

The Quarry

The Cleveland-Lloyd Dinosaur Quarry is home to one of the most impressive collections of dinosaur fossils worldwide. The quarry's unique concentration of the meat eating *Allosaurus* and the enormity of the deposit has fascinated both visitors and scientists. Over the years, more than 12,000 bones have been excavated from the quarry. Fossils from Cleveland-Lloyd are on exhibit in more than 65 museums worldwide.

Embedded in the surrounding area are the remains of a number of different dinosaurs. The quarry's visitor's center has been expanded to include several interpretive displays that illustrate the importance and magnitude of the site. The quarry is

BLM's first visitor center. It was originally dedicated in 1968 and was renovated and expanded in 2006.

Scientific Explanations

One of the puzzles that have intrigued scientists is the predominance of meat eating *Allosaurus* (the most common predator of the late Jurassic) in the deposit. Although the quarry includes herbivores such as *Camarasaurus*, *Stegosaurus* and *Carnotaurus*, *Allosaurus* bones make up 67% of the collection. This feature has caused researchers to question whether the area was once a type of predator trap. The deposit contains no articulated skeletons, leaving the bones scattered and mixed. This makes others wonder if the animals died because

of a drought or other natural disaster. Quarry visitors can view these fossils and explore some of the explanations that have been proposed by scientists.

Allosaurus

The allosaur was the most common predator during the Late Jurassic period, 155 to 145 million years ago. Allosaurs are thought to have had savvy hunting skills and it is suggested that they may have hunted in packs. One of their distinguishing characteristics is the presence of a small bony crest just above and forward of each massive eye. Many of the specimens from Cleveland-Lloyd dinosaur quarry are from juvenile and adolescent allosaurs. The predominance of *Allosaurus fragilis* fossils at the quarry has given researchers an unprecedented opportunity to do an in-depth study of the species. That gives paleontologists the opportunity to study the species as a whole rather than just an individual dinosaur.

Exhibits

The Cleveland-Lloyd Dinosaur Quarry National Natural Landmark has over 2000 square feet of interactive displays and exhibits. An updated and colorized bone bed map shows the scattering of various types of dinosaurs across the site. Another exhibit lists scientific theories that have been proposed and compares them to the data collected. Other exhibits include a display showing the excavation history of the site, a fossil preparation table, replica skulls of animals found in the quarry and a new allosaur skeleton mount. At the actual quarry two observation platforms allow visitors to see the deposit from various angles.

ALLOSAURUS

TRANSLATION: "different lizard"

HEIGHT: 15 feet

LENGTH: 30 feet

WEIGHT: 2 tons

DISTINGUISHING CHARACTERISTICS:

The most common predatory dinosaur found in the late Jurassic Period, Allosaurus is characterized by a bony crest above each eye. Allosaurus is the state fossil of Utah, a title it earned because of the great abundance of Allosaurus remains found at this site.

CAMPTOSAURUS

TRANSLATION: "bent lizard"

HEIGHT: 12 feet

LENGTH: 20 feet

WEIGHT: 4 tons

DISTINGUISHING CHARACTERISTICS:

The bird-like beak of this plant-eating dinosaur allowed it to crop coarse vegetation, which it readily sliced and sheared with its sharp-edged teeth.

STEGOSAURUS

TRANSLATION: "roof lizard"

HEIGHT: 9 feet

LENGTH: 23 feet

WEIGHT: 2 tons

DISTINGUISHING CHARACTERISTICS:

The small skull of this otherwise large herbivore had small specialized teeth that are suggestive of an herbivorous diet. They are distinct from any other plant-eating dinosaur teeth found in the quarry.

CAMARASAURUS

TRANSLATION: "chambered lizard"

HEIGHT: 25 feet

LENGTH: 60 feet

WEIGHT: 30 tons

DISTINGUISHING CHARACTERISTICS:

A large square skull and blunt, spoon-shaped teeth are characteristic of this dinosaur. It likely ate more coarse plant material than other long-necked dinosaurs such as Barosaurus.



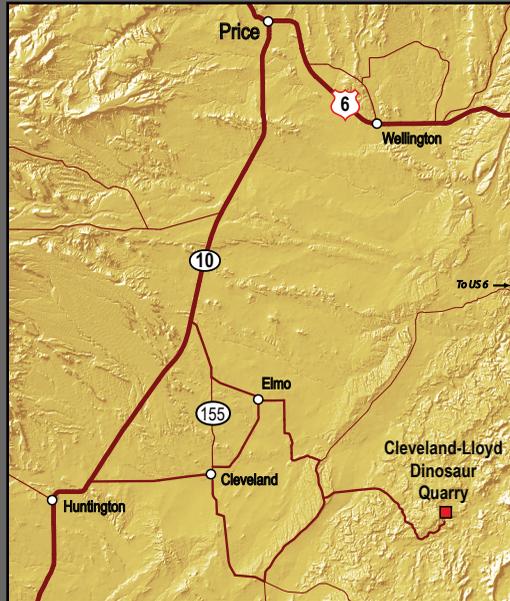
A Brief History of Cleveland-Lloyd Dinosaur Quarry

Schedule of Operation

Early March thru Memorial Day	Friday-Sunday
Memorial Day Thru Labor Day	Open daily
Labor Day thru the end of October	Friday-Sunday

Hours

Monday-Saturday	10 am to 5 pm
Sunday	noon to 5 pm



Directions

The quarry is located in the northern part of the San Rafael Swell, 30 miles south of Price.

From Price: take Hwy 10 south to the Cleveland/Elmo turnoff and follow the signs. The last 12 miles are on graded unpaved road. Unpaved roads may be hazardous when wet.

From Huntington: follow Hwy 10 north and take the Cleveland turnoff. In Cleveland go south towards the San Rafael Swell and follow the signs. The last 13 miles are on graded unpaved road. Unpaved roads may be hazardous when wet.

User Fees

Visitors will be charged a nominal fee. Please check with the Price Field Office for updated information.

For More Information Contact

The Bureau of Land Management
Price Field Office
125 South 600 West
Price, Utah 84501
435-636-3600

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EARLIEST EXPLORERS AND EXCAVATIONS

More than a hundred years ago, local cowboys and shepherds discovered large black bones. These were clearly not the bones of their live-stock.

University of Utah geologists investigated the area in 1928 and 1929 and unearthed about 500 bones. In 1939, paleontologists from Princeton University started a three-year excavation of the quarry to provide bones for its museum exhibits.

EDUCATION AND RESEARCH OPPORTUNITIES

In 1960, the University of Utah began excavation in cooperation with several universities and museums. Institutions all over the world helped to fund the work and, in return, they received displays of dinosaurs found at the quarry.

Much of the work was done by paleontologist Jim Madsen under the direction of W. Lee Stokes, then professor of geology at the University of Utah.

In 2001 the University of Utah returned to investigate the deposit. The excavation tools were virtually unchanged from earlier projects, but the research focus has shifted.

Paleontologists now understand that bones alone don't tell the whole story. All details found within the deposit, including geology, vertical and horizontal bone placement, and orientation, are studied.

As investigation and research continues, the Utah Museum of Natural History and the Bureau of Land Management will collaborate to develop new exhibits for this timeless quarry.

