

# HOODOO

[hōō'-dōō] n. 1. A pinnacle, or odd-shaped rock left standing by the forces of erosion.

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



*"...to conserve the scenery and the natural and historic objects and the wild life therein, and to provide for their enjoyment in such manner as will leave them unimpaired for the enjoyment of future generations..."*

National Park Service Organic Act, 1916

**Hiking, Shuttle  
& Road Information  
Inside!**

*Photo courtesy of John B. Wagner*

## Superintendent's Welcome...

On behalf of the entire Bryce Canyon community, it's our pleasure to welcome you to Bryce Canyon National Park! We're confident that you will enjoy the precious moments you spend here as much as we enjoy serving you.

The Bryce Canyon National Park Shuttle will begin its fourth year of operation on **May 16, 2003**. We encourage you to use our shuttle during your stay. It's **free**, easy-to-use, and best of all—you'll be doing your part to conserve fuel, protect park resources, and minimize traffic congestion, which is especially important this year because of our road construction.

Yes, we're in the midst of making some much-needed improvements to our 80-year old park road. We appreciate your patience and understanding during this enhancement project. Look for more information on this and other news inside this edition of the **Hoodoo**.

We hope you've allowed enough time to savor the area's special wonders. Bryce Canyon Country can be explored in a variety of ways. Sight-seeing, photography, hiking,

camping, horseback riding and star-gazing are some of the many ways you can experience and enjoy your national park, and the surrounding public lands.

What is it that makes Bryce Canyon so special? Ultimately, that's for **you** to decide. We invite you to join us for a Ranger Program to learn more about the geology, biology and history of this region. But you should also spend enough time to make your **own** connections to this unique landscape.

Places such as this have taken on an enhanced meaning to many visitors recently. Some come seeking solace and refuge, while others come seeking a deeper connection with our national heritage. Now, perhaps more than ever, our national parks are a source of strength and a symbol of the American spirit.

Have a safe and enjoyable visit in **your** national park!

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*Craig C. Axtell*  
Craig C. Axtell

## How to Contact Us:

- ✓ **FOR EMERGENCIES:**  
Notify a park ranger or call 911.
- ✓ **Listen** to AM Radio 1610 for Bryce Canyon National Park Shuttle information.
- ✓ **Listen** to AM Radio 1590 for general park information.
- ✓ **Call us at** 435/834-5322.
- ✓ **Write** to us at:  
Bryce Canyon National Park  
P.O. Box 170001  
Bryce Canyon, UT 84717
- ✓ **Visit our new and improved** web site at:  
[www.nps.gov/brcal/](http://www.nps.gov/brcal/)



## Park profile

- ✓ **Established:**  
1923 as Bryce Canyon National Monument, 1924 Utah National Park and in 1928 Bryce Canyon National Park
- ✓ **Elevation:**  
Lowest point: 6,620 feet (2018 m)  
Highest point: 9,115 feet (2778 m)
- ✓ **Precipitation:**  
Annual Average: 18 inches (45.7 cm)
- ✓ **Name:**  
Ebenezer Bryce lived in the area from 1875-1880 and aided in the settlement of southwestern Utah and northern Arizona.
- ✓ **Annual Visitation:**  
1929: 22,000 visits  
1959: 278,000 visits  
2002: 1.4 million visits

## Bryce Canyon Is Getting a New Road!

Over the next several months, visitors to Bryce Canyon National Park will discover that several miles of park road will be receiving a much-needed overhaul. Modifications are designed to increase safety, protect park resources and improve the visitor experience. Road work will continue through the fall of 2004.

Road improvements will include widening lanes and shoulders, realigning certain intersections, and redesigning and expanding some parking areas.

Originally constructed in 1923, Bryce Canyon's road system no longer meets current specifications and is unable to accommodate today's volume of traffic and vehicle size.



Road-grading in Bryce Canyon, circa 1923

The park will remain open during construction; however, there may be delays of up to 20 minutes and temporary closures on some sections of roadway.

**We appreciate your patience during this improvement project.**



## Bryce Canyon National Park Road Improvement - 2003

### BRYCE CANYON NATIONAL PARK IS OPEN!

- All viewpoints, except Agua and Ponderosa Canyons, are open and available for viewing.
- All park concessions are open and available.
- All park interpretive activities are available.
- Hiking trails are open.
- Campgrounds are open.
- Shuttle service from May 16<sup>th</sup> through early September will provide easier access.

### NO DELAYS ON HOLIDAY WEEKENDS

Memorial Day, July 4<sup>th</sup>, Pioneer Day (July 24<sup>th</sup>) and Labor Day (September 1<sup>st</sup>)

### NO DAYTIME CONSTRUCTION DELAY

from Entrance Sign to Rainbow Gate through Sept 1<sup>st</sup>  
Possible 20 minute maximum delay after Sept 1<sup>st</sup>

### Possible 20 min maximum daytime delay from Rainbow Gate to Farview from Apr 1<sup>st</sup> - Nov 1<sup>st</sup>

### No nighttime delay from North Lodge Loop Road to the CCC Picnic Area throughout the season

### Possible nighttime delay from Entrance Sign to North Lodge Loop Road

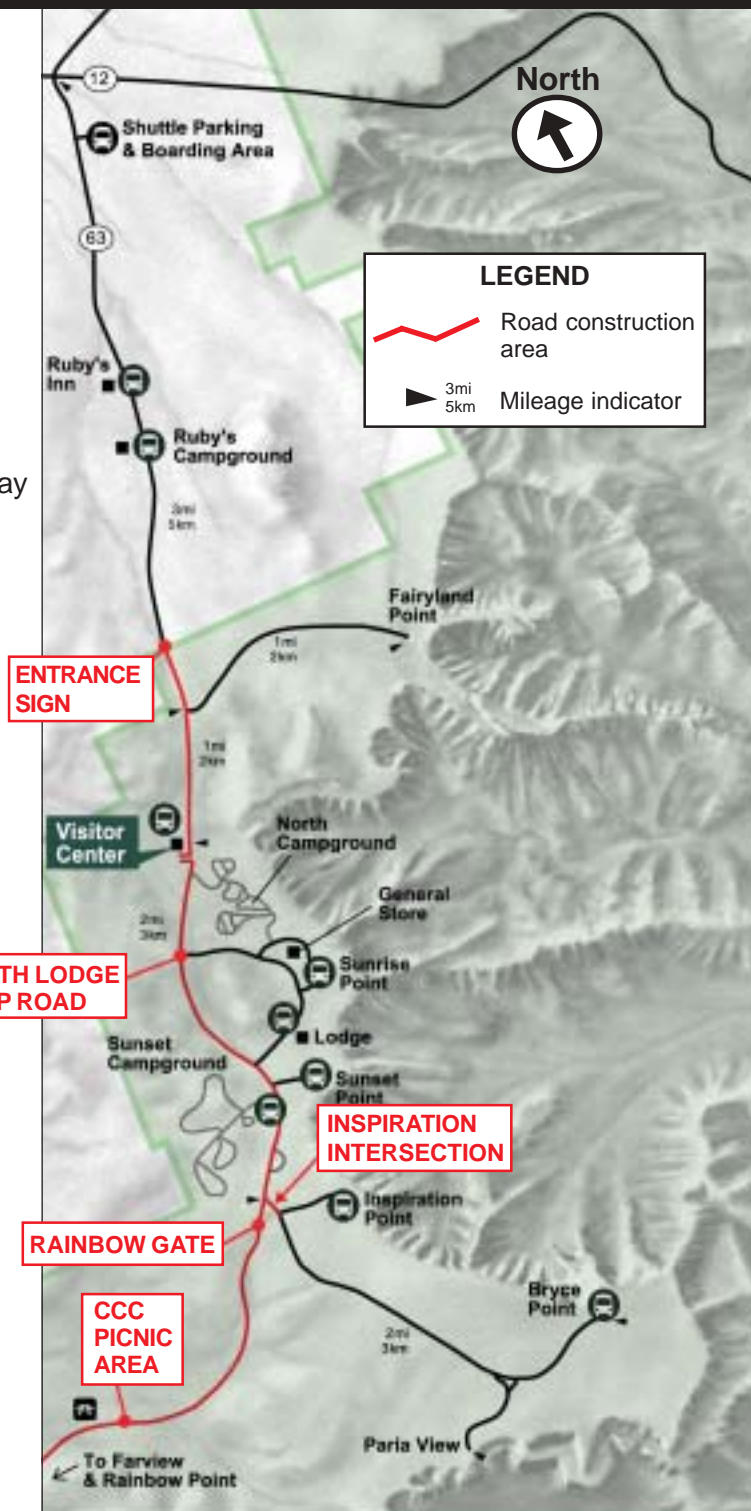
- May 22 through August 29 9pm-11pm (15 min)
- 11pm-5 am (1hr possible)

