

# Grand Canyon

National Park Service  
U.S. Department of the Interior  
Grand Canyon National Park  
Arizona



# The Guide

South Rim: March 1–May 28, 2010  
Also available in Deutsch, Español, Français,  
Italiano, 中文, 日本語, 한국어



View from Grandview Point. NPS photo by Michael Quinn

## Welcome to Grand Canyon National Park

The Grand Canyon we visit today is a gift from past generations. Take time to enjoy this gift. Sit and watch the changing play of light and shadows. Wander along a trail and feel the sunshine and wind on your face. Follow the antics of the ravens soaring above the rim. Can you hear the river roaring in the gorge far below? We must ensure that future generations have the opportunity to form connections with this inspiring landscape.

A few suggestions may make your visit more rewarding. The information in this publication will answer many of your questions about the South Rim. Stop by a visitor center and talk with a ranger. Participate in a ranger-led activity. Save gas and frustration; park your vehicle and ride the free shuttles. Watch a sunrise or sunset. Walk out at night to enjoy the star-filled sky or the moon-lit canyon.

Pause at a viewpoint and listen to other visitors proclaiming the beauty of the canyon in many languages.



## Ride the Free Shuttle Buses



To make your stay at Grand Canyon National Park less hectic and to reduce traffic congestion, use the free shuttle buses. The shuttles operate from before sunrise to after sunset, come by frequently, and the drivers never get lost. Read the article on page 5 and the map on pages 8–9 for more details.

## Start Your Visit at the Grand Canyon Visitor Center



Grand Canyon Visitor Center and Mather Point, just a few miles north of the South Entrance and 26 miles (42 km) west of the East Entrance, feature:

- Ample parking near the visitor center and canyon rim
- Rangers to answer your questions and help plan your visit
- A short, paved trail to Mather Point
- The Rim Trail to continue your exploration along the edge of the canyon
- Free shuttle buses to travel to other South Rim locations
- Rest rooms that are always available
- Books and gifts at Books and More bookstore

The Grand Canyon Visitor Center is open 8:00 a.m. to 5:00 p.m.; Books and More 8:00 a.m. to 6:00 p.m. in March and 8:00 a.m. to 7:00 p.m. in April and May. Enjoy the outside displays at any time. See page 5 for additional visitor centers.

## Mather Point Construction

Construction in the Mather Point area continues with new trails, an outdoor amphitheater, picnic tables, and new signs. Upon completion of the project, a new accessible trail will lead to Mather Point, a new rest room will serve the tour bus parking and rim area, shuttle buses will stop at a spot just west of Mather Point, and a shuttle bus loading area will be located near the visitor center and parking lots.

**Please use caution when exploring near construction areas.**

## Look inside for information on:

<b>Maps</b> . . . . .	8 – 9, 13, 16
Ranger Programs . . . . .	2 – 3
Information Centers . . . . .	5
Sunrise & Sunset Times . . . . .	5
Geology . . . . .	7
Hiking . . . . .	12 – 13
Visitor Services . . . . .	14 – 15
Desert View . . . . .	16

## What Time Is It?

Most of Arizona, including Grand Canyon National Park, remains on Mountain Standard Time year-round. Until March 13, Arizona is on the same time as Colorado, New Mexico, and Utah. Beginning March 14, Arizona is on the same time as California and Nevada.

## Emergency: 911

**24 hours-a-day dial  
911 from any phone  
9-911 from hotel phones**



**Thinking of  
Hiking?**















See pages 12–13

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

# Ranger Programs





During your visit the National Park Service encourages you to participate in the programs listed below. All programs are free. We hope that learning more about Grand Canyon National Park and its resources will lead to a greater

## Grand Canyon Village




Activity	Location	Time	Duration	Frequency
<b>Fossil Walk: Remnant Impressions</b>  <p>Walk among brachiopods, sponges, and other marine creatures that thrived on this part of the continent 270 million years ago, before the age of the dinosaurs. This easy ½-mile (0.8 km) one-way walk explores an exposed fossil bed along the rim. Parking may be limited; park in Lots C, D, or E or ride the free Village Route shuttle to the Bright Angel Lodge stop. An alternative activity will be offered during inclement weather. <b>No programs May 3–5.</b></p>	Patio on rim side of <b>Bright Angel Lodge</b>	9:00 a.m.	1 hour	Daily No programs May 3–5
<b>Colorado River Talk</b>   <p>Enjoy the grandeur and power of the Colorado River as you explore and discuss the river's role in Grand Canyon. Program may include a short walk on a paved path. Parking may be limited; plan to arrive by the free Village Route shuttle bus to the Yavapai Observation Station stop. <b>No programs May 3–5.</b></p>	Bicycle rack outside <b>Yavapai Observation Station</b>	10:00 a.m.	30 – 45 minutes	Daily No programs May 3–5
<b>Introduction to Grand Canyon Geology Talk</b>   <p>Why is the Grand Canyon so deep, wide, and grand? Why does it exist only here in the world? Come learn how Grand Canyon was formed. Program may include a short walk on a paved path. Plan sufficient time to arrive at the visitor center by the free Village Route shuttle bus or drive to the nearby parking lots.</p>	<b>Grand Canyon Visitor Center</b> at Canyon View Information Plaza	10:30 a.m.	30 – 45 minutes	Daily
<b>The Human Story</b>   <p>For thousands of years, humans have been part of Grand Canyon. Join park staff outside of Verkamp's Visitor Center to take a look at the history of the South Rim area. Programs may include a walk around the village historic district or a talk inside if the weather is poor. Parking in the nearby lot may be limited. Ride the free Village Route shuttle bus to the Train Depot stop or park in Lot D. <b>No programs May 3–5.</b></p>	<b>Verkamp's Visitor Center</b> front porch	10:30 a.m.	30–45 minutes	Daily No programs May 3–5
<b>Nature Walk or Talk</b>   <p>Learn more about the complexity and diversity of nature with a short hike along the rim. Talk will be presented inside during inclement weather. Topics vary and may include animals and plants adapting to changing seasons, human impact on nature, rare and endangered species, or Native American use of plants and animals. Parking may be limited; plan to arrive by the free Village Route shuttle bus to the Yavapai Observation Station stop. <b>No programs May 3–5.</b></p>	Bicycle rack outside <b>Yavapai Observation Station</b>	1:30 p.m.	45–60 minutes	Daily No programs May 3–5
<b>Rim Walk or Talk</b>   <p>Grand Canyon abounds with fascinating stories of history, geology and ecology. Enjoy an intriguing walk with a park ranger exploring the canyon's natural and cultural history. This is an easy ½-mile (0.8-km) walk on a paved trail. Activity will be moved indoors during inclement weather. Parking may be limited; consider parking at Lots C or D or riding the free Village Route shuttle bus to the Train Depot stop. <b>No programs May 3–5.</b></p>	<b>Verkamp's Visitor Center</b> front porch	2:30 p.m.	45 minutes	Daily No programs May 3–5
<b>Condor Talk: Wings over the Canyon</b>   <p>What highly endangered bird with a 9-foot wingspan is often spotted at Grand Canyon? The California condor! Learn about these majestic birds and their reintroduction in northern Arizona in a talk on the canyon's rim. Parking is limited; consider parking at Lots C or D or riding the free Village Route shuttle bus to the Bright Angel Lodge stop. <b>No programs May 3–5.</b></p>	In front of <b>Lookout Studio</b> near Bright Angel Lodge (You may have to use stairs to arrive at the program site.)	3:00 p.m.	30–45 minutes	Daily No programs May 3–5
<b>Geo-Glimpse Talk</b>   <p>Enjoy the geology exhibits at Yavapai Observation Station and explore a selected aspect of the canyon's geology during these short talks. Parking may be limited; plan to arrive by the free Village Route shuttle bus to the Yavapai Observation Station stop.</p>	Inside <b>Yavapai Observation Station</b>	3:00 p.m.	20 minutes	Daily

appreciation of your national park. Some programs are cancelled May 3–5 to allow our rangers to attend training.





## Grand Canyon Village continued

Activity	Location	Time	Duration	Frequency
<b>Evening Program</b>  				
The perfect way to end your day at Grand Canyon! Enjoy an illustrated ranger presentation on the canyon's fascinating natural or cultural history. For this evening's topic check the schedules posted around the park. Arrive by riding the free Village Shuttle bus to the Shrine of the Ages stop or park in Lot A. <b>No programs May 12 and 19</b>	<b>Shrine of the Ages</b> auditorium	March–April 7:30 p.m. May 8:00 p.m.	1 hour	Daily No programs May 12 and 19
<b>Full Moon Walks and Star Talks</b>  				
During nights around the full moon and new moon, rangers may offer moon walks and star talks at Yavapai Point. Check bulletin boards at the visitor centers and campgrounds to see if these events are scheduled.	<b>Yavapai Point</b>	Inquire at park visitor centers for times	1 hour	See page 5 for moon phase dates
<b>Additional Programs</b>				
As staffing permits, rangers will offer additional programs which may include Fossil Walks, Kolb Studio Tours, Condor Programs, and others as staffing is available. Look for signs in the Village area or at the visitor centers to confirm times and availability.	Locations vary	Varies	Varies	Varies




## Desert View and Tusayan Museum

<b>Glimpses of the Past</b>   				
Have you ever wondered how people found food, water and shelter in the desert Southwest 800 years ago? Join a ranger to explore the remains of an ancestral Puebloan village. Envision a thriving community in this harsh and demanding environment. This activity entails a journey on a 0.1 mile (0.2 km) flat, paved trail.	<b>Tusayan Museum</b> , 3 miles (5 km) west of Desert View	11:00 a.m. and 1:30 p.m.	30–45 minutes	Daily

## Inside the Canyon You must hike or ride the mules to these locations.

<b>Indian Garden</b>  	<b>These programs begin March 5.</b>			
Rangers present programs in the Indian Garden Campground over weekends as staffing permits. Check the bulletin board in the campground for times and topics. Programs begin March 5. <b>No programs May 2 and 6.</b>	<b>Indian Garden</b> on the Bright Angel Trail.	As posted	Varies	Friday– Sunday as staffing permits
<b>Phantom Ranch</b>  	<b>These programs begin March 5.</b>			
Programs are given daily at Phantom Ranch, reachable only by hiking or riding the mules to the bottom of the canyon. Talks cover a wide range of natural and cultural history topics. Upon arrival, check the Bright Angel Campground bulletin board or the Phantom Ranch Canteen for program locations and subjects. Programs begin March 5. <b>No programs May 2–6.</b>	<b>Phantom Ranch</b>	4:00 p.m.  7:30 p.m.	45–60 minutes	Daily

## Children must be accompanied by an adult at all programs.

-  All outdoor programs may be cancelled in inclement weather or when lightning danger is present.
-  These programs are wheelchair accessible with assistance. Wheelchairs are available for loan during the day at the Grand Canyon Visitor Center at Canyon View Information Plaza.
-  These family-oriented programs are ideal for meeting the ranger program requirement for Grand Canyon's Junior Ranger badge. Any ranger program, however, may serve the requirement on page 2 of the Junior Ranger Activity Booklet.

# Special Programs and Activities

## Archeology Day: March 27, Saturday Grand Canyon Visitor Center at Canyon View Information Plaza

People have lived in the Grand Canyon area for thousands of years, learning to sustain themselves in a challenging environment. Activities and presentations throughout the day, suitable for all ages, explore some of the activities of past peoples and how we learn about them.

