



# The Biggest—and Last—of Its Kind

BY BEN FENWICK

Canine unit supervisor Bobby Cross is accustomed to seeing dinosaurs. But in October 1994, he came across what may be the biggest one in the world.

Cross' job at the Howard McLeod Corrections Center in Atoka County is to "run" the dogs. That is, he trains them to chase down escaped inmates. Usually, this duty involves taking volunteer inmates into the wooded, undergrowth-filled area next to the prison, siccing the baying dogs on the men, then rounding up everyone once the training is complete. Since the great fossil bed of southeastern Oklahoma emerges from the ground nearby, Cross has learned over the years to spot the various signs of possible finds.

This was a big one. He called OU paleontologist Richard Cifelli.

"We were very fortunate to find it," Cifelli says. "They (sauropods from the early Cretaceous) are so rare. To the average person it looks unintelligible. It would take a lot of work to make it recognizable."

What Cross found, later deciphered at OU's new Sam Noble Oklahoma Museum of Natural History, would be hailed as what may be the world's biggest dinosaur yet discovered—the *Sauroposeidon proteles*, or "Earthquake God-Lizard." Poseidon is the name for the Greek god of earthquakes and the sea; proteles means "perfected before the end."

Standing flat-footed, the dinosaur could look through the top window of a six-story building. *Sauroposeidon* was, at up to an estimated 60 tons, arguably the most massive living creature ever to walk. Although recent discoveries in Africa may be in competition with *Sauroposeidon*, the debate is far from over.

*Sauroposeidon* certainly had the longest neck ever found—nearly 40 feet long—and was among the last of its kind, says Cifelli. "It's truly astonishing."

Each of the creature's neck vertebrae is about four feet long. A typical neck vertebra of the previous record holder, the *Brachiosaurus*, is only two feet long in comparison—and that is a big dinosaur. According to Cifelli, a mounted skeleton of *Brachiosaurus*, at the Field Museum in Chicago, is about 80 feet long. When living, it weighed about 30 tons. *Sauroposeidon* would have been nearly 100 feet long and tipped the scales at more than 50 tons.

In fact, when the bones were first found and catalogued, Cifelli says, he thought they might be the trunks of previously unknown trees.

That is where Matthew Wedel came in. Wedel is a graduate researcher credited with establishing that the find was indeed a new dinosaur. After careful examination, he discovered that the bones were not tree trunks, but belonged to the neck of a very, very big dinosaur, a relative to the better-known *Brachiosaurus*, but much, much larger. He named it *Sauroposeidon*.

"The neck on our creature is about a third longer than that of the *Brachiosaurus*," says Wedel. "This guy was pushing the envelope."



The creature was giraffe-like, with a short body and long neck, but was 30 times more massive than the largest giraffe ever known.

Wedel and Cifelli examined the secrets of the *Sauroposeidon* by looking at the bones with a CT scanner at the University of Oklahoma Health Sciences Center in Oklahoma City. They discovered that the creature's massive bones were like Styrofoam, filled with tiny air cells that made them light enough for the creature to carry. But like the arches of a cathedral, the bones were able to hold much more weight because of their structure.

Nevertheless, it would be very hard to imagine that a neck could get much longer and still function, Cifelli says. It was imperative for the creature to have as small a brain as possible. "No matter how small the dinosaur's brain was, just lifting it up was a challenge. It's remarkable how large the bones are."

The length of the creature's neck also may give clues to the environment in which it lived. The dinosaur inhabited what was essentially the delta of a massive river system, perhaps a prehistoric version of the Mississippi, when Oklahoma was the shore

## Raised from fossil beds of Atoka County, the once-mighty *Sauroposeidon* again will reign supreme at the **SNOMNH**.

of a Gulf of Mexico that covered most of Texas.

In this steaming jungle morass walked *Sauroposeidon*, eating the leaves from the tops of trees. As large as he was, Cifelli says, he was unlikely to have had many predators. He was also somewhat lonely as dinosaurs go, most of his fellow "sauropods" having died out approximately 150 million years ago at the end of the Jurassic era.

"He's well into the Cretaceous," Cifelli says. "About 110 million years old. There's a 35-45 million-year gap there. He was pretty much obsolete by the time we pick him up. He was one of the very last elements of the Jurassic. Already there are all these new players around him."

These "new players" were faster, smarter creatures, such as the *Tyrannosaurus rex* or the small, fast raptor dinosaurs, popularized in the movie *Jurassic Park*.

Having taken the world by surprise, *Sauroposeidon* is now the big man on campus. Despite the huge amounts of space available for displaying the dinosaurs in Oklahoma's collection, *Sauroposeidon* is too big to fit in the museum's Hall of Ancient Life. Where creatures from each of the Earth's prehistoric eras presently are displayed there, *Sauroposeidon* alone could take up all the space, from one end of the hall to the other.

So, tentatively, the museum's administrators and curators plan eventually to display the big fellow in the Great Hall. It may be the only place big enough to hold him.