### Possible nighttime road closure south of CCC Picnic Area to Farview

- Contact the park or local business for specific times

**Visitors with trailers should leave their trailer outside of the park, unless staying in a park campground. Buses and Commercial Tour Vehicles are welcome.**

**Additional road construction information is available on the park information radio (AM 1590 & 1610), the park office at (435) 834-5322, and local area businesses.**





## Walks, Talks & Other Activities



*We invite you to join rangers to learn more about Bryce Canyon National Park. Rangers discuss geology, plants, animals and human history on the various walks and talks offered each day.*

**All programs are free!**

### RIM WALK -

Stroll along the canyon rim to learn of the park's diversity. 1 mile, 1½ hours.

### CANYON HIKE -

Hike among the hoodoos into the heart of Bryce Amphitheater. 1½-3 miles, 2-3 hours.

### GEOLOGY TALK -

Rangers tell the geological story of Bryce Canyon. 30 minutes.

### JUST FOR KIDS -

Join a ranger for games and activities on ecology and Bryce Canyon. 1 hour. Register at the visitor center up to one day in advance. Space is limited.

### CAMPFIRE/AUDITORIUM PROGRAM -

Bryce Canyon's diversity comes to life during the slide program or evening talk at the campfire circles or Bryce Canyon Lodge auditorium. 1 hour.

### MOONLIGHT HIKE -

Hike among moonlit hoodoos. Register early at the visitor center **in person** on the day of the hike. 1½ miles, 2 hours. (Offered two nights each month during the full moon. Ask at the visitor center or check our website, [www.nps.gov/brca](http://www.nps.gov/brca), for moonlight hike schedules.)

### ASTRONOMY PROGRAMS -

Join an astronomer to view Bryce Canyon's night skies through telescopes. 2 hours. (Offered three times per month. Ask at the visitor center or check our website, [www.nps.gov/brca](http://www.nps.gov/brca), for night sky program schedules.)



**For dates, times, locations and topics, check the activity schedules posted at the visitor center, general store, Bryce Canyon Lodge, and campground bulletin boards.**

## Ebenezer & Mary BRYCE



Ebenezer Bryce and his family came to the Paria Valley in 1875. He was sent by the Church of Jesus Christ of Latter-day Saints because his skill as a carpenter would be useful in settling the area.

Bryce built a road to the plateau top to retrieve firewood and timber. He also built an irrigation canal to raise crops and animals. Local people called the canyon with strange rock formations near Ebenezer's home "Bryce's Canyon."

The Bryces moved to Arizona in 1880; to this day people continue to call this area Bryce Canyon.

## Bryce?

I've Heard That Name Before...



U.S.S. Bryce Canyon

This destroyer tender supplied and repaired hundreds of ships in the Pacific Fleet. She was the only ship in the U.S. Navy decorated with the "Gold E," having won five consecutive efficiency awards. Ask about our sailor register.

## WEATHER INFORMATION

	Average High Temperature		Average Low Temperature		Average Precipitation	
	F	C	F	C	In.	Cm.
January	39	4	9	-13	1.7	4.3
February	41	5	13	-11	1.4	3.6
March	46	8	17	-8	1.4	3.6
April	56	13	25	-4	1.2	3.0
May	66	19	31	-1	0.8	2.0
June	76	24	38	3	0.6	1.5
July	83	30	47	8	1.4	3.6
August	80	27	45	7	2.2	5.6
September	74	23	37	3	1.4	3.6
October	63	17	29	-2	1.4	3.6
November	51	11	19	-7	1.2	3.0
December	42	6	11	-12	1.6	4.0



## National Scenic Byway 12 "All-American Road"

Surrounding Bryce Canyon National Park are several recreational and scenic areas which can be reached by driving National Scenic Byway 12.

The Federal Highway Administration recently designated the route an "All-American Road," with one-of-a-kind features so exceptional that it qualifies as a destination unto itself.

Only a few National Scenic Byways achieve all intrinsic qualities of All-American Roads, making National Scenic Byway 12 one of the most unique roads in the country. Ask for a Scenic Byway 12 brochure at the visitor center.

## Accessibility



National parks are set aside for the enjoyment of all. Because of the rugged nature of many of our nation's treasures, it has been difficult to provide access for everyone who might have special needs. The National Park Service has been making strides to furnish facilities that allow everyone the opportunity to enjoy the beauties of the great outdoors.

Visitors will find that this is true at Bryce Canyon as well. Some of the steps to insure accessibility include:

- ◆ restrooms with accessible stalls
- ◆ accessible campsites
- ◆ half-mile section of the Rim Trail between Sunset and Sunrise Points is suitable for wheelchairs and those who have difficulty walking
- ◆ parking displaying the International Access Symbol
- ◆ many ranger guided interpretive programs are accessible (check at the visitor center for applicable programs)
- ◆ Bryce Canyon General Store and Lodge are accessible, as are the gift shop, laundromat, showers, and restaurant.

If you have any questions about accessibility within the park, stop by the visitor center and request an **Access Guide**.

Temporary handicapped parking permits are available at the visitor center, as well.

### Visitor Center:



Bryce Canyon's visitor center is open daily from 8:00 a.m. to 8:00 p.m. (summer months). Park information, museum, publications, an award-winning film, backcountry permits, first aid, and lost-and-found services are available here.

### Camping:



North and Sunset Campgrounds have a total of 216 sites, available on a first-come, first-served basis. Camping is \$10 a night per site. One group campsite is available by reservation only. No hookups are provided, but a fee-for-use sanitary dump station is available seasonally near North Campground.

### Lodging:



Bryce Canyon Lodge has 114 rooms including suites, motel rooms and cabins. For lodging reservations, write to: Xanterra Parks and Resorts, Inc., 4001 East Iliiff Ave., Suite 600, Aurora, CO 80014, or call (888) 297-2757; or visit their website at [www.xanterra.com](http://www.xanterra.com).