### Evening programs

Friday, March 26

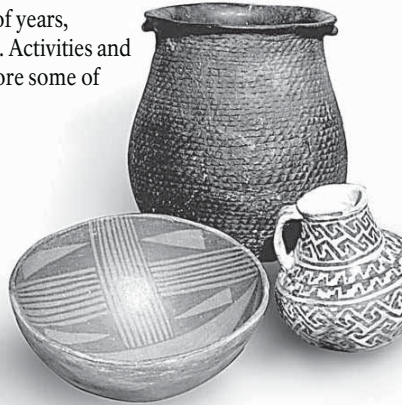
Archeologist Ian Hough

*Extreme Cultural Landscapes: New Archeological Research in Grand Canyon National Park*

Saturday, March 27

Ranger Jennifer Onufer

*A River of Dramatic Change: Archeology along the Colorado*



## March is Arizona Archeology Month

### Historic Kolb Studio Art Exhibits

**Kolb Studio is open 8:00 a.m.–6:00 p.m. in March, 8:00 a.m.–7:00 p.m. beginning April 1. Exhibits are free and open to all.**

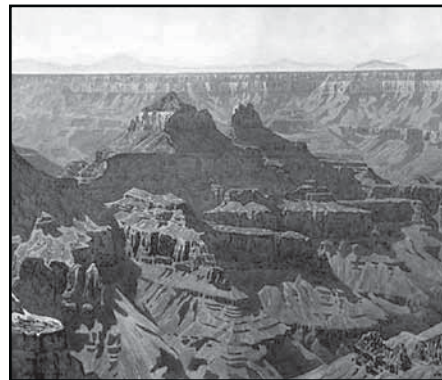
#### *Arts for Our Park: The Elements of Home: March 1–28*

In March of each year, the Grand Canyon National Park community celebrates National Youth Art Month with an exhibition of artworks created by local school children. Students from two Colorado Plateau communities—Leupp on the Navajo Reservation and Grand Canyon—interpret the *Elements of Home* theme through a variety of media.

#### *Canyon Magic: The Picerne Collection: Beginning April 2*

Dave Picerne, president and CEO of Picerne Real Estate Group, and Gary Fillmore, art appraiser and owner of Blue Coyote Gallery in Cave Creek, Arizona, combined forces in 2005 to assemble a premier collection of Arizona landmark art. Both believe the state of Arizona is blessed with some of the most recognizable and beautiful landscapes in North America. They founded the Arizona Centennial Landmark Art Collection in 2008, to educate the public about Arizona's artistic heritage and promote the state's natural scenic beauty.

This exhibit features early twentieth century paintings of Grand Canyon with various styles represented including several pieces by well-known landscape artists Gunnar Widforss and James Swinnerton.



*Grand Canyon, Gunnar Widforss, 1924  
19 x 22 inches, watercolor on paper*

Sponsored by the Grand Canyon Association. [www.grandcanyon.org](http://www.grandcanyon.org)

## Celebrate Wildlife Day: May 1, Saturday Shrine of the Ages

Staff from the National Park Service and Grand Canyon Association will hold an open house at the Shrine of the Ages near parking lot A on Saturday, May 1 from 10:00 a.m. to 5:00 p.m. Displays and exhibits will highlight canyon wildlife and current research projects. Researchers and rangers will offer indoor and outdoor programs for kids of all ages. Adobe Mountain Wildlife Center staff will have live animals and will provide informal programs throughout the day. A special wildlife evening program will be offered at 8:00 p.m. in the Shrine of the Ages.

For a schedule of activities check posters at National Park Service visitor centers or visit [www.nps.gov/grca/naturescience/wildlife-day.htm](http://www.nps.gov/grca/naturescience/wildlife-day.htm).



## Artist-in-Residence Program

Few places provoke as much wonder and creativity as Grand Canyon. The National Park Service hosts two Artist-in-Residence (AiR) programs—a seasonal program on the North Rim and a year-round program on the South Rim. Artists, selected through a formal jury process, are awarded three-week residencies. During their time here, each artist presents public programs of their own design in addition to studio time to pursue their projects.

The South Rim AiR program is pleased to host these artists during the 2010 spring season:

**March:** Collaborators Bridget Batch (photography, videography) and Kevin Cooley (videography) from Brooklyn, New York, focus on how people interact with each other within the massive scale of Grand Canyon. They plan to produce a collaborative performance piece with the help of willing park visitors and residents during their stay, as well as pursuing solo projects. Their outreach programs include a workshop with students from the local school and an evening program.

**April:** Poet and prose writer Dana Wildsmith, Bethlehem, Georgia, will focus on park-inspired pieces exploring the connection and tension between contemporary human culture and wilderness. Her public presentations include a project with local middle school students, an inner-canyon workshop at either Indian Garden or Phantom Ranch, and a formal reading as an evening program presentation.

**May:** While in-residence, photographer and mixed media artist Leah Sobsey from Greensboro, North Carolina, will experiment with the photographic process of cyanotype printing, which is dependent upon sunshine for processing. Her public programs include public hands-on workshops and an evening program.

All public workshops and presentations are free and family-friendly. Any necessary materials are provided. Watch for posters with more information on dates, locations, and times of Artist-in-Residence programs.

For more information about the Grand Canyon's AiR program, visit our web site: [www.nps.gov/grca/supportyourpark/air.htm](http://www.nps.gov/grca/supportyourpark/air.htm).



*Michael Miner, large-format photography  
AiR participant, January 2010*

# Enjoying Grand Canyon

## Information Centers

See pages 2–3 for ranger programs at these locations.



### Kolb Studio

Open daily 8:00 a.m. to 6:00 p.m.; 8:00 a.m. to 7:00 p.m. beginning April 1. Once the home and business of the Kolb brothers, pioneering photographers at Grand Canyon, this building has been restored. Visit the free art exhibits in the auditorium and shop in the bookstore. Kolb Studio is located in the Village Historic District, at the Bright Angel Trailhead. See page 4 for art exhibits displayed here. Free admission.



### Verkamp's Visitor Center

Open daily 8:00 a.m. to 6:00 p.m.; 8:00 a.m. to 7:00 p.m. beginning April 1. The newest visitor center resides in one of the oldest buildings on the South Rim. Operated for more than 100 years by the Verkamp family, the building now features displays telling the history of Grand Canyon Village and a bookstore. See pages 2–3 for ranger programs beginning here.



### Yavapai Observation Station

Open daily 8:00 a.m. to 6:00 p.m.; 8:00 a.m. to 7:00 p.m. beginning April 1. How old is the canyon? How did it form? The exhibits at Yavapai Observation Station answer these and other geology questions. The historic building, located one mile (1.6 km) east of Market Plaza, features expansive canyon views. The bookstore offers a variety of materials about the area.



### Canyon View Information Plaza

Grand Canyon Visitor Center open daily 8:00 a.m. to 5:00 p.m. Bookstore 8:00 a.m. to 6:00 p.m.; 8:00 a.m. to 7:00 p.m. beginning April 1. Start your visit at the Grand Canyon Visitor Center, Books and More bookstore, and Mather Point. Use the ample nearby parking or ride the free shuttle buses. You may view the outdoor exhibits anytime.



### Tusayan Museum

Open daily 9:00 a.m. to 5:00 p.m.; free admission  
A visit to Tusayan Ruin and Museum provides a look into the lives of a thriving community as illustrated by its pottery, seashell bracelets, corncobs, and arrowheads. See 2,000–4,000-year-old original split-twig figurines. Art from today's tribes provides a glimpse into their rich cultures. The museum is located three miles (5 km) west of Desert View.



### Desert View Bookstore & Park Information

Open daily 9:00 a.m. to 5:00 p.m.  
The Desert View Bookstore and Park Information Center, located at Desert View Point near the park's east entrance, offers an excellent selection of publications and park information.

**A passport cancellation stamp is available at all above locations.**

## Canyon's Best Bargain: The Free Shuttle Bus System

For more than 30 years the National Park Service has provided a free shuttle bus system on the South Rim. The buses use compressed or liquefied natural gas, a clean burning fuel. Buses have provisions for improved accessibility and can accommodate most wheelchairs. Riding the shuttles makes your stay more enjoyable, while reducing pollution and decreasing traffic congestion. All shuttles have racks for up to three bicycles.



### How do I use the shuttles?

The map on pages 8–9 is the key. The map shows routes, stops, operating times, and route lengths. Park your vehicle in one of the parking areas, proceed to the nearest bus stop, and board the next bus. The buses come by every 10–20 minutes. You do not need to obtain a ticket, and you are free to get on or off at any stop. You can ride to a stop, enjoy the view, shop at a gift store, or walk along the rim, then hop on a later shuttle.

### Where do the shuttles go?

Three shuttle routes operate during the spring, with a fourth route starting in late May. The routes do not overlap, although they interconnect. Buses show the route name on the front and display an appropriately colored square near the door.

#### Hermits Rest Route (red)

The western-most route winds seven miles along the rim to Hermits Rest, stopping at viewpoints along the way.

#### Village Route (blue)

This loop connects visitor centers, lodging, restaurants, gift shops, and campgrounds. It provides the best means to get to many of the ranger programs.

#### Kaibab Trail Route (green)

Leaving from Canyon View Information Plaza, this route goes to the South Kaibab Trailhead and two viewpoints to the east.

#### Tusayan Route (purple)

Starting in late May, this shuttle goes from Canyon View Information Plaza to the gateway community of Tusayan.

## Sunrise & Sunset

Date	Sunrise	Sunset
March 1	6:59 a.m.	6:23 p.m.
March 7	6:51 a.m.	6:29 p.m.
March 14	6:41 a.m.	6:35 p.m.
March 21	6:31 a.m.	6:41 p.m.
March 28	6:20 a.m.	6:47 p.m.
April 4	6:10 a.m.	6:53 p.m.
April 11	6:01 a.m.	6:59 p.m.
April 18	5:51 a.m.	7:05 p.m.
April 25	5:43 a.m.	7:11 p.m.
May 2	5:35 a.m.	7:17 p.m.
May 9	5:28 a.m.	7:23 p.m.
May 16	5:22 a.m.	7:28 p.m.
May 23	5:17 a.m.	7:34 p.m.

## Moon Phases

New moon	Full moon	Moon rise
March 15	March 29	6:49 p.m.
April 14	April 28	7:57 p.m.
May 13	May 27	7:50 p.m.

**All times are Mountain Standard Time**

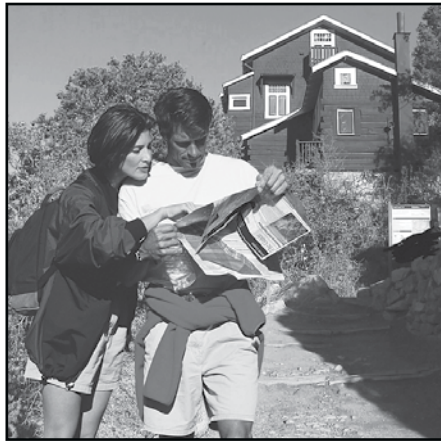


## Use Caution Near the Edge!

Footing can be dangerous. Watch for snow and ice in the early spring.

# Enjoying Grand Canyon

## Planning Your Grand Canyon Experience



Individual interests, available time, and the weather can influence your visit. Use the information in this publication and talk with a ranger in one of the visitor centers to help make your Grand Canyon experience memorable.

### If you have only an hour or two

Go to one of the viewpoints such as Mather, Yavapai, or Yaki Points and immerse yourself in the view. Walk a short distance along the Rim Trail and watch the changing patterns in the canyon.

