

Grand Canyon

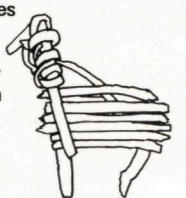
"The Grand Canyon of the Colorado . . . as unearthly in the color and grandeur and quantity of its architecture as if you had found it after death on some other star."

—John Muir 1898

Like Muir, those of us who stand along the rim are prompted to muse about the canyon's seeming unearthliness and then to wonder about the earthly events that created and are still changing this place.

After more than 100 years of studies, significant parts of the geological story are still obscure. We do know,

These split-twig figurines found in caves within the canyon probably represent deer or bighorn sheep. Left here by hunters 3,000 to 4,000 years ago, they are evidence that man has gazed upon the Grand Canyon of the Colorado for a long, long time.



Hidden in the layers of the Grand Canyon are fossils of ancient plants and animals, some as old as 570 million years. Each individual fossil is a tiny portion of the record of the evolution of life on earth.



South Rim

Rising some 2,100 meters (7,000 feet) above sea level, the South Rim supports plants and animals adapted to a dry, cool climate.

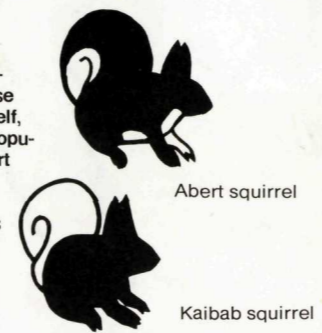


Maj. John Wesley Powell, a one-armed veteran of the Civil War, led the first expedition down the Colorado River through the Grand Canyon. He rode the river in a chair strapped to one of the group's wooden boats and searched the river ahead for hidden rocks and rapids. This adventuresome geologist also named the "Grand Canyon," as he referred to it in his diary of that 1869 trip.

however, that the Grand Canyon is a product of the conflict between two great earth forces: mountain-building on the one hand and gravity on the other. This portion of the earth's crust has been elevated 2.5 kilometers (1.5 miles) above sea level, and water, powered by gravity, is carrying this place to the sea. The vehicle is the mighty Colorado River.

Today, the Grand Canyon is about 1.5 kilometers deep (1 mile); it ranges in width from about 200 meters to 30 kilometers (600 feet to 18 miles); and measured along the

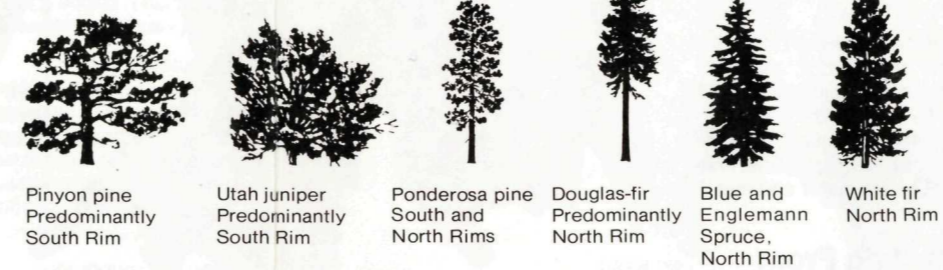
Originally only one species of tassel-eared squirrel lived here, but because of the deep barrier of the canyon itself, an isolated and slightly different population evolved on each rim. The Abert squirrel of the South Rim has a gray tail and white underparts, while the Kaibab squirrel of the North Rim has an all-white tail and black or gray underparts.



Both the Abert and Kaibab squirrels depend upon the same food—the seeds and inner bark of the ponderosa pine.



Different kinds of trees grow on the North Rim from those on the South Rim. Even the moderate difference in elevation between the two rims influences the vegetation.

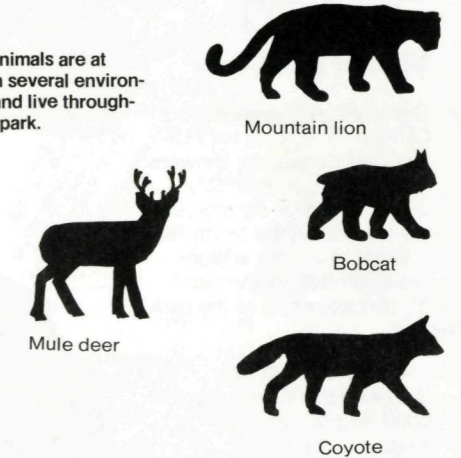


Pinyon pine Predominantly South Rim
Utah juniper Predominantly South Rim
Ponderosa pine South and North Rims
Douglas-fir Predominantly North Rim
Blue and Englemann Spruce, North Rim
White fir North Rim

Bighorn sheep, natives of the Inner Canyon, are having difficulties competing with the wild burros that roam the canyon, overgrazing the land and otherwise destroying the habitat. Burros were abandoned in the canyon by prospectors around 1900 and since then have greatly multiplied.



