



Bryce Amphitheater from Bryce Point. ©Larry Ulrich

Hoodoos Cast Their Spell

Hoodoo—a pillar of rock, usually of fantastic shape, left by erosion. Hoodoo—to cast a spell. At Bryce Canyon National Park erosion forms an array of fantastic shapes we know as hoodoos. Surrounded by the beauty of southern Utah, hoodoos cast their spell on all who visit. Geologists say that 10 million years ago forces within the Earth created and then moved the massive blocks we know as the Table Cliffs and Paunsaugunt plateaus. Rock layers on the Table Cliffs now tower 2,000 feet above their corresponding layers on the Paunsaugunt. Ancient rivers carved the tops and exposed the edges of these blocks, removing some layers and sculpting formations in others. The Paria Valley was created and later widened between the plateaus. The Paria River and its tributaries still carve the plateau edges. Carrying dirt and gravel, rushing waters gully the edges and steep slopes of the Paunsaugunt Plateau on which lies the national park. With time, tall and thin ridges called fins emerge. Fins then erode into pinnacles and spires called hoodoos, that, weakening and falling, add their bright colors to the hills below.

People have lived in the Colorado Plateau region for about 12,000 years, but only random fragments of worked stone reveal

their presence near Bryce Canyon. Artifacts add details of human use at lower elevations beyond the park boundary. Ancestral Puebloan and Fremont cultural influences found nearby are studied by archeologists. Paiutes, who lived in this region when settlers and other people from the eastern states came to southern Utah, accounted for the hoodoos as the “Legend People” whom Coyote had turned to stone.

Capt. Clarence E. Dutton and John Wesley Powell explored this area in the 1870s and gave it many place names. Dutton’s report gave the name Pink Cliffs to the Claron Formation. Names from the Paiute are Paunsaugunt, place or home of the beavers; Paria, muddy water or elk water; Panguitch, water or fish; and Yovimpa, point of pines. Paiutes were displaced by emissaries of the Church of Jesus Christ of Latter-day Saints who developed many small communities in Utah. Ebenezer Bryce did such work in southwestern Utah and northern Arizona. In 1875 Bryce came to the Paria Valley to live and harvest plateau timber. Neighbors called the canyon behind his home Bryce’s Canyon. Soon after 1900, people were coming to see the colorful geologic sights, and the first accommodations

Utah prairie dogs live only in southwestern Utah. They are listed as a threatened species under the 1973 Endangered Species Act. They live in the park’s meadows and are members of the rodent family.

They require vegetation sparse enough to see through and low enough to see over. They eat moist and nutritious grasses and grass-like forbs. Please respect their wildness. Do not try to get close to them or to any other wild animals in the park.



©Margaret Littlejohn

were built along the Paunsaugunt Plateau rim above Bryce’s Canyon. By 1920 people were trying to protect the canyon’s scenic wonders. In 1923 President Warren G. Harding proclaimed part of the area as Bryce Canyon National Monument under the Powell (now the Dixie) National Forest. In 1924 legislation was passed to establish the area as Utah National Park, but the provisions of the legislation were not met until 1928. Legislation passed that year changed the name of the new park to Bryce Canyon National Park.

Each year more than 1.7 million people visit the park from all over the world and take delight in the sights, which are as varied as the hoodoo’s shapes and colors. Open all year, the park offers recreational opportunities in each season. Hiking, sight-seeing, and photography are popular summer activities. Spring and fall months offer greater solitude. Winter quiet combines with the region’s best air quality for unparalleled views and serenity. In all seasons the fantastic shapes and colors cast their spell and remind us how important it is to protect places like Bryce Canyon National Park.



Horseback riding.



Snowpack at Bryce Point.



Paintbrush and balsam-root.



The Sentinel.

Along the plateau rim the geology catches your eye. Nearby forests and meadows stand in striking contrast to the intricately eroded rocks. Pinyon pines and junipers dominate lower elevations. Ponderosa pines yield to spruce, fir, and aspen at higher elevations. Bristlecone pines, the oldest trees in the park, grow on exposed, rocky slopes unsuitable for most trees.