### Food/Supplies:



The lodge has a restaurant, gift shop and post office. The restaurant at Bryce Canyon Lodge is open for breakfast, lunch and dinner. The General Store, located near Sunrise Point parking area, has groceries, quick meals, film and camper supplies.

### Showers/Laundry:



Shower and laundry facilities are available at the General Store, located near Sunrise Point parking area.

### Church Services:



Non-denominational and LDS services are held in the park on Sundays. Other services are offered in neighboring communities. Check at the visitor center or Bryce Canyon Lodge for schedules.

### Horseback Rides:



Morning and afternoon horseback rides led by wranglers are available April through October. 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. For more information, visit their website at [www.canyonrides.com](http://www.canyonrides.com).

### Phones:



Public phones are available at the visitor center, Bryce Canyon Lodge, the General Store and Sunset Campground. Emergency information is posted at the phones.

### Mail:



A post office is open at Ruby's Inn (Bryce, UT 84764) all year, and at the Bryce Canyon Lodge (Bryce Canyon, UT 84717) April through October. The park is unable to accept personal mail addressed to visitors.

### Pets



Pets are not recommended in the park. If you must bring your pet with you, be aware that they must be on a leash and under control at all times, they are not permitted on park trails, and there are no kennel services within 80 miles of the park.

### Bicycles



Bicycles are restricted to paved roadways. Information on mountain biking opportunities outside of the park may be obtained by writing or calling the Garfield County Travel Council, P.O. Box 200, Panguitch, Utah 84759, 1-(800) 444-6689; [www.brycecanyoncountry.com](http://www.brycecanyoncountry.com).

### Picnic Areas:



Picnic tables, water and restrooms are available at Sunset Point, Yovimpa Point and the south end of North Campground. Picnic tables are also located along the road to Rainbow Point, but these offer no other amenities.

## SAFETY AT BRYCE



**Ankle injuries are our number one safety problem.** Wear hiking boots with good ankle support and traction.



Observe speed limits and buckle up!



Be aware of the altitude. Park elevations reach 9115 feet (2778 meters). Know and respect your own physical limitations. High altitude sun can burn and dehydrate quickly. **Drink plenty of water.** Wear a hat, sunscreen and sunglasses that block ultraviolet light.



**Stay on designated trails and away from cliff edges.** Loose and crumbly rocks can make footing treacherous. Falls can be deadly. Don't throw rocks into the canyon; you may injure hikers on trails below you.

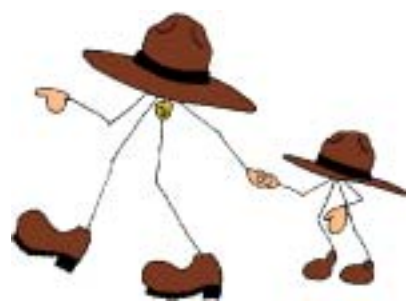


During lightning storms, stay away from the rim and do not take shelter under trees.



Do your part. **DON'T feed the wildlife.** Human food is harmful to wild animals. Animals will bite and can transmit diseases such as rabies and bubonic plague. Watch wildlife from a distance.





## Hey Kids!

Would you like to become a Junior Ranger?

1. Stop at the visitor center and ask for a **free** Junior Ranger booklet.
2. Complete the activities inside and return it to a ranger at the visitor center.
3. When you've finished, you'll receive an official certificate, Bryce Canyon Junior Ranger badge and embroidered patch!

*Bryce Canyon's Junior Rangers have a special chance to learn about the park's natural and cultural history.*



## For Kids Only!

Join in the fun and become a Bryce Canyon Junior Ranger.



## Geodetectives Program



## Kids ~ Parents Educators

Check out this fun and exciting adventure series about earth science!

The Geodetectives Program is designed for both teachers and students to learn about Earth Systems, Paleontology, Rocks and Minerals, Landforms, Plate Tectonics, and the Hydrologic Cycle.

Lesson plans can be downloaded from our web site. Fun experiments and learning mysteries are under construction and will be available soon.

All lesson plans follow the Utah State Core Curriculum and meet the National Science Education Standards.

Visit our geodetectives web page at:  
[www.nps.gov/brca/geodet](http://www.nps.gov/brca/geodet)

Uncover the past...

Discover the Earth

# BACKCOUNTRY CAMPING



Would you like to experience a part of Bryce Canyon National Park that few visitors ever see? Less than 1% of all Bryce visitors explore the park's backcountry.

In contrast to the day-hiking trails which wind through intricately-carved hoodoos, Bryce Canyon's backcountry trails traverse forests and meadows and afford distant views of spectacularly-colored cliffs.



Backcountry camping is allowed on a limited basis and only at designated campsites. A \$5 backcountry permit is required. Permits are issued at the visitor center from 8:00 a.m. until two hours before sunset.

**CAMPFIRES ARE NOT ALLOWED IN THE BACKCOUNTRY.** Water sources are unreliable and are not maintained or tested for bacterial contamination or heavy metals. We recommend that each person carry a minimum of one gallon of water from an approved drinking source for each day they are in the backcountry.



Ask at the visitor center for a free Backcountry Information Guide.

The 23-mile **Under-the-Rim Trail** can be accessed by four different connecting trails along the park road. The 9-mile **Riggs Spring Loop Trail** begins and ends at Yovimpa Point.

Stop at the visitor center and talk to a ranger before making any overnight trip into the backcountry. Maps and other information concerning trails, campsites, water availability and backcountry regulations are available at the visitor center.

Please practice principles of the Leave No Trace Outdoor Ethics Program.

- Plan ahead and prepare.
- Travel and camp on durable surfaces
- Dispose of waste properly.
- Leave what you find.
- Respect wildlife.
- Be considerate of other visitors.





## All Aboard Our Free Shuttle!



We encourage you to use the Bryce Canyon Shuttle during your stay. Not only is it **free**, easy and convenient, but you'll be doing your part to reduce traffic, conserve fuel and protect park resources. Following are answers to some frequently asked questions:

**When does the shuttle operate?** Beginning **May 16, 2003**, shuttle buses will operate **9:00 a.m. to 6:00 p.m.** daily during summer months. Check at the visitor center or tune to Radio 1610 AM for more detailed information on shuttle dates and times.

