

Petrified Forest

National Park
Arizona

National Park Service
U.S. Department of the Interior

Official Map and Guide



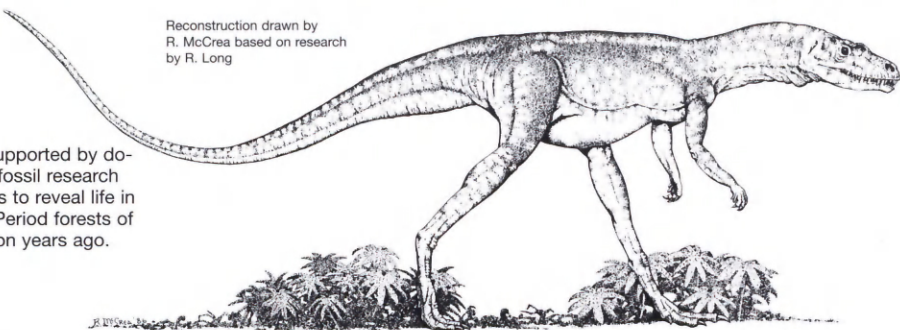
Dale Schicketanz

Research Into Fossils Continues

Fossils of some of the earliest dinosaurs, odd-looking plants, unusual fish, and strange giant reptiles have been found at the park since 1981. Nicknamed Gertie, the dinosaur at right was dis-

covered here in 1984. Gertie's place in the dinosaur family confounds paleontologists, who are still looking for clues. Casts of Gertie's bones are displayed at the Rainbow Forest Mu-

seum. Supported by donations, fossil research continues to reveal life in Triassic Period forests of 225 million years ago.



Reconstruction drawn by R. McCrea based on research by R. Long

Stories of Climate and Culture Told in Stone

This high, dry tableland was once a vast floodplain crossed by many streams. To the south, tall, stately pine-like trees grew along the headwaters. Crocodile-like reptiles, giant fish-eating amphibians, and small dinosaurs lived among a variety of ferns, cycads, and other plants and animals that are known only as fossils today. The tall trees—*Araucarioxylon*, *Woodworthia*, and *Schilderia*—fell and were washed by swollen streams into the floodplain. Silt, mud, and volcanic ash then covered the logs. This blanket of deposits cut off oxygen and slowed the logs' decay. Gradually, silica-bearing groundwaters seeped through the logs and, bit by bit, replaced the original wood tissues with silica deposits. As the process continued, the silica crystallized into quartz, and the logs were preserved as petrified wood.

That was about 225 million years ago in the late Triassic Period. After that time, the area sank, flooded, and was covered with freshwater sediments. Later the area was lifted far above sea level and this uplift created stresses that cracked the giant logs. Over time, wind and water have worn away the layers of hardened sediments, exposing the fossilized remains of ancient plants and animals. The hills will continue to expose fossil treasures as ceaseless weather patterns sculpt the soft sediments of the Painted Desert.

Today the ever-present forces of wind and water continue to remove sediments. Erosion continues to break down the exposed logs and unearth the logs and other remaining fossils still buried below the surface. In some places, up to 300 feet of fossil-bearing material remains. The petrified logs, other fossils of plants and creatures that lived in the area, and the rocks locking them in place all testify to changes in the environment through millions of years.

There are many stories here in the Petrified Forest. Evidence of early human occupation is readily visible on the landscape. Sites throughout the park tell of human history in the area for more than 2,000 years. We do not know the entire story, but there were separate occupations, a cultural transition from wandering fam-

ilies to settled agricultural villages—pueblos—and trading ties with surrounding villages. Although evidence of these early people fades about 1400, their story remains through their dwellings, pot sherds, and petroglyphs.

In the mid-1800s, U.S. Army mappers and surveyors exploring this area carried stories back East about the remarkable "Painted Desert and its trees turned to stone." Next, farmers, ranchers, and sightseers made their way into the area. After a period of using the wood for souvenirs and numerous commercial ventures, territorial residents recognized that the supply of petrified wood was not endless. In 1906 selected "forests" were set aside as Petrified Forest National Monument. In 1932 some 2,500 more acres of the Painted Desert were purchased and



Puerco Pueblo (above) was occupied twice, from 1100-1200 and 1300-1400, but Spanish

explorers found no people here in 1540. Ancient petroglyphs like those that adorn Newspaper



Rock (above) occur throughout the park.

added to the monument. In 1962 the area became Petrified Forest National Park, and in 1970, 50,000 acres were further designated for preservation as wilderness. Research continues to unlock the geological and human stories set aside for present and future generations. Today the story of our passing is added to the long history of Petrified Forest National Park.

