



# Petrified Forest

The Official Newspaper of  
Petrified Forest National Park  
Issue 2009



Summer



Autumn



Winter



Spring

## Who Lives in Petrified Forest?

### The Living Park

Although Petrified Forest is best known for its fossil clues to an ancient environment, it is also a living park. Despite its seemingly barren appearance, the grasslands of Petrified Forest National Park support hundreds of plant and animal species. Grasslands are one of the world's most endangered ecosystems, fragmented by development, overgrazing, and overuse. Petrified Forest National Park preserves some of the best recovering fragments of native grassland in northeastern Arizona.

### Residents

Too often, visitors hurry through the grassland. Take a moment to experience this surprisingly complex environment. Since the park has been protected from livestock-grazing for half a century, much of the natural diversity of the grassland has returned. The dominant plants are grasses, including over five dozen native species. Although the miniscule blossoms of grasses usually go unnoticed, other types of wildflowers are abundant throughout the wide-open spaces, such as luminous evening primrose, golden mariposa lily, and intensely blue flax. Larger shrubs form islands within the sea of grass, including several species of soft silvery sagebrush, saltbush



Like flames amidst the sagebrush and grasses, paintbrush (*Castilleja* species) are hemi-parasitic wildflowers that share nutrients of some of the native grassland shrubs.

festooned with papery seedpods, and rabbitbrush gilded with bright yellow flowers.

Some of the animals that visitors see in the park include pronghorn and prairie dogs. Pronghorn are permanent residents of the grassland, unique to this continent. These long legged hoofers are the fastest mammals in North America, sprinting over 60 mph. The bright white patches against their tan pelts are the best way to spot them against the gilded grasses of the prairie.

An important resident of the grassland, Gunnison's prairie dogs occupy subterranean

apartment houses. Living in large communities—or “towns”—prairie dogs depend on each other for safety. While most of the town is feeding, guards watch for golden eagles, coyotes, and other predators. Any sign of danger raises the alarm, sending all the prairie dogs racing to the safety of their many burrows. Prairie dogs host dozens of other animal species, which find homes and food around the towns.

Continued on the next page—



Petrified logs bathed in late afternoon light against a late summer thunderstorm.

*...even an hour's hike or a leisurely drive in the Arizona grasslands will dispel any notions of flatland monotony. Here the incandescence of sidelit grassy hills during a thunderstorm and the orange-lavender stripes of sunset on a craggy horizon easily rival natural beauty elsewhere. In this wide-open habitat it's not unusual...to spot distant pronghorn through binoculars, then realize they've long since checked you out.*

~ Carl and Jane Bock, *The View from Bald Hill: Thirty Years in an Arizona Grassland*, 2000.

# Environment at Petrified Forest National Park

Continued from front page—

## Neighborhoods

There are many neighborhoods within the grassland, from the open prairie to the juniper woodland at the rim of the Painted Desert and even wetlands. Bisecting the grasslands, washes, streams, and rivers provide a higher concentration of moisture for plants and animals. Trees and shrubs line the watercourses in narrow galleries, offering food and shelter for many amphibians, birds, reptiles, mammals, and insects. Willows and cottonwood are the larger native plants that find a home in the riparian areas, along with rushes, sedges, and other water-loving plants. The abundance of life in this area lures predators. Bobcats and bullsnakes hunt smaller animals, such as deer mice and white-tailed antelope ground squirrels. Tiny western pipistrelle bats dart among the trees, snapping insects out of the night air. Blond-furred pallid bats search for scorpions on the ground. The riparian community is cooler than the surrounding grassland. People as well as animals and plants find shelter in the shade beneath elegant, whispering cottonwoods. The riparian habitat is truly an oasis.

## Seasons

Petrified Forest is a dynamic environment. Temperatures can soar over one hundred degrees Fahrenheit in the summer and drop below freezing in the winter. Spring and summer are the prime growth seasons of the park. The tall branches of cliffroses are heavy with fragrant, cream-colored blossoms. The bright yellow blossoms of skunkbush sumac give way to tart maroon berries. Bright regiments of white-flowered peppergrass line the roads. During spring, the wind can be unrelenting, helping to erode the fantastic landforms of the region. Summer brings the monsoon, thunderstorms inundating the surface of the park, causing flash floods. Dry washes and riverbeds fill with rushing, silty water. Lightning punctuates the grassland. After the monsoon has gone, autumn offers some refreshing color to the park. Skunkbush sumac paints its lobed leaves ochre and red. Cottonwoods are a-flutter with brilliant yellow leaves. Asters are starred with purple blossoms. Hemispheric mounds of golden buckwheat become rusty red. Papery seedpods of saltbush blush copper and rose. It is a concert of color before the oncoming winter. Winter snow can make a sparkling wonderland of the park, frosting sagebrush and dusting the badlands as many animals migrate or retreat into the warm protection of burrows. It is a time of quiet, waiting for the reawakening in spring.

**Spend a moment in the grassland.** You may spot a kestrel swooping down to catch a silky pocket mouse, watch pronghorn browsing among saltbush, or catch sight of prairie dogs dashing for their burrows. Underestimated, grasslands provide wide vistas, colorful flora, and fascinating animals. Petrified Forest National Park preserves and protects this American landscape for contemplation and enjoyment for generations to come.

## Just a Few of the Residents

This list is just a fraction of the hundreds of animal species that make Petrified Forest National Park their home.



Coyote *Canis latrans*



Gopher snake *Pituophis catenifer*



Bobcat *Lynx rufus* (*Felis rufus*)



Couch's spadefoot *Scaphiopus couchii*



Pronghorn *Antilocapra americana*



Red-tailed hawk *Buteo jamaicensis*



Desert cottontail *Sylvilagus audubonii*



Common raven *Corvus corax*



Gunnison's prairie dog  
*Cynomys gunnisoni*



Rock wren *Salpinctes obsoletus*



White-tailed antelope squirrel  
*Ammospermophilus leucurus*



Greater roadrunner  
*Geococcyx californianus*



Collared lizard *Crotaphytus collaris*



Tarantulas *Aphonopelma* sp.

There are several handouts available of the common plants and animals at the park's information desks.

*Soul-melting-scenery was about me—the prairie, whose enameled plains lay beneath me, softening into sweetness in the distance like an essence . . . this prairie, where heaven sheds its purest light and lends its richest tints.* ~ George Catlin (1796-1872), Letters and Notes on the North American Indians



# Petrified Forest



Painted Desert



Petroglyphs



Painted Desert Inn



Pronghorn



Fossil phytosaur skull

## Natural Neighborhoods

Best known for its vast deposits of petrified wood, today Petrified Forest National Park is part of the Intermountain Basins semi-arid grassland—an environment with many natural neighborhoods. Winters are cold with a chance of snowstorms while summers are hot and thunderstorms bring the possibility of moisture during the monsoon season. Drought is common, sometimes lasting for years. While many visitors think that nothing can survive in what appears to be a barren place, hundreds of species of plants and animals live here. If you are lucky, you may see pronghorn along the park road, browsing among the shrubs, or hear the liquid song of a western meadowlark near an overlook. Discover the natural neighborhoods of the park, including the open grasslands, riparian areas, badlands, and miniature woodlands along the Painted Desert Rim.