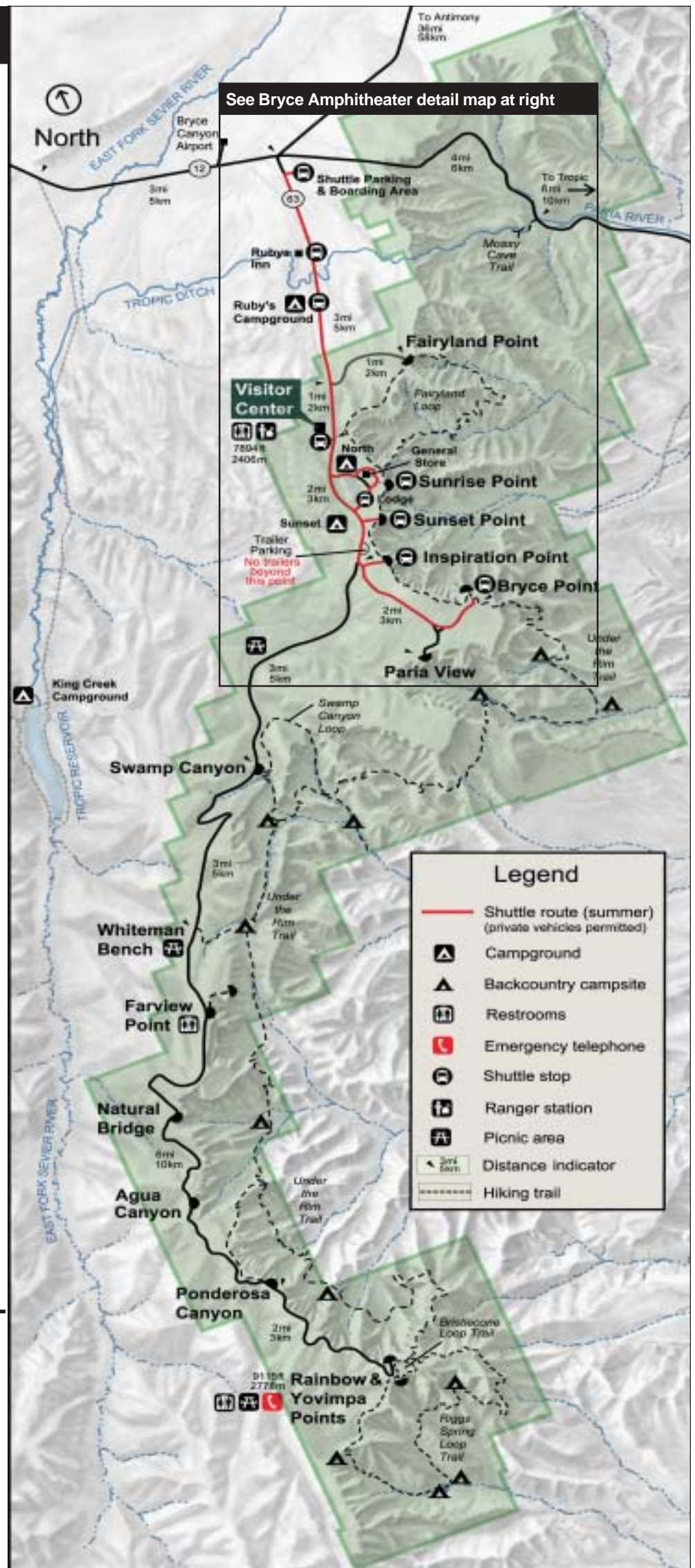
**Where can I board the shuttle buses?** You may board the shuttle at any of the following stops:

- Shuttle Parking and Boarding Area
- Ruby's Inn
- Ruby's Campground
- Bryce Canyon Visitor Center
- Sunset Campground
- Bryce Point
- Inspiration Point
- Sunset Point
- Bryce Canyon Lodge
- Sunrise Point/General Store

**Where should I park my private vehicle?** Ample parking is available at the Shuttle Parking and Boarding Area, and at Ruby's Inn. Parking is limited elsewhere. **Visitor center parking is limited to 1 hour.**

**Is there a charge to ride the shuttle?** There is no charge for riding the shuttle, but boarding the shuttle from outside the park requires a shuttle ticket or park pass.

**How often do the buses run?** During peak hours, buses run every 12 minutes.



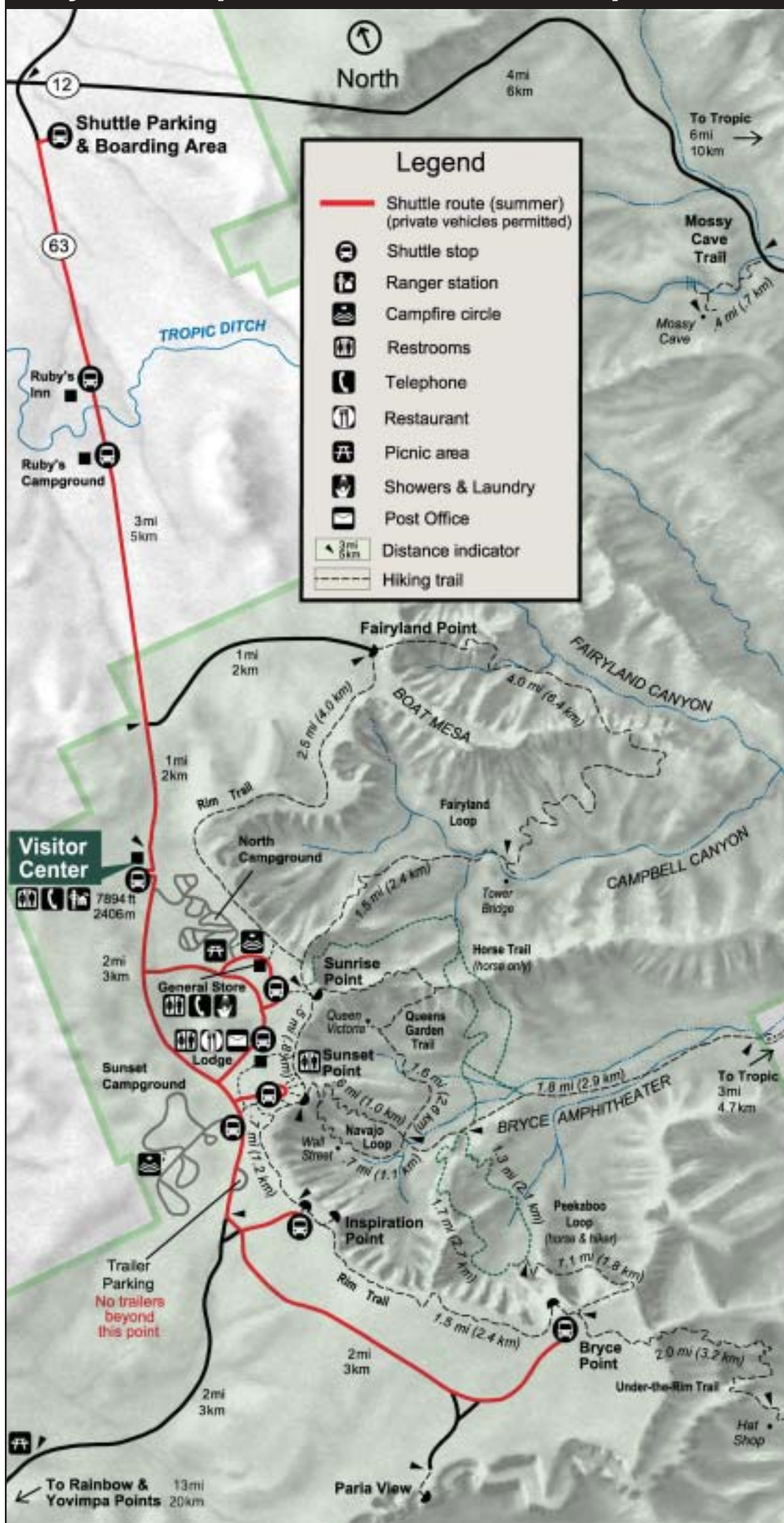
### Zion National Park Shuttle

From April through October, the Zion Canyon Scenic Drive is accessible by **shuttle bus only**. *Private vehicles are not allowed.* Free buses run from 5:30 a.m. to 11 p.m. as often as every six minutes. Buses are fully accessible. Pets are not allowed.