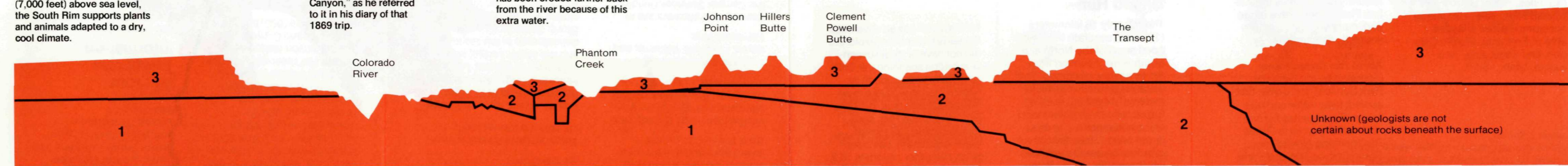
Some animals are at home in several environments and live throughout the park.



Mountain lion
Bobcat
Mule deer
Coyote

Inner Canyon

The Colorado River below Grand Canyon Village is only 730 meters (2,400 feet) above sea level. The vast inner canyon is a hot, dry desert with summer temperatures exceeding 40°C (100°F). Above the rims, the surface of the land slopes from north to south. Water falling on the South Rim flows away from the canyon; water falling on the North Rim flows toward the canyon. Thus the North Rim has been eroded farther back from the river because of this extra water.



A Brief Geologic History of the Canyon

The canyon cross section above roughly follows the Bright Angel Trail from the South Rim to the Colorado River and Bright Angel Creek from the river to the North Rim, showing major rock formations. The following explanation is keyed to the rock formations numbered in the cross section: **1** About 1,700 million years ago tremendous mountains were pushed up where the Grand Canyon

is today. The high temperatures and pressures associated with the mountain-building changed the rocks in existence then into the dark crystalline rocks we see today in the Inner Gorge. **2** These early mountains were eroded down to their roots, and where they once stood, crustal movements of the earth created a basin in which more than 3,500 meters (12,000 feet) of sediments and volcanic rocks were collected. About 800 million years ago, these layers were pushed up to form new mountains. These, in their

turn, were eroded down to their roots. **3** Between 570 and 225 million years ago, the Grand Canyon region was once again a basin—something like the present Gulf of Mexico. The flat-lying sandstones, shales, and limestones that today form the upper three-fourths of the canyon walls were collected in this basin.

One result of the conflict here is that perhaps nowhere else on earth has such a geological record been so clearly exposed. Within the walls of the Grand Canyon we have a view of geologic time—a view that stretches back as far as 2,000 million years.

Besides providing insights into geologic history, the Grand Canyon is a vast biological museum. The "grand" canyon and its innumerable side canyons are bounded by high plateaus that have cool north-facing slopes and hot south-

facing slopes, year-round and intermittent streams, and seasonal climatic variations. These various environments support life in abundance—from desert life forms at the lower elevations near the river and on the canyon walls to the conifer forest communities on the rims.

In the Grand Canyon, geological and biological processes are combined in one awesome spectacle. An appreciation and an understanding of this spectacle come with a recognition that creation of the canyon is a continuing process that is happening today and every day.

Cactus and other plants with special adaptations thrive in the heat and dryness of the Inner Canyon, sharply contrasting with the conifers of the North and South Rims.

