

# Petrified Forest

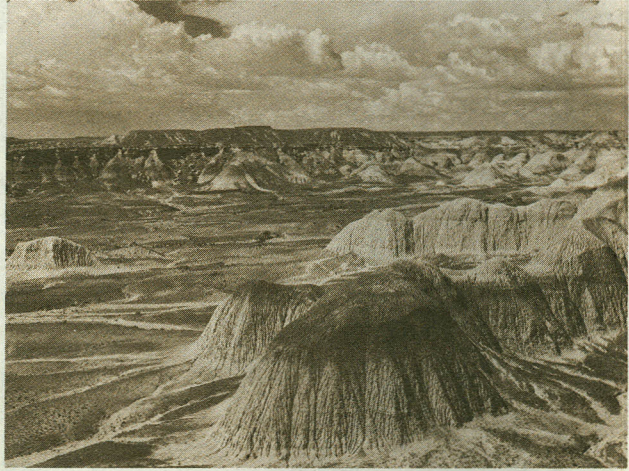
NATIONAL PARK • ARIZONA



National Parks Centennial 1872-1972

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, which is not commonly 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 log's 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 camping facilities and camping is therefore not permitted. The nearest public campgrounds are in national forests to the southeast and west, nearly 100 miles away.

## 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.

*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.* At the Painted Desert Visitor Center (near U.S. 66) you can obtain information about this and other areas in the Southwest administered by the National Park Service. And, at the Rainbow Forest Museum (near U.S. 180), you can see exhibits that include a diorama, outstanding specimens of polished petrified wood, fossils, minerals, and diagrams that explain how wood becomes petrified and how badlands are formed.

Wayside exhibits at major points of interest on the 27-mile park road will also increase your enjoyment and understanding of this area. Interesting drives to several places off the main road increase the distance of the complete trip through the park to about 29 miles. The guide map shows the principal points of interest by numbers, which refer to adjacent descriptions.

*Driving.* Park roads are designed to provide access to scenic points of interest and to view the park while driving. They are not high-speed highways. Parking areas are designated for your convenience. Please report any accident to the nearest ranger station.

*Hiking.* Walking trails will take you to additional points of interest. If you plan to hike away from established trails, be sure to carry an adequate supply of water, for there is *no water* in the desert. Before such hiking, you are required to register with a park ranger at the visitor center or at one of the entrance stations.

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

## ADMINISTRATION

Petrified Forest National Park is administered by the National Park Service, U.S. Department of the Interior. A superintendent, whose address is Petrified Forest National Park, Holbrook, AZ 86025, 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 basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources." The Department works to ensure the wisest choice in managing all our resources so that each will make its full contribution to a better United States—now and in the future.

# PETRIFIED FOREST NATIONAL PARK



P A I N T E D D E S E R T

Chinde Point Kachina Point

Pintado Point

Lacey Point

No Access

Visitor Center HEADQUARTERS

To Gallup, 69 Miles

PAINTED DESERT ENTRANCE



To Holbrook, 26 Miles

Santa Fe Railroad

## ROAD GUIDE

If you enter the park from U.S. 66 your first stop will be 1; if you enter from U.S. 180, it is 13.

**1 Painted Desert Visitor Center and Headquarters:** U.S. 66 entrance. Information. Exhibits on this and other units of the National Park System. Lunchroom, souvenir shop, and service station.

**2 Painted Desert:** Sweeping views from several overlooks along the rim and from the observation site on Kachina Point. Picnic area on Chinde Point, just west of Kachina Point observation site.