## Bryce Amphitheater Detail Map



## Trail Guide

TRAIL NAME / STARTING POINT	ROUND TRIP DISTANCE / TIME	ELEVATION	DESCRIPTION
<b>Easy to Moderate Hikes</b>			
<b>MOSSY CAVE</b> Highway 12, northwest of Tropic (not a loop)	.8 mi 1.3 km 1 hour	150 ft 45 m	Streamside walk up to a mossy grotto and a small waterfall.
<b>RIM TRAIL</b> Anywhere along rim (not a loop)	up to 11.0 mi up to 17.7 km 5-6 hours	550 ft 168 m	Outstanding views of hoodoos from above. Trail is paved and fairly level between Sunrise and Sunset Points.
<b>BRISTLECONE LOOP</b> Rainbow Point <i>Trail guide available at visitor center for \$1.</i>	1.0 mi 1.6 km 1 hour	100 ft 31 m	Hike through spruce-fir forests to cliffs with bristlecone pines and exceptional views.
<b>QUEENS GARDEN</b> Sunrise Point (not a loop) <i>Trail guide available at visitor center for \$1.</i>	1.8 mi 2.9 km 1-2 hours	320 ft 98 m	Considered the least difficult trail into the canyon. See Queen Victoria at the end of a short spur trail.
<b>Moderate Hikes</b>			
<b>NAVAJO LOOP</b> Sunset Point <i>Trail guide available at visitor center for \$1.</i>	1.3 mi 2.2 km 1-2 hours	521 ft 159 m	Switchbacks descend into Wall Street, a "slot" canyon with huge Douglas-fir trees. View Thors Hammer on the trail's north side.
<b>NAVAJO/QUEENS COMBINATION</b> Sunset or Sunrise Point	2.9 mi 4.6 km 2-3 hours	521 ft 159 m	Combine the two trails described above. Hike the Rim Trail back to your starting point.
<b>TOWER BRIDGE</b> North of Sunrise Point (not a loop)	3.0 mi 4.8 km 2-3 hours	800 ft 244 m	See bristlecone pines and the Chinese Wall. A shady 1/4-mile side trail leads to the bridge.
<b>Strenuous Hikes</b>			
<b>FAIRYLAND LOOP</b> Fairyland Point or north of Sunrise Point	8.0 miles 12.9 km 4-5 hours	900 ft* 275 m	Hike into Fairyland and Campbell Canyons along this strenuous but less crowded trail.
<b>PEEKABOO LOOP</b> Bryce Point <i>(Horses use this trail.)</i>	5.5 mi 8.8 km 3-4 hours	800 ft* 244 m	Steep but spectacular hike past Wall of Windows and Three Wisemen. <b>Hikers yield to horses on this trail.</b>
<b>PEEKABOO/NAVAJO COMBINATION</b> Sunset Point	4.9 mi 7.8 km 3-4 hours	800 ft* 244 m	Combine Peekaboo Loop with Navajo Loop. See descriptions above.
<b>PEEKABOO/NAVAJO/QUEENS COMBINATION</b> Sunset or Sunrise Point	6.8 mi 10.9 km 3-5 hours	800 ft* 244 m	Combine Peekaboo Loop with Navajo/Queens Garden combination. See descriptions above.

\* Multiple elevation changes occur on Fairyland and Peekaboo Loop Trails.

**Wear hiking boots with good traction.**  
**Carry and drink plenty of water.**  
**Park elevations reach over 9100 feet (2774 m). If you are not accustomed to high altitudes, even mild exertion may leave you feeling light-headed and nauseated.**



## Help Bryce Canyon RECYCLE!



The average person generates about 4.5 lbs of garbage each day. With over 1.5 million visitors, that's about 7 million pounds of trash each year! Unfortunately, some of that ends up on the ground. Trash decomposes very slowly in the park's cold and dry climate.

Due to the remoteness of Bryce Canyon, disposal and recycling facilities are a distance away. The park hauls garbage 15 miles to a landfill and recyclables 80 miles. To keep Bryce Canyon natural and beautiful for the future, please dispose of trash in the proper receptacles.

Trash containers: visitor center, all view points and campground entrances.

Aluminum recycling receptacles: visitor center, sewage dump station, North Campground picnic area, Sunrise, Sunset, Bryce, Farview and Rainbow Points, Bryce Canyon Lodge and General Store.

**Please keep  
Bryce Canyon  
beautiful!**

## Losing Afraid of <sup>^</sup>the Dark?

Some people are afraid of the dark. Here at Bryce Canyon, however, park rangers are afraid of the light! Perhaps you'd be fearful, too, if it was your job to protect the last of the best darkness left in the world.

It is not an easy job protecting the dark. Not only do we have to turn off our own lights, we also encourage our neighbors to do the same. Fortunately, the lights from the closest city lie far behind the curvature of the Earth.

Earth is a sphere, so in most places the horizons are only 12 miles away. Yet while looking from the top of one tall mountain to the next you can see a lot farther before the curvature of the Earth gets in the way. On a clear day we can see under the Bryce Canyon "blue" nearly 200 miles to the Black Mesas in Eastern Arizona.

Bryce is also a phenomenal place for stargazing, but before planets and stars appear, look for the rare sight of Earth's penumbra. After the last light of the setting sun fades from the highest clouds, a purple band will appear directly above the eastern horizon. This is the edge of Earth's own shadow being projected on to the atmosphere. Look quickly because this phenomenon is soon engulfed in darkness as the stars take the stage.

The first star may actually be a planet, but it is soon followed by Vega, Arcturus, and other bright stars. When the transition from light to dark is complete, look for the combined light of a billion stars all so distant they appear as one long cloud. *Behold, the Milky Way!* This stellar strip of light is only a portion of our galaxy's other great spiral arm. Imagine standing in the left hand of a spinning figure skater, looking across to her right arm while she dances our solar system and the rest of her 100 billion stars through the universe. What does an entire galaxy look like?

In most places it's never dark enough, but at Bryce, only two hours after sunset, your eyes will be able to see 527 quadrillion miles (2.2 million light years) to the Andromeda Galaxy. This smudge of light is an entirely different figure skater, dancing to a different tune.



*Andromeda Galaxy*

You can find her buy "star hopping" your eyes from the middle star in the Big Dipper's handle through the North Star past the zigzag-shaped constellation of Cassiopeia, until you come to a fuzzy cloud known as M31. Andromeda is simultaneously the largest and most distant object you will ever see with your naked eye, measuring 110,000 light years in diameter!

There are lots of reasons to force back darkness with light. To many people, light means safety and knowledge. To others light offers 24-hour advertising and industry. Yet, for those who know their stars, a skyward glance offers a sense of security, helping them feel at home no matter where they travel. Those who have come to love the night sky will gaze into the void for hours, inspired by an unparalleled sense of awe.

It is easy to feel insignificant underneath such vastness, yet ironically, it is within the individual's power to preserve such a view. Close your blinds at night. Replace porch lights with motion sensor security lights that only come on when they are needed. Ask your city officials to shroud streetlights so they only shine downward where the light is needed.

Many places have the potential for Bryce Canyon quality stargazing. Doing your part to preserve the heavens is literally as simple as throwing a switch. On or off? The choice is ours.