North Rim

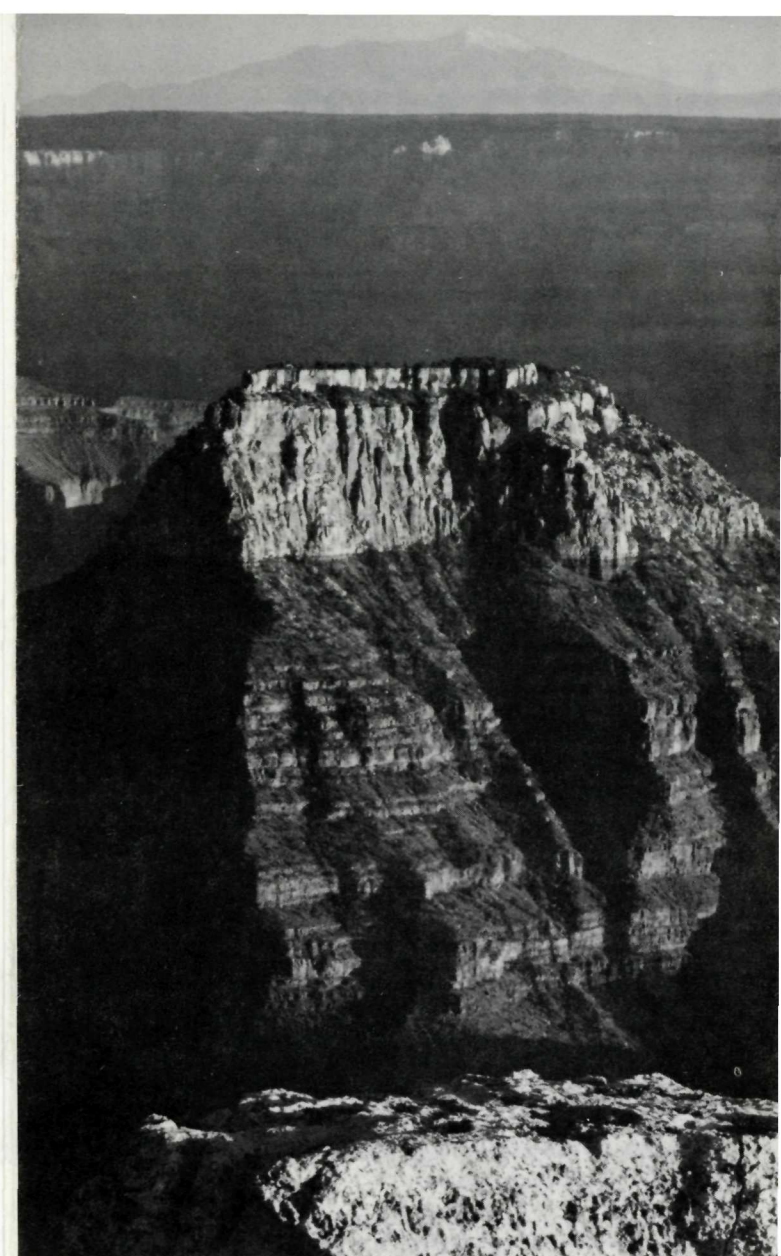
The North Rim is 2,400 meters (8,000 feet) above sea level, 300 meters (1,000 feet) higher than the South Rim, and the climate is colder and wetter.

Administration

Grand Canyon National Park is administered by the National Park Service, U.S. Department of the Interior. The superintendent's address is Grand Canyon, AZ 86023.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

National Park Service
U.S. Department of the Interior



Grand Canyon

National Park
Arizona

How to Use this Folder.

There are three separate areas in the park—the South Rim, the North Rim, and the Inner Canyon or Inner Gorge. Each has different facilities, different activities, and even different climates. This folder contains a separate section devoted to each area and is designed for use throughout the park. General information of interest to all park visitors is shown below.

For Your Safety

Please observe these simple rules and precautions:

Climbing in the canyon is dangerous; technical experts won't attempt it, so unskilled climbers shouldn't either. Most of the rock is too crumbly for safety.

Driving too fast or under the influence of alcohol or drugs is prohibited; the maximum speed limit is 75 kilometers per hour (45 mph). Remember that you are unfamiliar with the park roads and probably tired when you arrive.

Hitchhiking is a violation of National Park Service regulations. For your own safety—don't hitchhike; don't pick up hitchhikers.

Heart attacks have resulted from lack of oxygen. The canyon rims are 2,100 meters (7,000 feet) or more above sea level, and the air is extremely thin. Overexertion can be a contributing factor.

Swimming in the Colorado River should not be attempted. Water temperature is about 10°C (50°F) year-round, and the current flows from about 7 kilometers per hour (4 mph) up to 23 kph (14 mph) in some rapids.

Temperatures within the Inner Canyon can reach extremes; they soar to 50°C (120°F) in summer and plummet to well below freezing in winter. Winter storms also bring high winds and snow or cold rain. These extremes in weather can be fatal. Take enough water and food; dress for the weather; know your own physical limitations; seek shade or shelter before it's too late.