### If you have half a day

Stop at one of the visitor centers and learn more about the geology or history of the area. Participate in one of the ranger programs. Ride the Hermits Rest Route shuttle to Hermits Rest, getting off at the Monument Creek Vista stop and walking or bicycling the Greenway Trail to Pima Point.

### If you have all day

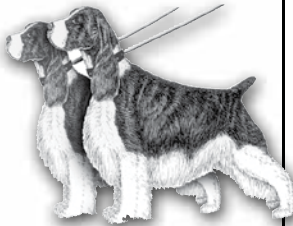
Walk a short distance down the Bright Angel or South Kaibab Trails, keeping in mind that it is much easier walking down than climbing back up. Drive east on Desert View Drive, enjoying the overlooks along the way and stopping at Tusayan Museum and the Desert View Watchtower. Be at one of the viewpoints an hour before sunset to savor the changing colors and shadows. Help your children attain their Junior Ranger badge.

### If you have two or more days

The canyon is yours to enjoy and explore. Arise early and take in a sunrise. Hike a trail and notice how much warmer it becomes as you descend into the canyon. Venture away from the popular viewpoints and experience the quiet of the canyon. Attend a couple of ranger-led activities, ending your day with the evening program.

## Pets Must Be Leashed at All Times

Leashed pets are allowed on rim trails throughout the developed areas of the South Rim, but not below the rim. The only exception is service animals.



Persons wishing to take a service animal below the rim must check in first at the Backcountry Information Center.

Kennels are available.  
Telephone: (928) 638-0534.

## Environmental Education Class Field Trips and Teacher Workshops

The Environmental Education staff invites teachers and students to take advantage of our free educational resources. We offer nine ranger-led field trip programs at the canyon covering geology, ecology, and history topics. Programs are designed for grades K-7 and address Arizona and national academic standards. Rangers also present in-class and learning programs via two-way video-conferencing. Advanced reservations are required.

Free teacher workshops cover suggested pre- and post-visit activities, as well as walk-throughs of the programs at the canyon. Park staff conducts workshops several times each year. For more information or to make reservations for either a park visit or a teacher workshop call (928) 638-7662 or visit [www.nps.gov/grca/forteachers/index.htm](http://www.nps.gov/grca/forteachers/index.htm). The National Park Service also offers summer camps at Grand Canyon for high school aged youths. Check [www.nps.gov/grca/forkids/index.htm](http://www.nps.gov/grca/forkids/index.htm) for more information.

## Cell Phone Tour

Your cell phone provides another way to learn more about Grand Canyon National Park. You can listen to a narration over your cell phone at numerous points of interest on the South Rim between Maricopa Point on the west and Yaki Point on the east.

Wherever you see one of the cell phone tour signs, dial (928) 225-2907 and enter the indicated stop number. You will hear an interpretive ranger give a two-minute synopsis on various aspects of the canyon from geology to Native American history to the night sky.

There is no additional charge to listen to these messages. Please be aware that cell phone coverage can be spotty and not all providers offer service in the park.



## Would you like to be a Junior Ranger?

Grand Canyon National Park offers a Junior Ranger program for children ages 4 and older.



To take part in the program, pick up a Junior Ranger booklet at the Grand Canyon Visitor Center at Canyon View Information Plaza, Verkamp's Visitor Center, or Tusayan Museum information desk and complete the activities listed for the appropriate age level.

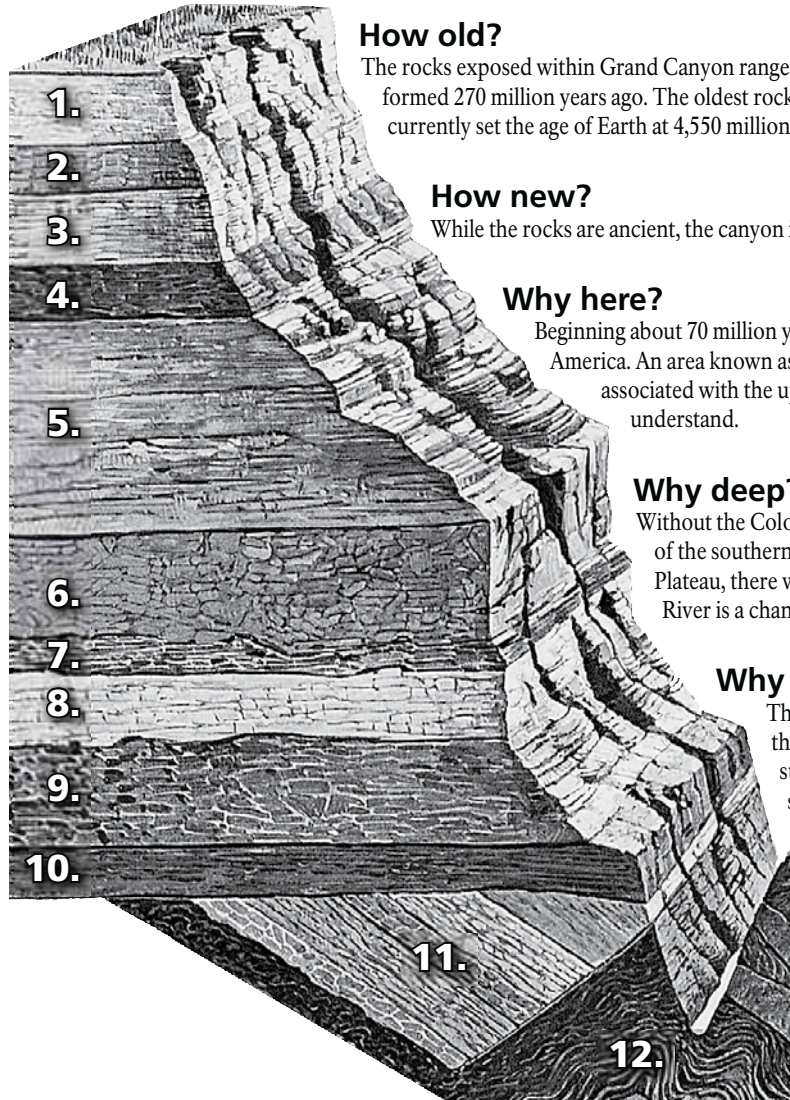
Once completed (don't forget attendance at one or more ranger programs) bring the booklet back to the Visitor Center at Canyon View Information Plaza, Verkamp's Visitor Center, or Tusayan Museum to receive an official Junior Ranger certificate and badge.

## Interagency Annual Pass

If you are a frequent visitor to National Park Service or other federal agency sites that charge entrance fees, you may be interested in the *America the Beautiful - National Parks and Federal Recreation Lands Pass*. Five agencies—National Park Service, Bureau of Land Management, Bureau of Reclamation, U.S. Fish and Wildlife Service, and U.S. Forest Service—participate. The \$80.00 pass is valid for one year from the time of first use. The program also offers a lifetime senior pass (\$10.00) for U.S. citizens 62 or over and a free access pass for those with permanent disabilities. The *America the Beautiful* pass may be purchased at entrance stations, Grand Canyon Association bookstores or online at [www.recreation.gov](http://www.recreation.gov). The senior and access passes are available only at entrance stations.



## There's Only One Grand Canyon: Basic Answers to Your Geologic Questions



### How old?

The rocks exposed within Grand Canyon range from the fairly young to the fairly old (geologically speaking). Kaibab limestone, the caprock on the rims of the canyon, formed 270 million years ago. The oldest rocks within the Inner Gorge at the bottom of Grand Canyon date to 1,840 million years ago. For comparison geologists currently set the age of Earth at 4,550 million years.

### How new?

While the rocks are ancient, the canyon is young. Geologists generally agree that canyon carving occurred over the last 5–6 million years—a geologic blink of the eye.

### Why here?

Beginning about 70 million years ago, heat and pressure generated by two colliding tectonic plates induced mountain building in western North America. An area known as the Colorado Plateau was raised more than 10,000 feet (3,000 m), but was spared most of the deformation and alteration associated with the uplifting of strata. This high plateau, so critical to Grand Canyon's story, is a geological puzzle that researchers still seek to understand.

### Why deep?

Without the Colorado River, a perennial river in a desert environment, Grand Canyon would not exist. Water draining off the western slopes of the southern Rocky Mountains carried sand and gravel, cutting down through the layers of rock. Without the uplift of the Colorado Plateau, there would not have been the thousands of feet of topography to sculpt. From Yavapai Point on the South Rim to the Colorado River is a change of 4,600 feet (1,400 m), yet the river still flows 2,450 feet (750 m) above sea level.

### Why wide?

The width results from the rock layers collapsing around the river and its tributaries combined with the "headward erosion" of these side streams. Softer, weaker layers erode faster, undermining the harder, stronger layers above them. Without adequate support, the cliffs collapse. The relentless river carries this eroded material to the Gulf of California. Much of what is now southeastern California and southwestern Arizona is covered with material eroded from Grand Canyon.

Over its 277 river miles (446 km), the jagged Grand Canyon varies in width. Along the South Rim, it ranges between 8 and 16 miles (13–26 km) depending upon where you choose to measure.

### Why Grand?

Often described as Earth's greatest geological showcase, the ensemble of stunning dimensions—the melding of depth, width, and length—sets Grand Canyon apart. Nowhere else features such a dazzling variety of colorful rock layers, impressive buttes, and shadowed side canyons. Grand Canyon is the canyon against which all other canyons are compared.

The exhibits at Yavapai Observation Station explain the geologic processes that formed the rocks and carved the canyon.

### Major strata in the canyon:

1. Kaibab Formation . . . . .	270 million years
2. Toroweap Formation . . . . .	273 million years
3. Coconino Sandstone . . . . .	275 million years
4. Hermit Formation . . . . .	280 million years
5. Supai Group . . . . .	315–285 million years
6. Redwall Limestone . . . . .	340 million years
7. Temple Butte Formation . . . . .	385 million years
8. Muav Limestone . . . . .	505 million years
9. Bright Angel Shale . . . . .	515 million years
10. Tapeats Sandstone . . . . .	525 million years
11. Grand Canyon Supergroup . . . . .	1,200 million–740 million years
12. Vishnu basement rocks . . . . .	1,840–1,680 million years

