

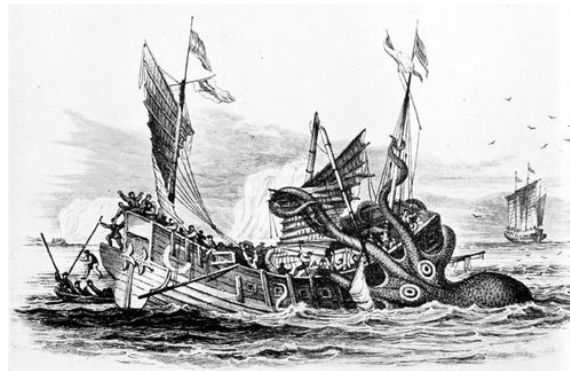
The Stuff of Legend

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This is a replica of the giant squid

Momotarou2012 (CC BY-SA 3.0)



Pierre Denys de Montfort's Poulpe
Colossal attacks a merchant ship, 1810.

The mysterious giant squid, while a very real species, has fueled folklore all over the world. And it's not alone—many storied beasts took shape around seeds of reality. While they may not breathe fire, heal disease, or crush ships, the animals that inspired their mythological counterparts are no less fantastic.

Release the Kraken

Denizens of the deep have enthralled humans for centuries. Greek myths pitted Hercules and Perseus against the serpentine sea monster Cetus. A 13th-century Icelandic saga told of the sea beast Hafgufa, which swallowed men and ships alike. In 1830, Alfred Lord Tennyson penned a sonnet about the kraken, a legendary Scandinavian sea creature so charismatic that 150 years later

Hollywood decided to unleash it on ancient Greece in *Clash of the Titans*.

These marine monsters may have a basis in fact. Giant squid may not reach the size of the gigantic kraken, which was sometimes depicted demolishing boats with its massive tentacles, but they are formidable and impressive animals. The largest giant squid are thought to measure more than 40 feet from the tips of their tentacles to the end of their mantle, or body. That's about the length of a school bus.

Sighting a squid as big as a bus is still a momentous feat. Photos and videos of these benthic behemoths in their natural habitat are rare, headline-making events. So imagine a sighting centuries ago: it would certainly have been exceptional fodder for any seafarer's stories. And as those tales were shared, the creature likely grew with each retelling, eventually reaching titanic proportions.

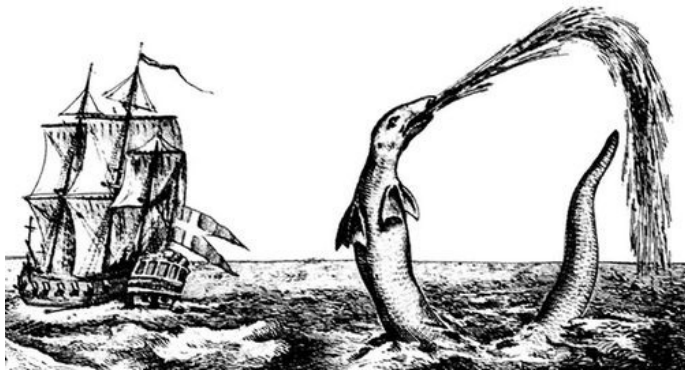
In his book *The Search for the Giant Squid*, marine biologist and Museum Research Associate Richard Ellis speculates that even Greek myths of the many-armed Scylla and the Hydra, one of Hercules's foes, could have been inspired by glimpses of giant squid.



