

Dinosaur remains are fairly rare in Arkansas; however there is one portion of the state where footprints and parts of a dinosaur foot have been found. When looking at the Geologic Map of Arkansas notice the area that is colored green. This area shows rocks exposed at the surface that are Cretaceous age. This is the only portion of state where there are rocks that may contain dinosaur fossils. The rocks exposed to the north of this area are much too old to contain dinosaur remains and the sediments to the south and east are too young to contain dinosaur remains.

Dinosaur footprints

Dinosaur foot prints were found on layers of rock exposed by strip mining in a gypsum mine near Nashville, Arkansas in 1983. The tracks were made by large, quadrupedal, vegetarian dinosaurs called sauropods (Pittman and Gillett, 1984). These dinosaurs were walking near the shoreline of the ancient Gulf of Mexico, approximately 100 million years ago, when it extended across southern Arkansas. The tracks were discovered in thin limestone beds within the DeQueen Limestone Member of the Trinity Group which is Early Cretaceous age.



Sauropod tracks in Early Cretaceous Limestone. Scale is 6 inches.



Sauropod trackway

Thousands of sauropod tracks were exposed in mining operations of a gypsum mine in southwest Arkansas. In some cases individual animals could be tracked for hundreds of feet. These tracks are thought to have been made in tidal flat muds along the shore of an ancient sea.

A few years ago another dinosaur trackway was discovered in southwestern Arkansas. These 2-foot-long tracks were made by theropod dinosaurs or two-legged predators that include *Tyrannosaurus rex*. It is possible this particular three-toed dinosaur was actually one of the largest predators around called *Acrocanthosaurus atokensis*. A complete skeleton of *Acrocanthosaurus* was recovered near Idabel, Oklahoma approximately 25 miles from the Arkansas state line.



Recently discovered theropod footprint from southwestern Arkansas.

“Arkansaurus fridayi”

The only scientifically described dinosaur bones discovered in Arkansas were foot bones discovered, during August of 1972, by Mr. J.B. Friday in a gravel pit near the community of Lockesburg, in east-central Sevier County. Other bones and mostly bone fragments have been found but are not identifiable and some remains may have even been recovered, but not brought to the attention of the scientific community.

Dr. James Harrison Quinn, at that time a professor at the University of Arkansas in 1973, cleaned, assembled, and compared the foot bones with the feet of two similar-appearing dinosaurs previously described in the literature. He then constructed clay models of the missing bones, to complete the partially assembled foot. Next, he made a latex mold and cast replicas of the foot. Finally, Dr. Quinn described the bones and informally gave our dinosaur the name *“Arkansaurus fridayi”*.

“Arkansaurus fridayi”, was part of a community in Early Cretaceous time that included large dinosaurs such as sauropods (gigantic four-footed plant-eaters), ankylosaurs (four-footed armored plant-eaters) and carnosaurs (large meat-eaters). Since only minimal information can be learned from foot bones the description of *“Arkansaurus”* is based largely on what is known of similar-appearing dinosaurs.

The bones were studied and re-described by Rebecca Hunt in 2003. The following pictures were graciously donated by Ms. Hunt. For more information see AGES Brochure 7, The Arkansas Dinosaur.



Top view of metatarsal bones of *‘Arkansaurus fridayi’*.



Cast reconstruction of foot based on fossil bones and comparisons with other dinosaurs.

References:

- Braden, Angela K., 1998, The Arkansas Dinosaur, '*Arkansaurus fridayi*': Arkansas Geological Survey Education Series 7.
- Hunt, Rebecca, 2003, An Early Cretaceous theropod foot from southwestern Arkansas: Proceedings Journal of the 2003 Arkansas Undergraduate Research Conference, pp. 87-103.
- Pittman, Jeffrey G. and Gillett, David D., 1984, Tracking the Arkansas dinosaurs: The Arkansas Naturalist, vol. 2, no. 3, 13 pages.