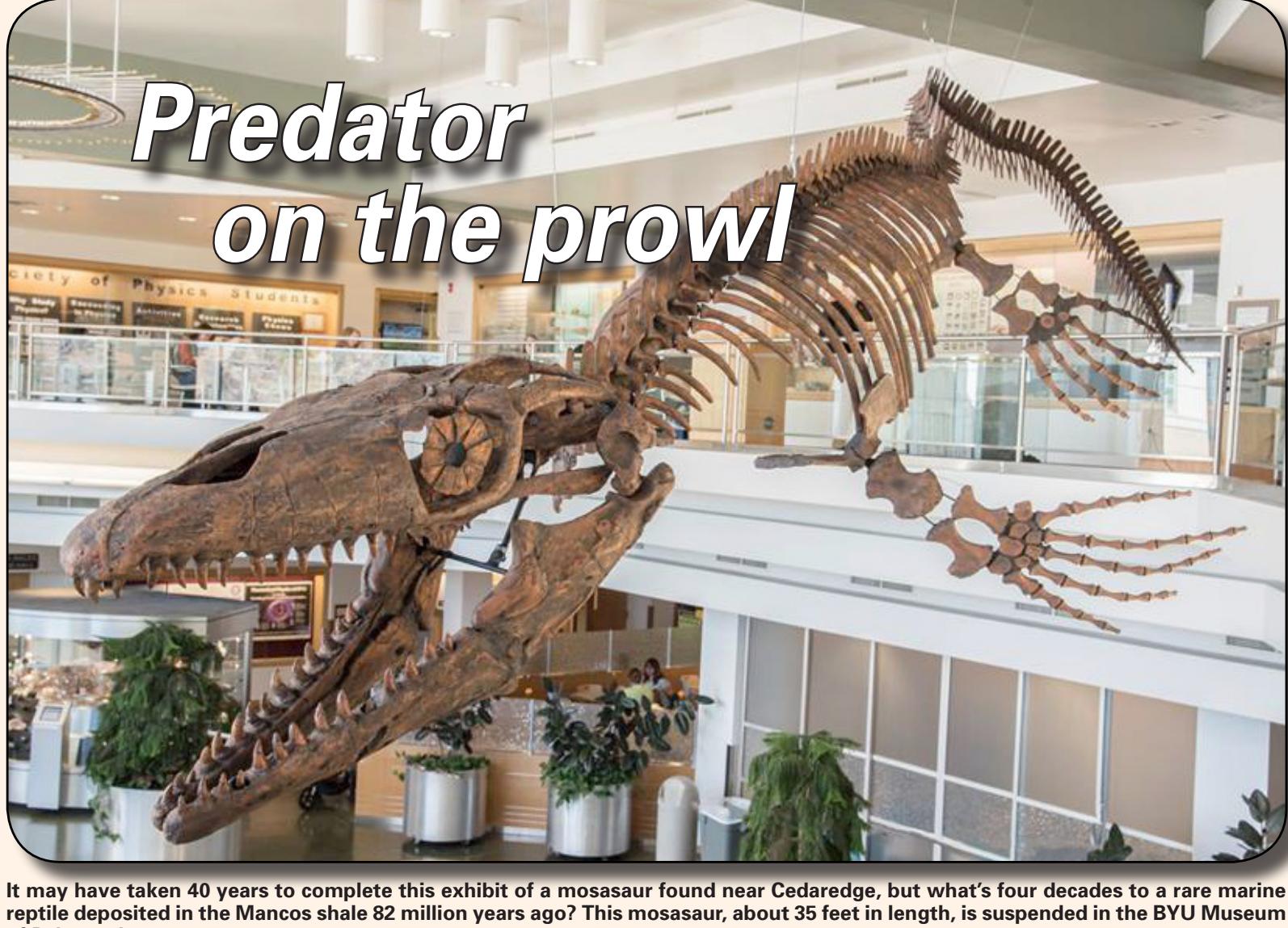


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It may have taken 40 years to complete this exhibit of a mosasaur found near Cedaredge, but what's four decades to a rare marine reptile deposited in the Mancos shale 82 million years ago? This mosasaur, about 35 feet in length, is suspended in the BYU Museum of Paleontology.

BY PAT SUNDERLAND

Managing Editor

A fossil uncovered near Cedaredge four decades ago is now on display in a museum on the campus of Brigham Young University in Provo, Utah.

While the full mosasaur skeleton is new to the BYU Museum of Paleontology, a cast of the skull has been showcased at the Welcome Center in Cedaredge for years.

The original bones were discovered below the "C" on the hill above Cedaredge in 1975 by three Cedaredge teens. In a front page article in the DCI, noted author Muriel Marshall related how the teens shared the find with their science teacher, Dick Jones.