*"Hey, Joe! That's not smog! That's the Milky Way!  
Joe had never seen the Milky Way."*

- C.W. McCall

## Why Are So Many Trees Black?

Perhaps you've noticed scorched trees and other signs of forest fires. Some fires were started by lightning, others were intentionally set by park rangers using a modern ecological practice called "prescribed burning."

While fire can be detrimental to some species, the right kind of fire promotes the growth of grasses, shrubs, and berry-producing bushes, thus providing food for many species of birds and wildlife.

Since the beginning of time, plants and animals have lived with fire. Only in the last 125 years, have we humans tried to change the laws of nature by preventing forest fires. Nature has not adjusted well to our

anti-fire notions. Meadows have been taken over by forests. Forests have become overly dense leading to disease and invasion by parasitic insects—all leading to an overall reduction in biodiversity.

Historic fires routinely burned away dead and dying wood. Now unnatural accumulations of fuels await firefighters like time bombs with the potential of becoming the destructive firestorms often depicted in the media. The National Park Service feels that prescribed fire is the most cost effective way to slowly and safely defuse the problem.

Please contact a park ranger for more information about prescribed fire and its role in maintaining long-term forest health.





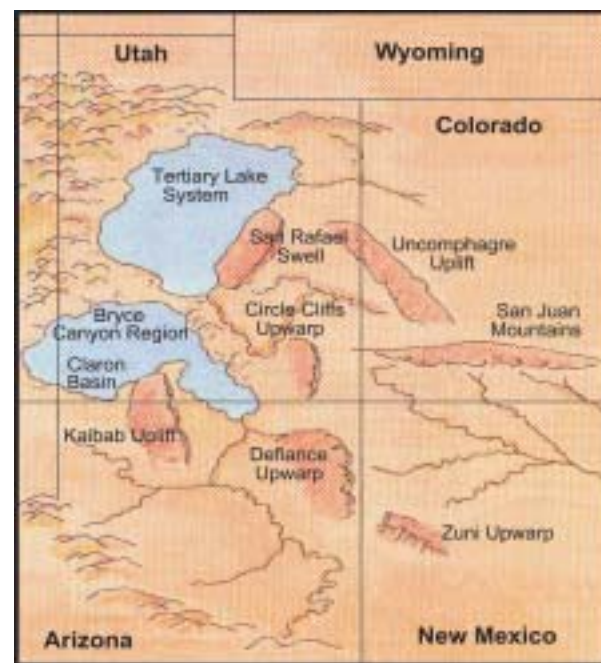
## How Was Bryce Canyon Created?

The striking scenery which makes Bryce Canyon unique has been created by the forces of nature sculpting the brilliantly-colored **Claron Formation** into a series of beautiful and unusual erosional features.

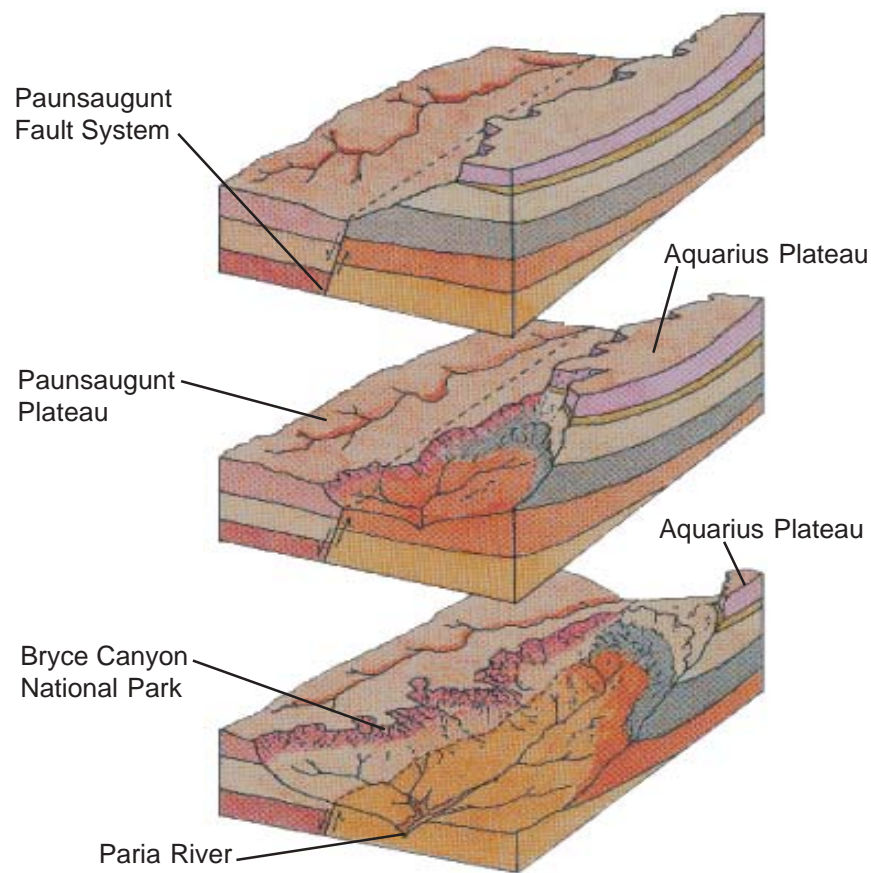
Bryce Canyon's beginnings take us back to the end of the earth's tumultuous Cretaceous Period, 65 million years ago. It was a time that brought cataclysmic changes worldwide, including the extinction of the dinosaurs.

### Deposition

The creation of this unique landscape can be traced back to a network of braided rivers and streams which transported a variety of sediments into a large **freshwater lake** that once covered southwestern Utah. Colorful minerals such as iron (yellow and red) and manganese (pink and violet) mixed with dissolved calcium carbonate to create this unusually colorful **limestone**. Over time, the water disappeared, leaving behind the multicolored **Claron Formation** from which Bryce Canyon's unusual scenery is carved.



Generalized Diagram of Tertiary Lake Systems in Utah



### Uplift & Faulting

About 10-15 million years ago, a period of uplift began in the large region of the southwest known as the Colorado Plateau. Such tremendous stress on the earth's crust led to a period of faulting, during which the Colorado Plateau was stretched and fractured to form a series of smaller plateaus.

The highest of these plateaus, the Aquarius, is visible to the east of Bryce. Bryce Canyon has been carved from the eastern rim of the Paunsaugunt Plateau. The **Paunsaugunt Fault**, which separates these two plateaus, initiated the sculpting process by breaking the surrounding rock with vertical mini-fractures called **joints**. A series of perpendicular joints were also created by another earthquake zone called the **Ruby's Inn Over-thrust Fault**. Earthquakes along these two faults left a checkerboard pattern of fractures, priming Bryce Canyon for the forces of weathering and erosion.

