

The Hoodoo

National Park Service
U.S. Department of the Interior



Bryce Canyon Map & Hiking Guide

Fall - Winter - Spring 2011 - 2012

Questions?
Bring this
newspaper
to the Visitor
Center!

What's Inside

EMERGENCY INFORMATION PAGE 2

Accessibility	2
Backpacking	5
Geology	3
Hiking Map	5
Information & Services	2
Natural History Association	7
Nearby Attractions	8
Park Map	4
Prescribed Fire	6
Safety	2 & 4
Trail Guide	5
Volunteers, Partners & Donors	7
Weather	6
Wildlife	6

Visitor Center Hours

October 2 - November 5, 2011
8 a.m. - 6 p.m.

November 6, 2011 - March 31, 2012
8 a.m. - 4:30 p.m.

April 1 - May 5, 2012
8 a.m. - 6 p.m.

International editions of *The Hoodoo* are available in Chinese, French, German, Italian, Japanese, Korean, and Spanish - exchange yours at the Visitor Center!

Safety at Bryce Canyon

How many people die at Bryce? Fortunately, Bryce averages less than 1 fatality per year. In order of decreasing abundance, fatalities are caused by:

- Heart attacks
- Falling off cliffs
- Lightning
- Vehicle accidents

Unfortunately, hundreds of serious injuries have also needlessly occurred, some out of ignorance, but too many from ignoring park safety warnings.

Top 10 Causes of Bryce Injuries

#10 Unsafe Driving

- Speeding (limits are 25, 30, 40, 45 mph, or as designated).
- Failure to wear seat belts.
- Passing on a double yellow line.
- Auto vs. animal. Watch for Wildlife!
- Rear-end collisions. Stop in pullouts, never in road.
- Not reducing speed on wet or icy roads.
- Slow down for crosswalks!

#9 Climbing / Sliding down cliffs

The rock at Bryce forms crumbly cliffs and steep gravelly slopes. Hand and toe holds support nothing heavier than chipmunks. Climbing the rocks and sliding on the slopes is illegal and dangerous.

#8 Feeding Animals

Fed animals become aggressive. Even small animals can inflict bites requiring stitches and, worse yet, transmit disease. Watch wildlife from a distance and discourage animals that approach you.

#7 Ignoring Extreme Weather

At Bryce it is possible for the difference between the daily high and low to be as much as 50° F / 27° C! Lightning is a year-round danger -- especially during summer monsoons! Seek the shelter of a building or your vehicle whenever the "flash-bang interval" (time between lightning and thunder) is less than 30 seconds. Do not stand under trees!

#6 Dehydration

Drink 1 quart / liter every 1-2 hours. A well hydrated body is better able to regulate body temperature and is more resistant to heat exhaustion. Sunburns also lead to dehydration. Wear a hat, sunscreen, and sunglasses to protect from the sun overhead and reflected UV light.

#5 Leaving the Trail

Stay on designated trails and away from cliff edges where footing can be tricky. Even on seemingly gentle slopes, it can be impossible to keep your footing. Bring the maps on page 4 and 5 to avoid getting lost.

#4 Over-exertion

Park elevations reach 9115 ft (2778 m) subjecting you to 70% of the oxygen you might be used to. Bryce's trails start at the top which means all returns will be uphill. Turn back BEFORE you become tired. Know and respect your own physical limitations.

#3, #2, & #1 Bad Choice of Footwear

Wear hiking boots with good ankle support and "lug" traction. Hiking without hiking boots is like SCUBA diving without an air tank. Sport-sandals & "trainers," are NOT safe hiking footwear.

Emergencies Call 911 or 435-676-2411

24-hours a day or contact a Park Ranger

Park Headquarters

435 834-5322

Fax 435 834-4703

Lost & Found: 435 834-4736

Mailing Address

PO Box 640201

Bryce, Utah 84764-0201

Web

Website: www.nps.gov/brca

Twitter: [brycecanyonNPS](https://twitter.com/brycecanyonNPS)

Facebook: facebook.com/BryceCanyonnps

Travelers Information Station: Tune radio to 1590 for park information.

National Park Service
U.S. Department of the Interior



Information and Services

Park Roads

The main park road is open year-round but may be temporarily closed immediately following a heavy snowfall. The Fairyland Point and Paria View spur roads are intentionally NOT plowed in the winter to provide a surface for cross-country skiers.

Visitor Center

Open daily except Thanksgiving (November 24), Christmas (December 25), and New Year's Day (January 1) from 8:00 a.m. to 4:30 p.m., with extended hours during the spring, summer and fall. Information, museum, publications, an award-winning film, backcountry permits, and lost-and-found services are available here.

Emergencies

24-hour emergency response, call 911 or 435 676-2411. Garfield Hospital, 435 676-8811, and Clinic, 435 676-8842 are in Panguitch.

Accessibility

Restrooms, the Visitor Center, Bryce Canyon Lodge and General Store (lodge & store April – mid-November only) are fully accessible. The ½-mile section of Rim Trail between Sunset and Sunrise points is paved and level. Inquire at the Visitor Center for information on accessible ranger-led programs, and to obtain an Access Guide.

Restrooms

Available year-round at the Visitor Center, North Campground, Mossy Cave, and Sunset, Inspiration, Farview, and Rainbow Points. Restrooms are also available April – mid November at Bryce Canyon Lodge, General Store, and Sunset Campground.

Phones

Available year-round at the Visitor Center and General Store. Phones are also available April – mid November at Bryce Canyon Lodge.

Pets

Pets must be leashed and under control; you are required to clean up after your pet. Pets are permitted at park viewpoints, campgrounds, and on paved surfaces or trails. Pets are not permitted in buildings or on unpaved surfaces.

Horseback Riding

Wranglers lead 2-hour and 4-hour horse and mule rides Spring – October (weather and trail conditions permitting). For same-day reservations, inquire at Bryce Canyon Lodge or call 435 834-5500. For advance reservations, contact: Canyon Trail Rides, P.O. Box 128, Tropic, UT 84776; 435 679-8665. Information: www.canyonrides.com.

Entrance Fees

Private Vehicle: \$25 per vehicle, good for 7 days at Bryce Canyon only.

Individual: \$12 per person (pedestrian, bicycle, motorcycle, and organized group), good for 7 days at Bryce Canyon only.

Interagency Annual Pass: \$80, good for one year from date of purchase in all federal fee areas.

Interagency Senior Pass: \$10 lifetime pass for U.S. residents 62 or older.

Interagency Access Pass: Free lifetime pass for U.S. citizens who are permanently disabled.

Commercial Tours: Ask for rates.

Camping

North Campground: Open all year, 101 campsites (only one loop open in winter). Available first-come, first-served Oct 1 – May 6. RV sites may be reserved May 6 – Sept. 25 by calling 877 444-6777 or www.recreation.gov. Reservations can be made up to 240 days in advance.

