

Bureau of Land Management



U.S. Department of the Interior

BLM

THEY WALKED HERE
LONG AGO . . .



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How do we know what kind of animals existed on earth millions of years ago? The evidence comes from fossils, which can be from plants or invertebrate and vertebrate animals. One of the most amazing forms of fossils has become increasingly popular in recent years—tracks of long-extinct dinosaurs. Scientists are increasing their knowledge of these amazing animals and how they lived by studying fossil tracks found on public lands administered by the Bureau of Land Management (BLM).

As caretaker of 262 million acres of land and resources, primarily in the western United States, the Department of the Interior's BLM has long managed a variety of programs, including: cattle grazing; mining; oil and gas development; conservation and restoration of habitat for wildlife, fish, and birds; and development of a wide range of outdoor recreation opportunities for the public. In the fast-growing West, where people have met and surpassed the challenge of reaching formerly remote areas in search of adventure, it has become imperative that the BLM conserve and protect the fossils found on public lands. These fossils are important to our understanding of our heritage. The BLM hopes this short guide will help you understand the importance of fossils and appreciate the public lands that preserve these precious remnants of the past.



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FOOTPRINTS IN STONE

Where can I see dinosaur tracks and how were they formed?

You can see dinosaur tracks in many places on public lands in Utah and Wyoming. Some are only a few inches long, and others—made by the giant plant-eating sauropods—are the size of automobile tires. Other tracks were made by five-toed primitive reptiles and amphibians.

Tracks and other evidence of an animal's activity are a special kind of fossil called a "trace fossil." Parts of the body, such as bones and teeth, are "body fossils." Dinosaur tracks were formed when animals stepped in soft mud or sand millions of years ago, and more mud or sand gently covered the tracks soon after they were made. Over time, more sediments covered them and the sediments turned to rock. When erosion wears some of the rock away, we may see the tracks as impressions that seem as fresh as if they were made yesterday. If the tracks were made in a layer of very soft sediment, that layer may have disappeared and only the hardened sediments that filled the tracks remain. These look like raised footprints when they are turned upside down.

SOLID AS A ROCK?

Can I make a replica of a dinosaur track?

While dinosaur tracks may look "solid as a rock," they are quite fragile. Erosion breaks them down and wears them away at various speeds depending on the material and the weather. Walking or riding a bike over tracks can damage them. But the greatest damage is often done by people who want to take home more than photographs.

Visitors to public lands sometimes love these treasures to destruction. Some believe it is possible to make replicas of dinosaur tracks for souvenirs or for additions to their personal fossil collections. Unfortunately, making replicas is not as easy as it seems.

Making replicas always **without exception** causes damage to the track. Even experienced professionals using specialized molding compounds do a little damage when the mold is lifted out of the track. Inexperienced people using the wrong materials can destroy a track or leave it permanently scarred by plaster, marking pens, or tools. Visitors should never try to fill a track with plaster or any other material. This causes extensive permanent damage, and never yields a good replica. Damaging tracks is against federal law.



INSETS: Tracks permanently scarred by plaster. Visitors should never try to fill a track with plaster or any other material. Damaging tracks is against federal law.



What fossils can I collect from public lands?

Visitors to public lands are welcome to collect *reasonable amounts* of many kinds of fossils without a BLM permit. These materials must be for your personal collection and cannot be sold or traded. No permit is needed for plant fossils, such as leaves, stems, and cones, or common invertebrate fossils, such as ammonites and trilobites. Petrified wood can be collected too—up to 25 pounds each day, plus one piece, but no more than 250 pounds in any calendar year.

A BLM permit is needed for the collection of vertebrate fossils, such as dinosaur bones, fish, teeth of any kind, turtle shells, and tracks. Vertebrate fossils are any remains or traces of animals with backbones. BLM permits are generally issued only to professional paleontologists, who must agree to preserve their finds in a public museum, a college, or a university because of their relative rarity and scientific importance.

More information about fossil collecting on public lands can be found at your local BLM office and in the BLM brochure, *Fossils on America's Public Lands*.





How can I help preserve our fossil heritage?

You can help preserve these tracks for everyone to enjoy by looking, but not touching.

- Admire them, but don't walk directly on them, or ride bikes or drive vehicles over them.
- Take photographs or make drawings.
- Measure them, but don't draw on or around them with chalk or anything else.
- Never try to remove the tracks or take pieces of them.
- Never try to make a replica by putting anything in or on the tracks.
- If you find tracks or other fossils you think may be new discoveries, record their location and pass your information on to your local BLM office. Specialists can then document your find, make scientific observations, and take photographs. Computers and special cameras can make three-dimensional digital images that will last forever, even after the tracks have eroded away.

If you see anyone attempting to damage tracks or other fossils, please call a BLM law enforcement office. Rewards are offered for the arrest and conviction of individuals who damage, destroy, or steal vertebrate fossils from your public lands. Your help is vital in preserving America's natural heritage!

Utah Law Enforcement Hotline: 1-800-722-3998

Wyoming Law Enforcement Office: 307-347-5170

www.blm.gov



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