The climate today is very different than the environment represented by the Chinle Formation and its fossils. Beneath the veneer of the modern park, an ancient world waits to be discovered. Petrified wood is only one of the many types of fossils found in the park. Fossilized remains of giant reptiles and amphibians, early dinosaurs, fish, ferns, cycads, and trees represent ancient ecosystems. Studying the layers of the colorful Chinle Formation, scientists continue to put together the story of the Late Triassic.

Archeologists also tell the story of the Petrified Forest through the clues left by past inhabitants, such as artifacts, remnants of villages, and evocative petroglyphs. The human story extends over 10,000 years. From ancient groups of hunter-gatherers to Route 66, this region has been a well traveled crossroad.

Enjoy the ancient Petrified Forest, but don't forget that it is a living park as well. Take in the vast landscape from an overlook at the edge of the Painted Desert, walk a trail amidst the petrified logs, or merely sit and enjoy Petrified Forest and its natural neighborhoods.



Both the current and the Late Triassic environments are represented in the Petrified Forest National Wilderness Area: living shrubs and grasses near fossils and ancient river deposits.

## What's Inside?

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## Welcome!

Even in a region graced with so many wonderful national park areas, Petrified Forest National Park is a unique place. Along with the strange and beautiful Painted Desert, hundreds of archeological sites, a National Historic Landmark, stretches of native grassland, and one of the largest petrified wood deposits in the world, Petrified Forest also offers a chance for silence, solitude, and contemplation.

Most of our visitors concentrate along the overlooks and short trails of the 28-mile park road. In summer, our busiest season, parking areas are packed and facilities are crowded. Like many of the national parks, years of use have made an impact.

Fortunately, the concern and efforts of National Park employees, volunteers, and our visitors aid in the stewardship of Petrified Forest National Park. One of the biggest dangers our park faces is the illegal removal of park resources, particularly petrified wood. With the help of visitors, this selfish act can diminish.

Join us in preserving and protecting one of the most fascinating national parks. Walk the trails amidst ancient petrified logs, take in the wide vistas of the Painted Desert, discover voices of the past in the petroglyphs, listen to the silence of wilderness.

Enjoy your park!

Cliff Spencer, Superintendent



### Did You Know?

Standing on the edge of a vast badlands landscape, a Spanish explorer is rumored to have named the area *El Desierto Pintado*—the Painted Desert—because the hills looked like they were painted with the colors of the sunset.

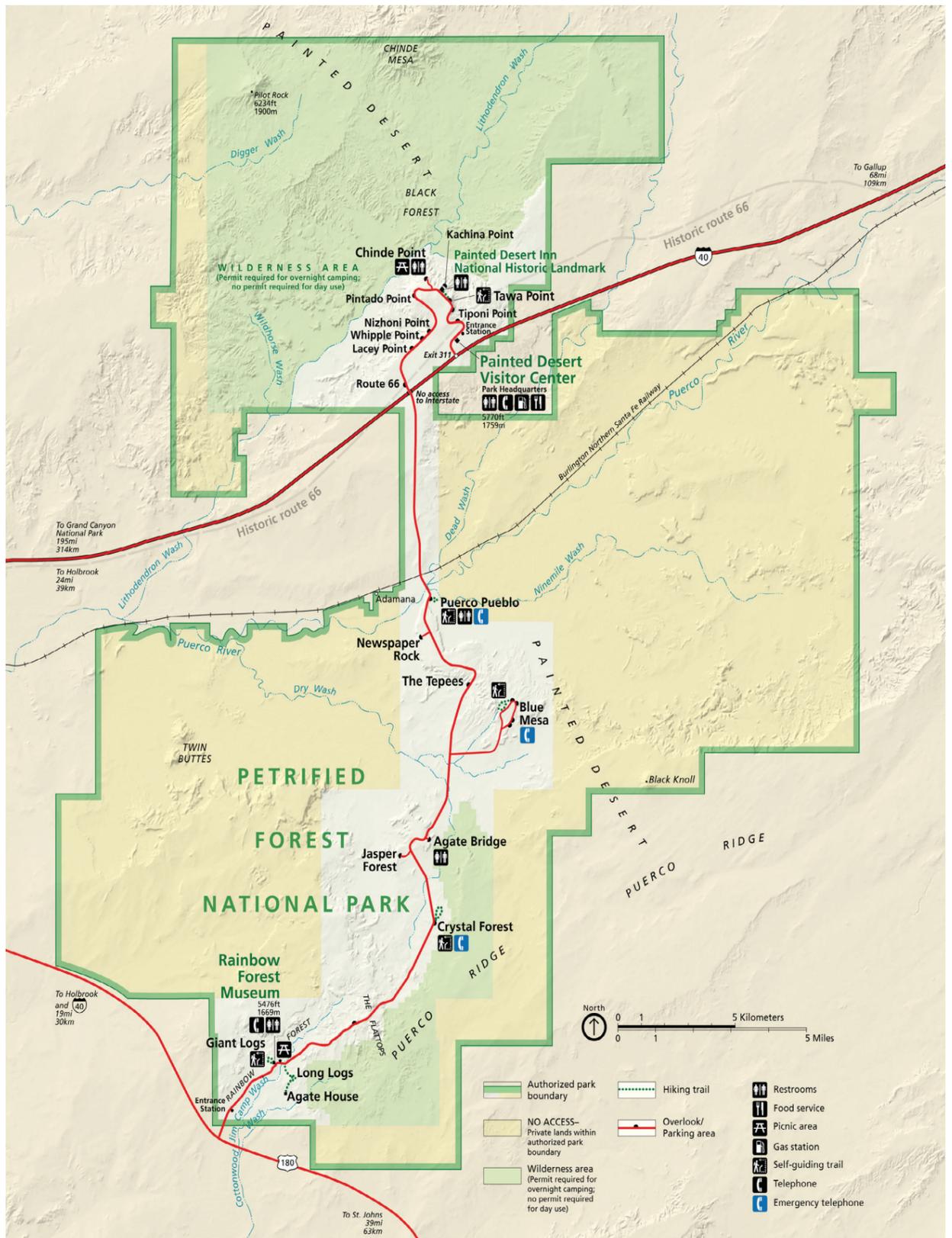


Ranger programs are available year-round

# Park Map and Information

## Rules and Regulations

- Do not remove any natural or cultural object from the park, including fossils, rocks, animals, plants, artifacts, etc.
- Vehicle travel is limited to the paved park road and park areas open to the public.
- Observe speed limit signs, which range between 15 and 45 miles per hour.
- Park or stop in designated areas. Do not stop in the middle of the road.
- Bicycles are permitted only on the paved park roads and parking areas open to the public. Bikes are not allowed off road at any time or on any trails.
- Pets must be leashed (no longer than 6 feet) and physically restrained at all times. Pets are not allowed in buildings, in designated Wilderness Area or on Wilderness Area access trail, except for service animals. Pets may be tied to an object for short periods of time (less than 5 min.) in developed areas or during emergencies. Clean up after your pet and deposit in trash receptacles!
- Do not litter, including cigarette butts. Use appropriate trash receptacles.
- Please recycle aluminum and plastic containers in the appropriate receptacles.
- Public use of the park is prohibited during closed hours except by permit.
- Camping in the park without a permit or outside of the Wilderness Area is prohibited.
- Do not climb on prehistoric or historic walls or other structures.
- Do not harm or remove any petroglyphs. Direct physical contact with any type of rock art is prohibited.
- Do not feed, touch, tease, frighten, harm, or disturb any animals in the park.
- Ground fires are prohibited. The use of solar, butane/propane, and white gas fueled stoves and charcoal grills are allowed in designated picnic areas.
- The consumption of alcohol or the presence of open alcoholic containers is prohibited, except in picnic areas.
- All vehicles, including buses, minibuses and vans, are prohibited from idling their engines for extended periods of time. Idling shall not exceed five minutes during periods of inclement weather and two minutes all other times.
- Firearms must be broken down, unloaded, cased, and stored in your vehicle. Carrying or use of firearms is prohibited.