### Weathering & Erosion

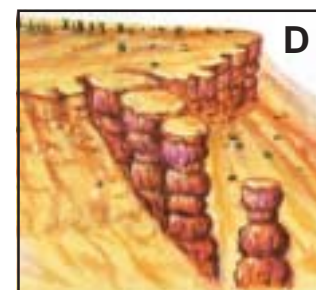
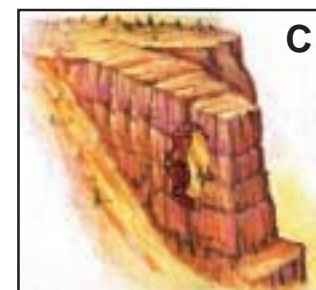
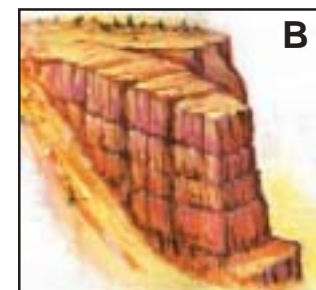
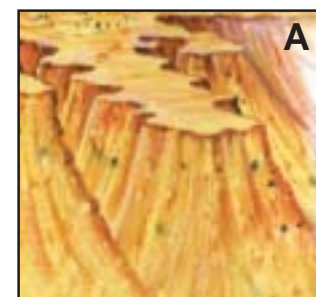
Although Bryce Canyon receives a meager 18 inches of precipitation annually, it's amazing what this little bit of water can do under the right circumstances!

Sub-freezing nighttime temperatures and relatively warm days result in over 200 freeze-thaw cycles annually. During the afternoon, snow and ice will melt, causing water to seep deep into the **joints** of the **Claron Formation**. Once the sun sets, temperatures plummet and the water re-freezes, expanding up to 9% as it becomes ice. Exerting tremendous force on the adjacent rock, this process, known as **frost wedging**, shatters and pries the weak rock apart.

At the same time, rain water, which is naturally acidic, is slowly dissolving away the limestone, rounding off the edges of these fractured rocks, and washing away the debris. The plateau continues to erode westward in a process called **headward erosion**.

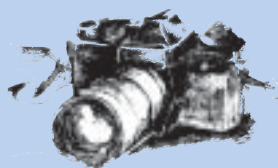
Small rivulets of water periodically run down the sloping eastern escarpment of the plateau, forming gullies **(A)**. As gullies are cut deeper, narrow walls of rock known as **fins** begin to emerge **(B)**. Fins eventually develop holes known as **windows** **(C)**. Windows grow larger until their roofs collapse, creating **hoodoos** **(D)**. As old hoodoos collapse, new ones are being born.

The conditions and processes at work here are not unique, but the distinctive way in which all of the elements operate together results in the fantastic scenery that makes Bryce Canyon worldly unique.





## Photo Tips



Early morning and late afternoon hours are great times for pictures. The lower angle of the sun highlights shadows and enriches the red and orange colors of the rock formations.

Sunrise and sunset times are posted daily at the visitor center.

Since the canyons face east, all viewpoints are excellent for the morning sun. For sunset, Inspiration and Bryce Points are high enough above the trees to see the sun set in the west.

At high altitudes, consider using filters to minimize ultra-violet light. A polarizer helps to saturate colors and enrich a blue sky.

Use a telephoto lens when photographing wildlife. Keep your distance and catch them in a natural setting.

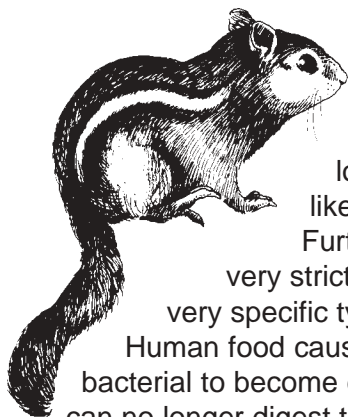
Stay a safe distance from the rim. Rocks are loose and crumbly and can make footing treacherous.

Bright light can make it difficult to get a properly exposed picture. It's a good idea to "bracket" your exposures (over and under-exposing) to get an acceptable picture.

Bryce photography continues into the night. With a tripod and cable release you can capture the moon, stars and planets as they shine in the clear night sky.

## Help Stop Animal Cruelty!

We, as visitors, have just as important a role in protecting wild animals as do park rangers. Feeding wildlife is a classic example of how good intentions can unwittingly cause serious harm.



Feeding wild animals is actually a form of animal cruelty! Fed animals frequent roads and parking lots where they are much more likely to get run over by cars. Furthermore, wild animals have very strict natural diets and therefore very specific types of digestive bacteria. Human food causes the wrong type of digestive bacteria to become dominant. Soon fed animals can no longer digest their natural foods and ultimately they will starve to death with full stomachs. What could be more cruel?

The act of feeding wildlife can also be dangerous to people. Rodents are notorious for transmitting diseases. You put yourself in jeopardy every time you get within flea-jumping distance 6-9 feet (2-3 m) of a squirrel or prairie dog. Worse yet, feeding can cause normally docile animals like deer to become aggressive. In one sad instance at Yosemite National Park, a young child was gored and killed by a "spike" deer buck when he refused to relinquish his sandwich to the animal.



Giving in just once to the big, brown, pleading eyes of a cute animal can have major consequences. BE RESPONSIBLE!! Learn to be a friend of wildlife by not trying to befriend animals with food.

**Please spread the word! True animal lovers don't feed wild animals. Helps us protect your national parks.**

## Wings of Success

Not since the 1800's, have nine-foot wingspans cast majestic shadows across the Grand Staircase. First reintroduced in 1996, now 24 captive-raised condors call the Grand Staircase home. After the laying of the first "wild" egg in March of 2001, it looks like condor recovery will just be a matter of time.

Nevertheless, 2000 was a tough year for the big birds -- six condors perished. Two were killed by coyotes, and four died of lead poisoning after ingesting lead shot from rabbit carcasses. Because bullets pass clean through rabbits, hunters are being asked to use rifles rather than shotguns when sport-hunting rabbits. Those who use rifles are not only rewarded by the increased "sport" rifle marksmanship brings, but they can also be proud of the fact that they are keeping lead out of the food web, and thus benefiting condors and many other scavenging birds and wildlife species.



In their relentless search for carrion, condors range over 100 miles a day. Keep your eyes peeled because occasionally they explore the cliffs of Bryce.

While scanning for condors, you may miss a glimpse of another success story streaking out of the sky. Bryce is also home to peregrine falcons. In 1999, peregrine were declared recovered and removed from the Endangered Species List.

Condors and peregrines serve as testament to how miraculous things can be accomplished when people care enough.

## Utah Prairie Dogs

Bryce Canyon is home to the Utah prairie dog (*Cynomys parvidens*), the western-most of five species of prairie dogs that inhabit North America. Prairie dogs once inhabited vast areas of the western Great Plains. The first pioneers who crossed the short-grass prairies were astounded to find vast colonies of stout little rodents. They called the creatures "prairie-dogs" and labeled their sprawling settlements towns. One such town in Texas covered an estimated 25,000 square miles and was said to have 400 million inhabitants! The settlement of the West, however, decimated these enormous populations.



Prior to the 1920's, Utah prairie dog distribution was estimated to be 95,000 animals. By the 1960's, populations had crashed due to poisoning, disease (bubonic plague), and drought. However, the chief concern has always been habitat loss. Habitat degradation practices like over-grazing, fire suppression, and various kinds of rural development furthered Utah prairie dog decline. By 1972 it was estimated that only 3,300 Utah prairie dogs remained, and it was thought they would be extinct by the year 2000.

