

# *Greek Myths: Not Necessarily Mythical*

By John Noble Wilford

Neither an archaeologist nor a paleontologist herself, Adrienne Mayor has nonetheless done some digging deep into the past and found literary and artistic clues -- and not a few huge fossils -- that seem to explain the inspiration for many of the giants, monsters and other strange creatures in the mythology of antiquity.

"I have discovered that if you take all the places of Greek myths, those specific locales turn out to be abundant fossil sites," Ms. Mayor, a classical folklorist and independent scholar, said in an interview. "But there is also a lot of natural knowledge embedded in those myths, showing that Greek perceptions about fossils were pretty amazing for prescientific people."

Her years of research thus challenge the widely held view that natural historians in classical Greece and Rome lacked the knowledge to interpret large vertebrate fossils as organic remains of the past. That conceptual breakthrough, representing the start of the modern science of paleontology, was supposedly made by the French naturalist Georges Cuvier in 1806.

Yet much like today's fossil hunters, Ms. Mayor found, ancient Greeks and Romans collected and measured the petrified bones they encountered and displayed them in temples and museums. They, too, recognized fossils as evidence of past life, now extinct, anticipating Cuvier by more than 2,000 years.

Still, the ancients often let their culture-bound imaginations run in unscientific directions. In her book, "The First Fossil Hunters: Paleontology in Greek and Roman Times," published in May by Princeton University Press, Ms. Mayor draws on a close study of classical texts to show that some of the more impressive and mysterious fossils were used as evidence supporting existing myths or creating new ones.

The Homeric legend of Heracles rescuing Hesione by slaying the Monster of Troy, for example, may have a paleontological origin. Ms. Mayor pointed out that in the earliest known illustration of the Heracles legend, painted on a Corinthian vase, the monster's skull closely matched that of an extinct giraffe. Such fossils are plentiful on the Greek islands and western coast of Turkey and are mentioned in classical literature.

The vase painting from the sixth century B.C., Ms. Mayor concluded, is most likely "the earliest artistic record of a vertebrate fossil discovery."

Fossils found and displayed in antiquity on the island of Samos probably inspired the story of savage monsters called Neades, whose reverberating bellows were said to tear the earth apart.

The Greeks thus had a neat explanation for two perplexing phenomena, the gigantic bones and the earthquakes that frequently devastated their land.

Other discoveries of huge mammal bones were viewed as confirmation of the ancient Greek belief in ancestral heroes as 15-foot giants. Mastodon fossils on Samos were hailed as the remains of the war elephants Dionysus is supposed to have deployed in his mythic battle with the Amazons.

And where did the idea of the griffin come from? Aristeeas, a seventh-century B.C. traveler, wrote of the gold-seeking Scythians who fought creatures in the Gobi Desert that resembled "lions but with the beak and wings of an eagle." These fierce creatures presumably nested on the ground and guarded deposits of gold. In reality, Ms. Mayor concluded, the griffin "was based on illiterate nomads' observations of dinosaur skeletons in the deserts of Central Asia."

Ms. Mayor's success in piecing together the griffin legend encouraged her to examine other Greek and Roman texts for "the world's oldest written descriptions of fossil finds," which had been overlooked by most classics scholars and historians of science. On a visit to Samos, she studied a rich collection of prehistoric bones and skulls

with which the ancients must have been familiar. She began to put texts and fossils together and saw the ancients in a new light.

"Just as a fossil is 'petrified time,' so is an ancient artifact or text," she wrote. "The tasks of paleontologists and classical historians and archaeologists are remarkably similar -- to excavate, decipher and bring to life the tantalizing remnants of a time we will never see."

Although Ms. Mayor's interpretations may draw fire from some scholars, the response to her book has so far been favorable. John R. Horner, a dinosaur paleontologist at the Museum of the Rockies in Bozeman, Mont., has called it "the best account ever concerning the real meaning of mythical creatures."

In a review in the journal *Science*, Dr. Mott T. Greene, a historian of geology at the University of Puget Sound in Tacoma, Wash., praised Ms. Mayor's "well-documented contention that the ancients constructed their deep time as we have constructed ours, through the discovery and analysis of the fossil bones of extinct creatures."

"If they told stories about these fossils that differ from our own," Dr. Greene continued, "they examined the fossils with the same techniques we employ today: comparative anatomy, skeletal reconstruction, paleogeography and museum display."

Art historians think that Ms. Mayor may well have solved the puzzle of the Corinthian vase depicting Heracles shooting arrows at the head of the monster of the Troy legend. The vase, on display at the Museum of Fine Arts in Boston, had mystified the experts because its monster does not conform to the conventional serpentine image of Greek sea monsters.

Some experts like Sir John Boardman, an art historian at Oxford University in England, suspected that the vase was the work of an incompetent artist. But when Ms. Mayor called attention to the similarity between the monster and the skull of an extinct giraffe, Dr. Boardman agreed and invited her to expand on this interpretation in an article, which was published in the February issue of *The Oxford Journal of Archaeology*.

Paleontologists also agreed that the skull of an extinct giraffe, possibly *Samotherium*, often found eroding out of rock outcrops in the region, may have been the artist's model and perhaps even the inspiration for the original myth.

"This vase," Ms. Mayor wrote, "is valuable evidence for the role that observations of fossilized animal remains played in ancient myths of monsters."

Dr. Kate A. Robson Brown, an anthropologist at the University of Bristol in England, thinks that some of Ms. Mayor's fossil-myth connections may be a stretch. As she noted in the current issue of *Natural History* magazine, "Many cultures around the globe have colorful giant lore -- Norse fables and Australian creation stories come to mind -- without the benefit of rich fossil deposits."

Ms. Mayor said her study of ancient texts revealed ample evidence of a "bone rush" among Greeks in the fifth century B.C. Every discovery of huge bones, it seems, prompted speculation that they belonged to this hero or that giant. Many of these finds happened to occur, Ms. Mayor said, at places where the gods and giants of mythology had met in battle.

She found in a second-century A.D. geography by the traveler Pausanias an account of the excitement created by the discovery of bones of heroic proportions that were taken to be those of mighty Ajax, of Trojan War legend. "Ajax's kneecaps were exactly the size of a discus for the boys' pentathlon," Pausanias wrote.