## What can I see?

### If you have one hour:

- Stop at the Painted Desert Visitor Center
- Drive through the park
- Visit Rainbow Forest Museum

### If you have several hours *add*:

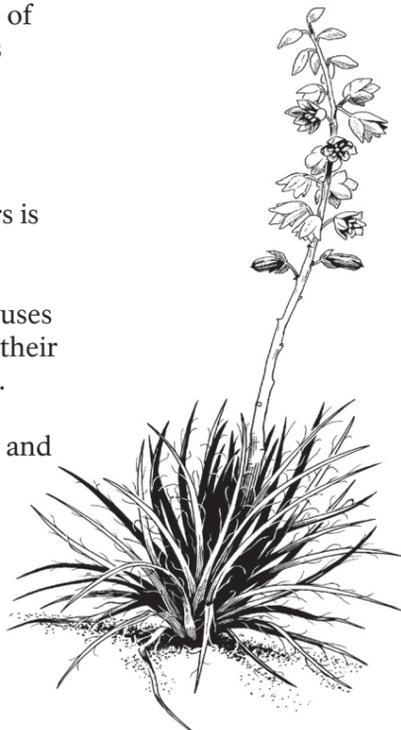
- See the park film at the Painted Desert Visitor Center or Rainbow Forest Museum
- Stop at Kachina Point and Painted Desert Inn National Historic Landmark
- Stop at Pintado Point, Newspaper Rock, and Jasper Forest
- Walk Puerco Pueblo Trail
- Drive Blue Mesa Road
- Walk Giant Logs Trail (pick up a trail guide in the Museum)

### If you have half a day *add*:

- Walk more of the developed trails

### If you have a day or more *add*:

- Hike into the one of the units of the Petrified Forest National Wilderness Area



### Did you know?

Arizona, except for the Navajo Nation, does not observe daylight savings, staying on Mountain Standard Time (MST) year round. During the summer, we are the same time as the Pacific Time Zone; during the winter, we are the same as the rest of the Mountain Time Zone.



## Accessibility



Most rest rooms, visitor centers, and picnic areas are accessible or accessible with assistance for wheelchair users. The park film has opened captions. There are braille books about the park available for free at the museum and visitor center. Service animals are always welcome in the park!

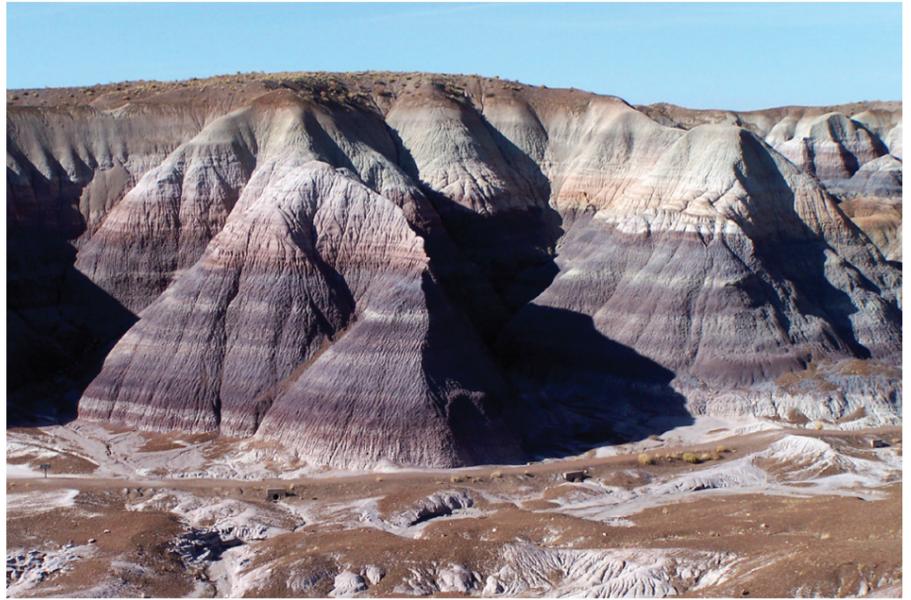
# Trails and Safety at Petrified Forest National Park

## Out of the Car and On the Trail

The best way to enjoy and experience Petrified Forest National Park is on foot. Designated trails range in length from less than a half-mile to three miles.

Stay on designated trails in developed hiking areas. Off-trail hiking damages the fragile grassland environment and disturbs wildlife habitat, creating unsightly “social” trails. Leaving the designated trail can also be hazardous for hikers due to loose rock and dangerous cliffs. Pets must be kept on leash at all times. Pets are not permitted in the park buildings, in Wilderness Area or on Wilderness access trails (except for service animals). Please clean up after your animal; use the trash receptacles. Bicycles are not allowed on trails or off roads at any time.

\*Mile Markers begin at the park’s northern entrance off of I-40.



Blue Mesa Trail

|  | Trailhead                    | Length                              | Description  |
|--|------------------------------|-------------------------------------|--|
| Painted Desert Rim                                       | Tawa and Kachina Points      | 1-mile round trip                   | This trail winds through the rim woodland, a place for chance encounters of many species of plants and animals. The view of the Painted Desert is spectacular. <i>Please do not harm animals or plants in the park.</i>  |
| Puerco Pueblo  | Puerco Pueblo parking lot    | 0.3-mile loop                       | Walk amidst the remains of a hundred room village, occupied by the ancestral Puebloan people between A.D. 1250 and 1400. <i>Do not climb on the boulders or walls. Please do not touch petroglyphs.</i>  |
| Blue Mesa  | Blue Mesa sunshelter         | 1-mile loop<br>Moderately strenuous | Descending from the mesa, this trail loops among petrified wood deposits and badland hills of bluish bentonite clay. Plant fossils, including delicate ferns, have been found in the sedimentary layers of Blue Mesa. <i>Please leave them for others to enjoy.</i>  |
| Crystal Forest   | Crystal Forest parking lot   | 0.75-mile loop                      | Despite more than a century of collecting, a few beautiful crystals hide in the petrified logs of Crystal Forest. <i>Please leave the petrified wood for others to enjoy. Report anyone removing petrified wood from the park.</i>   |
| Long Logs  | Rainbow Forest parking area  | 1.6-mile loop                       | Long Logs is one of the largest concentrations of petrified wood in the park. Explore this ancient log jam at the base of gray badlands. <i>Do not climb on the badland hills.</i>   |
| Agate House  | Rainbow Forest parking area  | 2-miles round trip                  | Archeologists believe that this small pueblo was occupied for a short time about 700 years ago. Seasonal farmers or traders possibly built Agate House as a temporary home.<br><br><i>Long Logs and Agate House Trails can be combined, as they start from the same trail head, for a total of 2.6 miles round trip.</i> |
| Giant Logs<br><i>Trail guide available in the Museum</i> | Behind Rainbow Forest Museum | 0.4-mile loop                       | Giant Logs features some of the largest and most colorful logs in the park. “Old Faithful”, at the top of the trail, is almost ten feet across the base.   |