Streams still work at carving the landscape.

Sedimentation

**Ancient Sedimentation**  
Our dynamic planet is constantly being reshaped by dramatic events such as earthquakes, volcanoes, and mudslides. Other changes may go undetected in human lifetimes. Geological time spans or periods cover millions of years. The Cretaceous Period began some 144 million years ago (mya) and lasted until about 65 million years ago. The rock formations you see exposed at Bryce Canyon began to develop during this time. For 60 million years a great seaway extended northwestward into this area. It deposited sediments of varying thickness and composition as it repeatedly

invaded, retreated, and then re-invaded the region. Retreating to the southeast, the seaway left sediments thousands of feet thick. Their remnants form the oldest, lowest, gray-brown rocks at Bryce Canyon.

In the Tertiary Period, between 65 and 40 million years ago, rivers and streams flowing from surrounding highlands deposited iron-rich, limy sediments in an ancient freshwater lake system. The sediments became the reddish-pink rocks that represent the Claron Formation from which the hoodoos are carved and for which the Pink Cliffs were named by Capt. Clarence E. Dutton.



The Cretaceous Seaway (left) stretched northward from the Gulf of Mexico into this region of North America. The sediments that were deposited as the seaway invaded and then retreated became the brown and gray rocks of marine origin now exposed at the park’s lowest elevations and across the Paria Valley.



Sediments originate in debris eroded from the land. Water carries varying sizes of debris or dissolves it chemically. When the water slows or cools, particles settle to the

bottom of the waterway, sorted by their size and weight. Rocks form when the particles are cemented and bonded together.



The hoodoos have been carved from the Claron Formation. Its rock was deposited by the ancient lakes, streams, and rivers over a period of 20 million years (above). Today’s state shapes are shown for reference.

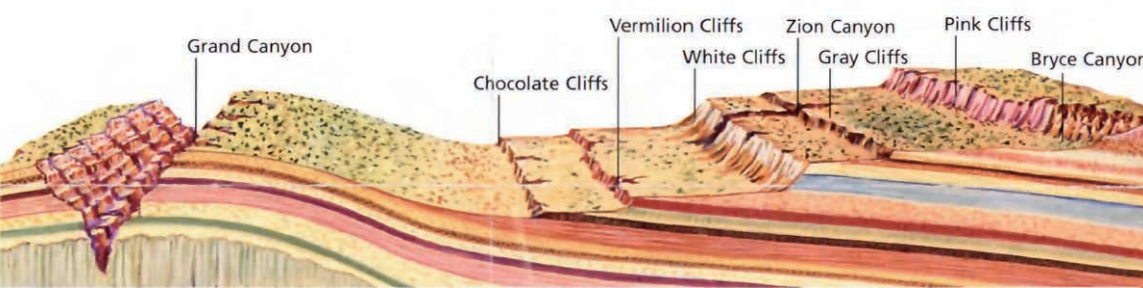
Uplift

**Deformation, Uplift, and the Grand Staircase**  
Horizontal compression related to the formation of the Rocky Mountains deformed these rocks. The volcanic materials from the north and west covered part of the region: black rocks at the mouth of nearby Red Canyon and on the Sevier Plateau—to the north—still protect the softer underlying layers. About 10 million years ago the Earth pulled apart, moving and tilting great blocks along north-south trending fault lines. Layers that were once connected then became displaced vertically by several thousand feet, thereby forming the High Plateaus of Utah.

Older Cretaceous layers now rested side by side with younger Tertiary layers across the fault lines. Streams began to remove the sediments that had been deposited by their ancestors. Working on the weakened edges of the up-thrown blocks, water gradually removed the uppermost Tertiary layers and exposed the Cretaceous rocks once again. At that point these drab marine sediments lay on the surface of the land side by side with the brightly colored rock formed from the deposits of freshwater lakes and streams.

