

# Petrified Forest

NATIONAL PARK • ARIZONA

The Painted Desert of northern Arizona is a strange landscape of curious shapes and a wonderful variety of colors. Here in the weirdly eroded badlands are found trees that have turned to stone. Thousands of great logs, brilliant with jasper and agate, lie scattered about; here and there the ground is paved with broken sections and chips, many of which preserve even the smallest details of the original wood. Petrified Forest National Park was established to protect some of the largest of these deposits for the enjoyment of present and future generations.

Prehistoric Indians lived here and built their homes with petrified wood. Surviving are ruins of these dwellings, as well as their petroglyphs (drawings and signs etched on stone).



A view of the Rainbow Forest



Agate Bridge



Petrified logs in Rainbow Forest

## HOW LOGS ARE PETRIFIED

During the 20 million years of the late Triassic period of geologic time (200 to 180 million years ago), this area was part of a vast flood plain crossed by many streams. On well-drained sites, near the headwaters of these streams, grew stately pinelike trees.

Some of these trees fell and were soon buried in mud, sand, and volcanic ash carried by flooding streams. The scarcity of oxygen deep under these stream deposits arrested the processes of decay and rot while the surrounding deposits hardened into sandstones and shales of the Chinle Formation.

This set the stage for petrification, a process not completely understood. Apparently the ancient Triassic streams contained chemicals that allowed the mineral silica to dissolve in their waters. This silica-bearing water penetrated the buried logs' wood cells and holes created by rot and insects. The water evaporated, leaving only the silica in the cell interiors and the holes. The wood tissues remained intact, and the silica turned into quartz.

Over millions of years, this area sank below sea level, was flooded, and then covered by layers of new sediments. Later it was uplifted far above the sea. The petrified trees, entombed in layers of rock, heaved under these great pressures and cracked and broke into the large and small pieces you see today. In recent times, wind and water have carved away the sandstones and shales surrounding the logs, leaving them on the surface as you see them today.

## VISITOR FACILITIES

There are no overnight accommodations within the park. Motels, restaurants, and other services are to be found in nearby communities.

*Painted Desert Oasis and Rainbow Forest Lodge* provide refreshments, lunches, souvenirs, and auto service. They are about 26 miles apart, near the entrances to the park. Both are open all year.

*Camping.* The park has no campgrounds. Only wilderness backpack camping is allowed. A permit is required; commercial campgrounds are east and west of the park.

## REGULATIONS

National parks were established to preserve outstanding natural, scenic, and historic values. They are an irreplaceable part of our national heritage. Regulations exist to ensure that this part of our heritage remains as you find it, so that others may enjoy it. Removal of petrified wood is prohibited.

*Speed limit.* You are required to keep within the posted limit.

*Pets* must be kept under physical control at all times. They are not allowed in public buildings nor in concessioner facilities.

## ENJOYING THE PARK

The park is open during daylight hours all year. Summer days may be quite warm, and clear weather may be broken by sudden thunderstorms. In winter, cold and snowy days are not uncommon. High winds may be expected at any season.

*How to See the Park.* Information on seeing the park is available at the Painted Desert Visitor Center and at the Rainbow Forest Museum. "The Stone Forest," a 17-minute film shown at the Painted Desert Visitor Center, explains how wood gets petrified. Exhibits of petrified wood and of the park's geological history are displayed at the Rainbow Forest Museum. Exhibits on human history in this area are displayed at the Painted Desert Inn, open summer months only.

*Driving.* A 27-mile scenic drive winds through the park. Spur roads and pullouts provide stopping places for viewing, photography, short walks, and exploration of the Painted Desert and Petrified Forest. Wayside exhibits explain major features. Please report any accidents or vandalism to the nearest ranger station.

*Hiking.* Short trails lead to major petrified wood sites and other points of interest. The wilderness offers cross-country hiking. Maps, trail and weather conditions, and overnight wilderness permits are available at the Painted Desert Visitor Center and the Rainbow Forest Museum. There is no water away from developed areas. Start your return hike before half of your water supply is gone.

*Guided Activities* are offered throughout the park during summer months. Schedules are posted at entrance stations and at visitor centers.

*Picnicking* is permitted only at Chinde Point and in Rainbow Forest where there are tables, water, and restrooms. Please put litter in trash cans.