## Safety

- Stay on the designated trails. Do not go beyond protective fencing or guardrails. Avoid cliff edges and steep slopes.
- Be aware of symptoms of high altitude sickness, including nausea, dizziness, headache, rapid heartbeat, and shortness of breath. Keep hydrated, rest, snack lightly, and avoid alcohol and cigarettes.
- Wear sunglasses with UV protection, a hat, and use sunscreen.
- The wild animals in the park can carry diseases including rabies, hanta virus, and plague. Do not handle or allow your pets near any live or dead animals and avoid nests and burrows.
- If you are injured or ill while visiting the park, contact a ranger at any visitor center facility.
- For Lost and Found, contact the Painted Desert Visitor Center, Rainbow Forest Museum, or call the park at 928-524-6228.
- Yellow emergency phones are located at Puerco Pueblo, Blue Mesa, and Crystal Forest. The park number for emergency only is 928-524-9726.



### Did You Know?

There are about ten known species of bats in the park. This pallid bat is sleeping at the Painted Desert Complex. Pallid bats hunt many things, including scorpions!

# Activities at Petrified Forest National Park



Thunderstorm over the Long Logs during the monsoon season of late summer.

## Points of Interest and Facilities

*In order as seen from north to south*

**Painted Desert Visitor Center** provides information, book sales, exhibits, and restrooms. A free orientation film is shown every half hour. A restaurant, gift shop, gas station, and convenience store are adjacent to the visitor center.

**Tiponi, Tawa, Kachina, Chinde, Pintado, Nizhoni, Whipple, And Lacey Points** are overlooks providing panoramic views of the Painted Desert.

**Painted Desert Inn National Historic Landmark**, located at **Kachina Point**, once served as a respite for travelers along historic Route 66. From the inn, you may view distant vistas and exhibits while touring this historic building.

**Puerco Pueblo**, a large archeological site, was occupied over 600 years ago. The pueblo has been partially excavated and a few of the room foundations stabilized.

**Newspaper Rock** has more than 650 petroglyphs adorning boulders that tumbled to rest below the cliffs. Due to defacement of these petroglyphs and unstable hillsides, the area is closed below the cliff. Free spotting scopes are available at the viewpoint.

**Blue Mesa** is an ideal setting to see the effect of erosion on badland hills. The one-way spur road leads to the mesa top, a four-mile round trip from the main park road.

**Jasper Forest** showcases bluffs which once encased the petrified wood now strewn across the valley floor.

**Crystal Forest, Long Logs, Agate House, and Giant Logs** are all trails that feature the many wonders of Petrified Forest. Refer to the Trails section for more information.

**Rainbow Forest Museum** provides exhibits of petrified wood, fossils, and displays of prehistoric animals as well as information, book sales, and restrooms. A free orientation film is shown every half hour. A gift shop and a seasonal snack bar are located nearby.



Ranger guided program at Giant Logs  
6 Newspaper

## Ranger Guided Programs

Ranger programs are available throughout the year. You probably won't be surprised that there are more programs available during our busy summer. There are three main programs:

**Triassic Park:** Discover the landscape of long ago and learn about the Late Triassic Epoch. Meet in the Rainbow Forest Museum sunroom. This will be either an easy Ranger-guided walk (with a few stairs) or a talk, depending on weather and interest.

**Painted Desert Inn National Historic Landmark:** Step back in time to learn about the inn's captivating history and architecture. Meet at the Painted Desert Inn National Historic Landmark for this easy Ranger-guided tour.

**Puerco Pueblo:** Explore this ancestral Puebloan village and discover petroglyphs along the trail. Meet at the Puerco Pueblo parking lot trailhead for this easy Ranger-guided walk.

Additional programs, activities, and events occur throughout the year. Call 928-524-6228 for more information, check at one of the visitor facilities when you come to the park, or visit <http://www.nps.gov/pefo>.



Exploring Petrified Forest

## A Timeless Treasure Trove

Imagine a place that protects pieces of natural and cultural history, from artifacts centuries old to fossils millions of years old. This place is the Petrified Forest National Park Museum Collection. More than 200,000 objects are housed in the collection, including archeological objects systematically recovered from hundreds of sites within the park's boundaries and associated field records; ethnological objects related to Hopi and Navajo cultures; Triassic invertebrate and vertebrate fossils; Park Photographic Archive; representative geological specimens collected from the park; and the biological collection (both plants and animals). The collection provides a window of discovery into the Late Triassic Epoch of our world's natural history—its flora, fauna, and geology, as well as millennia of human use and occupation, and the current natural environment—an aid to understanding and education among researchers, park staff, and park visitors. Explore some of the objects in the collection at the Rainbow Forest Museum and at <http://www.museum.nps.gov/pefo/page.htm>.



Petrified bark—a very rare specimen in the collection

## What's Over There?

Paula wanted to find a quiet spot all her own to meditate. She saw the perfect place. It was just a dozen yards off-trail to the top of a sandstone outcrop, and she could take a picture with that really long petrified log in the foreground. Brian saw footprints an hour later, after Paula had gone, and wondered what there was to see from that vantage point. Kim did the same. By noon, 30 people had followed in Paula's footsteps. By the next day, over a hundred. The trail Paula accidentally cleared divided in half a large patch of microbiotic soil, a living crust that protects the precious topsoil. She had carved an eight-lane freeway through that miniature world and opened it to erosion. The nutrients and moisture retention of that delicate system was gone and the animals and plants that depended on it would suffer. Paula's meditation spot became a place of quiet destruction.

We each have made an effort to come and experience this place. It also takes the effort of every visitor to protect it. "Taking only pictures, leaving only footprints" is not enough in this landscape. Where there is a designated trail, regulations require that you leave your footprints only on the trail. In the Wilderness Areas, watch where you step and follow washes when possible. Together we can protect this fragile and fascinating region.

# Wilderness and Camping at Petrified Forest National Park



North unit of the Petrified Forest National Wilderness Area

## Wilderness Hiking and Camping

The Petrified Forest National Wilderness Area was one of the first two designated in the National Park System. What is wilderness? The concept is different for everyone. Artists may see shapes and color; backpackers anticipate an adventure; legislators define it in legal terms. In general, wilderness is a place where the human imprint is minimal. In 1964 Congress passed the Wilderness Act, restricting grazing, mining, timber cutting and mechanized vehicles in these areas. Wilderness Areas are protected and valued for their ecological, historical, scientific and experiential resources. The Petrified Forest National Wilderness Area consists of over 50,000 acres of mesas, buttes, badlands, and scattered areas of grasslands.