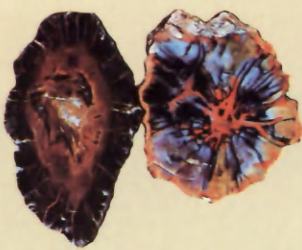
Commercial Sources of Petrified Wood

The earliest historic reports of petrified wood in this region were made by a U.S. Army officer who discovered fragments near today's Canyon de Chelly National Monument in north-eastern Arizona. In the 1850s deposits were found south of present-day Petrified Forest National Park. By 1900, removal of the wood led to calls for preserving areas with large deposits.

The park exists for this purpose, and there is no collecting or giving out of samples permitted. Petrified wood from outside the park, from the same geological deposits and of the same quality as that found in the park, can be bought from commercial dealers. Small pieces are sold rough, tumbled, or polished. Artists and craftspeople have worked larger pieces

into decorative objects. Minerals and impurities deposited while the wood was petrifying add the bright colors and interesting patterns.

Do not take even the smallest piece of petrified wood from the park. Multiplied by hundreds of thousands of visitors each year, the small pieces taken from the park can quickly amount to tons.



Polished samples of petrified wood (left) can show startling, crystal-like patterns. The colors of natural fragments (right) are muted but no less beautiful.



David Muench

What Is That Color?

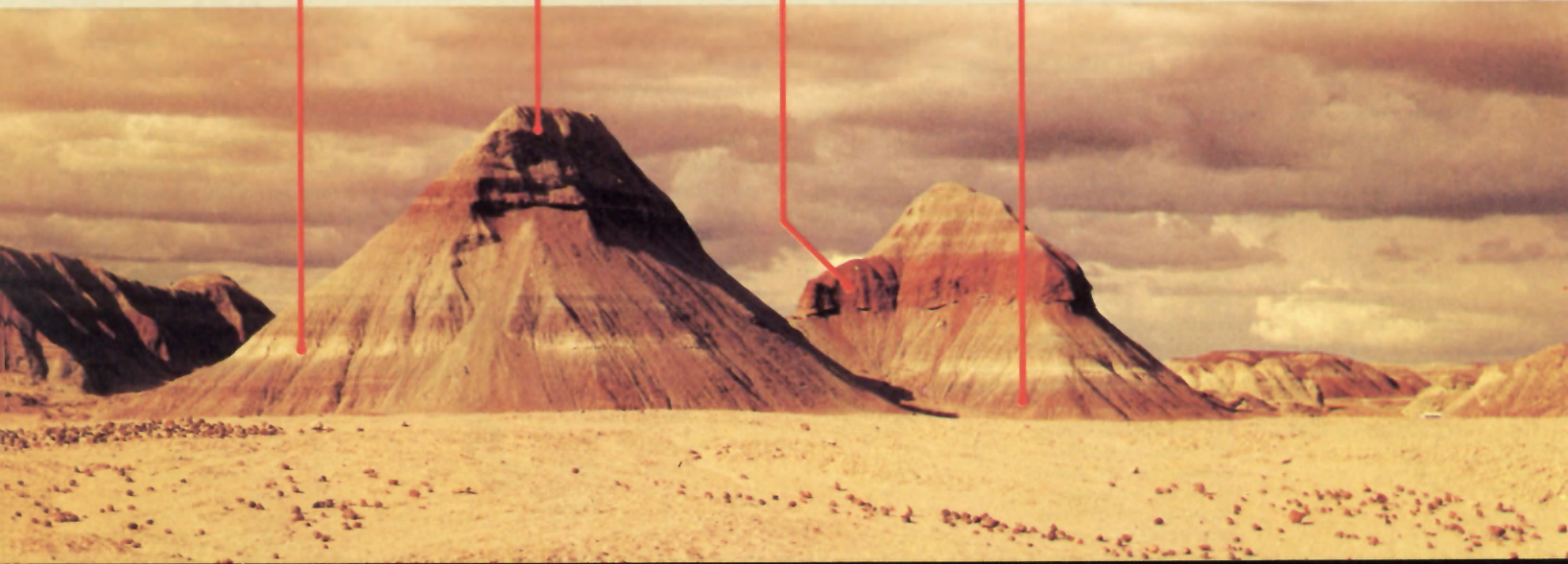
The distinct white layer interrupting the reddish base is sandstone.

