
<i>Fenestella internata</i> (Lonsdale), pl. x, fig. 13.....	710
<i>Fenestella media</i> , n. s., Dana, 1849, pl. x, figs. 14, 14 <i>a</i> , and fig. 15.....	710
<i>Fenestella ampla</i> (Lonsdale), pl. xi, figs. 1, 1 <i>a</i> ; 2, 2 <i>a</i>	710
<i>Fenestella fossula</i> (Lonsdale), pl. xi, figs. 3 <i>a, b</i>	710-711
<i>Fenestella gracilis</i> , n. s. (Dana), 1849, pl. xi, fig. 4.....	711
<i>Fenestella</i> , pl. xi, figs. 5, 5 <i>a</i>	711
<i>Chetetes crinita</i> (Lonsdale), Dana, pl. xi, figs. 6, 6 <i>a-c</i>	711
<i>Chetetes tasmaniensis</i> (Lonsdale), Dana, pl. xi, figs. 7, 7 <i>a</i> , 8, 8 <i>a</i>	711
<i>Chetetes ovata</i> (Lonsdale), Dana, pl. xi, figs. 9, 9 <i>a, b</i>	712
<i>Chetetes gracilis</i> , n. s., Dana, 1849, pl. xi, figs. 10, 10 <i>a-c</i>	712
<i>Hemitrypa?</i> , pl. xv, fig. 10.....	712
<i>Encrinural remains</i> , pl. xi, figs. 12 <i>a, b</i> , and pl. xi, figs. 13, 14, and fig. 15.....	712
<i>Pentadia</i> , Dana, 1847.....	712-713
<i>Pentadia corona</i> , pl. x, figs. 10, 10 <i>a-c</i> , 11 and 12.....	713
FOSSIL PLANTS.	
<i>Conifera</i> .	
Fruit scales, pl. xii, figs. 1, 2, 3, 4, 5, 5 <i>a, b</i> , 6, 7, 8, 8 <i>a-d</i>	714
<i>Næggerathia</i> , n. g., Dana, 1849.....	715
<i>N. spatulata</i> , n. s., Dana, 1849, pl. xii, fig. 9.....	715
<i>N. media</i> , n. s., Dana, 1849, pl. xii, fig. 10.....	715
<i>N. elongata</i> (J. Morris), Dana, 1849, pl. xii, fig. 11.....	715
<i>Sphenopteris lobifolia</i> (Morris), pl. xii, fig. 12.....	715-716
<i>Glossopteris broveniana</i> (Brongniart), pl. xii, fig. 13, 13 <i>a-c</i> , 14 (Young?).....	716-717
<i>Glossopteris ampla</i> , n. s., Dana, 1849, pl. xiii, fig. 13, <i>a, b</i>	717
<i>Glossopteris reticulatum</i> , n. s., Dana, 1849, pl. xiii, figs. 2, 3.....	717-718
<i>Glossopteris elongata</i> , n. s., Dana, 1849, pl. xiii, fig. 4.....	718
<i>Glossopteris? cordata</i> , n. s., Dana, 1849, pl. xiii, fig. 5.....	718
<i>Glossopteris linearis</i> (McCoy).....	718

	Page.
<i>Phyllothea australis</i> , pl. xiii, fig. 6, pl. xiv, figs. 1 [2?].....	718-719
<i>Clasteria</i> , n. g., Dana, 1849	719
<i>C. australis</i> , n. s., Dana, 1849	719-720
<i>Anarthrocanna australis</i> , n. s., Dana, 1849, pl. xiv, fig. 6 <i>a</i>	720
<i>Cystoseirites</i> ? pl. xiv, fig. 6, <i>b</i>	720
<i>Austrella rigida</i> , n. s., Dana, 1849, pl. xiv, figs. 7, 8.....	720
<i>Conferites</i> ? <i>tenella</i> , n. s., Dana, 1849, pl. xiv, fig. 9	720

FOSSILS FROM TIERRA DEL FUEGO.

<i>Helcerus</i> , Dana, 1848	720
<i>H. fuegiensis</i> , Dana, pl. xv, fig. 1 <i>a-c</i>	720-721

FOSSILS FROM SAN LORENZO, PEBU.

<i>Trigonia Lorentii</i> , n. s. (Dana), 1849, pl. xv, fig. 2 <i>a-c</i>	721
<i>Turbo</i> ———, Dana, 1849, pl. xv, fig. 3 <i>a, b</i>	721
<i>Nautilus tenui-planatus</i> , n. s., Dana, 1849, pl. xv, fig. 4.....	721

FOSSIL AMMONITE FROM THE ANDES.

<i>Ammonites pickeringi</i> , Dana, pl. xv, fig. 5	721
<i>Ammonites</i> , pl. xv, fig. 6.....	721
<i>Ostraca</i> ul. xv, fig. 7	722

FOSSILS FROM NORTHWESTERN AMERICA.

<i>Cetacean</i> , pl. xvi, fig. 1.....	722
Fishes, pl. xvi, fig. 2, pl. xvi, fig. 3, pl. xvii, figs. 1, 2 <i>a</i> , 2 <i>b</i>	722
<i>Crustacea</i> .	
<i>Callianassa oregonensis</i> , n. s., Dana, 1849	722-723
<i>Balanus</i> ———? Dana, pl. xvii, fig. 4.....	723
<i>Radiata</i> .	
<i>Galerites oregonensis</i> , n. s., Dana, 1849, figs. 5, 6, 6 <i>a</i> , pl. xxi, figs. 7, 8.....	729

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.

C. concentrica.

C. gemmata.

C. lineata.

C. oblonga.

C. protexta.

C. punctata.

Coconeima asperum.

C. cistula.

C. gibbum.

C. gracile.

C. lanceolatum.

C. lunula.

Discoplea oregonica.

Eunotia amphioxys.

E. argus.

E. gibba.

E. gibberula.

E. granulata.

E. librile.

E. subulata.

E. textricula.

E. uncinata.

E. westermanni.

E. zebra.

E. zebrina.

Fragilaria acuta.

F. amphicephala.

F. rhabdosoma.

Glaeonema paradoxum.?

Gomphonema gracile.

G. herculaneum.

G. longicolle.

G. mammilla.

G. minutissimum.

G. olar.

G. oregonicum.

Gallionella crenata.

G. distans.

G. granulata.

G. levis.

G. punctata.

G. undulata.

Himantidium arcus.

Navicula sigma.

N. bacillum.

N. scalprum.

N. semen.

N. sificala.

Pinnularia affinis.

P. amphioxys.

P. digitus.

P. gastrum.

P. macilenta.

P. mesogongyla.

P. pachyptera.

P. placentula.

P. oregonica.

P. viridis.

P. viridula.

Podosphenia pupula.

Rhaphoneis foliacea.

R. lanceolata.

R. oregonica.

Surirella bifrons.

S. plicata.

Stanronceis baileyi.

S. semen.

Synedra ulna.

S. splendida.

Amphidiscus armatus.

Lithodontium furcatum.

L. nasutum.

L. scorpius.

Lithostyloidium amphiodon.

L. crenulatum.

L. læve.

L. quadratum.

L. rude.

L. trabecula.

Lithostyloidium.?

Spongolithis acicularis.

S. aspera.

S. fustis.

S. inflexa.

S. mesogongyla.

V—THE WRITINGS OF JAMES HALL.

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	Page.
<i>Sphenopteris fremonti</i> , n. s., Hall, 1845, pl. ii, figs. 3, 3 a.....	304
<i>S. triloba</i> , n. s., Hall, 1845, pl. i, fig. 8.....	304
<i>S. (?) paucifolia</i> , n. s., Hall, 1845, pl. ii, figs. 1 a-d.....	304-305
<i>S. (?) trifoliata</i> , n. s., Hall, 1845, pl. ii, figs. 2, 2 a.....	305
<i>Glossopteris phillipsii</i> , n. s., Hall, 1845, pl. ii, figs. 5, 5 a-c.....	305-306
<i>Pecopteris undulata</i> , n. s., Hall, 1845, pl. i, figs. 1, 1 a.....	306
<i>Pecopteris undulata</i> var., Hall, 1845, pl. i, figs. 2, 2 a, b.....	306
<i>Pecopteris (?) odontopteroides</i> , n. s., Hall, 1845, pl. i, figs. 3, 4.....	306
<i>Trichopteris</i> , n. g., Hall, 1845.....	306
<i>T. filamentosa</i> , n. s., Hall, 1845, pl. ii, fig. 6.....	306-307
<i>T. gracilis</i> , n. s., Hall, 1845, pl. i, fig. 5.....	307
Stems of ferns, pl. i, fig. 7.....	307
Leaf of a Dicotyledonous plant (?), pl. ii, fig. 4.....	307
<i>Mya tellinoides</i> , n. s., Hall, 1845, pl. iii, figs. 1, 2.....	307
<i>Nucula impressa</i> , (?), n. s., Hall, 1845, pl. iii, fig. 3.....	308
<i>Cytherea parvula</i> , n. s., Hall, 1845, pl. iii, figs. 10, 10 a.....	308
<i>Pleurotomaria uniangulata</i> , n. s., Hall, 1845, pl. iii, figs. 4, 5.....	308
<i>Cerithium tenerum</i> , n. s., Hall, 1845, pl. iii, figs. 6, 6 a.....	308
<i>Cerithium fremonti</i> , n. s., Hall, 1845, pl. iii, figs. 7, 7 a.....	308
<i>Natica (?) occidentalis</i> , n. s., Hall, 1845, pl. iii, figs. 8, 8 a.....	308-309
<i>Turritella bilineata</i> , n. s., Hall, 1845, pl. iii, fig. 9.....	309
<i>Cerithium nodulosum</i> , n. s., Hall, 1845, pl. iii, figs. 11, 12.....	309
<i>Turbo paludinaeformis</i> , n. s., Hall, 1845, pl. iii, fig. 13.....	309
Leaves of Dicotyledonous plants, pl. iii, figs. 14, 15.....	309
<i>Inoceramus</i> ——— ?, Hall, 1845, pl. iv, figs. 1, 1 a.....	309-310
<i>Inoceramus</i> ——— ?, Hall, 1845, pl. iv, fig. 2.....	310

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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. xxiii-a-xxv. Washington, 1851.

POTSDAM AND CALCIFEROUS SANDSTONES.

	Page.
<i>Lingula prima</i> , Conrad, pl. xxiii, figs. 1 a-g.....	204
<i>Lingula antiqua</i> , Hall, pl. xxiii, figs. 2 a-c.....	204-205
Trilobites of the Potsdam Sandstone.....	205
<i>Dikell[o]cephalus</i> , D. D. Owen, pl. xxiii, figs. 3 a-e, and fig. 4.....	205-206

FOSSILS FROM THE CHAZY, BIRD'S EYE, BLACK RIVER, AND TRENTON LIMESTONES AND HUDSON RIVER GROUP.

<i>Phenopora multipora</i> , n. s., Hall, 1851, pl. xxiv, figs. 1 a, b.....	206-207
<i>Clathropora flabellata</i> , n. s., Hall, 1851, pl. xxiv, figs. 2 a, b.....	207
<i>Chaetetes lycoperdon</i> , Say, pl. xv, figs. 1 a-d.....	207-208
<i>Schizocerinus nodosus</i> ? pl. xxv, figs. 2 a-c.....	208

	Page.
<i>Echinospaerites</i> ? n. s., Hall, 1851, pl. xxv, figs. 3 a, b.....	208-209
<i>Crinoidae</i> , or <i>Cystidae</i>	209
— ? pl. xxv, figs. 4 a-c.....	209
<i>Murchisonia major</i> , n. s., Hall, 1851, pl. xxvi, figs. 1 a-c.....	209-210
<i>Asaphus barrandi</i> , n. s., Hall, 1851, pl. xxvii, figs. 1 a-d, and pl. xxviii.....	210-211
<i>Harpes escanabior</i> , n. s., Hall, 1851, pl. xxvii, fig. 2 a.....	211-212
<i>Phacops culiccephalus</i> , pl. xxvii, figs. 3 a, b.....	212
<i>Catenipora gracilis</i> , n. s., Hall, 1851, pl. xxix, figs. 1 a, b.....	212-213
<i>Sarcinula</i> ? <i>obsoleta</i> , n. s., Hall, 1851, pl. xxix, fig. 2 a, b.....	213
<i>Modiolopsis pholadiformis</i> , n. s., Hall, 1851, pl. xxx, figs. 1 a-c, and pl. xxxi, fig. 1.....	213-214
<i>Modiolopsis modiolaris</i> , Hall, pl. xxxi, figs. 2 a-d.....	214-215
<i>Ambonychia carinata</i> , Hall, pl. xxxi, fig. 3.....	215

CLINTON GROUP.

Tracks and trails of vertebrates ?.....	215-218
Tracks of Crustaceans ?.....	219-220

NIAGARA GROUP.

<i>Huronina vertebralis</i> , Stokes, pl. xxxiv, fig. 1.....	221
<i>Huronina acunulata</i> , n. s., Hall, 1851, pl. xxxiv, fig. 4.....	221-222
<i>Discosaurus conoidens</i> , pl. xxxiv, figs. 2 and 3.....	222-223

UPPER HELDERBERG LIMESTONES.

<i>Dictyonema fenestrata</i> , pl. xxxv, figs. 1 a, b.....	223-224
<i>Proetus</i> — ? Hall, 1851, pl. xxxv, fig. 2.....	224
<i>Phacops anchiqus</i> , pl. xxxv, figs. 3 a, b.....	224-225

LIST OF FOSSILS.

General remarks on the above list.....	229
Table of the number of species of fossils found in the State of New York and the Lake Superior district.....	230

3.

HALL, JAMES. Letter from Professor James Hall, of New York, containing observations on the Geology and Palaeontology of the country traversed by the expedition, and notes upon some of the Fossils collected on the route. <Exploration and Survey of the Valley of the Great Salt Lake of Utah, including a reconnaissance of a new route through the Rocky Mountains, by Howard Stansbury. Appendix E, pp. 398-414, pls. i-iv. Philadelphia, 1852.

CORALS.

	Page.
<i>Cyathophylloides</i>	
<i>Favophyllum</i> ? <i>rugosum</i> , n. s., Hall, 1852, pl. i, figs. 1 a, b.....	407-408
<i>Zaphrentis</i> ? <i>multilamella</i> , n. s., Hall, 1852, pl. i, fig. 2.....	408
<i>Zaphrentis stansburii</i> , Hall, n. s., 1852, pl. i, figs. 3 a, b.....	407
<i>Lithostro[n]tion</i> — (sp. indet.), Hall, 1852, pl. i, fig. 4 a, b.....	408

Brachiopoda.

<i>Terebratula subtilita</i> , n. s., Hall, 1852, pl. iv, figs. 1 a, b, 2 a, b.....	409
<i>Spirifer hemiplicata</i> , n. s., Hall, 1852, pl. iv, figs. 3 a, b.....	409
<i>S. octoplicata</i> ? pl. iv, fig. 4 a, b.....	409-410
<i>S. triplicata</i> , Hall, n. s., 1852, pl. iv, figs. 5 a-c.....	410
<i>Chonetes variolata</i> , (D'Orb. sp.) DeKoninck, pl. iii, figs. 1 a, b.....	410
<i>Productus costatus</i> ? DeKoninck, pl. iii, fig. 2.....	411
<i>P. semireticulatus</i> , DeKoninck pl. iii, figs. 3-5 a, b.....	411
<i>Productus</i> — (sp. indet.), Hall, 1852, pl. iii, fig. 4.....	411
<i>Orthis umbraculum</i> ? pl. iii, fig. 6.....	412

Acephala.

<i>Avicula</i> ? <i>custa</i> , pl. ii, figs. 1 a, b.....	412
<i>Tellinomya protensa</i> , Hall, n. s., 1852, pl. ii, fig. 3.....	412
<i>Cypriocardia occidentalis</i> , n. s., Hall, 1852, pl. iv, fig. 2.....	412
<i>Alorisma terminalis</i> , n. s., Hall, 1852, pl. ii, figs. 4 a, b.....	413
<i>A. avicula arata</i> , n. s., Hall, 1852, pl. ii, figs. 5 a, b.....	413

Gasteropoda.

<i>Pleurotomaria coronula</i> , n. s., Hall, 1852, pl. ii, figs. 6 a-d.....	413-414
<i>Eumphalus subplanus</i> , n. s., Hall, 1852, pl. ii, figs. 7 a, b.....	414

4.

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.

CRETACEOUS SPECIES.

	Page.
<i>Gryphæa</i> , Lamarck	99
<i>G. pitcheri</i> , Morton, 1834, pl. i, figs. 1-6	99-100
<i>G. pitcheri</i> , var. <i>navia</i> , Hall, 1856, (pl. i, figs. 7-10) *	100
<i>Ostrea</i> , Linnæus	100
<i>O. congesta</i> , Conrad, 1843, pl. i, fig. 11	100-101

CARBONIFEROUS SPECIES.

<i>Terebratula</i> [L]hwyd	101
<i>T. millepunctata</i> , n. s., Hall, 1856, pl. ii, figs. 1, 2	101
<i>T. subtilita</i> , Hall, pl. ii, figs. 3-5	101
<i>Spirifer</i> , Sowerby	101
<i>S. lineatus</i> , pl. ii, figs. 6-8	101-102
<i>S. kentuckensis</i> , Shumard, 1855, pl. ii, figs. 10, 11	102
<i>S. cameratus</i> , Morton, 1836, pl. ii, figs. 9, 12, 13	102-103
<i>Productus</i> , Sowerby	103
<i>P. semireticulatus</i> , Martin, 1809, pl. ii, figs. 16, 17	103
<i>P. rogersi</i> , Norwood & Pratt, 1854, pl. ii, figs. 14, 15	104
Imperfect specimens, the specific characters of which are obscure or indeterminable..	104-105

5.

HALL, JAMES. Geology and Paleontology 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.

Columnaria thomii, n. s., Hall, 1857, pl. xx, figs. 1 *a-d*.
Terebratula mexicana, n. s., Hall, 1857, pl. xx, figs. 2 *a-c*.
Orthis arachnoides, n. s., Hall, 1857, pl. xx, figs. 3 *a, b*.
Euomphalus michleranus, n. s., Hall, 1857, pl. xx, fig. 4.
Asaphus emoryi, n. s., Hall, 1857, pl. xx, fig. 5.

The Echinoderms in this report are described by Professor Hall.

	Page.
<i>Pyrina Parryi</i> , n. s., Hall, 1857, pl. i, figs. 1 <i>a-d</i>	144-145
<i>Toxaster texanus</i> , Roemer, pl. i, figs. 2 <i>a-c</i>	145
<i>Cyphosoma texanum</i> , Roemer, pl. i, figs. 3 <i>a-c</i>	145
<i>Holactypus planatus</i> , n. s., ? Hall, 1857, pl. i, figs. 4 <i>a-f</i>	145-146
<i>Toxaster elegans</i> , Shumard, sp. pl. xxi, figs. 1 <i>a-e</i>	146

Gryphæa Pitcheri, (Mort.), Hall is figured on pl. xxi, figs. 3 *a-c*, but its locality is not mentioned and it is not described.

6.

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

FOSSILS OF THE POTSDAM GROUP.

	Page.
<i>Brachiopoda</i> .	
<i>Obolella</i> , Bill.	205
<i>O. discoida</i> , n. s., H. & W., 1877, pl. i, figs. 1, 2	205
<i>Lingulepis</i> , Hall.	206
<i>L. merra</i> , n. s., H. & W., 1877, pl. i, figs. 5-7	206

* These figures are copied from Marcou's figures of *Gryphæa Pitcheri*, Mort., except fig. 10, which is copied from a figure of Marcou's *Gryphæa dilatata*, Sow., Bull. Geol. Soc. France, 2d ser. vol. xii, pl. xxi, and Geology of North America, pl. iv.

	Page.
<i>L. l. minuta</i> , n. s., H. & W., 1877, pl. i, figs. 3, 4.....	206-207
<i>Kutorgina</i> , Billings.....	207
<i>K. minutissima</i> , n. s., H. & W., 1877, pl. i, figs. 11, 12.....	207-208
<i>Leptana</i> , Dalman.....	208
<i>L. melita</i> , n. s., H. & W., 1877, pl. i, figs. 13, 14.....	208-209
Crustacea.	
<i>Conocephalites</i> , Zenker, = <i>Conocoryphe</i> Corda.....	290
Subgenus <i>Crepicephalus</i> , Owen? = <i>Loganellus</i> , Devine.....	209
<i>Crepicephalus</i> (<i>Loganellus</i>) <i>hagueti</i> , n. s., H. & W., 1877, pl. ii, figs. 14, 15.....	210-212
<i>C. (Loganellus) nitidus</i> , n. s., H. & W., 1877, pl. figs. 8-10.....	212-214
<i>C. (Loganellus) granulatus</i> , n. s., H. & W., 1877, pl. ii, figs. 2, 3.....	214-215
<i>C. (Loganellus) maculosus</i> , n. s., H. & W., 1877, pl. ii, figs. 24, 25, and 26 f.....	215-216
<i>C. (Loganellus) unisulcatus</i> , n. s., H. & W., 1877, pl. ii, figs. 22, 23.....	216-217
<i>C. (Loganellus) simulator</i> , n. s., H. & W., 1877, pl. ii, figs. 16-18.....	218
<i>C. (Loganellus) anytus</i> , n. s., H. & W., 1877, pl. ii, figs. 19-21.....	219-220
<i>C. (Bathyrus?) angulatus</i> , n. s., H. & W., 1877, pl. ii, fig. 28.....	220-221
<i>Pterocephalus</i> , Roemer.....	221
<i>Conocephalites</i> (<i>Pterocephalus</i>) <i>laticeps</i> , n. s., H. & W., 1877, pl. ii, figs. 4-7.....	221-223
<i>Ptychaspis</i> , Hall.....	223
<i>P. pusulosa</i> , n. s., H. & W., 1877, pl. ii, fig. 27.....	223-224
<i>Chariocephalus</i> , Hall.....	224
<i>C. tumifrons</i> , n. s., H. & W., 1877, pl. ii, figs. 38, 39.....	224-225
<i>Dikellocephalus</i> , Owen.....	225-226
<i>D. bilobatus</i> , n. s., H. & W., 1877, pl. ii, fig. 36.....	226
<i>D. multicinctus</i> , n. s., H. & W., 1877, pl. ii, fig. 37.....	226-227
<i>D. flabellifer</i> , n. s., H. & W., 1877, pl. ii, figs. 29, 30.....	227-228
<i>Agnostus</i> , Brongniart.....	228
<i>A. communis</i> , n. s., H. & W., 1877, pl. i, figs. 28, 29.....	228-229
<i>A. neoa</i> , n. s., H. & W., 1877, pl. i, figs. 26, 27.....	229-230
<i>A. prolongus</i> , n. s., H. & W., 1877, pl. i, figs. 30, 31.....	230-231
<i>A. tumidosus</i> , n. s., H. & W., 1877, pl. i, fig. 32.....	231

FOSSILS OF THE LOWER SILURIAN.

Brachiopoda.	
<i>Lingulepsis</i> , Hall.....	232
<i>L. ella</i> , n. s., H. & W., 1877, pl. i, fig. 8.....	232
<i>Orthis</i> , Dalman.....	232
<i>O. pogonipensis</i> , n. s., H. & W., 1877, pl. i, figs. 9, 10.....	232-233
<i>Strophomena</i> , Rafinesque.....	233
<i>S. nemea</i> , n. s., H. & W., 1877, pl. i, fig. 15.....	233-234
<i>Poraconites</i> , Pander.....	234
<i>P. obscurus</i> , n. s., H. & W., 1877, pl. i, fig. 16.....	234
Gasteropoda.	
<i>Raphistoma</i> , Hall.....	235
<i>R. acuta</i> , n. s., H. & W., 1877, pl. i, figs. 20-22.....	235
<i>Maclurea</i> , Lesneux.....	235
<i>M. minima</i> , n. s., H. & W., 1877, pl. i, figs. 17-19.....	235-236
<i>Fusispira</i> , Hall.....	236
<i>F. compacta</i> , n. s., H. & W., 1877, pl. i, fig. 25.....	236-237
<i>Cyrtolites</i> , Conrad.....	237
<i>C. sinuatus</i> , n. s., H. & W., 1877, pl. i, figs. 23, 24.....	237
Crustacea.	
<i>Conocephalites</i> , Zenker.....	237
<i>C. subcoronatus</i> , n. s., H. & W., 1877, pl. ii, fig. 1.....	237-238
<i>Crepicephalus</i> , Owen? = <i>Loganellus</i> , Devine.....	238
<i>C. l. (Loganellus) quadrans</i> , n. s., H. & W., 1877, pl. ii, figs. 11-13.....	238-240
<i>Dikellocephalus</i> , Owen.....	240
<i>D. quadriiceps</i> , n. s., H. & W., 1877, pl. i, figs. 37-40.....	240-241
<i>D. wabatchensis</i> , n. s., H. & W., 1877, pl. i, fig. 35.....	241-242
<i>D. t. gothicus</i> , n. s., H. & W., 1877, pl. i, fig. 36.....	242-243
<i>Bathyrus</i> , Billings.....	243
<i>B. pogonipensis</i> , n. s., H. & W., 1877, pl. i, figs. 33, 34.....	243-244
<i>Ogigia</i> , Brongn.....	244
<i>O. producta</i> , n. s., H. & W., 1877, pl. ii, figs. 31-34.....	244-245
<i>O. parabola</i> , n. s., H. & W., 1877, pl. ii, fig. 35.....	245-246

FOSSILS OF THE DEVONIAN.

Brachiopoda.

<i>Strophodonta</i> , Hall.....	246
<i>S. canae</i> , H. & W., pl. iii, figs. 1-3	246-247
<i>Rhynchonella</i> , Fischer	247
<i>R. emmonsii</i> , n. s., H. & W., 1877, pl. iii, figs. 4-8	247-248

Lamellibranchiata.

<i>Paracyclas</i> , Hall	248
<i>P. peroccidens</i> , n. s., H. & W., 1877, pl. iii, figs. 14-17	248
<i>Nuculites</i> , Conrad	248
<i>N. triangularis</i> , n. s., H. & W., 1877, pl. iii, figs. 12, 13	248-249
<i>Lunulicardium</i> , Munster	249
<i>L. fragosum</i> , Meek, pl. ii, figs. 9, 11	249-250

Gasteropoda.

<i>Bellerophon</i> , Montf.	250
<i>B. neleus</i> , n. s., H. & W., 1877, pl. iii, figs. 18-20	250-251

FOSSILS OF THE WAVERLY GROUP.

Radiata.

<i>Michelina</i> , D'Kon.	251
<i>Michelina</i> ——sp. ? H. & W., 1877, pl. iv, fig. 19	251-252

Brachiopoda.

<i>Streptorhynchus</i> , King	252
<i>S. equivalvis</i> , Hall, pl. iv, figs. 1, 2	252
<i>S. inflatus</i> , White & Whitf., 1862, pl. iv, fig. 3	252-253
<i>Strophomena</i> , Rafinesque	253
<i>S. rhomboidalis</i> , Wilckens, pl. iv, fig. 4	253
<i>Chonetes</i> , Fischer	253
<i>C. loganensis</i> , n. s., H. & W., 1877, pl. iv, fig. 9	253-254
<i>Spirifera</i> , Sow	254
<i>S. centronata</i> , Winchell, 1865, pl. iv, figs. 5, 6	254-255
<i>S. alba-pinensis</i> , n. s., H. & W., 1877, pl. iv, figs. 7, 8	255-256
<i>Athyris</i> , McCoy	256
<i>A. claytoni</i> , n. s., H. & W., 1877, pl. iv, figs. 15-17	256-257
<i>A. planosulcata</i> ? n. s., H. & W., 1877, pl. iv, figs. 10, 11	257
<i>Rhynchonella</i> , Fischer	257
<i>R. pustulosa</i> , White? pl. iv, figs. 12-14	257-258
<i>Terebratula</i> (Lilhwyl), Brug	258
<i>T. utah</i> , n. s., H. & W., 1877, pl. iv, fig. 18	258

Gasteropoda.

<i>Euomphalus</i> , Sow.	259
<i>E. (Straparollus) utahensis</i> , n. s., H. & W., 1877, pl. iv, figs. 20-23	259-260
<i>E. latus</i> , White, MSS., pl. iv, figs. 24, 25	260-261
<i>E. (Straparollus) ophirensis</i> , n. s., H. & W., 1877, pl. iv, figs. 26, 27	261

Crustacea.

<i>Proetus</i> , Stein.	262
<i>P. peroccidens</i> , n. s., H. & W., 1877, pl. iv, figs. 28-32	262-264
<i>P. loganensis</i> , n. s., H. & W., 1877, pl. iv, fig. 33	264

FOSSILS OF THE LOWER CARBONIFEROUS.

Brachiopoda.

<i>Orthis</i> , Dalman	265
<i>O. resupinata</i> ? Martin, sp. pl. v., figs. 1, 2	265
<i>Productus</i> , Sowerby	265
<i>P. flemingi</i> var. <i>burlingtonensis</i> , Hall, pl. v, figs. 9-12	265-266
<i>P. levicostus</i> ? White? 1860, pl. v, figs. 7, 8	266-267
<i>P. semireticulatus</i> , Martin, pl. v, figs. 5, 6	267-268
<i>P. elegans</i> , n. s., H. & W., 1877, pl. v, figs. 3, 4	268-269
<i>Spirifera</i> , Sowerby	269
<i>S. striata</i> , pl. v, figs. 13-15	269-270
<i>S. setigera</i> , Hall, pl. v, figs. 17, 18	270-271
<i>Spirifera</i> ——sp. ? H. & W., 1877, pl. v, fig. 16	271
<i>Athyris</i> , McCoy	271
<i>A. subquadrata</i> ? Hall, pl. v, figs. 19, 20	271-272

FOSSILS OF THE COAL-MEASURES AND PERMO-CARBONIFEROUS.

Lamellibranchiata.

<i>Aviculopecten</i> , McCoy	273
<i>A. weberensis</i> , n. s., H. & W., 1877, pl. vi, fig. 5	273

	Page
<i>A. carto cardinalis</i> , n. s., H. & W., 1877, pl. vi, fig. 4.....	273-274
<i>A. purpuratus</i> , n. s., H. & W., 1877, pl. vi, fig. 6.....	274-275
<i>Mytilina</i> , De Koninck.....	275
<i>M. arcuoloides</i> , M. & H., 1860, pl. vi, fig. 8.....	275-276
<i>M. permuta</i> , Swallow, 1858, pl. vi, fig. 7.....	276
<i>Sedgwickia</i> , McCoy.....	276
<i>S. t. concava</i> , M. & H., 1858, pl. vi, fig. 3.....	276-277
<i>Cardiomorpha</i> , De Koninck.....	277
<i>C. missouriensis</i> , Swallow, 1858, pl. vi, figs. 1, 2.....	277
<i>Cephalopoda</i>	
<i>Cyrtoceras</i> , Goldf.....	278
<i>C. cessator</i> , n. s., H. & W., 1877, pl. vi, fig. 15.....	278
<i>Goniatites</i> , De Haan.....	279
<i>G. kingii</i> , n. s., H. & W., 1877, pl. vi, figs. 9-14.....	279-280
FOSSILS OF THE TRIASSIC FORMATION.	
<i>Radiata</i>	
<i>Echino termata</i>	
<i>Pentacrinites</i> , Miller.....	280
<i>P. asteriscus</i> ? M. & H., 1858, pl. vi, fig. 16.....	280-281
<i>Brachiopoda</i>	
<i>Spiriferina</i> , D'Orb.....	281
<i>S. homfray</i> ? Gabb, pl. vi, fig. 18.....	281
<i>Spirifer</i> (<i>Spiriferina</i> ?) <i>alia</i> , n. s., H. & W., 1877, pl. vi, fig. 17.....	281-282
<i>Terebratula</i> , (Lilhwyl.), Brug.....	282
<i>T. humboldtensis</i> , Gabb, pl. vi, figs. 22-24.....	282-283
<i>Lamellibranchiata</i>	
<i>Edmondia</i> , De Koninck.....	283
<i>E. myrina</i> , n. s., H. & W., 1877, pl. vi, fig. 19.....	283
FOSSILS OF THE JURASSIC PERIOD.	
<i>Brachiopoda</i>	
<i>Rhynchonella</i> , Fischer.....	284
<i>R. myrina</i> , n. s., H. & W., 1877, pl. vii, figs. 1-5.....	284
<i>R. gnathophora</i> ? Meek, pl. vii, fig. 6.....	284-285
<i>Terebratula</i> (Lilhwyl.), Brug.....	285
<i>T. angusta</i> , n. s., H. & W., 1877, pl. vii, figs. 7-10.....	285
<i>Lamellibranchiata</i>	
<i>Ostrea</i> , Linn.....	285
<i>Ostrea</i> ——— sp. ? H. & W., 1877, pl. vii, fig. 12.....	285-286
<i>Gryphaea</i> , Linn.....	286
<i>G. calceola</i> var. <i>nebrascensis</i> , H. & W., 1877, M. & H., 1861, pl. vii, fig. 11.....	286-287
<i>Arionopretes</i> , McCoy.....	288
<i>A. (Eumicrotis ?) augustensis</i> , n. s., H. & W., 1877, pl. vii, figs. 14-16.....	288
<i>Eumicrotis</i> , Meek.....	289
<i>E. curta</i> , Hall, pl. vii, fig. 24.....	289
<i>Camptoneetes</i> , Agassiz.....	289
<i>C. bellistriatus</i> , Meek, pl. vii, fig. 13.....	289-290
<i>C. extenuatus</i> , Meek, pl. vii, fig. 18.....	290-291
<i>C. pertenuistriatus</i> , n. s., H. & W., 1877, pl. vii, fig. 17.....	291-292
<i>Lima</i> , Brug.....	292
<i>L. (Ptygostoma) occidentalis</i> , n. s., H. & W., 1877, pl. vii, fig. 23.....	292-293
<i>Trigonia</i> , Brug.....	293
<i>T. quadrangularis</i> , n. s., H. & W., 1877, pl. vii, fig. 22.....	293-294
<i>Leptocardia</i> , (n. g.), H. & W., 1877.....	294
<i>L. typica</i> , n. s., H. & W., 1877, pl. vii, figs. 26-29.....	295-296
<i>L. carditoides</i> , n. s., H. & W., 1877, pl. vii, fig. 25.....	296-297
<i>Astarte</i> , Sowerby.....	297
<i>A. ? arenosa</i> , n. s., H. & W., 1877, pl. vi, figs. 20-21.....	297-298
<i>Gastropoda</i>	
<i>Natica</i> , Lam.....	298
<i>N. ? lelia</i> , n. s., H. & W., 1877, vii, figs. 19-21.....	298-299
Classified list of the fossils described in this report.....	301-302

VI.—THE WRITINGS OF ANGELO HEILPRIN.

1.

HEILPRIN, ANGELO. On some new species of Eocene mollusca from the southern United States. <Proc. U. S. National Museum, vol. iii, pp. 149-152, pl. 1, 1880. Washington, 1881.

	Page.
<i>Pleurotoma</i> , Lamarck.....	149
<i>P. pagoda</i> , n. s., Heilprin, 1880, pl. —, fig. 1.....	149-150
<i>P. vcnusta</i> , n. s., Heilprin, 1880, pl. —, fig. 2.....	150
<i>P. platysoma</i> , n. s., Heilprin, 1880, pl. —, fig. 3.....	150
<i>Eucheilodm</i> , Gabb.....	150
<i>E. creno-carinata</i> , n. s., Heilprin, 1880, pl. —, fig. 4.....	150
<i>Scalaria</i> , Lamarck.....	150
<i>S. unilineata</i> , n. s., Heilprin, 1880, pl. —, fig. 5.....	150-151
<i>Fusus</i> , Lamarck.....	151
Subgenus <i>Strepsidura</i> , Swainson.....	151
<i>F. (Strepsidura) marnochi</i> , n. s., Heilprin, pl. —, fig. 6.....	151
<i>Terebra</i> , Lamarck.....	151
<i>T. plicifera</i> , n. s., Heilprin, pl. —, fig. 8.....	151
<i>Crassatella</i> , Lamarck.....	151
<i>C. declivis</i> , n. s., Heilprin, pl. —, fig. 9.....	151-152

2.

HEILPRIN, ANGELO. North American tertiary Ostreidæ. <4th Annual Rep. of the director of the U. S. Geological Survey. A review of the fossil ostreidæ of North America; and a comparison of the fossil with the living forms by C. A. White. Appendix I, pp. 309-316, pls. lxiv-lxxii. Washington, 1883.

	Page.
<i>Ostrea</i> , Linnæus.....	309

EOCENE.

<i>Ostrea alabamensis</i> , Lea, pl. lxiv, figs. 2-4.....	309
<i>Ostrea carolinensis</i> , Conrad.....	309
<i>Ostrea compressirostra</i> , Say, pl. lxv, figs. 1-2.....	309
<i>Ostrea cretacea</i> , Morton.....	310
<i>Ostrea divaricata</i> , Lea, pl. lxiv, fig. 1.....	310
<i>Ostrea eversa</i> , Melville, sp., pl. lxiv, figs. 5-8.....	310
<i>Ostrea falciformis</i> , Conrad.....	311
<i>Ostrea mortoni</i> , Gabb.....	311
<i>Ostrea sellaformis</i> , Conrad, pl. lxii, figs. 1, 2; pl. lxiii, fig. 1.....	311
<i>Ostrea thirsa</i> , Gabb, pl. lxiii, figs. 4-6.....	311
<i>Ostrea trigonalis</i> , Conrad.....	311
? <i>Ostrea tuomeyi</i> , Conrad.....	311

OLIGOCENE.

<i>Ostrea georgiana</i> , Conrad.....	311-312
<i>Ostrea vicksburgensis</i> , Conrad, pl. lxiii, figs. 2, 3.....	312

MIOCENE.

<i>Ostrea atwoodi</i> , Gabb, pl. lxviii, figs. 4, 5.....	312
<i>Ostrea borealis</i> , Lamarck.....	312
<i>Ostrea contracta</i> , Conrad, pl. lxix, figs. 1, 2.....	312

	Page.
<i>Ostrea disparilis</i> , Conrad, pl. lxxi, figs. 1, 2	312
<i>Ostrea panzana</i> , Conrad	313
<i>Ostrea percerassa</i> , Conrad, pl. lxxvii, fig. 3	313
<i>Ostrea sculpturata</i> , Conrad, pl. lxx, fig. 2	313
<i>Ostrea subfalcata</i> , Conrad, pl. lxxviii, figs. 1-3	313
<i>Ostrea subjeeta</i> , Conrad	313
<i>Ostrea tayloriana</i> , Gabb, pl. lxxvii, figs. 1, 2	313
<i>Ostrea titan</i> , Conrad	313-314
<i>Ostrea veleriana</i> , Conrad, pl. lxx, fig. 1	314
<i>Ostrea virginica</i> , Gmelin (= <i>O. virginiana</i> , Lamarck)	314

PLIOCENE.

<i>Ostrea atwoodi</i> , Gabb	314
<i>Ostrea bourgeoisii</i> , Rémond, pl. lxxi, fig. 1	214
<i>Ostrea heermanni</i> , Conrad	314
<i>Ostrea respektina</i> , Conrad, pl. lxxi, figs. 2-4	315

POST-PLIOCENE.

<i>Ostrea conchaphila</i> , Carpenter	315
<i>Ostrea fundata</i> (Say t), F. S. Holmes	315
<i>Ostrea gallus</i> , Valenciennes	315
<i>Ostrea lurida</i> , Carpenter, pl. lxxii, figs. 2, 3	316
<i>Ostrea veatchii</i> , Gabb, pl. lxxii, fig. 1	316

VII.—THE WRITINGS OF ALPHEUS HYATT.

1.

HYATT, ALPHEUS. [Descriptions of new genera and remarks on new species of Triassic fossils.] < Rep. Geol. Expl. 40th Parallel, by Clarence King. Vol. iv, part i, pp. 107-128 *pars*. Washington, 1877.

	Page.
<i>Clydonitidae</i> , n. f., Hyatt, 1877	107
* <i>Coroceras</i> , n. g., Hyatt, 1877	107-108
<i>Clydonites</i> , Hauer	109
<i>C. levidorsatus</i> , Hauer, sp., 1860, pl. x, fig. 7	109-110
<i>Trachyceratidae</i> , n. f., Hyatt, 1877	110
† <i>Gymnotoceras</i> , n. g., Hyatt, 1877	110-111
<i>G. rotelliforme</i> , Meek, 1877, pl. x, figs. 9, 9 a	112-113
<i>G. blakci</i> , Gabb, sp., 1864, pl. x, figs. 10, a-c, and pl. xi, figs. 6, 6 a	115-116
<i>Trachyceras</i> , Laube	116
<i>T. whitneyi</i> , Gabb, sp., 1864, pl. xi, figs. 3, 3 a	117-118
<i>T. judicarium</i> , Mojsisovics, 1869, pl. xi, figs. 1, 1 a	118
<i>Arcestidae</i>	
<i>Arcestes</i> , Suess, 1865.	119-120
<i>A. ? perplanus</i> , Meek, 1877, pl. xi, figs. 7, 7 a	121
<i>A. gabbi</i> , Meek, 1877, pl. x, figs. 6, 6 a, b	123
<i>Physanoidae</i> , Hyatt, 1877	124
‡ <i>Acrochordiceras</i> , n. g., Hyatt, 1877	124
<i>A. hyatti</i> , Meek, 1877, pl. xi, figs. 5, 5 a	125-126
§ <i>Eutonoceras</i> , n. g., Hyatt, 1877	126
<i>Eudisoceras</i> , n. g., Hyatt, 1877	128

2.

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.

	Page.
<i>Meekoceras</i> , n. g., Hyatt, 1880.	112
<i>M. aplanatum</i> , n. s., White, 1880.	113
<i>M. muchbachianum</i> , n. s., White, 1880	114
<i>M. gracilitatis</i> , n. s., White, 1880	115-116
<i>Arcestes ? cirratus</i> , n. s., White, 1880	117

3.

HYATT, ALPHEUS. [Description of the new genus *Enclimatoceras*.] < On the Nautiloid genus *Enclimatoceras* Hyatt, and a description of the type species. < On Mesozoic fossils, by C. A. White, Bull. U. S. Geol. Surv. No. 4. Vol. i, pp. 16-17 of No. 4, or pp. 104-105 of vol. i. Washington, 1884.

<i>Enclimatoceras</i> , n. g., Hyatt, 1884.	104-105
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* κόρυς, a helmet; κέρας, a horn.

† γυμνός, naked; ὠπτος, 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 tucumcarii*.

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.

Gryphæa dilatata, Sowerby, pl. xxi, figs. 1 a, b, and 2.

G. dilatata var. *tucumcarii*, 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. 802-813. 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 résumé 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.

	Page
<i>Gryphaea Pitcheri</i> , Morton	167
<i>G. dilatata</i> , Sowerby	168
<i>O. Marshii</i> , Sowerby	168

9.

MARCOU, JULES. Geology of North America, with two reports on the Prairies of Arkansas and Texas, the Rocky mountains of New Mexico, and the Sierra Nevada of California, originally made for the United States Government, pp. 1-144, pls. i-ix. Zurich, 1858.

CONTENTS.

	Page.
Introduction	1-8
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. (Extract from Report of Exploration for a railway route, near the thirty-fifth parallel of latitude, from the Mississippi River to the Pacific Ocean, by Lieutenant, now Captain, A. W. Whipple, Corps of Topographical Engineers, chapter vi, page 40, &c. Washington, 1855. House of Representatives, Document No. 129)	9-25
Geological notes of a survey of the country comprised between Preston, Red River, and El Paso, Rio Grande Del Norte. (Extract from Report of Exploration of a route for the Pacific Railroad, near the thirty-second parallel of latitude, from the Red River to the Rio Grande, by Brevet Capt. John Pope, Corps of Topographical Engineers, chapter xiii, Geological Report, p. 125, &c. Washington, 1855)	26-31
Paleontology	32-53
Geology of New Mexico	54-57
On the geology of the United States and the British Provinces of North America. (Extract from Dr. A. Petermann's Geographischen Mittheilungen, Heft 6, in 4 ^{to} . Gotha, 1855)	53-70
Sketch of a geological classification of the mountains of a part of North America. (Extract from the Annales des Mines, 5 ^{me} série, tome vii, page 329, &c. Paris, 1855)	71-80
On the Gold of California. (Extract from the Bibliothèque Universelle de Genève, février, 1855)	81-84

	Page.
Construction of the Geological map of the United States and the British Provinces; Criticism of the American Journal of Science and Arts, conducted by Professors B. Silliman, B. Silliman, jr., and James D. Dana.....	85-98
A synopsis of the history of the progress and discoveries of Geology in North America.....	99-121
List of maps and memoirs on the Geology of North America.....	122-143
Note.....	144

PALEONTOLOGY.

FOSSILS OF THE TERTIARY ROCKS.

<i>Ostrea virginica</i> var. <i>californica</i> , Marcou, 1858, pl. v, figs. 2, 2 a.....	32-33
--	-------

FOSSILS OF THE CRETACEOUS ROCKS.

<i>Ptychodus whipplei</i> , n. s., Marcou, 1858, pl. i, figs. 4, 4 a.....	33
<i>Ammonites shumardi</i> , n. s., Marcou, 1858, pl. i, figs. 1, 1 a.....	33-34
<i>Ammonites belknapii</i> , n. s., Marcou, 1858, pl. ii, figs. 1 a, 1 b.....	34
<i>Ammonites peruvianus</i> , de Buch., pl. v, figs. 1, 1 a, 1 b.....	34-35
<i>Ammonites gibsonianus</i> , Lea, pl. ii, fig. 2 a, 2 b.....	35
<i>Ammonites nori-mexicana</i> , n. s., Marcou, 1858, pl. i, figs. 2, 2 a.....	35-36
<i>Hauites fremonti</i> , n. s., Marcou, 1858, pl. i, fig. 3.....	36
<i>Inoceramus lerouxi</i> , n. s., Marcou, 1858, pl. ii, fig. 3.....	36-37
<i>Isocardia washita</i> , n. s., Marcou, 1858, pl. iii, figs. 2, 2 a, 2 b.....	37
<i>Gryphea sinuata</i> var. <i>americana</i> , Marcou, 1858, pl. iii, fig. 1.....	37-38
<i>Gryphea pitcheri</i> , Morton, pl. iv, figs. 5, 5 a, b, and 6.....	38-40
<i>Holaster comanchesii</i> , n. s., Marcou, 1858, pl. iii, figs. 3, 3 a.....	40-41
<i>Exogyra flabellata</i> , Goldf.....	41-42
<i>Cytherea missouriana</i> , Mort.....	42
<i>Tellina occidentalis</i> , Mort.....	42
<i>Caprotina texana</i> , Roem.....	42

FOSSILS OF THE JURASSIC ROCKS.

<i>Gryphea dilatata</i> var. <i>tucuncarii</i> , Marcou, 1858, pl. iv, figs. 1, 1 a, 1, 2, 3.....	43
<i>Ostrea marshii</i> , Sow., pl. iv, fig. 4.....	43-44

FOSSILS OF THE MOUNTAIN LIMESTONE OR LOWER CARBONIFEROUS ROCKS.