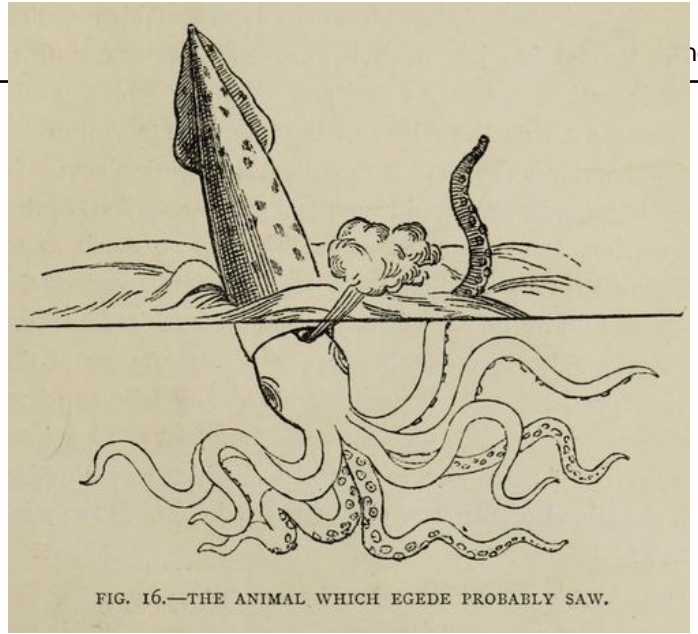
hydra, Gesner
AMNH / D. Finnin

Since enormous cephalopods usually keep to mid- to deep-water habitats, the most common way to see a giant squid would have been to spot a dead or dying squid that had floated to the surface. These animals' bodies—long, thin, and utterly strange—may have helped to give life to legends of serpentine sea monsters.

In Conrad Gesner's 16th-century *Historiae Animalium*, for example, the hydra is depicted as having a trunk-like body with many heads, each one sitting on the end of a long, serpentine neck. "[It] is not impossible," Ellis points out, "to see the 'heads' as arms, and the body as that of a large cephalopod." Lose the feet, and Gesner's hydra turns out to be a pretty decent depiction of a giant squid.



Erik Pontoppidan, 1753



Henry Lee, 1883

a "sea serpent" sighting may have been inspired by a breaching of a giant squid



The Unicorn in Captivity

My, What Big Tooth You Have

The natural world provided plenty of inspiration for other legendary beasts. Take the unicorn, an iconic creature in Western mythology that also has counterparts in China and Japan. Typically

depicted in the West as white horses with long, slender horns rising from their heads, unicorns have inspired artwork for hundreds of years, from medieval tapestries to elementary-school notebooks.

In the Middle Ages, believers didn't have to rely on second-hand stories to bolster their faith in unicorns. For a hefty sum, they could purchase long, white, spiraled horns, presented as proof of the wondrous creatures' existence. The majestic horns were said to have magical properties, including the power to cure disease.



a narwhal tusk
AMNH / D. Finnin

Unfortunately for medieval shoppers, these horns didn't come from unicorns. They were harvested from creatures arguably even more fantastic: narwhals, *Monodon monoceros*, a species of whale. Narwhal males sport an extraordinarily long tusk, which is actually an overgrown left canine tooth that pierces the animal's upper lip. Researchers have proposed several purposes for these impressive teeth—which can reach more than 9 feet in length—from an acoustic sounding stick to a seafloor spade. In 2014, dentist and Harvard School of Dental Medicine instructor Martin Nweeia, along with a team of colleagues, published a paper suggesting that this tooth is actually a sensory organ that may help males detect changes in salinity, temperature, pressure, and even pheromones released by females who are ready to mate.

Narwhal horns were not the only thing fueling belief in mythological equines. As Westerners began to expand their trade routes, real-life animals with notable horns on their heads were spotted in the far corners of the world. Around 1300, the Italian explorer Marco Polo recorded this sighting in Sumatra: "There are wild elephants and plenty of unicorns, which are scarcely smaller than elephants. They have the hair of a buffalo and feet like an elephant's. They have a single large, black horn in the middle of the forehead... They have a head like a wild boar's and always carry it stooped towards the ground. They spend their time by preference wallowing in mud and slime. They are very ugly brutes to look at."



Conrad Gesner, *Historiae animalium; liber primus, qui est de quadrupedibus viviparis*, woodcut, Zürich, 1551.



