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Fossils: Digging Into the Past

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Fossils: Digging Into the Past

Abstract

Fossils collected in Renaissance collection cabinets were items of wonder and curiosity. Although sometimes mistaken for other pieces of naturalia, they were widely collected by owners of princely cabinets and scholarly collections. Though naturalists and collectors often kept fossils in their collections, they did not have the same understanding as we do today of what they are. Due to their belief in mythological monsters and naturalia with magical properties, there were often misinterpretations or mislabeled objects to something they were not. According to Kenseth's "A World of Wonders in One Closet Shut," some collectors believed that fossilized shark's teeth were "adders' tongues," and that they could be used as antidotes to poison. Just as whale ribs were mistaken for "giant bones," and narwhal tusks were mistaken for "unicorn horns," fossils were also often misunderstood. [*excerpt*]

Keywords

fossils, Athanasius Kircher, apothecaries, Lycopoda fish, ammonite

Disciplines

Ancient, Medieval, Renaissance and Baroque Art and Architecture | Fine Arts | History of Science, Technology, and Medicine | Industrial and Product Design | Intellectual History

Comments

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Original version online at <http://wonder-cabinet.sites.gettysburg.edu/2017/cabinet/fossils-digging-into-the-past/>

Audio guide on fossils included.

Fossils: Digging Into the Past

Perceptions of Fossils During the Renaissance

By Sidney Nicole Caccioppoli



Ammonite Half 1 on loan from the
Gettysburg College Biology Department.
Photograph by Sydney Rush

Fossils collected in Renaissance collection cabinets were items of wonder and curiosity. Although sometimes mistaken for other pieces of naturalia, they were widely collected by owners of princely cabinets and scholarly collections. Though naturalists and collectors often kept fossils in their collections, they did not have the same understanding as we do today of what they are. Due to their belief in mythological monsters and naturalia with magical properties, there were often misinterpretations or mislabeled objects to something they were not. According to Kenseth's "A World of Wonders in One Closet Shut," some collectors believed that fossilized shark's teeth were "adders' tongues," and that they could be used as antidotes to poison. Just as whale ribs were mistaken for "giant bones," and narwhal tusks were mistaken for "unicorn horns," fossils were also often misunderstood ¹.

At that time, they were not called fossils, but "[figured](#)" or "formed stones." ² One well known collector of fossils was Athanasius Kircher (1602-1680), who examined and "found all sorts of miraculous images in fossil and mineral specimens." ³ He also authored [Mundus Subterraneus](#), which is a volume that includes information and images on the findings of the world underground. This included [fossils](#), which are formed when the organism is buried for a long time within a matrix until they have completely fossilized. A matrix is the rock or stone that a specimen becomes fossilized in. ⁴ Collectors and naturalists examined fossils to study where they may have come from, and how and what was trapped within the matrix.



Ammonite fossils

Image from: <http://rsnr.royalsocietypublishing.org/content/67/2/123>

Apothecaries may have on occasion tested them to see what properties they had, and would have observed the shape, size, and color of the fossils. John Woodward was one such geologist, who studied consistency, texture, and smell to catalogue and classify fossils.⁵ Robert Hooke (1635-1703), is another scholar from the Renaissance, who was one of the first people to study fossils using a microscope. He “believed that these stones were petrified exuviae of animals deposited in various layers of the Earth by means of naturally occurring changes such as earthquakes.”⁶ This shows the process of how as the scientists and scholars studied natural history, they began to develop a more accurate understanding, although not complete. Volumes and encyclopedias contained [images](#) and information that collectors used to contribute to their own knowledge, and share with others.

Gettysburg Wonder Cabinet Fossils

Gettysburg’s own Renaissance collector’s cabinet has a few marvels of its own, that will help the viewer understand why fossils were valued and included in such collections. First and foremost, there is the *Lycoperia* fish slate, which is from the Lianing Province, China, and dates back to the Late Cretaceous period, approximately 100.5 to 66 million years ago. The next pieces in the collection are the polished ammonite halves, which originate from Tulear, Madagascar, and date back to Middle Cretaceous Period, approximately 112 million years ago. Another fossil included is the Hadrosaurus egg from the Cretaceous period, about 75 to 65 million years ago.⁷

Lycoperia Fish Fossil



Lycoptera Fossil Slate on loan from the Gettysburg College Biology Department. Photograph by Sydney Rush

The Lycoptera fish slate is a large fossil, and the number of overlapping fish skeletons, as well as the different colors, makes it visually engaging. The fish would have been observed and perhaps even labelled by Renaissance scientists, especially as an interest for natural history grew, and people began to write and develop encyclopedias and volumes. At first there were volumes on natural history as a whole, but the more that it was studied, the more specific it became, and then there were volumes on fish and marine animals, plants, rocks, and other forms of natural history. Fish were popularly studied, collected, and documented, and this would have been a unique piece to study from.



Ammonite Half 2 on loan from the Gettysburg College Biology Department. Photograph by Sydney Gush

Ammonite Halves

The ammonite halves are a demonstration of how Renaissance collectors and artists thought that nature could also be altered and changed by man. While the ammonites (cephalopod mollusks) are fossilized marine creatures, the people of the Renaissance did not yet understand that, and some assumed them to be snake-like, because of the way in which they coil and spiral.⁸ Also, as the shell of the ammonite fossilizes, mineral deposits develop within and crystalize, giving the fossil a beautiful shine that would have been attractive to collectors.

Furthermore, these ammonites are polished, which means that they are meant to be seen, enjoyed, and admired. They look beautiful, and since they are halved, the pattern on the inside can be seen as well as the outside. They are very decorative pieces that would have been admired amongst other wonders in a collection. It is similar to, but not quite the same as a nautilus, which also would have been altered and used for decoration.⁹



Hadrosaurus Egg on loan from the Gettysburg College Biology Department. Photograph by Sidney Caccioppoli

Hadrosaurus Egg

The [Hadrosaurus](#) egg is from a “duck-billed,” land dwelling herbivore from the Late Cretaceous Period.¹⁰ Scholars and scientists might have known that this fossil was from a dinosaur, but they possibly may have first believed it to be an egg belonging to some sort of mythical creature. The size and shape of it suggest that it is a large egg, and must have come from a large creature. It is almost similar in size to an ostrich egg; however, those were used as decoration pieces. This piece may also have been one to inspire inquiry from the visitor about how it was acquired, what it was, and where it came from.

These unique items captured the values of beauty and wonder which lead them to be popular amongst collectors, and found in Renaissance collection cabinets.

These fossils are all on loan from Dr. Kazuo Hiraizumi, a professor in Gettysburg College’s very own Biology Department.

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