<i>Orthoceras nova-mexicana</i> , n. s., Marcou, 1858, pl. vii, fig. 1.....	44
<i>Myalina apachesii</i> , n. s., Marcou, 1858, pl. vii, figs. 6, 6 a.....	44-45
<i>Productus delawarei</i> , n. s., Marcou, 1858, pl. v, fig. 3.....	45
<i>Productus cora</i> , d'Orb., pl. vi, figs. 4, 4 a.....	45
<i>Productus cora</i> var. <i>mogayoni</i> , Marcou, 1858, pl. vi, fig. 5.....	45-46
<i>Productus semi-recticulatus</i> , Mart., pl. v, figs. 4, 4 a, pl. vi, fig. 6.....	46
<i>Productus costatus</i> , Sow., pl. v, fig. 5.....	46-47
<i>Productus flemingii</i> , Sow., pl. vi, fig. 7.....	47
<i>Productus scabriculus</i> , Mart., pl. v, figs. 6, 6 a.....	47-48
<i>Productus pyxidiformis</i> , de Kon., pl. vi, figs. 3, 3 a.....	48
<i>Productus pustulosus</i> , Phill., pl. vi, fig. 1.....	48
<i>Productus punctatus</i> , Mart., pl. vi, fig. 2.....	48
<i>Orthis pecosii</i> , n. s., Marcou, 1858, pl. vi, figs. 14, 14 a, b.....	48-49
<i>Orthis crenistria</i> , Phill.....	49
<i>Spirifer striatus</i> , Mart., pl. vii, figs. 2, 2 a.....	49
<i>Spirifer striatus</i> var. <i>triplicatus</i> , Marcou, 1858, pl. vii, fig. 3.....	49, 50
<i>Spirifer rocky-montani</i> , n. s., Marcou, 1858, pl. vii, figs. 4, 4 a-e.....	50
<i>Spirifer lineatus</i> , Mart., pl. vii, figs. 5, 5 a-c.....	50
<i>Terebratula rocky-montana</i> , n. s., Marcou, 1858, pl. vi, figs. 13, 13 a-c.....	50-51
<i>Terebratula mormonii</i> , n. s., Marcou, 1858, pl. vi, figs. 11, 11 a-c.....	51
<i>Terebratula uta</i> , n. s., Marcou, 1858, pl. vi, figs. 12, 12 a-c.....	51
<i>Terebratula royssii</i> , Leveillé, pl. vi, figs. 10, 10 a, b.....	51-52
<i>Terebratula plano-sulcata</i> , Phill., pl. vi, figs. 8, 8 a-b.....	52
<i>Terebratula subtilita</i> , Hall, pl. vi, figs. 9, 9 a-f.....	52
<i>Zaphrentis stansburyi</i> , Hall, pl. vii, fig. 7.....	52-53
<i>Zaphrentis cylindrica</i> , Milne-Edwards & Jules Haime, pl. vii, fig. 8.....	53
<i>Amplexus coralloides</i> ? Sow.....	53

MAISSOU, 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 H, pp. 158-172. Washington, 1876.

	Page.
Pliocene rocks of Los Angeles.....	158-159
The Sierra of Santa Monica	159-160
Sierra Madre, Pacoña or Pacorina Cañon	160-161
Geology of the vicinity of the San Fernando Mission	161
The San Fernando sierra.....	161-164
Asphaltum and mineral oil near San Francisquito ranch.....	164-166
Sierra liebre and California desert	166
Cañada de las Uvas.....	166-167
Tertiary rocks in the vicinity of Fort Tejon.....	167-169
Tertiary rocks of California.....	169
Glacial rocks of Southern California and Pike's Peak	169-170
Mountain chains and their ages.....	170
The Sierra Madre	170-171
Coast Range.....	171-172
Sierras of San Fernando and Santa Monica	172
Hills of Los Angeles.....	172

The occurrence of many fossils is mentioned in this report.

IX.—THE WRITINGS OF JOHN STRONG NEWBERRY.

1.

NEWBERRY, J. S. Palæontology. <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.

	Page.
<i>Archæocidaris</i> , McCoy	116
<i>A. longispinus</i> , n. s., Newberry, 1861, pl. i, figs. 1 and 1 a	116
<i>A. ornatus</i> , n. s., Newberry, 1861, pl. i, figs. 2, 3, 3 a	116-117
<i>A. gracilis</i> , n. s., Newberry, 1861, pl. i, figs. 4, 4 a	117
<i>Ammonites</i> , Brug	117
<i>A. percarinatus</i> , H. & M., 1856	117-118
<i>Nautilus</i> , Breynius	118
<i>Nautilus</i> , sp., Newberry, 1861	118
<i>Bellerophon</i> , Montfort	118
<i>Inoceramus</i> , Sowerby	119
<i>I. problematicus</i> , D'Orb.	119
<i>I. crispus</i> ? Mantell	119
<i>Pinna</i> , Linn.	119
<i>P. ? lingula</i> , n. s., Newberry, 1861	119-120
<i>Gryphæa</i> , Lamarck	120
<i>G. pitcheri</i> , Morton	120
<i>G. pitcheri</i> var. <i>navia</i> , Hall	120
<i>Allorisma</i> , King	120
<i>A. capax</i> , n. s., Newberry, 1861, pl. i, figs. 9, 9 a	120-121
<i>Productus rogersi</i> , Norwood & Pratten	121
<i>P. ivesi</i> , n. s., Newberry, 1861, pl. ii, figs. 1-8	122
<i>P. occidentalis</i> , n. s., Newberry, 1861, pl. ii, figs. 9, 10	122
<i>P. calhounianus</i> , Swallow	123
<i>P. costatus</i> , Sowerby	123
<i>P. costatoides</i> , Swallow	123-124
<i>P. semireticulatus</i> , Martin, De Koninck	124
<i>P. nodosus</i> , n. s., Newberry, 1861, pl. i, figs. 7, 7 b	124
<i>P. splendens</i> ? Norwood & Pratten, 1855	124-125
<i>P. scabrivulus</i> , Martin	125
<i>Streptorhynchus</i> , King	125
<i>S. umbraculum</i> , Von Bnch	125-126
<i>S. pyramidalis</i> , n. s., Newberry, 1861, pl. ii, figs. 11-13	126
<i>S. occidentalis</i> , n. s., Newberry, 1861, pl. i, figs. 5, 5 a	126
<i>Athyris</i>	126
<i>A. subtilita</i> , Hall	126-127
<i>Spirifer</i> , Sowerby	127
<i>S. cameratus</i> , Mort.	127
<i>S. rockymontani</i> , Marcou	127
<i>S. lineatus</i> , De Koninck	127-128
<i>Chonetes</i> , Fisher	128
<i>C. verneuilliana</i> , Norwood & Pratten, pl. ii, fig. 6	128
<i>Rhynchonella</i> , Fisher	128
<i>R. uta</i> , Marcou	128
<i>Pecten</i> , Linn.	128
<i>P. occidentalis</i> , Shumard	128
<i>P. (Monotis) coloradensis</i> , n. s., Newberry, 1861, pl. i, figs. 6, 6 a	129
<i>Fus[u]lina</i> , Fisher	129
<i>F. cylindrica</i> , Fisher	129

	Page.
FOSSIL PLANTS.	
<i>Cyclopteris</i> , Brong.	129
<i>C. moquensis</i> , n. s., Newberry, 1861, pl. i, figs. 1, 2.....	129-130
<i>Pecopteris</i> , Brong.	130
<i>P. cyclobola</i> , n. s., Newberry, 1861, pl. iii, figs. 3, 4, 4 a.....	130-131
<i>Neuropteris</i> , Brong.	131
<i>N. angulata</i> , n. s., Newberry, 1861, pl. iii, fig. 5.	131
<i>Sphenopteris</i> , Brong.	131
Subspecies, Newberry, 1861.....	131
<i>Phyllites</i> , Sternb.	131
<i>P. venosissimus</i> , n. s., Newberry, 1861, pl. iii, fig. 6.....	131
<i>P. coriaceus</i> , n. s., Newberry, 1861, pl. iii, figs. 7, 7 a.....	132
<i>Clathropteris</i> , Brong.	132

2.

NEWBERRY, J. S. Descriptions of the Carboniferous and Triassic Fossils collected on the San Juan Exploring Expedition under Capt. J. N. Macomb, U. S. Engineers. <Rep. Expl. Exp. from Santa Fé, New Mexico, to the junction of the Grand and Green rivers of the Great Colorado of the West in 1859, under the command of Capt. J. N. Macomb, 135-148, pls. iii-viii. Washington, 1876.

	Page.
<i>Deltodus mercurei</i> , n. s., Newberry, 1876, pl. iii, figs. 1, 1 a.....	137
<i>Ptychodus whipplei</i> , Marcon, pl. iii, figs. 2, 2 a-f.....	137-138
<i>Athyris subtilita</i> , Hall, sp.....	138
<i>Spirifer cameratus</i> , Morton.....	138
<i>Spirifer</i> (<i>Trigonotreta</i> ?) <i>texanus</i> , Meek, 1871, pl. iii, figs. 5, 5 a, b.....	139-140
<i>Productus nodosus</i> , Newberry, pl. iii, figs. 3, 3 d.....	140
<i>Pleurotomaria excelsa</i> , n. s., Newberry, 1876, pl. iii, figs. 4, 4 a.....	140-141
<i>Lamna texana</i> , Ræmer.....	141
<i>Oxyrhina mantelli</i> , Agass.....	141
<i>Otozamites macombii</i> , n. s., Newberry, 1876, pl. iv, figs. 1, 2, pl. vi, figs. 5, 5 a.....	141-142
<i>Zamites occidentalis</i> , n. s., Newberry, 1876, pl. v, figs. 1, 1 a, and 2.....	142-143
<i>Pecopteris bullatus</i> , Bunbury, pl. vi, figs. 1, 1 a.....	143
<i>Pecopteris mexicana</i> , n. s., Newberry, 1876, pl. vi, figs. 2, 2 a.....	143-144
<i>Pecopteris falcatus</i> , Emmons, pl. vi, fig. 3.....	144
<i>Pterophyllum fragile</i> , n. s., 1876, Newberry, pl. vi, figs. 6, 6 a.....	144
<i>Pterophyllum robustum</i> , n. s., Newberry, 1876, pl. vi, fig. 7.....	145
<i>Podozamites crassifolia</i> , n. s., Newberry, 1876, pl. vi, fig. 10.....	145
<i>Alethopteris whitnei</i> , n. s., Newberry, 1876, pl. vii, figs. 1, 1 a, b.....	145-146
<i>Camptopteris remondi</i> , n. s., Newberry, 1876, pl. vii, figs. 2, 2 a.....	146-147
<i>Tæniopteris elegans</i> , n. s., Newberry, 1876, pl. viii, fig. 1.....	147
<i>Tæniopteris glassopteroides</i> , n. s., Newberry, 1876, pl. viii, figs. 2, 2 a.....	147
<i>Tæniopteris magnifolia</i> , Rogers, pl. viii, figs. 3, 4.....	147-148
<i>Jeanpaulia radiata</i> , n. s., Newberry, 1876, pl. viii, fig. 6.....	148

X.—THE WRITINGS OF DAVID DALE OWEN.

1.

OWEN, D. D. Description of some organic remains figured in this work, supposed to be new. <Rep. Geol. Expl. of part of Iowa, Wisconsin, and Illinois, by David Dale Owen. Appendix, pp. 69-86, pls. xi-xviii and p. 33, pl. vii. Washington, 1844.

	Page.
<i>Catenipora escharoides</i> , pl. vii, fig. 2	33
<i>Pentamerus oblongus</i> , pl. vii, fig. 3	33
<i>Pentamerus huspodus</i> , pl. vii, fig. 3	33

APPENDIX.

<i>Cyathopora iowensis</i> , n. s., D. D. Owen, 1844, pl. xi	69
<i>Orthoceras undulatum</i> , n. s., D. D. Owen, 1844, pl. xii, fig. 6	69
<i>Gyroceras cornutes</i> , n. s., D. D. Owen, 1844, pl. xii, fig. 8	69
<i>Delthyris curuteines</i> , n. s., D. D. Owen, 1844, pl. xii, fig. 9	69
<i>Anthophyllum expansum</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 3	69
<i>Lunulites? dactioloides</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 4	69
<i>Cyathophyllum caliculare</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 5	69
<i>Cyathophyllum corinthium</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 6	69
<i>Cyathophyllum undulatum et multiplicatum</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 10	69
<i>Sarcinula (Porites?) glabra</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 11	70
<i>Lamellopore</i>	70
<i>L. infundibularia</i> , n. s., D. D. Owen, 1844, pl. xiv, fig. 1	70
<i>Astrea manillaris</i> , n. s., D. D. Owen, 1844, pl. xiv, fig. 3	70
<i>Astrea? g'gas</i> , n. s., D. D. Owen, 1844, pl. xiv, fig. 7	70
<i>Lingula iowensis</i> , n. s., D. D. Owen, 1844, pl. xv, fig. 1	70
<i>Orthoceras marginale</i> , n. s., D. D. Owen, 1844, pl. xvi, fig. 6	70
<i>Cyrtoceras conicum</i> , n. s., D. D. Owen, 1844, pl. xvi, fig. 9	70
<i>Strophomena convexa</i> , n. s., D. D. Owen, 1844, pl. xvii, fig. 2	70
<i>Orbitulites? reticulata</i> , n. s., D. D. Owen, 1884, pl. xviii, fig. 7	70
<i>Atrypa imitatis?</i> Vanuxem, pl. xii, fig. 1	74
<i>Atrypa prisca</i> , Hengevieu, pl. xii, fig. 2	74
<i>Calymene bufo</i> , Green, pl. xii, fig. 3	74
<i>Atrypa?</i> ———, pl. xii, fig. 4	74
<i>Delthyris?</i> ———, pl. xii, fig. 5	74
<i>Favosites polymorpha ramosa</i> , Goldfuss, pl. xii, fig. 7	74
<i>Atrypa prisca</i> ———, pl. xii, fig. 10	74
<i>Bellerophon</i> ———, pl. xii, fig. 11	74
<i>Nucula?</i> ———, pl. xii, fig. 12	74
<i>Favosites polymorpha</i> , Goldfuss, pl. xii, fig. 13	74
<i>Cyathophyllum helianthoides</i> , Goldfuss, pl. xiii, fig. 1	76
<i>Syringopora (lineata?)</i> ———, pl. xiii, fig. 2	76
<i>Favosites maxima?</i> Troost, pl. xiii, fig. 7	76
<i>Porites? astraformis</i> , Owen, pl. xiii, fig. 8	76
<i>Phragmoceras ventricosum?</i> ———, pl. xiii, fig. 9	76
<i>Aulopora serpens</i> , Goldfuss, pl. xiv, fig. 2	78
<i>Syphonia piriformis?</i> Goldfuss, pl. xiv, fig. 4	78
<i>Nucula minuta</i> , Owen, pl. xiv, fig. 5	78
<i>Cyathophyllum turbinatum?</i> Goldfuss, pl. xiv, fig. 6	78
<i>Cyathophyllum vesiculatum?</i> Goldfuss, pl. xiv, fig. 8	78
<i>Orthis</i> , pl. xiv, fig. 9	78
<i>Pentamerus oblongus?</i> pl. xiv, fig. 10	78
<i>Astrea fungiformis</i> , pl. xiv, fig. 11	78
<i>Sarcinula costata</i> , Goldfuss, pl. xiv, fig. 12	78
<i>Tubipora lamellosa</i> , n. s., Owen, 1844, pl. xiv, fig. 13	78
<i>Lingula iowensis</i> , pl. xv, fig. 1	80

	Page.
<i>Bellerophon</i> (cast), pl. xv, fig. 2	80
<i>Orthis</i> (cast), pl. xv, fig. 3	80
<i>Pleurotomaria</i> ? (cast), pl. xv, fig. 4	80
<i>Trochus lenticularis</i> ? (cast), pl. xv, fig. 5	80
<i>Pleurotomaria</i> (cast), pl. xv, fig. 6	80
<i>Delthyris</i> (cast), pl. xv, fig. 7	80
<i>Euomphalus</i> (cast), pl. xv, fig. 8	80
<i>Atrypa orbicularis</i> (cast), pl. xv, fig. 9	80
<i>Pleurotomaria</i> (cast), pl. xv, fig. 10	80
<i>Orthis testudinaria</i> ? (cast), pl. xv, fig. 11	80
<i>Bellerophon</i> (cast), pl. xv, fig. 12	80
<i>Ilænus-Trentonensis</i> ? pl. xvi, fig. 1	82
Casts of <i>Strophomena</i> , pl. xvi, fig. 2	82
Casts of <i>Strophomena</i> , <i>Orthis</i> ? and <i>Atrypa</i> , pl. xvi, fig. 4	82
<i>Cyathophyllum profundum</i> , Con., pl. xvi, fig. 5	82
<i>Pleurotomaria</i> ? pl. xvi, fig. 7	82
Siliceous casts of <i>Strophomena deltoidea</i> , pl. xvi, fig. 8	82
<i>Orthis</i> , pl. xvii, fig. 1	84
<i>Pleurotomaria</i> ? pl. xvii, fig. 3	84
<i>Atrypa</i> , pl. xvii, fig. 4	84
<i>Strophomena sericea</i> ? pl. xvii, fig. 5	84
<i>Strophomena deltoidea</i> , pl. xvii, fig. 6	84
<i>Paradoxides</i> ? pl. xvii, fig. 7	84
<i>Cardium iowensis</i> , n. s., Owen, 1844, pl. xvii, fig. 8	84
<i>Thaleops</i> ? pl. xvii, fig. 9	84
<i>Strophomena nasuta</i> ? pl. xvii, fig. 10	84
<i>Ceraurus</i> , pl. xvii, fig. 11	84
<i>Cypricardites</i> , pl. xvii, fig. 12	84
<i>Pleurotomaria</i> , pl. xvii, fig. 13	84
<i>Delthyris expansus</i> , pl. xvii, fig. 14	84
<i>Bellerophon bilobatus</i> , pl. xvii, fig. 15	84
<i>Strophomena</i> , pl. xviii, fig. 1	86
<i>Asaphus</i> , pl. xviii, fig. 2	86
<i>Strophomena angulata</i> ? pl. xviii, fig. 3	86
<i>Pleurotomaria</i> ? pl. xviii, fig. 4	86
<i>Pleurotomaria angulata</i> ? pl. xviii, fig. 5	86
<i>Pleurotomaria lenticularis</i> , pl. xviii, fig. 6	86
<i>Trochus</i> ? pl. xviii, fig. 7	86
<i>Orthoceras</i> , pl. xviii, fig. 9	86
<i>Phragmoceras</i> ? pl. xviii, fig. 11	86

2.

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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.

	Page.
<i>Pentremites pyriformis</i> , Say	437
<i>Archimedes</i> , Lesueur	437
<i>Retepora archimedes</i>	437
<i>Aulopora tubiformis</i>	442
<i>Retepora indianensis</i> , n. s., Owen, 1846	442

3.

OWEN, D. D. [Lists of fossils found.] <Rep. of a Geol. Recon. of the Chippewa land district of Wisconsin. 30th Congress, 1st session, Senate, Executive Doc. No. 57. Appendix, pp. 131-133. Washington, 1848.

	Page.
List of fossil genera found in the lower sandstones of Wisconsin, fig. 1, species undetermined	131
List of fossil genera found in the lower magnesian limestone, fig. 2, species undetermined	131

Page.

List of fossil genera and species found in the lower fossiliferous limestone at St. Peter's and Fort Snelling, which are identical with those occurring in the blue limestone of the Ohio Valley.....	131-132
List of organic remains found near the "Big Spring," on the Upper Iowa River.....	132
List of organic remains found in the limestones (fig. 3) of Turkey River, near the agency and the vicinity.....	133

4.

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.

This article was afterward republished in Owen's U. S. Geol. Rep. of Iowa, Wisconsin, and Minnesota.

	Page.
<i>Platycrinus</i> , Miller.....	57
<i>P. planus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 4 <i>a-c</i>	57-58
<i>P. yandellii</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 6 <i>a, b</i>	58
<i>P. discoides</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 1 <i>a, b</i>	58-59
<i>P. corrugatus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 2 <i>a-e</i>	59-60
<i>P. burlingtonensis</i> , n. s., Owen & Shumard, 1850, pl. vii, fig. 5.....	60-61
<i>Dichocrinus</i> , Munster.....	61
<i>D. ovatus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 9 <i>a, b</i>	61-62
<i>D. striatus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 10 <i>a, b</i>	62-63
<i>Cyathocrinus</i> , Miller.....	63
<i>C. iowensis</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 11 <i>a-c</i>	63
<i>C. cornutus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 8 <i>a, b</i>	63-64
<i>Pentremites</i> , Say.....	64
<i>P. norwoodii</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 13 <i>a-c</i>	64-65
<i>P. melo</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 14 <i>a-c</i>	65-66
<i>P. laterniformis</i> , n. s., Owen & Shumard, 1850, pl. vii, fig. 15.....	66
<i>P. stelliformis</i> , n. s., Owen & Shumard, 1850, pl. vii, fig. 16 <i>a, b</i>	67
<i>Actinocrinus unieornus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 12 <i>a, b</i>	67-68
<i>Actinocrinus evansii</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 3 <i>a, b</i>	68-69

5

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This article was afterward republished in Owen's U. S. Geol. Rep. of Wisconsin, Iowa, and Minnesota.

	Page.
<i>Platycrinus</i> , Miller.....	89
<i>P. guerichiensis</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 1 <i>a, b</i>	89
<i>Poterioocrinus</i> , Miller.....	89
<i>P. rhombiferus</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 2 <i>a-c</i>	89-90
<i>P. tumidus</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 3 <i>a, b</i>	90-91
<i>P. spinosus</i> , n. s., Owen & Shumard, 1852, pl. xi, fig. 4.....	91-92
<i>P. occidentalis</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 5 <i>a, b</i>	92-93
<i>Agassizocrinus</i> , Troost in MSS.....	93
<i>A. conicus</i> , n. s., Owen & Shumard, 1852, pl. xi, fig. 6.....	93
<i>Synbathocrinus dentatus</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 7 <i>a, b</i>	93-94

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. 573-587, pls. i-ii, ii-iii, iii-iiii, iv-v, vii-viii. Philadelphia, 1852.

	Page.
<i>Crustacea (Trilobites).</i>	
<i>Dike(l)locephalus</i> , n. g., D. D. Owen, 1852	573-574
<i>D. minnesotensis</i> , n. s., D. D. Owen, 1852, tab. i, figs. 1, 2, 10; tab. i A, figs. 3, 6	574
<i>D. pepinensis</i> , n. s., D. D. Owen, 1852, tab. i, fig. 9 a, b, fig. 13 (?) and tab. i, A, fig. 17 (?)	574
<i>D. miniscansis</i> , n. s., D. D. Owen, 1852, tab. i, figs. 3, 12, and tab. i A, figs. 4, 5	574-575
<i>D. iowensis</i> , n. s., D. D. Owen, 1852, tab. i, fig. 4, and tab. i A, fig. 13	575
<i>D. granulatus</i> , n. s., D. D. Owen, 1852, tab. i, figs. 7 (and 5?)	575
<i>Lonchocephalus</i> , n. g., D. D. Owen, 1852, tab. i A, fig. 12	575
<i>L. chipewicensis</i> , n. s., D. D. Owen, 1852, tab. i, figs. 6, 14; tab. i A, fig. 9	576
<i>L. hamulus</i> , n. s., D. D. Owen, 1852, tab. i A, figs. 8-12	576
<i>Crepicephalus</i> , n. g., D. D. Owen, 1852	576-577
<i>Menocephalus</i> , n. g., D. D. Owen, 1852, tab. i, fig. 11	577
<i>Asaphus (Isotelus) iowensis</i> , D. D. Owen, 1852, tab. ii A, figs. 1-7	577
<i>Cephalopoda</i>	577
<i>Ammonites nebrascensis</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 3, and tab. viii A, fig. 2	577-578
<i>Ammonites nebrascensis (?)</i> , D. D. Owen, 1852, tab. viii, fig. 2	578
<i>Ammonites cheyennensis</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 2	578-579
<i>Ammonites opalus</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 6	579
<i>Ammonites moreauensis</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 7	579
<i>Ammonites lenticularis</i> , D. D. Owen, tab. viii, fig. 5	579
<i>Scaphites</i> of Parkinson	579-580
<i>S. (Ammonites?) compressus</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 4	580
<i>S. (Ammonites?) nodosus</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 4	581
<i>Gyroceras burlingtonensis</i> , n. s., D. D. Owen, 1852, tab. v, fig. 10	581
<i>Discites tuberculatus</i> , n. s., D. D. Owen, 1852, tab. v, fig. 14	581
<i>Gasteropoda</i>	581
<i>Pleurotomaria muralis</i> , n. s., D. D. Owen, 1852, tab. ii, fig. 6	581
<i>Straparollus (Euomphalus) minnesotensis</i> , n. s., D. D. Owen, 1852, tab. ii, figs. 12, 13	581
<i>Conchifera</i>	582
<i>Inoceramus sagensis</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 3	582
<i>Inoceramus nebrascensis</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 1	582
<i>Cucullaea nebrascensis</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 1, 1 a	582
<i>Brachiopoda</i>	583
<i>Lingula pinnaformis</i> , n. s., D. D. Owen, 1852, tab. i B, figs. 4, 6, 8	583
<i>Lingula ampla</i> , n. s., D. D. Owen, 1852, tab. i B, fig. 5	583
<i>Orbicula prima</i> , n. s., D. D. Owen, 1852, tab. i B, figs. 17, 19, and top figures on tab. iv	583
<i>Atrypa comis</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 4	583
<i>Chonetes granulifera</i> , n. s., D. D. Owen, 1852, tab. v, fig. 12	583
<i>Chonetes (?) iowensis</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 7	584
<i>Productus nebrascensis</i> , n. s., D. D. Owen, 1852, tab. v, fig. 3	584
<i>Leptana trilobata</i> , n. s., D. D. Owen, 1852, tab. ii, figs. 17, 18	584
<i>Strophodontia</i> , Hall	584
<i>S. parva</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 9	584
<i>S. (?) costata</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 5	585
<i>S. iowensis</i> , n. s., D. D. Owen, 1852	585
<i>Orthis cuneata</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 10	585
<i>Spirifer iowensis</i> , n. s., D. D. Owen, 1852, tab. iii, fig. 1	585
<i>Spirifer pectinatus</i> , n. s., D. D. Owen, 1852, tab. iii, figs. 3 and 8 (?)	585
<i>Spirifer ligus</i> , n. s., D. D. Owen, 1852, tab. iii, fig. 4	585
<i>Spirifer evolutus</i> , D. D. Owen, tab. iii, figs. 2, 2 a, and 6, 6 a	586
<i>Spirifer edarensis</i> , D. D. Owen, 1852, tab. iii, fig. 5	586
<i>Spirifer inequicostatus</i> , n. s., D. D. Owen, 1852, tab. v, fig. 6	586
<i>Foraminifera</i>	586
<i>Selenoides</i> , n. g., D. D. Owen, 1852, fig. 3, a (and b?)	586
<i>S. iowensis</i> , n. s., D. D. Owen, 1852, tab. ii B, fig. 13	587

8.

OWEN, D. D., and SHUMARD, B. F. Descriptions of one New Genus and twenty-two New Species of Crinoidea, from the subcarboniferous limestone of Iowa. <Rep. Geol. Surv. of Wisconsin, Iowa, and Minnesota, and incidentally of a part of Nebraska territory, by David Dale Owen. Appendix. Article II, pp. 587-598, pls. Va-Vb. Philadelphia, 1852.

	Page.
<i>Platycrinus</i> , Miller	587
<i>P. planus</i> , Owen & Shumard, 1850, tab. v A, figs. 4 <i>a-c</i>	587
<i>P. yandellii</i> , Owen & Shumard, 1850, tab. v A, figs. 6 <i>a, b</i>	587-588
<i>P. discoideus</i> , Owen & Shumard, 1850, tab. v A, figs. 1 <i>a, b</i>	588
<i>P. corrugatus</i> , Owen & Shumard, 1850, tab. v A, figs. 2 <i>a-c</i>	589
<i>P. burlingtonensis</i> , Owen & Shumard, 1850, tab. v A, fig. 5	589
<i>Dichoerinus</i> , Munster	589-590
<i>D. ovatus</i> , Owen & Shumard, 1850, tab. v A, figs. 9 <i>a, b</i>	590
<i>D. striatus</i> , Owen & Shumard, 1850, tab. v A, figs. 10 <i>a, b</i>	590
<i>Cyathocrinus</i> , Miller	591
<i>C. iowensis</i> , Owen & Shumard, 1850, tab. v A, figs. 11 <i>a-c</i>	591
<i>C. cornutus</i> , Owen & Shumard, 1850, tab. v A, figs. 8 <i>a, b</i>	591
<i>Pentremites</i> , Say	591
<i>P. norwoodii</i> , Owen & Shumard, 1850, tab. v A, figs. 13 <i>a-c</i>	591-592
<i>P. melo</i> , Owen & Shumard, 1850, tab. v A, figs. 14 <i>a-c</i>	592
<i>P. laterniformis</i> , Owen & Shumard, 1850, tab. v A, fig. 15	592-593
<i>P. stelliformis</i> , Owen & Shumard, 1850, tab. v A, figs. 16 <i>a, b</i>	593
<i>Actinocrinus unicornus</i> , Owen & Shumard, 1850, tab. v A, figs. 12 <i>a, b</i>	593-594
<i>Megistocrinus</i> , n. g., Owen & Shumard, 1852	594
<i>M. exonsii</i> , n. s., Owen & Shumard, 1852, tab. v A, figs. 3 <i>a, b</i>	594
<i>Platycrinus</i> , Miller	594
<i>P. americanus</i> , Owen & Shumard, 1852, tab. v B, figs. 1 <i>a, b</i>	594-595
<i>Poteriocrinus</i> , Miller	595
<i>P. rhombiferus</i> , Owen & Shumard, 1852, tab. v B, figs. 2 <i>a-c</i>	595
<i>P. tumidus</i> , Owen & Shumard, 1852, tab. v B, figs. 3 <i>a, b</i>	595-596
<i>P. spinosus</i> , Owen & Shumard, 1852, tab. v B, fig. 4	596
<i>P. occidentalis</i> , Owen & Shumard, 1852, tab. v B, figs. 5 <i>a, b</i>	596-597
<i>Agassizocrinus</i> (Troost in MSS)	597
<i>A. conicus</i> , Owen & Shumard, 1852, tab. v B, fig. 6	597
<i>Synbathocrinus dentatus</i> , Owen & Shumard, 1852, tab. v B, figs. 7 <i>a, b</i>	597-598

9.

OWEN, D. D. Shumard, B. F. Summary of the distribution of Orders, Genera, and Species, in the Northwest. <Rep. Geol. Surv. of Wisconsin, Iowa, and Minnesota, and incidentally of a part of Nebraska Territory, by David Dale Owen. Appendix. Article III, pp. 598-600. Philadelphia, 1852.

Modified by additions and researches since the publication in the Proc. of the American Association, 1851.

XI.—THE WRITINGS OF JAMES SCHIEL.

SCHIEL, JAMES. List and Description of Organic Remains collected during the Exploration of the Central Pacific Railroad line, 1853-'54. <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 Lient. E. G. Beckwith, 1854. Vol. ii, chap. x, pp. 108-109, pls. i-iv. Washington. 1855.

	Page.
<i>Fenestella</i> , pl. i, fig. 1	108
<i>Brachiopoda</i> .	
<i>Terebratula subtilita</i> , Hall, pl. i, figs. 2 a, b	108
<i>Productus splendens</i> , Norwood & Prather, pl. i, fig. 3	108
<i>Productus æquicostatus</i> , Shumard, pl. ii, figs. 4, 5	108
<i>Spirifer</i> , pl. i, fig. 5	108
<i>Inoceramus</i> , pl. ii, fig. 6	108
<i>Inoceramus confertim-annulatus</i> , Rømer, pl. ii, fig. 7	108
<i>Inoceramus pseudo-mytiloides</i> , pl. iii, fig. 8	108
<i>Gryphæa pitcheri</i> , Morton, pl. iii, fig. 9	108
<i>Cardium multistriatum</i> , Shumard, pl. i, fig. 10	109
<i>Phillipsia</i> ———, pl. i, figs. 11-14	109
<i>Encrinites and bryozoa</i> , pl. i, fig. 12	109
<i>Ammonites</i>	109
<i>Gryphæa pitcheri</i>	109

XII.—THE WRITINGS OF BENJAMIN F. SHUMARD.

1.

SHUMARD, B. F. Description of the species of Carboniferous and Cretaceous fossils collected. <Expl. of the Red River of Louisiana, by Randolph B. Marcy, assisted by George B. McClellan. Appendix E, Paleontology, pp. 197-211, pls. i-vi. Washington, 1853.

FOSSILS OF THE CARBONIFEROUS SYSTEM.

	Page.
<i>Crinoidea.</i>	
<i>Cyathocrinus granuliferus</i> , Yandell & Shumard, MSS., pl. —, fig. —	199
<i>Agassizocrinus dactyliiformis</i> , Troost, MSS., pl. i, fig. 7	199-209
<i>Pentremites florealis</i> , Say, 1820	200
<i>Pentremites sulcatus</i> , F. Roemer, 1852	200
<i>Bryozoa.</i>	
<i>Archimediopora archimedes</i> , Lesueur, 1842, pl. i, fig. 6	201
<i>Brachiopoda.</i>	
<i>Productus punctatus</i> , Martin, pl. i, fig. 5 and pl. ii, fig. 1	201
<i>Productus cora</i> , D'Orbigny, 1842	202
<i>Productus costatus</i> , Sowerby, pl. i, fig. 2	202
<i>Terebratula subtilita</i> , Hall, pl. iv, fig. 8	202-203
<i>Terebratula macegi</i> , Shumard, n. s., 1853, pl. i, figs. 4 a, b	203
<i>Spirifer</i> — ? Shumard, 1853, pl. i, fig. 3	203

FOSSILS OF THE CRETACEOUS PERIOD.

<i>Mollusca.</i>	
<i>Pecten quadricostatus</i> , Sowerby, pl. iii, fig. 6; pl. —, fig. —	204
<i>Exogyra ponderosa</i> , Roemer, 1849	205
<i>Gryphaea pitcheri</i> , Morton, pl. vi, fig. 5	205
<i>Exogyra texana</i> , Roemer, pl. v, figs. 1 a, b and fig. 5	205
<i>Ostrea subovata</i> , n. s., Shumard, 1853, pl. v, fig. 2	205, 206
<i>Inoceramus confertim-annulatus</i> , Roemer, pl. vi, fig. 2	206
<i>Trigonia crenulata</i> , Lamarck, pl. iv, fig. 1	206
<i>Astarte washitensis</i> , n. s., Shumard, 1853, pl. iii, fig. 3	206, 207
<i>Cardium multistriatum</i> , n. s., Shumard, 1853, pl. iv, fig. 2	207
<i>Panopaea texana</i> , n. s., Shumard, 1853, pl. vi, fig. 1	207
<i>Terebratula choctawensis</i> , n. s., Shumard, 1853, pl. ii, figs. a, b	207-208
<i>Globiconcha (Tylostoma) tumida</i> , n. s., Shumard, 1853, pl. v, fig. 3	208
<i>Globiconcha (?) elevata</i> , n. s., Shumard, 1853, pl. iv, fig. 4	208
<i>Eulima (?) sulfusiformis</i> , n. s., Shumard, 1853, pl. iv, fig. 3	208
<i>Ammonites respertinus</i> , Morton	209
<i>Ammonites marciiana</i> , n. s., Shumard, 1853, pl. iv, fig. 5	209
<i>A. acuto carinatus</i> , n. s., Shumard, 1853, pl. i, fig. 3	209-210
<i>Ammonites</i> — ? Shumard, 1853, pl. —, fig. —	210
<i>Echinodermata.</i>	
<i>Hemaster elegans</i> , n. s., Shumard, 1853, pl. ii, figs. 4 a-c	210
<i>Holaster simplex</i> , n. s., Shumard, 1853, pl. iii, fig. 2	210-211
<i>Holctypus planatus</i> , F. Roemer	211

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<i>Acephala.</i>	Page.
<i>Avicula nebrascana</i> , n. s., E. & S., 1857	38
<i>Limopsis striato-punctatus</i> , n. s., E. & S., 1857	38

	Page.
<i>Cardium subquadratum</i> , n. s., E. & S., 1857	38-39
<i>Cardium rarum</i> , n. s., E. & S., 1857	39
<i>Arca sulcatina</i> , n. s., E. & S., 1857	39
<i>Leda fibrosa</i> , n. s., E. & S., 1857	39-40
<i>Mytilus meekii</i> , n. s., E. & S., 1857	40
<i>Ostrea subtrigonalis</i> , n. s., E. & S., 1857	40
<i>Gasteropoda</i> .	
<i>Pleurofoma minor</i> , n. s., E. & S., 1857	40-41
<i>Fusus haydeni</i> , n. s., E. & S., 1857 ..	41
<i>Fusus nebrascensis</i> , n. s., E. & S., 1857	41
<i>Turritella multilineata</i> , n. s., E. & S., 1857	41-42
<i>Rostellaria americana</i> , n. s., E. & S., 1857	42
<i>Cephalopoda</i> .	
<i>Ammonites galpini</i> , n. s., E. & S., 1857	42

4.

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TERTIARY SPECIES.

	Page.
<i>Lucina fibrosa</i> , n. s., Shumard, 1858	120
<i>Corbula evansana</i> , n. s., Shumard, 1858	120-121
<i>Leda willamettenensis</i> , n. s., Shumard, 1858	121
<i>Leda oregona</i> , n. s., Shumard, 1858	121-122
<i>Pecten coosensis</i> , n. s., Shumard, 1858	122
<i>Venus securis</i> , n. s., Shumard, 1858	122-123

CRETACEOUS SPECIES.

<i>Inoceramus vancouverensis</i> , n. s., Shumard, 1858	123-124
<i>Pinna calamitoides</i> , n. s., Shumard, 1858	124
<i>Pyrgula glabra</i> , n. s., Shumard, 1858	125

5.

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	Page.
<i>Productus popei</i> , n. s., Shumard, 1858	290
<i>P. mexicanus</i> , n. s., Shumard, 1858	291
<i>P. pileolus</i> , n. s., Shumard, 1858	291
<i>P. semireticulatus</i> , Mart., sp	292
<i>Autosteges guadalupensis</i> , n. s., Shumard, 1858	292
<i>Spirifer mexicanus</i> , n. s., Shumard, 1858	292-293
<i>Spirifer sulcifera</i> , n. s., Shumard, 1858 ..	293
<i>Spiriferina billingsii</i> , n. s., Shumard, 1858	294
<i>Retzia papillata</i> , n. s., Shumard, 1858	294-295
<i>Retzia</i> ? <i>meekana</i> , n. s., Shumard, 1858	295
<i>Rhynchonella guadalupar</i> , n. s., Shumard, 1858	295-296
<i>Camarophoria</i> ? <i>biculatea</i> , n. s., Shumard, 1858	296
<i>Phillipsia peranulata</i> , n. s., Shumard, 1858	296-297
<i>Fusulina elongata</i> , n. s., Shumard, 1858	297

SHUMARD, B. F. Notice of Fossils from the Permian Strata of Texas and New Mexico, obtained by the United States Expedition, under Capt. John Pope, for boring Artesian Wells along the 32d Paral., with Descriptions of New Species from these Strata and the Coal Measures of that region. <Trans. Saint Louis Acad. Sci., vol. i, pp. 387-403, 1859, pl. xi. Saint Louis, 1856-1860.

PERMIAN FOSSILS.

Page.

Zoophyta.

<i>Chaetetes mackrothii</i> , Geinitz	387
<i>Chaetetes</i> , sp. (?) Shumard, 1859	388
<i>Campophyllum</i> (?) <i>texanum</i> , n. s., Shumard, 1859	388
<i>Polycælia</i> ?, Shumard, 1859	388

Crustacea.

<i>Phillipsia perannulata</i> , Shumard, pl. xi, fig. 10	388
<i>Bairdia</i> , sp. (?), Shumard, 1859	388

Bryozoa.

<i>Fenestella popeana</i> , Prout	388
<i>Acanthocladia americana</i> , Swallow	388

Foraminifera.

<i>Fusulina elongata</i> , Shumard	388-389
--	---------

Brachiopoda.

<i>Productus</i>	389
<i>P. calhounianus</i> , Swallow	389
<i>P. mexicanus</i> , Shumard	389
<i>P. pileolus</i> , Shumard	389
<i>P. semirecticulatus</i> var. <i>antiquatus</i> , Martin	389
<i>P. popei</i> , Shumard, pl. xi, figs. 8a, b	389
<i>P. norwoodii</i> , Swallow	389-390
<i>P. leplayi</i> (?), Verneuil	390
<i>Strophalosia</i>	390
<i>S. (Aulosteges) guadalupensis</i> , Shumard, pl. xi, figs. 5a, b	390
<i>Chonetes</i>	390
<i>C. permiana</i> , n. s., Shumard, 1859	390
<i>C. Flemingi</i> (?), Norwood & Pratten	390
<i>Spirifer</i>	390
<i>S. mexicanus</i> , Shumard, pl. xi, figs. 4a, b	390-391
<i>S. guadalupensis</i> , n. s., Shumard, 1859	391
<i>S. sulciferus</i> , Shumard, pl. xi, figs. 3a-c	391
<i>S. cameratus</i> , Morton	391
<i>Spiriferina</i>	391
<i>S. billingsii</i> , Shumard	391-392
<i>Terebratula</i>	392
<i>T. elongata</i> , Schlottheim	392
<i>T. perinflata</i> , n. s., Shumard, 1859	392
<i>Rhynchonella</i>	392
<i>R. guadalupæ</i> , Shumard, pl. xi, figs. 6a-c	392
<i>R. indentata</i> , n. s., Shumard, 1859	393
<i>R. texana</i> , n. s., Shumard, 1859	393
<i>Rhynchonella</i> , sp. (?), Shumard, 1859	393-394
<i>Camerothoria</i> , Swallow, pl. xi, figs. 1a-e	394
<i>C. bisulcata</i> , Shumard, pl. xi, figs. 2a-d	394
<i>C. swalloriana</i> , n. s., Shumard, 1859, pl. xi, fig. 1 a-e	394-395
<i>C. schlottheimi</i> (?), Buch	395
<i>Retzia</i>	395
<i>R. papillata</i> , Shumard, pl. xi, figs. 9 a-c	395
<i>R. meekiana</i> , Shumard, pl. xi, figs. 7 a, b	395
<i>Streptorhynchus</i>	395
<i>S. (Orthisina) shumardianus</i> , Swallow	395
<i>Orthisina</i>	395
<i>Orthisina</i> sp. (?), Shumard, 1859	395
<i>Crania</i>	395
<i>C. permiana</i> , n. s., Shumard, 1859	395-396

	Page.
<i>Acephala</i> .	
<i>Myalina</i>	396
<i>M. squamosa</i> , Sow	396
<i>M. recta</i> , Shumard	396
<i>Pleurophorus</i>	396
<i>P. occidentalis</i> , M. & H	396
<i>Monotis</i>	396
<i>M. speluncaria</i> , Schlotheim	396-397
<i>Monotis</i> , sp. (?), Shumard, 1859	397
<i>Axinus</i>	397
<i>A. securis</i> , n. s., Shumard, 1859	397
<i>Edmondia</i>	398
<i>E. suborbiculata</i> , Swallow	398
<i>Cardiomorpha</i>	398
<i>Cardiomorpha</i> , sp. (?), Shumard, 1859	398
<i>Gasteropoda</i> .	
<i>Turbo</i>	398
<i>T. guadalupensis</i> , n. s., Shumard, 1859	398
<i>T. helicinus</i> (?), Schlotheim	398
<i>Straparollus</i>	399
<i>Straparollus</i> , sp. (?), Shumard, 1859	399
<i>Bellerophon</i>	399
<i>Bellerophon</i> , sp. (?), Shumard, 1859	399
<i>Pleurotomaria</i>	399
<i>P. halliana</i> , n. s., Shumard, 1859	399
<i>Chemnitzia</i>	399
<i>C. swallovia</i> , n. s., Shumard, 1859	399
<i>Cephalopoda</i> .	
<i>Nautilus</i> , sp. (?), Shumard, 1859	399-400
<i>Orthoceros</i> , sp. (?), Shumard, 1859	400

CARBONIFEROUS FOSSILS.

<i>Gasteropoda</i> .	
<i>Turbo texanus</i> , n. s., Shumard, 1859	400
<i>Straparollus cornudanus</i> *, n. s., Shumard, 1859	400-401
<i>Pleurotomaria proutiana</i> , n. s., Shumard, 1859	401
<i>Pleurotomaria obtusispira</i> , n. s., Shumard, 1859	401
<i>Pleurotomaria perornata</i> , n. s., Shumard, 1859	401-402
<i>Macrocheilus texanus</i> , n. s., Shumard, 1859	402

7.

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XIII.—THE WRITINGS OF ROBERT P. WHITFIELD.

1.

WHITFIELD, R. P. Descriptions of New Fossils. <Rep. of a reconnaissance of the Black Hills of Dakota, by William Ludlow, pp. 103-104, pl. i. Washington, 1875.

	Page.
<i>Obolus</i>	103
<i>O. pectenoides</i> , n. s., Whitfield, 1875, pl. —, figs. 1-3	103
<i>Lingulepis primaformis</i> ? pl. —, fig. 4	103
<i>Terebratula</i>	103
<i>T. helena</i> , n. s., Whitfield, 1875, pl. —, figs. 5-10	103-104

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	Page.
<i>Orepicephalus</i> , Owen	141
<i>O. (Loganellus) montanensis</i> , n. s., Whitfield, 1876, pl. i, figs. 1, 2	141
<i>Arionellus</i> , Barrande	141
<i>A. tripunctatus</i> , n. s., Whitfield, 1876, pl. i, figs. 3-5	141-142
<i>Gryphaea</i> , Lam	142
<i>G. planiconvexa</i> , n. s., Whitfield, 1876, pl. ii, figs. 9, 10	142
<i>Gervillia</i> , DeFrance	142
<i>G. sparsalirata</i> , n. s., Whitfield, 1876, pl. ii, fig. 8	142
<i>Myalina</i> , De Koninck	143
<i>M. ? (Gervillea) perplana</i> , n. s., Whitfield, 1876, pl. i, fig. 8	143
<i>Pinna</i> , Linn	143
<i>P. ludlowi</i> , n. s., Whitfield, 1876, pl. i, figs. 6, 7	143
<i>Tapes</i> , Mühlf.	143
<i>T. montanensis</i> , n. s., Whitfield, 1876, pl. ii, figs. 1, 2	143-144
<i>Maetra</i> , Linn	144
<i>M. maia</i> , n. s., Whitfield, 1876, pl. ii, fig. 5	144
<i>Sanguinolaria</i> , Lam	144
<i>S. oblata</i> , n. s., Whitfield, 1876, pl. ii, figs. 3, 4	144
<i>Thracia</i> , Leach	144
<i>T. (Corimya) grinnelli</i> , n. s., Whitfield, 1876, pl. ii, figs. 6, 7	144-145
<i>Vanikoropsis</i> , Meek	145
<i>V. toumeyana</i> , M. & H., sp., 1856, pl. ii, figs. 11-13	145

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FOSSILS FROM THE PRIMORDIAL ROCKS.