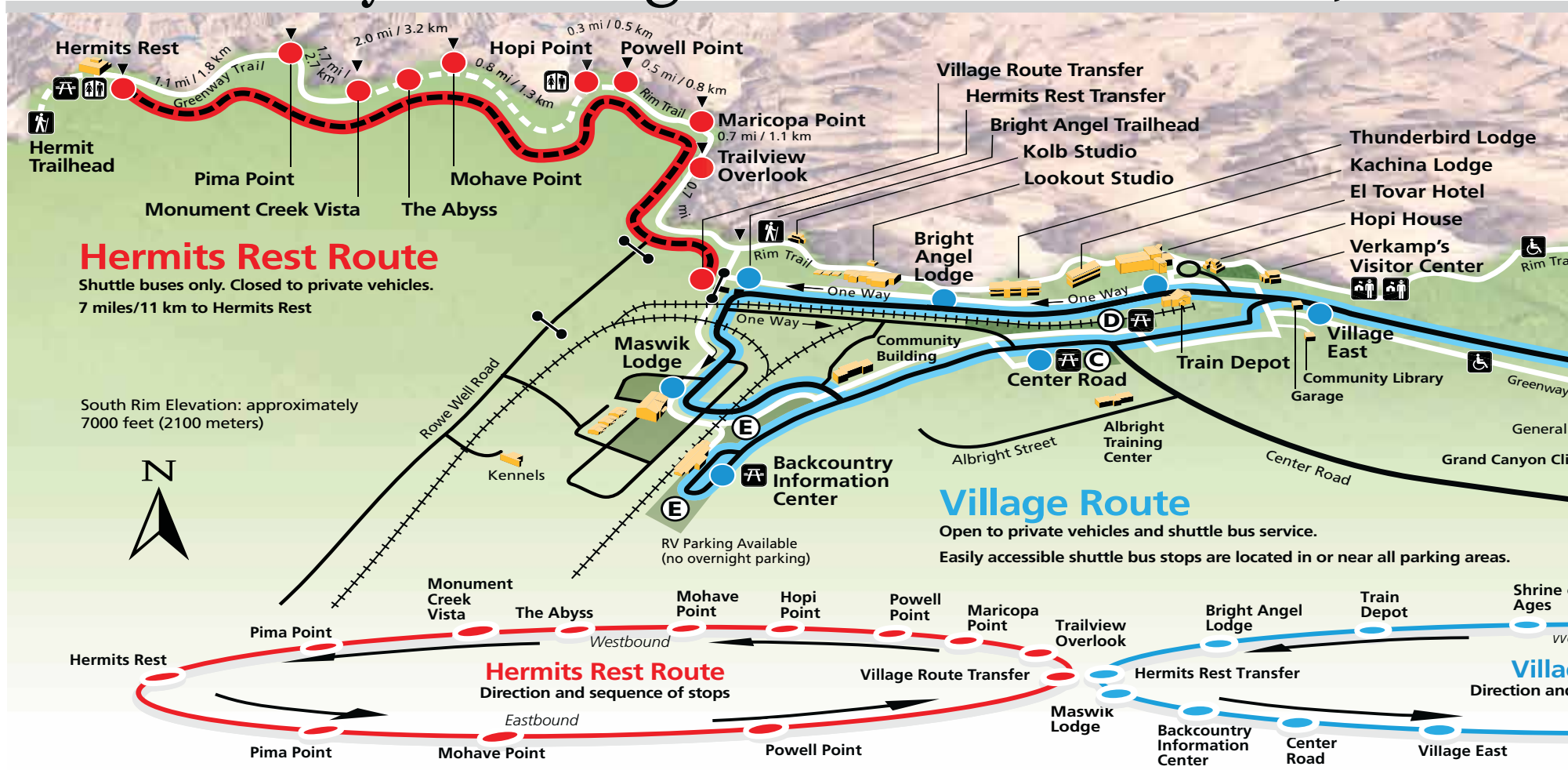
### Want to know more?

The geologic story is rich in detail and mystery. Attending a free ranger program may move you from wonder to comprehension. Programs are described on pages 2–3.

Grand Canyon Association bookstores offer many geology related titles. Bookstore hours and locations are listed on page 5. To learn more about geology at Grand Canyon, take a look at:

- *Yardstick of Geologic Time*, Allyson Mathis
- *Introduction to Grand Canyon Geology*, Greer Price
- *Carving Grand Canyon*, Wayne Ranney
- *Ancient Landscapes*, Ron Blakey and Wayne Ranney

# Grand Canyon Village Shuttle Bus Routes, Points



**Free Shuttle Buses**  
 Free shuttle buses operate on three routes during the spring:

**Hermits Rest Route** (indicated in red on the map above), **Village Route** (blue), and **Kaibab Trail Route** (green). A fourth route to Tusayan begins at the end of May. The routes interconnect, but do not overlap. No tickets are required, and bus stops are clearly marked by signs with the above symbol.

Buses are white with a green stripe and display the route name on the front with an appropriately colored square near each door. All buses are equipped with bicycle racks. Bicycle one way and ride the shuttle the other. Pets are not permitted on buses. Service may be suspended during inclement weather.

**Sunrise and sunset times are on page 5.**

**Hermits Rest Route**  
 Buses provide transportation between the Village Route Transfer and Hermits Rest (seven miles; 11 km) with stops at nine canyon overlooks. Buses stop only at Hermits Rest, Pima, Mohave, and Powell Points on return.

**75 Minutes Round-trip** (without getting off bus)

**March buses run every:**  
 30 minutes 4:30 a.m. to 9:30 a.m.  
 15 minutes 9:30 a.m. to sunset  
 30 minutes sunset to one hour after sunset

**April and May buses run every:**  
 30 minutes 4:30 a.m. to 7:30 a.m.  
 15 minutes 7:30 a.m. to sunset  
 30 minutes sunset to one hour after sunset

**Village Route**  
 Buses provide transportation between Canyon View Information Plaza, Yavapai Point, hotels, restaurants, campgrounds, parking lots, and other facilities in the Village area. This is not a scenic route, but rim views are available a short walk from many stops.

**60 Minutes Round-trip** (without getting off bus)

**March, April, and May buses run every:**  
 30 minutes 4:30 a.m. to 6:30 a.m.  
 15 minutes 6:30 a.m. to 7:30 p.m.  
 30 minutes 7:30 p.m. to 10:00 p.m.

**Kaibab Trail Route**  
 Buses provide transportation between Canyon View Information Plaza, South Kaibab Trailhead, Yaki Point, and Pipe Creek Vista. This is the shortest scenic route and the only access to Yaki Point.

**30 Min. Round-trip** (without getting off bus)

**March, April, and May buses run every:**  
 30 minutes from 4:30 a.m. to 6:30 a.m.  
 15 minutes from 6:30 a.m. to 6:00 p.m.  
 30 minutes from 6:00 p.m. to one hour after sunset.

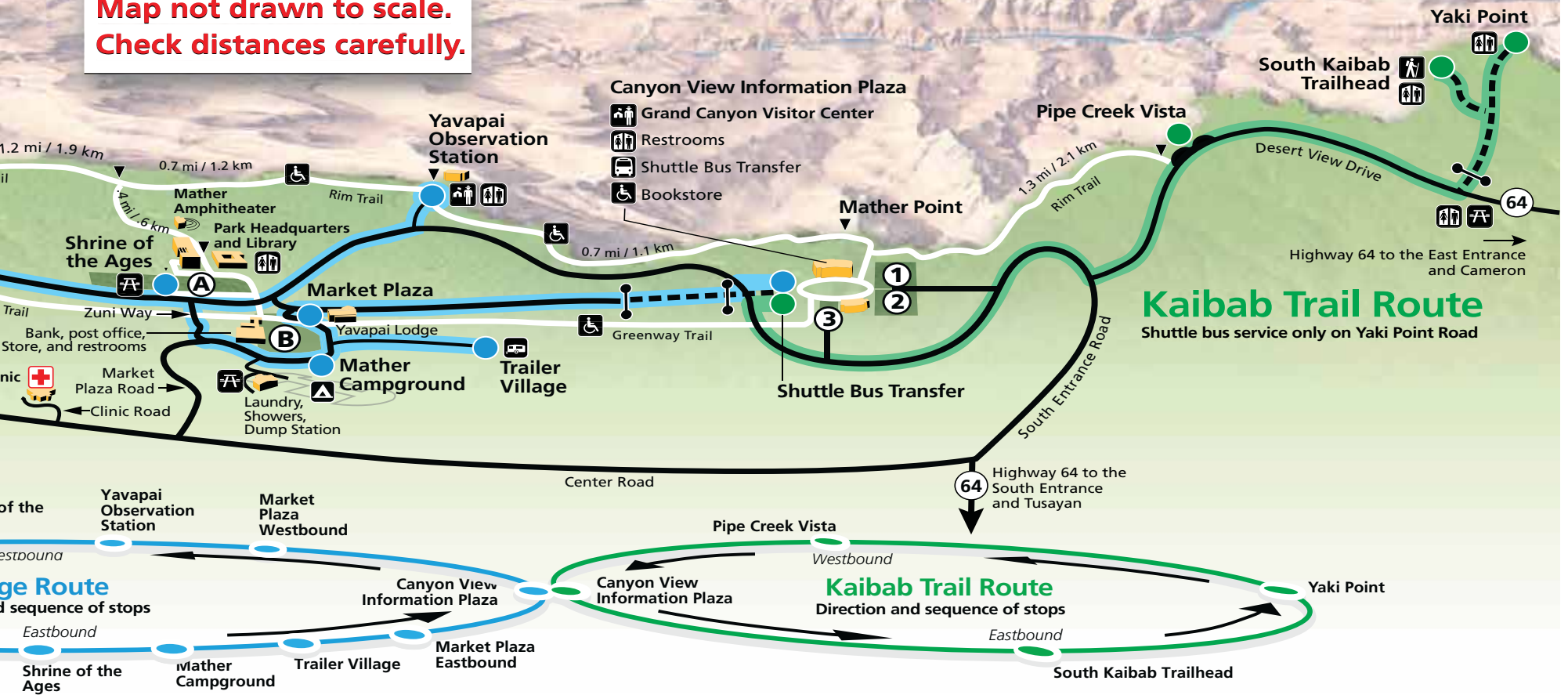
**Hikers' Express**  
 An early morning Hikers' Express goes to the South Kaibab Trailhead from Bright Angel Lodge shuttle bus stop, the Backcountry Information Center, and Grand Canyon Visitor Center daily at:

**March:** 7:00 a.m., 8:00 a.m., and 9:00 a.m.  
**April:** 6:00 a.m., 7:00 a.m., and 8:00 a.m.  
**May:** 5:00 a.m., 6:00 a.m., and 7:00 a.m.



# of Interest, and Parking

**Map not drawn to scale.  
Check distances carefully.**



## Rules of the Road



**Motorists:** Pedestrians have the right of way. Vehicles must stop for pedestrians in crosswalks. *It is the Law.*



**Pedestrians:** Avoid walking on narrow park roads. Use trails that parallel most park roads. Always face traffic.



**Bicyclists:** Bicycles are permitted on all paved and unpaved park roads and the Greenway Trails. They are prohibited on all other trails, including the Rim Trail. Bicyclists must obey all traffic regulations. Always ride single file with the flow of the traffic. See and be seen; wear bright colors and a helmet.

On the narrow Hermit Road bicyclists should pull to the right shoulder of the road and dismount when large vehicles are attempting to pass. Never hang onto a shuttle bus while riding.



## Parking

Parking is available in lots throughout Grand Canyon Village. Please avoid parking along the roadside except where signs or lines on the road indicate that it is permissible. Location of the lots is indicated on the map above.

- (A)** Near Park Headquarters. Large lot that frequently has available spots.
- (B)** Near the businesses in Market Plaza. This is the largest lot, but tends to fill early.
- (C)** This small lot near the intersection of Center and Village Loop Roads may have sites when others do not.
- (D)** Unpaved lot along the railroad tracks in the Grand Canyon Village Historic District.
- (E)** Near the Backcountry Information Center. The southern portion of this lot has large, pull-through spaces for RVs and vehicles with trailers.

## Grand Canyon Visitor Center Parking

Three new lots provide easy access to the rim, visitor center, rest rooms, and bookstore.



## Accessibility

An accessibility permit, allowing access to some areas closed to public traffic, is available at entrance gates, the Grand Canyon Visitor Center at Canyon View Information Plaza, Verkamp's Visitor Center, Park Headquarters, Kolb Studio, El Tovar Concierge Desk, and the Bright Angel Lodge, Yavapai Lodge, and Maswik Lodge Transportation Desks.

## Day-Use Wheelchairs

The National Park Service provides wheelchairs at no charge at the Grand Canyon Visitor Center at Canyon View Information Plaza.

