

*THE PALÆONTOLOGICAL COLLECTIONS
OF THE GEOLOGICAL DEPARTMENT
OF THE AMERICAN MUSEUM OF NAT-
URAL HISTORY*

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PRINTED BY
The University of Chicago Press
CHICAGO

THE PALÆONTOLOGICAL COLLECTIONS OF THE GEOLOGICAL DEPARTMENT OF THE AMERICAN MUSEUM OF NATURAL HISTORY.¹

THE geological department of the American Museum of Natural History completed in December, 1901, the publication of a catalogue of the types and figured specimens in its possession, by R. P. Whitfield, assisted by the author of the present note. This work has been under way for several years, and in its published form makes up a book of more than five hundred pages, forming Volume XI of the *Bulletin* of the Museum. This is one of the oldest departments of the museum, and its chief possession is the great James Hall collection, which was acquired in 1875, and which placed it at once in the front rank of American museums containing similar material. This collection will always be the standard reference series for all workers in North American Palæozoic palæontology, since it contains a very large proportion of the specimens described and figured by Professor Hall in the course of his work on the *Palæontology of New York* up to the time of the purchase of the collection by the American Museum. From time to time the department has received other collections, through exchange and other means, but, with the exception of the Holmes collection, they contained few types at the time of their acquisition. Most of the "figured specimens" in the collections of the department are those which were identified, re-described, illustrated, and published by Professor Hall in the *Palæontology of New York*, and therefore they have almost the dignity and value of types.

Of the specimens described and illustrated in the quarto volumes of the *Palæontology of New York*, the Museum possesses two-thirds of those in Volume I, covering the Cambrian and Lower Silurian systems; nearly eight-tenths of those in Volume

¹Read before the Geological Society of America at Rochester, N. Y., January 2, 1902.

II, extending from the Medina to the Onondaga stages, inclusive; three-fourths of those in Volume III, which treats of the Lower Helderberg and Oriskany groups; more than one-third of those in Volume IV, which describes the Brachiopoda of the Devonian system from the Upper Helderberg to the Chemung; about 30 per cent. of the specimens illustrated in Volume V, Part I, which is devoted to the Lamellibranchiata of the Upper Helderberg (or Corniferous), Hamilton, and Chemung groups; and a nearly equal proportion of the Cephalopoda and Gastropoda illustrated in Volume V, Part II. The collection, however, contains only about seventy-four of the specimens of Bryozoa given in Volume VI, and about seventy of the Crustacea illustrated in Volume VII of the *Palæontology of New York*. Much of the material for Volume VIII, on the Brachiopoda, was prepared for publication prior to 1876, hence a large proportion of the specimens used for illustrations are to be found in the American Museum, especially of those used for the plates bearing the name of R. P. Whitfield.

Most of the species in the volumes above mentioned were first published in the *Regents' Reports on the Condition of the State Cabinet* (or State Museum, as it is now called), but material from other states than New York was also used in these reports, and the American Museum has the fossils from the Wisconsin-Minnesota Cambrian beds described and figured in the *Sixteenth Report*; the Niagara material from Waldron, Ind., published in the *Twenty-eighth Report*; and the graptolites and the Wisconsin Niagara species given in the *Twentieth Report*. The Trenton fossils from Wisconsin described in the *Report of Progress of the Geological Survey of Wisconsin for 1861* are here, and the original descriptions have been republished with illustrations and notes by R. P. Whitfield in the *Memoirs of the American Museum of Natural History*, Volume I, Part II. The Museum has all the Warsaw fossils from Spergen Hill, Ind., originally published without figures by Hall in the *Transactions of the Albany Institute*, Volume IV, and republished by Whitfield with figures in *Bulletin Am. Mus. Nat. Hist.*, Vol. I. The collection also includes the

type fossils from the Clinton beds at Arisaig, Nova Scotia, described by Hall in Volume V of the *Canadian Naturalist and Geologist*; many of the Devonian and higher forms described by the same author in the *Geology of Iowa* and the *Supplement to the Iowa Report*, the latter being republished with figures by Whitfield in *Mem. Am. Mus. Nat. Hist.*, Volume I, Part I; several type specimens of the Dictyospongidæ, some of which have been described by Whitfield in the *Bulletin of the Am. Mus. Nat. Hist.*, Volume I, and others by Hall and Clarke in a *Memoir on the Palæozoic Reticulate Sponges*; Hall and Meek's types from the Cretaceous of the Bad Lands of Dakota, Nebraska, and Wyoming, described in the *Memoirs of the American Academy of Science and Arts*, Volume V; the fruits and seeds from the Eocene beds at Brandon, Vt., described by Lesquereux and published in Hitchcock's *Geology of Vermont*; and some of the Cephalopoda, Gastropoda, and Lamellibranchiata described by Whitfield in his U. S. Geological Survey monographs on the *Cretaceous and Tertiary Fossils of New Jersey*. The museum also has the Holmes collection, which includes more than two hundred of the specimens described and figured by Tuomey and Holmes's *Pleiocene Fossils of South Carolina* and in Francis S. Holmes's work on the *Post-Pleiocene Fossils of South Carolina*. The fossils described in the various bulletins and memoirs of the American Museum of Natural History are here as a matter of course. In addition to the republication of certain of Hall's types already mentioned, there have been described and illustrated in the *Bulletin* a large series of fossils of Chazy and Birdseye age from Fort Cassin, Vt.; Beekmantown, N. Y., and other localities on Lake Champlain, and many Cretaceous forms from Beirût, Syria, and from Jamaica, W. I.

The catalogue has been issued in four parts. Part I, including the Cambrian and Lower Silurian forms, was issued in July, 1898; Part II, containing the Upper Silurian specimens, was issued in October, 1899; Part III, comprising the Devonian forms, came out in October, 1900; Part IV, containing the specimens from the Lower Carboniferous to the Quaternary inclusive.

and the index, preface, and table of contents of the whole volume, bears date of December 27, 1901.

This work has determined that there are in this department of the museum at least 6,166 type specimens, representing 2,222 species and 71 varieties; and 2,179 figured specimens, not types, representing 499 species and 119 varieties. Three-fourths of this material has come from the Palæozoic systems above the Cambrian.

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