Edges exposed by uplift are susceptible to erosion. In Utah the southern edges of the High

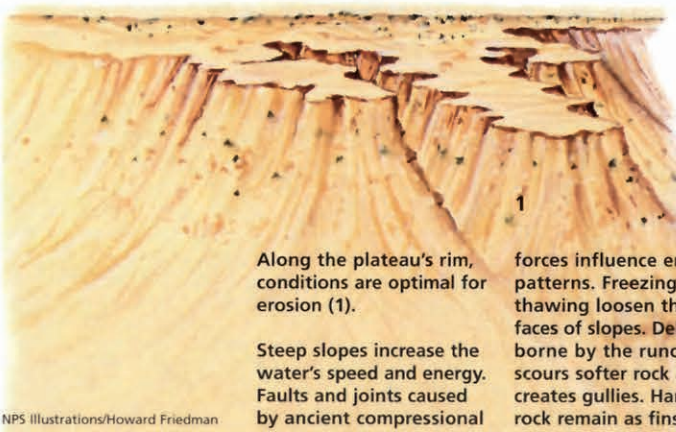
Plateaus have eroded into the cliffs of the Grand Staircase.



On the Colorado Plateau the high elevations and mountains create micro-climates in which forests may grow surrounded by arid lowlands.

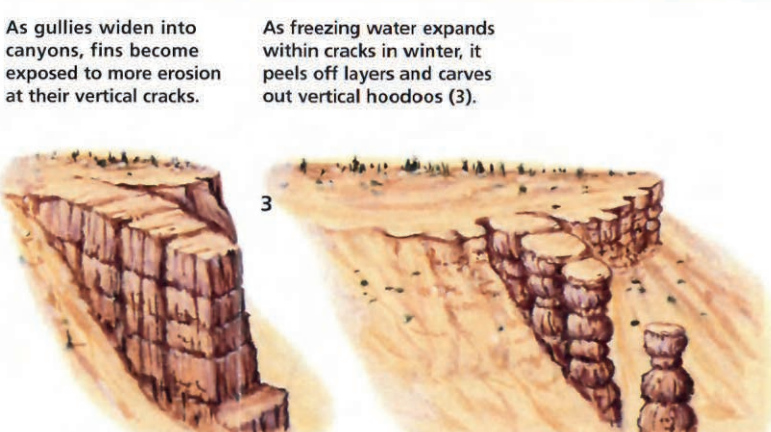
Erosion

**Differential Erosion**  
Water erodes rock mechanically and chemically. Scouring, abrading, and gully erosion occur when fast-moving water scrapes its silt, gravel, and rock debris against firmer bedrock. Slow-moving or standing water enters minute rock pores and dissolves the cements holding the rock together. This leaves loose grains to wash away. Softer Cretaceous rocks were loosened and carried away from the upthrown block by the Paria River. The resulting Paria Valley is carved out of rocks that lie deep beneath the Paunsaugunt Plateau, whose edge now is exposed to erosion.



Along the plateau’s rim, conditions are optimal for erosion (1). Steep slopes increase the water’s speed and energy. Faults and joints caused by ancient compressional

forces influence erosion patterns. Freezing and thawing loosen the surfaces of slopes. Debris borne by the runoff scours softer rock and creates gullies. Harder rock remain as fins (2).



As gullies widen into canyons, fins become exposed to more erosion at their vertical cracks.

As freezing water expands within cracks in winter, it peels off layers and carves out vertical hoodoos (3).



Hoodoos and eroding fins.

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# Exploring Bryce Canyon

## Visiting the Park

Following the plateau rim for much of its 18 miles, the park road and its overlooks offer stunning geological panoramas. Stop first at the visitor center and see a free film, look at exhibits, and browse the books, maps, and publications about the park and this area. Staff can answer questions and help you plan your visit.

Bryce Canyon National Park offers more than driving tours. In summer rangers conduct walks, talks, and campfire programs. Topics range from geology and wildlife to air quality. Some 50 miles of hiking trails offer close encounters with hoodoos. Trails lead down among them from overlooks on the main park road. Take a short walk. You will be surrounded by these unusual rock formations—and greatly rewarded for your effort.

