

Fantastic Beasts



Many ancient cultures have stories of fantastic creatures. Did all these people simply imagine dragons, gryphons, or giants?

Today, scientists believe they found fossils and, unable to explain them, gave them exaggerated features of the animals they knew and found places for them in folklore.

For instance, we know Greeks and Romans collected fossil bones. They believed these once belonged to their gods and warrior heroes, who were hailed as giants when the huge bones were found.

These fossils, now known to come from mammoths, were displayed in the Roman capital as late as AD 500.

Long before then, different cultures told stories of gryphons, which were part lion, part eagle and protected Earth's gold.

Where might *this* story have come from?

In the Gobi Desert, gold would often erode into streambeds with fossils of *Protoceratops*. Their skulls somewhat resembled contemporary lions, but with a large eagle-like beak.

Earlier still, dragons appeared in Chinese mythology. While many experts today don't see a direct fossil connection, there's an ironic link to the present day:

Many villagers still believe in dragons and grind fossilized "dragon bone" into medicines, as they have for 2,500 years. Paleontologists can often follow the sources of apothecary "dragon bone" to find new fossil beds.

No doubt there are some cases where mythical beasts sprang purely from the imagination, not fossil discoveries. But on a future EarthDate, we'll look at one famous myth that almost certainly did.

A *Protoceratops* skull (left) and a sketch of a primitive 3-cm Greek circular gold plaque stamped with a gryphon.

Photo Credit: Luis Miguel Bugallo Sánchez (own work; GFDL [<http://www.gnu.org/copyleft/fdl.html>] or CC-BY-SA-3.0 [<http://creativecommons.org/licenses/by-sa/3.0/>]), via Wikimedia Commons

Sketch Credit: British Museum Department of Greek and Roman Antiquities; F. H. Marshall (public domain), via Wikimedia Commons



Background: Fantastic Beasts

Synopsis: We have all read about fantastic beasts in ancient mythology from around the world. How did these stories come to be? Is there any truth or logic to them? Some researchers believe that ancient people discovered fossils of extinct species and created mythical creatures to explain these intimidating and frightening-looking skeletons.

- Historical literature and art describe a rich human chronicle of mythological creatures from many ages and localities. How did these beasts find their way into folklore?
 - European and Asian mythological stories were recorded from 2000 BC through at least AD 500. Fantastic creatures were also illustrated in carvings in Africa, Arabia, and the Americas.
 - Egyptians, Greeks, and Romans collected and measured fossil bones long before the so-called father of paleontology Georges Cuvier did in the early 19th century.
 - Many mythical beasts were attributed to specific localities, which in some cases also had rich fossil beds.
 - If fossils had unfamiliar characteristics, people used their imaginations to fill in the gaps.
 - Humanoid creatures included Giants and Cyclopes, while mythical animals included gryphons (or, griffins) and dragons.
- Without any large mammals in Europe and Asia Minor to explain femur bones as thick as a man's thigh and as tall as a man's waist, Pleistocene mammoth bones were reassembled into skeletons more than 15 ft tall. Often the giant skeletons were attributed to mythological heroes who lost their lives in previous great battles.
 - King Hygelac in the Old English epic poem *Beowulf* was a real-life king in the sixth century; he may have been remembered as a Giant in *Beowulf* because he was killed in battle and dumped into a mass grave near a rich Pleistocene fossil site where mammoth and other Pleistocene megafauna fossils were abundant.
 - Residents later memorialized the site; when they started finding mammoth bones there, they might have mistaken them for the king's remains.
- Greek heroes Achilles, Ajax, Antaeus, Asterion, Hyllus, and Orestes were all hailed as Giants when their huge bones—now known to be mammoth bones—were discovered between 560 BC and AD 180. These bones went on display in Constantinople around AD 500.
- Ancient Greek and Roman scholars, who had never seen an elephant, interpreted Pleistocene fossil dwarf elephant skeletons of Italy and Greece as single-eyed Cyclopes because the elephant nasal cavity was a large hole in the center of its skull.
 - These fossils—particularly abundant in Sicily, where most of the tales start— are the focus of the next EarthDate episode.
- Along the Silk Road and gold routes in the Gobi Desert of Mongolia, large numbers of Cretaceous *Protoceratops* dinosaur skeletons tended to erode along with gold into deposits concentrated by ancient streams. This coincidence may have led Scythian prospectors around 700 BC to propagate the myth of gryphons protecting gold deposits in this harsh, desolate region.
 - Gryphons were said to look like lions, but with the beaks and wings of eagles.
 - They were consistently described by numerous sources from the gold-bearing areas of the Gobi.
 - Gryphons were considered the kings of all creatures: the guardians of treasure and priceless possessions and symbols of divine power, military courage, and leadership. As beasts of the land and sky, gryphons were seen as a symbol of Jesus in Christendom.
 - Similar-looking creatures show up in art as long ago as 3000 BC in ancient Iran and Egypt, which may challenge the story of their Gobi Desert fossil origin from a couple of millennia later.

References: Fantastic Beasts

Mayor, A., 2011, *The first fossil hunters: dinosaurs, mammoths, and myth in Greek and Roman time* (revised ed.): Princeton, NJ: Princeton University Press, 400 p.

A Mammoth King | Earth Magazine

Greek Myths: Not Necessarily Mythical | NYTimes

8 Types of Imaginary Creatures "Discovered" in Fossils | MentalFloss

China's Dinosaur Folklore | Smithsonian

Dinosaur Fossils Part of Longtime Chinese Tonic | National Geographic

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- Gryphons are common in heraldry and symbols ranging from those of countries to churches to museums to Saab motorcars.
- China is home to some of the best-preserved Mesozoic dinosaur fossils in the world. Dragons first appeared in Chinese mythology as guardians of waterways, mountains, or skies more than 3,000 years ago. Chinese characters for *dinosaur* combine the words for *terror* and *dragon*. But experts say there is no direct evidence that Chinese dinosaur discoveries led to specific dragon myths.
- Many villagers still believe in dragons and continue to grind dinosaur fossils into “dragon bone” medicines, as they have for at least 2,500 years. Peasants use a dinosaur-powder drink to treat cramps and dizziness, and apply a similar paste to fractures and wounds. Paleontologists follow sources of apothecary “dragon bone” to find new fossil beds.
- Theories about dinosaur tracks are embedded in Chinese folklore. Stories of their sources range from footprints of divine birds or sacred mammals like rhinoceroses, to giant lotus flowers prints, to tracks of mountain gods or heroes like giant King Gesar, a warrior featured in an epic poem about Tibet’s history.

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