

**CATALOGUE OF THE ACADEMY
SERIES OF CASTS OF FOSSILS:
FROM THE PRINCIPAL MUSEUMS
OF EUROPE AND AMERICA**

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Catalogue of the Academy Series of Casts of Fossils: From the Principal Museums of Europe and America by Henry A. Ward

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HENRY A. WARD

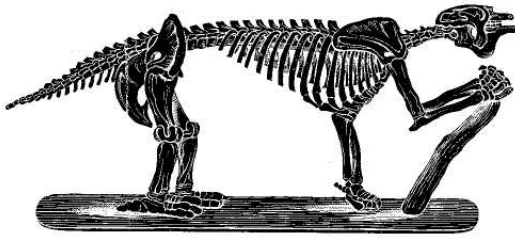
**CATALOGUE OF THE ACADEMY
SERIES OF CASTS OF FOSSILS:
FROM THE PRINCIPAL MUSEUMS
OF EUROPE AND AMERICA**

WARD SERIES OF CASTS

—OF—

FOSSILS.

(ACADEMY SERIES.)



ROCHESTER, N. Y.
1870.

GEOLOGICAL ILLUSTRATIONS.
WARD SERIES OF
CASTS OF FOSSILS.

Reduction of Price, Revision of the Series, Additions and New Catalogues.

Rochester, N. Y., November 1, 1870.

In the autumn of 1866, I issued a series of twelve hundred Casts of notable Fossils. These Casts I had moulded from actual specimens in the great royal and private Museums of Europe, with important additions from American sources. As this method was the only one by which these treasures illustrating the early Life on our planet might be brought within the reach of American students, studying on American soil, the enterprise was undertaken with a conviction of its utility to educational science, and with a confidence that the service would be appreciated. This confidence has not been disappointed. The call for these Casts has been large, and is steadily increasing. Our highest institutions of science have been the first to recognize their value and secure their aid. Among the scientific institutions which have most notably obtained this material are the following: New York State Geological Cabinet; the Buffalo Academy of Natural Sciences; the Philadelphia Academy; the Boston Natural History Society, and the Peabody Museum at Salem, Mass. Also the Cabinets of Williams, Amherst and Yale; of Columbia College, N.Y.; of Vassar College, Poughkeepsie, N.Y.; of Alleghany College, Meadville, Penn.; Madison University; University of Rochester; Ohio Wesleyan University; University of California, and the Wesleyan University of Middletown, Conn. (the last the donation of Orange Judd, Esq., of New York, editor of the *American Agriculturist*), have each secured from \$300 to \$3,000 worth of these Casts. Considerable numbers have also been sent to the Museums of England, Austria, Bavaria, India and Australia.

The orders which have been received during the past four years have indicated the fact that certain forms in this large series are more constantly preferred.

This has decided the writer to make up two considerable suites or series of these Casts, including in them, severally, those forms which have proved to be of more particular attractiveness and interest for our lesser and our larger institutions. In this way two distinct Geological Cabinets have been compiled, each complete in itself, but of different magnitude and scope.

ACADEMY SERIES.

This Cabinet contains *one hundred and seventy* specimens, so chosen as to embrace forms in each of the divisions of Fossil animal life, from the highest to the lowest. Here are Casts, carefully formed and colored, of the various orders of Mammals which roamed the plains and valleys or dwelt in caves, in the Tertiary and Quaternary periods; of great extinct Birds; of huge uncooth Reptiles,—Ichthyosaurus, Plesiosaurus,

Ignanodon, and Pterodactyle—which lived in the Jurassic Age; of Fishes which swam in Cretaceous, Oolite, and Devonian seas—the latter so graphically described by Hugh Miller in his writings on the “Old Red Sandstone.” Also Trilobites, and other Crustaceans, Insects, Ammonites and other Shells; Sea-Eggs, Star Fishes, Crinoids, Foramenifers and Sponges. Also, a few Fossil Plants suitable to be copied as Casts. This series is quite complete in its variety of forms, containing full material for illustration by the teacher of Geology in our Academies, Normal Schools and smaller Colleges. Its specimens vary in size from small shells to skulls and entire skeletons several feet in diameter. It will fill the shelves of a cabinet room twenty feet square. Each specimen is accompanied by a handsome printed label, and the display and graphic effect of the whole is very great.

