

Petrified Forest

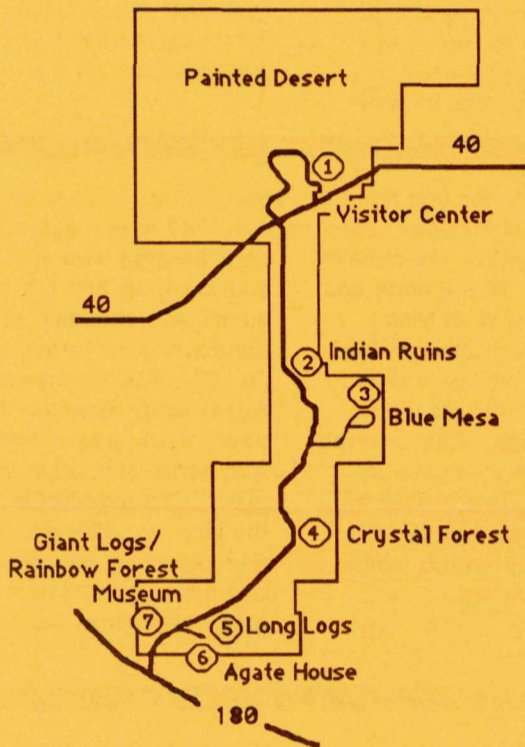
National Park
National Park Service
U.S. Department of the Interior

Trails

The best way to enjoy and experience Petrified Forest National Park is to leave the roadways and hike. Throughout the park, there are several short trails ranging from 0.4 to one mile in length. These trails travel along gentle terrain and lead through some of the highlights of the park. While hiking the trails, use this bulletin to enjoy and learn about petrified wood, fossils, badlands, early park

Anasazi Indian life, petroglyphs, the Painted Desert, and the plants and animals of today and 200 million years ago.

To learn more about the park, walk through the exhibits at Rainbow Forest Museum and/or watch the film at Painted Desert Visitor Center. Rangers are on hand to answer questions at both the museum and the visitor center.



The park belongs to everyone; help preserve the park so that others may continue to enjoy it.

- Collecting or removing petrified wood, rocks, fossils, archeological artifacts, plants or other natural objects in the park is **strictly prohibited**.
- Please report vandalism or removal of objects to a ranger.
- Please stay on the trails in these developed hiking areas; the desert is a fragile environment.
- Pets must be leashed at all times. They are not allowed in public buildings or on the Giant Logs Trail.

1. Painted Desert Rim Trail (1.2 miles round trip)

An unpaved but easy trail travels along the Painted Desert rim from Tawa to Kachina Point. Hike along the trail to observe and enjoy a land of contrasts. Stretching beyond the rim is the Painted Desert, brightly colored with banded hues of red, orange, pink and gray. Only a scant amount of vegetation

grows among the deeply eroded soft clay hills. In contrast, plentiful vegetation flourishes in the black volcanic soils on the rim. Juniper, cliffrose, mormon tea and squawbush are a few of the plants that brighten the rim with their leaves and spring blossoms.

2. Puerco Indian Ruins and Petroglyphs (250' of trail)

Two short paved trails lead from the parking lot. The left trail leads to Anasazi pueblo ruins, the right to an overlook of Anasazi petroglyphs. The Anasazi gain their name from a Navajo word meaning "the ancient ones."

Here near the Puerco River, a group of about 70 Anasazi Indians lived as a community in their 76 room pueblo. Sections of the pueblo and a kiva (a religious ceremonial room for men) have been partially excavated.

Walk around the pueblo ruins and imag-

ine Anasazi life here in the 1300's. The rooms were used primarily for storage, sleeping, and protection from bad weather. The center of daily life was the plaza. It was here where children played, women created baskets and pottery and prepared meals, and men gathered in the kiva. Outside the pueblo, men tended to crops and hunted small animals. During their spare time, the Anasazi worked on their "rock art" or petroglyphs. They created the petroglyphs by chipping pictures into the desert varnish, a dark mineral stain which covered a lighter rock surface.