No permits are required for day hiking. Wilderness hiking offers the opportunity to visit sites seldom seen by most park visitors. There are no developed trails; hiking is cross-country. Clear air, sparse vegetation, and a variety of landmarks combine to make hiking conditions excellent. Be prepared! There is no water and little shade in the backcountry. A gallon of water per person per day is recommended in summer months. Day hikers must be back at their vehicles by the park's posted closing time.

There are two units in the Petrified Forest National Wilderness Area. The **Painted Desert unit** is at the north end of the park, accessed from Kachina Point. The trailhead can be found on the northwest side of the Painted Desert Inn National Historic Landmark. Campers must hike at least one linear mile from the trailhead at Kachina Point or north of the Lithodendron Wash. The **Rainbow Forest unit** is at the south end of the park,

accessed from the parking area at mile marker 24 south of the Flattops. In the Rainbow Forest unit, campers must hike at least a half mile southeast of the main park road near the Flattops. There are no maintained campsites in the wilderness area.

Horseback riding and pack animals are permitted in the wilderness. All information and regulations contained in this article pertain to horse use in the wilderness.

A permit for backcountry camping may be obtained for a maximum of 14 consecutive days. The campsite must be relocated every three days to minimize impacts on the resource. Camping is allowed for not more than a total of 30 days in any calendar year park-wide. All permit applicants must read and sign the permit conditions sheet before being issued a permit.

### Regulations:

- Collection of plants, rocks, petrified wood, fossils, archeological objects or other materials is illegal everywhere in the park.
- No bicycles, motorized vehicles, firearms, or pets are allowed in the wilderness area.
- Camping in the park without a permit is prohibited.
- Group size for staying in the wilderness area overnight is limited to eight (8) persons per group. Use of campsites is limited to eight (8) persons.
- No wood or charcoal fires are allowed. The use of solar, propane/butane, and white gas fueled stoves is allowed in wilderness camping areas. Charcoal fires are not allowed in wilderness camping areas.
- Bury human waste. Pack out your trash.



South unit of the Petrified Forest National Wilderness Area

## Horseback Riding and Pack Animals

The park offers diverse riding and packing opportunities in the Petrified Forest National Wilderness Area. Animals designated as pack animals are horses, burros, mules, and llamas.

- When using parking areas, please leave room for other visitors to park.
- Park your trailer so that it does not interfere with vehicle traffic flow.
- Follow all park regulations.
- Clean up after horses in improved areas (parking lots, paved areas, etc).
- All food and water must be packed in. Feed must be certified weed-free.
- Do not leave horses unattended, to prevent encounters with other park visitors. Free-trailing or loose-herding is not permitted. Horses are prohibited on paved trails, paved roads and around visitor use areas.
- Water for horses may be obtained at the service station by the Painted Desert Visitor Center. No water is available in the wilderness area.
- Animals are limited to six (6) per group. No pets are allowed.

The trail down to the northern unit of the wilderness area can be very steep with an unstable surface. While there are no maintained trails in the wilderness areas, there is very little grade change and riding is easy. Petrified wood is sharp and can cause damage to stock hooves. Take care of yourself, your stock, and your park.



### Did You Know?

Many of the park's animals are nocturnal: they only come out at night. Some visitors will see few animals except for ravens. However, hundreds of species of animals make their home here, including jackrabbits, golden eagles, red-spotted toads, and tarantulas.

# Special Events and Activities



Navajo County Fair



Cultural demonstrations: Hopi pottery firing

## Special Event Calendar

- February *National Invasive Weed Week*, Last week in February
- March *Arizona Archaeology and Heritage Awareness Month*
- April *National Park Week*, Last full week in April
- May *National Wildflower Week*, First week in May  
*International Migratory Bird Day*, Second Saturday in May  
*Memorial Day*, observed last Monday of May
- Summer *Cultural Demonstrators*: Most Saturdays through the summer, visit with silversmiths, dancers, weavers and other demonstrators, many with items for sale.
- June *Summer Solstice*, June 20/21—for about a two week period around the summer solstice, join rangers each morning to watch sunlight and shadow interact with a petroglyph at Puerco Pueblo.
- August *Founders Day*: anniversary of the establishment of the National Park Service, August 25
- September *National Public Lands Day*: Last Saturday in September  
*Navajo County Fair*: county fairgrounds in Holbrook.
- October *Earth Science Week*: this international event was started to help the public gain a better understanding and appreciation for Earth Sciences and to encourage stewardship of the Earth.  
*Ghosts of the Past*: weekend evening close to Halloween, visit the ghosts of the Petrified Forest for this evening ranger tour.

November *National American Indian Heritage Month*

*Veterans Day*, November 11

December *Petrified Forest's Anniversary*, December 8-9

Details, such as time and place, will be posted on the park website <http://www.nps.gov/pefo> and at the visitor facilities closer to the event date.



Archaeology Expo



Off the Beaten Path programs: find fossils with the park paleontologist

## Science and Education Center

Petrified Forest is a living laboratory for many fields. The Petrified Forest National Park Science and Education Center offers a chance for park visitors, employees, and researchers to get together—a time for better understanding and appreciation of the natural and cultural resources of the park and region. Lectures are held on a regular basis. Topics include geology, paleontology, archeology, and biology. Join us to discover Petrified Forest's many facets! For more information contact the park, stop by the visitor facilities, or visit <http://www.nps.gov/pefo>.



Artist Shonto Begay at the Painted Desert Inn

## Artist-In-Residence Program

Artists have influenced the formation, expansion, and direction of our national parks. The work of many artists has also assisted in providing perspectives at parks, creating meaningful experiences for visitors. Artists document national parks through diverse approaches and techniques, including painting, poetry, photography, prose, and music, reflecting the multi-faceted qualities of parks, bringing enjoyment and a deeper understanding of the parks.

Founded in 2006 as part of the park's Centennial Celebration, Petrified Forest National Park's Artist-In-Residence Program

continues this tradition. The program offers visual, performing, and literary artists the opportunity to pursue their artistic discipline while being surrounded by Petrified Forest's inspiring landscape. Selected artists stay in the park for two-weeks during April through October. Artists are prepared to work in this sometimes demanding environment.

Participating artists are asked to donate an original piece of artwork from their residency in Petrified Forest to the park. The artwork will be accessioned into the park's permanent museum collection. Artists will also present two programs to the public during their residency.

Aspire to share your vision of Petrified Forest National Park with the public through the world of art. Work completed under this program contributes to the public understanding and appreciation of our national parks and create a legacy preserved for future generations.

The application form and more details about the program can be found at <http://www.nps.gov/pefo/parknews/artist-in-residence.htm>. For more information call 928-524-6228 or e-mail [PEFO\\_Superintendent@nps.gov](mailto:PEFO_Superintendent@nps.gov)



Photographer Fred Hirschmann with visitors in the field



Artist Gloria Giffords giving a presentation

# Education, Junior Rangers, and Volunteers

## Junior Ranger Program

Junior Rangers take time to explore, learn and protect their national parks. Kids of any age who complete the required activities in the Petrified Forest Junior Ranger Activity Booklet are eligible for a Junior Park Ranger Badge and Patch. Stop at the Painted Desert Visitor Center, Painted Desert Inn National Historic Landmark, or Rainbow Forest Museum to request an activity booklet.