To still further augment this display, there have been added three huge specimens, which are intended to stand independently on pedestals in the middle of the room. One of these—the Glyptodon, or great Fossil Armadillo—is nine feet long and about four feet high. These three specimens form a *Supplement* which may be taken with the cabinet, or may be omitted, as the purchaser elects.

The price of this entire Academy series, carefully boxed, and delivered at the Rochester freight office, is \$500. The price without the supplement is \$300.

COLLEGE SERIES.

This series consists of *three hundred and thirty* specimens, chosen like the preceding series, among the most noteworthy forms in the whole range of Fossil Organisms. The natural classes and orders are all here represented by copies of the most celebrated Fossils—the originals of which form the scientific treasures of Royal Museums, and are single and *unique*. The series commences with some rare human remains—including the famous Fossil human skeleton from Guadeloupe—and continues through all the classes of the Vertebrates, and then through the four sub-kingdoms of the Invertebrates, introducing every form and name of which the student in the highest course of geological teaching is ever likely to hear.

Besides the individual forms there are small suites of the Casts which illustrate particular families of Fossils, as among the Trilobites, Ammonites, Brachiopods, Echinoidea, Crinoidea and Foramenifera. This series is so full and extensive that it may be arranged by itself in the Museum Hall, forming a complete Geological Cabinet, or it may be worked in in the classification with such actual Fossils as the College may possess. The series of itself will quite fill the shelves of a cabinet hall thirty by forty feet in size, some of the larger specimens—Glyptodon, Mastodon, Deinotherium and Diprotodon—standing on distinct pedestals in the central area.

A *Supplement* is also added to this College Series, containing four of the largest Fossils known to science, and the largest Casts which have ever been taken. These are the Megatherium; the Elephas Ganess (Himalaya Mammoth); the Colossochelys (colossal Himalaya Tortoise), and the great Plesiosaurus Cramptoni, the latter *twenty-two feet long!*

The price of this College Series (boxed, &c.), is \$1,000. Its price, together with the supplement is \$1,600.

The two series above described have been chosen with much care and study that they shall meet the end for which they are intended, and be true compends of Geological science—complete illustrative cabinets.

The writer has just completed CATALOGUES of each of the series. These catalogues give a short descriptive notice of each specimen, stating its relation to modern forms, the locality where it was found, the geological bed in which it lay, its size, and the Museum in which the original is now preserved. There are also introductory notices of the Orders and other higher divisions, numerous illustrations, and a copious glossary-index. *The facts contained in these catalogues will be of much service to both teacher and student.*

The Academy Catalogue contains 80 pages, and 130 wood cuts. The College Catalogue contains 136 pages, and 230 wood cuts.

The writer, anticipating a large sale of these new series of Casts, or Geological Cabinets, has reduced

TESTIMONIALS.

their price far below what has before been charged for the same material. An occasion is thus offered to the Trustees of our institutions to increase their scientific appliances. It is hoped, too, that *Patrons of Academies or Colleges* may see here a signal opportunity to endow them with a *beautiful, useful, attractive and valuable cabinet of Geology*.

For the advantage of those parties who choose to make their own selections, the writer has just issued a CHECK LIST of 64 pages, containing the name, locality, formation, size and price (but without further description), of his entire series of 833 Casts of Fossils, and 35 miscellaneous Casts, alike of Geological import. Parties desiring this pamphlet, or the Catalogues, should address the writer, who will send (post-paid) the

Check-List, - - - - -	gratis,
Academy Catalogue, - - - - -	30 cents,
College Catalogue, - - - - -	60 "

A very few copies still remain of my "Illustrated Catalogue of Casts of Fossils," (pp. 228, wood cuts 284) which will be sent at the old price, viz. \$1.35 for the bound edition, and \$0.75 for the pamphlet form.

HENRY A. WARD, ROCHESTER, N. Y.,
P. O. Box, 297.

TESTIMONIALS.

From the American Journal of Science and Arts, for July, 1866.

Prof. Henry A. Ward's Collection of Casts of Fossils, at Rochester, N. Y.