Sumatran rhino
Ltshears (CC BY-SA 3.0)

In retrospect, it seems clear that Polo had in fact encountered the Sumatran rhinoceros. The animals' horns may have helped perpetuate the myth of the unicorn, though given the discrepancy between the unicorn's idealized form and the reality of the so-called "hairy rhinoceros," one can forgive Polo his disappointment.



dwarf elephant skull
AMNH / D. Finnin

Dinosaurs and Dragons

While specimens from living animals like the narwhal and rhino helped prop up the myth of the unicorn, some stories of mythological creatures were inspired by animals that had long been extinct. For instance, the fossilized skulls of dwarf elephants-which have huge nasal cavities in the center-are thought to have inspired stories of the Cyclops, the one-eyed giant of Greek mythology.

Big bones may have also given rise to one of the most enduring creatures of legend: the dragon. These enormous serpents or lizards, sometimes described as having wings and breathing fire, are found in tales across Europe and Asia, a tradition that spans Arthurian legend to contemporary film and television.



The Mythical Creature Dragon,
Friedrich Johann Justin Bertuch,
1806.

Dragon legends were likely inspired, and fueled, by fossil finds. The Austrian town of Klagenfurt for years displayed the skull of an extinct woolly rhinoceros that was fabled to belong to a dragon slain by knights. And pioneering paleontologist Mary Anning may have been the original "Mother of Dragons," securing her reputation as a famed fossil hunter in the 1820s with discoveries of pterosaurs and a complete skeleton of a *Plesiosaurus*, a find made famous in the 1840 title *The Book of the Great Sea-Dragons*.



Pterosaurs in the Vertebrate Origins on the Museum's fourth floor.

AMNH / D. Finnin

Dragons have been a powerful presence in Chinese culture for centuries, and in traditional Chinese medicine powdered dragon bones are still prescribed as a cure for conditions ranging from madness to dysentery. Most of these "dragon bones," though, are the fossils of extinct mammals, unearthed from China's many rich fossil beds.

The dragon continues to loom large in popular culture, at times inspiring a curious reversal: real species named in honor of legendary monsters. In 2011, while working on his Ph.D. at the Museum's Richard Gilder Graduate School, biologist Ed Stanley named a genus of girdled lizards found in South Africa's Drakensberg (that's Dragon Mountain) range after Smaug, the terrifying, treasure-hoarding dragon of J.R.R. Tolkien's *The Hobbit*. Stanley says the homage was as much to the author-Tolkien was born in South Africa-as to the fabled beast, but the end result is the same: the storied Smaug is now a real-world lizard.

Name: _____ Date: _____

1. What real-life animals are thought to have inspired the kraken and the hydra?
 - A. lobsters
 - B. clown fish
 - C. giant squid
 - D. plankton

2. What evidence caused people in the Middle Ages to believe that unicorns were real?
 - A. photographs of explorers with unicorns
 - B. large hooves that had special unicorn markings
 - C. paintings of unicorns in nature
 - D. large horns that were actually narwhal horns

3. Fossils can be misinterpreted to support legends of animals that aren't real.

What evidence from the text supports this conclusion?

- A. "Around 1300, the Italian explorer Marco Polo recorded this sighting in Sumatra: 'There are wild elephants and plenty of unicorns, which are scarcely smaller than elephants.'"
 - B. "Unfortunately for medieval shoppers, these horns didn't come from unicorns. They were harvested from creatures arguably even more fantastic: narwhals, Monodon monoceros, a species of whale."
 - C. "The Austrian town of Klagenfurt for years displayed the skull of an extinct woolly rhinoceros that was fabled to belong to a dragon slain by knights."
 - D. "The natural world provided plenty of inspiration for other legendary beasts."
4. What is one similarity between the myths of the hydra and the dragon?
 - A. Both creatures had popular books or stories written about them.
 - B. Both creatures were thought to be peaceful and gentle.
 - C. They were both proved to exist through fossil evidence.
 - D. They were both important parts of Greek mythology.

5. What is the main idea of this text?

- A. Mythological creatures like krakens, unicorns, and dragons are all believed to have been inspired by real-life animals or fossils.
- B. The hydra, a famous monster from Greek mythology, is now believed to have been inspired by giant squids.
- C. Sumatran rhinos are large, hairy animals with single horns that probably were the inspiration for Marco Polo's claim that he saw a unicorn.
- D. Looking at animal bones or fossils is a good way to figure out what kind of food animals ate when they were alive.