In June 1973, the animals were listed as an Endangered Species. Conservation strategies included reintroducing them to Bryce Canyon National Park. Today about 130 Utah prairie dogs live in the park, and comprise the largest geographically-protected population of this species. Despite being downlisted to "Threatened" status in 1984, Utah prairie dog populations remain precariously low throughout their range. The threat of extinction is still an uncomfortable reality.



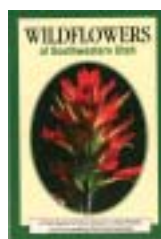


## GENERAL BOOKS

**Shadows of Time-Geology of Bryce Canyon National Park.**  
Text by Frank DeCourten, Photos by John Telford.  
155 pages, \$ 9.95 soft

**Bryce Canyon National Park**  
by Fred Hirschmann. Large format picture book.  
112 color pages. \$12.95 soft \$19.95 hard

**Bryce Canyon Auto and Hiking Guide** by Tully Stroud.  
An introduction to touring the park by car and foot.  
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**Wildflowers of Southwest Utah** by Hayle Buchanan. A field guide to Bryce Canyon and surrounding plant communities.  
119 pages, \$7.95

**KC Bryce Canyon: The Story Behind the Scenery** General Overview of Bryce Canyon's natural features. 48 pages, \$8.95

**KC Bryce Canyon: The Continuing Story**  
Photographic essay on Bryce Canyon.  
48 pages, \$8.95

**Sierra Press: Bryce Canyon National Park**  
by Greer Chesher. A beautifully written and illustrated book on Bryce Canyon. 45 pages, \$8.95  
Also available in this series.  
Zion, Grand Canyon, Yellowstone, Yosemite and Mesa Verde National Park.

**Geology of Utah, W. L. Stokes.**  
An excellent look at the complex and simple geology of Utah. 280 pages \$15.95

**Roadside Geology of Utah, H. Chronic.**  
This is a book that the layman will enjoy and the geologist appreciate. 326 pages \$18.00

**Geology of Utah's Parks and Monuments,**  
Sprinkel, Chidsey and Anderson. Available in August

## CHILDREN'S BOOKS

**Bryce Canyon Discovery** An educational activity book for children. 32 pages \$2.95

**Kid's Guide to Bryce Canyon**  
Coloring book with information and games. 32 pages, \$1.50

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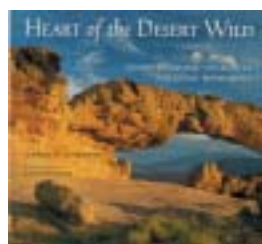
**Trails Illustrated Topographic Maps:** Backcountry and day hiking, information, water and tearproof.  
Scale 1:37270 \$9.95 ea.

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- Escalante Canyons
- Dixie National Forest
- Zion National Park
- Capitol Reef
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**Bryce Canyon Hiking Guide:**  
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**Bryce Canyon Day Hikes and Backpacking Trails** This publication is packed with great information about all the trails in Bryce Canyon. **SPECIAL \$1.95**

**Geological Cross Section**  
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**Grand Staircase - Escalante National Monument**  
by Greer Chesher

This publication combines a thought-provoking manuscript and spectacular images from one of America's newest national monuments.  
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The BCNHA in cooperation with the Bureau of Land Management has produced a striking line of postcards, magnets, posters and more on the Grand Staircase-Escalante National Monument. We also carry hiking guides for the area.

**All profits are used to finance new publications and assist Bryce Canyon National Park, the Bureau of Land Management and the Dixie National Forest in helping visitors admire and better understand our national parks.**

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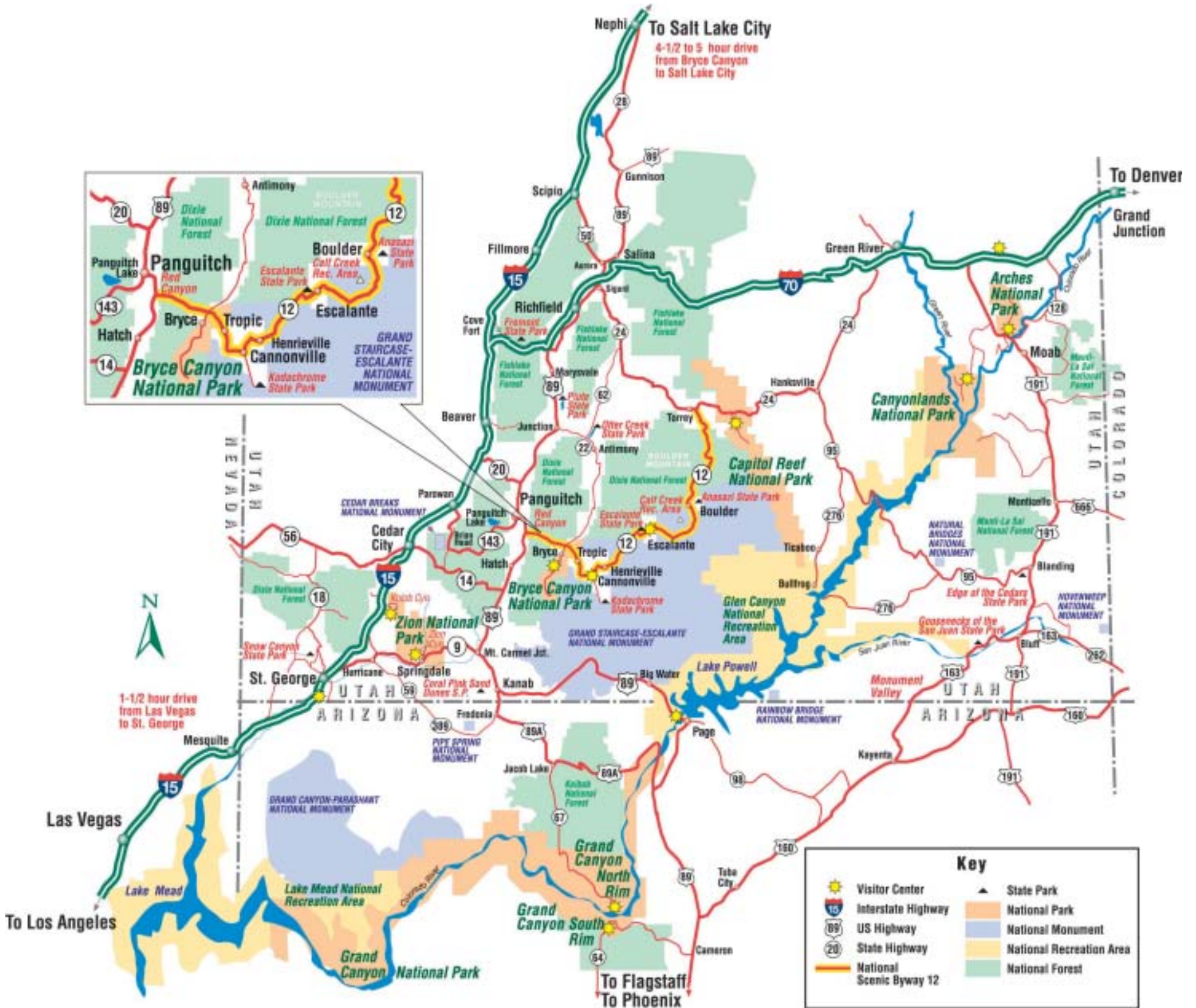
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PLEASE READ AND RECYCLE



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