What Are Fossils?

Fossils are the remains or traces of once living plants or animals that typically were buried in layers of sediment. Over time, these sediments turned to layers of sedimentary rock, preserving entombed remains as fossils. Paleontology is the scientific study of fossils.

Fossils may be shells, bones, or plant leaves, which are called body fossils.

Trilobite (above) and leaf (right) are body fossils often found on National Forest System lands.

Preserved tracks, trails, and burrows record an organism's life activities and are called **trace fossils**.

Reptile tracks (above) are trace fossils found on some National Forest System lands.

Ancient organisms that are commonly fossilized include plants, invertebrates (animals without bone, cartilage, or teeth), vertebrates (animals with bone, cartilage, or teeth), and microfossils (very small organisms that generally require magnification to identify).

Unearthing Fossils

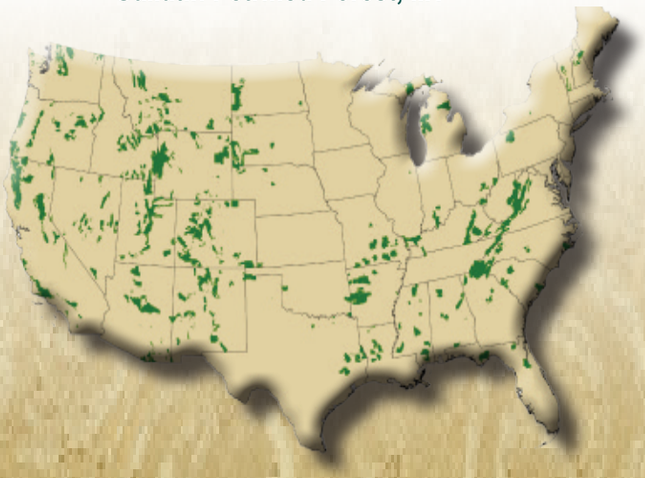
Fossils are known to occur on more than two-thirds of National Forest System lands. Fossil-bearing sedimentary rocks are often well exposed in the arid lands of the Western States, and the following National Forest System lands are particularly noteworthy for their paleontological resources:

Oglala National Grassland
Toadstool Geologic Park, NE

Comanche National Grassland
Picket Wire Canyonlands Purgatoire River Dinosaur Track Site, CO

Humboldt-Toiyabe National Forest
Berlin-Ichthyosaur Park, NV

Gallatin National Forest
Gallatin Petrified Forest, MT



Sedimentary rocks with potential to contain fossils in National Forest System lands of the contiguous United States.

Saving Our History

Fossils are unique, nonrenewable resources that paint an irreplaceable portrait of the ancient history of Earth's life. This history was written over billions of years in the pages of sedimentary rock layers.

Paleontological evidence of former climates in sedimentary rocks from the deep past to sediments from recent glacial ages helps us understand the history and pattern of today's changing climate.

Fossil mammal tooth from Pawnee National Grassland, CO.

Fossils on National Forest System lands are managed by the Forest Service in order to protect these valuable paleontological resources in trust for the American public. These are excellent places for learning and discovery.

Regulations for the management of fossils on National Forest System lands are published as Title 36 Code of Federal Regulations, Part 291. A link to the regulations is provided at the Forest Service Paleontology Web site:

http://www.fs.fed.us/geology/fossils.html

Human remains and artifacts are cultural resources, not paleontological resources, and are strictly regulated by law. Do not remove or disturb cultural resources, as well as fossils found in proximity to cultural resources. If disturbance is observed, please report locations to your local Forest Service district office.

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Keeping a Piece of History

You may be able to collect fossils from National Forest System lands without a permit if they are:

- Common invertebrate or plant fossils,
- Collected for personal use and not for resale,
- Gathered by hand or with nonpowered hand tools, and
- The amount is less than 25 pounds per person, per day, and not more than 100 pounds per year.

Leave little to no evidence of your collection efforts.

If you collect fossil specimens from National Forest System lands under permit, these fossil specimens are owned by the Federal Government and must be housed in approved repository institutions, such as natural history museums and universities, to ensure their proper care.

Fossil bones of a mosasaur, an aquatic reptile from Buffalo Gap National Grassland, SD. Vertebrate fossils like these can only be collected with a permit.

You have the **Responsibility** to know when and where it is legal to collect **fossils.**

Check with your local forest office for more details on legally collecting fossils. This will help you avoid fines from collecting in off-limit areas.

An upright stump of petrified wood is not common and can only be collected with a permit for research or education.

Working Alongside a Professional Paleontologist

Come work alongside professional paleontologists!

Dinosaur shoulder bone, Uncompahgre National Forest, CO.

Teeth in jaw of fossil pig, Toadstool Geologic Park, Oglala National Grassland, NE

The Forest Service's Passport-in-Time (PIT) program seeks volunteer assistance on many projects.

Check the PIT Web site at: http://www.passportintime.com/for more information.

For general information on the Forest Service Paleontology program, visit: http://www.fs.fed.us/geology/fossils.html.

USDA is an equal opportunity provider, employer, and lender.

PALEONTOLOGY
Traces of Past Life

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