	Page.
<i>Plantæ.</i>	
<i>Palæochorda</i>	7
<i>P. prima</i> , n. s., Whitfield, 1877, pl. i, fig. 2	7

	Page.
<i>Palæophycus</i> , Hall.....	7
<i>P. occidentalis</i> , n. s., Whitfield, 1877, pl. i, fig. 3.....	7-8
Molluscoida.	
<i>Brachiopoda.</i>	
<i>Lingulepis cuneolus</i> , n. s., Whitfield, 1877, pl. ii, figs. 5-6.....	8-9
<i>Lingulepis perattenuatus</i> , n. s., Whitfield, 1877, pl. ii, figs. 7-9.....	9
Articulata.	
<i>Trilobita.</i>	
<i>Calymenidæ.</i>	
<i>Crepicephalus</i> , Owen, (? <i>Loganellus</i> , Devine.).....	10
<i>C. (Loganellus) centralis</i> , n. s., Whitfield, 1877, pl. ii, figs. 21-24.....	10-11
<i>C. (Loganellus) planus</i> , n. s., Whitfield, 1877, pl. ii, fig. 20.....	11
	.
	FOSSILS FROM THE JURASSIC ROCKS.
Radiata.	
<i>Echinodermata.</i>	
<i>Asteroidea.</i>	
<i>Asterias</i> , Linnæus.....	15
<i>A. ? dubium</i> , n. s., Whitfield, 1877, pl. iii, fig. 3.....	15
<i>Pectenidæ.</i>	
<i>Pecten</i> , Brug.....	16
<i>P. newberryi</i> , n. s., Whitfield, 1877, pl. iv, figs. 12-15.....	16-17
<i>Pseudomonotis (Eumicrotis) orbiculata</i> , n. s., Whitfield, 1877, pl. iii, figs. 17-19.....	17
<i>Mytilidæ.</i>	
<i>Mytilus</i> , Linn.....	18
<i>M. whitei</i> , n. s., Whitfield, 1877, pl. v, figs. 9-12.....	18
<i>Trapezium</i> , Humph. (= <i>Cypricardia</i> , Lam.).....	18
<i>T. bellefourchensis</i> , n. s., Whitfield, 1877, pl. v, figs. 1-4.....	18-19
<i>T. subequalis</i> , n. s., Whitfield, 1877, pl. v, figs. 5-8.....	19-20
<i>Pleuromya</i> , Agassiz (family uncertain).....	20
<i>P. newtoni</i> , n. s., Whitfield, 1877, pl. v, figs. 19-20.....	20-21
<i>Tancredia corbuliformis</i> , n. s., Whitfield, 1877, pl. vi, figs. 5-8.....	21-22
<i>Tancredia bulbosa</i> , n. s., Whitfield, 1877, pl. vi, figs. 1-3.....	22
<i>Tancredia postica</i> , n. s., Whitfield, 1877, pl. vi, fig. 14.....	22-23
<i>Veneridæ.</i>	
<i>Dosinia</i> , Scopoli.....	23
<i>D. jurassica</i> , n. s., Whitfield, 1877, pl. v, figs. 21-24.....	23-24
<i>Psammobiidæ.</i>	
<i>Psammobia</i> , Lam.....	24
<i>P. ? prematura</i> , n. s., Whitfield, 1877, pl. v, fig. 31.....	24
<i>Neæra</i> , Gray.....	24
<i>N. longirostra</i> , n. s., Whitfield, 1877, pl. v, fig. 35.....	24-25
<i>Gastrochenidæ.</i>	
<i>Saxicava</i> , Bellevue.....	25
<i>S. jurassica</i> , n. s., Whitfield, 1877, pl. v, figs. 25-30.....	25-26
	FOSSILS OF THE CRETACEOUS.
Mollusca.	
<i>Lamellibranchiata.</i>	
<i>Pteridæ.</i> , Meek.	
<i>Pteria</i> , Scop.....	29
<i>P. (Pseudopteria) sublevis</i> , n. s., Whitfield, 1877, pl. vii, fig. 6.....	29-31
<i>Inoceramus perplexus</i> , n. s., Whitfield, 1877, pl. viii, fig. 3, and pl. x, figs. 4, 5.....	31
<i>Endocostea</i> , n. g., Whitfield, 1877.....	31-32
<i>E. typica</i> , n. s., Whitfield, 1877, pl. ix, figs. 1-7.....	32-33
<i>Nuculanidæ.</i>	
<i>Nuculana</i>	33
<i>N. subequilatera</i> , n. s., Whitfield, 1877, pl. xi, figs. 3, 4.....	33
<i>Crassatellidæ.</i>	
<i>Crassatella</i> , Lam.....	34
<i>C. subquadrata</i> , n. s., Whitfield, 1877, pl. xi, fig. 12.....	34
<i>Cyprinidæ.</i>	
<i>Sphæriola</i>	34
<i>S. transversa</i> , n. s., Whitfield, 1877, pl. x, figs. 14-16.....	34-35

	Page.
<i>Zellinidae.</i>	
<i>Leiopistha</i> , Meek	35
Subgenus <i>Cymella</i> , Meek	35
<i>Leiopistha (Cymella) meeki</i> , n. s., Whitfield, 1877, pl. xi, figs. 27, 28	35-36
<i>Anatinidae.</i>	
<i>Thracia</i> , Leach	36
<i>T. subgracilis</i> , n. s., Whitfield, 1877, pl. xi, figs. 29-30	36
<i>Gasteropoda.</i>	
<i>Fusus cheyennensis</i> , n. s., Whitfield, 1877, pl. xii, fig. 9	37
<i>Aporrhais meeki</i> , n. s., Whitfield, 1877, pl. xii, fig. 5	37
<i>Aporrhais (Goniocheila) castorensis</i> , n. s., Whitfield, 1877, pl. xii, fig. 1	38
<i>Akera</i> , O. F. Muller	38
<i>A. glans-oryza</i> , n. s., Whitfield, 1877, pl. xii, fig. 25	38-39
<i>Cephalopoda.</i>	
<i>Helicoceras</i> , D'Orb	39
<i>H. stvensoni</i> , n. s., Whitfield, 1877, pl. xiv, figs. 4-7	39-40
<i>Heteroceras</i> , D'Orb	40
<i>H. newtoni</i> , n. s., Whitfield, 1877, pl. xv, figs. 1-4	40-41
<i>Ancylloceras</i> , D'Orb	42
<i>A. jenneyi</i> , n. s., Whitfield, 1877, pl. xvi, figs. 6-8	42-43
<i>A. tricostatus</i> , n. s., Whitfield, 1877, pl. xv, figs. 7-8	43-44
<i>Ptyhoceras meekanum</i> , n. s., Whitfield, 1877, pl. xvi, figs. 1-2	44-45
<i>Ptyhoceras crassum</i> , n. s., Whitfield, 1877, pl. xvi, figs. 3-5	45-46
List of fossils described in the report of the Paleontology of the Black Hills	46-49

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FOSSILS FROM THE PRIMORDIAL ROCKS.

	Page.
<i>Plantæ.</i>	
<i>Palæochorda</i>	331
<i>P. prima</i> , Whitfield, 1877, pl. i, fig. 2	331-332
<i>Palæophycus</i> , Hall	332
<i>P. occidentalis</i> , Whitfield, 1877, pl. i, fig. 3	332
<i>Palæophycus</i> , sp.? Whitfield, 1880, pl. i, fig. 1	333
<i>Incertæsedes.</i>	
<i>Arenicolites</i> , sp.? Whitfield, 1880, pl. ii, fig. 25	333-334
<i>Brachiopoda.</i>	
<i>Lingulidæ.</i>	
<i>Lingulepis</i> , Hall	335
<i>L. pinnaformis</i> , Owen, pl. ii, figs. 1-4	335
<i>L. cuneolus</i> , Whitfield, 1877, pl. ii, figs. 5-6	336
<i>L. perattenuatus</i> , Whitfield, 1877, pl. ii, figs. 7-9	337
<i>L. dakotensis</i> , M. & H., pl. ii, figs. 10-11	337-338
<i>Obolidae.</i>	
<i>Obolus</i> , Eichwald	
<i>O. ? pectenoides</i> , Whitfield, 1875, pl. ii, figs. 18-19	338-339
<i>Obolella</i> , Billings	339
<i>O. polita</i> , Hall, 1860, pl. ii, figs. 12, 13	339-340
<i>O. nana</i> , M. & H., 1861, pl. ii, figs. 14-17	340-341
<i>Articulata.</i>	
<i>Trilobita.</i>	
<i>Oalymenidae.</i>	
<i>Orepticcephalus</i> , Owen (? <i>Loganellus</i> , Devine)	341
<i>O. centralis</i> , Whitfield, 1877, pl. ii, figs. 21-24	341-343
<i>O. planus</i> , Whitfield, 1877, pl. ii, fig. 20	343-344

FOSSILS FROM THE JURASSIC ROCKS.

<i>Radiata.</i>	
<i>Echinodermata.</i>	
<i>Asteroidæ.</i>	
<i>Asterias</i> , Linn	344
<i>A. ? dubium</i> , Whitfield, 1877, pl. iii, fig. 3	344-345

	Page.
<i>Crinoidea.</i>	
<i>Pentacrinidae.</i>	
<i>Pentacrinites</i> , Miller	345
<i>P. asteriscus</i> , M. & H., 1858, pl. 3, figs. 1-2.....	345
<i>Brachiopoda.</i>	
<i>Lingulida.</i>	
<i>Lingula</i> , Brug.	346
<i>L. brevisrostris</i> , M. & H., 1858, pl. iii, figs. 4-5.....	346-347
<i>Rhynchonellidae.</i>	
<i>Rhynchonella</i> , Fischer	347
<i>R. myrina</i> , pl. iii, figs. 6-7.....	347
<i>Lamellibranchiata.</i>	
<i>Ostreidae.</i>	
<i>Ostrea</i> , Linn	348
<i>O. strigilecula</i> , White, pl. iii, figs. 8-12.....	348-349
<i>Gryphæa</i> , Lam.	349
<i>G. calceola</i> var. <i>nebrascensis</i> , M. & H., 1861, pl. iii, figs. 13-16	349-350
<i>Pectenidae.</i>	
<i>Pecten</i> , Bruguières.....	350
<i>P. neuberryi</i> , Whitfield, 1877, pl. iv, figs. 12-15.....	350-351
<i>Camptonectes</i> , Agassiz	351
<i>C. bellistriatus</i> , Meek, 1860, pl. iv, figs. 6-11	351-353
<i>C. extenuatus</i> , M. & H., 1860, pl. iv, figs. 4, 5	353-354
<i>Aviculidae.</i>	
<i>Pseudomonotis</i> , Bronn.....	354
<i>P. (Eumicrotis) curta</i> , Hall, 1852, pl. iii, figs. 20-25.....	354-356
<i>P. (Eumicrotis) orbiculata</i> , Whitfield, 1877, pl. iii, figs. 17-19.....	356-357
<i>Avicula</i> , Lam.	357
Subgenus <i>Oxytoma</i> , Meek.....	357
<i>A. (Oxytoma) mucronata</i> , M. & H., pl. iv, figs. 1, 2.....	357-358
<i>Gervillia</i> , DeFrance	358
<i>G. recta</i> , Meek, pl. iv, fig. 3.....	358-359
<i>Arcidae.</i>	
<i>Grammatodon</i> , M. & H.....	359
<i>G. inornatus</i> , M. & H., 1858, pl. v, figs. 16-18.....	359-360
<i>Mytilidae.</i>	
<i>Mytilus</i> , Linn	360
<i>M. whitei</i> , Whitfield, 1877, pl. v, figs. 9-12.....	360-361
<i>Volzella</i> , Scopoli.....	361
<i>V. (modiola) formosa</i> , M. & H., 1861, pl. v, fig. 15.....	361-362
<i>V. pertenuis</i> , M. & H., 1858, pl. v, figs. 13, 14	362-363
<i>Crassatellidae.</i>	
<i>Astarte</i> , Sowerby.....	363
<i>A. ? fragilis</i> , M. & H., 1860, pl. v, figs. 32, 33	363-364
<i>Trapezium</i> , Hnmph. (= <i>Cypricardia</i> , Lam.)	364
<i>T. bellefourchensis</i> , Whitfield, 1877, pl. v, figs. 1-4	364-365
<i>T. subequalis</i> , Whitfield, 1877, pl. v, figs. 5-8	365-366
<i>Pleuromya</i> , Agassiz (family uncertain)	367
<i>P. newtoni</i> , Whitfield, 1877, pl. v, figs. 19, 20	367-368
<i>Tancrediidae.</i>	
<i>Tancredia</i> , Lycett (= <i>Hettangia</i> , Terquem)	368
<i>T. ? inornata</i> , M. & H., 1860, pl. vi, figs. 9-13	368-369
<i>T. corbuliformis</i> , Whitfield, 1877, pl. vi, figs. 5-8	370
<i>T. bulbosa</i> , Whitfield, 1877, pl. vi, figs. 1-3	370-371
<i>T. postica</i> , Whitfield, 1877, pl. vi, fig. 14.....	371-372
<i>T. warrenana</i> , M. & H., 1860, pl. vi, fig. 4	372
<i>Veneridae.</i>	
<i>Dosinia</i> , Scopoli	373
<i>D. jurassica</i> , Whitfield, 1877, pl. v, figs. 21-24.....	373
<i>Psammobiidae.</i>	
<i>Psammobia</i> , Lam.	374
<i>P. ? prematura</i> , Whitfield, 1877, pl. v, fig. 31	374
<i>Anatinidae.</i>	
<i>Thracia</i> , Leach	375
<i>T. ? sublevis</i> , M. & H., 1860, pl. v, fig. 34	375

	Page.
<i>Neera</i> , Gray.....	376
<i>N. longirostra</i> , Whitfield, 1877, pl. v, fig. 25.....	376
<i>Gastrochenidae</i> .	
<i>Sazicava</i> , Belle[v]ue.....	376
<i>S. jurassica</i> , Whitfield, 1877, pl. v, figs. 25-30.....	376-377
<i>Cephalopoda</i> .	
<i>Tetrabranchiata</i> .	
<i>Ammonitidae</i> .	
<i>Ammonites</i> , Bruguière.....	378
<i>A. cordiformis</i> , M. & H., 1858, pl. vi, figs. 20-24.....	378-380
<i>A. cordiformis</i> var. <i>distans</i> , Whitfield, 1880, pl. vi, fig. 25.....	380-381
<i>Dibranchiata</i> .	
<i>Belemnitidae</i> .	
<i>Belemnites</i> , Agricola.....	381
<i>B. densus</i> , M. & H., 1858, pl. vi, figs. 15-19.....	381-382
FOSSILS FROM THE CRETACEOUS ROCKS.	
<i>Lamellibranchiata</i> .	
<i>Monomyaria</i> .	
<i>Pectinidae</i> .	
<i>Syncyclonema</i> , Meek.....	383
<i>S. rigida</i> , H. & M., pl. vii, fig. 1.....	383-384
<i>Heteromyaria</i> .	
<i>Aviculidae</i> .	
<i>Pteria</i> , Scopoli.....	384
<i>P. linguiformis</i> , E. & S., sp., pl. vii, figs. 2, 3.....	384-385
<i>P. (Oxytoma) nebrascana</i> , E. & S., pl. vii, fig. 4.....	385-386
<i>P. (Pseudopteria) fibrosa</i> , M. & H., sp., 1856, pl. vii, fig. 5.....	386
<i>P. (Pseudopteria) sublevis</i> , Whitfield, 1877, pl. vii, fig. 6.....	387
<i>Inoceramus</i> , Sowerby.....	389
<i>I. problematicus</i> ? Schlot., pl. vii, fig. 11.....	389-390
<i>I. fragilis</i> , H. & M., pl. ix, fig. 10.....	390-391
<i>I. altus</i> , Meek, 1871, pl. ix, fig. 11.....	391
<i>I. perplezus</i> , Whitfield, 1877, pl. viii, fig. 3, and pl. x, figs. 4, 5.....	392
<i>I. sublevis</i> , H. & M., pl. x, figs. 1-3.....	393
<i>I. sagensis</i> , Owen, 1852, pl. vii, fig. 12, and pl. viii, fig. 2.....	393-395
<i>I. simpsoni</i> , Meek, 1860, pl. viii, fig. 1.....	395-396
<i>I. vanuxemi</i> , M. & H., 1860, pl. vii, figs. 8, 9, and pl. viii, figs. 4, 5.....	396-398
<i>I. vanuxemi</i> var. ? Whitfield, 1880, pl. vii, fig. 10.....	398
<i>I. barabini</i> , Morton, 1834, pl. vii, fig. 7, and pl. ix, fig. 8.....	398-400
<i>I. tenuilineatus</i> , H. & M., pl. ix, figs. 12, 13.....	400, 402
<i>Endocostea</i> , Whitfield, 1877.....	402-403
<i>E. typica</i> , Whitfield, 1877, pl. ix, figs. 1-7.....	403-404
<i>E. sulcata</i> , Roemer, sp., pl. x, fig. 6.....	404-405
<i>Integropallia</i> .	
<i>Arcidae</i> .	
Subgenus <i>Idonearea</i> , Conrad.....	405
<i>Idonearca shumardi</i> , M. & H., pl. xi, figs. 8-11.....	405-406
<i>Nucula</i> , Lam.	406
<i>N. planimarginata</i> , M. & H., 1856, pl. xi, figs. 5, 6.....	406-407
<i>Nuculana</i> , Link.	407
<i>N. bisulcata</i> , M. & H., 1861, pl. xi, fig. 7.....	407-408
<i>N. subequilatera</i> , Whitfield, 1877, pl. xi, figs. 3, 4.....	408
<i>Yoldia</i> , Möller.....	409
<i>Y. evansi</i> , M. & H., 1866, pl. xi, figs. 1, 2.....	409
<i>Lucinidae</i> .	
<i>Lucina</i> , Bruguière.....	409
<i>L. occidentalis</i> , Morton, pl. xi, figs. 19-21.....	409-410
<i>L. ventricosa</i> , H. & M., pl. xi, figs. 14-16.....	410-411
<i>L. (Diplodonta?) subundata</i> , H. & M., pl. xi, figs. 17, 18.....	411-412
<i>Crassatellidae</i> .	
<i>Crassatella</i> , Lam.	412
<i>C. subquadrata</i> , Whitfield, 1877, pl. xi, fig. 12.....	412-413
<i>Astarte</i> , Sowerby.....	413
<i>A. evansi</i> , H. & M., pl. xi, fig. 13.....	413

Veniellidae.	Page.
<i>Veniella</i> , Stoliczka	414
<i>V. humilis</i> , M. & H., 1860, pl. x, figs. 7-13	414
<i>Sphæriola</i>	415
<i>S. transversa</i> , Whitfield, 1877, pl. x, figs. 14-16	415
<i>Sinuopallia</i> .	
<i>Veneridae</i> .	
<i>Dosinia</i> , Scopoli	416
<i>D. missouriana</i> ? Morton, pl. xi, figs. 25, 26	416-417
<i>Thetis</i> , Linn	417
<i>T. circularis</i> , M. & H., 1856, pl. xi, figs. 21-24	417
Family ?	
<i>Leiopistha</i> , Meek	418
Subgenus <i>Cymella</i> , Meek	418
<i>L. (Cymella) meeki</i> , Whitfield, 1877, pl. xi, figs. 27, 28	418-419
<i>Anatinidae</i> .	
<i>Thracia</i> , Leach	419
<i>T. subgracilis</i> , Whitfield, 1877, pl. xi, figs. 29, 30	419-420
<i>Næra</i> , Gray	420
<i>N. moreauensis</i> , M. & H., pl. xi, fig. 31	420
<i>Gasteropoda</i> .	
<i>Siphonostomata</i> .	
<i>Fasciolariidae</i> .	
<i>Fasciolaria</i> , Lam.	421
<i>F. (Cryptorhytis) fusiformis</i> , H. & M., pl. xii, fig. 12	421-422
<i>F. (Cryptorhytis) contorta</i> , M. & H., pl. xii, fig. 10	422-423
<i>F. (Piestoecheilus) culbertsoni</i> , M. & H., pl. xii, fig. 11	423-424
<i>Fusus</i> , Lam.	424
<i>F. shumardi</i> , H. & M., pl. xii, figs. 7, 8	424
<i>F. cheyennensis</i> , Whitfield, 1877, pl. xii, fig. 9	424-425
<i>Aporrhaidae</i> .	
<i>Aporrhais</i> , Dillwyn	425
<i>A. newberryi</i> , Meek, pl. xii, fig. 4	425-426
<i>A. meeki</i> , Whitfield, 1877, pl. xii, fig. 5	426
<i>A. (Goniocheila) castorensis</i> , Whitfield, 1877, pl. xii, fig. 1	427
<i>Anchura</i> , Conrad	428
<i>A. ? sublevis</i> , M. & H., pl. xii, fig. 6	428
<i>A. (Drepanocheilus) nebrascensis</i> , E. & S., pl. xii, figs. 2, 3	429
<i>Holostomata</i> .	
<i>Naticidae</i> .	
<i>Lunatia</i> , Gray	430
<i>L. concinna</i> , H. & M., pl. xii, fig. 13	430
<i>Vanikora</i> , Quoy and Gaimard	430
<i>V. ambigua</i> , M. & H., pl. xii, fig. 14	430-431
<i>Amuroopsis</i> , Morch	431
<i>A. paludinaformis</i> , H. & M., pl. xii, fig. 16	431-432
<i>Trochidae</i> .	
<i>Margarita</i> , Leach	432
<i>M. nebrascensis</i> , M. & H., pl. xii, fig. 15	432
<i>Pulmonifera</i> ?	
<i>Siphonariidae</i> ?	
<i>Anisomyon</i> , M. & H.	433
<i>A. alveolus</i> , M. & H., pl. xii, fig. 20	433-434
<i>A. subovatus</i> , M. & H., pl. xii, fig. 19	434-435
<i>A. patelliformis</i> , M. & H., pl. xii, figs. 17, 18	435
<i>A. borealis</i> , Morton, 1842, pl. xii, figs. 21-23	436
<i>Tectibranchiata</i> .	
<i>Bullidae</i> .	
<i>Haminea</i> , Leach	437
<i>H. subcylindrica</i> , M. & H., pl. xii, fig. 24	437
<i>Akera</i> , O. F. Muller	437
<i>A. glauco-oryza</i> , Whitfield, 1877, pl. xii, fig. 25	437-438
<i>Prosopoecephala</i> .	
<i>Solenosconcheae</i> .	
<i>Dentaliidae</i> .	
<i>Dentalium</i> , Linn.	438
<i>D. gracile</i> , H. & M., pl. xii, fig. 20	438-439

	Page.
<i>Cephalopoda.</i>	
<i>Tetrabranchiata.</i>	
<i>Nautilidæ.</i>	
<i>Nautilus</i> , Breynius.	
<i>N. dekayi</i> var. <i>montanaensis</i> , Meek, pl. xvi, figs. 10, 11	439-440
<i>Ammonitidæ.</i>	
<i>Prionocyclus</i> , Meek	440
<i>P. wyomingensis</i> , Meek, 1870, pl. xiv, figs. 1-3	440-441
<i>Scaphitidæ.</i>	
<i>Scaphites</i> , Parkinson	441
<i>S. nodosus</i> , Owen, 1852, pl. xiii, fig. 12	441-443
<i>S. nodosus</i> var. <i>brevis</i> , Meek, pl. xiii, figs. 8, 9	443
<i>S. nodosus</i> var. <i>quadrangularis</i> , Meek, pl. xiii, figs. 10, 11	443-444
<i>S. warreni</i> , M. & H., pl. xiii, figs. 1-4	444-446
<i>S. wyomingensis</i> , M. & H., pl. xiii, figs. 5-7	446-447
<i>Helicoceras</i> , D'Orb.	447
<i>H. stvensoni</i> , Whitfield, 1877, pl. xiv, figs. 5-8	447-449
<i>Heteroceras</i> , D'Orb.	449
<i>H. newtoni</i> , Whitfield, 1877, pl. xv, figs. 1-4	449-451
<i>H. ? nebrascense</i> , M. & H., pl. xv, fig. 6, and pl. xiv, fig. 9	451-452
<i>Ancylloceras</i> , D'Orb.	452
<i>A. jenneyi</i> , Whitfield, 1877, pl. xvi, figs. 7-9	452-454
<i>A. tricostratus</i> , Whitfield, 1877, pl. xv, figs. 7, 8	454-455
<i>Ptychoceras</i> , D'Orb.	455-457
<i>P. meekianum</i> , Whitfield, 1877, pl. xvi, figs. 1, 2	457-458
<i>P. crassum</i> , Whitfield, 1877, pl. xvi, figs. 3-5	459
Synopsis of species from the Black Hills, noticed in other works, not described in this report	460-464
List of fossils described in this report	465-468

5.

WHITFIELD, R. P. Brachiopoda and Lamellibranchiata of the Raritan Clays and Green sand Marls of New Jersey. < Monographs of the United States Geological Survey, Vol. ix, pp. i-xx and 1-264, pls. i-xxxv. Washington, 1885.

CONTENTS.

	Page.
Letter of transmittal from Prof. George H. Cook	ix
Sketch of the Geology of Cretaceous and Tertiary formations of New Jersey	ix
Letter of transmittal from Prof. Robert P. Whitfield	xv
Preliminary remarks	xvii
<i>Brachiopoda</i>	3
Section I.— <i>Brachiopoda</i> of the Marl Beds	5
<i>Lamellibranchiata</i>	17
Section II.— <i>Lamellibranchiata</i> from the Raritan Clays	22
Section III.— <i>Lamellibranchiata</i> from the Lower Marl Beds	29
Section IV.— <i>Lamellibranchiata</i> from the Middle Marl Beds	194
Section V.— <i>Lamellibranchiata</i> from the base of the Upper Marls	205
Section VI.— <i>Lamellibranchiata</i> from the Eocene Marls	222
Section VII.— <i>Unionidæ</i> from the Camden Clays	243
Section VIII.—Classified list of the species	253

BRACHIOPODA.

Section I.—*Brachiopoda* from the several Marl Beds of the State.

Brachiopoda.

Terebratulidæ.

<i>Terebratula</i> , Lhwyd	6
<i>T. harlani</i> , Morton, pl. i, figs. 15-23	6-9
<i>Terebratulina atlantica</i> , Morton, pl. i, figs. 10-13	9-11
<i>Terebratulina floridana</i> , Morton	11-12
<i>Terebratulina lachryma</i> , Morton, pl. i, fig. 14	12
<i>Terebratella</i> , D'Orb.	12
<i>T. plicata</i> , Say, 1829, pl. i, figs. 5-9	12-14
<i>T. vanuxemi</i> , Lyell & Forbes, 1845, pl. i, figs. 1-4	14-15

LAMELLIBRANCHIATA.

Page.

Section II.—Lamellibranchiate Shells from the Plastic Clay.

Astartidae.

<i>Astarte</i> , Sowerby.....	23
<i>A. veta</i> , Conrad, pl. ii, fig. 1.....	23-24

Cyprinidae.

<i>Ambonicardia</i> , n. g., Whitfield, 1885.....	24-25
<i>A. cookii</i> , n. s., Whitfield, 1885, pl. ii, figs. 11-14.....	25
<i>Corbicula</i> , Megerle.....	26
<i>C. ? emacerata</i> , n. s., Whitfield, 1885, pl. ii, figs. 5, 6.....	26
<i>C. annosa</i> , Conrad, pl. ii, figs. 2-4.....	26-27
<i>Gnathodon</i>	27
<i>G. ? tenuidens</i> , n. s., Whitfield, 1885, pl. ii, figs. 7-10.....	27-28

Section III.—Lamellibranchiata from the Lower Marl Beds.

*Integripalliata.**Asiphonida.**Monomyaria.**Ostreidae.*

<i>Ostrea</i> , Linn.....	29
<i>O. denticulifera</i> , Conrad, pl. iii, figs. 8, 9.....	29
<i>O. crenulimarginata</i> , Gabb, pl. iii, figs. 10, 11.....	30
<i>O. panda</i> , Morton.....	30
<i>O. plumosa</i> , Morton, pl. iii, figs. 12, 13.....	31-32
<i>O. subpatulata</i> , L. & Sow., 1845, pl. iii, fig. 14.....	32-33
<i>O. tecticosta</i> , Gabb, pl. iii, figs. 1, 2.....	33-34
<i>O. larva</i> , Lamarek, pl. iii, figs. 3, 7.....	34-36
<i>Gryphæa</i> , Lam.....	36
<i>G. vesicularis</i> , Lam. ? (1860), pl. iii, figs. 15, 16; pl. iv, figs. 1-3; and pl. v.....	36-39
<i>Exogyra</i> , Say.....	39
<i>E. costata</i> , Say, pl. vi, figs. 1, 2.....	39-41

Anomiidae.

<i>Anomia</i> , Linn.....	42
<i>A. argentaria</i> , Morton, pl. iv, figs. 9-11.....	42
<i>A. tellinoides</i> , Morton, pl. iv, figs. 12, 13.....	43
<i>Diploschiza</i> , Conrad, 1866.....	43
<i>D. cretacea</i> , Conrad, pl. iv, figs. 4-8.....	43-44
<i>Paranomia</i> , Conrad, 1860.....	44
<i>P. scabra</i> , Morton, pl. x, fig. 10.....	44
<i>P. lineata</i> , Conrad, pl. ix, fig. 10.....	45
<i>Pecten</i> , Klein.....	45
<i>P. venustus</i> , Mort., pl. vii, figs. 1-4.....	45-46
<i>P. quinquenarius</i> , Conrad, 1854, pl. vii, figs. 13-16.....	47
<i>P. tenuitestus</i> , Gabb, 1861, pl. vii, figs. 5, 6.....	47-48
<i>P. planicostatus</i> , n. s., Whitfield, 1885, pl. viii, figs. 10, 11.....	48-49
<i>P. (Chlamys) cratieulus</i> , Morton, pl. vii, figs. 17, 18.....	49-50
<i>P. (Syncyclonema ?) perlamellosus</i> , pl. vii, fig. 7.....	50-51
<i>Amusium</i> , Klein.....	51
<i>A. simplicum</i> , Conrad, pl. vii, figs. 11, 12.....	51-52
<i>A. conradi</i> , n. s., Whitfield, 1885, pl. vii, figs. 8-10.....	52-53
<i>Camptonectes (Amusium) burlingtonensis</i> , Gabb, pl. viii, figs. 3-9.....	53-55
<i>Camptonectes parvus</i> , n. s., Whitfield, 1885, pl. viii, figs. 1, 2.....	55
<i>Neithea</i> , Drouet.....	50
<i>N. quinquecostata</i> (Sowerby), pl. viii, figs. 12-14.....	56-57

Spondyliidae.

<i>Spondylus</i> , Lam.....	57
<i>S. gregalis</i> , Morton, pl. ix, figs. 11, 12, and pl. x, figs. 1, 2.....	57-58
<i>Dianchora</i> , Sowerby.....	58-59
<i>D. echinata</i> , Morton, pl. x, figs. 3-9.....	59-60
<i>Plicatula</i> , Lam.....	61
<i>P. urticaea</i> , Morton, pl. ix, figs. 1, 2.....	61
<i>Radula</i> , Klein.....	61
<i>R. pelagica</i> , Morton, pl. ix, figs. 3-5.....	61-62
<i>R. acutilineata</i> , Conrad, pl. ix, figs. 6, 7.....	62-63
<i>R. reticulata</i> , Lyell & Forbes, 1845, pl. ix, figs. 8, 9.....	63-64

Heteromyaria.

Page.

Mytilidæ.

<i>Mytilus</i> , Linn.	64
<i>M. obliuivus</i> , n. s., Whitfield, 1885, pl. xvii, fig. 1.	64
<i>Modiola</i> , Lam.	64
<i>M. julia</i> , Lea, 1861, pl. xvii, figs. 6, 7?	64-65
<i>M. burlingtonensis</i> , n. s., Whitfield, 1885, pl. xvii, figs. 8, 9	65-66
<i>Lithodomus</i> , Cuvier.	66
<i>L. affinis</i> , Gabb, 1861, pl. xvii, figs. 2, 3.	66-67
<i>L. ripleyana</i> , Gabb, 1861, pl. xvii, figs. 4, 5.	67-68
<i>Pterida</i> , Meek (= <i>Aviculidæ</i> of Authors)	68
<i>Pteria</i> , Scopoli.	68
<i>P. petrosa</i> , Conrad, pl. xiv, fig. 10.	68-69
<i>P. laripes</i> , Morton, pl. xiv, fig. 9.	69-70
<i>P. navicula</i> , n. s., Whitfield, 1885, pl. xiv, fig. 8.	70-71
<i>Meleagrinella</i> , n. g., Whitfield, 1885.	71-72
<i>M. abrupta</i> , Conrad, pl. xiv, figs. 11-14.	72-73
<i>Gervilliopsis</i> , n. g., Whitfield, 1885.	73
<i>G. ensiformis</i> , Conrad, pl. xv, figs. 8-11, and pl. xvi, fig. 5.	73-74
<i>G. minima</i> , n. s., Whitfield, 1885, pl. xv, fig. 7.	74-75
<i>Inoceramus</i> , Sowerby.	75
<i>I. barabini</i> , Morton? pl. xv, figs. 3, 5.	75-76
<i>I. sagensis</i> , Owen, pl. xiv, fig. 15, and pl. xv, figs. 1, 2.	76-78
<i>I. sagensis</i> var. <i>quadrans</i> , Whitfield, 1885, pl. xiv, fig. 16.	79
<i>I. perovalis</i> , Conrad, pl. xv, fig. 6.	80
<i>I. pro-obliquus</i> , n. s., Whitfield, 1885, pl. xiv, fig. 17.	80-81

Pinnidæ.

<i>Pinna</i> , Linn.	81
<i>P. laqueata</i> , Conrad, pl. xvi, figs. 1, 2.	81-82

Dinmyaria.

Arcidæ.

<i>Area</i> , Linn.	82
<i>A. altirostris</i> , Gabb, 1861, pl. xii, figs. 22, 23.	82-83
<i>Nemodon</i> , Conrad.	83
<i>N. eufaulensis</i> , Gabb, pl. xii, figs. 3-5.	83-84
<i>N. angulatum</i> , Gabb, 1860, pl. xii, figs. 6, 7.	84-85
<i>N. brevifrons</i> , Conrad, pl. xii, figs. 1, 2.	85-86
<i>Nemoarca</i> , Conrad, 1870.	86
<i>N. cretacea</i> , Conrad, 1870, pl. xii, figs. 8-10.	86-87
<i>Breviarca</i> , Conrad.	87
<i>B. saffordi</i> , Gabb, pl. xii, figs. 11, 12.	87-88
<i>Trigonarca</i> , Conrad, 1862.	88
<i>T. cuneiformis</i> , Conrad, pl. xii, figs. 17, 18.	88-89
<i>T. transversa</i> , Gabb, 1861, pl. xii, figs. 13-16.	89-91
<i>Cibola</i> , Browne.	91
<i>C. rostellata</i> , Morton, pl. xi, figs. 34-36.	91-92
<i>C. uniopsis</i> , Conrad, pl. xi, figs. 32, 33.	92-93
<i>C. obesa</i> , n. s., Whitfield, 1885, pl. xi, figs. 30, 31.	93-94
<i>C. multiradiata</i> , Gabb, 1860, pl. xi, figs. 21, 22.	94
<i>Idonearca</i> , Conrad, 1872.	95
<i>I. tippana</i> , Conrad, pl. xii, figs. 19-21.	95-96
<i>I. antrosa</i> , Morton, pl. xiii, figs. 6-11.	96-98
<i>I. vulgaris</i> , Morton, pl. xiii, figs. 1-5.	98-99
<i>Azinea</i> , Poli.	99
<i>A. mortoni</i> , Conrad, pl. xi, figs. 23-25.	99-101
<i>A. alta</i> , n. s., Whitfield, 1885, pl. xi, figs. 26-29.	101

Nuculidæ.

<i>Nucula</i> , Lam.	102
<i>N. percrassa</i> , Conrad, pl. xi, figs. 4-6.	102
<i>N. monmouthensis</i> , n. s., Whitfield, 1885, pl. xi, fig. 1.	102-103
<i>N. slackiana</i> , Gabb, pl. xi, figs. 2, 3.	103-104
<i>N. perequalis</i> , Conrad.	104-105
<i>Nuculana</i> , Link.	105
<i>N. protexta</i> , Gabb, pl. xi, fig. 10.	105-106
<i>N. gabbana</i> , n. s., Whitfield, 1885, pl. xi, figs. 11-13.	106-107
<i>N. longifrons</i> , Conrad, pl. xi, figs. 16, 17.	107-108

	Page.
<i>N. pinnaformis</i> , Gabb, pl. xi, figs. 7, 8	108-109
<i>N. compressifrons</i> , Conrad, pl. xi, fig. 9	109
<i>Perrisonota</i> , Conrad	110
<i>P. protexta</i> , Conrad, pl. xi, figs. 14, 15	110
<i>Nucularia</i> , Conrad	111
<i>N. papyria</i> , Conrad, pl. xi, figs. 18-20	111-112
<i>Trigonidae</i> .	
<i>Trigonia</i> , Brug	112
<i>T. mortoni</i> , n. s., Whitfield, 1885, pl. xiv, figs. 5, 6	112-113
<i>T. eufaulensis</i> , Gabb, pl. xiv, figs. 1-4	113-114
<i>T. cerulea</i> , n. s., Whitfield, 1885, pl. xiv, fig. 7	114-115
<i>Siphonida</i> .	
<i>Integripalliata</i> .	
<i>Crassatellidae</i> .	
<i>Crassatella</i> , Lam.	115-116
<i>C. vadosa</i> , Morton †, pl. xvii, figs. 12-15	116-117
<i>C. cuneata</i> , Gabb, pl. xvii, figs. 18-20	118-119
<i>C. delawarensis</i> , Gabb	119
<i>C. monmouthensis</i> , Gabb, pl. xvii, figs. 21, 22	119-120
<i>C. prora</i> , Conrad, pl. xvii, figs. 10, 11	120-121
<i>C. subplana</i> , Conrad, pl. xviii, figs. 14-16	121-122
<i>C. transversa</i> , Gabb, 1861, pl. xvii, figs. 16, 17	122-123
<i>Scambula</i> , Conrad, 1869	123
<i>S. perplana</i> , Conrad, pl. xviii, figs. 8-10	123-124
<i>Astartidae</i> .	
<i>Gouldia</i> , Ad	124
<i>G. decemaria</i> , Conrad, pl. xviii, fig. 4	124-125
<i>G. conradi</i> , n. s., Whitfield, 1885, pl. xviii, figs. 1-3	125-126
<i>G. declivis</i> , Conrad, pl. xviii, fig. 11	126
<i>G. paralis</i> , Conrad, pl. xviii, figs. 12, 13	126-127
<i>Vetericardia</i> , Conrad, 1872	127
<i>V. octolirata</i> , Gabb	127-128
<i>V. crenulirata</i> , Lea, 1861, pl. xviii, figs. 5-7	128-129
<i>Lucinidae</i> .	
<i>Lucina</i> , Brug.	129
<i>L. cretacea</i> , Conrad, pl. xviii, figs. 23-25	129-130
<i>L. smockana</i> , n. s., Whitfield, 1885, pl. xviii, figs. 21, 22	130-131
<i>Chamidae</i> .	
<i>Diceras</i> , Lam.	131
<i>D. dactyloides</i> , n. s., Whitfield, 1885, pl. xviii, figs. 26, 27	131
<i>Cardiidae</i> .	
<i>Cardium</i> , Linn.	132
<i>C. eufaulensis</i> , Conrad, pl. xx, figs. 17-19	132
<i>C. ripleyanum</i> , Conrad, pl. xx, fig. 14	132-133
<i>C. ripleysense</i> , Conrad	133
<i>Oriocardium</i> , Conrad, 1870	133
<i>Cardium (Oriocardium) dumosum</i> , Conrad, pl. xx, figs. 9-13	133-135
<i>Cardium (Oriocardium) multiradiatum</i> , Gabb, pl. xxi, figs. 1-3	135-136
<i>Protocardium</i> , Beyrich	136
<i>C. (Protocardium) perelongatum</i> , n. s., Whitfield, 1885, pl. xx, figs. 20-22; pl. xxi, figs. 4, 5	136-138
<i>Pachycardium</i> , Conrad, 1870	138
<i>P. burlingtonense</i> , n. s., Whitfield, 1885, pl. xxi, figs. 6, 7	138
<i>Fulvia</i> , Grey, 1847	139
<i>F. tenuis</i> , n. s., Whitfield, 1885, pl. xx, fig. 8	139
<i>Fragum</i> , Bolton	139
<i>F. tenuistriatum</i> , n. s., Whitfield, 1885, pl. xx, figs. 15, 16	139-140
<i>Leipistha</i> , Meek	140
<i>L. protexta</i> , Conrad, pl. xx, figs. 1-3	140-141
<i>L. elegantula</i> , Roemer	141-142
<i>L. inflata</i> , n. s., Whitfield, 1885, pl. xx, figs. 4, 5	142
<i>Oymella</i> , Meek	142
<i>C. meeki</i> , Whitfield, pl. xx, figs. 6, 7	142-143
<i>Cyprinidae</i> .	
<i>Veniella</i> , Stoliczka	144
<i>V. conradi</i> , Morton, pl. xix, figs. 8-10	144-145

	Page.
<i>V. decisa</i> , Morton, pl. xix, figs. 15, 16.....	145-147
<i>V. inflata</i> , Conrad, pl. xix, figs. 4, 5.....	147-148
<i>V. elevata</i> , Conrad, pl. xix, figs. 6, 7.....	148-149
<i>V. trigona</i> , Gabb, 1861, pl. xix, figs. 11-14.....	149-150
<i>V. subovalis</i> , Conrad, pl. xix, figs. 1, 2.....	150-151
<i>V. trapezoidea</i> , Conrad, pl. xix, fig. 3.....	151-152
<i>Sphaeriola</i> , Stoliczka.....	152
<i>S. umbonata</i> , n. s., Whitfield, 1885, pl. xix, figs. 17, 18.....	152
<i>Sinuopalliatæ.</i>	
• <i>Veneridæ.</i>	
<i>Callista</i> , Poli.....	153
<i>C. delawarensis</i> , Gabb, pl. xxii, figs. 8-10.....	153-154
<i>Aphrodina</i> , Conrad, 1868.....	154
<i>A. tippana</i> , Conrad, pl. xxii, figs. 6, 7.....	154-155
<i>Cyprimeria</i> , Conrad, 1864.....	156
<i>C. depressa</i> , Conrad, pl. xxii, figs. 11-13.....	156-157
<i>C. densata</i> , Conrad, pl. xxii, figs. 19-21.....	157-158
<i>C. excavata</i> , Morton, pl. xxii, figs. 16, 17.....	159-160
<i>C. heilprini</i> , n. s., Whitfield, 1885, pl. xxii, figs. 14, 15.....	160
<i>C. spissa</i> , Conrad, pl. xxii, fig. 18.....	160-161
<i>Dosinia</i> , Scopoli.....	161
<i>D. gabbi</i> , n. s., Whitfield, 1885, pl. xxii, figs. 4, 5.....	161-162
<i>D. erecta</i> , n. s., Whitfield, 1885, pl. xviii, figs. 17-20.....	162-163
<i>Tenea</i> , Conrad, 1871.....	163
<i>T. pinguis</i> , Conrad, pl. xxii, figs. 1-3.....	163-164
<i>Tellinidæ.</i>	
<i>Tellimera</i> , Conrad, 1871.....	164
<i>T. eborea</i> , Conrad, pl. xxiii, figs. 12, 13.....	164-165
<i>Linearia</i> , Conrad, 1871.....	165
<i>L. metastrata</i> , Conrad, pl. xxiii, figs. 6-8.....	165-166
<i>L. contracta</i> , n. s., Whitfield, 1885, pl. xxiii, fig. 5.....	167
<i>Eora</i> , Conrad, 1871.....	167
<i>Æ. cretacea</i> , Conrad, pl. xxiii, figs. 16, 17.....	167-168
<i>Aenona</i> , Conrad, 1871.....	168
<i>Æ. eufaulensis</i> , Conrad, pl. xxiii, figs. 2, 3.....	168-169
<i>Æ. papyria</i> , Conrad, pl. xxiii, fig. 4.....	169-170
<i>Coriomya</i> , Agassiz.....	170
<i>C. tennis</i> , n. s., Whitfield, 1885, pl. xxiii, figs. 9-11.....	170-171
<i>Donacinidæ.</i>	
<i>Donax</i> , Linn.....	171
<i>D. fordii</i> , Conrad, pl. xxiii, fig. 1.....	171-172
<i>Macridæ.</i>	
<i>Veleda</i> , Conrad, 1871.....	172
<i>V. lutea</i> , Conrad, pl. xxiii, figs. 18-21.....	172-173
<i>V. tellinoides</i> , n. s., Whitfield, 1885, pl. xxiii, fig. 23.....	173-174
<i>V. transversa</i> , n. s., Whitfield, 1885, pl. xxiii, fig. 22.....	174
<i>Anatinidæ.</i>	
<i>Pholadomya</i> , Sowerby.....	175
<i>P. occidentalis</i> , Morton, pl. xxiv, figs. 1-3.....	175-176
<i>P. roemeri</i> , n. s., Whitfield, 1885, pl. xxiv, fig. 4.....	176-177
<i>Periplomya</i> , Conrad.....	177
<i>P. elliptica</i> , Gabb, 1861, pl. xxiii, figs. 14, 15.....	177-178
<i>Cercomya</i> , Agassiz.....	178
<i>C. peculiaris</i> , Conrad, pl. xxiii, figs. 24, 25.....	178
<i>Corbulidæ.</i>	
<i>Corbula</i> , Bruguière.....	178
<i>C. crassiplica</i> , Gabb, pl. xxiii, fig. 30.....	178-179
<i>C. foulkei</i> , Lea, 1861, pl. xxiii, figs. 27-29.....	180
<i>C. subcompressa</i> , Gabb, pl. xxiii, fig. 26.....	180-181
<i>Saxicavidæ.</i>	
<i>Panopea</i> , Ménard.....	181
<i>P. decisa</i> , Conrad, pl. xxiv, figs. 5-8.....	181-182
<i>Solenidæ.</i>	
<i>Solyma</i> , Conrad, 1871.....	182
<i>S. lineolata</i> , Conrad, pl. xxv, figs. 11-13.....	182-183