Where are you? Does someone else know? Your Wilderness Trailhead Reservation is your protection; it helps park rangers know when and where to look for you if you are lost or injured. The small amount of water that you can carry won't last very long in emergencies.

Some Things You Should Know

Entrance fees are charged. Grand Canyon National Park is a Designated Federal Entrance Fee Area.

Park rangers are the men and women in uniforms and broad brimmed hats, and they're here to help you have an enjoyable, safe visit and to protect the park and its features. Their responsibilities include those provided by city police and fire organizations. Contact any park ranger for information or assistance, and report all accidents, thefts, vandalism, and lost-and-found items at the nearest visitor center, ranger station, entrance station, or National Park Service information desk.

Camping in Grand Canyon National Park campgrounds is limited to 7 days. In most park locations, camping is not permitted outside of designated campgrounds. You can build campfires only in campground fireplaces, and fires must be completely extinguished before the campsite is vacated. You cannot cut or gather firewood; firewood and other fuels can be purchased at general stores. Place all rubbish in trash containers. Fees charged for rim campgrounds.

Fishing opportunities are limited. An Arizona license is required.

Motorcycles, trailbikes, and other off-road vehicles may not be operated outside of established public roads and parking areas. ALL DRIVERS must have a valid State driver's license. ALL VEHICLES, including minibikes and mopeds must be licensed.

Pets are not allowed on canyon trails. A kennel is available at Grand Canyon Village on the South Rim.

Collecting natural and historic objects is prohibited.

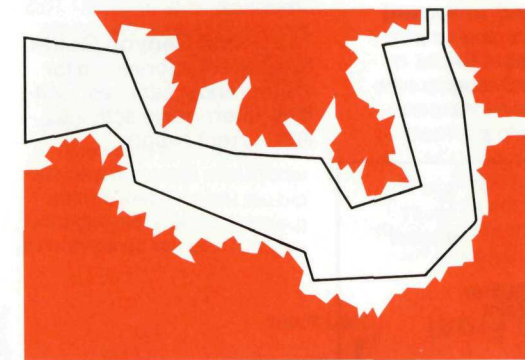
Feeding of animals is a dangerous and prohibited practice.

Publications and Schedules of Activities

A free park newspaper, Grand Canyon "Guide," is available at entrance stations and other locations; it contains current information about park activities. Schedules of activities and events are also posted on bulletin boards throughout the park.

Publications (about the Grand Canyon and other national parks, the Southwest and its Native Americans, and natural history), posters, and U.S.G.S. topographic maps are for sale at park museums and information stations. They are sold by the Grand Canyon Natural History Association, a non-profit organization; proceeds aid educational and scientific activities of the National Park Service at Grand Canyon.

Inner Canyon



Exploring the Canyon Desert

The Inner Canyon desert may be explored on foot, by mule, or by boat. On such trips, you will see more closely the canyon's rich natural beauty and sense even more sharply its immense size.

