

# MAGS EXPLORER



Memphis Archaeological and Geological Society Youth Newsletter

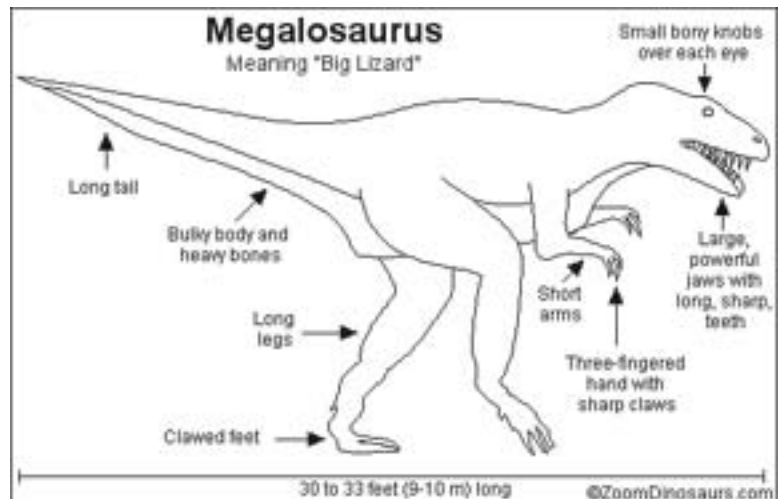
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## The First Dinosaurs

*MIKE BALDWIN-Roger Van Cleef will be talking about dinosaurs tonight in MAGS Youth [Mini MAGS]. Do you know which dinosaur was the first to be discovered? How about the second? Keep reading to find out.*

The world's earliest recorded dinosaur bones and footprints came to light in the early 1800's, when huge birds and vanished races of giant humans were still acceptable explanations for their troubling existence. It wasn't until 1842 that Sir Richard Owen first recognized Dinosauria.

Owen based his pioneering work largely on three early fossil discoveries made in England. The first fossil bones in history to be identified as a dinosaur belonged to *Megalosaurus*, found in 1818 in Oxfordshire and described in 1824 by the Reverend William Buckland, a geology professor at Oxford University, member of the Royal Society of London and president of the Geological Society of London. Discovered in Middle Jurassic deposits in a quarry at Stonesfield, the remains consisted of vertebrae, several hind limb bones, and parts of a lower jaw, pelvis, and shoulder blade. Buckland wrote in 1824: "From these dimensions as compared with the ordinary standard of the lizard family, a length exceeding 40 feet and a



bulk equal to that of an elephant seven feet high have been assigned by Cuvier to the individual to which this bone [the thighbone or femur] belonged."

Megalosaurus also represented the first meat-eating, or carnivorous, dinosaur ever found, and its description stirred the public imagination. Charles Dickens included a reference in his 1852 novel *Black*

[continued on page 2]

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# The First Dinosaurs

... continued from page one

*House*: “Implacable November weather. As much mud in the streets as if the water had but newly retired from the face of the earth, and it would not be wonderful to meet a *Megalosaurus*, forty feet long or so, waddling like an elephantine lizard up Holborn Hill.”

The second known dinosaur was *Iguanodon*, also from England. In 1822 Mary Ann Mantrell reportedly found fossil teeth and bones in a Lower Cretaceous exposure while accompanying her physician husband on his rounds in the Sussex countryside. Gideon A. Mantell was a serious and respected collector of rocks and fossils who was then completing the manuscript of *The Fossils of the South Downs*. Although Dr. Mantell apparently thought from the beginning that the discovery represented a giant reptile, the fossils were misidentified by specialists as either a fish, a rhinoceros, or a hippopotamus. Mantell wasn't convinced, and in 1825 he published “Notice on the *Iguanodon*, a Newly Discovered Fossil Reptile from the Sandstone of Tilgate Forest, in Sussex” in the prestigious *Philosophical Transactions of the Royal Society of London*. He chose the name *Iguanodon* (“iguana tooth”) because the fossil teeth resembled those of a modern iguana. We know today that the remains were indeed those of an extinct giant reptile, an herbivorous dinosaur related to the hadrosaurids, or duckbills.

The third fossil discovery that was studied extensively by Owen before his 1842 description of Dinosauria was *Hylaeosaurus*, found in the Wealden of southern England and described by Mantell in 1832. This plant-eating armored reptile is now considered an ankylosaur.

In 1854 Owen and British wildlife artist Benjamin Waterhouse Hawkins collaborated to create life-sized concrete sculptures of *Megalosaurus* and *Iguanodon* for the grounds of London's new Crystal Palace, built for the International Exposition in 1851. Based on the incomplete remains then available, the

rhinoceros-like models bear little resemblance to today's more accurate conceptions. In fact *Iguanodon* had a thumb spike mistakenly placed on its nose. But the exhibits were hugely popular at the time and are still on display in the park.

A much earlier fossil discovery in England may also have been a dinosaur. In 1676 Robert Plot, clergyman and director of the Ashmolean Museum at Oxford University, illustrated part of a large fossil bone that he thought belonged to a giant human. Nearly a century later, in 1763, Dr. Richard Brookes named the fossil *Scrotum humanum*. Unfortunately, Plot's bone disappeared long ago and is no longer available for study. Modern researchers note the drawing's similarity to the thighbone of a theropod dinosaur, perhaps *Megalosaurus*.

Another early discovery in England came in 1809, when William Smith was conducting a geological survey of the British Isles. Smith found three large bone fragments at Cuckfield in Sussex, including part of a huge shinbone, or tibia. Many years later the fossils--now in the collection of the Natural History Museum in London--were identified as belonging to *Iguanodon*.

Across the Atlantic in North America, dinosaur fossils were found years before the discovery of *Megalosaurus* and *Iguanodon*. But the early American finds were misidentified or unrecorded, and their significance wasn't realized until after the bones from England were described.

A “large thighbone” presented before the American Philosophical Society of Philadelphia on October 5, 1787, is now thought to have been a dinosaur foot bone called a metatarsal. The specimen vanished soon after discovery.

REF: David B. Weishampel and Luther Young: *Dinosaurs of the East Coast*: The Johns Hopkins University Press: Baltimore, Maryland: 1996: pp 53-57. *The information contained in this article is used for educational purposes under the provisions of the “Fair Use Act of 1976.”*