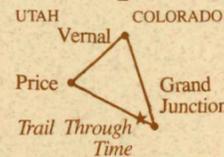


Explore earth's exciting past  
in the  
**Dinosaur Triangle**



► See in Grand Junction, Colorado  
**Dinosaur Valley Museum**

Featuring six animated life-like dinosaur replicas as they may have looked, moved, and sounded. See fossils and articulated skeletons; watch scientists restore fossils in the laboratory. Located at Main and 4th. From Memorial Day to September 30, open daily 8am - 4:30pm; in winter open Tuesday-Sunday 10am - 4:30pm; phone 303/243-DINO.

**Trail Through Time**

Use this brochure to guide yourself to the many points of interest along a 1 1/2 mile trail. Take the Rabbit Valley exit on I-70, 30 miles west of Grand Junction. Open year 'round. For further information call Dinosaur Valley, 303/243-DINO.

► See in Price, Utah

**Cleveland-Lloyd Dinosaur Quarry**

Since 1928, excavations have unearthed over 17,000 dinosaur bones here. Quarry tours originate at the Visitors Center. Restroom, picnic, and primitive camping facilities. Open Memorial to Labor Day, Thursdays through Mondays, 9am - 4pm. Located 30 miles south of Price on Utah Hwy. 10.

**College of Eastern Utah Prehistoric Museum**

View reconstructed dinosaur skeletons from Cleveland-Lloyd Quarry. Also on display are Indian rock art casts and artifacts, including the world-famous 800 year old Pillings clay figures. Open daily during summer, 9am - 5pm; closed Sundays in winter, corner of Main and Second East, phone 801/637-5060.

► See in Vernal, Utah

**Dinosaur National Monument**

Features a facility built around a magnificent wall containing hundreds of dinosaur bones, partially exposed and left in place. Since 1909, this site has produced 85 dinosaur skeletons, both juvenile and adult, of 11 different species. Open daily 8am - 5pm, phone 801/789-2115. Take US Hwy. 40 to Jensen, follow Utah Hwy. 149 north for 3 miles.

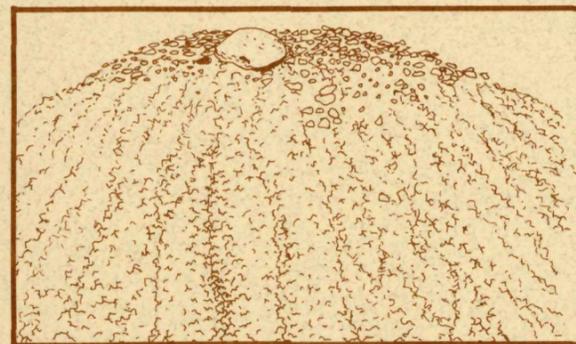
**Utah Field House of Natural History**

Inside the museum, examine fossil and mineral collections, Indian artifacts and natural history displays. Outside, roam through the Dinosaur Garden, "inhabited" by 14 life-size dinosaur models. Open daily 8am - 9pm from Memorial to Labor Day; in winter from 9am to 5pm. Located on Main Street (US Hwy. 40), phone 801/789-3799.

continued from the front

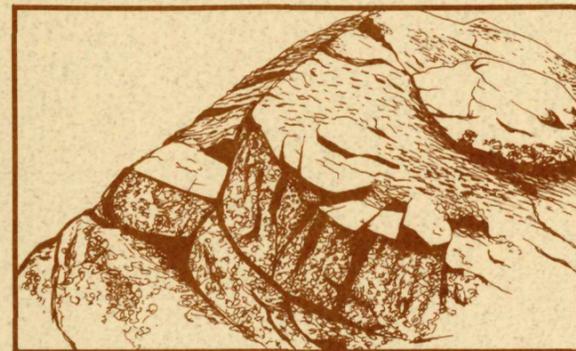
**7. Shelter and Overlook**

This location gives an excellent view of the Uncompahgre Plateau, the Colorado River, and the La Sal mountains in Utah.



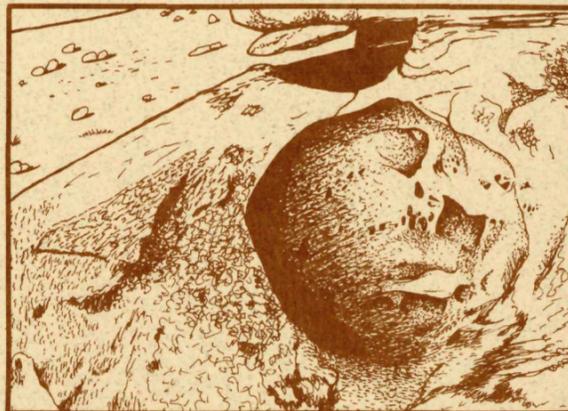
**8. Bentonitic Mudstones**

These extremely fine mudstones were deposited millions of years ago along slow moving stream channels and are actually decomposed volcanic ash. It is not known whether these mudstones are a result of volcanic activity in the area or a sort of air or water pollution deposited from volcanic activity elsewhere on the earth. BE CAREFUL! This area is very slippery when wet.