Sunset Campground: Open late spring to Sept. 25, 102 campsites. 20 tent sites are available for reservation up to 6 months in advance, all others first-come, first served.

Fees: Camping is \$15 a night per campsite (half price for Senior / Access Pass holders).

Group Campsite: One site available by reservation only, late spring to early fall. Group size is limited to 7-30 people and 8 vehicles. Cost is \$55-\$100 per night, dependent upon group size. Campsite may be reserved by calling 877 444-6777 or visiting www.recreation.gov.

Dump Station: No hookups are available in the park, but a fee-for-use dump station is available in summer near North Campground. Year-round dump stations may be available outside the park.

Other Campgrounds: For camping reservations at Zion and Grand Canyon National Parks, call 800 444-6777 or visit www.recreation.gov. Public campgrounds are available on US Forest Service, BLM, and Utah State Park lands nearby. Private campgrounds with showers and hookups are available outside the park.

Showers & Laundry

Coin-operated shower and laundry facilities are available at the General Store, open April – mid November, and outside the park at some nearby establishments.

Recycling

Bins are located at North Campground and Sunset Point (glass, bi-metal cans, aluminum cans, cardboard, & plastic #1-7). Please rinse all containers. Receptacles for recycling small propane cylinders are available at North Campground or seasonally at Sunset Campground.

Lodging

Bryce Canyon Lodge: Open April 1 – November 14, has cabins, motel rooms and suites, a restaurant, and gift shop. For lodging reservations call 877 386-4383, or on the internet visit www.brycecanyonforever.com.

Other Lodging: Available in Bryce Canyon City, Tropic, Cannonville, Bryce Junction, and Panguitch.

Food Services

Bryce Canyon Lodge: Open April 1 – November 14. Dining room serves breakfast, lunch, and dinner; Valhalla Pizzeria is open early April to early November. The General Store, open April 1 – mid November, has groceries, quick meals, and camping supplies. **Other Food Services:** Restaurants are available Bryce Canyon City, Tropic, Bryce Junction, and Panguitch.

Post Office / ATM / Internet

Ruby's Inn has a post office open Mon – Sat (Bryce, UT 84764), an ATM, and internet services. Personal mail addressed to park visitors will not be accepted at Bryce Canyon National Park.

Wireless Internet (WiFi)

Wireless Internet access is available at the Visitor Center or seasonally at the Bryce Canyon Lodge Lobby and the General Store front porch.

Religious Services

Available in the park during summer months and outside the park year-round. For information, inquire at the Visitor Center or Bryce Canyon Lodge.

Bicycles

Bicycles are restricted to paved roadways in the park and are prohibited on all trails, including the paved section of Rim Trail from Sunrise Point to Sunset Point. The nearby Dixie National Forest has a paved bicycle path through Red Canyon, and many miles of challenging and spectacular mountain bike trails. Contact Dixie National Forest, 435 676-9300, or Garfield County Travel Council, 800 444-6689, Grand Staircase-Escalante National Monument has countless miles of dirt roads suitable for mountain biking.

Picnic Areas

Picnic areas are available year-round at Sunset Point, the General Store, Rainbow Point, and from April – October at the south end of North Campground and Mile 4.5 of the park road. Water faucets are available seasonally at all locations except Mile 4.5 and Rainbow Point. Fire grates are available only at the North Campground Picnic Area.

Hoodoos: The Odyssey of an Oddity

The geologic history of Bryce Canyon National Park is rich and complex. Many processes and events have interacted over vast amounts of time to create and continually alter this unique landscape. The story begins long before technicolor hoodoos emerged from this limestone that geologists call the Claron Formation. First, you need to lithify sediments – turn them to rock. Before lithifying sediments, you need to trap them in a basin. To build a basin you need to first build mountains. Approximately 200 million years ago



Thors Hammer, visible from Sunset Point, following a winter storm.

(Mya), Earth's crust was crinkling throughout Nevada, into southern Canada. A strong, dense Pacific seafloor had smashed into North America's weaker continental crust. Much was at stake as the loser would be forced down and melted in Earth's mantle. Although North America remained on top, it was shattered in the contest. Over the 120 million year match, compressional forces bent, folded, broke, and heaved our crust into the sky, giving birth to the once mighty Sevier Mountains. Given enough time, rain and snow become geologic jackhammers splitting mountains apart. From the mountains, streams and rivers carried debris eastward, pulverizing the boulders to mud in transit.

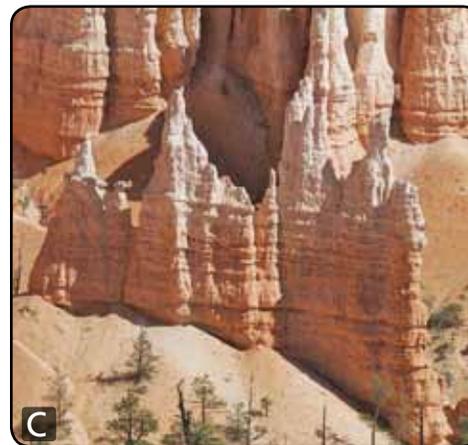
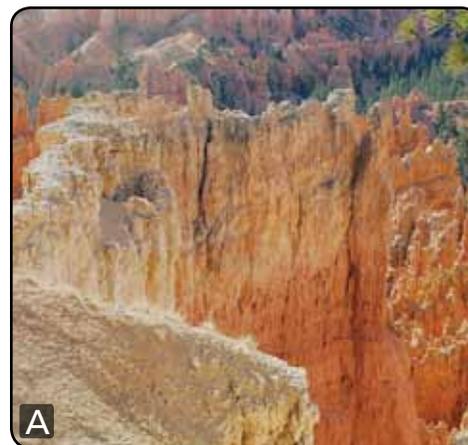
Slightly before the dinosaurs went extinct, ~ 65 Mya, the land in the Western U.S. changed dramatically. Down but not out, the oceanic plate pushed up our continental crust, stubbornly surfing atop the mantle instead of sinking and melting. This attempt at escaping uplifted land,

forming the Rocky Mountains and warping Utah and Arizona. The continued slow uplift shaped a land-locked basin between the Sevier Mountains and the younger Rockies. When the rivers wearing down the Sevier Mountains reached this basin they became braided streams and deposited layers of muds and silts. At the lowest levels, chains of lakes and ponds formed. Water escaped through evaporation, but with no rivers flowing out of the basin, the sediment was trapped. Between 55 and 30 Mya, this mammoth mud puddle, known as the Claron Basin, continued to fill with sediments rich in calcium carbonate – dissolved limestone.

The Claron Formation consists of two types of limestone rock. It has a lower pink member and an upper white member. In the early years of the basin the environment appears to have been more marsh-like, where plant roots helped oxidize iron to give the sediments a red color. Within the pink member, thin and non-continuous grey layers formed, suggesting that individual ponds within this marsh setting became so salty and/or mineralized that only cyanobacteria could survive. These algal-like creatures enriched limestone with magnesium they took from the water to create dolostone – important to hoodoo formation. With the passage of time and an increase in water depth, the basin transitioned into purer lakes where the less iron-rich white limestone was deposited.