Prof. Ward, in the course of his travels for the formation of his large Cabinet at Rochester, has had occasion to make casts of numerous fossils, large and small, from the skeletons of Elephants, Mastodons, and the Guadalupe Man to shells of Rhizopods; and he is consequently enabled to furnish copies of them to other Cabinets. He is now issuing an illustrated catalogue of 200 pages or more, which gives some idea of the extent of his collections. His casts have already received a number of scientific caudets in the country, among them those of Yale, Amherst, Cambridge, Vassar College, Albany, etc.; and wherever they have gone they are admired for their excellence and perfection of finish. We would recommend to Colleges, Academies, and other institutions where science is taught in the land, to supply themselves, as far as they are able, with these casts. They enable the instructor to exhibit to students specimens of the rare fossil skeletons and other species from the rocks, many of which are seldom or never found in American collections. By means of them, series representing the principal types of different Families (as that of Trilobites, or of Ammonites, etc.) may be made complete or nearly so. The casts are light and strong, and thus are well fitted for class purposes. They have been copied from the best specimens to be found in any collections, and are colored to correspond with the originals. They give, at comparatively small expense, wonderful effectiveness to a cabinet as a means of instruction. *A gift of a collection of Mr. Ward's casts from any patron of learning to an academy or college would render great service to the instructor, the pupils, and the institution.*

From Prof. LOUIS AGASSIZ.

MUSEUM OF COMPARATIVE ZOOLOGY,
Cambridge, Jan. 31, 1869.

(Extract from letter to Mr. Ward.)

* * * I was surprised and delighted to find how greatly the perfection of the specimens selected for casting enhance the importance of your series of Casts of Fossils, and I truly congratulate you upon the success you have achieved, and hope that you may meet with all the approbation and support you so richly deserve. * * * I now write to ascertain for what price I can obtain a complete series of all those of your casts which were taken from original specimens. * * * I wish thus to testify to the value of your specimens for exhibition in a great Museum, and I would add, that for teaching they are admirably suited, and I would gladly recommend their purchase to all the larger institutions of learning.

Yours, very truly,

L. AGASSIZ.

From the late PRESIDENT HITCHCOCK, of Amherst College.

Amherst, Nov. 21st, 1863.

Prof. H. A. Ward,

My dear Sir,

I have just sent you four large boxes containing moulds of twelve of the more prominent alata of tracks in our Ichneological Museum. The moulder whom you sent on copied these with much skill and truth; and the casts which you take from them will certainly be very close representations of the originals, and give their possessors an exact view of those wonders from the rocks of the Connecticut.

TESTIMONIALS.

I am delighted to see the excellent work which you are accomplishing in the matter of the plaster copies of the larger and rarer fossils. It is no small thing thus to put into our hands, as it were, the wealth of the old European Museums, and to re-create for us, in actual, tangible forms, the huge and strange animals which walked our globe in the age of Reptiles and of Mammals, or swam and crawled through the muddy wastes of the Paleozoic seas. Hardly anything could be more fortunate to American students of Geology than the appearance of these casts. *They will be invaluable adjuncts to the scientific department in every Academy, College or University in our country; and it would be folly for any one pretending to teach Geology not to make use of them.*

Our College has obtained from you as many of these casts as our funds would permit, and we have much admired the care which you have expended in making their form and color exact copies of the original specimens. For the sake of Geological science, as well as for yourself, I wish you ample success in your enterprise, and expect that you will have it.

Truly yours,

EDWARD HITCHCOCK.

From Prof. J. S. NEWBERRY,
SCHOOL OF MINES,
COLUMBIA COLLEGE,
NEW YORK.

Prof. H. A. WARD,—

DEAR SIR: I take pleasure in expressing my judgment of the value of your series of casts, both to students of geology, and to the people at large. To the first class they serve an important purpose in giving a clearer and longer retained knowledge of the extinct forms of life than can be gained by any other means at their command. To the latter they arrest attention and excite interest, the first step, toward scientific education in the individual or community.

I have daily fresh evidence of the utility to my classes and the public of the series which I purchased of you.

To most persons they are scarcely less interesting and impressive than the originals would be, and are equally instructive. I only regret in this connection that I have not space for more of them.

Yours very truly,

J. S. NEWBERRY,
Prof. of Geology.

From Prof. ALEXANDER WINCHELL.

