

Fantastic creatures, frequently found in classical myths, haunted the ancient imagination. Many people believed that giants and monsters actually existed in remote parts of the world. Pliny the Elder reports that Nereids and Tritons (mermaids and mermen) were sometimes washed ashore in Spain and Gaul. Accidental discoveries of oversized human bones and teeth (naturally assumed to have belonged to "heroes"), and monstrous births by animals and humans, are recorded in such curious works as Phlegon's *Amazing Occurrences* and the *Book of Portents* by Julius Obsequens.

Two stories, however, deserve closer attention. One concerns M. Aemilius Scaurus, who served in Syria with Pompey the Great from about 65 to 61 BC. As aedile in 58 he displayed at Rome a skeleton that he had brought back from Joppa (modern Jaffa-Tel Aviv in Israel), which Pliny (9.4.11) describes as forty feet long, with ribs higher than those of an Indian elephant, and a spine more than a foot thick. This was reputed to be the sea monster killed by Perseus when he rescued Andromeda; the myth had already been located at Joppa by the geographer Scylax (4th century BC). If these huge bones, seen by thousands at Rome, were not from a mythical creature, what were they?

The other story concerns the bone collection of the emperor Augustus. As we learn from Suetonius' biography *Divus Augustus* (72.3), Augustus decorated all his estates with statues, groves, and "objects remarkable for their age and rarity"; in particular, on the island of Capri

he had a collection of "huge bones of sea monsters and wild beasts, which are called the bones of the giants". What were these gigantic bones?

Paleontology (the study of prehistoric life) is a recent science, but discoveries are not new. The philosophers Pythagoras and Xenophanes, in the 6th century BC, were familiar with fossils. Finds of elephant-like bones in Italy in the 16th and 17th centuries generated much confusion: the anatomist Gabriele Fallopio (for whom Fallopian tubes are named) dismissed them as mineral formations, while the Danish physician Niels Stensen thought they were the remains of Hannibal's elephants! Today our knowledge of the prehistoric Mediterranean is much clearer. There were no dinosaurs in Italy, which lay beneath the sea in Mesozoic times (see map). However, such creatures as the woolly mammoth and woolly rhinoceros roamed over much of Italy during the late Pliocene and early

Pleistocene epochs, about two million years ago. Thus some of the gigantic bones assembled on Capri could have belonged to mammoths or other prehistoric mammals.

Israel, a biogeographical crossroads linking Eurasia to Africa, was overrun in the Early and Middle Pleistocene with the ancestors of elephants, camels and other large mammals. The skeletal remains of such a prehistoric beast might have been mistaken for a mythical monster. However, the measurements of the Joppa skeleton recorded by Pliny far exceed the size even of extinct land mammals. Since Joppa is located on the coast, it was most likely a whale: sea-going Romans had seen whales in the flesh, but might not recognize the

skeleton. Alternatively, it could be the fossil skeleton of a large plesiosaur. Plesiosaurs were Jurassic marine reptiles with paddle-shaped flippers in place of legs. Those occurring in Europe ranged in length from 7 to 39 feet. The 39-footer, known as a *Liopleurodon*, has been found in England, France, Germany and Russia, but could have strayed further south.

The bones of plesiosaurs might also account for some of the "sea monsters" in Augustus' collection (which, though assembled on Capri, could have come from anywhere in the Roman world). Other possibilities include whales, sea cows, sharks, and oar-fish. The oar-fish, often mistaken even in modern times for a "sea serpent", is an eel-like flatfish whose length can exceed 20 feet. Was Augustus the first keeper of a paleontological museum or "Jurassic park"? We shall probably never know.