We invite YOU to become a member of this very special group of people. Help protect our national parks and join the team. Become a Petrified Forest National Park Junior Ranger today!



Volunteers help in the visitor facilities and out in the park



Junior Rangers are sworn in by one of the rangers

## Education Programs

Educators! Bring your students to Petrified Forest National Park for a ranger-led program that will meet your curriculum needs. The park has endeavored to provide motivating educational opportunities for students while meeting several Arizona Academic Standards. We are always delighted to have classes visit the park with the desire to learn more about this extraordinary place.

Petrified Forest offers:

- Developed Curriculum-based programs on paleontology and archeology,
- Other ranger programs designed to meet specific curriculum needs,
- In-class programs, when a ranger brings the park to your students.

For information write to: Education Specialist, Petrified Forest National Park, P.O. Box 2217, Petrified Forest, AZ 86028  
Call the Education Specialist at 928-524-6228  
E-mail: [PEFO\\_Superintendent@nps.gov](mailto:PEFO_Superintendent@nps.gov)



Students explore science through curriculum-based programs at Petrified Forest

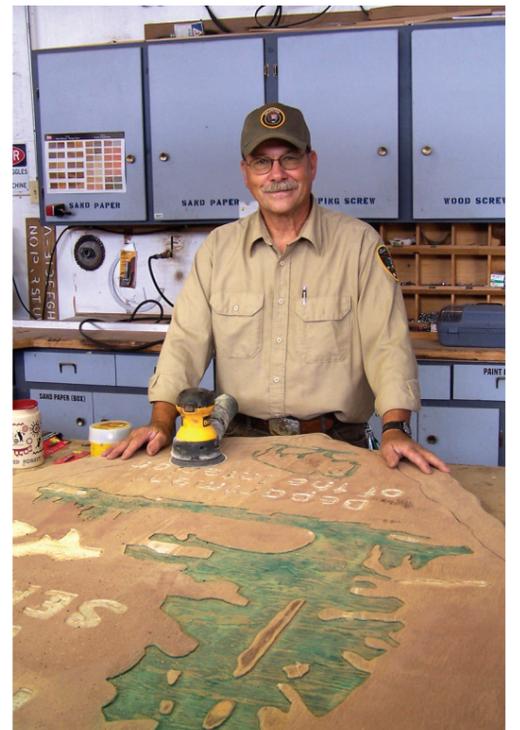
## Volunteers—Very Important People

Have you read the headlines lately? *Vandals Destroy Petroglyphs—Fossils are Stolen From Park—Petrified Wood Theft Continues.* This is what is happening on our public lands, lands set aside for everyone to enjoy. How can an interested person help deter the increasing damage to our cherished lands? Become a volunteer at Petrified Forest National Park!

Volunteers receive training about the park, including the fascinating scientific discoveries being made here and the problems in protecting our park. Volunteers may work directly with the public at visitor centers, rove trails, aid researchers, or delve into the park collection with our museum curator. Volunteers are an important part of the National Park Service team. Volunteers make the visitor experience in parks more enjoyable.

Our volunteers are, without a doubt, Very Important People! Last year, nearly 150,000 volunteers donated 5 million hours of their time to national parks. The national parks belong to all of us and they need our protection. No one else will do it for us. If you care, please join us as a VIP, Volunteer-In-Park. Learn something wonderful, meet new people, and make a difference.

For information write to: Volunteer Coordinator, Petrified Forest National Park, P.O. Box 2217, Petrified Forest, AZ 86028  
Call the Volunteer Coordinator at 928-524-6228  
E-mail: [PEFO\\_Superintendent@nps.gov](mailto:PEFO_Superintendent@nps.gov)



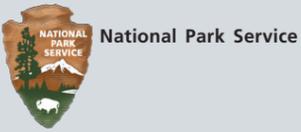
Volunteers help behind the scenes to make the park more enjoyable



### Did You Know?

Unlike hieroglyphs, petroglyphs don't represent sounds or letters. They represent ideas. Researchers theorize that some petroglyphs could be ceremonial, territorial, or commemorative. People of Zuni and Hopi recognize many of the petroglyphs in the park.

# Area Information, Climate, Museum Association, and Park Fees



## Petrified Forest National Park

**Mailing Address**  
Petrified Forest National Park  
P.O. Box 2217  
Petrified Forest, AZ 86028

**E-mail**  
[PEFO\\_Superintendent@nps.gov](mailto:PEFO_Superintendent@nps.gov)

**Fax Number**  
928-524-3567

**Park Headquarters**  
928-524-6228

**Website**  
<http://www.nps.gov/pefo>

The National Park Service cares for special places saved by the American people so that all may experience our heritage.



Petrified logs in the snow.

| Climatic Averages for Petrified Forest<br>(based on a fifty year period) |                            |                            |                                      |  |
|--|----------------------------|----------------------------|--------------------------------------|--|
| Month  | Average Max Temperature °F | Average Min Temperature °F | Average Daily Precipitation (inches) | Average Monthly Precipitation (inches) |
| Jan  | 47.5                       | 21                         | 0.018                                | 0.571                                  |
| Feb  | 54                         | 25                         | 0.018                                | 0.521                                  |
| March  | 61                         | 29                         | 0.0195                               | 0.606                                  |
| April  | 70                         | 35                         | 0.012                                | 0.371                                  |
| May  | 79                         | 43                         | 0.014                                | 0.446                                  |
| June   | 89                         | 52                         | 0.012                                | 0.348                                  |
| July   | 92                         | 60                         | 0.042                                | 1.311                                  |
| Aug  | 89                         | 59                         | 0.056                                | 1.744                                  |
| Sept   | 83.5                       | 52                         | 0.041                                | 1.227                                  |
| Oct  | 72                         | 40                         | 0.032                                | 1.001                                  |
| Nov  | 58.5                       | 37                         | 0.022                                | 0.672                                  |
| Dec  | 48                         | 21                         | 0.022                                | 0.679                                  |
| Total  | -                          | -                          | -                                    | 9.497                                  |

## Area Information

### Hours of Operation

Summer hours are 7 am to 7 pm MST. Winter hours are 8 am to 5 pm MST. There are transitional hours of operation during spring and fall.

### Lodging and Camping

The park does not provide any lodging facilities and camping is limited to backpacking into the Wilderness Area. Nearby communities, national forests, and state parks have a variety of motels and camping offerings. For information call:

Gallup Chamber of Commerce  
<http://www.thegallupchamber.com/>  
505-722-2228

Winslow Chamber of Commerce  
<http://winslowarizona.org/>  
928-289-2434

Holbrook Chamber of Commerce  
<http://www.ci.holbrook.az.us/>  
1-800-524-2459

For road conditions call:  
Arizona 1-888-411-7623 (or 511 in Arizona)  
<http://www.az511.com>

New Mexico 1-800-432-4269  
<http://www.nmroads.com/>

## Fees and Passes

### Petrified Forest Entrance Fees

\$20 annual pass to Petrified Forest  
\$10 per private vehicle for a seven-day pass  
\$5 per person: bicycles, pedestrians, motorcycle, and non-commercial bus passenger  
*Fees subject to change at any time.*



### National Parks and Federal Recreational Lands Pass Program

Passes admit the pass holder/s and passengers in a non-commercial vehicle at per vehicle fee areas, not to exceed 4 adults at per person fee areas. Children under 16 are free. Both the Senior and Access Passes provide a 50% discount for some fees, such as camping, swimming, boat launch, and specialized interpretive services.