UNIVERSITY OF MICHIGAN,
Oct. 14, 1870. }

[Extract from letter to Mr. Ward]

* * * Your copies place within the reach of all classes, *facsimiles* of the best specimens extant, either in Europe or America. In the department of Vertebrate paleontology it is absolutely impossible to get together, in the actual state, one-third of the illustrations of which you furnish the casts, and I confidently assert *that any institution which undertakes to teach geology, can no more afford to dispense with the facilities which you provide than it can with blackboards and ergates and test-tubes and air-pumps.*

I am very familiar with the character of your casts—their finish, their *life-likeness*, their reproduction of the choicest specimens on either continent, and I can intelligently assert that nothing further is to be desired. I would earnestly recommend them to the attention of amateur geologists; to all persons connected with museums; to patrons of education waiting for the opportunity to perform a noble act, and to classes of students ambitious to leave a monument to themselves with *alima mater*, which shall be not only *vere perveniens* but *vere utilis*.

Would that our people might learn like the Germans, to place less faith in brick and mortar, and more in books and the materials of science!

Very truly yours,

A. WINCHELL.

PROFESSOR WARD'S NATURAL SCIENCE ESTABLISHMENT AT ROCHESTER, N. Y.

WHEN Professor Agassiz gave his opening lecture in the Museum of Comparative Zoology at Cambridge in 1860, he said that American students had been forced to visit Europe, if they were desirous of making any extended study in the natural sciences, but that he intended to reverse this and compel European students to visit America; and by his judicious purchase of type collections abroad (thanks to the liberality of citizens and our State) he has made his promise good.

Professor Henry A. Ward of Rochester, New York, formerly a student of Professor Agassiz, and since Professor of Geology and Zoology in the Rochester University, has, under humbler auspices, long been working toward the same end. His large cabinet of geology and mineralogy at Rochester is well known to many of our readers. He long ago felt the necessity of bringing before the American student examples of those larger and rarer fossils known to geological science, of which only single specimens existed.

For this purpose he visited Europe, engaged accomplished workmen and commenced the foundation of a collection of casts. With untiring patience and sagacity he secured the moulds of nearly everything of importance, at enormous expense, carrying his workmen from one museum to the other, and taking moulds of the choicest specimens, for a period of three years.

The difficulties encountered in some of his experiences would form an interesting chapter. After many difficulties, he managed to secure moulds of the rare *Megatherium*, *Glyptodon*, *Deinotherium*, *Diprotodon*, *Sivatherium*, *Colossochelys*, *Mosasaurus*, *Plesiosaurus*, and many other unique specimens in European museums. Thorough and methodical in all his work, he felt that this collection of casts should be symmetrical and complete, as an educational collection, and so was commenced the famous Ward collection of casts. Thousands of dollars were spent in buying especially choice specimens of the obtainable forms solely for the

purpose of making casts from them, and the originals are still preserved in his museum at Rochester. Every educational institution in the country may now possess perfect casts of the rarest fossils, forming exact facsimiles of the unique originals in the British Museum, the Jardin des Plantes, and other foreign museums, besides a representative collection of all that is needed to illustrate geological history.

From this important beginning, Professor Ward has gone on enlarging the usefulness of his work by adding to his stock, skins and skeletons of animals, fossils and minerals, and alcoholic specimens, so that institutions may provide themselves with collections accurately labelled and arranged, without sending abroad for the purpose.

With the capital invested in so large an enterprise, rapid sales must be effected, and one not familiar with the scientific attainments of Professor Ward, and the sole desire that animates him, to spread far and wide the type collections so important for educational purposes, might confound his occupation with that of the ordinary dealer in natural history objects, such as one may find in any large city. While in the latter case, however, with some laudable exceptions, the dealers offer simply the fortuitous gatherings of sailors, comprising curiosities, shells, and detached portions of animals, like turtles' shields, sharks' jaws, and the like, of no intrinsic value, the work in which Prof. Ward is engaged is one of a solid scientific character. His outlays are immense, yet everything he does is done solely in reference to advancing science. He has the endorsement of every naturalist in the country, and already the leading museums in the country are indebted to him for some of their choicest material.

Every scientific man should visit Professor Ward's place at Rochester, New York, and see the bee-hive of industry he has built up around him. We visited Rochester in February, solely for the purpose of examining the new industry. Here one finds several large buildings, besides sheds and yards devoted to receiving, preparing and shipping specimens. There are twelve men constantly employed as taxidermists, osteologists, moulders and carpenters. Two of the osteologists he has brought from the Jardin des Plantes, Paris, where they had worked for a long time under the direction of eminent anatomists. The skeletons and skulls prepared here are beautiful in their whiteness and the elegance of their mounting. In the University building is Professor Ward's zoological cabinet, still his private property, containing type forms of the animal kingdom. This is carefully labelled and is strictly an educational collection.