This small map shows details of the developed area inside the matching rectangle on the large map.

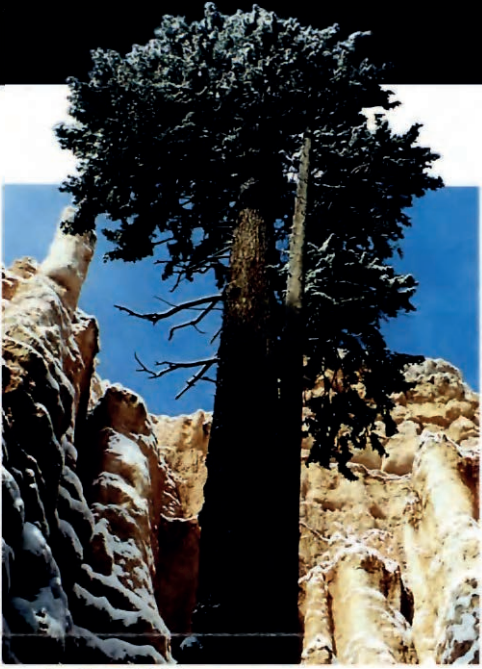
**Visitor Center** The visitor center has information, exhibits, publications, lost-and-found, backcountry permits, and first aid services. It is open daily 8 a.m. to 4:30 p.m.; closed Thanksgiving, December 25, and January 1. Hours are extended in spring, summer, and fall.

**For More Information** Bryce Canyon National Park P.O. Box 17000 Bryce Canyon, UT 84717 www.nps.gov/bcr

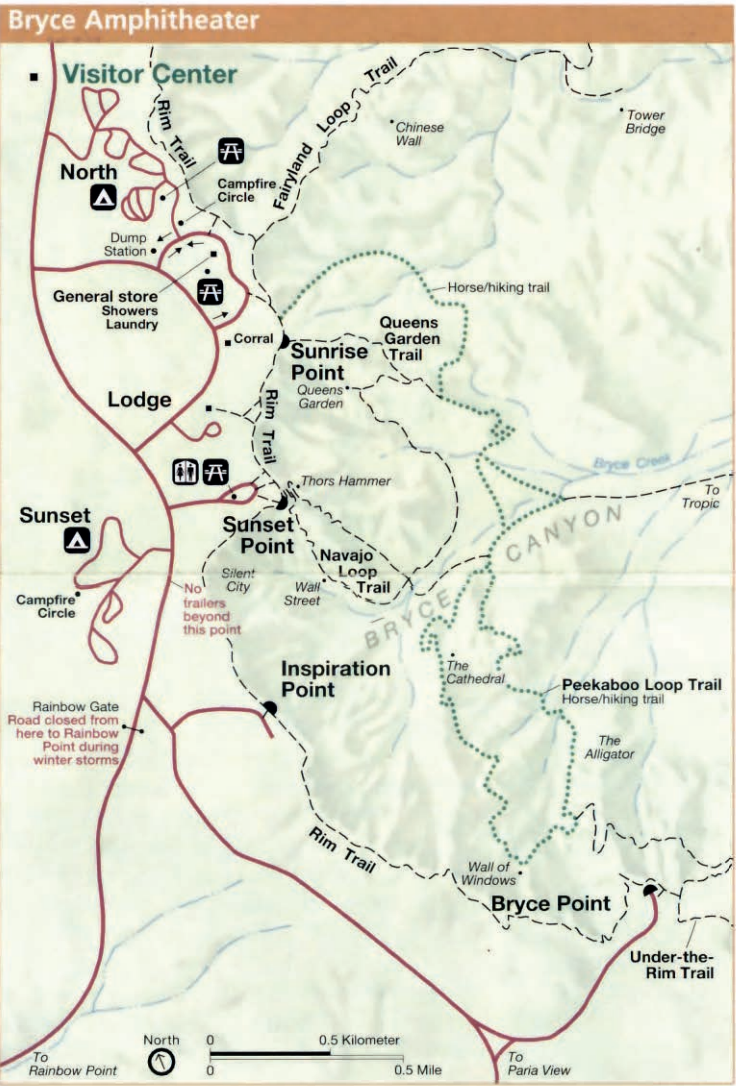
Call 435-834-5322 weekdays 8 a.m. to 4:30 p.m. Mountain Time, except federal holidays.