**Annual Pass** – \$80: can be obtained in person at the park, by calling 1-888-ASK USGS, Ext. 1, or via the Internet at <http://store.usgs.gov/pass>.

**Senior Pass**—\$10: lifetime for U.S. citizens or permanent residents age 62 or over. The pass can only be obtained in person at the park.

**Access Pass**—Free: lifetime for U.S. citizens or permanent residents with permanent disabilities. Acceptable documentation is required to obtain the pass. The pass can only be obtained in person at the park.

**Volunteer Pass**—Free: for volunteers acquiring 500 service hours on a cumulative basis.  
10 Newspaper

## Petrified Forest Museum Association

*Promoting Interpretive and Educational Programs  
Promoting Scientific Research and Resource Understanding  
Producing Park-Specific Publications and Materials  
Preparing the park for Future Generations*

Become a Member of the Petrified Forest Museum Association and help support your park!

**Membership Benefits**  
An initial 20% discount on anything purchased along with the membership

15% discount at all Petrified Forest Museum Association bookstores

10-20% discount at other national park bookstores around the country

### Added Benefits

**Individual members** receive *Petrified Forest: a Story in Stone*.

**Teacher members** receive *Petrified Forest: a Story in Stone* and a 25% discount at the bookstores.

**Family members** also receive our film *Timeless Impressions*.

**Supporting members** receive the premium items of the previous membership levels, plus the PFMA publication *Tapamveni: Rock Art of the Southwest*.

**Contributing members** receive the premium items of the previous membership levels, plus three PFMA puzzles.

**Steward members** receive the premium items of the previous membership levels, plus additional premium items.

**Lifetime members** receive all current PFMA publications and all new PFMA publications annually.

**Benefactor members** receive all the benefits of the lifetime membership plus an appreciation plaque for their contribution to our efforts at Petrified Forest National Park.

Contact: 928-524-6228 x239  
Email: [pfmabookstore@cybertrails.com](mailto:pfmabookstore@cybertrails.com)  
Website: <http://www.cybertrails.com/~pfma/>



|  |   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
|--|---|------------|---------|---------|---------|--------|---------|------------|---------|--------------|----------|---------|----------|----------|-----------|------------|-----------|
| Name _____   |   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| Address _____  |   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| City _____ State _____ Zip _____   |   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| Credit Card# _____ Expiration _____  |   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| Phone (____) _____   |   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| Mail To:<br>Petrified Forest<br>Museum Association<br>Park Rd. 1 - P.O. Box 2277<br>Petrified Forest, AZ 86028 | <table border="1"> <tr> <td>Individual</td> <td>\$25.00</td> </tr> <tr> <td>Teacher</td> <td>\$25.00</td> </tr> <tr> <td>Family</td> <td>\$35.00</td> </tr> <tr> <td>Supporting</td> <td>\$50.00</td> </tr> <tr> <td>Contributing</td> <td>\$100.00</td> </tr> <tr> <td>Steward</td> <td>\$250.00</td> </tr> <tr> <td>Lifetime</td> <td>\$1000.00</td> </tr> <tr> <td>Benefactor</td> <td>\$5000.00</td> </tr> </table> | Individual | \$25.00 | Teacher | \$25.00 | Family | \$35.00 | Supporting | \$50.00 | Contributing | \$100.00 | Steward | \$250.00 | Lifetime | \$1000.00 | Benefactor | \$5000.00 |
| Individual   | \$25.00   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| Teacher  | \$25.00   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| Family   | \$35.00   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
| Supporting   | \$50.00   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |
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| Benefactor   | \$5000.00   |            |         |         |         |        |         |            |         |              |          |         |          |          |           |            |           |

# Environment at Petrified Forest National Park

## The Raven's Sweet Song

*Did ever raven sing so like a lark That gives sweet tidings of the sun's uprise?*

~~William Shakespeare,  
*Titus Andronicus*

Perhaps ravens do not have the sweetest song, but these confident birds do have one of the most diverse vocabularies in the North American bird world. Researchers have recognized the diversity and complexity of raven "language" including the interesting fact that raven's may have a regional "accent".

Individuals also seem to have their own choice of sounds representing meaning—one bird's "quork" may be another bird's "tock".



One of the most common birds seen in Petrified Forest National Park, the ravens stalk visitors at overlooks and trailheads as if to excise a food tax. Do not fall prey to their charms! Ravens may have the knack of coercion, but they have an important job in the park: eating carrion among other choice items.

Ravens are large birds, standing an average of two feet tall with a wingspan up to four and a half feet. Not only impressive in size, ravens sport deep black feathers with a metallic sheen of purple, violet, blue, even green, depending on the light source. As they croak and chortle, ravens seem to have a fluffy throat due to the spade-shaped feathers. The tail is wedge-shaped in flight—distinguishing ravens from crows (as well as their more solitary nature). As the raven marches up to you, the heavy beak will no doubt impress. Be warned! The raven knows how to use it!

While rodents, insects, seeds, fruit, eggs, and practically anything else make up the ravens' diet, these opportunistic birds eat a great deal of carrion, an important niche in the ecosystem. Particularly in the winter, they can be seen cleaning up along the freeway and park road. Unfortunately, people food can distract ravens from their natural diet, leaving them sick or starving in the slow season. Besides, you've seen that heavy bill! Would you want to endanger yourself by trying to feed such a bird?

While not joining great flocks like crows, ravens are social within small family groups. Mates and relatives will cozy up next to one another. During winter, ravens in the park have been seen exchanging gifts of snow. Best left to their natural behavior, ravens can truly be a joy to watch. Strong fliers, ravens soar through the air, sometimes in pairs that play on the air. Like stunt pilots, they will perform barrel-rolls and false dives. Watch for these beautiful, intelligent residents of Petrified Forest National Park.



Snowmelt fills one of the park's many washes.

*I have need of the sky,  
I have business with the grass;  
I will up and get me away where the hawk is wheeling  
Lone and high,  
And the slow clouds go by.*

~~ Richard Hovey (1864-1900), *I have Need of the Sky*



## When is a Desert?

Deserts can be difficult to define—sometimes they are more a state of mind. As explorers and pioneers broached the interior of North America, they called the vast unknown the Great American Desert, what is now called the Midwest and high plains, not what most refer to as a desert. Historically, *desert* has been a term used for something stark and not useful to humans, a place where it is difficult to live and/or grow crops. Other words applied to such places are *barrens*, *badlands*, *malpais*, and so on. Today, the term *desert* is usually applied to specific ecosystems.