Geologists are unsure as to this mud puddle's fate as rocks that might have recorded this story do not exist. Did it evaporate away? Was it eventually drained as the basin was uplifted? What geologists are sure of is that over time these beds of sediment were compressed into rock and uplifted from 3000 ft to ~9000 ft in elevation. This uplift began about 15 Mya, forming the Colorado Plateau. About 8 Mya, the Bryce Canyon area broke off this uplift as the Paunsaugunt Plateau and has been sinking ever since into the Great Basin.

Technically, Bryce is not a canyon because canyons are primarily carved by flowing water – a stream or a river. Naturally acidic rainwater dissolves limestone, making the rounded edges of hoodoos, but the freezing and thawing of water does most of the sculpting at Bryce Canyon.



Look closely at the rock formations and it becomes easier to see the progression from fins (A), which develop windows (B), that later collapse to form hoodoos (C).

Approximately 200 days a year, ice and snow melt during the day and refreeze at night. When water becomes ice, it not only gets harder but expands to approximately 110% its original volume! This exerts enormous pressure on the rocks, forcing them apart from inside the cracks. First attacking the fractures created during uplift and faulting, the rock is chiseled into broken remains. Monsoon rains remove this debris, helping to reveal fins, the first step in hoodoo creation. Most commonly, the second step in hoodoo formation begins when frost-wedging cracks the fins, making holes we call windows. When windows collapse they create the rust painted pinnacles we call hoodoos. We often think of this process as hoodoo creation; when, in reality, it's just another step in water's endless process of destroying the rocks it began creating 55 Mya.

Although visitors to Bryce come to see the hoodoos in the Claron Formation, five other rock formations also exist in the park. They tell stories of dinosaurs, beaches, and of a sea that once separated North America into two large islands. Ask a ranger to learn more about these times in Earth's history.



Utah region 50 million years ago. Sediment eroded from mountains in northwestern Utah was deposited in a lake, lithified (turned to stone), and later uplifted to be re-eroded into hoodoos.



Park Profile

Established

1923 as Bryce Canyon National Monument administered by the U.S. Forest Service; Congress passed legislation in 1924 to create the national park and, in 1928, Bryce Canyon National Park was officially established.

Significance

Established to preserve and protect outstanding scenic and scientific values. Best known for the beautiful and bizarre rock spires called hoodoos, scenic vistas, and the dark night sky.

Hoodoo

[hoo'doo] n. 1. A pinnacle or odd-shaped rock left standing by the forces of erosion. 2. v. To cast a spell or cause bad luck. 3. Voodoo.

Elevation / Size

Lowest: 6,620 feet (2018 m) Yellow Creek
Highest: 9,115 feet (2778 m) at Rainbow Point
55 square miles (35,835 acres)

Name

Ebenezer and Mary Bryce lived in the area from 1875-1880 and aided in the settlement of southwestern Utah and northern Arizona.

Humans

Paleoindians are known to have been in the region nearly 10,000 years ago. The Fremont Culture inhabited the region as recently as 1,000 years ago, followed by the Southern Paiutes until 100 years ago. Mormon settlers arrived in the 1870s. Park visitation in 1929 was 22,000. In 2010, it reached 1.28 million.

Plant Life

More than 400 native plant species live in the park. Pinyon pine and juniper grow among the hoodoos at low elevations; ponderosa pine forests dominate the plateau top; spruce, fir, and aspen thrive at the highest elevations. Bristlecone pines, some more than 1600 years old, live at various elevations in the park.

Animal Life

Utah Prairie Dogs, a threatened species, can be seen in open meadows. Mule Deer and Pronghorn (mistakenly known as Antelope) are the most common large mammals seen. Mountain Lions and Black Bears live in the park, but are rarely seen. The park's bird list has over 200 resident and migratory species.

Bryce Canyon Lodge

Designed by Gilbert Stanley Underwood and built in 1925, it is a National Historic Landmark. Of the four original lodges in the Union Pacific Loop Tour (Bryce Canyon, Cedar Breaks, Zion, and Grand Canyon-North Rim), the Bryce Canyon Lodge is the only one still standing in its original state.

What Can I Do Here?

Making the most of your time

Less Than 4 Hours

Visitor Center

Stop at the Visitor Center for information, museum exhibits, and a 22-minute award-winning orientation film.

Auto Tour of the Overlooks

Drive to Bryce, Inspiration, Sunset and Sunrise points first. If you still have more time, visit overlooks in the southern portion of the park as described below.

Short Walk

Hike a short segment of the Rim Trail or select one of the other hikes from the "Easy to Moderate" group in the hiking table on page 5.

More Than 4 Hours

Visitor Center, Auto Tour, Short Walk and Day Hike(s)

Bryce is best viewed from its trails. Select one of the combination loops from the "Moderate" or "Strenuous" groups in the hiking table on page 5. *Use caution as trails may be covered in snow and/or ice.*

Ranger Programs

Attend a free Ranger Program to learn more about the natural and cultural history of this region. Rangers offer a limited number of programs in the fall, winter and spring. Inquire at the Visitor Center for a current schedule.

Auto Tour



Kevin Doxstater

Where is the Best Overlook?

There are 14 viewpoints along Bryce Canyon's 18-mile road (one-way distance) and everybody determines his or her favorite for a multitude of reasons. Furthermore, for every 15 minutes you extend your visit you can see another overlook. If you drive to the very southern end first, and stop at the overlooks as you return to the north, the entire park can be seen in as little as 3-4 hours. The northern overlooks have the most hoodoos, but the southern overlooks offer the most expansive views.

Park roads are plowed and sanded after each snowstorm but may be temporarily closed during and following winter storms. In the winter, the roads to Fairyland Point and Paria View are NOT plowed and become trails for cross-country skiers and snowshoers.

Cross-country Skiing & Snowshoeing

Where can I cross-country ski / snowshoe?

Snow depth at Bryce can be variable, so it's important to make back-up plans. With 3-4 feet of snow the entire park is skiable. The only area that is always "Out-of-Bounds" is skiing off the rim. If you want to slalom through hoodoos, you will have to go to Red Canyon. When snow depth is less than 1 foot, the only skiable surfaces are the groomed trails at Ruby's Inn, the Red Canyon Bike Path and the roads to Fairyland and Paria View. **Snowboarding, downhill skiing, sledding, etc. are NOT permitted off the rim.**

Unlike skiers, snowshoers are allowed to follow the hiking trails below the rim. When snow depth is less than 1 foot, the awkwardness of snowshoes outweighs any "flotation" advantage. On the popular trails where the snow quickly becomes packed and icy, hiking boots with traction devices are often more helpful than snowshoes.