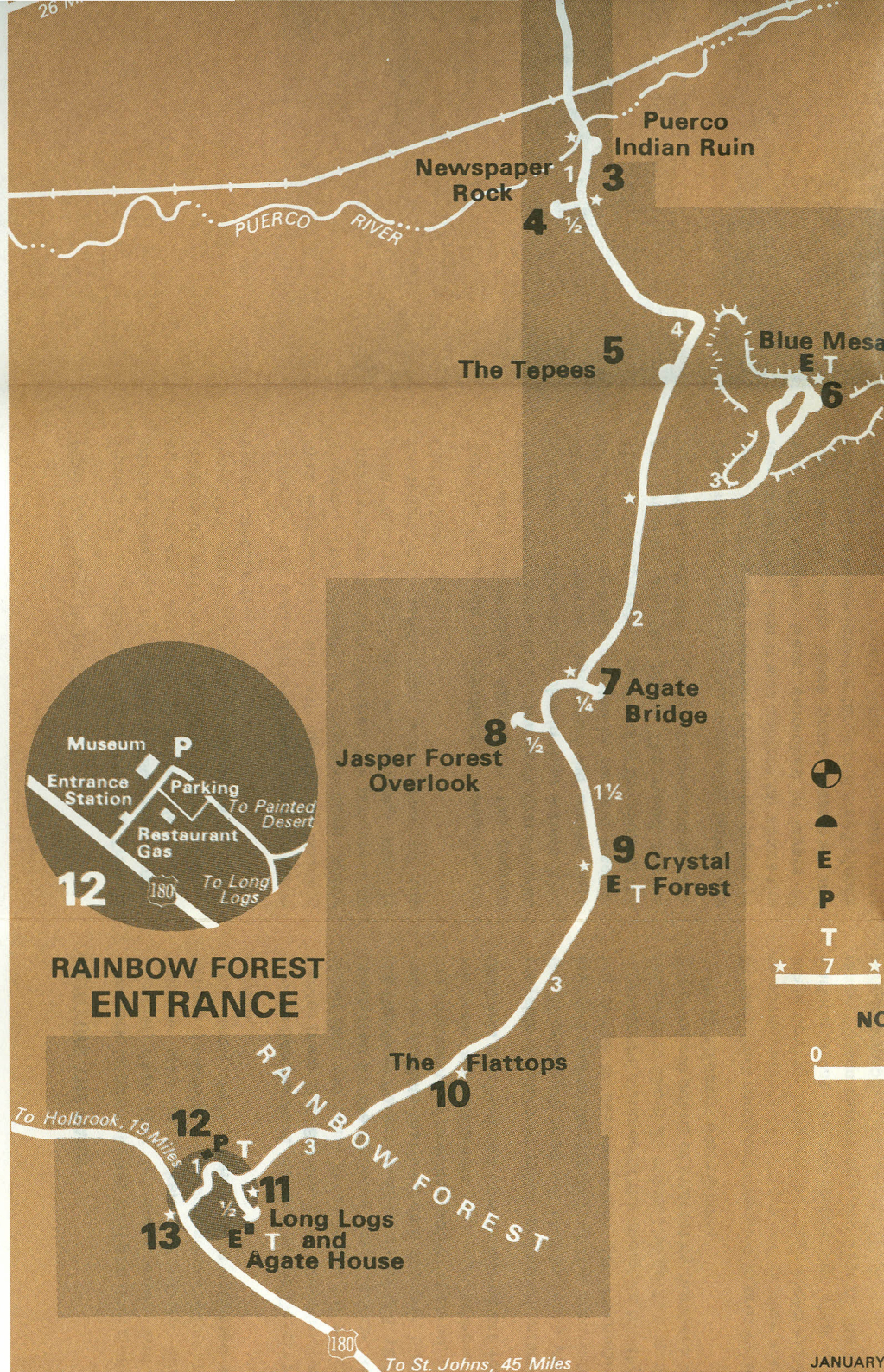
**3 Puerco Indian Ruin:** Remains of walls at site, which was occupied about 600 years ago, indicate a rectangular village of perhaps 150 rooms enclosing a large courtyard. A few rooms have been excavated.

**4 Newspaper Rock:** Petroglyphs (prehistoric Indian rock art) pecked into the surface of a massive sandstone block.

**5 The Tepees:** Small peaks resembling tepees or haystacks showing erosion of soft, layered clay deposits.

**6 Blue Mesa:** Illustrates the way petrified logs play a part in the constant renewal of the sculptured landscape. The soft earth erodes away, leaving a gradually narrowing ridge beneath the length of each log. Eventually, sections of the log roll off the ridge; erosion then reduces the ridge to a series of rounded pinnacles. When a section of a fossil log remains as a protecting cap atop one of these ridges, erosion often produces a pedestal-like formation capped by the log section. Sections of logs that come to rest at new locations on the soft clay after tumbling from their perches immediately start the erosional cycle all over again. An excellent short trail takes you into this interesting area.

**7 Anate Bridge:** More than 100 feet of this fa-



**7 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.

**8 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.

**9 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.

**10 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 road passes through a cleft separating the two main bodies of this surviving tableland.

**11 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. A paved self-guiding trail serves the area.

**12 Rainbow Forest Museum and Giant Logs:** Exhibits here are designed to answer pertinent questions that visitors may have when arriving at or leaving the park. Behind the exhibit hall are Old Faithful Log and many other exceedingly large logs. Picnic area nearby. Lunch room, souvenir shop, and service station.

**13 Rainbow Forest Entrance Station:** 2 miles from park boundary on U.S. 180.

## **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.