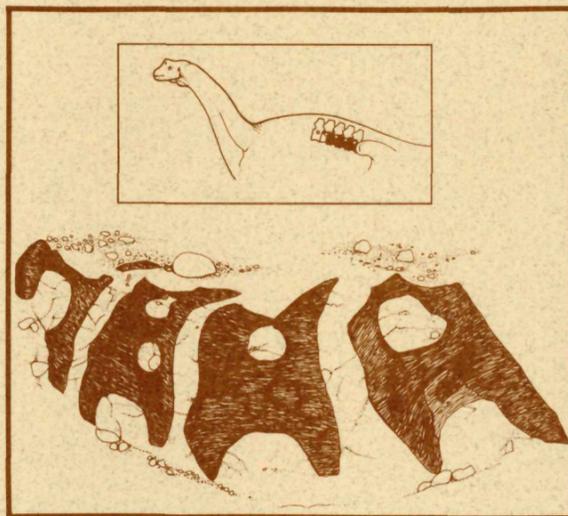
**9. Siliceous Sandstone**

This boulder, composed of stream deposited sand, contains an unusually hard cement which is actually more wear-resistant than the sand grains within it. Evidence of a large branch is visible.



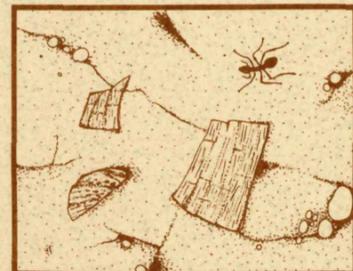
**10. Pocketed Boulder**

This large rock has eroded in a peculiar way. Its "pocketing" was formed by softer areas of the stone eroding faster than the surrounding rock when exposed to weathering.



**11. Articulated Skeleton**

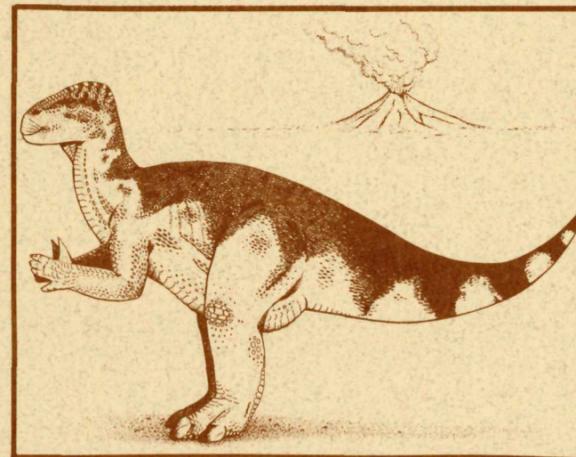
This, as yet unidentified, dinosaur fossil is probably a large plant-eater. The vertebrae are arching into the hill towards the head of the animal.



**12. Fossil Hash**

Contained in the rock of this "new" eroding streambed is a natural scattering of fossil bones that were deposited in an "old" stream. The original dinosaur bones were

broken into fragments as they were swept along the ancient stream channel.



**13. The Iguanodon**

This location has revealed the world's oldest *Iguanodon* dinosaur, nearly five million years older than any previously known find. This juvenile *Iguanodon* was a plant-eating dinosaur whose parents grew to be 16 feet high, 29 feet long, and weighed 6,000 pounds. The animal's skull and other bones have been excavated and are on display, along with a half size moving replica, at the Dinosaur Valley Museum in Grand Junction.

**14. Section Corner Marker**

Placed here by the United States Department of Interior, Bureau of Land Management, this section corner marks the common corner of four sections, giving information about location.

**Back to the Present -  
And into the Future**

During the past 140 million years, the entire landscape has changed countless times, along with its creatures and plant life. It will take years of extensive research and excavation to unearth the ancient secrets this site still holds.

As you leave the *Trail Through Time*, consider what this place may look like 140 million years from now.

**Future Proposals**

In process is the monumental task of mapping and preparing a paleontological resource inventory of the Rabbit Valley Research Natural Area. Proposed is an educational quarry site, where school children and members of the public, under supervision of a professional paleontologist, can try their hand at chipping the rocks in search of scientific treasures.