**Emergencies** Call 911 or the Garfield County Sheriff's office at 435-676-2411.

Bryce Canyon is one of more than 380 parks in the National Park System. To learn about national parks and National Park Service programs in America's communities, visit www.nps.gov.



Douglas fir on Wall Street.



## Enjoying the Park

**Interpretive Programs** Rangers offer interpretive programs during summer: geology talks, campfire programs, and guided walks and hikes. Staffing may also permit off-season programs—check the schedule at the visitor center.

**Lodging and Tours** Bryce Canyon Lodge reflects the rustic style of its period. Local timbers and stone were used to build it in 1924-25. It has a restaurant, gift shop, and post office. Rooms and cabins are available from April to November. Register at the lodge for guided horse rides. For lodging reservations contact: Amfac Parks and Resorts, 14001 East 11th Ave., Suite 600, Aurora, CO 80014-1433; 303-297-2757.

For horseback rides contact: Canyon Trail Rides, P.O. Box 128, Tropic, UT 84776-0128; 435-679-8665.

**General Store** Groceries, quick meals, film, and camper supplies are sold April to mid-October at a store near the Sunrise Point parking area. There are also shower and laundry facilities here.

**Camping** Tent and RV camping at North and Sunset campgrounds is first-come, first-served. A fee is charged. Stays are limited to 14 days per visit, 30 days per year. Sites have picnic tables and fireplaces; water and restrooms are nearby.

One group site is available by advance reservation only. You must bring or buy firewood; gathering wood is prohibited. There are no hookups. A fee-for-use sanitary dump station is provided near North Campground in summer—see small map.

**Accessibility** A paved, fairly level trail between Sunset and Sunrise points, many viewpoints, park buildings, and restrooms are accessible to people in wheelchairs. Accessible campsites are available in the summer months.

**Weather** From April through October, days are pleasant and nights cool. Thunderstorms are com-

mon in summer. Many winter days are bright and crisp, with snow blanketing the plateau like icing on a cake. Most park viewpoints remain open in winter, and lodging is available year-round near the park. Snowshoeing and cross-country skiing are popular in winter.

**Walking and Hiking** The best way to experience both the grandeur and intimacy of Bryce's meadows, forests, and startling erosional features is on foot. Maps and information are available at the visitor center. Carry drinking water, wear sturdy footwear, and remember—your return is uphill!

**Overnight backcountry use requires a \$5 permit available at the visitor center.** Overnight backpacking trips are allowed on the Under-the-Rim and the Riggs Spring Loop trails only.

**Safety** For a safe visit observe these regulations. • Steep drop-offs abound in the park—watch children closely and stay away from cliff edges. • During thunderstorms, stay in your vehicle and avoid isolated trees and open areas. • Unless otherwise posted, the speed limit is 35 mph. All wheeled vehicles, including bicycles, must stay on the paved roads. Be alert for deer and other animals when driving, especially after dark. • Keep wildlife wild! Feeding wildlife harms them and is illegal. • Firearms, hunting, and trapping are prohibited.

• Pets must be kept on a leash and may not be left unattended. They are not allowed on trails, at overlooks, or in public buildings. Nearest kennel services are 80 miles away. • Camp only in designated campgrounds; build fires only in grills; and picnic only at designated picnic areas. • High elevations can be dangerous for those with heart or respiratory ailments. Know your personal limits; don't overexert. • Stay on trails and don't take shortcuts. Yield to all horse traffic. Loose gravel may roll underfoot. Wear hiking shoes or boots giving good ankle support and watch your footing. • All plants, animals, rocks, and cultural objects are protected by federal law.