Ski and snowshoe equipment can be rented at Ruby's Inn. Traction devices for hiking boots can be purchased at the Visitor Center or Ruby's Inn.

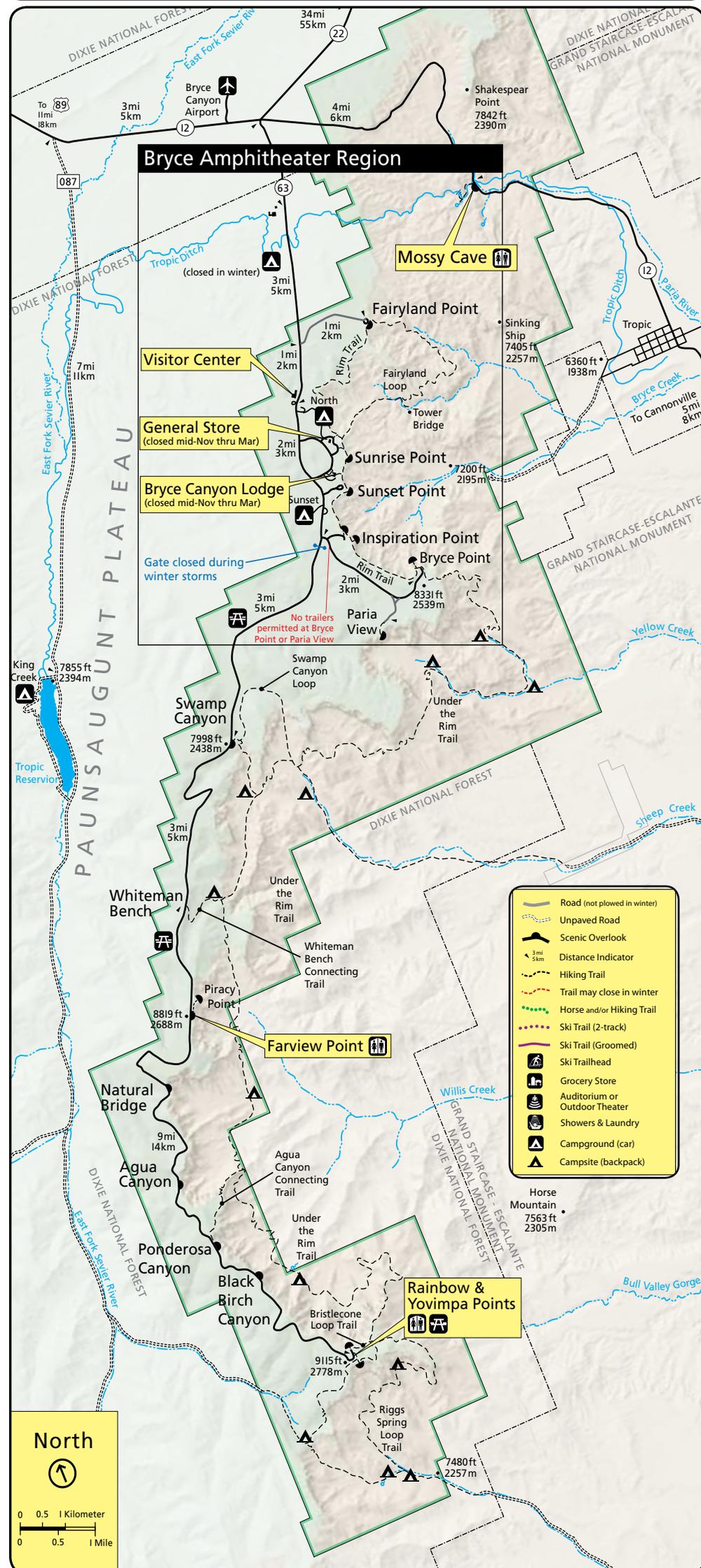


Avalanche Safety

Although uncommon, avalanches at Bryce Canyon can take the lethal form of mixed snow and mud.

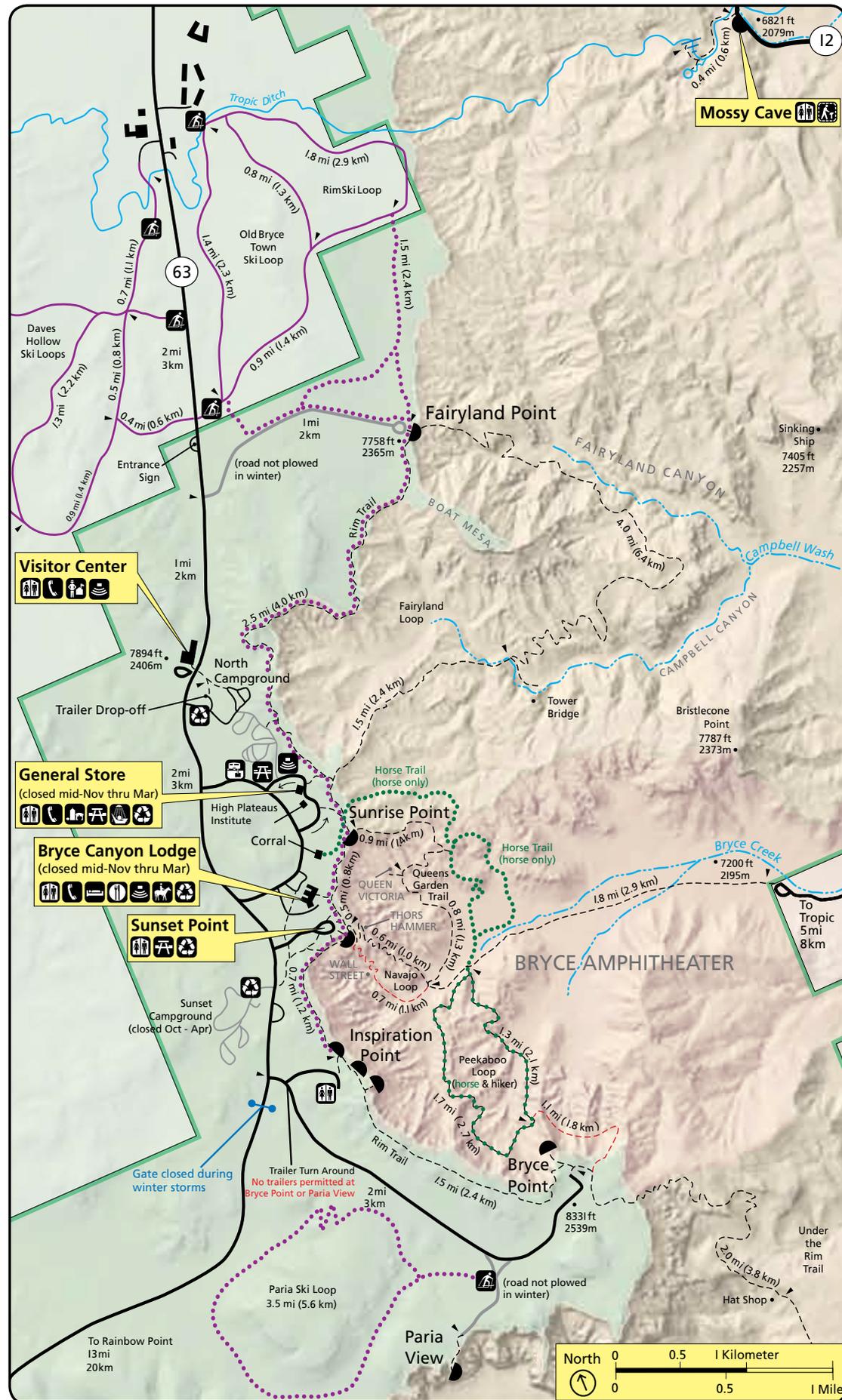
- Keep back from the canyon rim, hidden cornices can collapse under your weight.
- Turn back if you hear hollow or "whumping" sounds as you walk or ski.
- "Swim" to keep your head above the surface if caught in a slide.
- Avoid traveling alone and stay on designated trails.