## Legend

**Shuttle Bus Routes**  
(Indicated in red, blue, or green)

**Shuttle Bus Stops**  
(Indicated in red, blue, or green)

**Major Park Roads**  
(All vehicles)

**Secondary Roads**  
(All vehicles)

**Shuttle Buses Only**

**Parking**

**Picnic Tables**

**Paved Trails**

**Unpaved Trails**

**Distance between points on trails**

**Not to scale. Check distances carefully.**

# Park Science

## Archeological Site Excavated Near 3-Mile Resthouse

Bright Angel Trail is the most heavily traveled route for hikers heading into Grand Canyon. The trail follows the Bright Angel Fault, which produces natural breaks in the canyon's cliffs. The modern Bright Angel Trail follows an aboriginal path to Indian Garden and the Tonto Plateau. Archeological sites, such as one recently excavated near Three-Mile Resthouse, confirm the ancient history of the trail.

Archeologists from the Museum of Northern Arizona and Grand Canyon National Park excavated an ancient roasting pit near Three-Mile Resthouse in March 2008 (right). Such roasting features were used to cook a variety of both plant and animal foods. Prehistoric chefs placed hunted and gathered foods on rocks that had been heated by fire in a pit at the center of the roaster and covered the items with grasses or other vegetative matter. Sealing the cooking pit with a layer of soil retained moisture while the food cooked. Afterwards, the burnt rock and soil covering the roaster were raked out into a ring resulting in the typical donut shape.

The crew excavated the site by digging two meter-wide (three feet) trenches at right angles across the feature. While excavating the large donut-shaped roaster, they uncovered another smaller basin-shaped cooking feature within it. The crew recovered a variety of stone artifacts, mostly made from chert found in the Kaibab limestone on the canyon's rim. They collected soil samples for flotation analysis, a technique that separates lightweight plant material from soil particles. This process recovered almost 2,800 charred agave leaf fragments.

Three plant fragments from the site were dated using carbon-14 analysis. The large roaster samples dated BC 1460–1410 and BC 800–780; while the small cooking feature was used between AD 980 and 1030. That different peoples used this spot at different times over a span of 2,500 years suggests that something about the site made it ideal for agave roasting. Although it was on a frequently used route, was agave common nearby? Was water and firewood abundant? Perhaps a desirable camp site was close?



Each year the National Park Service learns more about the canyon's early history, providing a more complete understanding of the people who lived in and around Grand Canyon. This particular excavation is significant in that while other donut-shaped roasters are found in Grand Canyon, little evidence indicates their use for roasting agave. This excavation confirms that some places within the canyon landscape have attracted repeated human use for thousands of years.

## Take a Look at *Canyon Sketches*

*Canyon Sketches*, an electronic magazine on the park's web site, features short updates about the canyon's natural, cultural, and recreational resources. Articles highlight the projects that Grand Canyon's Science and Resource Management biologists, archeologists, physical scientists, and wilderness planners do to inventory, monitor, mitigate, restore, and rehabilitate park resources.

Recent features include exotic species control, historic fire towers, and transplanting of humpback chub (right). Articles include text, photographs, videos, and historic movies to tell the story.

Learn more in *Canyon Sketches* e-magazine at [www.nps.gov/grca/naturescience/cynsk.htm](http://www.nps.gov/grca/naturescience/cynsk.htm).



## Soaring to Success

### 15,000 years ago

A condor sits on a limestone boulder at the edge of the canyon. Her half-outrspread wings catch the warming rays of the rising sun. Slowly, a bit awkwardly, she turns so her back can feel the heat. When the sun is higher, creating updrafts, she will soar over the canyon.



Heading downriver, she might notice a cow-sized Shasta ground sloth lumbering uphill away from the river and disappearing into a cave. If she had ventured upriver, she might have seen a group of Columbian mammoths huddled under a sandstone overhang out of the midday sun.

These and other large mammals—Harrington's mountain goat, shrub ox, camels, horses—grazed on the abundant grasses or under the forests that extended down the sides of the canyon during the cooler, wetter climate of the last Ice Age. Their carcasses provided abundant carrion for the condor and its even larger relative the teratorn.

### Today

The climate changed. Now the canyon winds across a high desert. The large mammals are extinct, most by 10,000 years ago. The teratorn, with its 12-foot wingspan, is known from fossils found in the La Brea Tar Pits in California and Grand Canyon caves. Bone, fur, and dung preserved in Rampart Cave in the western Grand Canyon and in Bechan Cave (actually a large overhang) in southern Utah help scientists decipher the world of 15,000 years ago.

But the California condor lives on—barely. When Europeans arrived to North America 500 years ago, the California condor population existed

only along the Pacific Coast, perhaps living off the carcasses of large marine mammals washed ashore. Over the centuries human pressures—shooting, egg collecting, electric power lines, spilled antifreeze—further reduced the condor population. By the 1980s only 22 California condors remained.

All were trapped and a captive breeding program begun. The condors cooperated and by the late 1990s captive-reared condors were released back into the wild in California and northern Arizona. Over the years pairs formed and nesting attempted. In 2003 a wild-born condor fledged from a cave in Grand Canyon—the first fledgling in Arizona in more than a century.

As the 2010 nesting season begins, the California condor population stands at almost 360 birds, with 185 in the wild. More than 75 condors soar the skies of northern Arizona and southern Utah. With the return of warmer weather, more visitors frequently spot birds flying along the rim.

To learn more about California condors and the number of active nests in the canyon, attend the *Wings over the Canyon* condor talk given every afternoon at 3:00 in front of Lookout Studio. Rangers may set up spotting scopes at advantageous spots, if nests can be observed.

## Keep Wildlife Wild

Spring is a special, but precarious, time for wildlife. The long winter is coming to an end and new foods are growing. Many animals will soon be giving birth.

Enjoy wildlife from a safe distance. Seemingly tame squirrels, ravens, coyotes, elk, or deer can become aggressive without warning. Keep your distance and do not attempt to feed or approach the wildlife. If the animal obviously knows that you are there, you are too close!

For your safety and the well-being of the park's wildlife, **do not feed any animals.**



# Park Partners

The National Park Service thanks these partners for support with this and other publications.

## Xanterra South Rim

Xanterra South Rim is the primary concessioner and the sole provider of in-park lodging at the South Rim. Owned and operated by Xanterra Parks & Resorts, we have been providing quality guest service since the El Tovar Hotel was opened in 1905 by the Fred Harvey Company. Today park visitors have a choice of accommodations in seven distinctly different lodging properties. Additional services include gift stores, restaurants and in-park tours.

As the nation's largest national and state park management company, we know that we play an integral part in the tourism industry and how it impacts the natural environment. This is why we are a company based upon



values that reflect an environmental ethic and social conscience for the long term. We have implemented comprehensive environmental initiatives throughout our operations. Please join us in these efforts to reduce, reuse and recycle during your visit to this special place. For more information call (928) 638-2631 or visit [www.grandcanyonlodges.com](http://www.grandcanyonlodges.com).

## Forever Resorts

Forever Resorts operates the Grand Canyon Lodge, restaurants, retail, gift and convenience stores, service station, and Grand Canyon Cookout Experience on the North Rim. Forever Resorts trains and encourages employees to foster a sense of awareness and stewardship in park visitors through an appreciation of park resources. For information on Grand Canyon North Rim Lodge, visit online at [www.grandcanyonforever.com](http://www.grandcanyonforever.com).



FOREVER  
RESORTS

## DNC Parks & Resorts

DNC Parks & Resorts at Grand Canyon (DNC) operates the general stores in the park at Desert View and Grand Canyon Village. DNC encourages its associates to develop a strong relationship with the park during their tenure and to be good stewards of its special places in which we operate. For more information please contact us at (928) 638-2262. [www.delawarenorth.com](http://www.delawarenorth.com)



**ecologix**  
Xanterra's Environmental Commitment

### Xanterra South Rim's Environmental Commitment

Xanterra South Rim has raised the bar of environmental performance for ourselves and the tourism industry, by setting standards to improve our environmental performance. Our activities include:

1. Xanterra is one of the few U.S. hospitality companies to achieve ISO 14001 certification of its environmental management system (EMS). We call our EMS "ecologix – the logical integration of business and ecology."
2. In a move that decreases visible emissions from our tour buses by 66 percent and improves fuel economy by close to 20 percent, Xanterra maintains hydrous alcohol injectors (Hydrofire) and throttle controls (DriverMax) on our bus fleet. This is a practical way to reduce pollution in the park from our fleet of motor coaches powered by naturally-aspirated diesel engines. Each motor coach travels an average of 20,000 miles per year.
  - The Hydrofire hydrous alcohol injectors works with the fuel injection system to reduce nitrous oxide (NO<sub>x</sub>) emissions (a contributor to acid rain and smog) and increase the efficiency of the bus
  - The DriverMax throttle controls the acceleration cycle by optimizing fuel flow and operating between the driver's foot throttle and the engine.
3. The recycling program in the park – which accepts a wide range of items commingled in the same bins – has helped increase the amount of trash we keep out of the landfill, raising the percentage from 10 percent to 40 percent. In the brown bins around the park (and the blue ones in our guest rooms), you can recycle paper (including newspaper), plastic bottles (#1 and #2), aluminum cans, glass, metal, and cardboard. We also recycle household batteries (ask at our Retail stores where to leave them).
4. Xanterra is one of only a few companies in the entire tourism industry to produce an environmental sustainability report, publicly disclosing the company's environmental performance. If you stay overnight in our facility, there will be a copy of this report in your room.
5. Xanterra is the first U.S. hospitality company to be granted "Chain of Custody" certification from the Marine Stewardship Council to serve only Alaskan wild salmon and to ban certain types of fish species deemed harmful to the environment.
6. Xanterra South Rim purchases renewable wind power equal to 5% of our total electricity usage. This purchase of almost 670,000 kWh is the equivalent of taking 81 cars off the road or planting 127 acres of trees.
7. If you're staying with us more than one night, please help conserve water by participating in our towel and linen reuse program. Just by rehangng your towel on the rack, our staff will know not to unnecessarily change towels or linens.



## GRAND CANYON ASSOCIATION

INSPIRE. EDUCATE. PROTECT.

### Inspired by the Canyon? Here Is How You Can Help.

Grand Canyon National Park is a "spectator park" by virtue of the scenic splendor that draws millions of visitors each year. Such a narrow description of the inherent value of the park betrays the intricate ecosystem and complicated cultural history that define this iconic landscape.

While absorbing the majesty of the canyon, it is sometimes easy to overlook the unending efforts by the National Park Service to preserve, protect, and make available for the enjoyment of visitors this grandest of chasms. In a "crown jewel" national park where needs continue to outreach funding, the National Park Service has turned to partners such as the Grand Canyon Association, the park's official fund-raising organization.

While operating bookstores and the Grand Canyon Field Institute, the Grand Canyon Association also supports the National Park Service's trail work—rehabilitating backcountry trails and building 73 miles of multi-use trails on the North and South Rims. Support from the association also helps fund the Hike Smart campaign, promoting visitor safety in the park.

The park is home to hundreds of animal species and thousands of plant species. Funding from the Grand Canyon Association ensures that the park's wildlife biologists and independent researchers can monitor and study the local flora and fauna. Such research aids park managers in making science-based decisions.

The Grand Canyon Association also underwrites some of the park's art programs, including Grand Canyon Celebration of Art each fall and exhibits at historic Kolb Studio.

The Grand Canyon Association needs the financial support of Grand Canyon enthusiasts like you to maintain and expand these worthy projects. Together, we can help further the understanding and protection of this irreplaceable resource for generations to come.