	Page.
<i>Leptosolen</i> , Conrad, pl. xxv, figs. 1-2	183-184
<i>Legumen</i> , Conrad, 1858	184
<i>L. planulatum</i> , Conrad, xxv, figs. 3-4	184-185
<i>L. appressum</i> , Conrad, pl. xxv, figs. 6-8	185-186
<i>Siliqua</i> , Muhlfeld	186
<i>S. cretacea</i> , Gabb, pl. xxv, figs. 9, 10	186-187
<i>Pholadidæ</i> .	
<i>Pholas</i> , Linn.	187
<i>P. cithara</i> , Morton, pl. xxv, 14-16	187-188
<i>P. lata</i> , n. s., Whitfield, 1885, pl. xxv, fig. 17	189-190
<i>Martesia</i> , Leach	190
<i>M. (Pholas) cretacea</i> , Gabb, pl. xxv, figs. 20-23	190
<i>Teredidæ</i> .	
<i>Teredo</i> , Linn.	191
<i>T. irregularis</i> , Gabb, pl. xxv, figs. 18, 19	191-192
<i>Gastrochænidæ</i> .	
<i>Olavagella</i> , Lam.	192
<i>O. armata</i> , Morton, pl. xxv, fig. 24	192-193
Section iv.—Lamellibranchiata from the Middle Marl Beds.	
<i>Ostreidæ</i> .	
<i>Gryphæa</i> , Lam.	194
<i>G. vesicularis</i> , Lam., pl. xxvi, figs. 9, 10	194
<i>G. bryani</i> , var. <i>precedens</i> , n. var., Whitfield, 1885, pl. xxvi, figs. 7-8	194-195
<i>Gryphæostrea</i> , Conrad	195
<i>G. vomer</i> , Morton, pl. xxvi, figs. 11-12	195-196
<i>Mytilidæ</i> .	
<i>Modiola</i> , Lam.	197
<i>M. ovata</i> , Gabb, pl. xxvi, figs. 13-14	197
<i>M. (Lithodomus?) inflata</i> , n. s., Whitfield, 1885, pl. xxvi, figs. 1-2	197-198
<i>Pteriidæ</i> , Meek.	
<i>Pinna</i> , Linn.	198
<i>P. rostriformis</i> , Morton, pl. xvi, figs. 3-4	198
<i>Arcidæ</i> .	
<i>Idonearca</i> , Conrad	199
<i>I. mediana</i> , n. s., Whitfield, 1885, pl. xxvi, figs. 5-6	199
<i>I. compressirostra</i> , n. s., Whitfield, 1885, pl. xxvi, figs. 15-16	199-200
<i>Isocardiidæ</i> .	
<i>Isocardia</i> , Lamarck	200
<i>I. conradi</i> , Gabb, pl. xxvi, figs. 3-4	200-201
<i>Teredidæ</i> .	
<i>Teredo</i> , Linnæus	201
<i>T. tibialis</i> , Morton, pl. xxvi, figs. 19-22	201-203
<i>Gastrochænidæ</i> .	
<i>Gastrochæna</i> , Spengl.	203
<i>G. americana</i> , Gabb, pl. xxvi, figs. 17-18	203-204
Section V.—Lamellibranchiata from the lower layers of the Upper Marl Beds of New Jersey.	
<i>Ostreidæ</i> .	
<i>Ostrea</i> , Linnæus	205
<i>O. glandiformis</i> , n. s., Whitfield, 1885, pl. xxvii, figs. 1-5	205-206
<i>Gryphæa</i> , Sow	206
<i>G. bryani</i> , Gabb, 1876, pl. xxvii, figs. 6-9	206-207
<i>Mytilidæ</i> .	
<i>Modiola</i> , Lam.	207
<i>M. johnsoni</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 8, 9	207
<i>Arcidæ</i> .	
<i>Arca</i> , Linn.	208
<i>A. quindecimradiata</i> , Gabb, 1860, pl. xxvii, figs. 10-13	208
<i>Astartidæ</i> .	
<i>Cardita</i> , Brug.	209
<i>O. intermedia</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 14, 15	209
<i>Crassatella</i> , Lamarck	209
<i>O. conradi</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 1-5	209-210
<i>O. delawarensis</i> , Gabb, pl. xxvii, figs. 14, 15	210-211

	Page.
<i>C. littoralis</i> , Conrad, pl. xxviii, figs. 6, 7.....	212-213
<i>C. rhombea</i> , n. s., Whitfield, 1885, pl. xxvii, figs. 16-19	213-214
<i>Cardiidae</i>	
<i>Criocardium</i> , Conrad	214
<i>C. nucleolus</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 10, 11.....	214-215
<i>Cyprinidae</i>	
<i>Veniella</i> , Stoliczka	215
<i>V. rhomboidea</i> , Conrad, pl. xxviii, figs. 12, 13.....	215-216
<i>Petricolidae</i>	
<i>Petricola</i> , Lam.....	216
<i>P. nova-egyptica</i> , n. s., Whitfield, 1885, pl. xxviii, fig. 22.....	216-217
<i>Macluridae</i>	
<i>Veleda</i> , Conrad, 1871	217
<i>V. nasuta</i> , n. s., Whitfield, 1885, pl. xxviii, fig. 23	217
<i>Veneridae</i>	
<i>Caryatis</i> , Roemer	218
<i>C. ? veta</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 16-19	218-219
<i>Saxicavidae</i>	
<i>Panopca</i> , Ménard.....	219
<i>P. elliptica</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 24, 25	219-220
<i>Anatinidae</i>	
<i>Periplomys</i> , Conrad	220
<i>P. truncata</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 20, 21	220-221
Section VI.—Lamellibranchiata from the Eocene marls of New Jersey.	
<i>Ostreidae</i>	
<i>Ostrea</i> , Linnæus	222
<i>O. glauconoides</i> , n. s., Whitfield, 1885, pl. xxix, fig. 2	222-223
<i>O. (Alectrionia?) linguaefelis</i> , n. s., Whitfield, 1885, pl. xxix, fig. 1	223
<i>Oryphæa</i> , Lam.....	
<i>G. vesicularis</i> , Lam., pl. xxix, figs. 7, 8.....	224
<i>Pectenidae</i>	
<i>Pecten</i> , Klein	224
<i>P. kneiskerni</i> , Conrad, pl. xxix, figs. 3-5.....	224-226
<i>P. rigbyi</i> , n. s., Whitfield, 1885, pl. xxix, fig. 6.....	226
<i>Avicula annosa</i> , Conrad, pl. xxix, fig. 9.....	226-227
<i>Nuculidae</i>	
<i>Nucula</i> , Lam.....	227
<i>N. circe</i> , n. s., Whitfield, 1885, pl. xxix, fig. 12	227-228
<i>Nuculana</i> , Mörch	228
<i>N. albaria</i> , Conrad, pl. xxix, figs. 15, 16	228-229
<i>Nucularia</i> , Conrad.....	229
<i>N. secunda</i> , n. s., Whitfield, 1885, pl. xxix, figs. 13, 14.....	229-230
<i>Axinea</i> , Poli	230
<i>A. conradi</i> , n. s., Whitfield, 1885, pl. xxix, figs. 10, 11	230
<i>Astartidae</i>	
<i>Astarte</i> , Sowerby.....	231
<i>A. castanella</i> , n. s., Whitfield, 1885, pl. xxx, figs. 1, 2.....	231
<i>A. planimarginata</i> , n. s., Whitfield, 1885, pl. xxx, figs. 3, 4	232
<i>Cardita</i> , Brug.....	232
<i>C. perantiqua</i> , Conrad, pl. xxx, figs. 8-10.....	232-233
<i>C. brittoni</i> , n. s., Whitfield, 1885, pl. xxx, figs. 11, 12.....	233-234
<i>Crassatella</i> , Lam.....	234
<i>C. alta</i> , Conrad, pl. xxix, fig. 17	234-235
<i>C. obliquata</i> , n. s., Whitfield, 1885, pl. xxix, fig. 18, and pl. 30, figs. 13, 14.....	235-236
<i>Cardiidae</i>	
<i>Protocardium</i> , Beyr.....	236
<i>P. curtum</i> , Conrad, 1870, pl. xxx, figs. 5-7	236-237
<i>Veneridae</i>	
<i>Caryatis</i> , Roemer	237
<i>C. ovalis</i> , n. s., Whitfield, 1885, pl. xxx, figs. 15, 16.....	237-238
<i>Macluridae</i>	
<i>Veleda</i> , Conrad, 1871	238
<i>V. equilatera</i> , n. s., Whitfield, 1885, pl. xxx, fig. 17	238-239

	Page
<i>Corbulidæ.</i>	
<i>Corbula</i> , Brug.	239
<i>O. (Necarra) nasutoidea</i> , n. s., Whitfield, 1885, pl. xxx, figs. 18, 19.	239-240
<i>Necarra</i> , Grey.	240
<i>N. æquivalvis</i> , n. s., Whitfield, 1885, pl. xxx, figs. 20, 21.	240-241
<i>Pholadidæ.</i>	
<i>Parapholas</i> , Conrad, 1848.	241
<i>P. kneiskerni</i> , n. s., Whitfield, 1885, pl. xxx, figs. 22-24.	241-242
<i>Terididæ.</i>	
<i>Teredo</i> , Linn.	242
<i>T. emacerata</i> , n. s., Whitfield, 1885, pl. xxx, fig. 25.	242
Section VII.—Unionidæ, from the clays at Fish House, Camden County.	
<i>Unionidæ.</i>	
<i>Unio</i> , Retzius.	244
<i>U. nasutoidea</i> , Lea, 1868, pl. xxxiv, figs. 4, 5.	244-245
<i>U. radiatoides</i> , Lea, 1868, pl. xxxiv, figs. 1-3.	245-246
<i>U. subrotundoides</i> , Lea, 1868, pl. xxxii, fig. 5.	246-247
<i>U. cariosoides</i> , Lea, 1868, pl. xxxii, fig. 3.	247
<i>U. humerosoides</i> , Lea, 1868, pl. xxxi, fig. 4.	248
<i>U. roanokoides</i> , Lea, 1868, pl. xxxi, fig. 3, and pl. xxxiii, figs. 1, 2, and pl. xxxiv, fig. 7.	248-249
<i>U. ligamentinoides</i> , Lea, 1868, pl. xxxi, fig. 1, and pl. xxxii, fig. 4, and pl. xxxiv, fig. 8.	249
<i>U. alatoides</i> , Lea, 1868, pl. xxxiii, figs. 3, 4, and pl. xxxiv, fig. 6.	249-250
<i>U. præanodontoidea</i> , n. s., Whitfield, 1885, pl. xxxi, fig. 2.	250
<i>U. rectoides</i> , n. s., Whitfield, 1885, pl. xxxii, figs. 1, 2.	250-251
<i>Anodonta</i> , Cuvier.	251
<i>A. grandoides</i> , Lea, 1868, pl. xxxv, figs. 2, 3.	251-252
<i>A. corpulentoides</i> , Lea, 1868, pl. xxxv, fig. 1.	252
Section VIII. Appendix.	
Classified list of the species described in this volume.	253-264

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.

	Page.
<i>Atrypa lingulata</i> , n. s., Nicollet, 1843.....	167
<i>Ostrea congesta</i> , Conrad	169

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.

	Page.
<i>Fenestella trituberculata</i> , n. s., Prout, 1858.....	228-229
<i>Fenestella popeana</i> , n. s., Prout, 1858	229-230
<i>Fenestella corticata</i> , n. s., Prout, 1858	230
<i>Fenestella intermedia</i> , n. s., Prout, 1858	231
<i>Fenestella variabilis</i> , n. s., Prout, 1858	231-232
<i>Fenestella shumardii</i> , n. s., Prout, 1858	232
<i>Fenestella norwoodiana</i> , n. s., Prout, 1858	233
<i>Fenestella subretiformis</i> , n. s., Prout, 1858	233-234
<i>Eschara</i> ? <i>concentrica</i> , n. s., Prout, 1858	234
<i>Eschara</i> ? <i>tuberculata</i> , n. s., Prout, 1858	234-235

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.

	Page.
<i>Polypora mexicana</i> , n. s., Prout, 1858, pl. xvi, figs. 2 a, b	270-271

THE WRITINGS OF BENJAMIN F. SHUMARD.

SHUMARD, B. F. Paleontology. <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*.

FOSSILS OF THE COAL MEASURES.

	Page.
<i>Brachiopoda.</i>	
<i>Productus splendens</i> , Norwood & Pratt	518
<i>Productus villiersi</i> , D'Orbigny	518
<i>Productus nebrascensis</i> , Owen, D. D	518
<i>Productus æquicostatus</i> , Shumard	518
<i>Productus semireticulatus</i> , Mart., sp.	518
<i>Chonetes smithii</i> , Norwood & Pratt	518
<i>Terebratula ? subtilita</i> , Hall	518
<i>Spirifer plano-convexa</i> , Shumard	518
<i>Spirifer meusebachianus</i> , Roemer, F	518-519
<i>Spirifer kentuckensis</i> , Shumard	519
<i>Rhynchonella</i> — ?	519
<i>Atrypa</i> — ?	519
<i>Orthosina umbraculum</i> ? Buch, sp	519
<i>Acephala.</i>	
<i>Myalina subquadrata</i> , Shumard	519
<i>Mytilus engelmanni</i> , n. s., Shumard, 1857	519
<i>Arca</i> — ?	519
<i>Pecten occidentalis</i> , Shumard	519
<i>Avicula</i> — ?	519

FOSSILS OF THE CRETACEOUS FORMATION.

<i>Ammonites peracultus</i> ? H. & M.	520
<i>Scaphites mandenensis</i> , Morton, sp	520
<i>Scaphites nicolleti</i> , Morton, sp	520
<i>Rostellaria nebrascensis</i> , Evans & Shumard	520
<i>Ostrea congesta</i> , Conrad	520
<i>Inoceramus crispus</i> , Mantell	520
<i>Inoceramus barabini</i> , Morton	520
<i>Inoceramus sagensis</i> ? Owen, D. D	520
<i>Inoceramus fragilis</i> , H. & M	520
<i>Inoceramus ten[us]ilineatus</i> , Hall & Meek	520
<i>Arca shumardi</i> , M. & H.	520
Vertebral scales and fin bones of fishes	520

INDEX OF GENERA AND SPECIES.

[The page numbers in heavy type indicate references to the original descriptions.]

A.	Page.		Page.
Abra? formosa.....	48	Actæon intercalaris.....	94
Acambona.....	119	melanellus.....	221
pinna.....	129	pygmaeus.....	221
Acanthocardium.....	99	(Solidula) attenuata.....	18
Acanthocladia americana.....	19, 257	striatus.....	221
Acanthotelson.....	36 , 46, 53, 61, 179	subellipticus.....	14 , 101
eveni.....	53 , 61, 179	woosteri.....	143
inæqualis.....	36 , 46	Actæonella.....	29, 210
stimpsoni.....	36 , 46, 61, 179	syriaca.....	210
Acanthotelsonidae.....	36	Actæonema striata.....	220
Acar.....	98	sulcata.....	220
Acella.....	106, 141, 161	Actæonidae.....	101
haldemani.....	141 , 161	Actæonina.....	29, 86, 143
Acephala.....	225, 232, 255, 258, 274	biplicata.....	48
Acervularia.....	108, 150, 155, 163, 223	minuta.....	86
adjunctiva.....	150 , 163	naticoides.....	48
davidsoni.....	155	prosocheila.....	143
pentagona.....	108, 192	Actæoninae.....	29
Acidaspis.....	57, 79, 186	Actinaria.....	96, 142, 165
ceralepta.....	79	Actinoceramus.....	47, 97
cincinnatiensis.....	79	Actinoceras.....	27
crosotus.....	79	Actinocrinidae.....	53, 81
humata.....	57	Actinocrinites.....	81, 87
parvula.....	186	delicatus.....	81
Acila.....	98	longus.....	81
Acilis.....	74 , 86, 152	penicillus.....	81
robusta.....	86	sculptilis.....	87
? stevensoni.....	152	sculptus.....	81
swallowiana.....	74	Actinocrinus.....	23, 26, 37, 38, 41, 42, 59, 118, 127, 130, 149, 165
Acmæa occidentalis.....	102	(Alloprosallocrinus) eueonus.....	38
papillata.....	102	(Amphoracrinus?) concavus.....	26
parva.....	102	sub t u r b i	
Acmæidae.....	102	natus.....	23
Acæli.....	35	araneolus.....	23
Acrochordiceras.....	110 , 239	asteriscus.....	23
hyatti.....	110 , 239	(Batoerinus) asteriscus.....	42
Acroloxus.....	106, 161	dodecadactylus.....	42
minutus.....	106, 161, 169	pistilliformis.....	41
Acrothele.....	189, 198	pistillus.....	59
? dichotoma.....	189	calyculus var. pardinensis.....	40
matthewi.....	198	concinus.....	42
Acrotreta.....	126, 129, 189	delicatus.....	87
gemma.....	189	dodecadactylus.....	26
pyxidicula.....	126 , 129	evansii.....	249
subsidna.....	126 , 129	nashvillæ var. subtractus.....	118
Actæon.....	94, 101, 143	pistillus.....	37
attenuatus.....	101	(Pradoerinus?) amplus.....	26
concinus.....	13	pyriformis var. rudis.....	26
ellipticus.....	50	quadrispinus.....	118
impressa.....	220		

	Page.		Page.
<i>Ammonites lenticularis</i>	250	<i>Anatina claibornensis</i>	220
<i>leonensis</i>	219	<i>Anatinidae</i>	30, 32, 34, 100, 109, 111, 134, 261, 262, 264, 271
<i>libanensis</i>	210	<i>Anchnra</i>	94, 102, 111, 137, 134, 137, 143, 264
<i>marciiana</i>	255	<i>biangulata</i>	48
<i>moreanensis</i>	250	(<i>Drepanoch[e]ilus</i>) <i>americana</i>	48, 102
<i>mullananus</i>	29	<i>decemlirata</i>	48
? <i>mullananus</i>	107	<i>mudgeana</i>	143
<i>nebrascensis</i>	250	<i>nebrascensis</i>	48, 102, 264
<i>newberryanus</i>	17 , 93	<i>prolabiata</i>	143
<i>novi-mexicana</i>	243	<i>rostrata</i>	48
<i>opalus</i>	250	<i>ruida</i>	143
<i>peracultus</i>	274	? <i>fusiformis</i>	111 , 134
<i>percarinatus</i>	14 , 245	<i>haydeni</i>	143
<i>peruvianus</i>	243	<i>newberryi</i>	94
<i>pickeringi</i>	227	<i>nuptialis</i>	125, 127
<i>placenta</i> , var. <i>intercalaris</i>	21	<i>parva</i>	48, 102
<i>dekayi</i> , var. <i>intereal-</i> <i>aris</i>	135	<i>prolabiata</i>	137
<i>pleurisepta</i>	219	<i>ruida</i>	137
<i>safedensis</i>	209	? <i>sublevis</i>	48, 102, 264
(<i>Scaphites</i> ?) <i>ramosus</i>	17	<i>Ancillaria elongata</i>	222
<i>serrato-carinatus</i>	66	<i>Ancillopsis altile</i>	222
<i>shumardi</i>	243	<i>Ancylidae</i>	106
<i>swallowi</i>	159	<i>Ancylloceras</i>	104, 209, 261, 265
<i>syriacus</i>	208	<i>annulatum</i>	159
<i>texanus</i>	219	? <i>cheyenensis</i>	15
<i>vancouverensis</i>	27	(<i>Hamites</i>) <i>uncus</i>	19
<i>vermillionensis</i>	21	<i>jennyci</i>	261 , 265
<i>vespertinus</i>	255	? <i>nebrascensis</i>	15
<i>Ammonitidae</i>	35, 104, 135, 263, 265	<i>nicolletii</i>	14
<i>Amorphozoa</i>	41	<i>safedensis</i>	209
<i>Ampelita</i>	107	<i>tricostatus</i>	261 , 265
<i>Ampbicœlia</i>	56	? <i>uncum</i>	104
<i>neglecta</i>	56	<i>Ancyloceratidae</i>	104
<i>Amphidiscus armæus</i>	229	<i>Ancylus</i>	112
<i>Amphion</i>	191	<i>undulatus</i>	65 , 112, 166, 170
<i>nevadensis</i>	191	<i>Angulus</i>	100
<i>Amphistegina</i>	120	<i>Animalia</i>	129
<i>Amphora libyca</i>	229	<i>Anisomyon</i>	20 , 102, 112, 134, 143, 264
<i>Amphoracrinus</i>	42, 54, 82	<i>alveolus</i>	21, 102, 264
<i>divergens</i>	54, 82	<i>borealis</i>	21, 102, 134, 264
? <i>spinobranchiata</i>	82	<i>centrale</i>	70 , 134, 143
<i>subturbatus</i>	42	<i>inæquicostatus</i>	48
<i>Amplexus</i>	121, 136, 155, 163, 223	<i>patelliformis</i>	20, 21, 102, 264
<i>coralloides</i> ?	243	<i>sexsulcatus</i>	21, 102, 112
<i>fragilis</i>	121	<i>shumardi</i>	102
<i>yandelli</i>	156	<i>subovatus</i>	21, 102, 264
<i>zaphrentiformis</i>	136 , 160	<i>Anisopoda</i>	46
<i>Ampullaria</i>	197	<i>Anisorhynchus</i>	101
<i>powelli</i>	180, 188 , 197	<i>Anisothyris</i>	101
<i>Ampullina alveata</i>	221	<i>Anisus</i>	34, 106, 108
<i>Amusium</i>	266	<i>Annularia</i>	149
<i>conradi</i>	266	<i>longifolia</i>	149
<i>simplicum</i>	266	<i>Annulata</i>	35
<i>Amussium</i>	35	<i>Anodonta</i>	140, 160, 272
<i>aurarium</i>	35	? <i>angustata</i>	167
<i>propatulum</i>	49	? <i>cattskillensis</i>	167
<i>Anadara</i> ? <i>canalis</i>	50	<i>corpulentoides</i>	272
? <i>congesta</i>	50	<i>decurtata</i>	170
<i>incile</i>	50	<i>grandoides</i>	272
<i>microdonta</i>	50	<i>parallela</i>	140 , 160, 168,
<i>protracta</i>	50	<i>propatoris</i>	139 , 160, 168
<i>trigintinaria</i>	50	<i>Anodontopsis</i>	79, 194
<i>trilineata</i>	50	<i>amygdaleformis</i>	194
<i>Anarthrocanna australis</i>	227		

	Page.		Page.
Anodontopsis ? milleri	66, 79	Arca congesta	50, 215, 216
(Modiolopsis ?) unionoides ..	79	(Cneullæa) cordata	15
unionoides	66	equilateralis	17
Anolax gigantea	222	inornata	18, 180
plicata	222	shumardi	15
Anomalocardia trigintinaria	50	cunens	209
Anomalocerinus	37, 55, 77	declivis	207
incurvus	77	devincta	206
Anomalocystites	77	equilateralis	92
(Atelocystites) bala-		fabiformis	208
oides	69, 77	incile	50
Anomia	93, 95, 97, 158, 160, 211, 213, 219, 266	indurata	207
argentina	266	longa	209
concentrica	22, 95	microdonta	50, 211, 213
gryphorhynchus	74, 160, 168	obispoana	217
miconema	88, 160, 168	orientalis	207
nitida	93	parallela	70
? obliqua	21, 97	protracta	50
(Plæonopsis ?) gryphorhynchus ..	77	quindeccmradiata	270
propatoris	158, 167	rhomboidella	220
rætiformis	111	shumardi	274
subcostata	211, 213, 219	striata	51
subtrigonalis	21, 97	subelongata	218
tellinoides	266	subrotundata	207
anomiidæ	97, 111, 266	sulcatina	256
Anomocare	190	syriaca	207
? parvum	190	trilineata	50, 215, 216
Anomalocardia rhomboidella	220	vancouverensis	17
Anomphalus	40, 87	Arceadæ	28
rotulus	40, 87	Arcestes	110, 146, 163, 239
Anthophyllum cuneiforme	220	? — ?	146, 163
expansum	247	? cirratus	146, 163, 239
Anthracerpes	37, 46, 53	gabbi	110, 239
typus	37, 46	? perplanus	110, 239
Anthracoptera	61, 165	Arcestdiæ	110, 239
? ? fragilis	41, 61	Archæocaris	90
polita	165	vermiformis	89
Anthracopupa ohioensis	167	Archæocidaridæ	43
Anthrapakemon	37, 46, 61, 179	Archæocidaris	23, 44, 72, 127, 131, 136, 150, 151, 163, 196, 245
gracilis	37, 46, 61, 179	— ?	19, 87
Aphrodina	100, 269	eratis	136, 163
tippana	269	dininnii	150, 163
Aploceras	27	gracilis	245
Aporrhaidæ	102, 111, 134, 264	longispinus	245
Aporrhais	102, 264	mucronata	23, 44
biangulata	102	ornatus	131, 245
decemilrata	48	triplex	151
(Goniocheila) castorensis	261, 264	triserrata	72
meeki	261, 264	trudifer	127, 131
newberryi	264	Archæocaris vermiformis	68
parva	21, 48	Archimedes	147, 154, 248
sublævis	21, 48	laxa	154
Aptycha	29	Archimedipora	94
Arachnida	61	— ?	94
Arachnophyllum	223	archimedes	255
Arca	92, 137, 207, 208, 209, 211, 213, 215, 216, 217, 218, 267, 270	Architectonica abotti	48
— ?	206, 274	henrici	221
acclivis	207	ornata	221
altirostris	267	plana	221
bhamdunensis	209	psendogranulata	221
brevifrons	207	Arceidæ	33, 98, 111, 134, 262, 263, 267, 270
canalis	50, 215, 216	Arceinæ	33
carbouaria	20	Arceopagella	70, 100
? coalvillensis	137	? macrodonta	100

	Page.		Page.
Arcopagella mactroides	70 , 100	Astartella gurleyi	144 , 165
Arcopagia	215, 216, 217, 218	newberryi	90
medialis	215 , 216	varica	90
texana	218	astartidae	266, 268, 270, 271
unda	217	Astartila	221 , 225
Arenicolites?	261	?corpulenta	225
Arethusiana	190	cyclas	224 , 225
americana	190	cyprina	224 , 225
Arionellus	28, 186, 259	cytherea	224 , 225
(Crepicephalus) oweni	28	intrepida	221 , 225
pustulatus	186	polita	224 , 225
tripunctatus	259	transversa	224 , 225
Arrhoges	102	Asteroidca	26
Articulata	31, 35, 46, 55, 56, 58, 59, 74, 79, 80, 81, 84, 91, 105, 108, 109, 135, 136, 138, 144, 153, 159, 165, 260, 261	Asterias	260, 261
Asaphiscus	129	dubium	260 , 261
wheeleri	129	Asteridae	24
Asaphus	79, 91, 185, 186, 191, 248	Asteroidea	40, 44, 60, 61, 78, 260, 261
barrandi	232	Astreospongia	58
caribouensis	191	hamiltonensis	41 , 58
?curiosa	191	Astrea fungiformis	247
emoryi	233	?gigas	247
homalonotoides	186	mamillaris	247
(Isotelus) iowensis	250	Astrodapsis	215 , 217
megistos	79	antiselli	216 , 217
vigilans	65 , 91	Astylospongia	56, 192
(Megaspis?) goniocercus	76	?carbonaria	41
romingeri	185	??christiani	56
wisconsensis	185	praemorsa	91
Asiphonida	266	Athyris	24, 43, 72, 85, 89, 92, 94, 109, 148, 178, 193, 196, 235, 245, 273
Astarte	30, 34, 164, 207, 208, 209, 218, 236, 262, 263, 266, 271	angelica	193
arctata	207	claytoni	235
?arenosa	236	crassiscardinalis	116
castanella	271	hirsuta	196
engonata	207	lamellosa	89
evansi	263	parvirostra	24
?fragilis	22 , 34, 262	persinuata	109
gemma	224 , 225	planosulcata	43, 235
gibbosa	51	roissyi	109
gregaria	15	subquadrata?	235
inornata	22 , 34	subtilita	52, 72, 85, 92, 94, 109, 178, 245, 246
lintea	208	vittata	148
lucinoides	209	Atlantidae	121
minutissima	220	Atrypa	58, 62, 94, 108, 148, 193, 247, 248
mortonensis	51	— ?	274
mucronata	208	aspera	58, 62, 94
nebrascensis	51	comis	250
orientalis	207	desquamata	193
packardii	164 , 189	limitaris?	247
parva	220	lingulata	273
pervetus	207	orbicularis	248
planimarginata	271	prisca	247
subcordata	209	reticularis	58, 62, 94, 108, 148, 193
sublineolata	208	Aturia angustatus	50
syriaca	207	orbiculata	49
texana	218	vanuxemi	223
undulosa	208	Ancella	35, 176
vallisnerianus	51	concentrica var.	176
ventricosa	30	erringtoni	35
veta	266	var. linguiformis	35
washitensis	255	hausmanni	51, 52
Astartella	90, 144, 165	Aulacomya	98
— ?	90	Aulophyllum	62
		?richardsoni	62
		Aulopora serpens	192, 247

	Page.		Page.
<i>Anlopora tubaeformis</i>	248	<i>Aviculopecten idahoensis</i>	146, 162
<i>Anlosteges</i>	121	<i>indianensis</i>	41, 61
<i>guadalupensis</i>	256	<i>interlineatus</i>	24, 45, 132, 178
<i>spondyliiformis</i>	120, 121	<i>koninckii</i>	24, 45
<i>Auriculida</i>	112	<i>limaformis</i>	116
<i>Austrella rigida</i>	227	<i>macoyi</i>	32, 132
<i>Avalana subglobosa</i>	14, 29, 102	<i>neglectus</i>	73, 86, 87
<i>Avicula</i>	24, 73, 86, 136, 208, 262	<i>nodocostatus</i>	116
?	224, 274	<i>oblongus</i>	43
<i>abrupta</i>	47	<i>occidaneus</i>	110
<i>annosa</i>	271	<i>occidentalis</i>	45, 73, 132, 178
<i>convexo-plano</i>	47	<i>oweni</i>	24, 43
<i>cretacea</i>	47	<i>paralis</i>	80
<i>curta</i>	49	<i>parvulus</i>	236
? <i>custa</i>	232	<i>pealei</i>	146
? <i>fibrosa</i>	15	? <i>pealei</i>	162
<i>haydeni</i>	13, 47	<i>pellucidus</i>	24, 45
<i>iridescens</i>	47	<i>perocidens</i>	196
<i>laripes</i>	47	<i>pintoensis</i>	196
<i>linguiformis</i>	47	(<i>Pseudomonotis</i> ?) <i>idahoensis</i> ..	71
<i>longa</i>	73, 86	<i>randolphensis</i>	41
(<i>Monotis</i>) <i>tenuicostata</i>	18	<i>sanduskyensis</i>	67
<i>morganensis</i>	86	<i>spinuliferus</i>	64
<i>multangula</i>	50	(<i>Strebloteria</i> ?) <i>hertzeri</i> ..	66, 90
<i>munsteri</i>	49	<i>superstrictus</i>	164
<i>nebrascana</i>	47, 255	<i>utahensis</i>	94, 110
<i>oblonga</i>	24	<i>weberensis</i>	235
(<i>Oxytoma</i>) <i>gastrodes</i>	76	<i>whitei</i>	73
<i>mucronata</i>	262	<i>williamsi</i>	68
<i>parkensis</i>	136	<i>winchelli</i>	89
<i>pedornalis</i>	47	<i>Aviculo-pectininae</i>	32
<i>petrosa</i>	47	<i>Aviculopinna</i>	73
<i>pinnaeformis</i>	51	<i>americana</i>	52, 73, 90
<i>planisulca</i>	47	<i>pinnaeformis</i>	52
(<i>Pseudoptera</i>) <i>propleura</i>	76	<i>Axinea</i>	98, 102, 111, 160, 215, 216
<i>rhytophora</i>	76	<i>barbarensis</i>	215, 216, 217
<i>samariensis</i>	208	<i>subimbricata</i>	98
<i>speluncaria</i>	51	<i>wyomingensis</i>	111
<i>subgibbosa</i>	21, 47	<i>Axinea</i>	217, 267, 271
? <i>sulcata</i>	73	<i>alta</i>	267
<i>triangularis</i>	47	<i>conradi</i>	271
<i>volgensis</i> ?	226	<i>holmesiana</i>	160
<i>Aviculidae</i>	29, 32, 262, 263, 267	<i>mortoni</i>	267
<i>Aviculinae</i>	29, 32	<i>Axininae</i>	34
<i>Aviculopecten</i> ..	24, 32, 43, 45, 61, 73, 80, 89, 90, 94, 110, 116, 119, 127, 132, 146, 162, 164, 178, 196, 235, 236	<i>Axinus</i>	258
?	32	<i>rotundatus</i>	20
<i>affinis</i>	196	(<i>Schizodus</i>) <i>ovatus</i>	19, 20
<i>altus</i>	146, 162	<i>securis</i>	258
<i>amplus</i>	24, 32, 43	<i>Axophyllum</i>	92, 121, 177
<i>burlingtonensis</i>	24, 43	<i>radis</i>	92, 121, 177
<i>carbonarius</i>	87	<i>Azthemis</i>	217
<i>carboniferus</i>	73, 178		
<i>catactus</i>	110		
<i>coreyana</i>	127, 132		
<i>coxanus</i>	24, 45, 73		
<i>crenistriatus</i>	66, 89		
<i>curto-cardinalis</i>	236		
(<i>Emmicrotis</i> ?) <i>augstensis</i> ..	236		
<i>eurekensis</i>	196		
<i>fimbriatus</i>	41		
<i>grandocostus</i>	119		
<i>hagueli</i>	196		
<i>hawni</i>	51		

B.

<i>Baculites</i>	28, 93, 94, 103, 135, 209
?	209
<i>anceps</i> var. <i>obtusus</i>	94, 103
<i>asper</i>	103
<i>baculus</i>	28
<i>chicoensis</i>	93
<i>compressus</i>	14, 103
<i>grandis</i>	14, 103
<i>inornatus</i>	27
<i>occidentalis</i>	27, 93
<i>ovatus</i>	14, 17, 103, 135
<i>syriacus</i>	209

	Page.		Page.
Baculitidae	103, 135	Bellerophon.....	24, 42, 46, 55, 74, 81, 117, 118, 126, 129,
Bailiella.....	198	132, 138, 147, 151, 154, 164, 178,	
Bairdia ?	257	195, 197, 235, 245, 247, 248, 258	
Bakevellia.....	32, 132	allegoricus.....	126 , 129
parva	19 , 20, 32, 132	bilabiatulus	117
Balanus	227	bilobatus	248
estrellanus	217	bowmani	138
Barbatia	98, 143, 158	(Bucania) platystoma	55
barbulata	158	carbonarius	74, 178
coalvillensis	143	combsi	195
(Polynema ?) parallela.....	98	crassus.....	24 , 46, 132, 178
Bariosta	105	cyrtolites	42
Baroda subelliptica.....	143	gibsoni	154
wyomingensis	143	inspeciosus	151
Barrandia	191	interlineatus	51
?	191	leda	195
mecoyi	191	lyra	195
Barycrinus	54 , 83, 84	maera	195
geometricus	83	majusculus	197
hoveyi.....	83	marcouanus	51
var. herculeus.....	54, 83	marconianus	74
magnificus	54 , 83	micromphalus	226
mammatus	83	montfortianus	74
pentagonus	83	neleus	235
spectabilis	64 , 84	newberryi	67 , 81
subtumidus.....	83	nodocarinatus	178
Baraphyllum.....	57, 144	pannus	118
? ? arenarium	58	patulus	81
fungulus	144	pelops	195
Basommatophora.....	135	percarinatus.....	74, 178
Bathymophalus.....	34, 106, 137, 161	perelegans.....	117
Bathyurellus (Asaphiscus) bradleyi.....	76	perplexa.....	195
Bathyrurus	185, 191, 234	propinquus	67 , 81
armatus	186	scriptiferus.....	118
? congeneris.....	191	strictus	223 , 226
? haydeni	76	sublævis	154
longispinus	185	subpapillosus.....	147, 164
pogonipensis.....	234	textilis	197
serratus	76	undulatus	223 , 226
? similimus	191	vinculatus	117
? tuberculatus	191	Bellerophonitidae	39, 132
Batocrinus	42, 54, 81	Bellinurus.....	36, 46
cassedayanus	54 , 81	danae	36 , 46
christyi	81	Beyrichia.....	121, 188, 191, 195
(Eretmocrinus) neglectus	54 , 81	bella	188
remibrachiatus.....	81	cincinnatiensis	187
pyriformis	81, 87	fætoidea	121
quasilus	54 , 81	lithofactor.....	120
trochiscus	54 , 81	var. velata	120
verneuillians	82	petrifactor.....	121
Beaumontia	147, 158	var. velata	121
? solitaria	147 , 158	(Primitia) occidentalis	195
Belemnitella	105	Blastoidea	26, 44, 126
? bulbosa	15 , 105	Brachiopoda	20, 22, 24, 26, 27, 30, 31,
paxillosa	49	33, 41, 43, 44, 45, 55, 56, 57, 58, 59,	
Belemnites.....	31, 35, 95, 111, 176, 263	60, 61, 62, 64, 68, 72, 78, 80, 85, 89,	
densus	19 , 35, 95, 179, 263	90, 91, 92, 94, 96, 98, 108, 109, 110,	
macritatis	176	116, 118, 121, 126, 127, 129, 130, 131,	
nevadensis	111	133, 138, 146, 147, 148, 149, 151, 154,	
pacificus	35	155, 162, 163, 165, 177, 189, 190, 192,	
paxillosa	49	196, 225, 232, 233, 234, 235, 236, 250,	
Belemnitidae.....	31, 35, 105, 111, 263	253, 255, 257, 260, 261, 262, 265, 274	
Belemnocrinus.....	59, 118 , 120	Brachydontes	140, 158, 160
typus	118	Brachyspira.....	159
whitii	40 , 59	Breviarca	98, 267

	Page.		Page.
Breviarca saffordi	267	Callista delawarensis	269
Bryozoa	19, 154, 253, 255, 257, 274	deweyi	28
Bucanella nana	66	(Dosiniopsis) deweyi	100
Bucardinae	34	nebrascensis	100
Buccinidae	103	orbiculata	100
Buccinofusus diegoensis	222	owenana	100
Buccinopsis	219	eufalensis	48
parryi	219	? pellucida	100
Buccinum	205	Calloarea	98
? devinctum	206	Callonema	195
integrum	205	occidentalis	195
? nebrascensis	14	Calobates	101
sowerbii	221	Calophyllum	223
? vinculum	13	Calymene	79, 148
Buchiceras	135	bufo	247
swalovi	135	senaria	79, 148
Bulinnea	106	Calymenidae	260, 261
Bulinus linnaeiformis	16, 221	Calyptraea trochiformis	221
nebrascensis	16	Camæna	106
perversus	221	Camarophoria	43, 196, 257
? teres	15, 221	? bisulcata	256, 257
? verniculus	15, 221	cooperensis	196
Bulinus	106, 161	globulina	52
atavus	139, 161, 169	schlotheimi ?	257
disjunctus	145, 161, 169	subtrigonia	43
floridanus	170	swalloviana	257
longiusculus	106, 161, 169	Camerinidae	31
rhomboides	106, 161, 169	Cameroceras	129
subelongatus	106, 161, 169	Campeloma	107, 112, 162, 166
Bulla	212, 214	macrospira	112, 162, 168
dekayi	220	(Melantho) macrospira	68
jugularis	212, 214	multilineata	107, 162, 169
minor	14	multilineatum	221
occidentalis	14	multistriata	107, 162, 169, 221
petrosa	50, 206	producta	166, 169
subcylindrica	16	vetula	107, 162, 169
volvaria	14	vetulum	221
Bullidae	101, 264	Campophyllum	72, 109, 177
Bursacerinus	26, 59, 118	? texanum	257
confirmatus	118	torquium	72, 177
wachsmuthi	26, 59	Camptonectes	33, 49, 95, 127, 133, 164, 236, 262
Busycon ?	211, 213	(Amusium) burlingtonensis	266
bairdi	16	bellistriata	95
? blakei	211, 213	bellistriatus	33, 49, 133, 230, 262
? oregonensis	50	calvatus	220
Buthus ?? carbonarius	53	extenuatus	33, 49, 180, 236, 262
Bythinella	159	parvus	266
gregaria	70, 159, 170	portenistriatus	236
		platessa	127, 133
C.		platessiformis	164
Cæloenterata	177	stygius	127, 133
Calceocrinus	63, 82, 83, 188	Campopteris remondi	246
barrandii	188	Campylodiscus aneric ?	229
? bradleyi	63, 83	Cancellaria	210
? wachsmuthi	63, 82	petrosa	210
Calceola	99	Caninia	223
Callianassa	153	Cantharis vauhani	49
danai	13	Cantharus	103
oregonensis	227	Cantharus	103
ulrichi	153, 157	(Cantharus) vauhani	103
Callipteris	149	julesburgensis	157
sullivanti	149	Canthyria	105
Callista	28, 100, 269	Caprina	214, 218
(Aphrodina ?) tenuis	100	occidentalis	215, 218

	Page.		Page.
Caprina planata	215, 218	Cardium iowensis	248
Caprinella coralloidea	13	kansasense	70, 99
Caprotina	93	luteum	210, 212
(Requienia ?) bicornis	93	mediale	218
texana	243	modestum	50, 211, 213
Capsa	220	multistriatum	253, 255
texana	220	ovulum	208
Capularia discoidea	220	pauperculum	70, 143
Capulidæ	132	pertense	28
Capulus fragilis	14	(Protocardia) filiosum	218
occidentalis	13, 48	multistriatum	218
Carbonacea	64, 92	salinaense	70
gibbosa	64, 92	texanum	218
Cardiide	34, 99, 111, 268, 271	(Protocardium) perelongatum	268
Cardinia	164, 224	rarum	256
? costata	225	ripleyanum	268
cuneata	224	ripleyense	268
? cuneata	225	sancti-sabæ	47
? exilis	224	scitulum	17
precisa	164	shumardi	21
recta	224, 225	speciosum	16
Cardiola	197	subcurtum	111
? filicostata	197	subquadratum	256
Cardiomorpha	24, 79, 86, 89, 119, 236, 258	syriacum	207
(Cardiopsis ?) parvirostris	119	trite	143
missouriensis	86, 236	Caricella flemingii	221
? obliquata	68, 79	Carinifex	112
radiata	24	binneyi	65
subglobosa	89	tryoni var. concava	65
Cardiopsis	26, 42, 119	(Vorticifex) binneyi	112, 166, 170
radiata	42	tryoni	65, 112, 166, 170
Cardissoides	34	Caryatis	100, 271
Cardita	211, 213, 216, 218, 219, 270, 271	ovalis	271
abbreviata	50	? veta	271
brittoni	271	Caryophyllia	142
carinata	50	egeria	142
eminula	218	johannis	142
intermedia	270	Cassidula	219
littoralis	271	(Lacinia alveata)	219
monilicosta	50	Cassidulus patelliformis	222
occidentalis	50, 216	Cassiope	127, 134
perantiqua	271	whitfieldi	127, 134
planicosta	211, 213, 219	Cassiopella	139, 162
radians	50	turricula	162, 169
rhombica	271	Catenipora escharoides	247
subtenta	50, 206	gracilis	232
subtetra	220	Catillocrinus	54, 59, 83
Cardium	28, 93, 99, 111, 143, 207, 208, 209, 210, 211, 212, 213, 218, 268	bradleyi	54, 83
australe	225	wachsmuthi	59
bellulum	93	Catillus	97
bellum	208	obliquus	221
biseriatum	207, 210	Catopygus patelleformis	222
(Cerastoderma) modestum	50	Cavolinidae	31
choctawense	159	Cellepora tubulata	222
congestum	218	Cemoria crucibuliformis	50
crebricriuatum	207, 209	Centrocrinus	38, 42
(Cricocardium) dumosum	268	Centronella	56
multiradiatum	268	billingsiana	56
speciosum	99	Cephalopoda	20, 21, 22, 25, 27, 28, 31, 33, 35, 38, 39, 40, 42, 44, 46, 55, 59, 63, 65, 67, 68, 74, 79, 80, 81, 84, 87, 91, 93, 94, 95, 103, 109, 110, 111, 117, 121, 126, 129, 132, 135, 138, 144, 146, 149, 154, 159, 162, 165, 179, 191, 195, 198, 226, 236, 250, 256, 258, 261, 262, 265
curtum	111	Cerastoderma	99
elegantulum	47		
eufratensis	268		
ferox	225		
(Hemicardium ?) curtum	28		
hermonense	207		

	Page.		Page.
Ceratiocaris.....	61, 89	Chione (Liophora) latilirata.....	50
(Colpocaris) bradleyi.....	68 , 89	Chiton.....	87
clytroides.....	68 , 90	carbonarius.....	87
sinuatus.....	53 , 61	Chladocrinus.....	33
(Solenocaris) strigata.....	68 , 90	Chlamys.....	97
Ceraurus.....	79, 186, 191, 248	nebrascensis.....	97
?.....	191	Chonetes.....	24, 31, 43, 60, 62, 72, 85, 94, 119, 127, 131,
icarus.....	79	177, 192, 235, 245, 257	
rarus.....	186	deflecta.....	192
pleurescathemus.....	185	filiatriata.....	193
Cercomya.....	269	flemingi?.....	257
peculiaris.....	269	geniculata.....	119
Ceriphasiidae.....	106, 112, 139	glabra.....	52, 72
Cerithidea.....	161, 180	granulifera.....	72, 131, 250
? nebrascensis.....	169, 180	hemispherica.....	192
(Pirencella?) nebrascensis.....	106, 161	illinoisensis.....	60
Cerithiidae.....	106	? iowensis.....	250
Cerithiopsidae.....	102	loganensis.....	235
Cerithiopsis.....	102	macrostriata.....	193
moreauensis.....	102	mesoloba.....	131
Cerithium.....	180, 210	? ? millepunctata.....	64 , 85
bilineatum.....	210	mucronata.....	19 , 20, 31, 52, 193
fremonti.....	221, 231	permiana.....	257
mediale.....	206	planumbona.....	24 , 43
nebrascensis.....	16	platynota.....	127 , 131
nodulosum.....	221, 231	pusilla.....	62
pillingi.....	180	setigera.....	193
tenerum.....	221, 231	smithii.....	85, 274
totium-sanctorum.....	180	variolata.....	232
Chaenocardia.....	86	verneuiana.....	20, 72, 177, 245
ovato.....	86	var. utahensis.....	94
Chaenomya.....	32 , 38, 73, 84, 86	Chonophyllum.....	165
cooperi.....	32	sedaliense.....	165
hybrida.....	38	Cibota.....	267
leavenworthensis.....	32, 73	multiradiata.....	267
minebaha.....	73, 86	obesa.....	267
rhomboidea.....	38 , 84	rostellata.....	267
Chaetetes.....	55, 131, 138, 147, 158, 257	uniopsis.....	267
? ? dimissus.....	147 , 158	Cidaris.....	206
lycoperdon.....	231	hemigranulosus.....	159
mackrothii.....	257	Cinulia.....	29, 101
milleporaceus.....	131	(Avellana) pulchella.....	48
muscatineusis.....	138	naticoides.....	48
petropolitanus.....	55	(Oligoptycha) concinna.....	102
Chamidae.....	180, 268	Cladocora [?] lineata.....	49
Chariocephalus.....	190, 234	Cladocrinus.....	33
? tumifrons.....	190, 234	Cladodus occidentalis.....	20
Chennitzia.....	48, 103, 134, 258	Cladopora.....	155, 192
cerithiiformis.....	103	pulchra.....	192
coroua.....	48	reticulata.....	155
meekiana.....	48	Clasteria.....	227
swallowiana.....	258	australis.....	227
? texana.....	48	Clathropora.....	155
Chenopus.....	207, 209, 210	flabellata.....	231
— ?.....	210	frondosa.....	155
induratus.....	207	Clathropteris.....	246
syriacus.....	208	Clausilia contraria.....	221
turriculoides.....	207	teres.....	221
Chetetes crinita.....	226	vermicula.....	221
gracilis.....	226	Clavagella.....	270
ovata.....	226	armata.....	270
tasmaniensis.....	226	Clavatula?.....	211, 213
Chione.....	100	? californica.....	211 , 213
(Liophora) alveatus.....	50	Clavelites (Peistochilus) scarboroughi.....	49
athleta.....	50	Clavella vicksburgensis.....	222

Page.