Bryce Canyon National Park



Hiking the Park

Bryce Amphitheater Region



Day-Hiking Trail Guide

Bryce Canyon has 8 different day-hiking trails. Because many of these trails are interconnected, our most popular hikes are combinations of two or more of these basic trails. **If you can only do one hike, the Queen's / Navajo Combination Loop might be the best choice.** Take this page with you while hiking.

TRAIL NAME STARTING POINT	ROUND TRIP	HIGH POINT ASCENT LOW POINT	DESCRIPTION
Easy to Moderate Hikes (gentle grades & minimal elevation change)			
MOSSY CAVE Northeast section of Bryce along Hwy 12 (not a loop)	0.8 mi 1.3 km 1 hour	6920ft 2109m 6827ft 2080m 200ft 61m	Streamside walk up to a mossy overhang and small waterfall. (Waterfall flows May-October.)
SUNSET to SUNRISE Sunset Point (not a loop)	1.0 mi 1.6 km 1 hour	8000ft 2438m 8024ft 2446m 34ft 10m	Outstanding views of hoodoos from above. Rim Trail is paved and fairly level between Sunset and Sunrise Points, and open to pets.
BRISTLECONE LOOP Rainbow Point	1.0 mi 1.6 km 1 hour	9115ft 2778m 200ft 61m 8939ft 2725m	Hike through spruce-fir forests to cliffs with bristlecone pines and expansive vistas.
QUEENS GARDEN Sunrise Point (not a loop)	2.0 mi 3.2 km 1-2 hours	8001ft 2439m 357ft 109m 7676ft 2340m	The least difficult descent into the canyon. See Queen Victoria at the end of a short spur trail.
Moderate Hikes (steep grades with "down & back" elevation change)			
NAVAJO LOOP Sunset Point	1.3 mi 2.2 km 1-2 hours	8000ft 2438m 550ft 168m 7476ft 2279m	See Wall Street, Two Bridges, and Thors Hammer on this short but steep trail. <i>Clockwise direction recommended.</i>
NOTE: The Wall Street side of the Navajo Loop is closed during the winter and early spring due to dangerous conditions created by ice and/or falling rocks.			
QUEENS/NAVAJO COMBINATION LOOP Sunset Point	2.9 mi 4.6 km 2-3 hours	8001ft 2439m 600ft 183m 7476ft 2279m	Combine two trails described above with the Rim Trail to form a loop. <i>Clockwise direction recommended.</i>
TOWER BRIDGE North of Sunrise Point (A portion of the Fairyland Loop - not a loop)	3.0 mi 4.8 km 2-3 hours	7984ft 2433m 802ft 245m 7210ft 2197m	See bristlecone pines and the China Wall. A shady ¼-mile spur trail leads to the bridge.
HAT SHOP Bryce Point (not a loop)	4.0 mi 6.4 km 3-4 hours	8315ft 2534m 1075ft 328m 7380ft 2249m	Descend the Under-the-Rim Trail to see a cluster of balanced-rock hoodoos.
Strenuous Hikes (steep grades with MULTIPLE elevation changes)			
FAIRYLAND LOOP Sunrise Point	8.2 mi 13.2 km 4-5 hours	8075ft 2461m 1716ft 523m 7142ft 2176m	See the China Wall, Tower Bridge and tall hoodoos on this picturesque, less-crowded trail.
PEEKABOO LOOP Bryce Point	5.5 mi 8.8 km 3-4 hours	8315ft 2534m 1571ft 479m 7429ft 2264m	Steep but spectacular hike through the heart of Bryce Amphitheater. See the Wall of Windows.
NAVAJO/PEEKABOO COMBINATION LOOP Sunset Point	4.9 mi 7.8 km 3-4 hours	8000ft 2438m 1581ft 482m 7390ft 2252m	Combine Navajo and Peekaboo Loop Trails into a mini figure-8.
THE 'FIGURE 8' (NAVAJO/PEEKABOO/QUEENS GARDEN COMBINATION) Sunset Point	6.4 mi 10.2 km 4-5 hours	8001ft 2439m 1631ft 497m 7390ft 2252m	Combine Queens Garden, Navajo Loop and Peekaboo Loop into one ultimate hike!

Backcountry Camping & Hiking

Bryce Canyon's backcountry consists of two trails: the 9-mile Riggs Spring Loop, and the 23-mile Under-the-Rim Trail. Backcountry camping is by permit only on a first-come, first-served basis. Permits may be purchased at the Visitor Center from 8:30 a.m. until one hour before the Visitor Center closes.

Bryce's backcountry is not for everyone. Water sources are few and unreliable, fires are prohibited, and these trails are difficult - if not impossible - to follow in winter or spring when under several feet of snow. More importantly, unlike most national parks, Bryce's backcountry has the fewest hoodoos in the park. If you came to see hoodoos, windows, and slot canyons, you should choose long day hikes instead. However, if you have come to get away from everybody and you are an experienced backpacker, ask at the Visitor Center for a Backcountry Information brochure to aid in planning your trip.

Hiking Reminders

- CAUTION - Rocks occasionally fall on most hiking trails. If you see or hear active rockfall, leave the area.
- Wear hiking boots with "lug" traction and ankle support.
- Carry plenty of water; 1 quart (liter) per 2-3 hours of hiking.
- Park elevations reach over 9,100 feet (2774 m). Even mild exertion may leave you feeling light-headed and nauseated.
- = Trails also used by horses April/May - October. Hikers must yield to horses; if in doubt follow wrangler's instructions. Avoid meeting a horseback ride by hiking clockwise. Remember, you are responsible for your own safety and never throw anything, at any time. You may injure hikers below.