For more information about the association and its donation program, contact the director of development, Bonnie O'Donnell, at [bodonnell@grandcanyon.org](mailto:bodonnell@grandcanyon.org), call (928) 863-3876, or visit the association's web site at [www.grandcanyon.org](http://www.grandcanyon.org).

# Day Hiking



## Before You Go . . .

### Plan Ahead

As a day hiker no permits are required. You are entirely on your own. Your descent into the canyon, however brief, marks your entry into a world in which preparation, self-reliance, and common sense are crucial.

### Know the Weather

Spring weather varies. Snowstorms on the rim are common in March and can occur as late as May. Late April and May can be windy. By mid-May temperatures along the river in the inner canyon may approach 100° F (40°C).

### Double Your Calories, Double Your Fun

Salty snacks and water or sports drinks should be consumed on any hike lasting longer than 30 minutes. Food is your body's primary source of fuel and salts (electrolytes) while hiking in the canyon.

If you do not balance your food intake with your fluid consumption, you run the risk of becoming dangerously debilitated and severely ill. For every hour hiking in the canyon, you should drink ½ to 1 quart (liter) of water or sports drinks.

Your best defense against illness and exhaustion is to eat a large breakfast, a full lunch, a snack every time you take a drink, and a rewarding full dinner at the end of the day. This is not a time to diet.

### Watch Your Time

Plan on taking twice as long to hike up as it took to hike down. Allow 1/3 of your time to descend and 2/3 of your time to ascend.

### Mules and Hikers

Encounters between hikers and mules have resulted in injuries to packers and the death of some mules. To ensure safety for yourself, other trail users, and mule riders, when encountering mules on the trails:

- Step off the trail on the uphill side away from the edge.
- Follow the directions of the wrangler. Remain quiet and stand perfectly still.
- Do not return to the trail until the last mule is 50 feet (15 m) past your position.

### Hiking Tips

- 1. Be Prepared:** Know your route. Know the weather forecast. The weather can change quickly and dramatically. Carry a map, flashlight, and extra clothing including wind and rain protection. Instep crampons may be necessary on icy trails in early spring.
- 2. Stay Comfortable:** Dressing in layers is the key to comfortable hiking. This allows you to adjust for the changing conditions as you go up and down the trails. And as Mother always said, "Don't forget your hat!" It is important to stay dry and protected from the wind.
- 3. Go Slowly:** If you can carry on a conversation, you are hiking at the right pace. If you find yourself out of breath, your legs and digestive system are not getting enough oxygen. Lack of oxygen can cause fatigue, heavy legs, and exhaustion.
- 4. Rest Often:** Sit down, prop your legs up, and take a 10-minute break at least once every hour.
- 5. Eat and Drink Frequently:** Balance your food and water intake. Salty snacks help replace electrolytes lost through perspiration. No matter what the temperature, you need water and energy to keep going.

## Hiking Chart for some popular day hike destinations

**Warning!** National Park Service rangers recommend that you do not attempt to hike from the rim to the river and back in one day, because of the distance, high canyon temperatures, low humidity, and the steepness of the trails. Few trails form loops; you will be hiking on the same trail in both directions. You are responsible for the safety of yourself and those in your party!

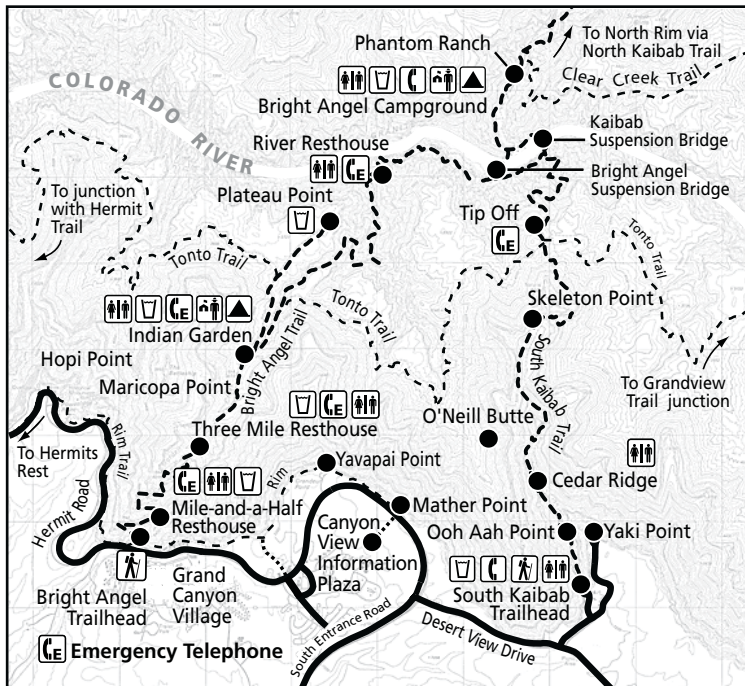
Trails	Destination	Round trip distance	Approximate time round trip	Elevation change	Notes
<b>Rim Trail (mostly flat, many sections suitable for wheelchairs)</b>					
The Rim Trail offers easy walking and quiet views as it winds along the rim from Hermits Rest west to Pipe Creek Vista. Begin from any viewpoint and use the free shuttle buses to return.	Follows the rim for 12 miles	Your choice	15 minutes to half-a-day	200 feet 60 m	Mostly paved, except dirt from Monument Creek Vista to Maricopa Point
<b>Bright Angel Trail (steep, but popular)</b>					
The most popular trail into the canyon offers some shade and seasonal water (subject to line breaks). Trail begins west of Bright Angel Lodge. Can be icy early in the spring. Check at visitor centers or the Backcountry Information Center for trail condition.	1 ½-Mile Resthouse	3 miles 4.8 km	2–4 hours	1,131 ft. 345 m	Rest rooms Water May – September
	3-Mile Resthouse	6 miles 9.6 km	4–6 hours	2,112 ft. 644 m	Water May – September
	Indian Garden	9.2 miles 14.8 km	6–9 hours	3,060 ft. 933 m	Rest rooms Water year-round
<b>South Kaibab Trail (steep with expansive views)</b>					
Trail begins south of Yaki Point; you must ride the free shuttle bus to the trailhead. Best views for a relatively short hike, but no afternoon shade. Water at trailhead, but not along the trail. Can be icy in the early spring.	Ooh Aah Point	1.8 miles 2.9 km	1–2 hours	600 ft. 180 m	No water First view east
	Cedar Ridge	3 miles 4.8 km	2–4 hours	1,140 ft. 347 m	Rest rooms No water
<b>Hermit Trail (steep and rocky)</b>					
This rough, unmaintained trail starts 500 feet west of Hermits Rest. Recommended for experienced desert hikers, this trail has little afternoon shade. Hiking boots recommended. Water from springs must be treated.	Waldron Basin	3 miles 4.8 km	2–4 hours	1,240 ft. 380 m	No water, little shade
	Santa Maria Spring	5 miles 8 km	4–6 hours	1,760 ft. 540 m	Treat water
	Dripping Springs	7 miles 11 km	5–7 hours	1,400 ft. 430 m	Treat water Narrow trail



The *Hikers' Express* picks up at the Bright Angel Lodge shuttle bus stop, the Backcountry Information Center, and Grand Canyon Visitor Center and proceeds to the South Kaibab Trailhead daily at: March – 7:00 a.m., 8:00 a.m., and 9:00 a.m.; April – 6:00 a.m., 7:00 a.m., and 8:00 a.m.; May – 5:00 a.m., 6:00 a.m., and 7:00 a.m.

# Hiking and Camping Below the Rim

## Corridor Trails: Bright Angel and South Kaibab



## Backpacking Permits

Overnight backpacking in Grand Canyon provides a degree of solitude, wildness, and silence that is increasingly difficult to find. A backcountry permit is required for all overnight backpacking, except for guests of Phantom Ranch. Permits can be reserved up to four months in advance. A fee of \$10.00 per permit plus \$5.00 per person per night is collected. The permit program helps to limit impacts to the natural resource while providing a greater degree of solitude for hikers.

Individuals arriving without a permit may be able to obtain one through a daily waiting list. Inquire early in the morning at the Backcountry Information Center, open daily 8:00 a.m. to noon and 1:00 p.m. to 5:00 p.m. For more information, pick up a *Trip Planner* at the Backcountry Information Office or any NPS visitor center.

### Backcountry Information Center

P.O. Box 129  
Grand Canyon, AZ 86023  
Tel: (928) 638-7875 (1:00 p.m. to 5:00 p.m.  
Monday - Friday)  
[www.nps.gov/grca](http://www.nps.gov/grca)

## Health Hazards

Moderation is the key to having an enjoyable hike. Hike within your ability, maintain proper body temperature, balance your food and water intake, and rest often. Emergency situations include:

### Heat exhaustion

Heat exhaustion is the result of dehydration due to intense sweating. Hikers can lose one to two quarts (liters) of water per hour. Rangers treat as many as twenty cases of heat exhaustion a day in summer.

**Symptoms:** pale face, nausea, cool and moist skin, headache, and cramps

**Treatment:** drink water, eat high-energy foods, rest in the shade, cool the patient

### Heat stroke

Heat stroke is a life-threatening emergency where the body's heat-regulating mechanisms become overwhelmed by a combination of internal heat production and environmental demands.

**Symptoms:** flushed face, dry skin, weak and rapid pulse, high body temperature, poor judgment or inability to cope, unconsciousness. Victim is in danger!

**Treatment:** find shade, cool victim with water, send for help!

### Hyponatremia

Hyponatremia is an illness that mimics the early symptoms of heat exhaustion. It is the result of low sodium in the blood caused by drinking too much water, not eating enough salty foods, and losing salt through sweating.

**Symptoms:** nausea, vomiting, altered mental states, and frequent urination

**Treatment:** have the victim rest and eat salty foods. If mental alertness decreases, seek immediate help!

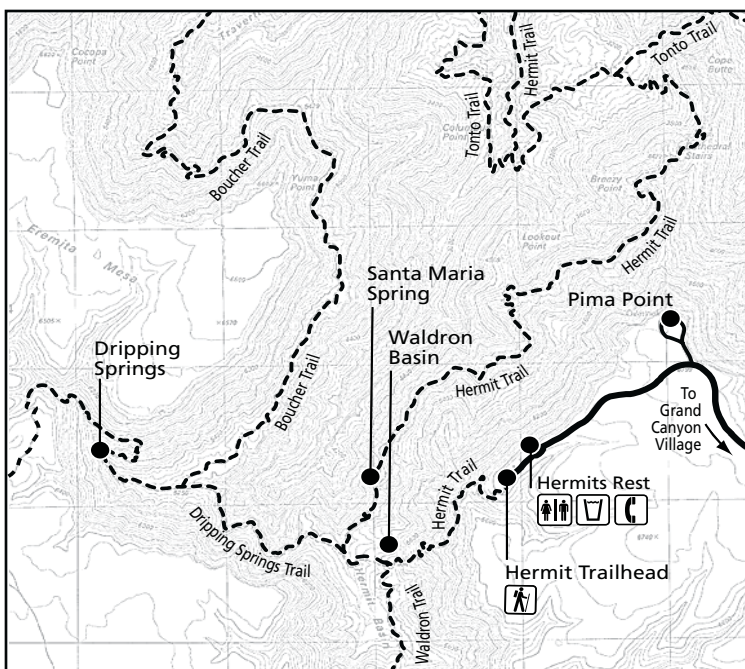
### Hypothermia

Hypothermia is a life-threatening emergency where the body cannot keep warm due to exhaustion and exposure to cold, wet, windy weather.