## Wildlife

Forests and meadows of Bryce Canyon provide the habitat to support diverse animal life, from birds and small mammals to foxes and occasional mountain lions and black bears. Keep a healthy distance from all wildlife; feeding or approaching causes problems for the animals and can be dangerous to you. Be especially careful not to disturb their eating behavior and their natural wariness.

Mule deer are the most common large mammals in the park. Watch for them on summer mornings and evenings in the roadside meadows. Mountain lions prey on mule deer, which is mutually beneficial to their respective population dynamics. Elk and pronghorn antelope, reintroduced near the park, are now sometimes seen in the park.

More than 160 species of birds visit the park each year. Watch swifts and swallows perform their aerobatics along cliff faces while feeding on insects in flight. Most bird species migrate to warmer climates, but jays, ravens, nuthatches, eagles, and owls spend the winter here. In winter, mule deer, mountain lions, and coyotes will migrate to lower elevations. Ground squirrels and marmots pass



A mountain short-horned lizard suns itself on a rock.

the winter in hibernation. While humans have greatly reduced the amount of habitat that is available to wildlife in most parts of the nation, the relative scarcity of water in southern Utah restricts commercial and residential development and helps account for the region's greatly enhanced diversity of wildlife.

## Wildflowers

At these comparatively high elevations, many wildflowers that bloom in spring in other areas may bloom here in late summer. Elevations in Bryce Canyon range from 6,000 to 9,100 feet. Because soil and moisture conditions vary so much, elevation exerts great influence on the more than 400 plant species that grow here.