Hypothermia: Dangerous Low



Exposure to cold, wet, or windy conditions can lead to hypothermia, a life-threatening lowered body temperature. Hypothermia symptoms include uncontrollable shivering, disorientation, apathy, slurred speech, loss of coordination, followed by unconsciousness and death.

The best treatment for hypothermia is prevention. Wear warm clothing in layers which can be added or removed, especially when exerting yourself in cold weather. Wear a hat and gloves. Drink lots of water and eat high energy foods.

Most importantly, when you feel cold, it's time to go inside and warm up!

Bryce Canyon's Wildlife



Mule Deer Buck. Do NOT approach or attempt to feed any wild animal!

For a small park, Bryce has several types of habitat and is home to over 70 mammal species, 17 reptiles and amphibians, as well as over 200 species of birds. Many of these species are either migratory or hibernate in winter. Mule Deer and Pronghorn migrate to lower elevations where food is more readily available. Utah Prairie Dogs, chipmunks, and ground squirrels hibernate from late October until March. A few birds, including Bald Eagles, are seen at Bryce Canyon only in winter, while a few hardy bird species, including White-breasted and Pygmy Nuthatches, Common Ravens, Steller's Jays and Clark's Nutcrackers, live in the park all year. Though wildlife watching at Bryce in winter is challenging, it never hurts to look. If luck is on your side, you may be fortunate enough to catch a glimpse of a Long-tailed Weasel in its snow white winter coat with a black-tipped tail.

Please report all sightings of predators (Black Bear, Mountain Lion, Gray or Red Foxes, Bobcat, Coyote, etc.) to a Park Ranger or the Visitor Center. In addition, please report any wildlife hit on the road to a Park Ranger. Road-killed wildlife helps park resource managers track animal diseases such as plague and rabies.

WEATHER AT BRYCE CANYON

	MONTH											
	J	F	M	A	M	J	J	A	S	O	N	D
TEMPERATURE (°F)												
Normal Daily Maximum	39	41	46	56	66	76	83	80	74	63	51	42
Normal Daily Minimum	9	13	17	25	31	38	47	45	37	29	19	11
Extreme High	62	66	76	82	89	96	97	94	91	85	75	67
Extreme Low	-30	-29	-13	-5	5	20	25	17	17	-2	-20	-23
Avg. # of Days that rise above 90°F	0	0	0	0	0	1	4	0	0	0	0	0
Avg. # of Days that drop below 32°F	31	28	31	20	20	6	0	9	9	22	29	31
PRECIPITATION												
Normal	1.7	1.4	1.4	1.2	0.8	0.6	1.4	2.2	1.4	1.4	1.2	1.6
Maximum	9.2	6.8	6.8	3.8	2.3	2.7	3.8	4.8	4.2	4.5	5.4	6.2
Maximum 24 hr. Precipitation	2.3	1.5	1.5	1.8	1.2	1.7	1.8	3.8	3.4	1.7	1.5	3.2
Maximum Snowfall	63	75	75	62	18	6	T	T	4	22	22	49
Days with Measurable Precipitation	7	7	8	6	5	3	5	6	4	4	5	6
Average # of Thunderstorms	0	0	0	1	5	6	14	19	7	2	0	0
SUNSHINE / CLOUDINESS												
Number of Clear Days	9	7	9	10	12	17	16	16	18	17	11	10
Number of Partly Cloudy Days	8	8	8	9	10	8	10	10	8	7	8	8
Number of Cloudy Days	14	13	14	11	9	5	5	5	4	7	8	13
% Possible Sunshine	56	64	60	68	74	83	77	79	80	75	63	60

How is the weather? A 2011 review of 65 years of weather data recorded at the park has shown some changes are taking place in long term climate patterns. The data shows that, while summer mean high temperatures are on the decline, winter mean low temperatures have been rising. With the rise in winter temperatures, the number of annual freeze-thaw days has decreased from nearly 220 to less than 180. Total snowfall has also declined, while summer rainfall amounts have increased (though not enough to compensate for the amount of water lost by decreased snow pack). As Bryce Canyon's climate is directly responsible for the formation of hoodoos (see the geology article on page 3), it is difficult to predict how Global Climate Change will affect the park in the future. Will the dramatic shapes and colors that make Bryce Canyon what it is today become little more than lowly lumps of soil tomorrow? Only time will tell . . .

Fire: A Burning Issue



Drip-torch being used to ignite a prescribed burn.

You may notice signs of forest fires here at Bryce Canyon. Some fires were started by lightning; others were intentionally set by park management using a practice called prescribed burning.

Fires were once a common natural occurrence throughout this area. Before the late 1800s, lightning frequently started fires which rejuvenated plant growth, recycled soil nutrients, cleared undergrowth, and increased wildlife habitat diversity. Grazing, fire suppression, and other land management practices have altered this natural cycle and created an unhealthy forest with dangerous accumulations of dead trees and underbrush in some areas of the park.

A primary mission of the National Park Service is the preservation of dynamic natural processes. At Bryce Canyon, the wise use of fire is an important tool in the effort to restore a healthy balance to our forest ecosystems. Here, fire managers use prescribed fires, which are intentionally ignited during periods of manageable fire behavior to rejuvenate forests and meadows. In addition, natural fires ignited by lightning are allowed to burn within confined zones and, frequently, costing less money to manage.

During the summer of 2009, Bryce Canyon Fire Management, working with the Dixie National Forest, managed a wildland fire

that burned for three months. The Bridge Fire started June 14, 2009 from a lightning strike on national forest lands. The fire burned for one month before it swept into the park atop Whiteman Bench. Evidence of this fire may be seen between mile markers 8 and 10 on the park road. You may also see it below Swamp Canyon and Farview Point. The Bridge Fire burned a total of 4,759 hectares, of which 1,925 were within the park's boundary, making it the largest wildland fire in the park's history. It was allowed to burn in order to open the forest canopy and forest floor to promote the regeneration of ponderosa pine, quaking aspen and other native species.

As you notice the blackened trees also look for deer, elk, prairie dogs, and countless species of birds that thrive here because of our management of fire. Park scientists measure how plants and animals respond to fire in order to continuously refine fire management practices for the benefit of forest and grassland plant communities as well as the animals they support.