**Credits**

A Cooperative Management Agreement between the BLM and the Museum of Western Colorado has made this educational and research site possible. Development of the area could not have been completed without the extensive efforts of the Colorado Natural Areas Program, members of the BLM Geologic Advisory Group, the Rabbit Valley Advisory Group, and volunteers, organizations, and local businesses in Western Colorado.

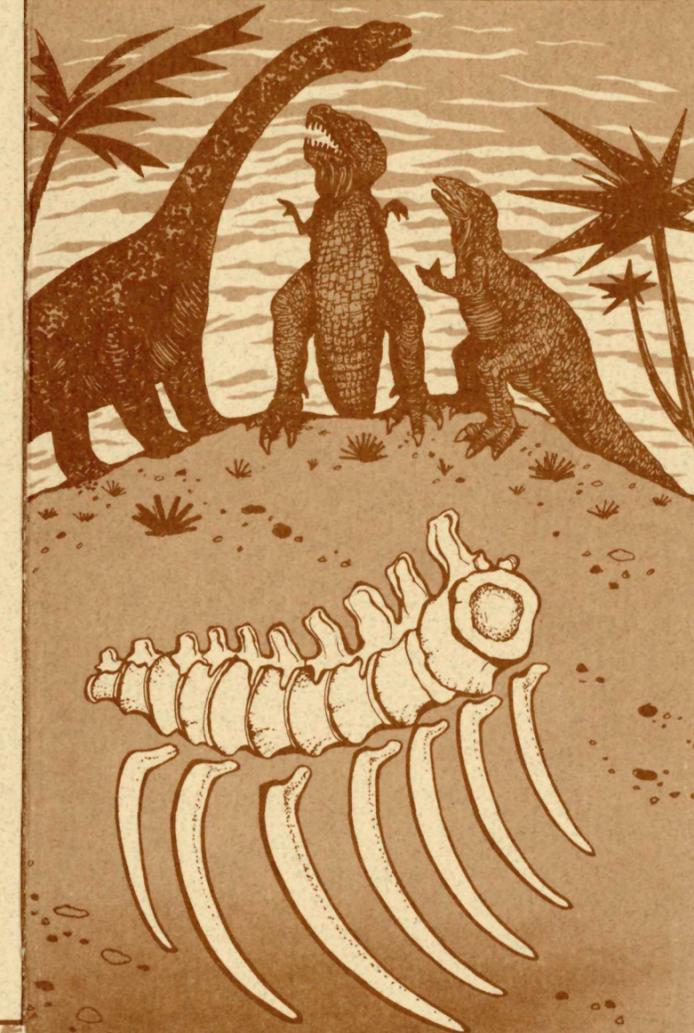
Special thanks to Amy Nuernberg for design of the logo and brochure and to Steve Beach for the illustrations.

If you would like to know more about dinosaurs, and specifically local discoveries, we invite you to visit Dinosaur Valley Museum in downtown Grand Junction, Colorado.

Presented by: Department of the Interior's Bureau of Land Management and the Museum of Western Colorado.



**TRAIL  
THROUGH  
TIME**



## Once Upon A Time, 140 Million Years Ago . . .

Before you begin your walk, take a moment to imagine this place as it once was — not a high desert but rather a lush vast floodplain and hillsides covered with giant conifer, palm and cycad trees. The weather is warm and humid, the skies are dark with clouds; the forests, rivers, and swamps are populated with crocodiles, turtles, and roaming herds of dinosaurs. There is the constant buzz of insects in the air, punctuated with the sudden cries of flying reptiles, and roars of dinosaurs amidst the rumble of distant thunder. The heavy air smells of decaying vegetation. Time seems to stand still — for these creatures and plants know no future or past. This was the scene you would have experienced 140 million years ago during the Jurassic Age.

The legacies of that time have been left to us in the form of ancient plant (flora) and animal (fauna) fossils. During the millions of years since that hot, muggy day, many rivers, streams, lakes, and seas have accounted for the deposition of thousands of feet of sediment, and the erosion of entire mountain ranges. Remnants of the flora and fauna were preserved by being trapped and buried. Over time, with immense heat and pressure, the sediments turned to rock and the plants and animals became fossilized.

Modern day environment is one where erosion dominates. Rain, snowfall, runoff, and freezing have exposed many fossils. For many years to come, this protected 280 acre site is expected to yield a wealth of fossil history.

In today's drier climate, the area is vastly different from that of the Jurassic. Vegetation along the *Trail Through Time* includes seasonal wildflowers, prickly pear and hedgehog cactus, yucca plant, saltbush, rabbit brush and scattered stands of pinyon pine and juniper trees.