When he visited the site, Jones said he could see an outline of the animal in the Mancos shale, but he had no idea what kind of animal it was. He reached out to Dr. Jim Jensen, a BYU paleontologist who was in the area to work the Dry Mesa (Quarry) dig 35 miles west of Delta, where Eddie and Vivian Jones discovered the world's largest dinosaur in the early 1970s. The Joneses were not only Dick's parents, they were also amateur archaeologists who found many of the dinosaurs on the Western Slope.

"Dinosaur Jim" Jensen opened the Cedar Mesa site with the assistance of Dick Jones and two Delta teenagers, Rod and Mike Scheetz, who had previously worked with Jensen.

Jensen determined the prehistoric bones were not that of a dinosaur, but a large marine

reptile. They had lain on the Cedar Mesa grade for 82 million years, he estimated. It was later determined that a backhoe excavating fill material had skinned so close to the buried treasure, some of the skeleton was shaved away.

By the time Muriel Marshall arrived at the dig a few days later, a four-foot section of tail vertebrae was exposed.

"Jensen is removing earth, grain by grain, from the cheese-soft bones," Marshall wrote. "Jones and the Scheetzs, following the line indicated by the curved tail, are excitedly working with trowel tip and whisk broom, like detectives nosing out clues in a mystery story."

Jensen worked quickly to preserve and protect the fragile bones, because he realized the fossil was located where anybody could go in and help themselves, Jones explains. "He spent two days excavating the site, then took the bones to BYU."

For years, the fossils from decades of field work in Utah, Colorado, Montana and Wyoming were stored under BYU's football stadium. Later, an addition to the BYU Museum of Paleontology provided room for nearly all those fossils. Today the director of the museum is Rod Scheetz, the Delta teen who assisted Jensen at the dig site.

It took about 10 years to prepare the skull, a cast of which is displayed in the Welcome Center at Pioneer Town. The skull is about three feet in length and offers a glimpse of the reptile's powerful jaw, with teeth pointing in opposite directions to grasp its prey.

Jones said the skull is just one reason the Cedar Mesa find was so unique. "In all my years of hunting, I rarely found the skull of a prehistoric animal; it's usually the first to be scavenged or to roll away. To have a skull is very rare."

It took another 30 years for the skeleton to be assembled.

The BYU Museum of Paleontology houses a fossil vertebrate collection of over 17,000 specimens ranging from Devonian fish (380 million years ago) to Pleistocene mammoths and cave fossils (15,000 years ago). Some dinosaurs have yet to be described and named.

"Most of the fossils we collect will never be exhibit quality," Scheetz explained. "We've collected many scientifically important fossils, but unfortunately they lack esthetics or their condition is too fragile. The fossils that are exhibit-worthy take considerable effort to mount."

"Most of our mounts are casts from the original bone," he added. "Very rarely do we find a complete animal, because one of the requirements for preservation is that it has to be locked away from the environment (like being buried), and as you could imagine, it often takes a lot of sediment to bury a dinosaur. So we most often find bones, or parts of an animal. If we are to build a mounted dinosaur, the missing parts will be filled in or modeled based on other identical individuals (if there are any), or off of similar species. The casts can then be drilled though to mount on a metal structure to make life-like poses."

Because molding and casting entail more money and expertise than is available at BYU, the museum works out deals with casting companies. "When we find and prepare an exceptional fossil, we ask casting companies if they are interested," Scheetz said. "If they are, we enter into an agreement that we get a complimentary cast in exchange for them being able to sell

casts. We also get a royalty from the casts sold, but the casting company has to be able to sell several just to break even."

BYU works with an exhibit builder out of Fruita, Gaston Design.

The mosasaur that was recently mounted at BYU, *Prognathodon stadtmani*, was strictly a marine reptile that swam in the Cretaceous Seaway 82 million years ago, Scheetz explained. "It was a major predator in its day. It had a long powerful tail and its limbs evolved into paddles, so it would not be able to support itself on land. But because it was a reptile, it was an air breather, so it had to come to the surface to breathe."

"We know mosasaurs fought each other," states an informational plaque displayed with the skull at Pioneer Town.

"Skulls show face bites and embedded teeth from other mosasaurs. They had hinges in their jaws, like snakes, that allowed them to swallow very large prey. Teeth in the roof of their mouth kept their prey in place until they could push it farther down their throats. Some fossils have been found with preserved stomach contents containing the remains of turtles, fish, sharks, birds and other mosasaurs."

During the late Cretaceous period, Colorado was covered

by an ancient sea. The drab gray shale (the Mancos shale) that make up the 'dobbies' north of Delta, are the muds from the bottom of that Cretaceous Sea, Scheetz explained. It's there the remains of the pre-historical animal lay buried.

Many of the fossils in BYU's collection came from the Dry Mesa Quarry on the Uncompahgre Plateau. Scheetz was asked if there's any interest in future exploration in the area.