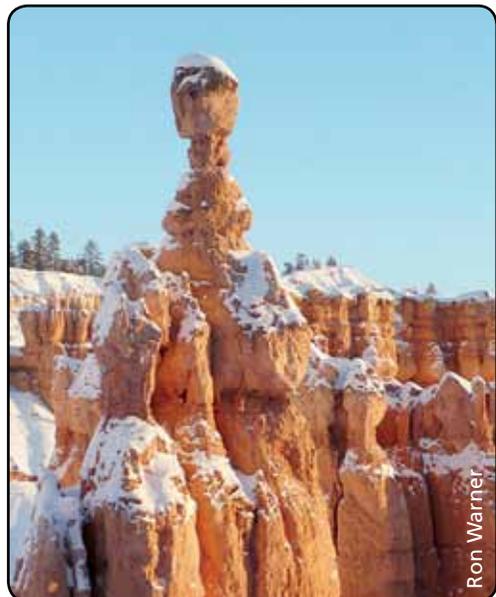
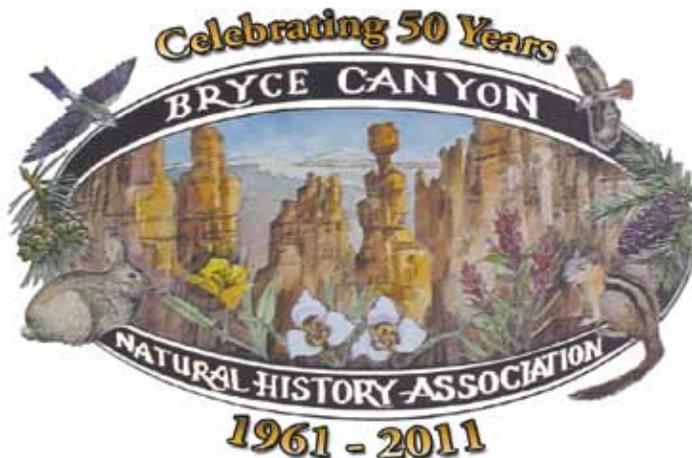
Smoke from the 2009 Bridge Fire as seen from Swamp Canyon.

Bryce Canyon Natural History Association

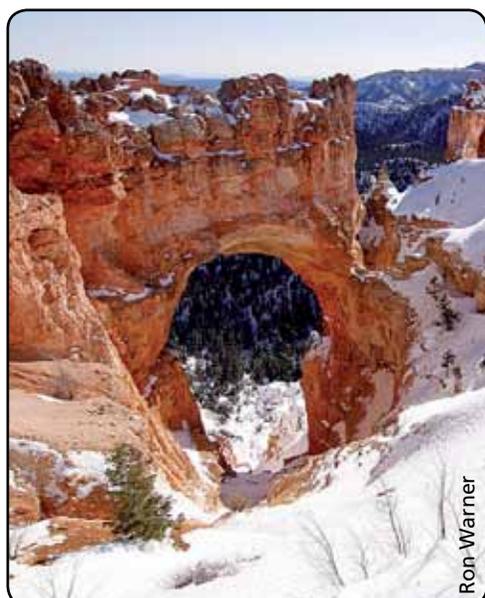
PO Box 640051, Bryce, UT 84764-0051 888 362-2642 Fax 435 834-4606 www.brycecanyon.org

Celebrating its Golden Anniversary in 2011–2012, the Bryce Canyon Natural History Association continues to be a proud partner to the National Park Service. Since their charter in 1961, over five million dollars in support has been provided to forward the scientific, educational, historical, and interpretive activities of Bryce Canyon National Park. This has been accomplished in part by creating educational publications and interpretive material available for purchase or free distribution, and supporting popular interpretive activities like the Junior Ranger Program.

Every purchase from the Bryce Canyon National Park bookstore helps support the collective mission of the park and association. Special events and promotions will be featured throughout the year to celebrate this incredible milestone in partnering. Please visit our website at www.brycecanyon.org for updated information.



Become a personal partner with Bryce Canyon National Park to help preserve and protect the wonder and resources for this and future generations.



As a Natural History Association member, you can help us:

- Publish nearly one million pieces of free literature for park visitors each year.
- Support resource management research activities.
- Support educational outreach programs to schools in southern Utah and beyond.
- Continue National Park Service research projects that document the natural and human history of Bryce Canyon National Park.
- Support the Junior Ranger Program.
- Help publish interpretive books, maps, posters, and audio-visual products that educate visitors about Bryce Canyon National Park and Dixie National Forest.
- Support the Bryce Canyon Interpretation Division of the National Park Service.
- Provide scholarships to deserving students and universities.

A membership with Bryce Canyon Natural History Association includes these benefits:

- 15% discount on all books, maps, posters, and other products sold by Bryce Canyon Natural History Association in our stores, by phone (888 362-2642), or online (www.brycecanyon.org).
- Discounts to hundreds of other stores operated by more than 60 nonprofit cooperating associations at numerous national parks and other public lands throughout the United States (you must present your membership card to receive discount).
- Bryce Canyon Natural History Association members receive a discount on most High Plateaus Institute courses. These courses offer in-depth outdoor education to visitors. Call or check our website for listings.

High Plateaus Institute

In the spring of 2004, the Bryce Canyon Natural History Association (BCNHA) and Bryce Canyon National Park, in collaboration with the local business community, school officials, universities, and city, county, state and federal government entities, initiated the High Plateaus Institute (HPI). This exciting educational facility provides researchers, students, teachers, local residents, and visitors with expanded opportunities for exploration, discovery, and science-based learning.

Many exciting programs are offered through the HPI during the summer season. Some examples include: educational programs in geology, astronomy, plants, cultural



history (ranching and cowboy poetry) and photography. The HPI plays host to a variety of researchers each year, as well as provides a location for ranger-led programs for kids and families.

For further information, contact the BCNHA Education Specialist at (435) 834-4784 or email marilyn@scinternet.net.

Thank You to Our Donors & Partners

Bryce Canyon National Park wants to thank its generous donors and park partners for helping to improve programs and services here at the park.

The **Bryce Canyon Natural History Association** provides the park with booklets and badges for the Junior Ranger program, printing costs for this **Hoodoo newspaper** and other publications, and housing for Volunteers and interns. The Association also funds a full time Education/Outreach Specialist for the park.

The **donation box** in the lobby of the visitor center has funded interpretive equipment that directly benefits the visiting public.

Two Geoscientist-in-Parks interns were granted by the **Geologic Society of America**. These interns assisted with research, including initiating an erosion study comparing the Bridge wildfire and the Puma Prescribed Burn, presented public geology programs throughout the summer, and provided training for park staff on the geology of the Colorado Plateau. Our Natural History Association also helped to fund these two positions.

The **Bryce Canyon Lodge** and **Bryce Canyon City** have implemented a Dollar Check-Off Program. Guests at their hotels have the option of donating a dollar per night of their visit. These programs have funded seasonal employees for interpretation, trail crews, and various projects throughout the park including our astronomy and geology festivals, new public restrooms at Bryce Point, structural fire and emergency medical equipment, and exhibit panels.

A hearty "thanks" to our generous donors and park partners. We couldn't do it without you!