Clavifusus altile.....	222
cooperi.....	222
Cleidophorus.....	32
Cleobis.....	223 , 225
gracilis.....	224
grandis.....	223
recta.....	224
Clidophorus.....	79
(Nuculites ?) fabula.....	79
pallasi.....	51
(Pleurophorus) simplus.....	51
solenoides.....	51
Climacograptus.....	129
Clinopistha.....	64 , 80, 86, 178
antiqua.....	66 , 80
radiata.....	178
var. levis.....	64, 86
Clisiophyllum.....	30, 223
gabbi.....	30
Closteriscus.....	102
tenuilineatus.....	102
Clydonites.....	110, 239
lævidorsatus.....	110, 239
Clydonitidæ.....	110 , 239
Clypeaster jonesii.....	222
rogersi.....	222
tumidus.....	222
Cocconeis concentrica.....	229
finnica.....	229
gemmata.....	229
lineata.....	229
oblonga.....	229
prætexta.....	203, 229
punctata.....	229
Cocconema asperum.....	203, 229
cistula.....	229
cymbiforme.....	203
gibbum.....	229
gracile.....	229
lanceolata.....	229
lunula.....	229
Codonites.....	64 , 83, 87
gracilis.....	64 , 83
stelliformis.....	83, 87
Cœlocrinus.....	42, 117
concavus.....	42
subspinosus.....	117
Cœlopleurus infulatus.....	222
Cœlospira concava.....	36
Coleolus.....	195
lævis.....	195
Coleoprion.....	191
minuta.....	191
Colpocaris.....	89
Columna.....	106, 161
teres.....	106, 161, 169
vermicula.....	106, 161, 169
var. contraria.....	106
Columnaria.....	223
? sexradiata.....	49
thomii.....	233
Colus.....	212, 214
arctatus.....	50, 212 , 214
Comarocystites.....	37, 54
shumardi.....	37 , 54

Page.

Comarocystites shumardi var. obconicus.....	37, 54
Combophyllum.....	62
multiradiatum.....	62
Complanaria.....	99
Conactæon.....	29
Conchifera.....	21, 22, 116, 119, 127, 130, 132, 133,
135, 136, 137, 138, 140, 142, 144, 146, 147, 151,	
153, 155, 158, 159, 160, 162, 163, 165, 178, 250	
Concholepas pygmæa.....	221
Conchopeltis.....	185
alternata.....	185
minnesotensis.....	185
Confervites? tenella.....	227
Conifera.....	226
Conocardium.....	38, 80, 92, 117, 130, 194
nevadensis.....	194
obliquum.....	38 , 92
ohioense.....	66 , 80
pulcellum.....	117
trigonale.....	80
Conocephalites.....	186, 234
calciferus.....	186
bartii.....	186
(Pteroccephalus) laticeps.....	234
subcoronatus.....	234
Conocoryphe.....	108, 129, 198, 234
(Bailiella) baileyi.....	198
(Conocephalites) kingii.....	65
elegans.....	198
matthewi.....	198
(Ptychoparia) gallatinensis.....	76
kingii.....	108, 129
walcotti.....	198
Conodictyum.....	40
radiatum.....	40
Conomitra fusoides.....	221
Constellaria.....	155
antheloidea.....	155
Conularia.....	39, 81, 84, 89, 118, 138, 149, 151, 165,
185, 195, 198, 226	
byblis.....	118
crustula.....	151, 165
elegantula.....	67 , 81
inornata.....	226
levigata.....	226
micronema.....	67 , 89
missouriensis.....	84, 149, 198
molaris.....	138
multicostata.....	39
newberryi.....	89
quadrata.....	185
subcarbonaria.....	39 , 84
tenuistriata?.....	226
victa.....	118
whitei.....	39
Coralliochama.....	180
orcutti.....	180
Corbicula.....	99, 105, 112, 137, 140, 160, 166, 266
æquilateralis.....	76
annosa.....	266
angheyi.....	166 , 168
berthoudi.....	166 , 168
cardiniæformis.....	140 , 160
cleburni.....	140 , 160, 168
crassatolliformis.....	70

	Page.		Page.
Corbicula (Cyrena?) securis.....	76	Corbulamella.....	18, 101
cytheriformis.....	105, 160, 169	gregaria.....	18, 101
?emacerrata.....	266	Corbulidæ.....	101, 105, 111, 112, 134, 269, 272
? fracta.....	70	Cordieria moorei.....	221
var. crassiuscula.....	77	Corimya.....	269
(Leptesthes) cardinikeformis.....	169	tenuis.....	269
fracta.....	160, 168	Cornulina arnigera.....	222
macropistha.....	141, 160, 168	Cosceras.....	110, 239
planumbona.....	88, 160, 169	Cosceneis.....	203
subelliptica.....	105, 160	Costella.....	107
subelliptica var.		Crania.....	119, 121, 177, 257
moreauensis.....	105	modesta.....	121, 177
nebrascensis.....	105, 160, 168	permiana.....	257
nucalis.....	70, 99	reposita.....	119
obesa.....	140, 160, 169	sheldoni.....	119
occidentalis.....	105, 160, 168	Craniidæ.....	121
powelli.....	137	Crassatella.....	93, 99, 143, 208, 211, 213, 217, 237, 260
pyriformis.....	168		263, 268, 270, 271
subelliptica.....	168	alta.....	211, 213, 271
? subtrigonalis.....	70, 99	cimarronensis.....	143
umbonella.....	168	collina.....	217
(Veloritina) bannisteri.....	77	conradi.....	270
cytheriformis.....	77	cuneata.....	268
durkeei.....	112, 160, 168	declivis.....	237
inflexa.....	76	delawarensis.....	268, 270
Corbis lamellosa.....	220	evansii.....	13
Corbula.....	17, 95, 101, 105, 111, 112, 134, 137, 143,	monmouthensis.....	268
	160, 207, 208, 210, 211, 213, 218, 219, 269, 272	obliquata.....	271
aleihensis.....	210	(Pachythærns) evansi.....	99
(Anisorhynchus?) engelmanni.....	112	prora.....	268
pyriformis.....	95, 112	shumardi.....	93
congesta.....	207	subplana.....	268
crassatelliformis.....	160	subquadrata.....	260, 263
crassimarginata.....	101	syriaca.....	208
crassiplica.....	269	transversa.....	268
diegoana.....	211, 213	uvasana.....	211, 213
dubiosa.....	145	vadosa.....	268
engelmanni.....	95	Crassatellidæ.....	30, 32, 33, 34, 99, 260, 262, 263, 268
evansana.....	256	Crassatellina.....	70, 99
fonlkei.....	269	oblonga.....	70, 99
? gregaria.....	15	Crenella.....	28, 98
inornata.....	18, 101	concentrica.....	220
mactriiformis.....	15, 161, 168	elegantula.....	28, 98
moreauensis.....	15	granulata cancellata.....	47
nasuta.....	219	Crenipecten.....	196
nematopora.....	76, 134, 143	hallanus.....	196
(Næra) nasutoides.....	272	Crepicephalus.....	234, 250 , 259, 260, 261
occidentalis.....	218	(Bathyrus?) angulatus.....	234
(Pachydon) mactriiformis.....	105	centralis.....	261
perundata.....	105	(Loganellus) anytus.....	231
subtrigonalis.....	105	centralis.....	260
perundata.....	15, 160	granulosus.....	231
(Potamomya?) concentrica.....	22	haguei.....	231
engelmanni.....	22	maculosus.....	231
pyriformis.....	22	montanensis.....	259
pyriformis.....	161	nitidus.....	234
subcompressa.....	269	planus.....	260
sublineolata.....	208	? quadrans.....	231
subtrigonalis.....	15, 160, 168	simulator.....	231
subundifera.....	137	unisulcatus.....	231
syriaca.....	208	planus.....	261
tropidophora.....	77, 160	Crepidula.....	212, 214
undifera.....	77, 161, 168	? ———.....	206
var. subundifera.....	161, 168	prærupta.....	50, 206
ventricosa.....	15	princeps.....	212, 214

	Page.		Page.
Crinoidea.....	26, 33, 37, 40, 41, 42, 43, 44, 45, 55, 118, 121, 127, 133, 255, 262	Cyathocrinus kelloggi.....	118
Crinoidea.....	232	lamellosus.....	117
Criocardium.....	99, 268, 271	multibrachiatus.....	154
nucleolus.....	271	? poterium.....	61
Criptogamia.....	128	quintelobus.....	37 , 60
Crucibulum.....	212, 214	ramosus.....	52
spinosum.....	212 , 214	rigidus.....	118
Crustacea.....	31, 36, 39, 46, 55, 56, 57, 58, 59, 61, 65, 67, 68, 74, 79, 80, 81, 89, 91, 108, 109, 121, 126, 129, 136, 148, 149, 153, 159, 179, 191, 195, 227, 231, 235, 250, 257	saffordi.....	23 , 43
Cruziana.....	126, 128	sangamoneusis.....	23 , 45
linnarssoni.....	126 , 128	scitulus.....	23 , 27
rustica.....	126 , 128	sculptilis.....	27, 42
Crypta praeupta.....	50	stillativus.....	150, 163
Cryptoceras.....	39, 104	subtumidus.....	37
Cryptogramma floridana.....	220	wachsmuthi.....	26 , 60
? penita.....	220	Cyathophycus.....	186
Cryptomya.....	215, 216	reticulatus.....	186
ovalis.....	215 , 216	subsphericus.....	186
Cryptonella.....	193	Cyathophyllidæ.....	62, 108, 109, 121, 223
? circula.....	193	Cyathophyllidæ.....	232
pinouensis.....	193	Cyathophyllum.....	62, 108, 109, 223
Cryptorhynchis.....	103	— ?.....	192
Ctenobranchiata.....	34	articum.....	62
Ctenoides acutilineata.....	47	caliculare.....	217
denticulata.....	47	(Campophyllum ?) nevada dense.....	109
squarrosa.....	47	corinthium.....	247
Cucullæa.....	98, 111, 208, 209, 218	corniculum.....	192
exigua.....	16	davidsoni.....	192
haguei.....	111	hellanthoides.....	247
(Idonearca ?) cordata.....	98	palmeria.....	108
nebrascensis.....	98	profundum.....	248
shumardi.....	98	rugosum.....	192
lintea.....	208	subcæspitosum.....	109
nebrascensis.....	250	turbinateum ?.....	247
ononcheila.....	220	undulatum et multiplicatum.....	247
opiformis.....	209	vesiculosum ?.....	247
paralella.....	208	Cyathopora iowensis.....	247
subrotunda.....	208	Cyclas.....	99, 215, 217
terminalis.....	218	estrellana.....	217
transversa.....	220	formosa.....	15
(Trigonarca ?) obliqua.....	111	fragilis.....	15
? Cucullæarca.....	98	permacra.....	50, 217
Cucullifera.....	222	subellipticus.....	15
Cupellæocrinus.....	38	tetrica.....	215
Cyathaxonia.....	52	Cyclina ? circularis.....	48
Cyathocrinites.....	54, 82, 87	Cyclobranchiata.....	34
fragilis.....	54 , 82	Cyclonema.....	79, 80, 148
? poterium.....	83	bilix.....	79, 148
sculptilis.....	82	crenulata.....	67 , 80
tenuidactylus.....	54 , 82	Cyclopteria.....	246
Cyathocrinus.....	23, 26, 37, 38, 42, 43, 45, 53, 60, 81, 117, 118, 150, 154, 163, 249, 251	moquensis.....	246
— ?.....	19	Cyclora.....	79
angulatus.....	23 , 43	minuta.....	79
arboreus.....	38 , 60	? parvula.....	79
cornutus.....	249 , 251	Cylichna.....	101
? crassus.....	23	dekayi.....	220
enormis.....	37, 60	petrosa.....	50
farleyi.....	40 , 60	scitula.....	21 , 101
granuliferus.....	255	? volvaria.....	101
inflexus.....	52	Cylichnida.....	101
iowensis.....	249 , 251	Cylindrites.....	29
		Cymatopleura ? campylodiscus.....	203
		Cymbella gibba.....	203
		Cymbopora.....	100
		Cymella.....	48, 101, 134, 261, 264, 268

	Page.		Page.
<i>Cymella bella</i>	101	<i>Cyrena securis</i>	143
<i>meekii</i>	268	(<i>Veloritina</i>) <i>durkeei</i>	135
<i>Cymomia lamarekii</i>	222	<i>erecta</i>	137
<i>Cyphaspis</i>	148, 191	<i>Cyrenidae</i>	99, 105, 112, 135
? <i>brevimarginatus</i>	191	<i>Cyrtia</i>	119
<i>christyi</i>	148	<i>curvilineata</i>	119
<i>Cyphosoma texanum</i>	233	<i>Cyrtina</i>	57, 58, 62, 193
<i>Cypricardella</i>	117, 194, 197	<i>billingsi</i>	62
<i>quadrata</i>	117	<i>dalmani</i>	57
<i>Cypricardia</i>	225, 260, 262	<i>dauidsoni</i>	193
<i>acutifrons</i>	226	<i>hamiltonensis</i>	62, 193
<i>arcedes</i>	226	<i>panda</i>	63
(<i>Avicula</i> ?) <i>venetis</i>	226	<i>triquetra</i>	58
<i>imbricata</i>	226	<i>Cyrtoceras</i>	25, 46, 59, 91, 129, 138, 195, 236
<i>occidentalis</i>	232	(<i>Aploceras</i>) <i>curtum</i>	46
<i>prærupta</i>	226	<i>cessator</i>	236
? <i>rigida</i>	117	<i>conicum</i>	247
<i>rugulosa</i>	224	<i>curtum</i>	25, 27
<i>siliqua</i>	226	<i>dardanus</i>	91
<i>simplex</i>	226	<i>dictyum</i>	138
<i>sinuosa</i>	224	? <i>dilatatum</i>	25, 46
<i>Cypricardinia</i>	90, 194	<i>nevadense</i>	195
<i>carbonaria</i>	67, 90	<i>ohioense</i>	67
<i>indenta</i>	194	<i>ohioensis</i>	81
<i>Cypricardites</i>	54, 55, 79, 248	<i>sacculum</i>	59
— ?	55	<i>Cyrtoceratites</i>	81
? <i>carinata</i>	79	<i>Cyrtochiln</i>	103
<i>obliquus</i>	55	<i>Cyrtolites</i>	56, 79, 121, 191, 234
<i>sterlingensis</i>	79	? <i>costatus</i>	79
<i>Cypridæ</i>	121	<i>dyeri</i>	79
<i>Cypridinidæ</i>	121, 136	? <i>gillianus</i>	121
<i>Cyprimeria</i>	92, 93, 111, 269	<i>imbricatus</i>	56
? <i>crassa</i>	93	(<i>Microceras</i>) <i>inornatus</i>	79
<i>densata</i>	269	<i>ornatus</i>	79
<i>depressa</i>	269	<i>sinuatus</i>	191, 234
<i>excavata</i>	269	<i>Cysteophyllum</i>	62, 155, 192, 223
<i>heilprini</i>	269	<i>americanum</i>	192
<i>spissa</i>	269	var. <i>articum</i>	62
<i>subalata</i>	111	<i>vesiculosum</i>	155
? <i>tenuis</i>	92	<i>Cystidea</i>	37
<i>Cyprina</i>	99, 176	<i>Cystoidea</i>	54, 77
<i>arenaria</i>	18, 47	<i>Cystoseirites</i> ?	227
<i>compressa</i>	18	<i>Cythero</i>	74, 79, 121
<i>cerdada</i>	18	<i>cincinnatiensis</i>	68, 79
? <i>dallii</i>	176	<i>nebrascensis</i>	74
<i>humilis</i>	21, 47	<i>simplex</i>	121
<i>laphami</i>	48	<i>Cytherea</i>	207, 211, 213, 216, 218, 219
<i>ovata</i>	18, 99	<i>deweyi</i>	15, 48
var. <i>compressa</i>	99	<i>lamarensis</i>	48, 159
<i>subtumida</i>	18, 48	<i>lenticularis</i>	220
<i>Cyprinidæ</i>	260, 266, 268, 271	<i>leonensis</i>	48, 218
<i>Cypris</i>	136	? (<i>Meretrix</i>) <i>dariena</i> ?	216
— ?	136	<i>missouriana</i>	48, 243
<i>Cyrena</i>	99, 135, 137, 143, 158	<i>nebrascensis</i>	15, 48
<i>arenaria</i>	47	<i>nutalli</i>	219
<i>carletoni</i>	76, 158, 167	<i>orbiculata</i>	13, 48
(<i>Corbicula</i>) <i>cytheriformis</i>	21	<i>oregonensis</i>	50
<i>durkeei</i>	66	<i>ovata</i>	220
<i>dakotensis</i>	99, 167	<i>owenana</i>	16, 48
<i>holmesi</i>	88	<i>parvula</i>	231
<i>inflexa</i>	143	<i>pellucida</i>	16, 48
<i>intermedia</i>	15	<i>syriaca</i>	207
<i>moreanensis</i>	15	<i>tenuis</i>	13, 48
<i>occidentalis</i>	15	<i>texana</i>	48, 218

	Page.		Page.
<i>Cytherea tippana</i>	48	<i>Dicellocyphalus richmondeusis</i>	189
<i>vespertina</i>	50	<i>iola</i>	189
<i>Cytherodon</i>	194	<i>Diceras</i>	268
D.		<i>dactyloides</i>	268
<i>Dalmania</i>	39	<i>Dichocrinus</i>23, 42, 43, 54, 63, 82, 83, 84, 91, 118,	249, 251
<i>danae</i>	39	<i>angustus</i>	118
<i>Dalmanites</i>57, 58, 79, 81, 109, 186, 195		<i>constrictus</i>	23, 43
<i>carleyi</i>	69, 79	<i>connis</i>	23, 42
<i>danae</i>	56	<i>cornigerus</i>	84
<i>intermedius</i>	186	<i>crassitestus</i>	118
<i>meeki</i>	195	<i>expansus</i>	54, 83
(<i>Odontocephalus</i>) <i>negoria</i>	58	<i>ficus</i>	83, 91
<i>ohioensis</i>	67, 81	<i>lineatus</i>	63, 82
<i>tridentiferus</i>	57	<i>ovatus</i>	249, 251
<i>Dawsonella meeki</i>	167	<i>pisum</i>	63, 82
<i>Decapoda</i>	35, 37, 46, 61	(<i>Pterotocrinus</i>) <i>chestorensis</i>	23
<i>Delphinula depressa</i>	221	<i>crassus</i>	23
<i>plana</i>	221	<i>striatus</i>	249, 251
<i>Delthyris</i>	247, 248	<i>Dicraniscus</i>	70
<i>eurteines</i>	247	<i>ortoni</i>	70
<i>expansus</i>	248	<i>Dicranobranchia</i>	132
<i>Deltodus mercuri</i>	246	<i>Dietyonema fenestrata</i>	232
<i>Dendrocrinus</i>55, 77, 188		<i>Dielasma</i>	127, 130, 132
<i>casei</i>	66	? <i>bovidons</i>	127
<i>oswegöensis</i>	55	<i>Dikelocephalus</i>231, 234, 250	
<i>retractilis</i>	188	<i>bilobatus</i>	234
<i>Dendrograptus</i>	187	<i>flabellifer</i>	234
<i>compactus</i>	187	<i>gothicus</i>	234
<i>simplex</i>	187	<i>granulosus</i>	250
<i>tenuiramosus</i>	187	<i>iowensis</i>	249
<i>Dentaliidae</i>	34, 101, 132, 264	<i>miniscænsis</i>	250
<i>Dentalium</i>26, 34, 44, 74, 86, 93, 95, 101, 127, 132,		<i>minnesotensis</i>	250
209, 264		<i>multicinctus</i>	234
<i>annulostriatum</i>	65, 86	<i>pepiuensis</i>	250
<i>canna</i>	127, 132	<i>quadriceps</i>	234
<i>cretaceum</i>	209	<i>washsatchonsis</i>	234
(<i>Ditrupe</i> ?) <i>pusillum</i>	221	<i>Dimyaria</i>98, 105, 133, 267	
<i>fragilis</i>	14	<i>Diodora crucibuliformis</i>	50
<i>gracilis</i>	13, 161, 264	<i>Dione</i>	100
<i>konoosense</i>	93	<i>angustifrons</i>	50
<i>meekianum</i>	74, 86	? <i>brevilineata</i>	50
<i>nanaimoensis</i>	17	<i>decisa</i>	50
<i>pauperulum</i>	21	<i>eufalcensis</i>	48
? <i>subquadratum</i>	22, 34, 95	<i>lamarensis</i>	48
<i>thallus</i>	50	<i>leonensis</i>	48
<i>venustum</i>	26, 43	[?] <i>meekiana</i>	48
<i>Diadora</i>	216	<i>missionriana</i>	48
<i>crucibuliformis</i>	216	<i>nebrascensis</i>	48
<i>Diaea</i>	132, 133, 134, 135	<i>orbiculata</i>	48
<i>Dianchora</i>	266	<i>oregonensis</i>	50
<i>echinata</i>	266	<i>ovata</i>	220
<i>Diastropa</i>	107	<i>owenana</i>	48
<i>Dibranchiata</i>	35, 105, 263	? <i>pellucida</i>	48
<i>Dicellocyphalus</i>	126, 129, 189, 191	[?] <i>ripleyana</i>	48
? <i>angustifrons</i>	189	[?] <i>tenuis</i>	48
<i>bilobatus</i>	189	<i>texana</i>	48
? <i>expansus</i>	190	<i>tippana</i>	48
<i>finalis</i>	191	<i>uniomeris</i>	50
<i>flagricaudus</i>	126, 129	<i>vespertina</i>	50
<i>inexpectans</i>	191	<i>Diphyphyllum</i>108, 155	
<i>marica</i>	189	<i>archiaci</i>	155
<i>nasutus</i>	189	<i>arundinaceum</i>	155
<i>osceola</i>	189	<i>fasciculum</i>	108
? <i>quadriceps</i>	189	<i>simcöense</i>	192

	Page.		Page.
Diphyphyllum stramineum	155	Drepanocheilus	48, 102
Diplodon	105	Dreissena leucopheata	180
Diplograptus	129	Drillia lonsdalii	222
Diploschiza	266	texana	222
cretacea	266	Dynmyaria	132, 135
Discinidae	110	Dysnomys	105
Discina	85, 89, 110, 119, 177, 192, 196	Dystactella	194
?	110, 192	insularis	194
capax	119		
connata	196	E.	
convexa	177	Ecculiomphalus	195
lodensis	192	devoniensis	195
lugubris	49	Echinianthus mortonis	222
manhattanensis	20	Echinodermata	19, 24, 26, 33, 37, 40, 41,
minuta	192	42, 43, 44, 54, 55, 56, 58, 59, 60, 64,	
multilineata	49	66, 68, 72, 77, 81, 84, 91, 94, 96, 118,	
newberryi	196	127, 130, 131, 133, 136, 138, 144, 147,	
nitida	85, 177, 196	148, 149, 150, 151, 154, 158, 163, 165,	
(Orbiculoidea) newberryi	89	196, 206, 209, 210, 236, 255, 260, 261	
? pleurites	89	Echinoidea	23, 42, 43, 44, 54, 60, 96
tenuilineata	20	Echinosphærites ?	232
Discites	39, 104	Echinus	206, 209, 210
tuberculatus	250	bullatus	210
Discostrellaria bouei	220	infulatus	222
Discophycus	186	kerakensis	209
typicalis	186	libanensis	210
Discoplea oregonica	229	syriacus	206
atmosphærica	203	Edmondia	38, 45, 73, 86, 89, 109, 117, 178, 197,
Discoscaphites	104	236, 258	
Discosorus conoideus	232	aspinwallensis	70, 73, 178
Dispothea	205	? calhoumi	19, 20
constricta	205	butlingensis	117
Dithyrocaris	87, 179	? circularis	197
carbonarius	65, 87, 179	? glabra	73
Ditrupea subcoarctata	221	medon	197
Docoglossa	102	myrina	236
Dolabra	56	? nebrascensis	73
? carinata	68	ovata	87
sterlingensis	40, 56	peroblonga	38, 86
Dolatorcrinus ornatus	66	? pinonensis	109
Doliopsis	222	reflexa	73
Dolium petrosuni	206	suborbiculata	258
Donacilla	99	subtruncata	73
Donacinae	269	tapesiformis	89
Donax	269	unioniformis	45
fordii	269	Edriocrinus	57
? protexta	50, 206	pocilliformis	57
Dorycerinus	54, 82	Egeta	99
canaliculatus	82	Egeria inflata	220
quenquelobus var. intermedius	54, 82	plana	229
roemeri	54, 82	Electroma	97
unicornis	82	Endolobus	39, 45
Dosinia	211, 212, 215, 216, 217, 260, 262, 264, 269	Enclimaceras	176, 239
alta	211, 213, 215, 216, 217	(Nautilus) ulrichi	176
erecta	269	Enerinites	253
gabbi	269	Enerinarus	186
gyrata	220	trentonensis	186
jurassica	260, 262	varicostatus	186
longula	215, 216, 217	Endoceras multitubulatum	191
missouriana ?	264	proteiforme	191
montana	217	Endocostea	260, 263
subobliqua	217	sulcata	263
Dosinia ? tenuis	27	typica	260, 263
? Dosiniopsis	100	Endopachys maclurii	220
lenticularis	220	Entalis	101

	Page.
Entalis paupercula.....	101
Entolium.....	35, 73, 86, 89, 178
aviculatum.....	73, 86
shumardianum.....	89
Ensis curtus.....	50
Entomotraca.....	36, 46, 61, 79, 89
Eocidaris.....	72, 83
hallianus.....	52, 72
squamosa.....	63
?squamosus.....	83
Eocystites.....	198
primævus.....	198
Eoscorpis.....	53 , 61
carbonarius.....	61
Ephithemia.....	203
Eretmocrinus.....	41, 54
Eridophyllum.....	155
strictum.....	155
Eriphyla.....	99
gregaria.....	99
Erisocrinus.....	35 , 36, 37, 45, 63, 72, 82, 85, 150, 163
antiquus.....	63 , 82
(Cerioerinus) planus.....	163
inflexus.....	163
conoideus.....	37 , 45
nebrascensis.....	35 , 36
planus.....	150
tuberculatus.....	37 , 45
typus.....	35 , 36, 45, 72, 85, 163
whitei.....	82, 63
tubulata.....	222
Eschara concentrica.....	273
tuberculata.....	273
Ethmophyllum.....	53
whitneyi.....	53
gracilis.....	53
Etonia.....	57
peculiaris.....	57
Eudiscoceras.....	110 , 239
gabbi.....	110
Eucalyptocrinus.....	148
crassus.....	148
Euchilodon.....	237
creno-carinata.....	237
Euconactæon.....	29
Eulina.....	221
aciculata.....	221
chrysalis.....	77
funicula.....	77
?inconspicua.....	77
lugubris.....	221
notata.....	221
peracenta.....	25 , 27
scale.....	221
?subfusiformis.....	255
Enlimella.....	134, 144, 158
funicula.....	134, 144
?chrysalis.....	158
?inconspicua.....	158
Eumicrotis.....	29 , 32, 33, 45, 178, 236
curta.....	32, 33, 49, 236
hawni.....	32, 178
var. ovata.....	32
sinuata.....	45
Eunema.....	25

	Page.
Eunema ? salteri.....	25
Eunotia amphioxys.....	229
argus.....	229
gibba.....	203, 229
gibberula.....	229
granulata.....	229
librile.....	203, 229
subulata.....	229
textricula.....	229
uncinata.....	229
webstermanni.....	229
zebra.....	229
zebrina.....	229
Euomphalidæ.....	132
Euomphalus.....	25, 30, 80, 117, 118, 130, 132, 138, 165
ammon.....	117
decewi.....	80
eurekensis.....	195
laxus.....	130 , 235
nichleranus.....	233
(Omphalotrochus) whitneyi.....	30
(Phanerotinus) laxus.....	195
planodorsatus.....	25
pernodosus.....	132
(Raphistoma?) rotuliformis.....	65
trochiscus.....	65
roberti.....	118
rugosus.....	51, 87, 179
springvalensis.....	138 , 165
(Straparollus) ophirensis.....	235
subrugosus.....	197
utahensis.....	235
subplanus.....	232
umbilicatus.....	25
Eupachycrinus.....	72, 84, 85, 136, 163
boydii.....	64 , 85
fayettensis.....	85
platybasis.....	136 , 163
tuberculatus.....	85
verrucosus.....	72
Enphoberia.....	53 , 61
armigera.....	53 , 61
major.....	53
??.....	61
Euproops.....	61, 179
danae.....	61, 179
colletti.....	179
Euptycha.....	29
Eurydesma.....	225
cordata f.....	224, 225
elliptica.....	224 , 225
gibbosa.....	225
globosa.....	224
sacculus.....	225
Eurypteride.....	61, 187
Enrypteris.....	61, 179
(Anthraconectes) mazonensis.....	53 , 61, 179
Enspira.....	143, 158
coalvillensis.....	143
utahensis.....	158
Entomoceras.....	110 , 239
laubei.....	110
Eutropia haleana.....	48

	Page.		Page.
<i>Fusus cooperi</i>	221, 222	<i>Gastrochæna americana</i>	270
<i>eonybearii</i>	222	<i>Gastrochænide</i>	260, 263, 270
<i>constrictus</i>	13	<i>Gastrocæli</i>	35
<i>contortus</i>	14	<i>Gastrosiphites</i>	35
<i>corpulentus</i>	206	<i>Genota</i>	103
<i>culbertsoni</i>	14	<i>Geophila</i>	135
<i>dakotaensis</i>	14, 49	<i>Gervillia</i>	28, 98, 119, 151, 158, 164, 259, 262
<i>ellerii</i>	209	(<i>Avicula</i>) <i>sulcata</i>	51
? <i>flexuocostatus</i>	14, 49	<i>gregaria</i>	159
<i>galpinianus</i>	14	<i>longa</i>	51
<i>geniculus</i>	206	<i>montanaensis</i>	164
<i>haleanus</i>	49	<i>mudgeana</i>	151, 158
<i>haydeni</i>	256	<i>parva</i>	51
<i>intertextus</i>	18, 49	<i>recta</i>	28, 98, 262
<i>mullicaensis</i>	49	<i>sparsalirata</i>	259
<i>migrans</i>	50	<i>strigosa</i>	119
<i>newberryi</i>	14, 49	<i>subtortuosa</i>	16, 98
<i>nebrascensis</i>	256	<i>Gervilliopsis</i>	267
(<i>Neptunea</i> ?) <i>gabbi</i>	76, 144	<i>ensiformis</i>	267
<i>utahensis</i>	76	<i>minima</i>	267
<i>oregonensis</i>	50	<i>Gilbertsocrinus</i>	42, 63, 82
(<i>Pleurotoma</i> ?) <i>scarboroughi</i>	18	<i>bursa</i>	42
<i>remondii</i>	221	<i>calcaratus</i>	42
<i>scarboroughi</i>	49	(<i>Goniasteroidocrinus</i>) <i>fiscel-</i>	
? (<i>Serrifusus</i>) <i>dakotensis</i>	103	<i>lus</i>	42
<i>shumardi</i>	264	(<i>Goniasteroidocrinus</i>) <i>ob-</i>	
(<i>Strepsidura</i>) <i>marnochi</i>	237	<i>ovatus</i>	63, 82
<i>subturritus</i>	17	(<i>Goniasteroidocrinus</i>) <i>to-</i>	
<i>subturrites</i>	49	<i>nui radiatus</i>	63, 82
<i>taitii</i>	222	<i>Glæonema paradoxum</i>	229
<i>tenuilineata</i>	13	<i>Glauconome</i>	72, 127, 131
<i>tenuilineatus</i>	49	<i>nereldis</i>	127, 131
? <i>utabensis</i>	159	<i>trilineata</i>	72
<i>vaughani</i>	17, 49	<i>Globiconcha</i> [?] <i>elevata</i>	255
? <i>vinculum</i>	49	(<i>Tylostoma</i>) <i>tumida</i>	255
G.		<i>Glossidæ</i>	93, 134
<i>Gadus pusillus</i>	221	<i>Glossopteris ampla</i>	226
<i>subcoarctatus</i>	221	<i>browniana</i>	226
<i>Gafrarium liratum</i>	220	? <i>cordata</i>	226
<i>Galaxias</i>	106	<i>elongata</i>	226
<i>Galeodea</i> (<i>Galeodaria</i>) <i>quinquecostata</i>	222	<i>linearis</i>	226
<i>Galerites oregonensis</i>	227	<i>phillipsii</i>	231
<i>Galeropsis excentricus</i>	221	<i>reticulum</i>	226
<i>Galerus excentricus</i>	221	<i>Glossus fraterna</i>	50
<i>Gallionella</i>	203	<i>markoei</i>	50
<i>crenaria</i>	229	<i>Glycimeris</i>	101, 143, 217
<i>distans</i> ?	203, 229	<i>berthoudi</i>	143
<i>granulata</i>	229	<i>estrellanus</i>	50, 217
<i>lævis</i>	229	<i>occidentalis</i>	101
<i>punctata</i>	229	<i>Glyptocrinus</i>	77, 187
<i>undulata</i>	229	<i>argutus</i>	187
<i>varians</i>	203	<i>baeri</i>	69, 77
<i>Gampsonyx</i>	53	<i>decadactylus</i>	77
<i>fimbriatus</i>	61	<i>dyeri</i>	68, 77
<i>Gasteropoda</i> .. 20, 21, 22, 24, 26, 28, 30, 31, 32, 34, 39, 40,		<i>var. subglobosus</i>	68, 77
42, 43, 44, 45, 56, 57, 59, 60, 63, 65, 67,		<i>nealli</i>	77
68, 74, 79, 80, 84, 86, 89, 90, 91, 93, 94,		<i>parvus</i>	77
95, 101, 105, 107, 108, 111, 112, 117,		? <i>subnodosus</i>	187
118, 121, 126, 127, 129, 130, 132, 133,		<i>Gnathodon</i>	266
134, 135, 136, 137, 138, 143, 147, 148,		? <i>tenuidens</i>	266
151, 153, 154, 155, 158, 159, 161, 164,		<i>Gnathostomata</i>	61, 179
165, 178, 191, 194, 197, 226, 232, 234,		<i>Gomphoceras</i>	39, 59, 195
235, 236, 250, 256, 258, 261, 264, 273		(<i>Apioceras</i>) <i>turbiniforme</i>	39
<i>Gastrochæna</i>	270	<i>sacculum</i>	39
		<i>suboviforme</i>	195

	Page.		Page.
Gomphoceras turbiniforme.....	59	Grammatodon.....	34, 92, 262
Gomphonema clavatum ?.....	203	inornatus.....	34, 262
gracile.....	229	? vanconverensis.....	92
herculeanum.....	229	Grammostomum phyllodes.....	47
longicolle.....	229	Grammysia.....	38, 59, 89, 194, 197
mamilla.....	229	arcuata.....	197
minutissimum.....	203, 229	? hannibalensis.....	89, 197
olar.....	229	minor.....	194
Gomphonema oregonicum.....	229	rhomboidalis.....	38 , 59
Goniasteroidocrinus.....	42, 53, 63, 81, 82	rhomboides.....	67 , 89
tuberosus.....	42	ventricosa.....	67 , 89
Goniatitidae.....	110, 132	Granatoocrinus.....	44, 60, 64, 83, 84, 126, 130, 147
Goniatites.....	25, 46, 110, 117, 132, 149, 195, 236	cornutus.....	44
compactus.....	38 , 87	glaber.....	64 , 84
desideratus.....	195	granulosus.....	83
globulosus.....	25 , 46	lotoblastus.....	126, 130, 147
var. excelsus.....	92	melonoides.....	64 , 83
goniolobus.....	110	neglectus.....	64 , 83
iowensis.....	25 , 46	norwoodi.....	40, 60, 83
kingii.....	236	pisum.....	64 , 83
lyoni.....	25 , 42	projectus.....	60
oweni.....	149	shumardi.....	40 , 60
opisnus.....	117	Granoarca.....	98
Goniobasis.....	95, 106, 112, 135, 137, 141, 161	Graphiocrinus.....	85
arcta.....	95	dactylus.....	85
? arcta.....	221	Graptolithus.....	126, 129, 187
chrysaloidea.....	137 , 161, 168	annectans.....	187
chrysallis.....	70 , 161, 168	(Climacograptus) ramulus.....	126 , 129
cleburni.....	137 , 161, 167	(Diplograptus) hypniformis.....	126, 129
convexa.....	106, 161, 169	pistis.....	129
var. impressa.....	106, 169	quadrimumcronatus.....	126, 129
endlichi.....	141 , 161, 168	Gratulpia ?.....	212, 214
fremontii.....	221	mactropsis.....	212 , 214
gracilenta.....	106, 161, 169	Griffithides.....	39, 198
? insculpta.....	77	portlocki.....	198
invenusta.....	106, 161, 169	Gryphaea.....	28, 30, 33, 97, 133, 172, 173, 208, 219, 233,
macilenta.....	161, 168	236, 245, 259, 262, 266, 270, 271	
nebrascensis.....	106, 135, 161, 169	bryani.....	270
nodulifera.....	70	var. precedens.....	270
? nodulosa.....	221	calceola.....	95
? omitta.....	106, 161, 169	var. nebrascensis.....	28, 33,
simpsoni.....	95, 112	172, 236, 262	
? simpsoni.....	221	capuloides.....	208
sublaevis.....	106, 161, 169, 221	dilatata.....	241, 242
? subortuosa.....	106, 161, 169, 221	var. tucumcarii.....	241, 243
tenera.....	135, 170	mucronata.....	173
? tenera.....	221	mutabilis.....	179
tenuicarinata.....	106, 135, 162, 169	nebrascensis.....	180
? tenuicarinata.....	221	navia.....	173
Gonioceras.....	48, 101	pitcheri.....	173, 219, 233, 241, 242, 243, 245,
stimpsoni.....	48	253, 255	
Goniocylindrites.....	29	var.....	133
Goniomya.....	92, 100, 164	navia.....	233, 245
americana.....	15 , 100	sinuata var. americana.....	243
borealis.....	92	thirsæ.....	173
montanaensis.....	164	vesicularis.....	97, 173, 208, 266, 270, 271
Goniophora.....	194	vomer.....	173
perangulata.....	194	Gryphaeostrea.....	97, 270
Gonostoma yatesii.....	180	vomer.....	270
Gorgoniidae.....	96	Gryphorhynchus.....	29
Gonidia.....	268	Gryphostrea eversa.....	220
conradi.....	268	Gulnarua.....	105
decennaria.....	268	? Gymnotoceras.....	110 , 239
declivis.....	268	blakei.....	110, 239
paralis.....	268	rotelliforme.....	110 , 239

	Page.		Page.
Gypidula	193	Helix	28, 106, 107, 135, 137, 141, 153, 161
Gyraulus	34, 106, 153	(Aglaia) fidclis	180
Gyroceras	59, 63, 154	evansi	21
burlingtonensis	250	evanstonensis	141, 169
constrictum	59	kanabensis	137, 169
cornutes	247	leidyi	14, 107, 135, 170
elrodi	154	(Monodon?) dallii	180
logani	63	occidentalis	17
(Nautilus?) inelegans	67	(Patula) perspectiva	180
rockfordensis	59	sepulta	153
(Trochoceras?) ohioensis	67	peripheria	137, 170
Gyroceratites	81	riparia	137, 170
(Nautilus?) inelegans	81	? sepulta	169
? (Trochoceras?) ohioensis	81	spatiosa	28, 221
Gyrodes	102, 111	veterna	28, 170
conradi	102	? veterna	107
depressa	111	vetusta	106, 161, 169
Gyrorbis	35	vitrinoides	17
	H.	(Zonites) marginicola	170
Hadrophyllum	165	Helicoceras tortum	18, 49
glans	165	Heliolites	155
Haliotidæ	39	elegans	155
Halobia	110	Helisoma	34, 106
(Daonella) lommeli	110	Helonix thallus	50
Halysites	155	Hemiaster	96
catenulata	155	elegans	255
Haminea	101, 264	? humphreysanus	18, 96
minor	101	Hemicystites	78
occidentalis	101	(Cystaster) granulatus	78
subcylindrica	101, 264	stellatus	78
Hamites larvatus	220	Hemifusus horni	221
fremonti	243	Hemipronites	31, 56, 72, 78, 85, 89, 108, 109, 131, 177
leai	49	chemungensis var. arctostri-	
mortoni	14	ata	108
verneulii	49	crassus	31, 72, 85, 177
Haplocephala	222	crenistris	109, 131
(Cucullifera) eccentrica	222	subplanus	56
grandis	222	Hemitrypa?	226
Harpaga tippiana	48	Hercoglossa	104
Harpes escanabæ	232	Heteractis duclousi	220
Hartia	198	Heteroceras	93, 104, 261, 265
matthewi	198	? angulatum	49, 104
Helcion	14	cheyennensis	49, 104
alveolus	14	? cochleatum	104
carinatus	14	cooperi	93
patilliformis	14	? nebrascense	104, 265
sexsulcatus	14	newtoni	261, 265
subovatus	14	oweni	49
Helcium alveolum	21	tortum	49, 104
carinatum	21	? umbilicatum	104
patelliforme	21	Heterocrinus	37, 55, 77
sexsulcatum	21	(Anomalocrinus) incurvus	37
subovatum	21	crassus	91
Heliceras	224, 227	constrictus	77
fuergiensis	224, 227	exilis	77
Helicidæ	106, 107, 135, 180	exiguus	68
Helicoceras	104, 135, 261, 265	heterodactylus	77
? angulatum	21, 49	(Iocrinus) subcrassus	77
tortus	18	juvenis	77
mortoni var. tenuicostatum	104	laxus	77
pariense	135	simplex	77
tenuicostatus	19	subcrassus	37, 55, 68
stevensoni	261, 265	Heteromyaria	97, 263, 267
Helicotoma	191	Hettangia	262
sp?	191	americana	76

	Page.		Page.
Himauidium aeneus	229	Illænurus eurekaensis	191
Himnites	216	Illænus	36, 55, 80, 91, 186
crassa	216	(Bumastus) graftonensis	65, 91
crassus	49	insignis	80
giganteus	49	crassicauda	55
Hipponyx borealis	21	indeterminatus	186
pygmaea	221	milleri	186
Hippurites	209, 210	taurus	55
liratus	210	trentonensis?	248
plicatus	210	Incertæ sedes	261
syriacus	209	Inoceramus	29, 30, 93, 95, 97, 111, 127, 133, 136, 143, 207, 208, 209, 218, 245, 253, 263, 267
Holaster	206	— ?	92, 231
comanchesi	243	(Actinoceramus) costellatus	47
simplex	255	altus	70, 263
syriacus	206	aratus	208
Holactypus planatus	233, 255	aviculoides	21
Holopea	39	balchii	21
(Cyclora) nana	67	barabini	92, 134, 263, 267, 274
(Isonema) depressa	39	(Catillus) balchii	97
Holostomata	264	convexus	97
Homalala	100	cripsii?, var. subcom-	
Homalina	100	pressus	97
Homocrinus	91	barabini	97
angustatus	64, 91	incurvatus	97
Hormomya	98	proximus	97
Huronion annulata	232	?, var. sub-	
vertebralis	232	circularis	97
Hyalina	106, 161	sagensis, var. nebras-	
? evansi	106, 161, 169	censis	97
? occidentalis	106, 161, 169	sublevis	97
Hybocrinus	55	tenuilineatus	97
? incurvus	55	tenuirostris	97
Hydreinoocrinus	121	undabundus	97
verrucosus	121	vanuxemi	97
Hydrobia	106, 137, 162	conradi	13
anthonii	221	confertim-annulatus	218, 253, 255
anthonyi	106, 162, 170	convexus	13
? eulimoides	107, 162, 170	crassalatus	133
recta	137, 170	cripsii	218, 274
subconica	107, 162, 170	?	245
utabensis	137, 169	var. subundatus	92
warreniana	106, 162, 170	cuneatus	21
Hydrozoa	126, 129	deformis	111, 134
Hyalithes	126, 129, 189, 191, 195, 198, 199	depressus	134
— ?	195	dimidiatus	127, 134
acadica	198	elevatus	209
(Camarotheca) emmonsii	199	erectus	111
carbonaria	198	exogyroides	29
danianus	198	flaccidus	134
micmac	198	fragilis	13, 93, 133, 263, 274
primordialius	126, 129, 189	gilberti	136, 143
shaleri	199	howelli	136, 143
vanuxemi	191	(Inoceramus) altus	97
Hyridella	105	fragilis	97
I.			
Idonearca	98, 134, 263, 267, 270	incurvus	16
antrosa	267	lerouxii	243
compressirostra	270	lynchii	207
medians	270	(Myliloides) problematicus	97
shumardi	263	var.	
tippiana	267	aviculoides	98
vulgaris	267	mytilopsis	218
Igoceras	40	nebrascensis	250
Illænurus	191	? obliqua	30
		oblongus	143