## ADMINISTRATION

Petrified Forest National Park is administered by the National Park Service, U.S. Department of the Interior. A superintendent, whose mailing address is Petrified Forest National Park, Arizona 86028, is in immediate charge of the park. His office is in the Painted Desert Visitor Center.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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## FOR YOUR SAFETY

- Drive carefully at all times; park in designated parking areas, only.
- If you plan an extended hike, have sufficient water and notify park personnel.
- Park elevations range from 5,100 to 6,235 feet; health conditions should be considered before strenuous exercise.
- Do not climb or play on petrified logs; petrified wood can be extremely sharp.

## A WARNING ABOUT PETRIFIED WOOD

Federal law prohibits removal of any petrified wood from this park, *no matter how small the piece*. If you violate this law, you will be subject to a fine or imprisonment or both.

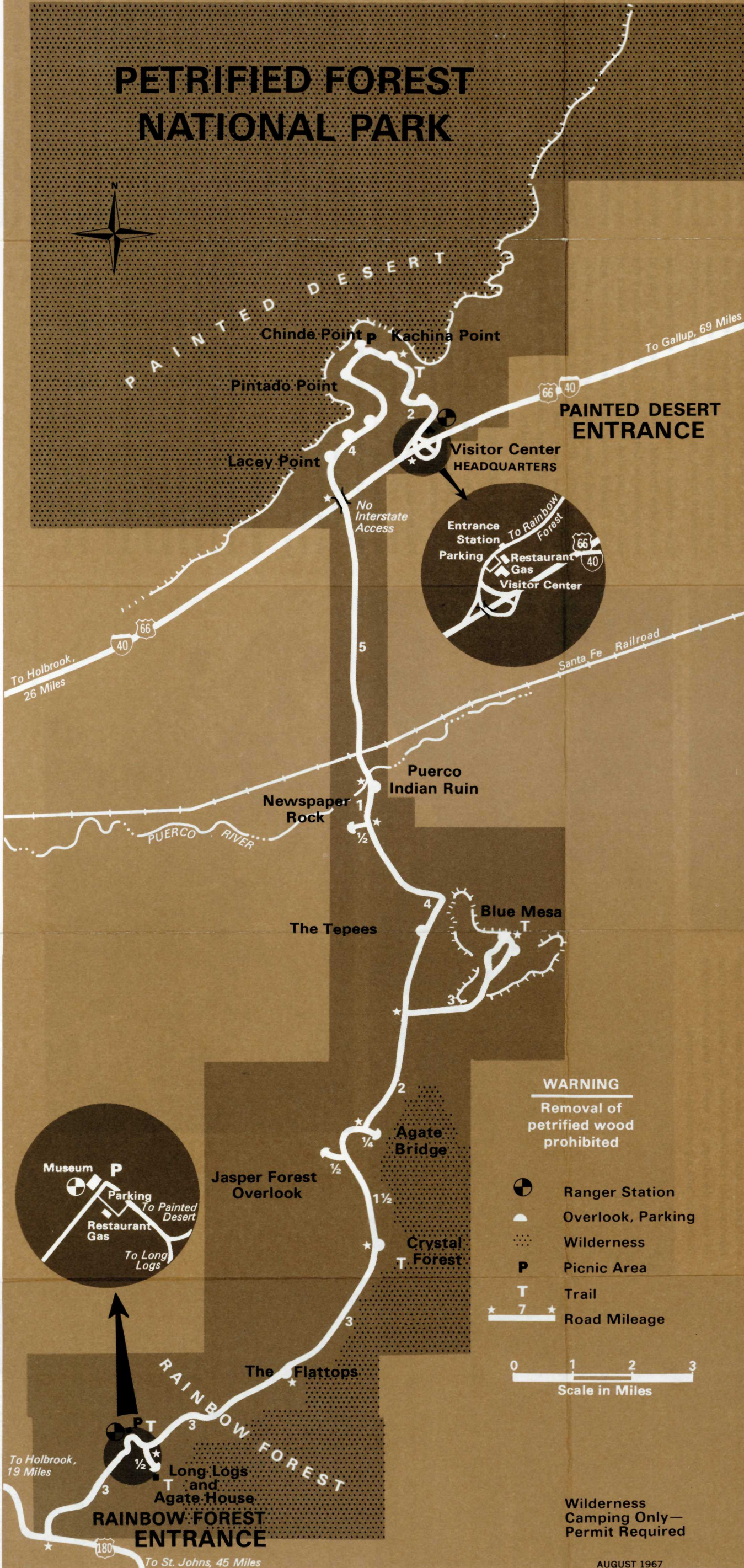
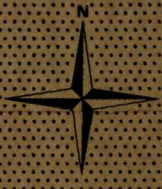
The reason for strict enforcement of this law will be clear to you: If every visitor should remove even a small piece of petrified wood, there would soon be none left. A thoughtless, selfish person who might attempt to take away a chip of petrified wood would, in effect, be guilty of trying to steal from all visitors who come after him.

