

EXPLORE ONE OF THE WORLD'S BEST DINOSAUR FOSSIL SITES



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Fossils in field jackets. Dipslodocus excavation, Canon City, CO., 1915-16

Photo by Dait Du'Wessou, Denver Museum of Natural History Photo Archives

Can you imagine finding a fossilized bone that is taller than you?

Beginning in Garden Park in 1877, fossil discoveries revealed large, plant-eating dinosaurs to the world. Crews working for rival paleontologists O.C. Marsh and E.D. Cope in this area uncovered large concentrations of bones—many of the best specimens of Jurassic dinosaurs ever found. Discoveries in the Garden Park Fossil Area include dinosaurs, fish, turtles, crocodiles, lizards, mammals, frogs, crayfish and clams representing ten million years of late Jurassic history.

Several local residents played an important part in the dinosaur discoveries. They alerted Marsh and Cope to the presence of fossils and did the "dirty work" of excavating the fossils. Marshall P. Felch, a local rancher, worked for many years in this area for O.C. Marsh of Yale University. He excavated fossils and mapped their locations. He also wrote many letters to Professor Marsh. Today, these maps and letters are important scientific and historic records.



Felch Family photo



Learn more about this fascinating area by walking the trail and reading the exhibits along the path. The trail is 1/4 mile, one-way. An easy hike leads to views of the Marsh-Felch Quarry. The last part of the trail involves a more strenuous, uphill climb. As you hike, let your imagination take you back to the time when early paleontologists made their discoveries of amazing dinosaur fossils.



Bones of the Monsters
Binckley & Hartwell, 1879

SHIFTING STREAMS PRESERVED MANY DINOSAUR FOSSILS

Some of the first discoveries of Jurassic dinosaur skeletons were made at the quarry directly across from you. In addition to numerous partial skeletons, the Marsh-Felch Quarry yielded almost complete skeletons of *Allosaurus fragilis*, *Ceratosaurus nasicornus*, and *Stegosaurus stenops* with the bones in nearly perfect arrangement. Take a few minutes to learn why the Marsh Quarry is a fossil rich site.



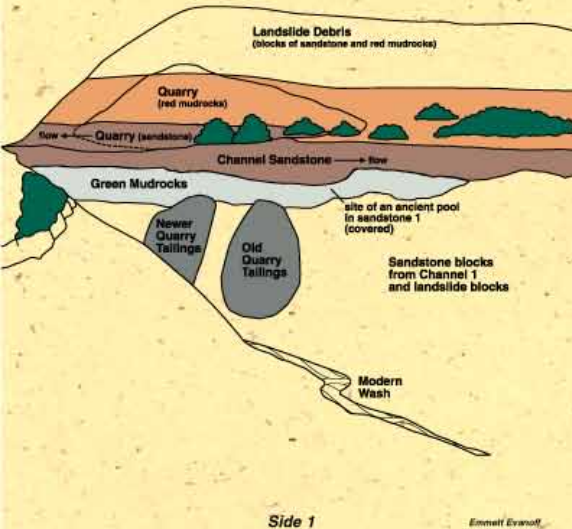
Marsh Quarry Today



Historic Marsh Quarry

An Ancient Floodplain

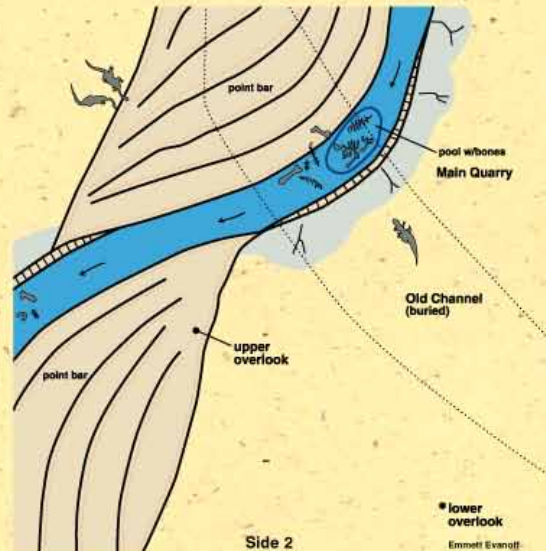
When dinosaurs roamed the earth, this area was part of a wide floodplain. The subtropical climate had alternating wet and dry seasons. About 150 million years ago, a stream flowed across what is now the Marsh Quarry. Over time, sand deposited by the stream hardened into a tan sandstone. Look for this layer that supports the cliff that supports the quarry. The bulge at the base of the sandstone cliff that cuts into the greenish clays marks a deep pool in the ancient stream.