You may also see a variety of mammals and reptiles including coyotes, rabbits, bats, squirrels, and mice; whip, garter, and midget faded rattle snakes; and the brightly colored yellowhead collared lizard (also known as the mountain boomer). Throughout the year, visitors may see rock wren, red-tailed hawks, ravens, golden eagles, and an occasional bald eagle during the winter months.

## Welcome to an "Outdoor Museum"

The Rabbit Valley Research Natural Area and Interpretive Trail is located on public lands administered by the Department of the Interior, Bureau of Land Management (BLM). Designation and building of this trail has been possible through the combined efforts of many federal, state, and county agencies and local volunteers interested in preserving the paleontological, geological, and natural wonders of this area.

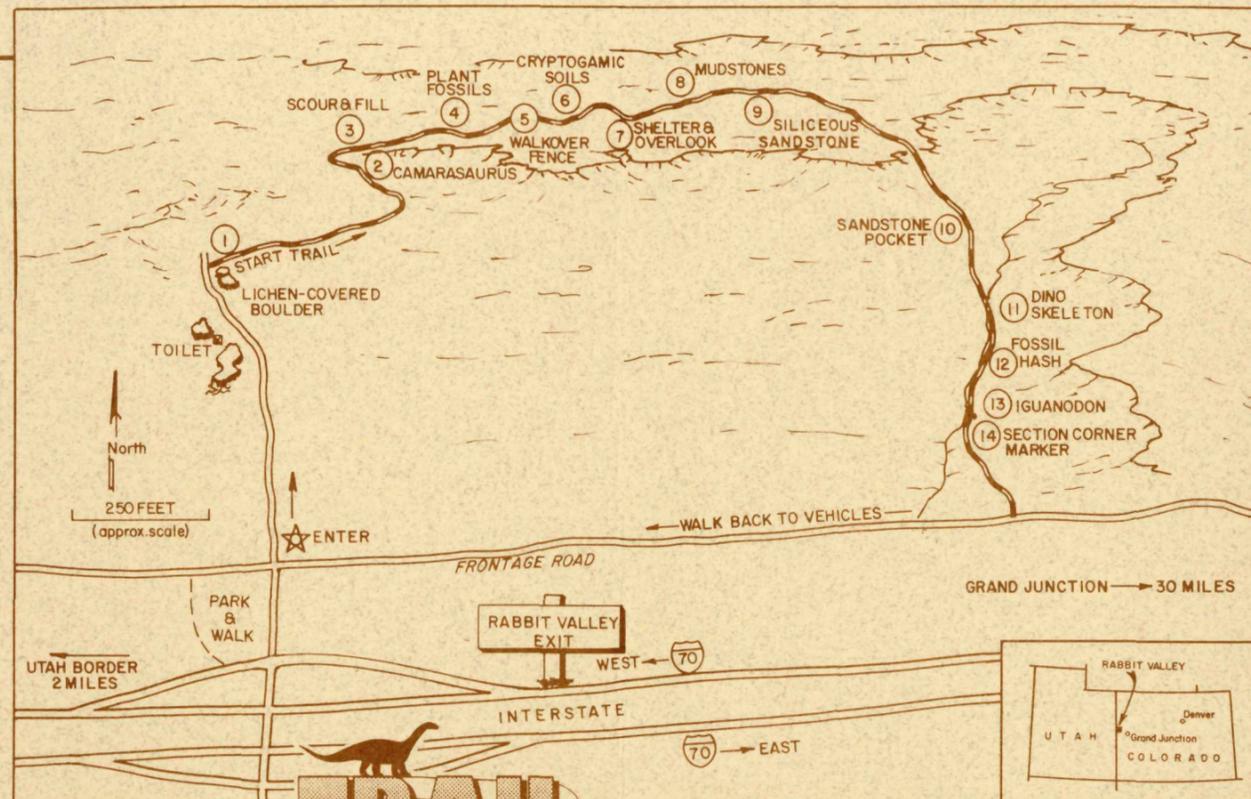
The responsibility of protecting this valuable site is now yours. Enjoy the ancient wonders as you walk along the *Trail Through Time*. But remember — these discoveries are for all visitors to see and appreciate. It is illegal to remove, deface, or destroy improvements, artifacts, rocks, fossils, animals, and plants. Leave only footprints, take only pictures — so those who follow may enjoy this experience.

## For Your Comfort and Safety

The Rabbit Valley Interpretive Trail is a self-guided, moderately strenuous one and one-half mile loop. The walking tour takes approximately 90 minutes to complete, including a short rest at the covered shelter overlook.