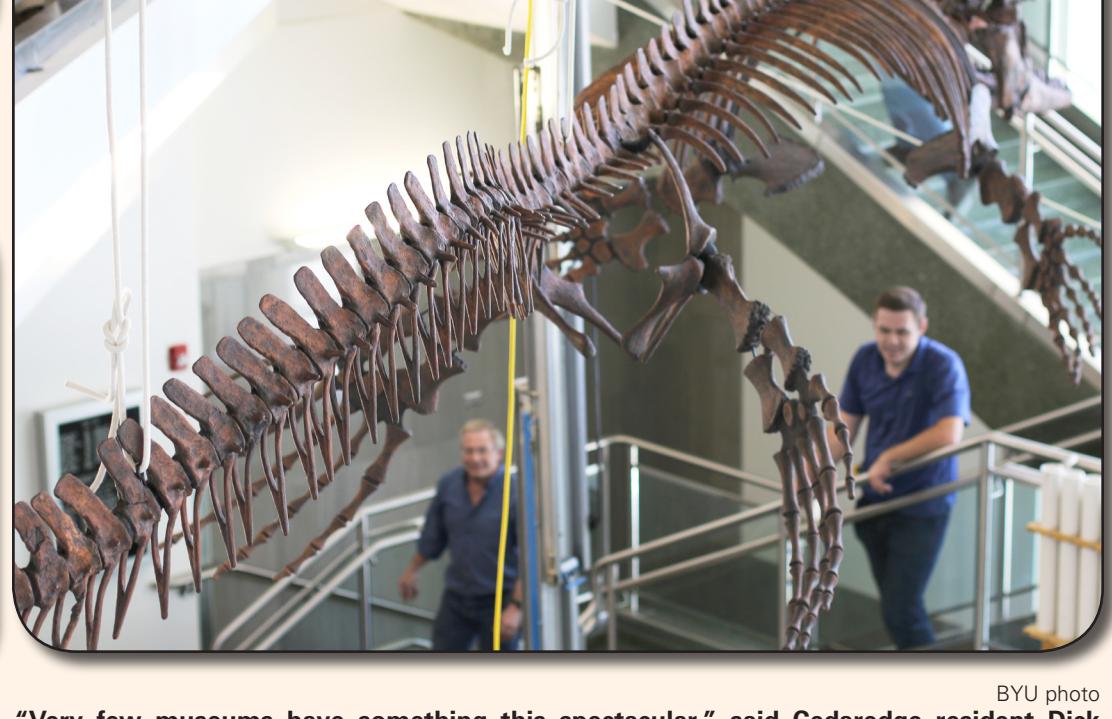
"Perhaps," he said. "Delta County is rich in Mesozoic fossils. Unfortunately most of them have been collected and are in someone's back yard. So while these fossils make for great campfire discussions, the rest of the world will never know about them. Very rarely do we find someone like the Eddie and Vivian Jones Family, who found many dinosaurs on the Western Slope, or Gary Thompson, who found the mosasaur, who report their discoveries to science."

Jones added that it's common to come across seashells in the 'dobbies', but things with hard vertebrae are much more difficult to find and, with restrictions on public lands, nearly impossible to recover.

The mosasaur was a "spectacular find," he said; there may never be another quite like it.



The mosasaur on display at BYU's Museum of Paleontology was assembled by Gaston Design, an exhibit builder based in Fruita.



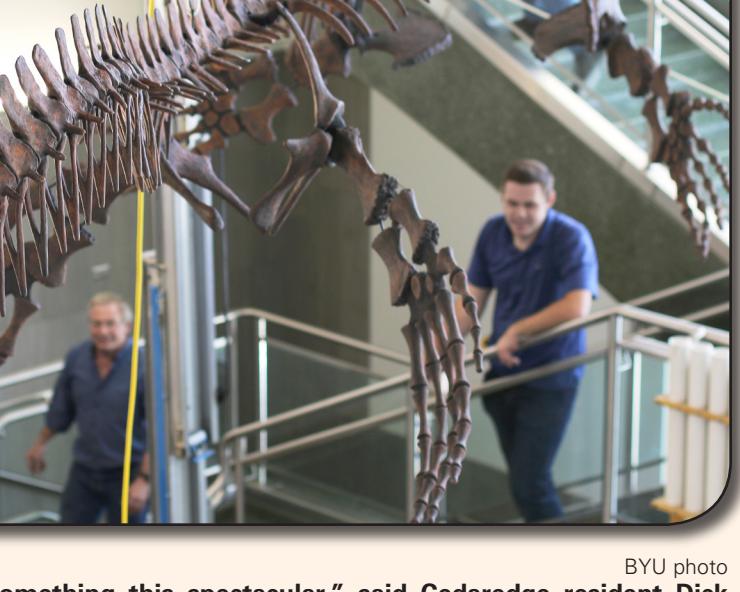
"Very few museums have something this spectacular," said Cedaredge resident Dick Jones, of the exhibit of the mosasaur that once prowled the sea that covered this area.



This cast of the mosasaur's skull is displayed at the Welcome Center in Cedaredge. The cast was presented to Pioneer Town in August 2003.



Newspaper articles from 1975 tell the story of the Cedar Mesa find. They're part of the display at the Welcome Center at Pioneer Town.



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