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BACK BONES: New Mexico Museum of Natural History volunteer Joe McDowell carefully chips away at a *Seismosaurus* fossil. Scientists' disagreements over whether the New Mexico dinosaur is the longest center on bones of the spinal column.

DINO'S REPUTATION SHRINKS

■ *Scientist's analysis suggests that *Seismosaurus* is not the world's longest, as believed*

By JOHN FLECK
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Seismosaurus, New Mexico's claim to the record books as the longest dinosaur ever found, may not have been so big after all, new research suggests.

Scientists are still arguing about the details, but many believe the dinosaur was 90 to 100 feet long, not the 150 to 170 feet estimated when *Seismosaurus* claimed the title of "world's longest."

It's still plenty big, scientists say, but not the world-record giant claimed by paleontologist David Gillette when he published the first detailed analysis of the fossilized *Seismosaurus* in 1991.

The dragon slayer is New York graduate student Brian Curtice, whose new analysis suggesting a smaller size for *Seismosaurus* has even won converts among the paleontologists at the New Mexico Museum of Natural History and Science, which owns the only *Seismosaurus* fossils found.

Curtice's work would leave a Colorado fossil called *Supersaurus* as the new title-holder at an estimated 134 feet in length, though there are other contenders.

Gillette still believes *Seismosaurus* is bigger.

It's a hard question to settle, Gillette said, because only about a third of the dinosaur's bones have been recovered, requiring scientists to fill in the blanks to estimate *Seismosaurus*' length.

But Gillette said he believes *Seismosaurus* might have been even longer.

The disagreement between Curtice and Gillette

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revolves around the placement of individual vertebrae.

Real fossils are not laid out neatly like in the movies but instead are usually jumbled like a jigsaw puzzle straight out of the box. To compound the difficulty, many of the pieces are missing, leaving the scientists to make educated guesses about where the rest go.

Curtice and Gillette disagree about where the fossils from the spinal column should be placed, which then leads to a disagreement about the estimated size of the dinosaur.

Hikers discovered *Seismosaurus*' fossil bones in 1979, sticking out of rocks near San Ysidro, northwest of Albuquerque.

Crews from the New Mexico museum began painstakingly digging out the bones in 1985, when Gillette was curator of paleontology at the New Mexico Museum of Natural History and Science.

Gillette left the museum in 1988 to become state paleontologist in Utah, but he continued overseeing the excavation and in 1991 published a description of *Seismosaurus* that claimed the world record.

Gillette gave *Seismosaurus* its name, identifying it as a new species of long-necked, plant-eating dinosaur from late in the Jurassic period, some 150 million years ago.

"Seismo-" means earthquake, and Gillette titled his 1993 book "*Seismosaurus: The Earth Shaker*."

The excavated bones are at the New Mexico museum in Albuquerque, where volunteers are chipping away the remaining rock to prepare the fossils for study and display.

While the "longest dinosaur" tag stuck to *Seismosaurus* in the media, scientists had raised questions about Gillette's claim from the beginning.

"I think most people are skeptical of Gillette's data," said

Baltimore paleontologist Gregory Paul, an amateur who is a recognized expert on dinosaur size.

Most scientists believe it was 100 feet long or less, said Pete Reser, who is in charge of preparing fossils at the Museum of Natural History and Science.

That would leave it among the four or five biggest dinosaurs but would dethrone it from its title.

Paul said as much in a research paper delivered at a 1992 scientific conference.

Curtice, now a Ph.D. student at the State University of New York at Stony Brook, has more recently taken up the issue.

Curtice studied *Seismosaurus*' vertebrae at the New Mexico museum for his master's thesis, completed last year at Brigham Young University.

Spencer Lucas, curator of paleontology at the New Mexico museum, has long been a skeptic of the *Seismosaurus* claim.

"Claims that ... *Seismosaurus* was as much as 52 meters (roughly 170 feet) long — and thus the longest dinosaur — cannot be supported," Lucas wrote in his 1993 book "*Dinosaurs of New Mexico*."

Curtice's work strengthens that view, Lucas said in an interview.

Curtice, in interviews conducted by telephone and electronic mail, said that regardless of whether *Seismosaurus* is the longest dinosaur found, it is still an enormous and interesting dinosaur.

And the scientific debate doesn't seem to have dampened the public's enthusiasm for *Seismosaurus*.

A Japanese museum is paying \$40,000 later this year for the privilege of shipping some of the late dinosaur's bones to Japan.

They will be on display as part of an exhibit of the world's largest dinosaurs.