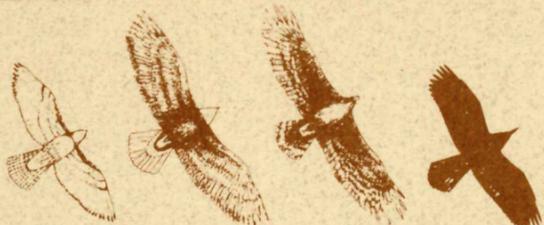
Please be aware of the following:

- Hike on designated trail only.
- Mid-summer temperatures can reach 105°F.
- Biting gnats are prevalent in May and June.
- There is no water available on the trail. Bring your own supply, especially during the summer months.
- A toilet is located near the beginning of the trail.
- Pack out all trash; there are no receptacles.
- Smoking is discouraged due to the potential fire danger.
- Wear suitable clothing: hat, rubber-soled hiking boots; bring rain gear.
- Be aware of quickly changing weather conditions. Parts of the trail are on rocky areas that become slippery when wet.
- Adjacent lands are privately owned and sheep or cattle may be grazing in the area. Respect these lands and the rights of private landowners.
- No pets are allowed on the trail.
- Snakes and scorpions, although seen infrequently, do inhabit the area.



# TRAIL THROUGH TIME

### Watch For:

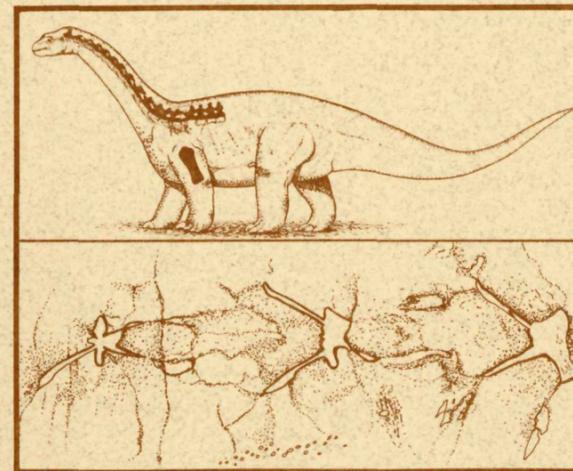


Red-tailed Hawk Bald Eagle Golden Eagle Raven



### 1. Lichen-Covered Boulder

Once part of a rapidly moving stream bed, this boulder contains sand grains and pebbles — indicating the mountainous source material was not far away. Through erosion, this rock has broken up and moved to its present position.



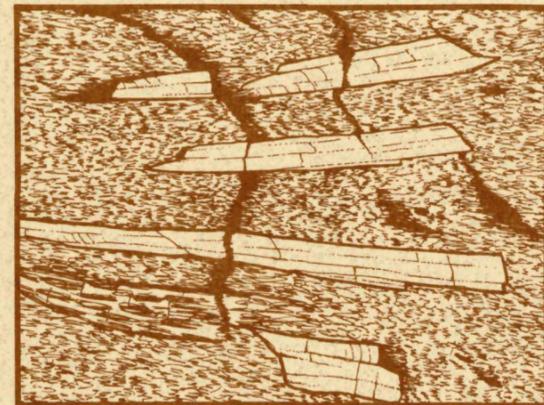
### 2. Camarasaurus

This 50-foot plant-eating dinosaur spent its life roaming through lush forests near lakes and rivers. Flood waters probably brought this 20,000 pound *Camarasaurus* to its present location. Limb bones and over 18 articulated backbones (vertebrae) are visible in the rock. The skull has been collected and is now on exhibit at the Dinosaur Valley Museum in Grand Junction, Colorado.



### 3. Ancient Stream Channel

These rocks were once part of an ancient stream bed. Notice the "scour and fill" structure within this pebble conglomerate boulder. This was caused by one stream channel intersecting and eroding another.



### 4. Plant Fossils

These twig and branch impressions are plant fossils deposited some 135 million years ago in a geologic formation known as the Burro Canyon. Many sites here have yielded impressions of twigs, stems, and leaves.

### 5. Sheep Fence

Installation of this walkover fence, rather than a pedestrian gate, assures more protection to grazing livestock. In this arid country four acres are required to graze one sheep per month.



### 6. Cryptogamic Soils

The very fragile porous black soils seen here are actually very slow growing (50 to 100 years) lichens, fungus, mosses, and algae. They reduce soil erosion and add important nitrogen to the soil to allow for growth of future plant communities. Avoid walking on Cryptogamic soils by staying on the designated trail.

*continued on the back*