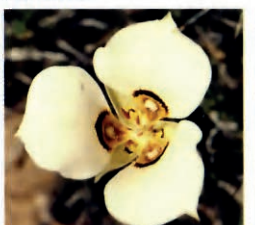
Paintbrush



Rubber rabbitbrush



Nootka rose



Sego lily

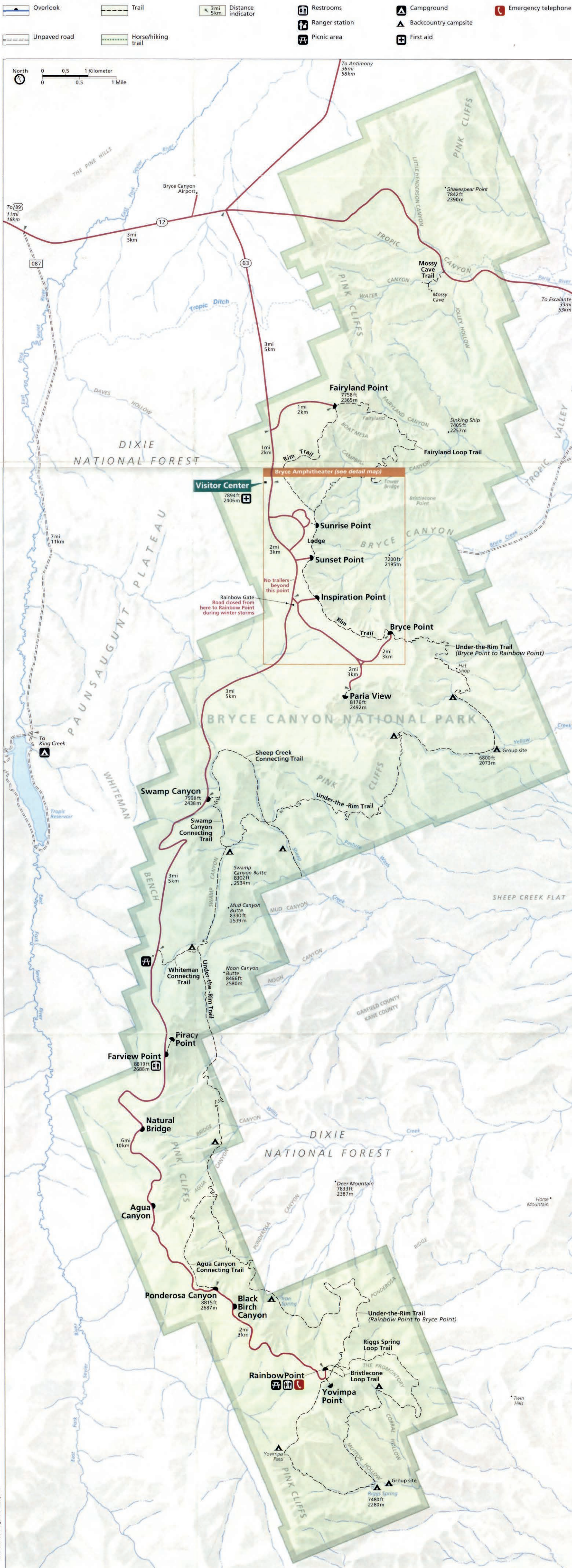


Manzanita



Arrowleaf balsamroot

## Navigating the Park



## Driving Along the Plateau Rim



Rabbitbrush and golden aspen glow in autumn.

The 18-mile-long main park road affords outstanding views of the park and southern Utah scenery. From many overlooks you can see more than 100 miles on a clear day. On crisp winter days, only the curvature of the Earth restricts the view from Rainbow or Yovimpa points. As you drive south from the visitor center to Rainbow Point, you gradually gain 1,200 feet of elevation. Watch how the forests change from ponderosa pine to spruce, fir, and aspen.

**Drivers note:** Unless you are using a campground, you must leave your trailer in the trailer turn-around area in summer, or in the visitor center parking lot in winter.

Vehicles more than 25 feet long are not allowed at Paria View. All overlooks lie east of the road; to avoid crossing oncoming traffic, drive to the park's southern end, then make your stops at the overlooks on your return.

**Fairyland Point** lies one mile off the main road between the entrance station and park boundary, so many visitors miss it. Highlighted by the Sinking Ship, with the Aquarius Plateau and distant Navajo Mountain as its backdrop, this scenery rivals any in the park. In winter the road is not plowed; it is used as a cross-country ski trail.

**Sunrise, Sunset, Inspiration, and Bryce points** encircle Bryce Amphitheater, the biggest natural amphitheater in the park. The Queens Garden Trail starts at Sunrise Point—you can hike from there to either Thors Hammer or Wall Street. Inspiration Point offers the best views of Silent City. Under-the-Rim Trail starts at Bryce Point. Vast panoramas from both points feature the Black Mountains in the northeast and Navajo Mountain in the south.



At Sunset Point you look into Bryce Amphitheater.

**Paria View** looks out over hoodoos in an amphitheater carved by Yellow Creek. The Paria River valley and Table Cliffs Plateau form its backdrop. To the south you can see the White Cliffs, carved out of Navajo Sandstone. In winter the road is not plowed; it is used as a cross-country ski trail.

**Farview Point** offers a panorama including its neighboring plateaus and mountains and, far to the southeast, the Kaibab Plateau of the Grand Canyon's North Rim. Here ponderosa pines begin to give way to Douglas fir and white fir.

**Natural Bridge** was not formed by a stream as true natural bridges are. More accurately an arch, it was carved by both rain and frost erosion acting from the top of the rock.

**Agua Canyon** displays contrasts of light and color that are among the most satisfying in the park. Look for small trees atop a hoodoo known as The Hunter. In the distance the rims of southern plateaus and canyons are visible.

**Ponderosa Canyon** shows off its multicolored hoodoos framed by pine-covered foothills and the Table Cliffs Plateau to the north.



Agua Canyon affords good views of the vertical cliffs that typify the southerly Paunsaugut Plateau.

**Yovimpa and Rainbow points** offer expansive views of southern Utah. On most days you can see Navajo Mountain and the Kaibab Plateau 90 miles away in Arizona. On a very clear day the view extends into New Mexico. The foreground is awash in the colors of long-eroded slopes and remnant hoodoos. The park road ends at Rainbow Point.



Known as The Poodle, this hoodoo northwest of Rainbow Point seems to pose for the camera. Look carefully—it may be difficult to find. Behind it the Pink Cliffs look like a photographer's painted studio backdrop. At Rainbow Point the scenic drive along the canyon rim ends in a road loop that turns back toward the park entrance.

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