About one-third of the Earth's land surface is considered some type of desert. As an environment, deserts are considered arid lands with little rainfall, low humidity, and sparse flora and fauna. The connotation of deserts for human-use has changed. Deserts have become desirable for habitation and recreation. Where once pioneers cursed and died, hikers revel in the stark beauty and silence. Where early inhabitants seemed to scratch for a living, ritzy subdivisions are changing the landscape. Humans grow citrus, dates, cotton, nuts, and many other crops in desert environments around the world.

Heat does not make a desert, nor do cactuses or sand. Sand can be found in temperate woodland streams and along tropical beaches. Cactuses are found throughout the Americas, including unexpected places like Minnesota and Ontario. Deserts can be hot like the Sahara or cold like the Gobi. There are nearly as many definitions of *desert* as there are deserts in the world. Scientific classifications of deserts rely on combinations of number of days of rainfall during a year, annual rainfall, temperature, humidity, vegetation, geography, and global circulation patterns.

Based on Peveril Meigs' desert categories, a widely accepted system since the 1950s, extremely arid lands have at least 12 consecutive months without rainfall (such as the Atacama Desert in South America), arid lands have less than 250 millimeters (9.8") of annual rainfall (like the Sonoran Desert of the United States and Mexico), and semiarid lands have a mean annual precipitation of between 250 and 500 mm (9.8" to 19.7"). Arid and extremely arid land are deserts, and semiarid grasslands generally are referred to as steppes—the environment in which Petrified Forest National Park is located.

Petrified Forest National Park is part of the Colorado Plateau, parts of which are sometimes called high desert. This reference reminds us of the time that people called places deserts in a cultural sense, many visitors finding the Colorado Plateau beautiful, but relatively uninhabitable—more familiar to temperate or boreal woodlands or the urban coasts. High desert is sort of a nickname, referring to a region that is actually a very complex quilt of semi-arid grassland and steppe, pinyon-juniper woodlands, and great stretches of rock and badlands. When is a desert? As you can see, sometimes it depends on the beholder.

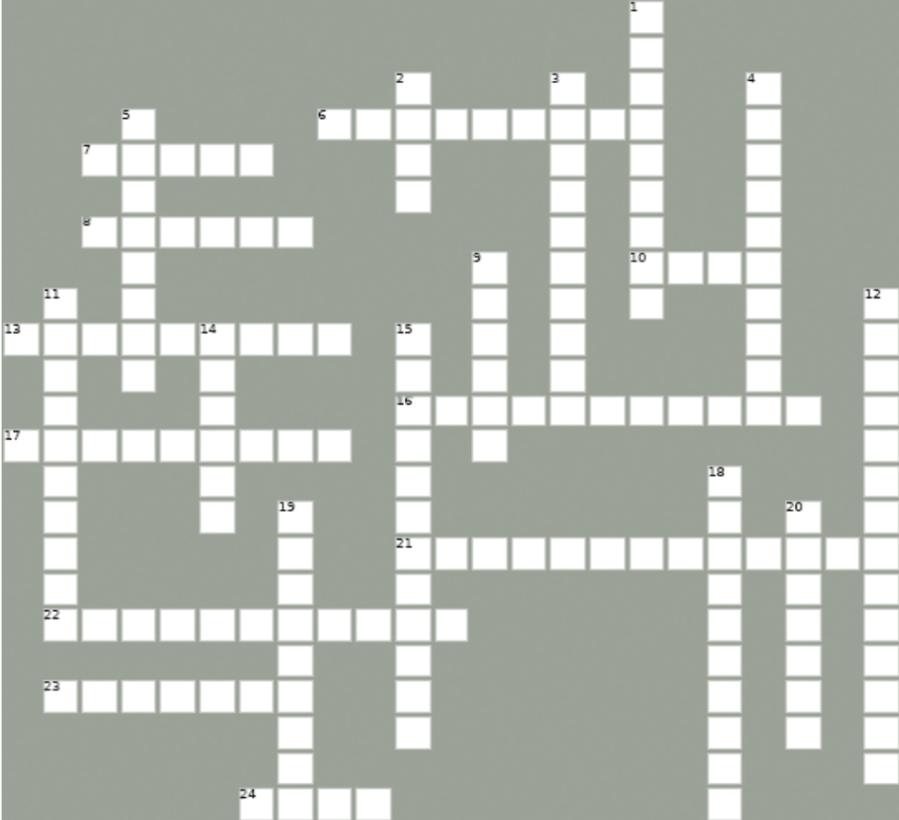


Rabbit brush, snakeweed, and pale blue trumpet punctuate the blooming grassland

*To make a prairie it takes a clover and one bee—  
And revery—  
The revery will do  
If the bees are few.*

~~Emily Dickinson, *Complete Poems of Emily Dickinson*, 1955

# Environment at Petrified Forest National Park



## Crossword Puzzle Clues

### Across

- 6 The cream-colored flowers of this large shrub are very fragrant.
- 7 This black bird is one of the most commonly seen animals in the park.
- 8 This type of semi-arid grassland features many shrubs as well as grass.
- 10 This mainly falls in winter.
- 13 What is the ecosystem of Petrified Forest?
- 16 Many people are afraid of this shy, venomous reptile.
- 17 Sometimes incorrectly called antelope, this deer-like animal is the fastest land mammal in the Western Hemisphere.
- 21 This amphibian survives during harsh times by burrowing into the mud and hibernating.
- 22 This is one of the largest brown hawks.
- 23 This coniferous tree has scale-like leaves and berry-like cones.
- 24 This mainly falls in late summer.

### Down

- 1 One of the most common shrubs in the park is best known for its aroma, particularly after a rain.
- 2 This often is very high in the spring, sometimes causing dust storms.
- 3 This common rabbit found in the park is best known for its fluffy white tail.
- 4 This native bird, with a yellowish belly, often sits on fence posts to sing its beautiful song.
- 5 This is one of the most common shrubs in the park, known for its papery seeds.
- 9 This wild dog sings at night.
- 11 Considered a keystone animal of grasslands, this little rodent lives in big towns.
- 12 This large, brightly-colored lizard is very territorial.
- 14 Often found as colorful patches or crusts on rocks, these living colonies include algae and fungi.
- 15 This tulip-like golden wildflower blooms in the spring in Petrified Forest.
- 18 This large deciduous tree lives along rivers, streams, and washes.
- 19 This type of grass has seed heads that look like eyebrows.
- 20 This is the rainy season in late summer.

## Petrified Forest Environment Puzzles

The natural environment of Petrified Forest is quite diverse and complex. Use this list for both the crossword and the word search puzzles.

- |                 |               |                 |
|-----------------|---------------|-----------------|
| blue grama      | juniper       | rattlesnake     |
| cliffrose       | lichen        | raven           |
| collared lizard | mariposa lily | sagebrush       |
| cottontail      | meadowlark    | saltbush        |
| cottonwood      | monsoon       | snow            |
| coyote          | prairie dog   | spade foot toad |
| golden eagle    | pronghorn     | steppe          |
| grassland       | rain          | wind            |



## Journaling

What did you see today in the park's environment that interested you? Write down your thoughts!

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## Who lives in the park?

Circle the animals that live in Petrified Forest National Park!