Petrified wood, obtained from sources outside the park, may be purchased from park concessioners or from adjacent curio shops.



WARNING — Removal of petrified wood prohibited

# PETRIFIED FOREST NATIONAL PARK



## ROAD GUIDE

**Painted Desert Visitor Center and Headquarters:** I-40 entrance. Information and orientation to the Painted Desert and petrified wood sites. A 17-minute film shows how wood is petrified. Lunchroom, souvenir shop, and service station.

**Painted Desert:** Sweeping views from several overlooks along the rim. Cultural exhibits at Painted Desert Inn during summer months. Picnic area at Chinde Point.

**Puerco Indian Ruin:** Remains of walls at site, which was occupied before A.D. 1400, indicate a rectangular village of perhaps 150 rooms enclosing a large courtyard. A few rooms have been excavated.

**Newspaper Rock:** Petroglyphs (prehistoric Indian rock art) pecked into the surface of a massive sandstone block, 120 steps down steep incline.

**The Tepees:** Colorful bands of eroded clay deposits make up these badlands formations.

**Blue Mesa:** Elevated logs, erosion gullies, and brightly banded clay hills illustrate the constant renewal of the landscape. The earth erodes, exposing logs and chunks of petrified wood. The wood shelters the earth on which it rests until erosion leaves only a pedestal capped by the log. When the pedestal erodes the log rolls to a new location and the cycle begins anew, resulting in an ever-changing landscape. A 3/4-mile trail leads down to the desert floor.

**Agate Bridge:** More than 100 feet of this famous log are exposed, but both ends are still encased in the sandstone in which the log was buried. A 40-foot-wide ravine has gradually been carved into the sandstone, with the log spanning the narrow draw. A concrete-beam support was placed under the heavy log in 1917 as a precaution against collapse.

**Jasper Forest Overlook:** The spur road leads to the edge of Jasper Forest Mesa. Great masses of log sections litter the valley floor and clog the gullies that cut into the edge of the mesa.

**Crystal Forest:** Here were once many fossil logs in which beautiful clear and amethyst quartz crystals filled the cracks and hollows. Before Federal protection of the area, collectors and souvenir hunters blasted many of the logs in search of these gems. This type of activity and commercial exploitation prompted the citizens of the Arizona Territory to petition Congress for the preservation of Petrified Forest.

**The Flattops:** Massive remnants of a once continuous layer of durable sandstone protecting a series of layered deposits that have elsewhere been removed by erosion.

**The Long Logs and Agate House:** The eastern part of Rainbow Forest is most notable for the number of exceptionally long logs, which are only partly uncovered. A partially restored pueblo, now called Agate House, is at the end of a foot trail from the parking area.

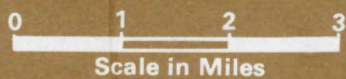
**Rainbow Forest Museum and Giant Logs:** Staff and exhibits provide information about the petrified forest and surrounding areas. A 1/2-mile trail leads through a large concentration of petrified wood, including Old Faithful Log. Lunch room, souvenir shop, and service station; picnic area nearby.

**Rainbow Forest Entrance Station:** Park boundary on U.S. 180. Westbound visitors can get on I-40 at Holbrook.

**Wilderness Areas:** Overnight use by permit only, available free at Painted Desert Visitor Center and at Rainbow Forest Museum. Park at Kachina Point or at The Flattops.

WARNING  
Removal of petrified wood prohibited

- Ranger Station
- Overlook, Parking
- Wilderness
- Picnic Area
- Trail
- Road Mileage



Wilderness  
Camping Only—  
Permit Required