	Page.		L.	Page.
<i>Inoceramus perovalis</i>	267	<i>Lachnia</i>		219
perplexus	260, 263	<i>Lacunaria alabamensis</i>		221
pertenuis	16	erecta		221
problematicus	95, 111, 133, 245, 273	<i>Lamellibranchiata</i>	20, 26, 27, 28, 29, 30, 32, 33, 38,	
problematicus?	263	40, 41, 42, 43, 44, 54, 55, 56,		
pro-obliquus	267	58, 59, 61, 64, 66, 68, 73, 79,		
pseudo-mytiloides	253	80, 84, 86, 89, 90, 91, 92, 93,		
? rectangulus	30	94, 95, 97, 105, 108, 110,		
sagensis	250, 263, 267, 274	112, 148, 149, 190, 194, 196,		
var. quadrans	267	235, 236, 260, 262, 263, 271		
simpsoni	22, 95, 111, 263	<i>Lamellopora</i>		247
subcompressus	21	infundibularia		247
sublevis	13, 263	<i>Lamna texana</i>		246
subundatus	27	<i>Lamprodoma elongata</i>		222
sulcatus	47	phillipsii		222
syriacus	209	<i>Lampsilis</i>		105
tenuilineatus	13, 263, 274	<i>Lapparia mooreana</i>		221
tenuirostriatus	29	<i>Latia dallii</i>		166, 170
texanus	218	<i>Latiarca</i>		98
umbonatus	18	otoucheila		220
undabundus	29	transversa		220
vancouverensis	256	<i>Latirus (Persisternia) plicatus</i>		221
vanuxemi	21, 263	<i>Leaia</i>		61, 179
ventricosus	15	tricarinata		61, 179
(Volvierceramus) exogyroides ..	97	<i>Lecythiocrinus</i>		150, 163
umbonatus	97	olliculaformis		150, 163
<i>Inoperculata</i>	34	<i>Leda</i>	24, 26, 28, 116	
<i>Insecta</i>	37, 47	barrisii		116
<i>Integripalliata</i>	266, 268	bellistriata		51
<i>Integropallia</i>	263	bisulcata		28, 47
<i>Iocrinus</i>	188	compsa		220
trentonensis	188	curta		26
<i>Iphidea (?) sculptilis</i>	76	fibrosa		48, 256
<i>Iridea</i>	105	longifrons		47
<i>Isocardia</i>	205, 207, 270	(Nucula) subscitula		19
conradi	270	oregona	49, 220,	256
crenulata	207	pinnaeformis		47
fraterna	50	protecta		47
? hodgei	68	slackiana		47
markoi	50, 205	subangulata		47
washita	243	subscitula		20
<i>Isocardiidae</i>	270	willamettensis	49,	256
<i>Isochiliua</i>	188	(Yoldia) levistriata		24
<i>Isodora</i>	107	<i>Legumen</i>		270
<i>Isognomen</i>	29, 32	appressum		270
<i>Isonema</i>	39, 159	planulatum		270
depressa	59	<i>Leiopistba</i>	127, 134, 264, 268	
humilis	67	(Cymella) meeki		264
<i>Isopleurus curviliratus</i>	48	undata	101, 134	
meekianus	48	elegantula		268
<i>Isopoda</i>	36, 46, 61, 179	inflata		268
		protecta		268
J.		(Psilomya) meekii	127, 134	
<i>Janira</i>	209, 215, 216	<i>Leioplax</i>		138
affinis	49	? turricula		138
bella	49, 215, 216	<i>Leiopteria</i>		194
syriaca	209	rafinesquii		194
<i>Jeanpaulia radiata</i>	246	<i>Leiorhynchus</i>	109, 193	
K.		quadricostatus		109
<i>Kutorgina</i>	189, 234	<i>Lepacrinetes</i>		77
minutissima	234	moorei		77
prospectensis	189	<i>Leperditia</i>	80, 126, 129, 188, 191, 195	
sculptilis	189	alta		80
whitfieldi	189	bivia		126, 129, 191

	Page.		Page.
Leperditia (Isochilina) armata	188	Limnæa (Polyrhytis) similis	22, 95, 112, 170
rotundata	195	tenuicosta	16, 221
Lepidesthes	60, 144, 154, 165	vetusta	22, 95, 170
colletti	144, 154, 165	Limnæidae	34, 105, 107, 112, 135
Lepidesthes coreyi	60	Limnæinæ	34
Lepidocentrus	63	Limnophila	34
irregularis	63	Limnophysa	106
Lepidoptera	37, 47	Limopsis	98
Lepocrinites moorei	66	ellipsis	220
Leptæna	57, 78, 130, 189, 234	nitens	50
melita	189, 234	parvula	98
? nucleata	57	pectuncularis	220
sericea	78, 130	striato-punctatus	255
trilobata	250	Limoptera	194
Leptesthes	99, 105, 141, 160	sarmenticia	194
Leptocælia	57	Lincaria	100, 269
flabellites	57	cancellata-sculpta	48
Leptocardia	99, 100, 236	contracta	269
carditoidea	236	? formosa	100
typica	236	irradians	48
Leptodesma	194, 196	metastriata	269
?	196	Lingula	28, 33, 55, 58, 62, 72, 85, 89, 96, 119, 126, 129, 133, 177, 189, 192, 198, 262
transversa	194	alba-pinensis	192
Leptodomus granosus	20	ampla	250
Leptolimnæa	106, 153	antiqua	231
Leptopora	147, 163	brevirostris	18, 33, 262
winchelli	147, 163	? dawsoni	198
Leptosolen	101, 270	halli	119
conradi	70, 101	iowensis	247
Leucochælia	159	læna	192
Lichas	39, 55, 91	ligea	192
boltoni	91	var. nevadensis	192
eucellus	39, 55	(Lingulella) membranacea	89
Lichenocrinus	66, 69, 77	louensis	192
crateriformis	78	? manticula	126, 129, 189
dyeri	77	melio	89
Lima	30, 73, 86, 110, 133, 178, 218, 236	minuta	62
acutilineata	47	mytiloides	85
? cuneata	30	nitida	28, 96
denticulata	47	ovata	223, 225
leonensis	218	pinnaformis	250
(Limatula) erecta	110	prima	231
pelagica	47	quadrata	55
(Plagiostoma) occidentalis	236	scotica	89
recticostata	30	var. nebrascensis	72
retifera	52, 73, 86, 178	subspatulata	13, 53
? sinuata	30	umbonata	177
squamosa	47	whitei	192
wacoensis	133, 218	Lingulella davisii	68
Limidæ	30, 110, 133	laniborni	68
Limnæa	105, 107, 112, 153, 161	Lingulepis	31, 189, 233, 234, 261
(Acella) baldemanni	168	cuneolus	260, 261
? compactilis	169	dakotensis	261
(Leptolimnæa) minuscula	153	ella	234
(Limnophysa ?) compactilis	77	mæra	189, 233
nitidula	112, 168	? minuta	189, 234
vetusta	112	perattenuatus	260, 261
meekiana	107	pinnaformis	261
meekii	170	pinniformis	31, 68
minuscula	170	prima	31
nitidula	95, 161, 221	primeformis	259
(Pleurolimnæa) tenuicostata	106, 161, 169, 221	Lingulidæ	31, 33, 62, 96, 133, 261, 262
(Polyrhytis) kingii	112, 170	Linnaresonia	199
shumardi	107, 170	sagittatis	199

	Page.		Page.
Linnarssonina transversa.....	199	Loxonema scitula.....	25, 46
Liopistha.....	47, 101, 261	semicostata.....	86
(Cymella) meeki.....	261	?subattenuatum.....	195
protexta.....	101	Lucina.....	80, 99, 131, 153, 207, 208, 263, 268
Lioplacodes.....	35, 49	acutilineata.....	204
veterna.....	49	cleburni.....	157
vaternus.....	35, 167	cretacea.....	268
Liopodesthes.....	134, 158	(Diplodonta ?) subundata.....	263
lingulifera.....	134	fibrosa.....	256
nuptialis.....	134	gyrata.....	220
?obscurata.....	158	lirata.....	80
Lithasia antiqua.....	166, 170	occidentalis.....	146, 50, 99, 263
Lithodendron lineata.....	49	var. vent-	
Lithodomus.....	38, 208, 210, 267	ricosa.....	99
affinis.....	267	(Paracyclas) ohioensis.....	66, 80
cretaceus.....	208	permaera.....	50
ripleyana.....	267	profunda.....	153, 157
stamineus.....	210	safedensis.....	209
Lithodontium furcatum.....	229	smockana.....	268
nasutum.....	229	subtruncata.....	207
scorpius.....	229	subundata.....	13, 99, 134
Lithophaga.....	38, 61	syriaca.....	207
lingualis.....	38, 61	ventricosa.....	263
?pertennis.....	38, 84	Lucinidae.....	30, 99, 110, 134, 263, 268
Lithostrotion.....	30, 109, 131, 149, 156, 165	Lunatia.....	102, 137, 264
— ?.....	30, 232	?acutispira.....	48
?californiense.....	30	concinna.....	102, 264
canadense.....	149	minima.....	221
mamillare.....	30, 149, 156, 165	occidentalis.....	102
microstylum.....	165	subcrassa.....	112
whitneyi.....	109, 131	utahensis.....	137
Lithostylidium.....	229	Lunulicardium.....	235
amphiodon.....	229	fragosum.....	235
crenulatum.....	229	Lunalites.....	220
laeve.....	229	bonei.....	220
quadratum.....	229	?daetioloidea.....	217
rude.....	229	duclousii.....	220
trabecula.....	229	interstitia.....	220
Littorina.....	212, 214	Lutraria?.....	211, 213, 215, 217
pedroana.....	212, 214	transmontana.....	215
Littorinidae.....	103	traskei.....	213
Lituites.....	80, 91	Lyellia.....	155
graftonensis.....	65, 91	americana.....	155
?ortoni.....	80	Lyonsia (Panopea) concava.....	19
Loganellus.....	234, 260, 261	Lyopomata.....	96, 133
Lonchocephalus.....	250	Lyosoma.....	164
chippewaensis.....	250	powelli.....	164, 179
hamulus.....	250	Lyropora.....	60
Lophophyllum.....	72, 85, 117, 131, 138, 165, 177		
calceola.....	117		
expansum.....	138, 165		
proliferum.....	72, 85, 131, 177		
Loxonema.....	25, 27, 46, 86, 152, 195, 197		
— ?.....	195		
approximatum.....	195		
attenuata var. semicostata.....	67		
bella.....	197		
cerithiformis.....	25, 46		
eurekensis.....	195		
inornata.....	25		
kanei.....	36		
multicostata.....	27, 46		
nitidula.....	25		
nobile.....	195		
rugosa.....	25, 46, 152		

	Page.		Page.
Macrocheilus medialis	25, 46	Margarita abyssinus	48
newberryi	86	mudgeana	102
pallianus	51	nebrascensis	102, 264
pulchellus	25	Margaritana	98
texanus	258	nebrascensis	99, 167
Macrocyclus	107	Margaritella	102
spatiosa	107, 170, 221	abotti	48
Macrodon	73, 86, 90, 117, 197	flexistriata	102
?	85	Marginella buplicata	221
delicatus	64	Marsupiocrinites	42
hamiltonæ	197	Martesia	101, 270
micronema	40	cuneata	101
obsoletus	69, 90	(Pholas) cretacea	270
parvus	117	? roessleri	69
tenuistriata	51, 73	Martinia	30, 31, 41, 44, 63, 130, 131, 155, 193
tenuistriatus	41, 85	Matthevia	199
truncatus	197	variabilis	199
Macrodoninae	34	Mazonia	61
Macroscaphites	104	woodiana	61
Macrura	37, 46, 61, 179	Meekella	72, 85, 120, 121, 131, 177
Maetra	93, 100, 111, 207, 211, 213, 215, 218, 259	striato-costata	72, 85, 121, 131, 177
?	217	Meekoceras	146, 162, 239
alta	16	aplanatum	146, 162, 239
arciformis	207	gracilitatis	146, 163, 239
? canonicus	70, 143	var	146, 163
(Cymbophora ?) formosa	100	mushbachianus	146
gracilis	100	mushbachianum	162, 239
nitidula	100	Megalaspis	126, 129
? siouxensis	100	belemnurus	126
? utahensis	111	belemnura	129
warrenana	100	Megambonia	79, 194
diegoana	211, 213	jamesi	68, 79
emmonsii	111	occidentalis	194
formosa	16	Megaptera	56, 148
gabiotsensis	217	casei	56
gibbsana	27, 93	Megistocrinus	82, 118, 138, 251
gracilis	21	crassus	118
? holmesi	143	evansii	251
? incompta	134	farnsworthi	138
maia	259	parvirostris	82
petrosa	207	plenus	118
pervetus	207	(Saccocrinus) whitei	82
siouxensis	21	Melampus	158
syriaca	207	?	158, 167
texana	215, 218	americana	166, 169
(Trigonella) ? arenaria	111	antiquus	77, 158, 167
warrenana	16	? priscus	22
Maetridæ	100, 111, 134, 269, 271	Melania	28, 112, 137, 162
Mæonia	225	anthonyi	16, 221
axinia	225	areta	22, 221
? carinata	225	elaiornensis	170
elliptica	225	convexa	16, 17
elongata	225	(Goniobasis ?) sculptilis	65
fragilis	225	subsculptilis	65
gigas	225	? wyomingensis	77
gracilis	225	humerosa	22, 221
grandis	225	? insculpta	162, 169
myiformis	225	invenusta	17
? recta	225	larunda	137
valida	225	minutula	16, 221
Mæra	100	multistriata	16, 221
Malca	216	nebrascensis	16
ringens	216	? nitidula	22
Malletinae	32	omitta	17
Margarita	102, 264	(Potodoma) veterana	28, 49

	Page.		Page.
<i>Melania</i> ?scriptilis.....	112, 166, 170	<i>Microcylus</i> discus.....	58
simpsoni.....	22 , 221	<i>Microdiscus</i>	198
sublaevis.....	17 , 221	dawsoni.....	198
?subsculptilis.....	163, 166, 170	punctatus.....	198
subtortuosa.....	17 , 221	<i>Microdoma</i>	40 , 87
taylori.....	166, 170	conica.....	40 , 87
tenuicarinata.....	17 , 221	<i>Microdon</i>	194, 197
warrenana.....	17	(Cypriocardella) connatus.....	197
wyomingensis.....	162, 169	macrostriatus.....	194
<i>Melanitida</i>	112, 135	<i>Micromeris</i> minutissima.....	220
<i>Melanopsis</i>	166	parva.....	220
<i>Meleagrinnella</i>	267	<i>Micropurgus</i> minutulus.....	221
abrupta.....	267	<i>Microstizia</i>	96
<i>Melina</i> montana.....	50	millepunctata.....	96
torta.....	50	<i>Micropyrgus</i>	107, 162
<i>Melinia</i> nitidula.....	221	minutulus.....	107, 162, 169
<i>Melininae</i>	29, 32	<i>Milthea</i>	99
<i>Mellita</i> texana.....	215	<i>Mitra</i> costata.....	221
<i>Melonites</i>	23	flemingii.....	221
danae.....	23	fussoides.....	221
multipora.....	43, 60, 212	lineata.....	221
<i>Menetus</i>	34, 106	minima.....	221
<i>Menocephalus</i>	250	mooreana.....	221
<i>Meretrix</i>	211, 212, 213, 214	<i>Mnestia</i>	101
californiana.....	211 , 213	<i>Modiola</i>	28, 73, 197, 211, 213, 267, 270
darlena.....	212 , 214	attenuata.....	47
decisa.....	50, 211 , 213	(Brachydontes) multilinigera.....	76
tularana.....	211 , 213	burlingtonensis.....	267
uniomeris.....	50, 211, 213	concentrica-costellata.....	47
tvasana.....	211 , 213	contracta.....	50, 211 , 213
<i>Merista</i>	57	cretacea.....	47
laevis.....	57	ducatelli.....	50
<i>Meristella</i>	56, 80, 193	granulato-cancellata.....	47
<i>Meristella</i> ? (<i>Meristina</i>) cylindrica.....	80	johnsoni.....	270
(<i>Whitfieldia</i>) nasuta.....	193	juliae.....	47
<i>Merocrinus</i>	187	julia.....	267
corroboratus.....	188	(<i>Lithodomus</i> ?) inflata.....	270
typus.....	187	meekii.....	47
<i>Merostomata</i>	61, 179	? nevadensis.....	197
<i>Mesalia</i>	102	ovata.....	270
kansasensis.....	102	pedernalis.....	47
striata.....	221	(<i>Perna</i>) formosa.....	28 , 49
<i>Mesodesma</i>	137	pertenuis.....	49
bishopi.....	137	saffordi.....	47
<i>Mesonacis</i>	199	spiniger.....	50
<i>Mesorhytis</i>	103	? subelliptica.....	73
<i>Metaptera</i>	105	(<i>Volsella</i>) subimbricata.....	80
<i>Metis</i>	100	<i>Modiolaria</i>	98
<i>Metoptoma</i>	40, 60, 186, 188, 191, 195, 197	<i>Modiolopsis</i>	38, 54, 58, 130, 187, 190
? analoga.....	191	—— (?).....	130
billingsi.....	188	acutifrons.....	224
cornuta forme.....	186	arcodes.....	224
? devonica.....	195	cancellata.....	187
peroccidens.....	197	imbricata.....	224
phillipsi.....	191	modiolaris.....	232
(<i>Platyceras</i>) umbella.....	40	modioliformis.....	54
? umbella.....	60	occidens.....	191
<i>Michilina</i>	165, 177, 223, 235	orthonata.....	54
?.....	235	perovata.....	38 , 58
engeneae.....	177	pholadiformis.....	232
expansa.....	165	pogonipensis.....	191
placenta.....	165	prerupta.....	224
<i>Micrabacia</i>	96	siliqua.....	224
americana.....	96	simplex.....	224
<i>Microcylus</i>	58	subnasuta.....	64 , 91

	Page.		Page.
Modiomorpha	110, 194, 197	Myacites (Pleuromya) weberensis	111
altiforme.....	194	subcompressus.....	164
ambigua.....	197	subellipticus.....	34
? desiderata.....	197	Myacites unionoides	49
? lata.....	110	Myalina	24, 32, 44, 45, 73, 82, 86, 132, 151, 178,
oblonga.....	194		196, 236, 257, 259
obtnsa.....	194	—?.....	132
? ovata.....	110	angulata.....	24 , 32, 44
? pintoensis.....	197	apachesi.....	243
Mollusca 24, 31, 32, 33, 38, 40, 41, 43, 44, 45, 54, 55, 56,		aviculoides.....	21, 32, 236
57, 58, 59, 60, 61, 68, 72, 78, 80, 84, 85, 88, 90,		concentrica.....	24 , 44
91, 94, 95, 96, 105, 107, 108, 109, 110, 111, 112,		congeneris.....	196
118, 120, 133, 135, 136, 137, 138, 142, 144, 148,		? (Gervillia) perplana.....	259
151, 153, 154, 155, 176, 225, 255, 260		meliniformis.....	41 , 45
vera.....	132, 133, 164	(Mytelus) perattenuata.....	19 , 20
Molluscoidæ	133, 165, 260	nemosis.....	196
Monoceras sulcatum	222	nessus.....	196
Monomyaria	97, 105, 132, 133, 263, 266	perattenuata.....	32, 51, 86
Monopleura	176	permiana.....	32, 151, 236
marcida.....	176	recta.....	258
pinguiscula.....	176	recurvirostra.....	24 , 45
Monopteria	41 , 45, 127, 132, 178	recurvirostris.....	178
gibbosa.....	178	squamosa.....	20, 258
marian.....	127 , 132	st. ludovica.....	84
Monotis	86, 258	subquadrata.....	20, 32, 51, 73, 178, 274
—?.....	258	swalovi.....	45, 51, 73, 132, 178
? gregaria.....	64 , 86	Myrophoria	111, 133
hawnei.....	19 , 20, 51	ambilineata.....	133
speluncaria.....	258	lineata.....	111
Monticulipora	129, 135, 155	Myomia	224
dalii.....	129	elongata.....	224
frondosa.....	155	valida.....	224
monticula.....	138	Myriapoda	37, 46, 61
Mortonia (Periarhus) crustuloides	222	Myrtea	99
lyelli.....	220	Mytelus subarenatus.....	16
pileus-sinensis.....	222	Mytilarca	194
tumida.....	222	chemungensis.....	194
Mortoniceras	104	dubia.....	194
shoshonense.....	104	(Plethomytilus) oviformis.....	194
? vermillionense.....	104	Mytilidæ	30, 33, 98, 110, 111, 260, 262, 267, 270
Mulinia	215, 216	Mytiloides	97
densata.....	215 , 216	Mytilus	30, 98, 116, 164, 211, 213, 217, 260, 262, 267
Multicostatæ	34	attenuatus.....	15
Murchisonia	55, 74, 117, 147, 151, 164, 191	concavus?.....	51
bicincta.....	55	engelmanni.....	274
copei.....	151	febristriatus.....	116
inornata.....	40 , 87	humerus.....	211 , 213
major.....	232	inezensis.....	217
milleri.....	191	inflatus.....	50
nebrascensis.....	74	meekii.....	256
obsolete.....	67	multistriatus.....	30
? proluxa.....	117	occidentalis.....	116
subtæniata.....	51	oblivius.....	267
terebra.....	147 , 164	(Orthonota) ventricosa.....	116
Muricidæ	103	pedroanus.....	211 , 213
Mya	215, 216	pertenuis.....	18
abrupta.....	205	subarenatus.....	98
montereyana.....	215 , 216	whitei.....	164, 260 , 262
? subinnata.....	216		
tellinoides.....	231		
Myacites	31, 34, 111, 164		
depressus.....	31		
inconspicuus.....	111		
nebrascensis.....	21 , 34		
(Pleuromya) subcompressa.....	111, 179		

N.

Naïa	105
Naiadites carbonaria	167
elongata.....	167
lævis.....	167
Naidea	105

	Page.		Page.
Narica	212, 214	Nautilus (Cryptoceras) capax	39, 92
diegoana	50, 212, 214, 221	? leidyi	39
Nassa	212, 214	rockfordensis	40
intastriata	212	springeri	121
interstriata	214	danvillensis	144, 165
pedroana	212, 214	dekayi	104
Natica	208, 210, 211, 212, 213, 214, 217, 219, 223, 226, 236	var. montanaensis	104, 265
acutispira	48	digonus	42
alabamiensis	221	(Discites) disciformis	39, 84
alveata	211, 213, 221	ornatus var. amplus	39
ambigua	14, 48	(Discus) digonus	25
collina	219	planorbiformis	25
concinna	13	sangamonensis	25
erecta	221	trisulcatus	25
geniculata	212, 214	divisus	121
gibbosa	211, 213, 221	elegans	104
inezana	50, 217	var. nebrascensis	29
indurata	208	(Endolobus) peramplus	39
? lelia	236	spectabilis	45
limula	219	eccentricus	19, 20, 33
minima	221	forbesianus	179
moreauensis	14	globatus	45
obliquata	13	lamarekii	222
occidentalis	14, 231	lasallensis	39, 87
ocoyana	212, 214	missouriensis	179
œtites ?	211, 213	occidentalis	74
orientalis	210	planorbiformis	46
paludinaeformis	13	ponderosus	74
saxea	206	sangamonensis	46
? scalaris	210	(Solenocœilus) collectus	65, 84
subcrassa	15	leideyi	84
syriaca	208	spectabilis	25
texana	219	subglobosus	25
tuomeyana	16, 48	(Temnocheilus) coxanus	84
Naticidæ	102, 111, 132, 264	latus	87
Naticina obliqua	221	niotensis	39, 84
Naticopsis	25, 27, 46, 80, 86, 132, 136, 152, 164, 165, 179	winslowi	87
æquistriata	80	(Temnochilus) coxanus	65
altonensis	86, 152	latus	65
hollidayi	25	winslowi	65
? (Idonearca) humilis	80	tenui-planatus	227
levis	67, 80	(Tromatodiscus) sulcatus	40
littonana var. genevieveensis	40	trisulcatus	42
monilifera	152, 165	winslowi	179
nana	46, 132, 179	Navicula bacillum	229
nodosus	25	scalprum	229
(Platystoma) acquistriata	67	semen	229
remex	136, 164	sificala	229
subovatus	86	sigma	229
(Trachydomia) nodosa	46	Neæra	101, 260, 263, 264, 272
var. hollidayii	46	aequivalvis	272
ventrica	86	fibrosa	48
whcleri	86, 179	longirostra	260, 263
var.	152	moreauensis	101, 264
Nautilidæ	33, 63, 104, 121, 132, 265	ventricosa	101
Nautilina	106	Neitheæ	215, 218, 266
Nautilus	25, 27, 29, 33, 39, 42, 45, 46, 65, 74, 84, 92, 93, 104, 132, 144, 165, 179, 245, 258, 265	occidentalis	215, 218
— (?)	258	quinquecostata	266
angustatus	50, 206	texana	218
campbelli	27, 93	Nematocrinus	40
chesterensis	25, 45	Nemoarca	267
		cretacea	267
		Nemocardium	99
		Nemodon	98, 267
		angulatum	267

	Page.		Page.
Nemodon brevifrons	267	Nucula	73, 86, 92, 98, 116, 147, 155, 163, 178, 194, 197, 207, 208, 209, 213, 224, 247, 263, 267, 271
enfaulcusis	267	— ?	194
sulcatinus	98	abrupta, Conrad	209
Nemophora floridana	220	Dana	224, 225
Neptuna impressa	49	(Acila) conradi	50
Neptunella	103	? anodontoides	69
Nerinea	208, 209, 210, 219	bellastriata	159
— ?	210	beyrichi	51, 73, 86
abbreviata	210	cancellata	15, 98
cochleariformis	210	circo	271
cretacea	209	concinna	225
orientalis	210	crebriligneata	208
rhamdunensis	208	cultolliformis	220
schottii	219	decisa	213
syriaca	208, 210	divaricata	50, 206
Nerita	180	equilateralis	15
— ?	180	evansi	15
(Nereis) densata	48	gabbana	267
Neritolla	28, 34	glendonensis	225
nebrascensis	28, 34, 49	haydeni	159
(Nereis) densata	48	impressa	206, 231
Neritidae	34, 133, 134, 180	insularis	197
Neritina	127, 133, 134, 136, 137, 141, 143, 158, 161, 166	iowensis	116
bannisteri	158, 167	kazanensis	51
bruneri	166, 169	levatiforme	197
(Dostia?) bellatula	76	longifrons	267
carditoides	76	magna	220
(patelliformis)	76	media	220
incompta	143	minuta	247
naticiformis	141, 161, 168	monmouthensis	267
nebrascensis	49, 167	myiformis	207
(Neritella) bannisteri	76	obsoletastrata	16, 98
pisum	76	? obtenta	209
phaseolaris	127, 133	ovula	220
pisiformis	76, 158	paralella	207
pisum	143	parva	86, 220
powelli	136	pectuncularis	220
(Velatella) baptista	141, 161, 169	penita	49
bellatula	158, 167	percerassa	267
carditoides	134, 158, 167	perdita	208
patelliformis	143	perequalis	267
var. webe-		perobliqua	207
rensis	143	perovrata	208
volvineata	137, 161, 169	perumbonata	147, 163
Neritopsis? tuomeyana	48	plana	220
Neuropteris	149, 246	planimarginata	98, 263
angulata	246	planomarginata	15
hirsuta	149	plicata	220
rarinervis	149	pulcherrima	220
Neverita gibbosa	221	rescuensis	194
Nipteroerinnus	54, 82	scitula	15
arborens	82	semen	220
wachsmuthi	54, 82	slackiana	267
Nodosaria	219	submucronata	207
texana	219	subnasuta	13
Nöggerathia	226	subplana	15, 98
elongata	226	syriaca	207
media	226	taekana	17, 92
spatulata	226	ventricosa	13, 73, 155, 178
Notocoeli	35	Nuculana	44, 73, 87, 98, 140, 147, 160, 163, 178, 211, 260, 263, 267, 271
Notomya	224	albaria	271
Notosiphites	35	bellistriata	178
Nucleospira	193	var. attenuata	73
barrisii	116		
concinni	193		

	Page.		Page.
<i>Nuculana bisulcata</i>	47, 98, 263	? <i>Odontobasis formosa</i>	141 , 162
<i>compressifrons</i>	268	<i>Odontocephalus</i>	58
<i>compso</i>	220	<i>Odontopteris</i>	149
<i>cultelliformis</i>	220	<i>subcuneata</i>	149
? <i>curta</i>	44	<i>Ogygia</i>	190, 234
<i>decisa</i>	211	<i>parabola</i>	231
? <i>equilateralis</i>	98	? <i>problematica</i>	190
<i>inclara</i>	140 , 160	<i>producta</i>	231
<i>longifrons</i>	47	? <i>spinosa</i>	190
<i> magna</i>	220	<i>Olenellus</i>	126, 129, 189
<i>media</i>	220	<i>gilberti</i>	126, 129, 189
<i>obesa</i>	147 , 163	<i>howelli</i>	129, 189
<i>oregona</i>	49, 220	<i>iddingsi</i>	189
<i>ovula</i>	220	<i>powelli</i>	126
<i>parva</i>	220	<i>Olenus (Olenellus) gilberti</i>	88
<i>penita</i>	49	<i>howelli</i>	88
<i>pinnaformis</i>	47, 268	<i>Oligoporus</i>	25 , 43, 54, 83
<i>plana</i>	220	<i>coreyi</i>	64
<i>plicata</i>	220	<i>dane</i>	43, 60
<i>protecta</i>	47, 267	<i>nobilis</i>	54 , 83
<i>pulcherrima</i>	220	<i>Oligoptych</i>	101
<i>semen</i>	220	<i>Oliva ancillariæformis</i>	50
<i>slackiana</i>	47	<i>phillipsii</i>	222
<i>subangulata</i>	47	<i>Olivella ancillariformis</i>	50
<i>subequilatera</i>	260 , 263	<i>Olivula</i> ? <i>plicata</i>	222
<i>subnasuta</i>	98	<i>punctulifera</i>	222
<i>willamettensis</i>	49	<i>Ollacrinus</i>	42
<i>Nuculanidae</i>	32, 260	<i>Omala</i>	100
<i>Nuculanina</i>	32, 33	<i>Omphiscola</i>	106
<i>Nucularia</i>	268, 271	<i>Onychaster</i>	61 , 63, 83
<i>papyria</i>	268	<i>barrisi</i>	83
<i>secunda</i>	271	<i>flexilis</i>	61
<i>Nuculidæ</i>	98, 267, 271	<i>flexilis</i>	83
<i>Nuculites</i>	235	<i>Onychocrinus</i>	40, 43, 60, 84, 154
<i>triangulus</i>	235	<i>diversus</i>	40 , 60
<i>Nullipora</i> ? <i>obtexta</i>	119	<i>exculptus</i>	83, 154
<i>Nunmulites</i>	209	<i>monroensis</i>	43
<i>arbiensis</i>	209	<i>norwoodi</i>	43
<i>floridana</i>	220	<i>ramulosus</i>	154
<i>mantelli</i>	222	<i>whitfieldi</i>	84
<i>Nyassa</i>	194	<i>Operculatum planulatum</i>	222
<i>parva</i>	194	<i>Omphalotrochus</i>	30
O.		<i>Ophileta</i>	55, 108
<i>Obeliscus melanellus</i>	221	<i>complanata</i> var. <i>nana</i>	108
<i>pygmaeus</i>	221	<i>owenana</i>	55
<i>striatus</i>	221	<i>Ophioderma</i>	158
<i>Obolella</i>	27, 31, 189, 190, 198, 233, 261	? <i>bridgerensis</i>	158
— ?	198	<i>Ophiuroidea</i>	78
? <i>ambigua</i>	190	<i>Opis</i>	208, 209
<i>chromatica</i>	199	<i>equalis</i>	209
<i>discoidea</i>	189, 233	<i>undatus</i>	208
<i>nana</i>	27 , 31, 261	<i>Orbicula</i>	207, 209, 210
<i>polita</i>	261	? —	210
<i>transversa</i>	198	<i>lugubris</i>	49
<i>Obolidæ</i>	261	<i>multilineata</i>	49
<i>Obolus</i>	56, 259, 261	<i>prima</i>	250
<i>pectenoides</i>	259	<i>subobliqua</i>	207
? <i>pectenoides</i>	261	? <i>syriaca</i>	209
(<i>Trimerella</i>) <i>conradi</i>	56	<i>Orbiculoidea</i>	72, 89
<i>Obovaria</i>	105	— ?	72
? <i>Odontobasis</i>	103 , 137, 141, 162	<i>Orbitolites discoidea</i>	220
<i>buccinoidea</i>	137	<i>interstitia</i>	220
<i>buccinoides</i>	162	(<i>Orbitoides</i>) <i>mantelli</i>	222
<i>constricta</i>	103	<i>Orbitulites</i> ? <i>reticulata</i>	247 , 248
		<i>texasus</i>	47

	Page.		Page.
Orthis.....	29, 30, 57, 58, 62, 72, 78, 85, 109, 116, 129, 130, 131, 148, 151, 165, 177, 189, 190, 192, 198, 234, 235, 247, 248	Othoceras blakei.....	110
—— ?	30, 58, 248	(Cameroeras) colon	120
arachnoides	233	colon	126
bellula	78	cribrosum	74
biforata var. acutilirata	148	crebristriatum	39, 91
lynx.....	130	eurekensis	198
billingsi	198	expansum	25, 27, 44
borealis	78	hisogramma	67
carbonaria	72, 85	jolietensis	39, 91
coloradoensis	66	kingii	109
crenistria	243	marginale	247
cuneata	250	medullare	91
electra	129	multicameratum	191
ella	78	nobile	39
emacerata	78	nova mexicana	243
enrekensis	189	oneidiense	187
fissicosta	78	(Ormoceras) beekii.....	55
hamburgensis	190	ortoni	68, 79
hibrida	57	randolphensis	198
impressa	192	rushensis	87, 170
insculpta	78	subbaculum	39
iowensis	62, 148	undulatum	247
var. furnarius.....	58	winchellii	39, 91
lonensis	190	Orthocerata	191
mefarlanei	58, 62 , 192	Orthoceratitidæ	109, 110
melcheli	109	Orthonema	27, 46, 74, 80, 86
occidentalis	78, 130, 148	conica	40, 86
pecosii	131, 177, 243	newberryi	67, 80
perveta	190	salteri	46
plicatella	78, 130	subteniata	51, 74
(Platystrophia) acutilirata	78	Orthonota	116
biforata	78	Orthonychia	40
dentata	78	Ostraca	227
laticosta	78	Ostracoda	136
lynx	78	Ostrea.....	28, 33, 93, 94, 105, 111, 133, 136, 142, 151, 158, 160, 172, 173, 205, 206, 209, 211, 213, 216, 217, 219, 233, 236, 237, 262, 266, 270, 271
pogonipensis	234	—— ?	97
resupinata ?	235	alabamensis	237
resupinoides	151	(Alectryonia) bellaplicata	142
retrota	78	blackii.....	151, 158
subelliptica	116	larva	173
subcarinata	57	linguafelis	271
subquadrata	78, 148	procumbens	172
testudinaria	130, 190, 248 ?	sannionis.....	136, 142
thiemei	116, 165	americana	172
tricenaria	190	anomieformis	172
tullicensis	192	anonioides	76, 158, 172
umbraculum ?	232	apressa	172
Orthisina	257	atwoodi	237, 238
—— ?	257	barrandei.....	172
crassa	19, 20	bella	172, 219
missouriana	52	bellarugosa	172
missouriensis	20	belliplicata	172
shumardiana	20	blackii	172
umbraculum	20, 274	breweri	172
Orthoceras	25, 27, 36, 39, 44, 55, 74, 79, 87, 91, 94, 109, 110, 126, 129, 154, 179, 187, 195, 198, 248	borealis	237
—— ?	191, 198, 258	bryani	172
anellum	55	bourgeoisii	238
angulatum	91	boussingaultii	206
annulato-costatum	44	carinata	172, 219
annulatum	154	carolinensis	172, 237
annulocostatum	27	compressirostra	237
baeulum	22, 94	conchaphila	238

	Page.		Page.
<i>Ostrea confragosa</i>	172	<i>Ostrea sculpturata</i>	238
<i>congesta</i>	97, 172, 233, 273, 274	<i>sellæformis</i>	205 , 237
<i>contracta</i>	215 , 219, 237	<i>soleniscus</i>	66 , 76, 158, 173
<i>convexa</i>	172	<i>strigilecula</i>	133 , 172, 262
<i>cortex</i>	133, 172, 219	<i>subalata</i>	173
<i>corticosa</i>	209	<i>subfalcata</i>	238
<i>crenulata</i>	172	<i>subjecta</i>	217 , 238
<i>crenulimarginata</i>	172, 266	<i>subovata</i>	173, 255
<i>cretacea</i>	172, 237	<i>subspatulata</i>	173, 219, 266
<i>denticulifera</i>	172, 266	<i>subtrigonalis</i>	105, 168, 173, 256
<i>disparilis</i>	238	<i>syriaca</i>	206
<i>diluviana</i>	172	<i>tayloriana</i>	238
<i>divaricata</i>	137	<i>tecticostata</i>	173, 266
<i>elegantula</i>	172	<i>titan</i>	216, 238
<i>engelmanni</i>	22 , 95, 172	<i>thiræ</i>	237
<i>eversa</i>	220, 237	<i>toroso</i>	173
<i>exogyrella</i>	172	<i>translucida</i>	18 , 173
<i>falcata</i>	172	<i>trigonalis</i>	237
<i>falciformis</i>	237	<i>tuomeyi</i>	173, 237
<i>franklini</i>	172	<i>uniformis</i>	173
<i>fundata</i>	238	<i>veatchii</i>	238
<i>gabbana</i>	28 , 172	<i>veleniana</i>	219 , 238
<i>gallus</i>	238	<i>velicata</i>	173, 219
<i>georgiana</i>	237	<i>vespertina</i>	211, 213, 219, 238
<i>glabra</i>	18 , 160, 168, 173	<i>vicksburgensis</i>	237
<i>glauconoides</i>	271	<i>virgata</i>	206, 209
<i>glendiformis</i>	270	<i>virginiana</i>	238
(<i>Gryphæa</i> ?) <i>patina</i>	97	<i>virginica</i>	238
<i>uniformis</i>	93	<i>var. californica</i>	243
(<i>Gryphæostrea</i> ?) <i>subulata</i>	97	<i>vomer</i>	173
<i>heermanni</i>	212, 213, 238	<i>wyomingensis</i>	77
<i>idriaensis</i>	71, 173	<i>Ostreidæ</i>	30, 33, 97, 105, 111, 133, 262, 266, 270, 271
<i>inornata</i>	21 , 97, 173	<i>Otozamites macombii</i>	246
<i>insecura</i>	136	<i>Ovales</i>	34
<i>larva</i>	266	<i>Oxystele</i>	180
<i>lateralis</i>	173	<i>Oxyrbina mantelli</i>	246
<i>linguloides</i>	206	<i>Oxytoma</i>	33 , 49, 97, 142, 151, 153, 158, 262
<i>littlei</i>	173		P.
<i>lugubris</i>	93, 173, 219	<i>Pachycardium</i>	99, 268
<i>lurida</i>	238	<i>burlingtonense</i>	268
<i>lyoni</i>	173	<i>Pachydesma</i>	215, 217
<i>malleiformis</i>	173	<i>inezana</i>	215 , 217
<i>marshii</i>	241, 242, 243	<i>Pachydomus</i>	225
<i>mesenterica</i>	173	<i>antiquatus</i>	225
<i>mortoni</i>	173, 237	<i>cuneatus</i>	225
<i>multilirata</i>	173, 219	<i>revis</i>	225
<i>nasuta</i>	173	<i>ovalis</i>	224
<i>obrutus</i>	209	<i>pusillus</i>	224
<i>orientalis</i>	209	<i>sacculus</i>	224
<i>owenana</i>	173	<i>Pachymya</i>	143, 151, 158
<i>panda</i>	173, 266	<i>austinensis</i>	143
<i>pandæformis</i>	173	? <i>compacta</i>	151, 158
<i>panzana</i>	217 , 238	? <i>herseyi</i>	143
<i>patercula</i>	172	? <i>truncata</i>	70
<i>patina</i>	16 , 173	<i>Pachyodon</i>	101, 105
<i>peculiaris</i>	173	<i>Pachyphyllum woodmani</i>	192
<i>pellucida</i>	97, 173	<i>Pachytherus</i>	99
<i>percrassa</i>	238	<i>Palæoneilo</i>	89
<i>planovata</i>	173	<i>bedfordensis</i>	89
<i>plumosa</i>	173, 266	<i>Palæacis</i>	154
<i>prudentia</i>	133 , 173	<i>cuneatus</i>	154
<i>quadruplicata</i>	142, 173	<i>cymbia</i>	52
<i>robusta</i>	173, 219	<i>obtusa</i>	52
<i>sannionis</i>	173	<i>inubonata</i>	52
<i>scapha</i>	206	<i>Palæacmea</i>	193

	Page.		Page.
<i>Palæaster</i>	78	<i>Paradoxides acadicus</i>	198
<i>dyeri</i>	69 , 78	<i>eteminicus</i>	198
<i>gramilosus</i>	78	<i>harlani</i>	199
<i>incomptus</i>	70 , 78	<i>lamellatus</i>	198
<i>?jamesii</i>	78	<i>?nevadensis</i>	65 , 108
<i>shaefferi</i>	78	<i>Paramithrax</i>	159
<i>Palæchinidæ</i>	43	<i>?walkeri</i>	159
<i>Palæchinus</i>	23, 43, 83	<i>Paranomia</i>	266
<i>burlingtonensis</i>	23 , 43	<i>lineata</i>	266
<i>gracilis</i>	63 , 83	<i>scabra</i>	266
<i>Palæocampa</i>	37 , 47, 61	<i>Parapholas</i>	143, 272
<i>anthrax</i>	37 , 47	<i>kneiskerni</i>	272
<i>Palæocaridæ</i>	37	<i>sphenoides</i>	143
<i>Palæocaris</i>	37 , 46, 53, 61, 179	<i>Pasceolus</i>	56
<i>typus</i>	37 , 46, 61, 179	<i>dactylioides</i>	56
<i>Palæochorda</i>	259, 261	<i>Pasithea aciculata</i>	221
<i>prima</i>	259 , 261	<i>lugubris</i>	221
<i>Palæocyclus</i>	62	<i>notata</i>	221
<i>kirbyi</i>	62	<i>scale</i>	221
<i>Palæomanon</i>	192	<i>sulcata</i>	220
<i>rœmeri</i>	192	<i>striata</i>	220
<i>Palæomoera</i>	100	<i>Patella</i>	154
<i>Palæophycus</i>	260, 261	<i>levetel</i>	154
<i>occidentalis</i>	260 , 261	<i>tenella</i>	223
<i>Palæophyllum</i>	155	<i>Patoceras</i>	104
<i>divaricans</i>	155	<i>Patula</i>	153
<i>Palasterina</i>	24	<i>Pecopteris</i>	246
<i>(Shoenaster) fimbriata</i>	24	<i>bullatus</i>	246
<i>Palinurus</i>	143	<i>cyclobola</i>	246
<i>pentangulatus</i>	143	<i>falcatus</i>	246
<i>Pallium</i>	215, 216, 217	<i>mexicana</i>	246
<i>crassicaudo</i>	215	<i>?odontopteroides</i>	231
<i>estrellanum</i>	215 , 216, 217	<i>undulata</i>	231
<i>Palmula sagittaria</i>	47	<i>var.</i>	231
<i>Paludina conradi</i>	16	<i>Pecten</i>	24, 30, 205, 207, 208, 211, 212,
<i>leai</i>	16	213, 214, 215, 216, 217, 245, 200 , 262, 266, 271	
<i>leidyi</i>	16	<i>acutiplicatus</i>	30
<i>multilineata</i>	16 , 221	<i>affinis</i>	49
<i>peculiaris</i>	16	<i>altiplectus</i>	215
<i>retusa</i>	16	<i>altiplicatus</i>	217
<i>trochiformis</i>	16	<i>bella</i>	49
<i>vetula</i>	16 , 221	<i>bellistriata</i>	22
<i>Pandora</i>	216	<i>bellistriatus</i>	49
<i>bilirata</i>	216	<i>broadheadii</i>	51
<i>Panopæa</i>	207, 210, 217, 269, 271	<i>calvatus</i>	220
<i>cooperi</i>	19	<i>catilliformis</i>	212 , 214
<i>decisa</i>	269	<i>(Chlamys) eraticulus</i>	266
<i>elliptica</i>	271	<i>comptus</i>	224 , 226
<i>estrellana</i>	50	<i>coosensis</i>	256
<i>(myacites) subelliptica</i>	18	<i>delumbis</i>	208
<i>occidentalis</i>	16	<i>deserti</i>	211 , 213, 217
<i>orientalis</i>	210	<i>discus</i>	217
<i>pecterosa</i>	207	<i>extenuatus</i>	22 , 49
<i>texana</i>	255	<i>hawni</i>	51
<i>Papillina altisii</i>	222	<i>humphreysii</i>	205
<i>Papyridea (Liopistha) elegantula</i>	47	<i>illawarrensis</i>	226
<i>rostrata</i>	47	<i>kneiskerni</i>	271
<i>sancti-sabæ</i>	47	<i>lenuisculus</i>	226
<i>Paracyclas</i>	138, 149, 194, 235	<i>magnolia</i>	217
<i>elliptica var. occidentalis</i>	149	<i>meekii</i>	215 , 217
<i>occidentalis</i>	194	<i>missonriensis ?</i>	51
<i>peracoides</i>	235	<i>mitis</i>	226
<i>sabina</i>	138	<i>(Monotis ?) coloradensis</i>	245
<i>Paradoxide</i>	31, 108	<i>nebrascensis</i>	15
<i>Paradoxides</i>	108, 198, 199, 243	<i>neglectus</i>	51

	Page.		Page.
Pecten nevadanus	212, 214	Pentremites norwoodii	249, 251
newberryi	260, 262	pyriformis	149, 248
obrutus	208	sirius	118
occidentalis	245, 274	stelliformis	249, 251
pabloensis	216	sulcatus	255
planicostatus	266	(Tricolocrinus?) obliquatus	91
propatulus	49, 206	(Troostocrinus?) woodmanii	54, 83, 87
quadricostatus	255	wortheni	83
quinqnenarius	266	Periploma claibornensis	220
righyi	241	Periplomya	269, 271
rigida	13, 47	elliptica	203
squamuliferus (?)	266	truncata	271
(Syncyclonema ?) perlammollosus	266	Perischæchinidæ	42, 43, 44, 60
tenuicollis	224, 226	Perissoptera	102
tenuilineatus	24	Peronæa	100
tenuisculus	224	Peronæoderma	100
tenuitestus	266	Perna	29, 32, 217
ntabensis	22	montana	50, 217
venustus	266	torta	50
Pectenidæ	30, 260, 261, 271	Pernopecten	59
Pectinibranchiata	34, 102, 106, 132, 134, 135	shumardianus	59
Pectinidæ	32, 33, 97, 132, 133, 263	Perisonota	268
Pectuncululus	99, 217	protecta	268
ellipsidis	220	Petalodus alleghaniensis	20
nitens	50, 206	Petraster	26
patulus	206	wilberanus	26
siouxensis	13	Petricola	211, 213, 271
subimbricatus	18	nova ægyptica	271
Pectunculina parvula	15	pedroana	211, 213
Pelagus vanuxemi	222	Petricolidæ	271
Penitella	212, 214	Petrospongia	43
speleca	214	Phacops	59, 195
spekeum	212	anchiops	232
Pennularia nobilis	203	callicephalus	232
varidis	203	rana	59, 195
Pentacrinidæ	33, 133, 262	Phacopsidæ	109
Pentacrinites	33, 94, 262	Pharella	101, 158
asteriscus	236, 262	dakotensis	101
Pentacrinus	133	? pealei	76, 158
asteriscus	18	Phasianella haleana	48
asteriscus	33, 133	perovata	48
Pentadia	223, 226	punctata	48
corona	226	Phenopora multipora	231
reniformis	223	Phillipsia	39, 74, 84, 87, 90, 149, 179, 196
spatangus	223	—?	74, 253
trigonia	223	bufo	149
Pentamerus	58, 62, 116, 193	coronata	196
borealis	62	(Griffithides) bufo	65, 84
comis	58, 193	lodiensis	90
huspodus	247	portlockii	39, 84
lenticularis	116	sangamonensis	39, 87, 179
lotis	193	scitula	39, 87, 179
oblongus	247	major	74
subglobosus	58	perannulata	256, 257
Pentinidæ	133	scitula	74
Pentremites	26, 54, 83, 91, 118, 149, 249, 251	stevensoni	69
burlingtonensis	64, 83	tuberculata	65
conideus	149	Philocrinus	36
cornutus	26	nebrascensis	36
florealis	255	pelvis	36
godoni	149	Pholididæ	101, 270, 272
(Granatocrinus) granulosis	38	Pholidouya	29, 34, 35, 92, 100, 164, 205,
laterniformis	249, 251		207, 209, 218, 269
melo	249, 251	(Cymella) undata	48
var. projectus	26	deceisa	207