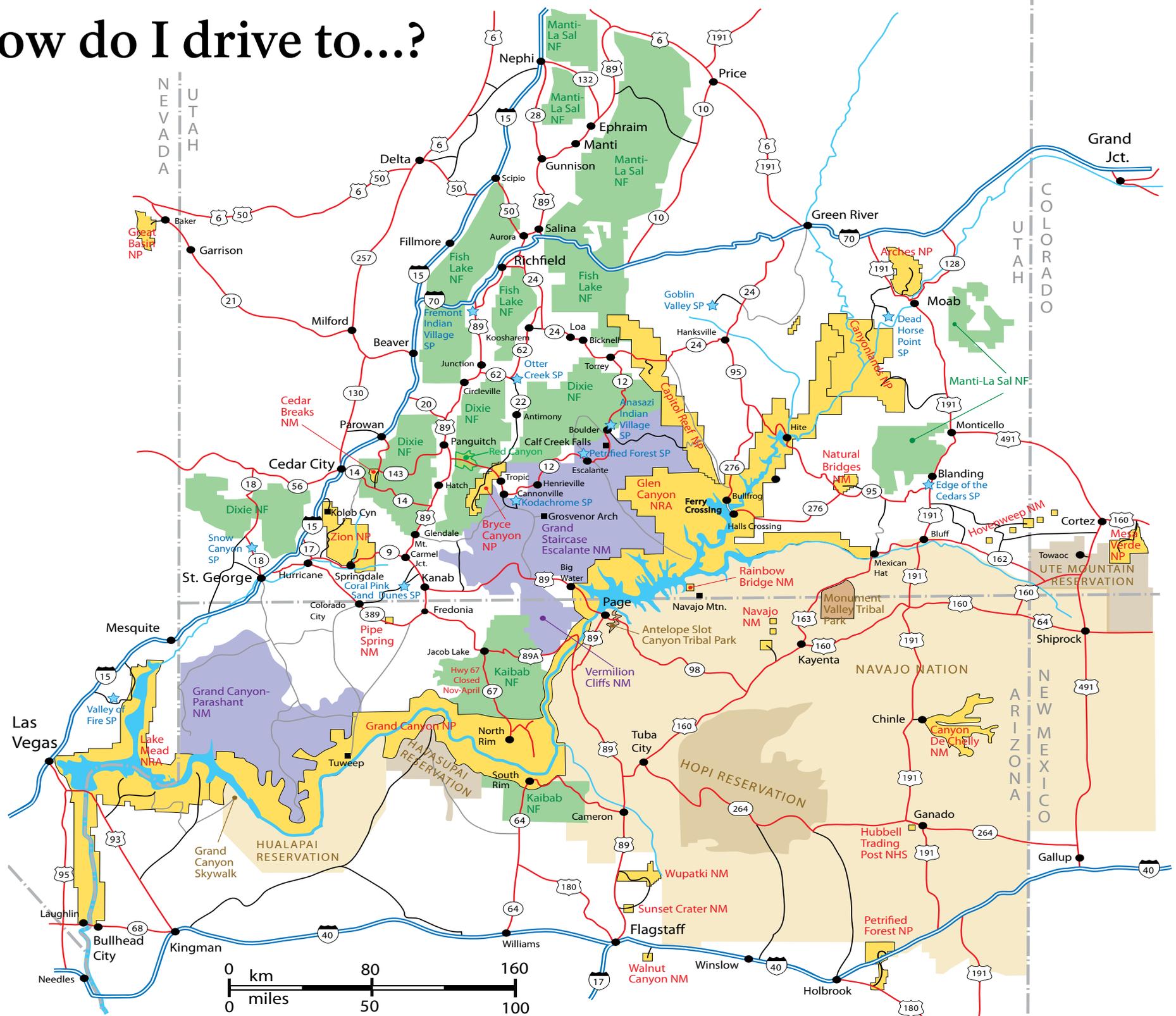
V.I.P.s (Volunteers-In-Parks)

Last year, more than 200 volunteers donated nearly 20,000 hours to Bryce Canyon National Park! If **you've** got time and talents to share, why not become a Volunteer-In-Park (V.I.P.)?

For more information, log on to: www.nps.gov/bzca (click on volunteer) or www.volunteer.gov/gov.

To learn more about our astronomy volunteer program, log on to: www.nps.gov/bzca/planyourvisit/astronomyvolunteer.htm.

How do I drive to...?



Driving Distances

	Miles	Hours		Miles	Hours		Miles	Hours		Miles	Hours
Arches NP (via US 89 & I-70)	270	6	Cortez, CO (thru Page)	357	8	Kanab	80	1½	Panguitch	25	½
Arches NP (via UT-12)	249	6¾	Death Valley NP (Furnace Cr.)	392	7	Kodachrome Basin SP	25	¾	Salt Lake City	260	4½
Boulder (Anasazi SP)	80	2	Escalante	50	1½	Lake Powell (Page, AZ)	150	3	Tropic	11	½
Capitol Reef NP (via UT-12)	120	3	Grand Canyon NP (North Rim)	160	3½	Las Vegas	270	4½	Yosemite NP (via Tioga Road)	610	11½
Cedar Breaks NM	56	1½	Grand Canyon NP (South Rim)	300	5½	Monument Valley (via Page)	275	6½	Yosemite NP	738	13
Cedar City	80	1¾	Great Basin NP	199	5½	Monument Valley (via Cap Reef)	313	7½	Zion NP (East Entrance)	78	1½



Capitol Reef National Park
121 miles northeast via Utah 12 & 24

The Waterpocket Fold, a giant wrinkle in Earth's crust, features a jumble of colorful cliffs, massive domes, soaring spires, twisting canyons, and graceful arches. Ancient rock art and historic orchards tell of the park's cultural history. Orchards are open June - October for "self-serve picking" of cherries, pears, apricots, peaches, and apples. Visitor Center: 435-425-3791
www.nps.gov/care



Cedar Breaks National Monument
83 miles west via Utah 12, US 89 & Utah 14

At 10,350 feet (3155 m), Cedar Breaks is the highest Park Service unit and features a spectacular amphitheater of walls, fins, spires, and columns eroded out of colorful Claron limestone. Forests of pine, spruce, fir, and aspen are separated by alpine meadows ablaze with brilliant summer wildflowers. Temperatures are usually cool. Headquarters: 435-586-9451
www.nps.gov/cebr



Grand Staircase-Escalante Nat'l Monument
South and east via Utah 12 & US 89

This 1.9 million acre area features diverse and ruggedly beautiful landscapes. Utah 12 and US 89 skirt the fringes of the monument and offer numerous scenic pull-outs. All of the roads in the monument's interior are unpaved, and many require 4-wheel drive. Escalante Visitor Center: 435-826-5499 Cannonville Visitor Center: 435-679-8981 Kanab Headquarters: 435-644-4600
www.ut.blm.gov/monument



Red Canyon / National Scenic Byway 12
124-mile route between US 89 & Utah 24

National Scenic Byway 12 stretches 124 miles from Red Canyon to Capitol Reef National Park and provides breathtaking views across the Grand Staircase and into the Escalante Canyons. The Federal Highway Administration designated this route an "All-American Road," making it a "destination unto itself." Ask for a Byway 12 Route Guide at any visitor center along the way.