The cap of The Tepees is clay. Dark layers are caused by high carbon content.

The darker red is iron-stained siltstone.

The reddish base is stained by iron oxide (hematite).

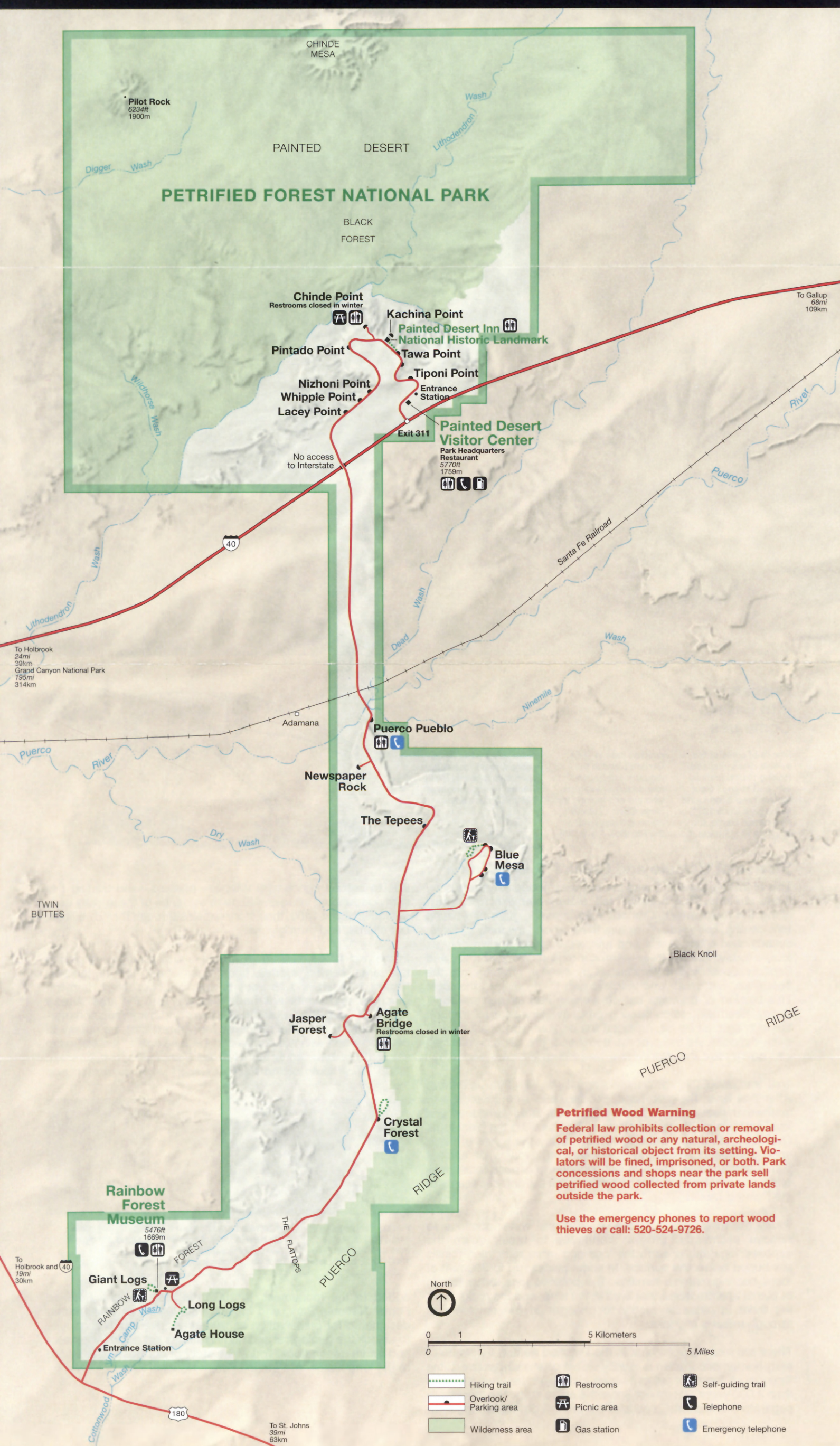
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Visiting the Park

Painted Desert Visitor Center has a 20-minute film. Painted Desert Inn National Historic Landmark is a pueblo structure with exhibits on cultural history. Rainbow Forest Museum has exhibits about petrified wood, geology, and paleontology. Along the 28-mile park road are overlooks, entries to hiking trails, and the wilderness area trailhead.