3. Blue Mesa (1 mile loop)

A steep paved trail leads from the top of a mesa down into the blue badlands — an amazing and beautiful area of banded, cone-shaped hills. The hills are composed of bentonite, a soft, porous clay which is very susceptible to erosion. Rainwater races down the hillsides creating the intricate patterns of miniature ravines. The bands of color represent different layers that were deposited under water. The blue-gray layers were deposited under a

lake while the pale red layers were deposited under a slow-moving river. Manganese and iron oxides are responsible for the colors.

The Blue Mesa badlands are rich with plant and animal fossils. Look for fossils while hiking through the area. Study the fossils, but please don't remove or disturb them. (For more information on fossils, visit the Visitor Center and Museum.)

4. Crystal Forest (0.8 mile loop)

The trees of Crystal Forest once hid large amounts of beautiful smoky quartz, clear quartz, and purple amethyst crystals. These semi-precious gems developed in the hollows of the trees after the trees petrified. They were formed of silica, the same compound that turned the trees to stone. In the late 1800's, before the establishment of Petrified Forest National Monument, profit seekers dynamited many logs in this area in search of these gems. Massive logs were reduced to the chips that can be seen

scattered about Crystal Forest.

Hike the paved loop trail and look for smoky quartz which can still be found on a few logs along the trail. Admire the colorful "desert pavement," the stony carpet composed of gravel, petrified wood chips, and other rocks. Imagine this area if exploitation had been allowed to continue. Help with the continued preservation of Petrified Forest by leaving every piece of wood and rock here so that others may enjoy it.

5. Long Logs (0.6 mile loop)

A paved loop trail leads through the largest concentration of petrified wood in the park. These logs are the remains of an ancient log jam. At the north end of the loop, logs can be seen lying crisscross on top of each other in log jam formation. While at the northern end of the loop, look for some of the park's longest intact logs. The exposed portion of the long log which lies directly adjacent to the trail measures 116 feet. Most of these logs are the petrified remains of an extinct conifer tree called araucarioxylon.

Imagine this area during the Triassic Age, 200 million years ago. It was an area of large swamps, slow streams, and low-lying hills. It was warm and humid with abundant rainfall. The araucarioxylon forest grew about 50-100 miles southwest of here on higher land. Beneath the 200 foot tall trees, there was a forest floor covered with ferns and other moisture-loving plants. Strange-looking animals roamed the land and waters — phytosaurus, metoposaurus, placerias, coelophysis, and many more. Learn more about these animals at the Visitor Centers.

6. Agate House (0.9 miles round trip)

This paved trail leads through petrified forest deposits and ends at a reconstructed Anasazi Indian ruin. The eight room pueblo sits on a knoll, 50 feet above the surrounding Rainbow Forest. The walls of this unique ruin are built entirely of colorful petrified wood sealed with adobe.

Archaeologists believe the pueblo was only occupied for a short period, sometime between 1100 and 1300 A.D. It may have been used as a temporary home or hotel for wandering Anasazi farmers. To learn more about the Anasazi, stop at the Puerco Indian Ruins and Petroglyphs. (Help preserve Agate House by not climbing on the walls.)

7. Giant Logs (0.4 mile loop)

Follow this paved loop through a collection of some of the most massive petrified logs in the park. The largest log, known as "Old Faithful," has a diameter of 9'9" at the base. From the hilltop near Old Faithful, look out upon the vast concentrations of petrified wood in Rainbow Forest. Conditions had to be near perfect to create this wonder. Two hundred million years ago, these trees were carried here by streams and then quickly buried by sediments. Water carrying dissolved mineral silica filtered into the trees. The silica precipitated out of the water and filled the wood cells with microscopic quartz crystals — turning the trees to stone.

The variety of colors in the wood was created by the presence of iron and manganese oxides.

And what broke the logs? The process started 70 million years ago while the logs were still buried. This land containing the petrified trees was uplifting from sea level to an elevation of several thousand feet. The shifting of the land put stresses on the rock trees and fine cracks developed along the length of the logs. Erosion eventually exposed the logs to the surface where freezing and thawing widened the cracks and separated the logs into sections.

Within the park there are two large wilderness areas. Ask a ranger about hiking or backpacking in these areas. A permit is required for overnight trips.