	Page.		Page.
<i>Pholadomya</i> (<i>Goniomya</i>) <i>borealis</i>	17	——? <i>secalina</i>	107, 170
(<i>Homomya</i>) <i>audax</i>	225	<i>subelongata</i>	16
<i>curvata</i> (?)	225	<i>Physanoidæ</i>	110, 239
<i>glendonensis</i>	225	<i>Physella</i>	107
<i>humilis</i>	21, 34	<i>Physetocrinus</i>	81
<i>kingii</i>	164	<i>Physidæ</i>	106, 107, 135, 139
<i>marylandica</i>	205	<i>Physinæ</i>	34
<i>occidentalis</i>	269	<i>Physodon</i>	107
<i>orbiculata</i>	35	<i>Piostocheilus</i>	49, 103, 159
<i>papyracea</i>	29, 100	<i>vicksburgensis</i>	222
(<i>Platymya</i>) <i>undata</i>	225	<i>Pileopsis tenella</i>	226
(<i>Procardia</i>) <i>hodgii</i>	190	<i>alta</i>	226
<i>roemeri</i>	269	<i>Pinna</i>	73, 111, 121, 127, 132, 134, 158, 178, 196, 245, 259, 267, 270
<i>sancti-sabæ</i>	220	<i>calanitoides</i>	256
<i>subelongata</i>	17, 92	<i>consimilis</i>	196
<i>subventricosa</i>	18, 100	<i>hilrichsiana</i>	121
<i>syriaca</i>	209	<i>inexpectans</i>	196
<i>texana</i>	218	<i>kingii</i>	111
<i>undata</i> M. & II	15, 48	<i>lakesi</i>	145, 158
<i>undata</i> Dana	223	<i>laqueata</i>	267
<i>Pholadomyidæ</i>	100	? <i>lingula</i>	245
<i>Pholas</i>	205, 270	<i>hulderi</i>	259
<i>cithara</i>	270	<i>peracuta</i>	73, 132, 178
<i>cuneata</i>	18	<i>petrina</i>	127, 134, 152
? <i>lata</i>	270	<i>rostriformis</i>	270
<i>petrosa</i>	205	<i>stevensoni</i>	152
<i>Pholidocidaris</i>	83	<i>Pinnidæ</i>	111, 121, 132, 134, 267
<i>irregularis</i>	83, 87	<i>Pinnularia affinis</i>	229
<i>Pholidops</i>	79, 192	<i>amphioxys</i>	229
<i>bellula</i>	192	<i>digitus</i>	229
<i>cincinnatiensis</i>	79	<i>gastrum</i>	229
<i>quadrangularis</i>	192	<i>macilenta</i>	229
<i>Phonemus</i> (<i>Flabellina</i>) <i>cuneatus</i>	47	<i>mesogonyla</i>	229
<i>sagittarius</i>	47	<i>oregonica</i>	229
<i>Phorus</i>	138, 208	<i>pachyptera</i> ?	203, 229
<i>exoneratus</i>	138	<i>placentula</i>	229
<i>syriacus</i>	208	<i>viridis</i>	229
<i>Phragmoceras</i>	39, 91, 248	<i>viridula</i>	229
<i>ventricosum</i> ?	247	<i>Pirenella</i>	106, 161
<i>walshii</i>	39, 91	<i>Pisces</i>	224
<i>Phyllites</i>	246	<i>Pisidium</i>	137
<i>coriaceus</i>	246	<i>sagittatum</i>	137, 168
<i>venosissimus</i>	246	<i>Pitar</i>	100
<i>Phylloceras</i>	93, 104	<i>Placenticeræ</i>	93, 104
? <i>halli</i>	104	<i>placenta</i>	104
? <i>ramosus</i>	93	<i>var. intercalare</i>	104
<i>Phylloda</i>	100	(<i>Sphenodiscus</i>) <i>lenticulare</i>	104
<i>Phyllograptus</i>	126, 129	<i>vancouverense</i>	93
<i>loringi</i>	126, 129	<i>Placnuopsis</i>	86, 90, 142
<i>Phyllopoda</i>	61	<i>carbonaria</i>	41, 86, 87
<i>Phyllothea australis</i>	227	<i>hilliardensis</i>	142
<i>Phylloteuthis</i>	21, 105	<i>recticardinalis</i>	90
<i>subovata</i>	105	<i>Plagiaria</i>	98
<i>subovatus</i>	21	<i>Plagiostoma dumosa</i>	222
<i>Physa</i>	107, 135, 137, 141, 143, 161, 197	<i>echinatum</i>	47
——?	143, 161, 167, 168	<i>pelagicum</i>	47
<i>bridgerensis</i>	77, 135, 159, 170	<i>Planaria nitens</i>	221
<i>carletoni</i>	77, 143, 167	<i>Planella</i>	35
<i>copei</i>	139, 161, 169	<i>Planorbella</i>	34, 106
<i>felix</i>	141, 161, 169	<i>Planorbinae</i>	34
<i>kanabensis</i>	137	<i>Planorbis</i>	34, 95, 106, 107, 112, 135, 137, 153, 159, 161
<i>longuiscula</i>	16	——?	135
<i>nebrascensis</i>	16	<i>aqualis</i>	153, 170
<i>pleromatis</i>	135, 170	<i>amplexus</i>	17
<i>prisca</i>	180, 197		
<i>rhomboidea</i>	16		

	Page.
<i>Planorbis</i> (<i>Bathymorphalus</i>) <i>amplexus</i>	106, 161, 169
<i>kanabensis</i>	137 , 169
<i>plano-convexus</i>	106, 161, 169
<i>var.</i>	106
<i>cirratus</i>	159, 170
<i>convolutus</i>	16 , 106, 161, 169
<i>var.</i>	106
<i>fragilis</i>	17
(<i>Gyraulus</i>) <i>militaris</i>	153 , 170
<i>leidy</i>	21 , 107, 170
<i>lunata</i>	170
(<i>Menetus</i>) <i>nebrascensis</i>	107
<i>vetustus</i>	107
<i>nebrascensis</i>	170
<i>spectabilis</i>	22 , 95, 112
<i>var. utahensis</i>	95, 112
<i>subumbilicatus</i>	16
<i>tenuivolvis</i>	17
<i>utahensis</i>	22 , 135, 170
<i>var. spectabilis</i>	170
<i>veternus</i>	24, 167
<i>vetulus</i>	21
<i>vetustus</i>	170
<i>Planorbis</i>	128, 259, 261
<i>Planularia</i> <i>cuneata</i>	47
<i>Platyceras</i>	40, 57, 59, 60, 74, 80, 84, 86, 90, 117, 132, 149, 165, 178, 186, 194, 197
<i>attenuatum</i>	67
<i>biserialis</i>	60
<i>bivalve</i>	117
<i>conradi</i>	194
<i>dumosum</i> <i>var. attenuatum</i>	80
<i>equilatera</i>	84, 149
<i>fissurella</i>	84
<i>haliotoides</i>	40 , 59
<i>infundibulum</i>	84
<i>laevigatum</i>	40
<i>minutissimum</i>	186
<i>multispinosum</i>	67 , 80
<i>nebrascense</i>	132, 179
<i>nebrascensis</i>	74
<i>nodosum</i>	194
<i>occidens</i>	197
(<i>Orthonychia</i>) <i>chesterense</i>	40
<i>infundibulum</i>	40
<i>lodiense</i>	67 , 89
<i>pyramidatum</i>	57
<i>quincyense</i>	60
<i>subplicatum</i>	40 , 59
<i>paralium</i>	117
<i>piso</i>	197
[?] <i>reversum</i>	60
<i>spinigerum</i>	86
<i>spirale</i>	57
<i>subundatum</i>	57
<i>thetiforme</i>	194
<i>tortum</i>	67 , 90
<i>tribulosum</i>	165
<i>uncum</i>	40 , 84
<i>undulatum</i>	194
<i>ventricosum</i>	59
<i>Platydisma</i> <i>depressum</i>	226
<i>oculus</i>	226
<i>rotundatum</i>	226
<i>Platycrinites</i>	82, 83, 85

	Page.
<i>Platycrinites</i> <i>aqualis</i>	82
<i>burlingtonensis</i>	82
(<i>Eucladocrinus</i>) <i>montanaensis</i>	71
<i>hali</i>	82
<i>hemisphaericus</i>	83
<i>incomptus</i>	83
<i>planus</i>	82
<i>parvulus</i>	85
<i>subspinosus</i>	82
<i>teuuibranchiatus</i>	82
<i>Platycrinus</i>	23, 26, 38, 42, 43, 59, 60, 117, 118, 127, 130, 144, 154, 163, 165, 248, 249, 250, 251
<i>—?</i>	127, 130
<i>americanus</i>	249 , 251
<i>bonoensis</i>	144 , 165
<i>burlingtonensis</i>	249 , 251
<i>corrugatus</i>	249 , 251
<i>discoideus</i>	249 , 251
<i>haydeni</i>	163
<i>hemisphaericus</i>	38 , 60, 154
<i>incomptus</i>	117
<i>multibranchiatus</i>	26
<i>notensis</i>	38 , 60
<i>oweni</i>	26
<i>parvulus</i>	38
<i>penicillus</i>	23 , 44
<i>planus</i>	44, 59, 249 , 251
<i>plenus</i>	23
(<i>Pleurocrinus</i>) <i>asper</i>	26 , 59
<i>subspinosus</i>	42
<i>pleurovimensis</i>	118
<i>prattenanus</i>	23 , 43
<i>quinquenodus</i>	118
<i>scobina</i>	26 , 59
<i>verrucosus</i>	117
<i>yandellii</i>	249 , 251
<i>Platystoma</i>	25, 80, 148, 194, 197
<i>inornatum</i>	197
<i>lineatum</i>	194
<i>nana</i>	25 , 27
<i>niagarensis</i>	148
<i>var. trigonostoma</i>	80
? <i>trigonostoma</i>	67
? <i>tumida</i>	25
<i>Platydisma</i>	195
? <i>ambiguum</i>	195
? <i>depressum</i>	223
? <i>mccoyi</i>	195
<i>pelicoideus</i>	40
<i>Platytrochus</i> <i>goldfussii</i>	220
<i>stokesii</i>	220
<i>Plectosolen</i> ? <i>diegoensis</i>	220
<i>parallelus</i>	220
<i>Plethomytilus</i>	194
<i>Pleurocrinus</i>	38, 42
<i>Pleurodictyum</i>	57
<i>problematicum</i>	57
<i>Pleurolimnæa</i>	106, 161
<i>Pleuromya</i>	260, 262
<i>newtoni</i>	260 , 262
<i>Pleurophorus</i>	32, 33, 38, 45, 61, 73, 86, 90, 151, 197, 258
<i>—?</i>	92
? <i>angulatus</i>	38, 92
<i>calhouni</i>	33
? (<i>cardinia</i>) <i>subcuneata</i>	19

	Page.		Page.
<i>Pleurophorus costatiformis</i>	38, 61	<i>Pleurotomaria pratteni</i>	25, 45
<i>oblongus</i>	73, 86	<i>prontiana</i>	258
<i>occidentalis</i>	19, 32, 73, 258	(<i>Scalites</i> ?) <i>tropidophora</i>	70, 79
<i>meeki</i>	197	<i>scitula</i>	25, 45
<i>subcostatus</i>	38, 45, 151	<i>shumardi</i>	25, 43
? <i>subcuneata</i>	20	<i>speciosa</i>	25, 45
<i>subcuneatus</i>	33, 51	<i>spherulata</i>	179
<i>tropidophorus</i>	90	<i>spironema</i>	40, 87
<i>Pleurotoma</i>	212, 214, 237	<i>subscalaris</i>	25, 46
<i>beaumontii</i>	222	<i>subconstricta</i>	24, 45
<i>cclata</i>	222	<i>subdecussata</i>	74
<i>childreni</i>	222	<i>subturbinata</i>	19, 20, 32
<i>desnoyersii</i>	222	<i>subsinnuata</i>	25, 45
<i>kellogii</i>	222	<i>strzeleckiana</i>	226
<i>lonsdalii</i>	222	<i>tabulata</i>	149, 179
<i>minor</i>	256	<i>taggarti</i>	88, 164
<i>monilifera</i>	222	<i>tenuicincta</i>	24, 45
<i>nodocarinata</i>	222	<i>texana</i>	49
<i>obliqua</i>	222	<i>textiliger</i>	67, 89
<i>ocoyana</i>	212	<i>triflata</i>	223, 224
<i>pagoda</i>	237	<i>tumida</i>	46
<i>platysoma</i>	237	<i>turbiniiformis</i>	25, 45, 179
<i>sayi</i>	222	<i>uniangulata</i>	231
<i>texana</i>	222	<i>valvatiformis</i>	40, 87
<i>transmontana</i>	212, 214	<i>Pleurotomariidae</i>	32, 39, 63, 103
<i>varicostata</i>	222	<i>Plicatula</i>	93, 136, 142, 218, 266
<i>venusta</i>	237	<i>arenaria</i>	93
<i>Pleurotomaria</i>	24, 32, 39, 43, 44, 45, 56, 63, 74, 79, 81, 89, 117, 147, 149, 151, 164, 165, 179, 191, 197, 248, 258	<i>hydrotheca</i>	136, 142
— ?	63, 248	<i>incongrua</i>	219
<i>angulata</i> ?	248	<i>striato-costata</i>	52
<i>broadheadi</i>	165	<i>urticosa</i>	266
<i>brazoensis</i>	45	<i>Plumulites</i>	191
<i>casii</i>	56	<i>Podosphenia pupula</i>	229
<i>chesterensis</i>	25, 44	<i>Podophthalma</i>	32, 132, 133
<i>conoides</i>	40, 87	<i>Podozamites crassifolia</i>	246
<i>cornula</i>	232	<i>Pœcilopoda</i>	189, 191, 195, 198
<i>coxana</i>	40, 87	<i>Polycellia</i>	275
<i>cyclonemoides</i>	56	<i>Polynema</i>	98
<i>excelsa</i>	246	<i>Polyphemopsis</i>	27, 46, 86, 149, 155, 179
<i>granulostriata</i>	24, 45	— (?)	179
<i>grayvillensis</i>	74, 147, 164	<i>chrysallis</i>	40, 86
<i>gurleyi</i>	67, 87	<i>fusiformis</i>	149
<i>halliana</i>	258	<i>inornata</i>	46
<i>haydeniana</i>	74	<i>nitidula</i>	46, 155, 179
<i>humerosa</i>	19, 20, 32	<i>peracuta</i>	40, 179
<i>inornata</i>	74	<i>Polypi</i>	71, 96, 108, 109, 121, 126, 148, 149, 177
<i>lucina</i>	81	<i>Polypora</i>	72, 127, 131
<i>lenticularis</i>	248	<i>biarmica</i>	52
<i>lonensis</i>	191	<i>marginata</i>	52
<i>marconiana</i>	74	<i>mexicana</i>	274
<i>mississippiensis</i>	117	<i>stragula</i>	127, 131
<i>morrisiana</i>	224, 226	<i>submarginata</i>	72
<i>mulliciensis</i>	49	<i>Polyrhytes</i>	106
(<i>Murchisonia</i>) <i>meta</i>	39	<i>Polyzoa</i>	38, 60, 68, 72, 78, 80, 88, 90, 94, 127, 131, 144, 147, 151, 163, 178
<i>muralis</i>	250	<i>Porambonites</i>	234
<i>nevadensis</i>	197	<i>obscurus</i>	234
<i>newportensis</i>	165	<i>Porcellia</i>	59, 117, 118
<i>nodomarginata</i>	197	<i>crassinoda</i>	117
<i>nuda</i>	223, 226	<i>nodosa</i>	59
<i>obtusispira</i>	258	<i>obliquinoda</i>	118
<i>perhumerosa</i>	74	<i>Porifera</i>	154, 189, 192
<i>perizomata</i>	151	<i>Porites astriformis</i>	247
<i>peronata</i>	258	<i>Porocrinus</i>	37, 55
		<i>crassus</i>	37, 55

	Page.		Page.
<i>Poroerinus pentagonius</i>	37, 55	<i>Poteriocrinus</i> (<i>Scaphiocrinus</i>) <i>unicus</i>	91
<i>Portlandia</i>	98	<i>wachsmuthi</i>	26
<i>Posidonomya</i>	90, 110, 194	<i>spinosus</i>	249, 251
<i>devonica</i>	194	<i>subimpressus</i>	26, 60
<i>fracta</i>	90	<i>swallowi</i>	23, 42
<i>fragosa</i>	110	<i>tenuibrachiatus</i>	26, 60
<i>laevis</i>	194	<i>tumidus</i>	249, 251
<i>Potamida</i>	105	(<i>Zeacrinus</i>) <i>carbonarius</i>	37
<i>Poteriocrinites</i>	77, 82, 83, 84, 85	<i>Priscoficus hornii</i>	221
<i>biselli</i>	84	<i>Prionocyclus</i>	94, 104, 159, 265
(<i>Dendrocrinus</i>) <i>caduceus</i> ..	77	<i>macombi</i>	94
<i>dyeri</i>	68, 77	(<i>Prionotropis</i>) <i>woolgari</i>	104
<i>casei</i>	77	<i>wyomingensis</i>	159, 265
<i>cincinnatiensis</i>	68, 77	<i>Prionotropis</i>	104
<i>polydactylus</i>	68, 77	<i>Procardia</i>	100
<i>posticus</i>	77	<i>Productella</i>	193
<i>hardinensis</i>	84	<i>Productidae</i>	31, 62, 108, 109, 121
<i>macoupinensis</i>	85	<i>Productus</i> ..	24, 26, 30, 44, 45, 58, 61, 62, 72, 85, 89, 92,
? <i>perplexus</i>	82	94, 108, 109, 119, 130, 131, 149, 155, 163,	
(<i>Scaphiocrinus</i>) <i>aqualis</i>	83	177, 193, 196, 233, 235, 257	
<i>bayensis</i>	84	— ?	62, 89, 109, 232
<i>carbonarius</i>	85	<i>aequicostatus</i>	253, 274
<i>coreyi</i>	83	<i>brachytherus</i>	225
<i>depressus</i>	83	<i>calhounianus</i>	20, 245, 257
<i>hemisphericus</i>	85	<i>cancerini</i>	52
<i>huntsvillae</i>	84	<i>cora</i>	177, 243, 255
<i>macadamisi</i>	83	<i>var. mogayoni</i>	243
<i>randolphensis</i>	84	<i>costatoides</i>	245
<i>unicus</i>	83	<i>costatus</i> ..	72, 109, 131, 149, 177, 243, 245, 255
(<i>Zeacrinus</i>) <i>arboreus</i>	84	?	232
<i>armiger</i>	84	<i>delawarii</i>	243
<i>cariniferous</i>	84	<i>dissimilis</i>	62
<i>compactilis</i>	89	<i>elegans</i>	235
<i>compactulus</i>	84	<i>exanthematus</i>	58
<i>concinus</i>	64, 83	<i>flamingii</i>	52, 243
<i>formosus</i>	84	<i>var. burlingtonensis</i> ..	235
[<i>Hydreionocrinus</i>]		<i>fragilis</i>	223, 225
<i>acanthoporus</i>	85	<i>giganteus</i>	163
<i>mucrospinus</i>	85	<i>hirsutiformis</i>	193
<i>subtumidus</i>	84	<i>horrescens</i>	52
<i>Poteriocrinus</i>	23, 26, 37, 38, 42, 43, 60, 85, 91, 118,	<i>horridus</i>	52
163, 249, 251		<i>ivesi</i>	245
<i>bursæformis</i>	118	<i>koninckianus</i>	52
<i>carinatus</i>	26, 60	<i>levicostatus</i> ?	235
<i>depressus</i>	85	<i>levicostus</i>	116
? <i>enormis</i>	26	<i>lasallensis</i>	85
<i>hemisphericus</i>	52	<i>latissimus</i>	92
<i>indianensis</i>	38, 60	<i>leplayi</i> ?	257
<i>montanaensis</i>	163	<i>longispinus</i>	52, 72, 85, 109, 131, 177
<i>obuncus</i>	118	<i>magnus</i>	26, 61
<i>occidentalis</i>	249, 251	<i>mexicanus</i>	131, 256, 257
<i>rhombiferus</i>	249, 251	<i>multistriatus</i>	22, 94, 109
<i>salignoideus</i>	118	<i>muricatus</i>	131
(<i>Scaphiocrinus</i>) <i>bayensis</i> ..	38	<i>nanus</i>	24, 45
<i>carbonarius</i>	26	<i>nebrascensis</i> ..	52, 72, 85, 131, 177, 250,
<i>decadactylus</i>	23, 43	274	
<i>norwoodi</i>	38	<i>nevadensis</i>	109
<i>solidus</i>	26	<i>nodosus</i>	245, 246
<i>subtumidus</i>	38	<i>norwoodi</i>	20, 257
<i>tenuidactylus</i>	38, 60	<i>occidentalis</i>	245
		<i>orbinianus</i>	52
		<i>parvus</i>	24, 44, 130
		<i>pertenuis</i>	72
		<i>pileolus</i>	256, 257
		<i>popei</i>	256, 257

	Page.		Page.
<i>Productus prattenianus</i>	20, 52, 72, 109, 131	<i>Protozoa</i>	31, 41, 43, 55, 56, 58, 71, 120, 121, 131, 177
(<i>Productella</i>) <i>hallanus</i>	193	<i>Psammobia</i>	260, 262
<i>lachrymosus</i> var.		? <i>cancellato-sculpta</i>	48
<i>linus</i>	193	? <i>prematura</i>	260 , 262
<i>lachrymosus</i> var.		<i>Psammobiidae</i>	260, 262
<i>stigmatus</i>	193	<i>Pseudobuccinum</i>	18 , 103
<i>lachrymosus navi-</i>		<i>nebrascensis</i>	18 , 103
<i>cella</i>	193	<i>Pseudoliva sulcata</i>	222
<i>speciosus</i>	193	<i>Pseudomonotis</i>	73, 262
<i>subaculeatus</i>	193	(<i>Eumicrotis</i>) <i>curta</i>	262
<i>shumardianus</i>	193	<i>orbiculata</i>	260 , 262
<i>truncatus</i>	193	<i>lawni</i>	51
<i>punctatus</i>	72, 85, 131, 155, 177, 243, 255	<i>radialis</i>	73
<i>pustulosus</i> (?)	20, 242	<i>sinuata</i>	51
<i>pyxidiformis</i>	243	<i>Pseudonutilus</i>	104
<i>rogersi</i>	20, 52, 233, 245	<i>Pseudoptera</i>	97, 143
<i>scabriculus</i>	243, 245	<i>Psephis tantilla</i>	50
<i>scitulus</i>	24 , 43	<i>Psilomya</i>	134
<i>semireticulatus</i>	30, 72, 109, 131, 177, 232,	<i>Pteria</i>	33, 97, 142, 151, 153, 156, 260, 263, 267
233, 235, 243, 245, 274		<i>abrupta</i>	47
var. <i>antiquatus</i> ..	257	<i>convexo plano</i>	47
<i>semistriatus</i>	22 , 94, 109	<i>cretacea</i>	47
<i>splendens</i> (?)	20, 245, 253, 274	<i>haydeni</i>	47, 97
<i>subaculeatus</i>	94, 108, 196	<i>iridescens</i>	47
<i>subhorridus</i>	109	<i>laripes</i>	47, 267
<i>symmetricus</i>	72, 177	<i>linguiformis</i>	47, 97, 263
<i>villiersi</i>	274	var. <i>subgibbosa</i>	97
<i>viminalis</i>	119	(?) <i>multangula</i>	50
<i>Proctidae</i>	109	<i>navicula</i>	267
<i>Proetus</i>	39, 59, 79, 81, 109, 195, 232, 235	<i>nebrascana</i>	47
<i>ellipticus</i>	39 , 59	(<i>Oxytoma</i>) <i>erecta</i>	153 , 157
<i>haldemani</i>	196	? <i>gastrodes</i>	143
<i>loganensis</i>	235	<i>mucronata</i>	180
<i>marginalis</i>	196	<i>munsteri</i>	33, 49
<i>peroccidens</i>	235	<i>nebrascana</i>	97, 263
(<i>Phæton</i>) <i>denticulatus</i> ..	109	<i>salinensis</i>	151 , 158
<i>planinargitus</i>	67	<i>parkensis</i>	142
<i>planimarginatus</i>	81	<i>pedernalis</i>	47
<i>spurlocki</i>	69 , 79	<i>petrosa</i>	47, 267
<i>Promacrus</i>	68, 89	<i>planisulca</i>	47
<i>andrewsi</i>	89	(<i>Pseudoptera</i>) <i>fibrosa</i>	97, 263
<i>Protarea</i>	155	<i>propleura</i>	143
<i>vetusta</i>	155	<i>sublevis</i>	260 , 263
<i>Protaspongia</i>	189	(<i>Pterinea</i>) <i>morganensis</i> ..	40
<i>fenestrata</i>	189	?? <i>stabilitatis</i>	158
<i>Protaster</i>	78, 83	<i>subgibbosa</i>	47
? <i>granuliferus</i>	70, 78	<i>triangularis</i>	47
? <i>gregarius</i>	83	<i>Pteriidae</i>	29, 30
<i>Prothyris</i>	74, 89	32, 33, 97, 110, 111, 132, 133, 260, 267, 270	
<i>elegans</i>	69 , 74	<i>Pteriine</i>	32, 33
<i>mecki</i>	76	<i>Pterinea</i>	29, 45, 56, 58, 59, 194, 196
<i>Protista</i>	154	<i>fiabella</i>	194
<i>Prosobranchiata</i>	32, 34	<i>macroptera</i>	226
<i>Prosopocephala</i>	132, 264	(<i>Monopteria</i>) <i>gibbosa</i>	41 , 45
<i>Protocardia</i>	34, 92, 99, 218	<i>newarkensis</i>	194
(<i>Leptocardia</i> ?) <i>pertenuis</i> ..	100	<i>pintoensis</i>	196
<i>rara</i>	100	(<i>Pteronites</i> ?) <i>newarkensis</i> ..	67
<i>subquadrata</i>	100	? <i>subpapyracea</i>	41 , 58
(<i>Protocardia</i>) <i>salinaensis</i> ..	99	<i>thebesensis</i>	56
<i>scitula</i>	92	<i>undulata</i>	59
<i>shumardi</i>	34	<i>Pteriniinae</i>	29, 32, 33
<i>Protocaris</i>	199	<i>Pterinopecten</i>	196
<i>marshi</i>	199	<i>hoosacensis</i>	196
<i>Protocardium</i>	268, 271	<i>spio</i>	196
<i>curtum</i>	271	<i>Pterocercella</i>	48

	Page.
<i>Pterocera</i> <i>tippiana</i>	48
<i>Pterocephalus</i>	190, 234
<i>Pterophyllum robustum</i>	246
<i>fragile</i>	246
<i>Pteropoda</i>	28, 31, 39, 56, 67, 84, 89, 118, 126, 138, 149, 151, 165, 189, 191, 195, 198
<i>Pterotocrinus</i>	44
<i>chesterensis</i>	44
<i>crassus</i>	44
<i>Ptilodictya</i>	78, 80, 90, 144, 147, 151, 163
(<i>Stictopora</i>) <i>carbonaria</i>	67 , 90
<i>gilberti</i>	66 , 80
<i>sercata</i>	90
<i>shafferi</i>	68 , 78
<i>triangulata</i>	144 , 147, 151, 162
<i>Ptychaspis</i>	186, 190, 234
<i>minuta</i>	190
<i>pusulosa</i>	234
<i>speciosus</i>	186
<i>Ptychoceras</i>	104, 265
<i>crassum</i>	261 , 265
<i>leai</i>	49
<i>meekanum</i>	261 , 265
<i>mortoni</i>	17 , 104
<i>verneuillii</i>	49
<i>Ptychoceratida</i>	104
<i>Ptychodus whipplei</i>	243 , 246
<i>Ptychoparia</i>	129, 190, 191, 198, 199
? <i>annectaus</i>	191
<i>anytus</i>	190
(<i>Daloma</i> ?) <i>affinis</i>	190
<i>dissimilis</i>	190
<i>granulosus</i>	190
<i>hagueli</i>	190
<i>laviceps</i>	190
<i>linnarssoni</i>	190
<i>nitidus</i>	190
<i>occidentalis</i>	190
<i>orestes</i>	199
var. <i>thersites</i>	199
<i>onangondiana</i>	198
var. <i>aurore</i>	199
<i>oweni</i>	190
<i>pernasutus</i>	190
<i>prospectensis</i>	190
(<i>Pterocephalus</i>) <i>laticeps</i>	190
<i>occidens</i>	190
<i>quadrata</i>	199
<i>robbi</i>	198
<i>regersi</i>	199
<i>similis</i>	190
var. <i>robustus</i>	190
(<i>Solenopleura</i> ?) <i>breviceps</i>	190
<i>tener</i>	199
<i>uniusleatus</i>	190
<i>Ptychophyllum</i>	108
? <i>infundibulum</i>	108
<i>Ptychopteria</i>	196
<i>protoforme</i>	196
<i>Pulmonaria</i>	61
<i>Pulmonata</i>	102, 105, 107
<i>Pulmonifera</i>	34, 135, 197
— ?	264
<i>Psilomya</i>	101, 127
<i>Pupa</i>	137, 159

	Page.
<i>Pupa arenula</i>	137, 159, 170
<i>atavuncula</i>	159 , 170
<i>bigabyt</i>	167
<i>helicoides</i>	16
<i>incolata</i>	137 , 170
? <i>leidy</i>	77
(<i>Leucocheila</i>) <i>incolata</i>	159
<i>vermillionensis</i>	167
<i>vetusta</i>	167
<i>Purpura</i>	212
<i>Pyramia</i>	225
<i>Pyramidellidae</i>	103, 134
<i>Pyramimitracostata</i>	221
<i>Pyranus</i>	224
<i>ellipticus</i>	224
<i>myiformis</i>	224
<i>Pyrgorhynchus mortonis</i>	222
<i>Pyrgulifera</i>	70 , 95, 162
<i>bumeroza</i>	95, 112, 162, 168
<i>Pyrifusus</i>	103
? <i>flexicostatus</i>	49
? <i>haleanus</i>	49
? <i>impressus</i>	49
<i>intertextus</i>	49
(<i>Neptunella</i>) <i>intertextus</i>	103
<i>newberryi</i>	103
<i>subturrites</i>	103
<i>newberryi</i>	49
<i>subturrites</i>	49
<i>Pyrina parryi</i>	233
<i>Pyropsis</i>	103
<i>bairdi</i>	103
var. <i>rotula</i>	103
<i>Pyruia bairdi</i>	14 , 16, 49
<i>glabra</i>	256
<i>modesta</i>	50
Q.	
<i>Quadrula</i>	105
R.	
<i>Radiata</i>	33, 37, 40, 41, 42, 43, 44, 45, 54, 55, 56, 57, 58, 60, 68, 71, 77, 85, 94, 96, 108, 109, 117, 133, 136, 138, 142, 144, 154, 165, 226, 227, 235, 236, 260, 261.
<i>Radix</i>	105
<i>Radula</i>	266
<i>acutilineata</i>	266
<i>pelagica</i>	266
<i>reticulata</i>	266
<i>Raphistoma</i>	55, 108, 130, 191, 234
<i>acuta</i>	234
<i>lenticularis</i>	55
<i>nasoni</i>	191
? <i>rotuliformis</i>	108
? <i>trochiscus</i>	108, 130
<i>Receptaculites</i>	55, 91, 129, 190
— ?	55, 129
<i>ellipticus</i>	190
<i>elongatus</i>	190
<i>formosus</i>	64 , 91
<i>globularis</i>	55
<i>mammillaris</i>	190
<i>oweni</i>	55
<i>Remopleurides</i>	185
<i>striatulus</i>	185

	Page.		Page.
Renssellæria	57, 63	Rhynchonella pugnus	193
conradi	57	pustulosa	116 , 235
kevis	63	rockymontana	131
Requienia	176	speciosa	57
patagiata	176	subtrigona	21
texana	176	tennesseensis	148
Retepora archimedes	248	tethys	193
indianensis	248	texana	257
Retzia	30, 72, 79, 116, 131, 147, 163, 178, 196, 257	thera	196
acamponia	119	uta	20, 52, 131, 177, 245
(Ambona?) altirostris	119	wasatchensis	127 , 131
compressa	30	wilmingtonensis	220
? meekana	256	Rhynchonellidæ	30, 33, 62, 108, 109, 131, 262
meekiana	257	Rhytophorus	95, 112, 137, 161
mermonii	20, 52, 131, 178	meekii	137 , 161, 168
papillata	256 , 257	priscus	95, 112, 161, 168
punctulifera	73	Rimella curvilirata	48
radialis	196	Ringicula acutispira	48
sexplicata	116	biplicata	221
(Trematospira) granulifera	68 , 79	pulchella	48
woosteri	147 , 163	subpellucida	48
Rhaphoneis foliacea	229	Ringiculidæ	101
lanceolata	229	Ringiculinae	29
oregonica	229	Ringinella subpellucida	48
Rhiphidoglossa	102, 132, 133, 134	Rissoidæ	106
Rhiphidoglossata	32, 34	Rostellaria?	219
Rhizopoda	31, 129, 131, 190	americana	48, 256
Rhodea	106	biangulata	14 , 48
Rhodocrinus	59, 150, 163	? collina	219
nanus	40 , 59	(texana)	219
vesperalis	150 , 163	fusiformis	13
Rhombopora	71 , 131	indurata	206
lepidodendroides	71 , 131	nebrascensis	48, 274
Rhynchonella	24, 30, 41, 57, 59, 72, 78, 80, 85, 116, 118, 126, 127, 130, 131, 148, 163, 165, 177, 193, 196, 235, 236, 245, 257, 262	rostrata	48
— ?	30, 33, 36, 62, 257, 274	Rostellites	214, 219
angulata	52	bellus	48
argenteirubica	126 , 130	biplicatus	49
capax	78, 148	conradi	49
caput testudinis	118	nasutus	49
carolina	80	texana	219
castanea	62 , 193	texanus	214
dentata	78, 148	Rostrifera	35
duplicata	193	Rotella	152
emmonsii	193, 235	nana	221
endlichi	88 , 163	verruculifera	152
eurekensis	196	Rotundaria	105
gnathophora	30 , 236		
guadalupe	256 , 257	S.	
horsfordi	193	Saccocrinus	56
indentata	257	christyi	56
(Leiorhynchus) laura	193	Sagenella	187
nevadensis	193	ambigua	187
sinuatus	193	Sanguinolaria	259
metallica	127 , 131	oblata	259
missouriensis	41, 59	Sanguinolites	68, 80, 89, 194, 197
myrina	236 , 262	aeolus	89, 197
neglecta	80	? combensis	194
var. acobina	70	? gracilis	194
nitens	49	? maenia	197
? occidentalis	193	obliquus	66
opposita	116	? obliquus	89
osageensis	72, 85	(Promacrus) missouriensis	69
ottumwa	118 , 165	nasutus	69
		rigidus	194

	Page.		Page.
<i>Sanguinolites retusus</i>	197	<i>Scaphites nodosus</i> var. <i>plenus</i>	21, 104
<i>salteri</i>	197	<i>quadrangularis</i>	104, 265
<i>sanduskyensis</i>	66 , 80	<i>ventricosus</i>	28 , 104
? <i>sanduskyensis</i>	194	<i>vermiculus</i>	159
<i>simplex</i>	197	<i>vermiformis</i>	28 , 104
<i>striatus</i>	197	<i>warreni</i>	104, 135, 265
<i>Sanguinolites ventricosus</i>	194	<i>wyomingensis</i>	265
<i>Sarcinula</i>	223	<i>Scaphitidae</i>	104, 135, 265
<i>costata</i>	247	<i>Scaphoides</i>	33
? <i>obsoleta</i>	232	<i>Scenella</i>	189
(Porites?) <i>glabra</i>	247	? <i>conula</i>	189
<i>Saxicava</i>	211, 213, 260, 263	<i>Schænaster</i>	44, 60
<i>abrupta</i>	211 , 213	<i>fimbriatus</i>	44
<i>jurassica</i>	260 , 263	<i>wachsmuthi</i>	40 , 60
<i>Saxicavidae</i>	101, 269, 271	<i>Schizambon</i>	190
<i>Scala forshayii</i>	48	<i>typicalis</i>	190
<i>Scalaria</i>	205, 237	<i>Schizocrinus nodosus</i> ?	231
<i>cerethiformis</i>	14	<i>Schizodesma</i>	100
<i>expansa</i>	205	<i>Schizodus</i>	24, 32, 44, 45, 73, 86, 89, 132, 178, 194, 197
<i>forshayii</i>	48	— ?	45
<i>texana</i>	48	<i>amplus</i>	64 , 86
<i>unilineata</i>	237	<i>chesterensis</i>	24 , 44
<i>Scalpellum inequicostatum</i>	48	<i>cuneatus</i>	90, 197
<i>Scambula</i>	268	<i>curtiforme</i>	197
<i>perplana</i>	268	<i>curtus</i>	41 , 73, 86
<i>Scaphiocrinus</i>	26, 43, 60, 72, 82, 83, 84, 85, 91, 117, 144, 149, 165	(Cytherodon) <i>orbicularis</i>	194
<i>elio</i>	82	<i>deparcus</i>	197
<i>delicatus</i>	82	<i>medinaensis</i>	67 , 89
<i>depressus</i>	64	<i>obscurus</i>	51
<i>fuscillus</i>	82	<i>ovatus</i>	32
<i>gibsoni</i>	144 , 149, 165	(Prisconia) <i>perelegans</i>	86
<i>gurleyi</i>	144 , 149, 165	<i>rossicus</i>	51, 52, 87
? <i>hemisphaerious</i>	72	<i>subtrigonalis</i>	67
<i>juvenis</i>	82	<i>pintoensis</i>	197
<i>macrodactylus</i>	82	<i>wheeleri</i>	73, 132, 178
<i>nanus</i>	82	<i>Schizopyga</i>	215, 216
<i>notabilis</i>	82	<i>californiana</i>	215 , 216
<i>penicillus</i>	82	<i>Schizothærus</i>	211, 213
<i>rndis</i>	82	<i>nutalli</i>	211 , 213
<i>rusticellus</i>	117	<i>traskei</i>	211
<i>scalaris</i>	82	<i>Schoenaster</i>	24
<i>striatus</i>	82	<i>Scoliostoma</i>	195
<i>tethys</i>	82	<i>americana</i>	195
(<i>Zeacrinus</i>) <i>asper</i>	82	<i>Scorpio carbonarius</i>	53
<i>lyra</i>	82	<i>Scutella</i>	205
<i>scobina</i>	82	<i>aberti</i>	205
<i>serratus</i>	82	<i>crustuloides</i>	222
<i>Scaphites</i>	28, 104, 135, 250, 265	<i>jonesii</i>	222
(<i>Ammonites</i> ?) <i>comprimus</i>	250	<i>lyelli</i>	220
<i>nodosus</i>	250	<i>pileus-sineusis</i>	222
(<i>Discoscaphites</i>) <i>abyssinus</i>	104	<i>rogersi</i>	222
<i>cbeyennensis</i>	104	<i>Seacrinus</i> (<i>Prisconia</i>) <i>perelegans</i>	64
<i>conradi</i>	104	<i>Sedidae</i>	98
var. <i>gu-</i>		<i>Sedgewickia</i>	32, 38, 61, 79, 236
<i>losus</i>	104	<i>altirostrata</i>	32
<i>conradi</i> var. <i>in-</i>		<i>concava</i>	32, 236
<i>termedius</i>	104	? <i>compressa</i>	68 , 79
<i>mandanensis</i>	104	? <i>fragilis</i>	68 , 79
<i>nicoletii</i>	104	(<i>Grammysia</i> ?) <i>neglecta</i>	68 , 79
<i>larvæformis</i>	19 , 104	(<i>Sanguinolites</i>) ? <i>subarcuata</i>	38, 61
<i>mandanensis</i>	274	<i>topekaensis</i>	32
<i>nicoletii</i>	274	<i>Semicassis sowerbii</i>	221
<i>nodosus</i>	265	<i>Seila</i>	102
var. <i>brevis</i>	104, 265	<i>Septopora cestriensis</i>	87
		<i>Septastrea</i> ? <i>sexradiata</i>	40

	Page.		Page.
Serpula	35, 105, 135, 144, 165	Soleniscus planus	151 , 175, 178
<i>insita</i>	144 , 165	<i>typicus</i>	25 , 46, 175, 178
<i>intrica</i>	135	Solenocaris	90
(Spirorbis) planorbites	51	Solenochilus	65, 104
? <i>tenuicarinata</i>	105	Solenocochlea	101, 132, 264
? <i>tenuicarinatus</i>	17	Soleuoides	250
Serpulidae	35, 105, 135	<i>lowensis</i>	250
Serrifusus	103	Solenomya	45, 87, 90, 197
Sigaretus scopulosum	50	?? <i>anodontoides</i>	90
<i>scopulosus</i>	206	<i>biarmica</i>	50
Siliqua	270	<i>curta</i>	197
<i>cretacea</i>	270	(<i>Jancia</i>) <i>vetusta</i>	66
Sinistralia	103	<i>radiata</i>	45
Sinuopallia	264, 269	Solenopsis	74
Sinum scopulosum	50	<i>solenoides</i>	74
Siphonariide	102, 112	Solidula biplicata	48
?	264	Solyma	269
Siphonida	268	<i>lineolata</i>	269
Siphonostomata	264	Spatangidae	96
Siphonotreta ? <i>curta</i>	225	Sphaera	110
Skenidium	192	<i>whitneyi</i>	110
<i>devonicum</i>	192	Sphærella inflata	220
Smithia	62, 108	Sphærexochus	91
<i>hennahii</i>	108	<i>romingeri</i>	91
(<i>Pachyphyllum</i>) <i>woodmani</i>	123	Sphæriola	99, 260, 264, 269
<i>verrilli</i>	62	? <i>cordata</i>	99
Solariidae	108, 180	? <i>endotrachys</i>	99
Solariorbis depressus	221	? <i>obliqua</i>	88
<i>lineatus</i>	221	<i>transversa</i>	260 , 264
<i>nitens</i>	221	<i>umbonata</i>	269
Solarium	180	? <i>warreniana</i>	99
<i>abyssinus</i>	48	Sphærium	105, 112, 135, 160
<i>henrici</i>	221	— ?	135
<i>ornatum</i>	221	<i>formosum</i>	105, 160, 168
<i>pseudogranulatum</i>	221	<i>idahoense</i>	65 , 112, 166, 170
<i>wallatense</i>	180	<i>planum</i>	21 , 105, 160, 168
Solecortus ? <i>ellipticus</i>	225	<i>recticardinale</i>	21 , 105, 160, 168
(<i>Psanmobia</i> ?) <i>planulatus</i>	225	<i>rugosum</i>	65 , 112, 166, 170
Solemya	24, 80, 99, 153	<i>subellipticum</i>	105, 160, 168
<i>bilix</i>	153 , 157	Sphaerocrinus	37
(<i>Jancia</i>) <i>vetusta</i>	80	Sphenodiscus	104
<i>protexta</i>	50	Sphenophyllum	155
<i>radiata</i>	24	Sphenophyllum emarginatum	155
<i>supplicata</i>	99	<i>schlottheimi</i>	155
<i>ventricosa</i>	205	Sphenopteris	149, 246
Solemyidae	99	<i>acuta</i>	149
Solenacutus	50	<i>fremonti</i>	231
? <i>dakotensis</i>	18	<i>lobifolia</i>	226
<i>diegoensis</i>	220	<i>paucifolia</i>	231
<i>irradians</i>	48	<i>triloba</i>	231
<i>parallelus</i>	220	<i>trifoliata</i>	231
(<i>Solecortus</i> ?) <i>ellipticus</i>	223	Sphenopoterium	24 , 41, 43
<i>planulatus</i>	223	<i>compressum</i>	24 , 43
<i>subplicatus</i>	15	<i>cuneatum</i>	24 , 43
Solenidae	101, 279	<i>enorme</i>	24 , 41
Soleniscus	25 , 46, 151, 178	<i>var. depressum</i>	41
<i>brevis</i>	151	<i>obtusum</i>	24 , 43
(<i>Macrocheilus</i>) <i>fusiformis</i>	175, 178	Spheroecoryphe	185
<i>medialis</i>	175, 178	<i>robustus</i>	185
<i>newberryi</i>	175, 178	Spiractæon	29
<i>paludina formis</i>	175, 178	Spiraxis	221
<i>ponderosus</i>	175, 178	Spirifer	30, 31, 41, 44, 57, 58, 61, 62, 73, 89, 90, 91, 92,
<i>primigenius</i>	175, 178	94, 108, 109, 116, 118, 127, 130, 131, 148, 149,	
<i>texasus</i>	175, 178	155, 163, 165, 178, 225, 233, 245, 253, 257	
<i>ventricosus</i>	175, 178	— ?	20, 36, 255

