

Practical Arithmetic

and

NEW YORK.



BY A. A. A. A. A. A. A. A.

AND

BY THE AUTHOR OF THE 'NEW YORK' AND 'BOSTON'

BOSTON.

AND THE AUTHOR OF THE 'NEW YORK' AND 'BOSTON'

AND

AND THE AUTHOR OF THE 'NEW YORK' AND 'BOSTON'

PALÆONTOLOGY  
OF  
NEW - Y O R K .

VOLUME II.

CONTAINING DESCRIPTIONS OF THE ORGANIC REMAINS OF THE LOWER  
MIDDLE DIVISION OF THE NEW-YORK SYSTEM,

(EQUIVALENT IN PART TO THE MIDDLE SILURIAN ROCKS OF EUROPE.)

BY JAMES HALL.

---

ALBANY :  
PRINTED BY C. VAN BENTHUYSEN.  
1852.

A

TO HIS EXCELLENCY WASHINGTON HUNT,

Governor of the State of New-York.

SIR,

I HEREWITH submit to Your Excellency that part of my Report on the Palæontology of New-York, containing descriptions of the organic remains from the lower part of the middle division of the System, embracing those of the Medina sandstone, Clinton group, Niagara group, Coralline limestone, and Onondaga-salt group. All the species described are illustrated by figures drawn and engraved from original specimens, the geological positions of which are well authenticated.

I have the honor to be,

With great respect,

Your obedient servant,

JAMES HALL.

ALBANY, September 1, 1852.

A

## CONTENTS OF VOL. II.

	PAGES
PREFACE .. .. .	vii - viii
Oneida conglomerate .. .. .	1
Medina sandstone, Clinton and Niagara groups .. .. .	2 - 4
Organic Remains of the Medina sandstone .. .. .	4 - 14
— — Clinton group .. .. .	15 - 105
— — Niagara group .. .. .	106 - 320
— — Coralline limestone .. .. .	321 - 338
— — Onondaga-salt group .. .. .	339 - 350
Additions and Corrections .. .. .	351 - 355
Index of Genera and Species .. .. .	356 - 358
List of Plates .. .. .	359 - 362

## PREFACE TO THE SECOND VOLUME.

THIS volume contains descriptions and figures of all the fossils yet observed by me, whether collected by myself or others, in the Medina sandstone, Clinton group, Niagara group, Coralline limestone and Onondaga-salt group; the entire number of species being 344. As announced in the first volume, I intended to include in this volume the descriptions and illustrations of the fossils of the Lower Helderberg; but it soon became apparent that the number of plates would be too much increased, and it was therefore necessary to terminate the volume with the Onondaga-salt group.

The numbering of the plates in this volume extends to 85; while the actual number, from intercalation, amounts to 101.

The engraving for this volume was commenced in 1847; and during the year 1848, nearly all the plates were given in hand to the engravers. In February, 1849, there remained to be given out the drawings of plates 35, 36, 37, 38, 60, 70 and 73 A; and the printing of the volume was then in progress. After having proceeded as far as the 120th page, and finding that the engraving was likely to be much delayed, I suspended the further printing at that time, for the purpose of making a re-examination of the corals and bryozoa, which resulted in the ascertaining of nearly as many additional species as possessed before. These additions to this class of fossils have increased the number of plates between 34 and 41, by an amount equal to those indicated by letters.

With the exception of the last fifteen pages, the printing of this volume was completed in the early part of 1850; but the engraving has not been finished to permit its appearance till 1852. In the mean time several works have appeared, in which species, identical or allied with those here described, have been published. To those authors, therefore, whose publications bear date anterior to this volume, but which are not referred to, this