**Symptoms:** uncontrolled shivering, poor muscle control, and a careless attitude

**Treatment:** put on dry clothing, drink warm liquids, and protect from wind, rain, and cold.

## Hermit Trail



## Leave No Trace

Leave No Trace is a nonprofit organization dedicated to promoting responsible outdoor recreation through education, research and partnerships. While enjoying your visit, please consider the following principles to minimize your impact and help protect Grand Canyon for future generations.



1. Plan ahead and prepare
2. Travel and camp on durable surfaces
3. Dispose of waste properly
4. Leave what you find
5. Minimize campfire impacts  
No campfires in Grand Canyon National Park backcountry.
6. Respect wildlife
7. Be considerate of other visitors

For more information: [www.LNT.org](http://www.LNT.org)

## Want to know more?

Grand Canyon Association bookstores offer many books and maps on hiking. Bookstore hours and locations are listed on page 5. A few items to consider include:

- *Official Guide to Hiking Grand Canyon*, Scott Thybony
- *The Grand Canyon Trail Guides* series: Bright Angel, Grandview, Havasu, Hermit, North Kaibab, South Kaibab, South and North Bass
- *Grand Canyon National Park Trails* topographic map

# Lodging and Services

## Lodging

### In the Park—South Rim

For same-day reservations, call (928) 638-2631. For advance reservations, call (888) 297-2757 or write:

Xanterra Parks & Resorts  
6312 South Fiddlers Green Circle, Suite 600N  
Greenwood Village, CO 80111

[www.grandcanyonlodges.com](http://www.grandcanyonlodges.com)

All prices are subject to change.

#### Bright Angel Lodge

On the rim. \$69 – 174

#### El Tovar Hotel

On the rim. \$174 – 426

#### Kachina Lodge

On the rim. \$170 – 180

#### Thunderbird Lodge

On the rim. \$170 – 180

#### Maswik Lodge

West end of village. \$90 – 170

#### Yavapai Lodge

Market Plaza. \$107 – 153

#### Phantom Ranch

Located at the bottom of the canyon. Overnight dormitory and cabin space. Advance reservations are required. Call for prices (see above) or inquire at the Transportation Desks in Bright Angel, Maswik, or Yavapai Lodges.

### North Rim

The North Rim opens for the season May 15.

#### Grand Canyon Lodge

Make reservations by calling (877) 386-4383 or [www.foreverresorts.com](http://www.foreverresorts.com)

### Outside the Park—Tusayan, AZ

#### Best Western Grand Canyon Squire Inn

(800) 937-8376 or (928) 638-2681

#### Canyon Plaza Resort

(800) 995-2521 or (928) 638-2673

#### Grand Hotel

(888) 634-7263 or (928) 638-3333

#### Holiday Inn Express

(888) 473-2269 or (928) 638-3000

#### Red Feather Lodge

(866) 561-2425 or (928) 638-2414

## Camping

### In the Park—South Rim

Camping is permitted only in designated campsites in Grand Canyon National Park.

#### Mather Campground

Operated by the National Park Service. No hook-ups are available, but there is a dump station. Maximum vehicle length: 30 feet. Campsites are \$18 per night. Some sites may be available on a first-come, first-served basis. Check at the campground entrance. For advance reservations contact (877)-444-6777 or visit [www.recreation.gov](http://www.recreation.gov).

#### Trailer Village

Pull-through sites with hookups are located next to Mather Campground. \$34.00 per site per night for two people; \$3.00 for each additional person over age 16. Campers may register at the entrance to Trailer Village. Reservations through Xanterra Parks & Resorts. For same-day reservations, call (928) 638-2631. See advance reservation contact information in adjacent column.

#### Desert View Campground

Located near the East Entrance, 25 miles east of Grand Canyon Village. Self-registration is on a first-come, first-served basis. \$12 per site per night. Opens mid-May.

### Outside the Park

#### Camper Village

Commercial campground located one mile (1.6 m) south of park entrance in the town of Tusayan. Hookups, coin-operated showers, laundry, propane, dump station, and store are available year-round. Call (800) 638-2887 or (928) 638-2887.

[www.grandcanyoncampervillage.com](http://www.grandcanyoncampervillage.com)

#### Ten-X Campground

Operated by Kaibab National Forest. Located two miles south of Tusayan. \$10.00 per vehicle per night. No hookups or showers. Group sites available by reservation. Opens May 1, weather permitting. Information: (928) 638-2443.

## Dining

Listed west to east along the rim.

#### Hermits Rest Snack Bar

Open daily 9:00 a.m. – 5:00 p.m.

#### Maswik Cafeteria

In Maswik Lodge at the west end of the village.

Open daily 6:00 a.m. – 10:00 p.m.

Pizza Pub 12:00 noon – 11:00 p.m.

#### Bright Angel Restaurant

In Bright Angel Lodge. Open daily.

Breakfast: 6:30 a.m.–10:45 a.m.

Beginning April 1 open at 6:00 a.m.

Lunch: 11:15 a.m. – 4:00 p.m.

Dinner: 4:30 – 10:00 p.m.

Lounge: 11:00 a.m. – 11:00 p.m.

#### Bright Angel Coffee House

Located in the Bright Angel Lodge.

Open daily 5:30 a.m. – 10:00 a.m.

#### Bright Angel Fountain

Until March 12 weekends only 11:00 a.m.–5:00 p.m.

Beginning March 13 daily 10:00 a.m. – 6:00 p.m.

Hours may vary depending on weather.

#### The Arizona Room

On the rim in Bright Angel Lodge. Open daily.

Reservations are not accepted.

Lunch: 11:30 a.m. – 3:00 p.m.

Lunch service begins March 5

Dinner: 4:30 p.m. – 10:00 p.m.

Lounge: 4:30 p.m. – 10:00 p.m.

#### El Tovar Dining Room

Located on the rim. Open daily.

Breakfast: 6:30 a.m. – 10:45 a.m.

Lunch: 11:15 a.m. – 2:00 p.m.

Dinner: 5:00 p.m. – 10:00 p.m.

Beginning April 1: 4:30 p.m. – 10:00 p.m.

Dinner reservations are required:

(928) 638-2631 ext. 6432.

Lounge: 11:00 a.m. – 11:00 p.m.

#### Canyon Village Delicatessen

Located in the General Store. Open daily.

March–April: 8:00 a.m. – 6:00 p.m.

May: 8:00 a.m. – 7:00 p.m.

#### Yavapai Cafeteria

Located at Market Plaza. Opens March 12

Daily 6:30 a.m. – 8:00 p.m.

#### Desert View Trading Post Snackbar

Open daily 8:00 a.m. – 6:00 p.m.

Beginning May 13: 8:00 a.m. – 7:00 p.m.

## Groceries

### Canyon Village Market

The General Store is located in Market Plaza.

March–April: 8:00 a.m. – 8:00 p.m.

May: 8:00 a.m. – 9:00 p.m.

### Desert View Marketplace

March–April: 9:00 a.m. – 5:00 p.m.

May: 9:00 a.m. – 6:00 p.m.

## Books and gifts

Listed west to east along the rim.

**Hermits Rest** . . . . . 9:00 a.m. – 5:00 p.m.

**Maswik** . . . . . 7:00 a.m. – 10:00 p.m.

**Kolb Studio** . . . . . 8:00 a.m. – 6:00 p.m.

Beginning April 1 . . . . . 8:00 a.m. – 7:00 p.m.

**Lookout Studio** . . . . . 9:00 a.m. – 5:00 p.m.

Beginning May 13 . . . . . 8:00 a.m. – sunset

**Bright Angel** . . . . . 7:00 a.m. – 10:00 p.m.

**El Tovar** . . . . . 7:00 a.m. – 10:00 p.m.

**Hopi House** . . . . . 9:00 a.m. – 5:00 p.m.

Beginning May 13 . . . . . 8:00 a.m. – 8:00 p.m.

**Verkamp's Visitor Center** 8:00 a.m. – 6:00 p.m.

Beginning April 1 . . . . . 8:00 a.m. – 7:00 p.m.

**Yavapai Curio** . . . . . 8:00 a.m. – 8:00 p.m.

Beginning May 13 . . . . . 7:00 a.m. – 10:00 p.m.

### Books & More at Canyon View

**Information Plaza** . . . . . 8:00 a.m. – 6:00 p.m.

Beginning April 1 . . . . . 8:00 a.m. – 7:00 p.m.

### Yavapai Observation Station

. . . . . 8:00 a.m. – 6:00 p.m.

Beginning April 1 . . . . . 8:00 a.m. – 7:00 p.m.

**Tusayan Museum** . . . . . 9:00 a.m. – 5:00 p.m.

### Desert View Bookstore/Park Information

. . . . . 9:00 a.m. – 5:00 p.m.

### Desert View Trading Post

. . . . . 8:00 a.m. – 6:00 p.m.

Beginning May 13 . . . . . 8:00 a.m. – sunset

### Desert View Watchtower

. . . . . 8:00 a.m. – 6:00 p.m.

Beginning May 13 . . . . . 8:00 a.m. – sunset

# Services

## Medical

**24-Hour emergency care dial 911;**  
from hotel rooms dial **9-911**

### **North Country Grand Canyon Clinic**

March 1 – March 31

Monday – Friday: 8:00 a.m. – 5:00 p.m.

Beginning April 1: Daily: 8:00 a.m. – 6:00 p.m.  
(928) 638-2551

## Services

### **In the Park–South Rim**

#### **Laundry and Showers**

Located near Mather Campground.

March 1–March 25: 8:00 a.m. – 6:00 p.m.

Last laundry load: 4:45 p.m.

March 26 – April 22: 7:00 a.m. – 9:00 p.m.

Last laundry load: 7:45 p.m.

Beginning April 23: 6:00 a.m. – 11:00 p.m.

Last laundry load: 9:45 p.m.

#### **Chase Bank and ATM**

At Market Plaza. 24-hour ATM.

Monday – Thursday: 9:00 a.m. – 5:00 p.m.

Friday: 9:00 a.m. – 6:00 p.m.

Accepts travelers checks and major credit cards.  
(928) 638-2437.

ATM also available in Maswik Lodge lobby.

#### **Post Office**

At Market Plaza.

Monday – Friday: 9:00 a.m. – 4:30 p.m.

Saturday: 11:00 a.m. – 1:00 p.m. (928) 638-2512.

#### **Kennels**

Open daily: 7:30 a.m. – 5:00 p.m.

(928) 638-0534.

For retrieval after 5:00 p.m., contact Fire and Safety: (928) 638-2631.

#### **Lost and Found**

For items lost or found in hotels or restaurants, call: (928) 638-2631. For all other lost items call: (928) 638-7798. Take found items to the Grand Canyon Visitor Center at Canyon View Information Plaza or Verkamp's Visitor Center.

#### **Garage Services**

Located east of Grand Canyon National Park Lodges general offices. (928) 638-2631

Open daily 8:00 a.m. – noon; 1:00 p.m. – 5:00 p.m.

Provides emergency repairs such as tires, belts, batteries, fuses, hoses, etc. Tow service provided to Williams or Flagstaff for more advanced repairs. After hours emergency service available.

## Tours & River Trips

### **Air Tours**

Fixed-wing and helicopter tours originate daily from Grand Canyon Airport. A list of air tour operators is available upon request at NPS visitor centers or consult the local telephone directory.