Tawa Point and Rim Trail Easy one-mile round trip between Tawa and Kachina Point. An unpaved trail overlooks the Painted Desert.

Kachina Point and Rim Trail Painted Desert Inn; renovated by the Civilian Conservation Corps, 1930s. Murals by Hopi artist, Fred Kabotie.

Puerco Pueblo A 100-room pueblo built before 1400, partially stabilized. Walk the short trail through Puerco Pueblo to view petroglyphs.

Newspaper Rock See huge boulders covered with petroglyphs.

The Tepees Formations colored by iron, manganese, and other minerals.

Blue Mesa and Blue Mesa Trail Three-mile vehicle loop road with views of clay hills, log falls, and a pedestal log. One-mile loop trail, moderately difficult, drops into the badlands; self-guiding trail.

Jasper Forest Overlook See petrified logs strewn across the landscape.

Crystal Forest Trail Easy 0.75-mile loop. Cracks and hollows in petrified logs once held clear quartz and amethyst crystals.

The Flattops Remnants of a continuous layer of sandstone that once capped this area. Remaining capstone protects layered deposits below.

Long Logs Trail Easy 0.5-mile trail through the largest concentration of petrified wood. Trail closes ½ hour before park closes.

Agate House Trail Easy 0.8-mile walk to a partially restored pueblo built of petrified wood. Trail closes ½ hour before park closes.

Giant Logs Trail Easy 0.4-mile paved trail with stairs. Enter at Rainbow Forest Museum. Trail passes the park's largest log, "Old Faithful."

Services

Painted Desert: restaurant, service station, gift shop. Rainbow Forest: gift shop, snack bar. Food and overnight lodging are found in nearby communities.

Camping and Picnics

There are no campgrounds within the park. Overnight wilderness camping is allowed by obtaining a free permit at a visitor center. Commercial campgrounds are located outside the park. Covered picnic areas are found at Chinde Point and Rainbow Forest.

More Information

Write: Petrified Forest National Park, P.O. Box 2217, Petrified Forest, AZ 86028-2217. Call: 520-524-6228. Internet: www.nps.gov/pefo.



Vistas of the varied palette of Painted Desert topography unfold before you from a trail near Kachina Point.

Wilderness Hiking and Camping Park at Kachina Point. The wilderness trail begins on the north side of the Painted Desert Inn. Free permit required for overnight camping; available at the Painted Desert Visitor Center and Rainbow Forest Museum up to one hour before park closes. **Water** is not available in the backcountry. Carry one gallon of water per person per day. There are no designated camp sites. No permit required for day use. **Pets** are prohibited in wilderness areas.

Safety and Regulations Please use caution and enjoy a safe visit. •Weather may be extreme—lightning, high winds, and flash floods can accompany summer storms; avoid open areas. •The elevation averages 5400 feet; know your limits. •Watch your step and your children at overlooks, drop-offs, and on trails. Do not throw objects over cliffs; people below may be injured. •Help prevent sunburn. Use sunscreen, and wear a wide-brimmed hat, long-sleeved shirt, and long pants. •Do not climb on petrified logs—the sharp edges can inflict severe wounds. •Avoid wildlife; which may carry bubonic plague, hanta virus, and rabies. •Obey posted speed limits. Do not stop in roadway; park in designated areas only. •Pets must be on a leash at all times and are not allowed in buildings or off paved surfaces. •Bicycles and motorized vehicles are permitted only on the paved park road. •Federal law prohibits collecting plants, rocks, animals, fossils, archaeological objects, and petrified wood.



Save Time and Gas

From the west take U.S. 180 from Holbrook to south park entrance, drive north, and rejoin I-40 at the north entrance. From the east exit I-40 at the north park entrance, drive southward, and turn west on U.S. 180 to join I-40 at Holbrook.

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