Sand Buries Bones

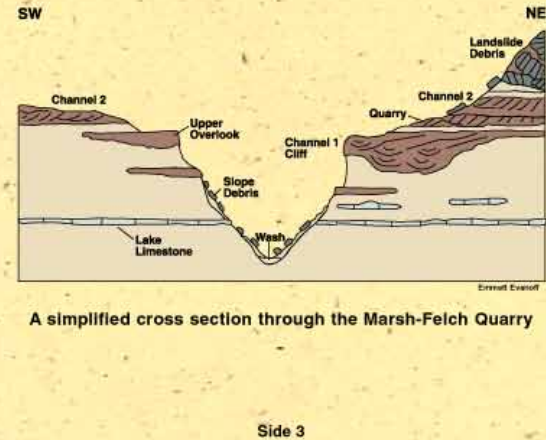
Over hundreds or thousands of years, the stream shifted its course. Swiftly flowing water created a deep pool at a bend in the stream near where the new channel crossed the old channel. Bones were deposited here in two ways:

- 1) Floods moved some dinosaur bones from upstream into the pool.
- 2) During a severe drought, dinosaurs came to drink from the pool. Some died and their skeletons were preserved almost intact. When the drought ended, floods covered the bones with sand.



Erosion Exposes Fossil Treasure

Within the last several thousand years, a stream cut through the sandstone and clay layers. The creek carved the canyon below you exposing the fossil-rich rocks of the Morrison Formation. Without this erosion, the fossils would have remained hidden under the ground, like buried treasure. The bone treasures were first found on top of the sandstone ledge at the quarry.



A simplified cross section through the Marsh-Felch Quarry

RARE PLANTS AND RARE FOSSILS SHARE THIS SITE

A rare plant, the Brandegee Wild Buckwheat, grows along this trail and in a few other sites in Garden Park. What do this rare plant and the rare fossils of Garden Park have in common? The Morrison Formation, layers of gray, tan, maroon and light green soils and rock exposed here, sustains this rare plant and holds world-class fossils.

Hunters of Rare Plants and Rare Fossils Know the Rocks

Paleontologists, scientists who study ancient life, identify areas to search for fossils based on geology. They know that certain types of rocks often bear fossils. Botanists, scientists who study plants, also use their knowledge of geology to identify areas to search for rare plants. They know that rare plants often grow in soils formed from specific types of rocks.



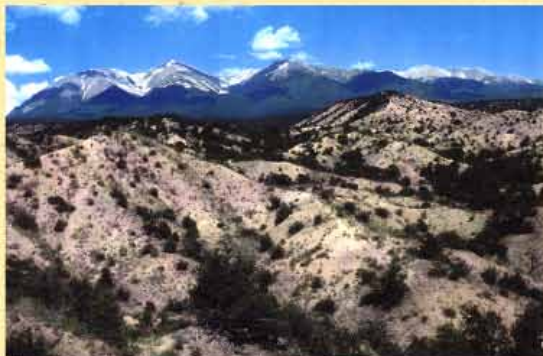
Brandegee Wild Buckwheat,
Eriogonum brandegeei
Susan Spackman



Planta 10-25cm tall

Colorado's Wealth of Rare Native Plants

The Brandegee Wild Buckwheat represents only one of over 200 rare plant species native to Colorado. To discover the key to Colorado's plant diversity, look at the landscape around you. The canyons, mountains, and foothills here provide just a small sample of Colorado's variety of terrain. These places, with so many differences in geology, soil, temperature, and moisture, provide the perfect conditions for many different plant species to flourish.



Habitat of Brandegee Wild Buckwheat, *Eriogonum brandegeei* by Susan Spackman



Garden Park Paleontology Society

Tony's Tree

On May 13, 1998, Tony Moreno of Colorado Springs made an exciting discovery on his fifteenth birthday. While hiking this trail with his classmates and Pat Monaco from the Dinosaur Depot, Tony found an unusual rock on the hillside next to the trail. Tony's rock was a 20 foot long, 155 million year old tree buried into the hillside! It took three months to excavate Tony's Tree – the only Jurassic tree found east of the Continental Divide. You can see Tony's Tree at the Dinosaur Depot Museum in Cañon City.

Help protect and preserve this area by **not collecting fossils or rocks**. Collection of vertebrate fossils is illegal.

Leave any fossil you find in place and report the location to the Bureau of Land Management or the Dinosaur Depot in Cañon City. If it is an important find, you could have the fossil named after you!