### **Bus Tours**

Tours within the park to Desert View and Hermits Rest, as well as sunrise and sunset tours, are available daily. Contact any transportation desk or call (928) 638-2631.

### **Mule Trips**

Two-day trips into the canyon depart each morning and may be available on a waiting-list basis. A three-hour ride to The Abyss overlook departs once daily through March 14; twice daily beginning March 15.

Call (928) 638-2631 or contact the **Bright Angel Lodge Transportation Desk** for information.  
[www.grandcanyonlodges.com](http://www.grandcanyonlodges.com)

### **Horse Rides**

Trail rides and twilight wagon rides are available from Apache Stables at the north end of Tusayan. Rides are offered as weather permits. For information and reservations call (928) 638-2891.

### **Smooth-Water Raft Trips**

Half-day and full-day trips on the Colorado River from Glen Canyon Dam to Lees Ferry are provided by Colorado River Discovery. (888) 522-6644 or [www.raftthecanyon.com](http://www.raftthecanyon.com) or contact any Transportation Desk.

### **Hiking and Backpacking**

**Grand Canyon Field Institute (GCFI)** offers a wide variety of educational programs throughout the park. These single- and multi-day classes led by expert instructors share the wonder of Grand Canyon with participants of all ages and backgrounds. For more information call (866) 471-4435 or visit: [www.grandcanyon.org/fieldinstitute](http://www.grandcanyon.org/fieldinstitute). GCFI is a program of the nonprofit Grand Canyon Association.

## Transportation

### **Transportation Desks**

Information about Phantom Ranch facilities, mule trips, horseback riding, air tours, smooth-water float trips, and motorcoach tours (including wheelchair-accessible tours) is available in the following lodge lobbies. Call (928) 638-2631, ext. 6015.

#### **Maswik Lodge**

Times vary based on seasonal demand.

#### **Bright Angel**

6:00 a.m.–6:30 p.m. March 1–31.

6:00 a.m.–8:00 p.m. Starting April 1.

#### **Yavapai Lodge**

Times vary based on seasonal demand.

### **Railroad**

**Grand Canyon Railway** offers service between Williams, Arizona, and Grand Canyon. Call (800)-THE-TRAIN for information and reservations. [www.thetrain.com](http://www.thetrain.com)

### **Taxi Service**

Service is available to the Grand Canyon Airport, trailheads, and other destinations. Daily 24-hour service. (928) 638-2631, ext. 6563.

### **Rim to Rim Shuttle**

Daily round-trip transportation between the North Rim and South Rim is provided by **Transcanyon Shuttle**. One trip each way daily. Scheduled service begins May 15. Reservations required: (928) 638-2820.

### **Shuttle Service**

**Arizona Shuttle** provides shuttle service between Flagstaff and Grand Canyon twice daily, also serving Phoenix and Tucson as well as other locations in northern Arizona.

(877) 226-8060 or (928) 226-8060

[www.arizonashuttle.com](http://www.arizonashuttle.com)

### **Arizona Highway Information**

511 or (888) 411-ROAD

[www.az511.gov](http://www.az511.gov)



## Religious Services

Religious services are offered in the park and the surrounding community. Current schedules are posted at Mather Campground (near the check-in station), Shrine of the Ages, the information kiosk near the post office, the Grand Canyon Visitor Center at Canyon View Information Plaza, and Verkamp's Visitor Center.

#### **Community Easter Sunrise Service**

April 4, 6:00 a.m. at Mather Point. Shuttle service available from Market Plaza. Open to all.

#### **Church of Jesus Christ of Latter-Day Saints**

Don Kiel, Branch President. (928) 638-9426

#### **El Cristo Rey Roman Catholic**

Father Eugene Cagoco, D.S., (928) 638-2390

#### **Grand Canyon Assembly of God**

Brian and Debbie Fulthorp, Co-pastors,  
(928) 638-9415

#### **Grand Canyon Baptist Church**

Rick Wiles, Pastor. (928) 638-2790

#### **Grand Canyon Community Church**

(Christian Ministry in the National Parks—interdenominational)

Jared Long, Pastor. (928) 638-2340

#### **Jehovah's Witnesses (Tusayan)**

Borden Miller, (928) 635-4166

#### **Jewish Services and Programs**

Rabbi Nina Perlmutter, (928) 777-8172

## Available in Tusayan

**IMAX Theater** ..... (928) 638-4629

Movie shown every hour on the half hour

..... 8:30 a.m. – 8:30 p.m.

#### **Kaibab National Forest**

Tusayan Ranger District ..... (928) 638-2443

#### **News and Weather**

KNAU ..... Radio FM 90.3

## **Hualapai Skywalk**

The Hualapai Skywalk is on the Hualapai Indian Reservation, not in Grand Canyon National Park. The Skywalk is at the west end of Grand Canyon approximately 250 miles (400 km) from the South Rim. Stop by any NPS visitor center for a brochure with a map.

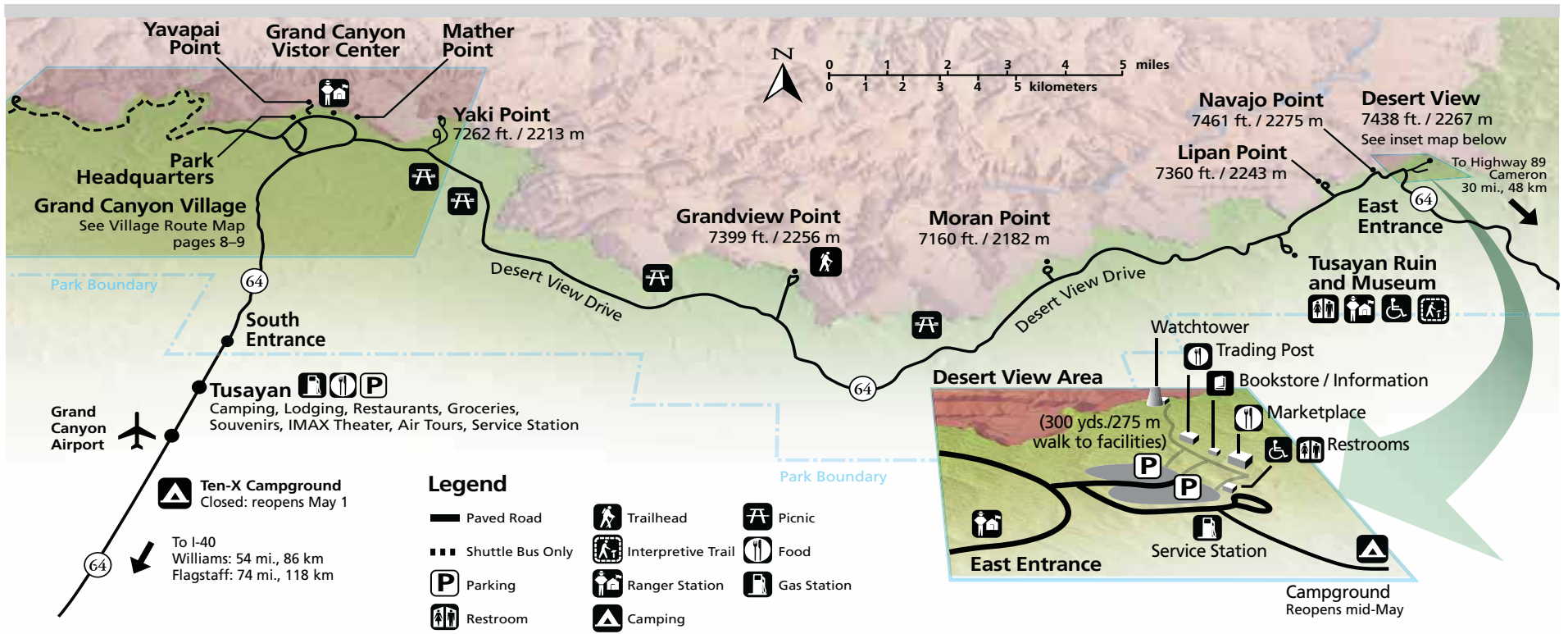
The Skywalk is a Hualapai Tribal business.

For information or to make reservations:

(888) 868-9378 or (928) 769-2219 or

[www.grandcanyonwest.com](http://www.grandcanyonwest.com).

# South Rim



## Bookstores



## GRAND CANYON ASSOCIATION

*Supporting the Park since 1932*

When you shop at Grand Canyon Association (GCA) bookstores, your purchase supports Grand Canyon National Park. GCA is a nonprofit organization created in 1932 to cultivate knowledge, discovery, and stewardship for the benefit of Grand Canyon National Park and its visitors. Since then, GCA has provided in excess of \$33.5 million in financial support. For GCA bookstore locations, see page 5.

When you visit our bookstores, ask how you can support Grand Canyon National Park's educational programs and scientific research by becoming a member of the Grand Canyon Association. In addition to supporting the park, you will receive a 15% discount at all GCA bookstores, including our online bookstore at [www.grandcanyon.org](http://www.grandcanyon.org).

Member discounts are also available for most classes offered by the Grand Canyon Field Institute, GCA's outdoor education program. For more information about GCFI, visit [www.grandcanyon.org/fieldinstitute](http://www.grandcanyon.org/fieldinstitute).

Teachers can take advantage of GCA's *Travelin' Trunk* program, which brings the Grand Canyon to your classroom. For more information contact (800) 858-2808 ext. 7142 or [www.grandcanyon.org/fieldinstitute/educators\\_trunk.asp](http://www.grandcanyon.org/fieldinstitute/educators_trunk.asp).

Shop online: [www.grandcanyon.org](http://www.grandcanyon.org) or call toll free (800) 858-2808, ext 7030.

## North Rim

The average distance across Grand Canyon "as the raven flies" is 10 miles; however, traveling from the South Rim to the North Rim by automobile requires a five-hour drive of 215 miles.

During winter months, highway AZ 67 to the North Rim entrance is closed due to snow. Lodging and camping are available at the canyon's North Rim from May 15 through mid-October. Reservations are strongly recommended. Lodging reservation information is on page 14.

Additional facilities are available in the surrounding Kaibab National Forest, the Kaibab Lodge area, and Jacob Lake.

A separate issue of *The Guide* is published for the North Rim and includes details about facilities and services, as well as program and hiking information. The North Rim issue of *The Guide* for the 2010 season will be published in May. Stop by any NPS visitor center to obtain a copy.

## Desert View Services

Chevron Service Station	Staffed beginning April 1	9:00 a.m. – 5:00 p.m.
	Gas available 24 hours year-round with credit card	
Desert View Marketplace	March – April:	9:00 a.m. – 5:00 p.m.
	May:	9:00 a.m. – 6:00 p.m.
Bookstore/Park Information		9:00 a.m. – 5:00 p.m.
Trading Post Gift Shop		8:00 a.m. – 6:00 p.m.
	Beginning May 14:	8:00 a.m. – sunset
Watchtower Gift Shop		8:00 a.m. – 6:00 p.m.
	Beginning May 13:	8:00 a.m. – sunset
Watchtower stairs		Close 30 minutes before gift shop
Desert View Campground		Opens mid-May weather permitting
		First-come, first-served

**National Park Service**  
**U.S. Department of the Interior**

## Grand Canyon National Park

Post Office Box 129, Grand Canyon, AZ 86023

For the latest information updates, visit Grand Canyon National Park's web site at: [www.nps.gov/grca/](http://www.nps.gov/grca/)

*The Guide* is published by Grand Canyon National Park in cooperation with the Grand Canyon Association. Printed by Arizona Daily Sun on recycled paper, using soy-based inks. ♻️

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