	Page.		Page.
<i>Spirifer acuminata</i>	149	<i>Spirifer sphakæna</i>	225
<i>agelaius</i>	163	(<i>Spiriferina</i>) <i>cristata</i>	196
<i>annectans</i>	196	<i>scobina</i>	94
<i>cameratus</i>	20, 52, 73, 85, 94, 131, 149, 178, 233, 245, 246, 257	<i>pulcher</i>	94
<i>carteri</i>	89	<i>striatus</i>	130, 131, 243
<i>cedarensis</i>	250	var. <i>triplicatus</i>	243
<i>centronatus</i>	130	<i>strigosus</i>	94
<i>compactus</i>	62	<i>subcardiiformis</i>	165
<i>cupidatus</i>	109	<i>suborbicularis</i>	91
<i>darwinii</i>	225	<i>subundiferus</i>	58
<i>desiderata</i>	196	<i>snleifera</i>	256 , 257
<i>dnodeticostatus</i>	225	<i>textus</i>	149
<i>englemanni</i>	57, 94, 108	<i>trigonalis</i>	196
<i>euritines</i>	149, 250	(<i>Trigonotreta</i>) <i>argentarius</i>	108
<i>extenuatus</i>	130	<i>biplicatus</i>	89
<i>fastigatus</i>	64 , 91	<i>cameratus</i>	109
<i>formacula</i>	58	<i>opinus</i>	90
<i>fultonensis</i>	85	<i>piñonensis</i>	65 , 108
<i>glaber</i>	225	<i>scobina</i>	109
var. <i>contracta</i>	26	<i>striatiformis</i>	89
<i>glans cerasus</i>	118	<i>strigosus</i>	108
<i>gregaria</i>	149	<i>texanus</i>	68
<i>guadalupensis</i>	257	? <i>texanus</i>	246
<i>hemicyclus</i>	57	<i>triplicata</i>	232
<i>hemiplicata</i>	20, 232	<i>utabensis</i>	94, 108
<i>hirtus</i>	116	<i>vespertilia</i>	225
<i>inequicostatis</i>	250	<i>Spirifera</i>	193, 196, 235
<i>iowensis</i>	250	— ?	193, 235
<i>kentuckensis</i>	20, 233, 274	<i>alba-pinensis</i>	235
<i>kennicotti</i>	62	<i>centronata</i>	235
<i>keokuk</i>	92	<i>disjuncta</i>	193
<i>laminosus</i>	52	<i>englemanni</i>	22 , 193
<i>leidy</i>	196	<i>macra</i>	22
<i>ligus</i>	250	(<i>Martinia</i>) <i>glabra</i>	193
<i>lineatus</i>	20, 233, 243, 245	var. <i>nevadensis</i>	193
(<i>Martinia</i>) <i>cooperensis</i>	41	<i>norwoodi</i>	22
<i>franklinii</i>	63	<i>parryana</i>	193
<i>glaber</i> var. <i>contracta</i>	44, 127, 131	<i>piñonensis</i>	319
<i>lineatus</i>	30, 155, 178	<i>pulchra</i>	22
<i>maia</i>	193	<i>rareicosta</i>	193
<i>meristoides</i>	63	<i>scobina</i>	22
<i>peculiaris</i>	130	<i>setigera</i>	235
<i>plano convexa</i>	178, 274	(<i>Spiriferina</i> ?) <i>alia</i>	236
<i>plano convexus</i>	31, 73, 131	<i>striata</i>	235
<i>richardsoni</i>	63	<i>varicosa</i>	193
<i>sublineatus</i>	63	<i>Spiriferida</i>	31, 62, 108, 169
<i>undifera</i>	193	<i>Spiriferina</i>	30, 73, 109, 118, 127, 131, 178, 196, 236, 257
<i>meusebachianus</i>	274	— ?	30, 109
<i>mexicanus</i>	256 , 257	<i>billingsii</i>	256 , 257
<i>moosak paliensis</i>	52	<i>homfrayi</i> ?	236
<i>neglecta</i>	196	<i>kentuckensis</i>	52, 73, 131, 178
<i>neglectus</i>	91	(<i>Martinia</i>) <i>glabra</i>	193
<i>oetoplicata</i> ?	232	<i>oetoplicata</i>	131
<i>paradoxus</i>	58	<i>pulchra</i>	169
<i>perextensus</i>	58	<i>spinosa</i> var. <i>campestris</i>	127
<i>perlamellosus</i>	57	<i>subtexta</i>	119
<i>pennatus</i>	250	<i>Spirigera</i>	127, 130, 132
<i>planoconvexa</i>	26, 274	<i>Spirigera</i> — ?	20
<i>propinquus</i>	61	<i>monticola</i>	127 , 130
<i>radiata</i>	148	<i>obmaxima</i>	130
<i>rocky-montani</i>	243 , 245	<i>planosulcata</i>	132
<i>rocky montanus</i>	131	<i>subtilita</i>	20, 132
<i>solidirostris</i>	116	<i>Spironema</i>	48, 103
		<i>bella</i>	48

	Page.		Page.
<i>Spironema tenuilineata</i>	48, 103	<i>Streptorhynchus</i> <i>lens</i>	119
<i>Spirorbis</i>	106, 153	<i>minor</i>	190
? <i>dickhauti</i>	153	<i>occidentalis</i>	245
<i>helix</i>	51	(<i>Orthismia</i>) <i>shumardianus</i>	257
<i>Spirulea rotula</i>	49	<i>pyramidalis</i>	245
<i>Spondylidar</i>	266	<i>umbraculum</i>	245
<i>Spondylus</i>	217, 266	<i>Striarca</i>	98
<i>dimosus</i>	222	<i>Striatopora</i>	56, 119, 156
<i>echinatus</i>	47	<i>carbonari</i>	119
<i>estrallensis</i>	215	<i>linnaeana</i>	156
<i>estrellanus</i>	217	<i>missouriensis</i>	56
<i>gregalis</i>	266	<i>Stricklandinia</i>	57, 91, 135
<i>Spongie</i>	41, 43, 56, 58, 91	<i>castellana</i>	138
<i>Spongiolites</i>	203	<i>davidsoni</i>	152
<i>Spongolithis</i> <i>acicularis</i>	229	<i>deformis</i>	64, 91
<i>aspera</i>	229	<i>elongata</i> var. <i>curta</i>	57
<i>fustis</i>	229	<i>Stricklandinia</i> <i>salteri</i>	152
<i>mesogonyla</i>	229	<i>Strobilocystites</i>	138
<i>Stagnicola</i>	106	<i>calvini</i>	138
<i>Stralagnum concentricum</i>	220	<i>Stromatopora</i>	156, 192
<i>Stauroneis baileyi</i>	229	<i>Strombus</i>	208
<i>semen</i>	229	<i>pervetus</i>	208
<i>Stavelia</i>	98	<i>pustulifera</i>	156
<i>Steganoerinus</i>	40, 42, 59	<i>Stromomena rhomboidalis</i>	130
<i>araneolus</i>	42	<i>Strophalosia</i>	257
<i>pentagonus</i>	42, 59	(<i>Aulosteges</i>) <i>guadalupensis</i>	257
<i>sculptus</i>	42	<i>Strophodonta</i>	148, 192, 235, 250
<i>Stephanodiscus</i> — ?	203	<i>arcuata</i>	192
<i>Stenaster</i>	78	<i>beckii</i>	36
<i>grandis</i>	69, 78	<i>canace</i>	235
<i>Stenophora columnaris</i>	52	<i>calvini</i>	192
<i>Stenotheca</i>	189	? <i>costata</i>	250
<i>acadica</i>	198	<i>demissa</i>	148, 192
<i>elongata</i>	189	<i>headleyana</i>	36
<i>Stramonita</i>	212, 214	<i>inequiritiata</i>	192
<i>petrosa</i>	212, 214	<i>iowensis</i>	250
<i>Straparollus</i>	25, 26, 30, 42, 44, 46, 74, 87, 195, 258	<i>parva</i>	250
— ?	258	<i>paterstoni</i>	192
<i>Straparollus cornudanus</i>	258	<i>perplana</i>	192
(<i>Euomphalus</i>) <i>minnesotensis</i>	250	<i>punctulifera</i>	192
<i>pernodosus</i>	65, 87	<i>Strophites grandeva</i>	167
<i>rugosus</i>	74	<i>Strophomena</i>	56, 57, 58, 62, 78, 89, 126, 129, 130
<i>subquadratus</i>	65, 87	148, 190, 192, 234, 235, 248	
<i>subrugosus</i>	87	<i>alternata</i>	148
<i>lebs</i>	42	<i>angulata</i> ?	248
<i>newarkensis</i>	195	<i>convexa</i>	247
<i>planidorsatus</i>	44	<i>deltoides</i>	248
<i>similis</i>	26, 44	<i>filitexta</i>	130
var. <i>planus</i>	26, 44	<i>Fontinalis</i>	126, 129
<i>umbilicatus</i>	46	(<i>Hemopronites</i>) <i>crenistris</i>	89
<i>Streblopteria</i>	45, 196	<i>filitexta</i>	78
<i>similis</i>	196	<i>nutans</i>	78
? <i>tenuilineata</i>	45	<i>plano-convexa</i>	78
<i>Strophoua</i>	212, 214	<i>planumbona</i>	78
<i>pedroana</i>	212, 214	<i>plicata</i>	78
<i>Strepsidura</i>	237	<i>sinuata</i>	78
<i>conybearii</i>	222	<i>sulcata</i>	78
<i>Streptacis</i>	86	<i>nemea</i>	190, 234
<i>whitfieldi</i>	67, 86	<i>nasuta</i> ?	248
<i>Streptelasma</i>	155	<i>planumbona</i>	148
<i>corniculum</i>	155	<i>rhomboidalis</i>	36, 58, 78, 192, 235
<i>Streptorhynchus</i>	116, 119, 177, 190, 192, 235, 245, 257	<i>serica</i> ?	248
<i>chemungensis</i>	192	(<i>Strophodonta</i>)	58
<i>equivalvis</i>	235	<i>cavumbona</i>	57
<i>inflatus</i>	116, 235	<i>demissa</i>	62

	Page.		Page.
<i>Strophomena</i> (<i>Strophodonta</i>) <i>subdemissa</i>	62	<i>Syringopora lineata</i> ?	247
<i>unicostata</i>	56	<i>maclurei</i>	156
<i>Strophomenida</i>	31, 62, 108, 109	<i>miltattentata</i>	72, 131
<i>Strophostylus</i>	57	<i>perelegans</i>	156, 192
<i>cancellatus</i>	57	<i>Syringothyris</i>	196
<i>Strotocrinus</i>	40, 42, 81	<i>cuspidata</i>	196
? <i>asperrimus</i>	81		T.
<i>ectypus</i>	81	<i>Tanioglossa</i>	132, 135
<i>liratus</i>	81	<i>Teniopteris elegans</i>	246
<i>perumbrosus</i>	42, 81	<i>glassopteroideus</i>	246
(<i>Physetocrinus</i> ?) <i>asper</i>	81	<i>magnifolia</i>	246
<i>dilatatus</i>	81	<i>Tanniosoma</i>	215, 216
<i>regalis</i>	42	<i>gregaria</i>	215, 216
<i>Styliola</i>	195	<i>Tancredia</i>	34, 99, 143, 164, 262
<i>fissurella</i>	195	? <i>aquilateralis</i>	21, 34
<i>fissurella</i> var. <i>intermittens</i>	195	<i>americana</i>	99
<i>Subnites</i>	56, 91	<i>bulbosa</i>	260, 262
<i>inflatus</i>	65, 91	? <i>calionotus</i>	143
(<i>Polyphemopsis</i>) <i>brevis</i>	56	<i>corbuliformis</i>	260, 262
<i>Succinea</i>	137, 159	<i>extensa</i>	164
(<i>Brachyspira</i>) <i>papillispira</i>	159, 170	? <i>inornata</i>	262
<i>papillispira</i>	137	<i>postica</i>	260, 262
<i>Sarcula</i>	103	<i>warrenana</i>	21, 34, 262
<i>beaumontii</i>	222	<i>Tancrediidae</i>	34, 99, 262
<i>cælata</i>	222	<i>Taonurus</i>	155
<i>childreni</i>	222	<i>colletti</i>	155
<i>desnoyersii</i>	222	<i>Tapes</i>	158, 211, 213, 215, 216, 217, 259
<i>kellogii</i>	222	— ?	217
<i>monilifera</i>	222	<i>diversum</i>	211, 213
<i>nodocarinata</i>	222	<i>hilgardi</i>	158
<i>obliqua</i>	222	<i>inezensis</i>	217
<i>sayi</i>	222	<i>lineatum</i>	215, 216
<i>varicostata</i>	222	<i>montana</i>	217
<i>Sarculites</i>	103	<i>montanensis</i>	259
<i>Sarilella bifrons</i>	229	<i>wyomingensis</i>	70
<i>plicata</i>	229	<i>Taphius</i>	34, 106
<i>Sarirella</i>	203	<i>Taxocrinus</i>	37, 44, 58, 60, 82, 149
<i>campylodiscus</i>	203	<i>gracilis</i>	37, 58
<i>splendida</i>	203	<i>multibrachiatus</i> var. <i>colletti</i>	149
<i>Sycotypus</i>	212, 214	<i>semioivatus</i>	44
<i>ochoanus</i>	214	<i>thiemei</i>	82, 87
<i>oceyanus</i>	50, 212	<i>Tectibranchiata</i>	101, 264
<i>penitus</i>	221	<i>Tectura</i> ? <i>occidentalis</i>	48
<i>Symphysurus</i>	191	<i>Tecturidae</i>	134
? <i>goldfussi</i>	191	<i>Tellimera</i>	269
<i>Synbathocrinus</i>	53, 63, 81, 82, 91	<i>eborea</i>	269
<i>brevis</i>	63, 82	<i>Tellina</i>	28, 100, 111, 207, 209, 211, 212, 213, 214
<i>dentatus</i>	249, 251	<i>albaria</i>	206
<i>robustus</i>	91	(<i>Arcopagia</i>) ? <i>cheyennensis</i>	107
<i>wachsuthi</i>	40, 63, 82	<i>aretata</i>	206
<i>Synecyclonema</i>	47, 97, 263	<i>bitruncata</i>	206
? <i>rigida</i>	47, 97, 263	? <i>cheyennensis</i>	15
<i>Synedra splendida</i>	229	<i>congesta</i>	211, 213
<i>ulna</i>	229	<i>dariana</i>	212, 214
<i>Synocladia</i>	72, 90, 131, 178	<i>diegoana</i>	211, 213
<i>Syphonia biserialis</i>	19, 52, 72, 90, 131, 178	<i>emacerata</i>	206
<i>piriformis</i> ?	247	<i>equilaterialis</i>	15
<i>virgulacæ</i>	52	? <i>formosa</i>	21, 48
var. <i>biserialis</i>	87	<i>gracilis</i>	15
<i>Syntriclasma</i> ?	45, 72, 85, 177	? <i>isonema</i>	111
<i>hemiplicata</i>	45, 72, 85, 177	<i>modesta</i>	111
<i>Syringopora</i>	36, 72, 108, 109, 130, 131, 156	<i>nasuta</i>	206
— ?	109	<i>nitidula</i>	28
<i>harveyi</i>	119, 130	<i>obruta</i>	207
<i>hisingeri</i>	192		

	Page.		Page
<i>Tellina occidentalis</i>	243	<i>Terebratulina mormonii</i>	243
oocoyana.....	212 , 214	nitens.....	49, 206
(Ene?) subscitula.....	100	perinifata.....	257
pedro.....	211	plano-sulcata.....	243
pedroana.....	213	rocky montana.....	243
(Peronæa?) equilateralis.....	100	royssii.....	243
scitula.....	100	semisimplex.....	146 , 162
plana.....	220	subtilita.....	232 , 233, 243, 253, 255, 274
pronti.....	15	uta.....	243
scitula.....	15	utah.....	235
subelliptica.....	15	wacoensis.....	218
subscitula.....	70	wilmingtonensis.....	220
subtortuosa.....	16	<i>Terebratulidæ</i>	30, 121, 132, 265
syriaca.....	207 , 289	<i>Terebratulina atlantica</i>	265
<i>Tellinella</i>	100	floridana.....	265
<i>Tellinidæ</i>	100, 111, 269	lachryma.....	265
<i>Tellinides</i>	100	<i>Terebrispira</i>	103
<i>Tellinomya</i>	55, 79, 190	<i>Teredidæ</i>	101, 270, 272
alta.....	55	<i>Teredo</i>	101, 270, 272
contracta.....	190	emacerata.....	272
? hamburgensis.....	190	globosa.....	18 , 101
? obliqua.....	79	irregularis.....	270
protensa.....	232	selliformis.....	21 , 101
ventricosa.....	55	substriata.....	206
<i>Tellinula</i>	100	tibialis.....	270
<i>Temnochilus</i>	65, 104	<i>Tessarolax</i>	158
<i>Tenea</i>	269	hitzii.....	158
pinguis.....	269	<i>Testacea</i>	206
<i>Tentaculites</i>	39, 56, 138, 195	<i>Tetrabranchiata</i>	33, 35, 103, 132, 135, 263, 265
attenuatus.....	195	<i>Tetradecapoda</i>	36, 46, 61, 90
bellulus.....	195	<i>Teuthidæ</i>	105
gracilistriatus.....	195	<i>Textularia phylloides</i>	47
hoyti.....	138	<i>Thaleops?</i>	248
oswegoensis.....	39 , 56	<i>Tballogenes</i>	123
scalariformis.....	195	<i>Thaumastus</i>	106, 161
sterlingensis.....	39 , 56	limnæformis.....	106, 161, 169
tennistriatus.....	39 , 56	<i>Theca</i>	28, 31
<i>Terebra</i>	237	gregaria.....	31
plicifera.....	237	lanceolata.....	226
<i>Terebratella</i>	265	(Pugilunculus) gregarea.....	28
plicata.....	265	<i>Thecia ramosa</i>	192
vanxemi.....	265	<i>Thecosmata</i>	31
<i>Terebratula</i>	30, 73, 85, 130, 132, 146, 154, 162, 178, 196, 209, 218, 233, 235, 236, 257, 259, 265	<i>Thetis</i>	100, 264
—?.....	30, 206, 225	? circularis.....	100, 264
amygdala.....	223 , 225	<i>Thracia</i>	34, 92, 100, 151, 158, 215, 216, 259, 261, 262, 264
augusta.....	146, 162, 236	? arcuata.....	21 , 34
bovens.....	85	(Corimya) grinnelli.....	259
bovidens.....	73, 178	gracilis.....	100
burlingtonensis.....	116	maetropis.....	215 , 216
choctawensis.....	218, 255	mya-formis.....	151 , 158
(Dielsma) bovidens.....	132	? occidentalis.....	17 , 92
burlingtonensis.....	130	? prouti.....	101
elongata.....	223 , 225, 257	subgracilis.....	261 , 264
formosa.....	154	? sublevis.....	21 , 34, 262
harlani.....	265	? subtortuosa.....	100
hastata.....	196	subtruncata.....	17 , 92
helenæ.....	259	trapezoides.....	205
hermonensis.....	209	<i>Thyatira</i> (?) bisecta.....	59
humboldtensis.....	236	<i>Tiara humerosa</i>	221
lachryma.....	222	<i>Tinoporus (Orbitolina) texanus</i>	47
leonensis.....	220	<i>Tornatella elliptica</i>	50
mareyi.....	255	<i>Tornatellæa impressa</i>	220
mexicana.....	233	<i>Toxaster elegans</i>	233
millipunctata.....	20, 233	texanus.....	233
		<i>Toxoglossa</i>	134

	Page.		Page.
Trachycardium	99	Tritonidae	102
Trachyceras	110, 239	Tritonidea	103
judicarium	110, 239	Tritonifusus migrans	50
var. subasperum	110	? tenuilineatus	49
whitneyi	110, 239	Tritonium diegoensis	222
Trachyceratidae	110, 239	Trochactæon	29
Trachydomia	46	Trochactæonina	29
Trachytriton	49, 102	Trochidae	102, 180, 264
vinculum	49, 102	Trochita	212, 214, 217
Trapezium	260, 262	antiqua	67
bellefourchensis	260, 262	carbonaria	40
micronema	76, 143	costellata	217
subequalis	260, 262	diegoana	212, 214
truncatum	143	trochiformis	221
Trematis	126, 129	Trochoceras	39, 79
pannulus	126, 129	baeri	39, 79
Trematocrinus	23, 42	Trochonema	55, 80
fiscellus	23	tricarinata	67, 80
Trematodiscus	27, 42, 104	umbilicata	55
Trematospira	57, 193	Trochus	180
? imbricata	57	lenticularis ?	248
infrequens	193	(Oxystele) euryostomus	180
Triarthrus becki	187	Tropidina	35, 107
Trichopteris	231	Tropidiscus	106
filamentosa	231	Tropidocardium	99
gracilis	231	Tropidoleptus	58
Trigonarca	98, 267	carinatus	58
(Breviarca) exigua	98	Tuba ? bella	48
? salinensis	98	Tubicola	35, 105, 135
? siouxensis	98	Tubipora lamellosa	247
cuneiformis	267	Tubulostium diekhanti	157
transversa	267	Tudicola ? dakotensis	49
Trigonata	34	(Pyropsis) bairdi	49
Trigonella	100	Tulotoma	138, 162
Trigonellites	35	thompsoni	138, 162, 169
Trigonia	30, 33, 92, 133, 164, 207, 209, 218, 236, 268	Turbinolia	218
alta	207	goldfussii	220
americana	164	stokesii	220
cerulea	268	texana	218
conradi	22, 23	Turbo	227, 258
crenulata	255	glabra	50
cuneiformis	207	guadalupensis	258
distans	210	helicinus ?	258
emoryi	218	lineatus	221
eufaulensis	268	mudgeanus	70
evansana	17	nebrascensis	14
evansi	92	paludinaformis	231
lorentii	227	tenuilineata	48
montanaensis	164	tenuilincatus	14
mortoni	268	texanus	258
pandicosta	30	Turbonilla	134, 143
quadrangularis	236	(Chemnitzia?) coalvillensis	77, 143
texana	218	melanopsis	134
syriaca	207, 209	maclurii	220
Trigonidae	30, 32, 33, 111, 132, 133, 268	Turnus	101, 137
Trigonotreta	31, 57, 58, 89	(Gonioclasma) stimpsoni	101
Trilobita	31, 39, 90, 179, 260, 261	spheroideus	137
Trilobites	28, 148, 149, 249	(Xylophagella) elegantulus	141
Trimerella	80	Turricula	193
grandis	80	Turrilites	49
ohioensis	80	cheyennensis	49
Triplesia	80, 190	(Helicoceras) cochleatus	18
calcifera	190	? umbilicatus	18
ortoni	80	Turris	103
Triton	216	minor	103

	Page.		Page.
<i>Turris</i> (<i>Surecula</i>) ? <i>contortus</i>	103	<i>Unio meeki</i>	139, 159, 170
<i>hitzia</i>	103	<i>mendax</i>	139, 168
<i>texasus</i>	49	<i>nasutoides</i>	272
<i>Turritella</i>46, 134, 143, 158, 208, 210, 211, 212,		<i>nucalis</i>	18, 34, 167
213, 214, 216, 217, 219		<i>penultimus</i>	167
(<i>Aclis</i> ?) <i>miconema</i>	76, 143	<i>petrinus</i>	137
<i>altira</i>	216	<i>prænodontoides</i>	272
<i>bilineata</i>	231	<i>primævus</i>	139, 160, 168
<i>coalvillensis</i>	76, 143	<i>priscus</i>15, 105, 160, 168	
<i>convexa</i>	14	<i>proavitus</i>	139, 160, 168
<i>gatunensis</i>	216	<i>propheticus</i>	137, 160, 168
<i>inezana</i>	217	<i>radiatoides</i>	272
<i>irrorata</i>	214	<i>rectoides</i>	272
<i>kansasensis</i>	70	<i>roanokoides</i>	272
<i>leonensis</i>	220	<i>senectus</i>	139, 160, 168
<i>magnicostata</i>	208	<i>shoshonensis</i>	137, 159, 170
<i>marinochi</i>	143	<i>stewardi</i>	136, 167
<i>moreauensis</i>	14	<i>subrotundoides</i>	272
<i>multilineata</i>	256	<i>subspatulatus</i>	18, 105, 160, 168
<i>ocoyana</i>	212, 214	<i>tellinoides</i>	170
<i>peralveata</i>	208	<i>terra-rubra</i>	88
<i>planiliteris</i>	219	<i>vetustus</i>	22, 95, 112, 135, 169, 168
<i>spironema</i>	76, 158	<i>washakiensis</i>	70, 159, 170
<i>stevensana</i>	46	<i>Unionidæ</i>34, 98, 105, 112, 135, 139, 272	
<i>striata</i>	221	<i>Unionopsis</i>	99
<i>syriaca</i>	208, 210	<i>Uperocrinus</i>	41
<i>uvasana</i>134, 211, 213		<i>Urosthene</i>	224
<i>variata</i>	217	<i>australis</i>	224
<i>Turritellidæ</i>	102, 104, 134, 135		
<i>Tylostoma</i>	153		V.
<i>princeps</i>	153	<i>Valvata</i>35, 107, 158, 162	
		? <i>montanaensis</i>	107, 162, 169
U.		<i>nana</i>	77, 158, 167
<i>Uintacrinus</i>	93	<i>parvula</i>	16, 107, 162
<i>socialis</i>	93	<i>scabrida</i>	167
<i>Umbonium nana</i>	221	<i>subumbilicata</i>	107, 162, 169
<i>Umbrella planulata</i>	222	? (<i>Tropidina</i>) <i>scabrida</i>	35
<i>Unicardium</i>	30	<i>Valvatidæ</i>	35, 107
<i>gibbosum</i>	30	<i>Vanikora</i>	102, 264
<i>Unio</i> , 34, 95, 105, 112, 135, 136, 137, 140, 159, 160, 166, 272		<i>ambigua</i>	48, 102, 264
<i>alatooides</i>	272	<i>diegoana</i>	50, 221
<i>aldrichi</i>	140, 160, 168	<i>Vanikoridæ</i>	102
(<i>Baphia</i> ?) <i>nebrascensis</i>	70	<i>Vanikoropsis</i>	102, 259
<i>belliplicatus</i>	66, 112, 160, 168	<i>tuomeyana</i>	102, 259
<i>brachyopisthus</i>	137, 160, 168	<i>Vanuxemia</i>	54
<i>cariosoides</i>	272	<i>dixonensis</i>	41
<i>clinopisthus</i>	166, 170	? <i>dixonensis</i>	54
<i>condoni</i>	180	<i>Velatella</i>134, 141, 158, 161	
<i>conesi</i>	139, 160, 168	<i>Veleda</i>	269, 271
<i>cristonensis</i>	88, 167	<i>cquilatera</i>	271
<i>cryptorhynchus</i>	139, 160, 168	<i>lintea</i>	269
<i>danaï</i>	18, 105, 169, 168	<i>nasuta</i>	271
<i>deweyanus</i>	18, 105, 160, 168	<i>telinoides</i>	269
<i>endlichi</i>	139, 160, 168	<i>transversa</i>	269
<i>gallinensis</i>	88	<i>Veloritina</i>	99, 135, 137, 160
<i>goniambonatus</i>	140, 160, 168	<i>Venericardia</i> (<i>Cardiocardites</i>) <i>carinata</i>	50
<i>gonionotus</i>	137, 160, 168	<i>monilicastra</i>	50
<i>haydeni</i>	22, 95, 112, 170	<i>subtenta</i>	50
<i>holmesianus</i>	139, 160, 168	<i>occidentalis</i>	50
<i>hubbardii</i>	167	(<i>Pteromeris</i>) <i>abbreviata</i>	50
<i>humerosoides</i>	272	<i>radians</i>	50
<i>leai</i>	170	<i>Veneridæ</i>100, 111, 260, 262, 264, 269, 271	
<i>leanus</i>	70	<i>Veniella</i>	99, 134, 264, 268, 271
<i>ligamentinoides</i>	272	<i>contradi</i>	99, 268
<i>martini</i>	180	<i>decisa</i>	269

	Page.		Page.
Veniella elevata.....	269	Viviparus leidy.....	107, 162, 169
goniophora.....	99 , 134	var. formosus.....	107, 169
humilis.....	264	paludina-formis.....	170
inflata.....	269	panguit-chensis.....	137 , 169
mortoni.....	99	peculiaris.....	107, 162, 169
rhomboidea.....	271	plicapressus.....	138 , 162, 169
subovalis.....	268	prudentius.....	162, 169
subtumida.....	99	prudentia.....	141
trapezoidea.....	269	retusus.....	107, 162, 169
trigona.....	269	reynoldsana.....	28
(Venilicardia ?) humilis.....	99	reynoldsianus.....	107, 162, 169
Veniliellidae.....	264	trochiformis.....	107, 135, 162, 169
Venilia.....	29, 99	var.....	135
gabbana.....	47	wyomingensis.....	68 , 170
humilis.....	47	Volzella.....	33, 98, 111, 140, 158, 160, 164, 262
laphami.....	48	attenuata.....	47, 98
mortoni.....	29	(Brachydontes) laticostata.....	140 , 160, 168
quadrata.....	47	multilinigera.....	158
subtumida.....	48	regularis.....	140 , 160, 168
Venilicardia.....	90	concentrico-costellata.....	47
Venus.....	207, 208, 217	conradi.....	49
—?.....	206	contracta.....	50
alveata.....	50	cretaea.....	47
althleta.....	50	ducatelli.....	50
angustifrons.....	50, 206	formosa.....	33, 49
bisecta.....	50, 206	galpiniana.....	98
brevilineata.....	50, 206	inflata.....	50
? circularis.....	16 , 48	juliæ.....	47
floridana.....	220	meekii.....	47, 98
indurata.....	207	(Modiola) formosa.....	262
latilirata.....	50	(Modiolina) platynota.....	164
lamellifera.....	206	pedernalis.....	47
meckiana.....	48	pertenuis.....	33, 49, 262
ripleyana.....	48	saffordi.....	47
pajaroana.....	217	scalprum var. isonema.....	111
penita.....	220	[?] spinigera.....	50
perovalis.....	208	subimbriata.....	164
securis.....	256	Volutalitbes.....	211, 219
(Trigonia) tantilla.....	50	Voluta[?]lithes.....	213
unionides.....	49	californiana.....	211 , 213
vespertina.....	219	sayana.....	219
syriaca.....	207	Volutilitbes bella.....	43
Vermes.....	135, 138, 144, 153, 165	biplicata.....	49
Vermetus rotula.....	49	nasuto.....	49
Vestigia.....	129	Volviceramus.....	97
Vetelletia (Ancylus) minuta.....	16	Vorticifex.....	112
Vetericardia.....	268		
crenulirata.....	268		
octolirata.....	268		
Vitrina.....	106, 161		
obliqua.....	17 , 169		
? obliqua.....	106, 161		
Vitrinidae.....	106, 107		
Vivipara.....	28		
Viviparidae.....	35, 107, 112, 135		
Viviparus.....	35, 107, 112, 135, 137, 141, 162		
? —?.....	136		
conradi.....	107, 112, 162, 169		
covesi.....	141 , 162, 168		
gilli.....	35		
gillianns.....	167		
glaber.....	50		
ionicus.....	136 , 170		
leai.....	107, 162, 169		

Y.	Page.		Page.
<i>Yoldia</i>	33, 44, 73, 90, 98, 263	<i>Zaphrentis</i> <i>priscus</i>	167
<i>evansi</i>	98, 263	<i>rafinesquii</i>	155
<i>impressa</i>	49	<i>recta</i>	62
<i>levistriata</i>	44	<i>spinulifera</i>	125
<i>microdonta</i>	70 , 98	<i>stansburyi</i>	109, 232 , 243
(Palaemonio ?) <i>carbonaria</i>	69 , 90	<i>Zaptychius</i>	188 , 197
<i>acitula</i>	98	<i>carbonaria</i>	180, 188 , 197
<i>stevensoni</i>	69 , 90	<i>Zeacrinus</i>	23, 42, 43, 45, 72, 82, 84, 85, 118
<i>subscitula</i>	33, 73	? <i>armiger</i>	64
<i>ventricosa</i>	98	<i>crassus</i>	45
		<i>discus</i>	23 , 45
		(Hydreionocrinus ?) <i>acantho-</i>	
		<i>porus</i>	64 , 87
		? <i>muco-spinus</i>	72
<i>Zamites</i> <i>occidentalis</i>	246	<i>perangulatus</i>	118
<i>Zaphrentis</i>	58, 62, 109, 117, 119, 130, 131, 148, 155, 165, 177	<i>planobrachiatus</i>	23 , 43
— ?	58, 130	<i>sacculus</i>	118
<i>acutus</i>	117	var. <i>concinus</i>	118
<i>calceola</i>	165	<i>troostanus</i>	23 , 42
<i>cylindrica</i>	243	<i>Zellinidæ</i>	261
<i>elliptica</i>	119 , 165	<i>Ziphosura</i>	61
<i>excentrica</i>	109 , 131	<i>Zoophyta</i>	55, 56, 57, 58, 119, 257
<i>gibsoni</i>	177	<i>Zygospira</i>	57, 78
<i>glans</i>	119	<i>cincinnatiensis</i>	78
<i>haysii</i>	36	<i>headi</i>	79
<i>mcfarlanei</i>	62	<i>modesta</i>	78
? <i>multilamella</i>	109, 232	<i>subconca</i>	57

GENERAL INDEX.

	Page.		Page-
A.			
Albert, J. W.	273	Birds of Iowa.....	123
Africa.....	156	Bismarck.....	176
Agua doce molluscos cretaceos.....	181	Bitter Creek.....	145
Alabama.....	17, 96	fossils.....	77
Alaska fossils.....	176	group.....	141
Albino flowers.....	124	Black Buttes, Wyoming.....	145
Albuquerque.....	241	Black Hills.....	18, 157, 261
Allen, J. A.....	123	fossils.....	259
Alluvium.....	74, 75	Black River fossils.....	231
America (North).....	49, 139, 141, 147, 166, 167, 179, 198, 242	Black slate.....	25
America (Northwestern).....	144, 180	Blake, W. P.....	210, 242
fossils of.....	217	Blood, circulation of.....	140
Amérique.....	125	Braintree argillites fauna.....	199
Andes fossil ammonite.....	227	Branchial appendages of Trilobites.....	185
Arhimedes limestone.....	75	Brazil.....	181
Arizona.....	128, 146, 187, 188, 241, 244	Brazilian National Museum.....	181
Arkansas.....	153, 157, 241, 242	Bridger group.....	145
River.....	241, 242	British America.....	171
Artesian wells.....	156, 157, 256, 257, 274	North America.....	147
Arthur, Mr.....	146	British Provinces.....	242
Ashley's Fork, Utah.....	145	Brownville.....	71
Aspinwall.....	71	Bryan's Pass.....	256
Astoria fossils.....	205	Bull-snake, (Pityophis).....	175
Oregon.....	205, 206	Burlington.....	116, 117
Atchison Landing.....	71	beds.....	116
Atlantic supracretaceous.....	205	group fossils.....	42, 59, 81
Tertiary fossils.....	205	C.	
Australia.....	223, 224	Cache à la poudre.....	145
Azoic.....	123	Calciferous fossils.....	186, 231
B.		California.....	29, 35, 152, 180, 241, 242, 244
Bailey, J. W., writings of.....	203, 273	desert.....	244
Bear Creek.....	146	fossils.....	210, 212, 216
River.....	76, 145	(North).....	17, 231
fossils.....	95, 112	(Southern).....	244
Laramie fossils.....	168	Tertiary fossils.....	215
Beckett's.....	205	Cambrian.....	188
Beckwith, E. S.....	203	faunas.....	198
Bell County, Texas.....	146	fossils.....	189
Bellevue.....	71	middle.....	199
Benner's fossil shells.....	205	Trilobites.....	199
Bennett's mill.....	71	Camden clays.....	265
Berthoud, E. S.....	146	company, New Jersey.....	272
Bexar County, Texas.....	146	Canada.....	188
Bibliography.....	141, 147	de las Uvas.....	244
Big Spring, Iowa.....	248	(Geol. Surv.).....	179
Bijou Creek, Colorado.....	145	Canadian period.....	126, 129
Biographic sketch of F. B. Meek.....	11	Cañon Park, Colorado.....	145
Birds.....	124	Carboniferous.....	13, 18, 21, 23, 31, 32, 35, 38, 41, 59, 63, 64, 69, 74, 75, 76, 81, 92, 108, 116, 123, 126, 127, 128, 130, 131, 136, 148, 150
Bird's eye fossils.....	231	crinoidea.....	54

	Page.		Page.
Carboniferous fossils	19, 22, 24, 29, 40, 59, 66, 70, 71, 92, 94, 109, 117, 118, 136, 144, 146, 147, 150, 151, 163, 164, 167, 175, 189, 196, 233, 241, 246, 255, 258	Cretaceous fossils	21, 22, 23, 27, 28, 66, 70, 71, 76, 9, 93, 95, 96, 111, 136, 142, 145, 147, 157, 158, 167, 180, 214, 218, 220, 222, 233, 243, 255, 256, 260, 263
(lower)	147	invertebrates	181
fossils	81, 91, 116, 235, 243	Iowa	120
Ostreidae	172	(lower)	19
shells	223	ostreidae	172
(upper)	147	Crow Creek, Colorado	145
Carroll, Montana	256	Croxton, Mr.	71
Catalogue	210	Cyathophycus, nature of	187
Cat, domestic instinct in	175		
Cedar Bluff	71	D.	
Cenozoic	135, 140, 153	Dakota	123, 157, 176, 259, 261
Unionidae	140	group	96, 120
Central Pacific Railroad line fossils	253	(Northwestern)	171
Cerebro spinal meningitis	119	Dall, W. H.	176
Cephalopodes cretaceous	181	Dana, J. D.	242
Chalk organic remains of	208	writings of	223
Chazy fossils	231	Danforth Hills, Colorado	145
limestone fossils	186	Dead Sea	206
Cheek list of fossils, Eocene and Oligocene	220	Deer Creek coal field	188
Chemung	13, 116	Denison, Texas	146
Chester group fossils	44, 84	Devonian	13, 28, 41, 54, 66, 77, 116, 123, 155, 174, 176
Chippewa land district fossils	248	fossils	22, 57, 65, 94, 108, 118, 148, 167, 189, 192, 235
Chouteau limestone	75	Dodd's ranch, Utah	145
Chutes River, Oregon	229	Drift	75, 120, 122
Cincinnati group	37, 68, 69	(glacial)	171, 176
fossils	55, 77	Dry Creek (Mexico), Cretaceous fossils	218
Claiborne	205	Dutton, C. E.	174
Clinton fossils	80		
group fossils	232	E.	
Coal beds	273	Echinodermes cretaceous	181
measures	17, 36, 50, 53, 61, 75, 88, 121, 149, 155	Echo Cañon	76
of Europe	128	Economic geology	75
fossils	45, 85, 90, 92, 121, 177, 235, 256	Economic geology of Monticau County Mis-	
(upper)	19	souri	13
United States	128	Ehrenberg, C. G., writings of	229
Coalville, Utah	76, 145	El Paso	241, 242
Coast Range	244	Cretaceous fossils	218
Collett, John	148, 154, 174, 177	Emory, Major	214
Colorado	128, 136, 141, 145, 116, 153, 157, 159, 244	Encrinital limestone	13, 75
River	188	Engelman, H.	256
(Eastern)	156	Eocene fossils	170, 205, 210, 212, 220
group	145	of Southern States	237
(Northwestern)	142	marls	265
of the West	246	fossils	271
Commissioner of Agriculture	156	ostreidae	237
Common schools	124	Etats-Unis	241
Conchiferous cretaceous	181	Eureka district, Paleontology of	188
Cone in cone	122	Europe	141, 147
Conrad, T. A., writings of	205	Evans, Colonel	88
Contents, table of	5	Evans, John, and Shumard, B. F.	255
Cook, G. H.	265		
Cooper marble	75	F.	
Cope, E. D.	139, 171, 222	Fair Haven section	205
Corniferous fossils	80	Far West	128
group fossils	57	Fish house, New Jersey	272
Cretaceous	13, 14, 15, 16, 17, 20, 35, 47, 76, 96, 108, 123, 125, 127, 128, 133, 150, 151, 152, 156, 176, 259, 265	Fetal hydrocephalus	119
corals	146	Forests	142
eastern limit in Iowa	125	Forestry	166, 176
(European)	27, 96	Fort Benton group	96
		Clark	17
		Collins, Colorado	145

	Page.		Page.
Fort Leavenworth	256	Hall, James, writings of	231
Pierre group	96	and Meek, F. B.	13
Riley	256	and Whitfield, R. P.	233
Smith	241	Hamilton group fossils	58
Snelling	248	Harper's Hill, Australia	223
Tejon	244	Hartt, C. F.	181
Union	141	collection	198
group	96	Hawn, F.	17
Fortieth parallel, palæontology of	108	Hayden, F. V.	66, 71, 96
Fossil corals	223	Hays, Dr	36, 52
leaves	273	Heilprin, A.	172
mollusca	180	Angelo, writings of	237
plants	149, 155, 226, 246	Helderberg	52
ridge, Colorado	145	(lower) fossils	56
Fox Hill beds	27	upper	13
Hills fossils	145	fossils	232
group	96, 145	Helotes, Texas	146
Fremont, J. C.	203, 231	Hersey, J. C.	146
French	242	High Point mine	13
Fresh and brackish water deposits fossils ..	139	Hilgard, E. W.	124
water infusoria, Oregon	203	Hilliard, Wyoming	145
and land mollusca	150	Hudson River fossils	231
miocene fossils	180	group	157, 175
mollusks	125, 156	Hunter, valley of, Australia	223
paleozoic fossils of Nevada ..	188	Hyatt, A.	146
Frontera cretaceous fossils	218	Alpheus, writings of	239
G.		I.	
Galena beds fossils	55	Idaho	76, 146
Garter snake	142	(Southeastern)	146, 162, 239
Gasteropodes cretaceous	181	Illawara, Australia	223
Gatun, Isthmus of Darien fossils	216	Illinois	24, 26, 36, 37, 38, 40, 41, 50, 53, 54,
Geinitz, H. B.	51	67, 81, 87, 144, 154, 247, 249	
Genus pyrgulifera	180	palæontology	90
Geological survey of Iowa, Wisconsin, and		survey	179
Minnesota	249	Indiana	25, 69, 144
Geology of North America	233, 242	fossils	147, 154, 177
Georgia	152	Indianapolis	124
Glacial rocks of Colorado	244	Infusorial deposits, Oregon	229
Pike's Peak	244	fossils	103
Golden City, Colorado	145	Interior states	164
Goniatite limestone	25	Introductory note	7
Goode, G. Brown	175	Iowa	26, 116, 117, 121, 123, 138, 142, 247, 249, 250, 251
Grand Cañon of the Colorado	188	first annual report	120
tertiary history of	174	and second annual reports	122
River	246	geography of	124
Great Plains	156, 157	lakes of	122
Prairie region	166	(Northwestern)	123
Red Pipestone quarry	122	River	248
Salt Lake	232	soils of	119
Greeley, Colorado	88, 145, 146	(Southern)	120
Green River	246	(Southwestern)	120, 123
group	145, 171	geology of	120
fossils	166	(Western)	123
region	140	Irish, C. W.	123
sand marls	265	Isthmus of Darien, Tertiary fossils ..	212, 214
Greenland	141	Ives, J. C.	245
Grinnell	93	J.	
Grupo da Bahia	181	Jacun cretaceous fossils	218
Guthrie County, Iowa	123	Jenney, Walter P.	157, 261
H.		John Day group	180
Hague, Arnold	188	Jordan River	206
Haime	52	Judith River	17, 141
Hall James	203	group	96, 139

	Page.		Page.
Nicollet, I. N., writings of	273	Permian	19, 32, 187
Niobrara group	96	fossils	256, 257, 274
Nishnaboli	120	Permo-carboniferous fossils	235
Non-marine fossil mollusca, supplement to	180	Petermann, A	242
mollusca	167	Pike's Peak	244
North American continent biologically considered	177	Plastic clays fossils	266
Northwest	17	Plateau Province	136
Northwestern Boundary Commission	27	Platte River	71
localities	92	Plattsmouth	71
Nouveau Mexique	241	Pliocene	244
Nuevo Leon	171	fossils	170
		ostreidæ	238
O.		Poblazon	273
Oak Creek, Texas, Cretaceous fossils	218	Pogonip group fossils	190
Océan, Pacifique	241	Point of Rocks, Wyoming	145
Ocoya Creek (Miocene fossils)	212, 214	Polar Ocean	52
Ohio	66, 67, 68, 69, 70, 77, 88, 153	Pope, John	241, 242, 256, 257, 274
valley	248	Portuguese	181
Oligocene fossils	220	Post Pliocene	205
Ostreidæ	237	ostreidæ	238
Omaha	71	Potomac River, section near mouth	205
Onondaga limestone	13	Potsdam	18, 31, 259
Oregon	17, 203, 229, 231, 256	fossils	231, 233
(Eastern)	180	Powell, J. W.	126, 157
(Western)	180	Prairie fires	124
Organic remains in Oregon	231	Pre-carboniferous of Grand Cañon	188
Oriskany group fossils	57	Preservation of fossils	146
Ostreidæ, fossil N. A.	172	Preston	241, 242
Otse City	71	Primordial	31, 126, 128
Owen, D. D., and Shumard, B. F.	240, 251	fossils	27, 259, 261
writings of	247	Progress of Invertebrate Palæontology	
Owl, great horned	144	U. S.	150, 152, 156, 171
Oyster, enemies of	176	Prospect Mountain group fossils	189
		Prout	64
P.		Hiram A., writings of	274
Pacific Ocean	28	Pueblo, Mexico	153
Railroad	65	Pyramid Mount	17
R. R. R. Exploration	233		
Pacoña or Pacorina Cañon	244	Q.	
Palæontologic notes	199	Quaternary	13, 74, 75
Palæontology of Black Hills	261		
Colorado River of the West	245	R.	
Exploration of Iowa, Wisconsin, and Illinois	247	Raritan clays	265
Fortieth Parallel Survey	233	Raton	273
P. R. R. Surv., vol. vii.	217	Raynolds, W. F.	27
United States and Mexican		Recent fossils	211, 213
Boundary Survey	233	Red quartzite	123
Paleozoic	37, 41, 64, 68	River	241, 242, 255
erinoidea	53, 63, 64	Report Geology of Iowa, Wisconsin and	
fossils	26, 138	Minnesota	250
groups	187	Survey, Iowa	123
pteropods	199	Palæontologic field work, 1877	114
rocks	249	Reptilian age	33
of Texas	188	Rio Grande del Norte	241, 242
(Upper) fossils	51	Puerco cretaceous fossils	218
Palestine expedition	206	San Pedro cretaceous fossils	218
Park range	142	Riverside	71
Part I.	9	Rock Bluff	71
II.	113	Rockford	25
III.	183	Rock Springs, Wyoming	15
IV.	201	Rocky Mountains	88, 142, 145, 157, 242
Parvin, T. S.	123	Rouge (rivière)	241
Patuxent River section	205	Rulo	71
		Ryder, John A.	172

	Page.		Page.
Waverly group fossils	88, 235	Whitfield, R. P., writings of	259
Western States. 38, 40, 41, 63, 64, 67, 157, 163, 248, 274		Whitney, J. D.	29, 53
West Indies	141, 147	Wilkes, Charles	205, 223, 224
Virginia	69	Williamson, R. S.	210
Wetherby, A. G.	153	Winchell	17
Wheeler, G. M.	125, 128, 151, 244	Wind River group	96
Whipple, A. W.	241, 242	Tertiary fossils	96, 107
White, C. A.	237, 239	Wisconsin	174, 247, 248, 249, 250, 251
Biography of	115	Woodpeckers	125
and Nicholson, H. A.	141, 147	Wooster, L. C.	146
and St. John, O. H.	120, 121	Worthen, A. H.	90, 179
writings of.	116	Wyoming. 68, 71, 76, 139, 145, 146, 150, 153, 159, 244	
Mountain Indian reservation	188	(Southwestern)	156
River, Colorado	145		
group	96	Y.	
Indian agency, Colorado	145	Yampa River, Colorado	145
Tertiary fossils	96, 107	Yellowstone River	171
Whiteaves, J. F.	179		
Whitfield, R. P., and Hall, James.	272	Z.	
and White, C. A.	272	Zoophytes	223

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