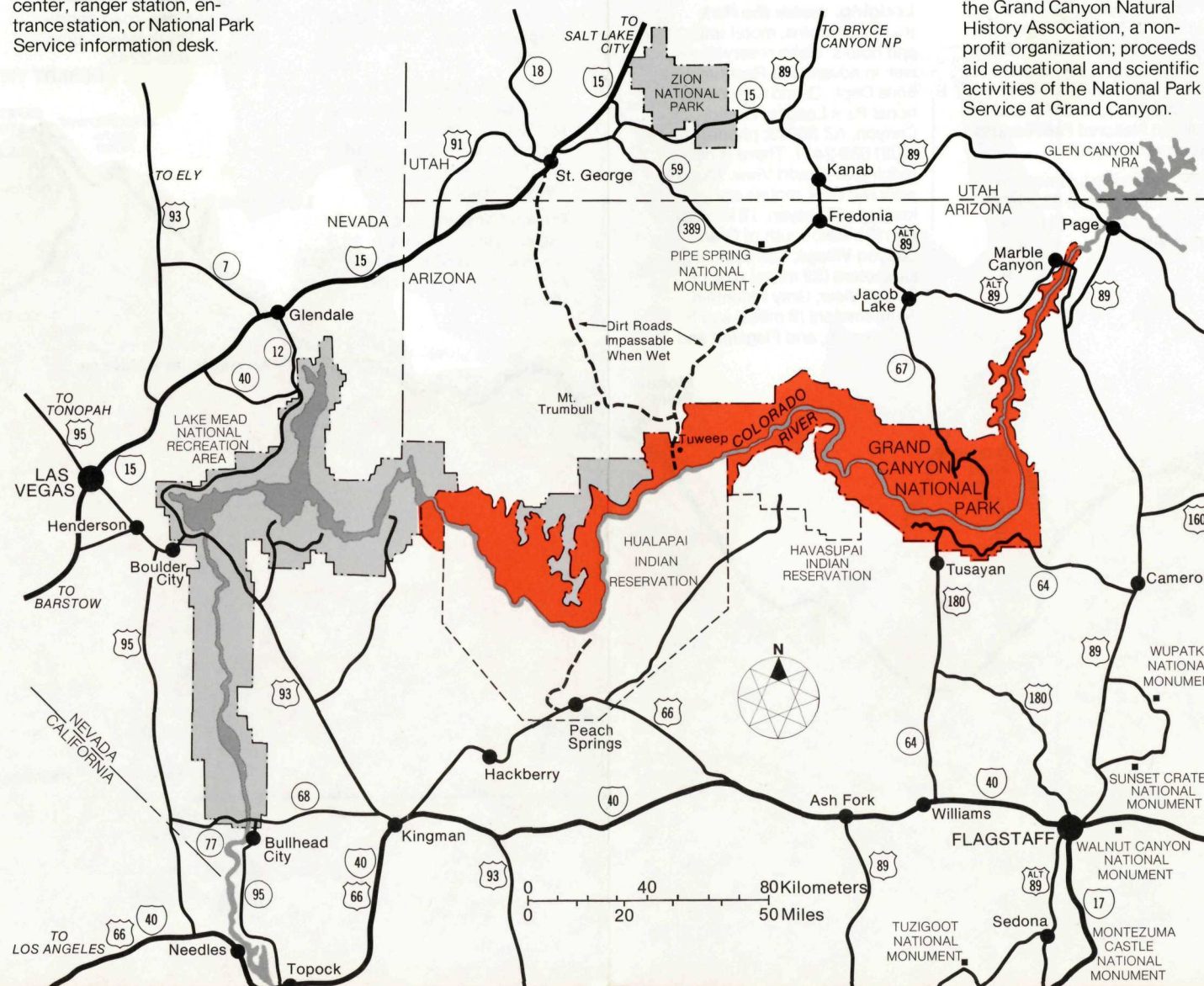
Seasons. The desert seasons follow cycles much different from those of the North and South Rims. Temperatures and precipitation shown below are for Bright Angel Campground at river level, 730 meters (2,400 feet) above sea level.

Spring (March, April, May)—When spring arrives on the canyon rims, summer is already advancing into the Inner Canyon. Wildflowers are at their best from February to April. Average high and low temperatures: 28°C and 13°C (83°F and 56°F). Average monthly precipitation: 1.4 centimeters (0.5 inch).

Summer (June, July, August)—Summer in the Inner Canyon is hot! Plan on carrying 4 liters (4 quarts) of water per person per day; travel during the cooler morning and evening hours. Average high and low temperatures: 39°C and 24°C (103°F and 76°F). Average monthly precipitation: 2.2 centimeters (0.8 inch).

Fall (September, October, November)—Although occasionally days are too hot or too cold, fall is the ideal time for hiking in the Inner Canyon. The low humidity still requires an ample supply of water. Average high and low temperatures: 28°C and 14°C (83°F and 58°F). Average monthly precipitation: 1.8 centimeters (0.7 inch).

Winter (December, January, February)—Below the higher elevations the weather is mild, and spring wildflowers begin blooming in February. But snow and ice usually cover the upper 300 meters (1,000 feet) of the canyon walls, making footing on the trails treacherous. Hikers need both hot and cold weather clothing. Average high and low temperatures: 15°C and 4°C (59°F and 39°F). Average monthly precipitation: 1.9 centimeters (0.8 inch).



Hiking and Camping

Hiking trails. From the South Rim, **Bright Angel Trail**, 15 kilometers (9 miles) long, and **South Kaibab Trail**, 11 kilometers (7 miles) long, lead to the River Ranger Station. **North Kaibab Trail**, 23 kilometers (14 miles) long, connects the North Rim with the river.

A few trails penetrate the Grand Canyon wilderness; these are not maintained, distances are great, and water is hard to find and heavy to carry. All hikers should gain experience on Bright Angel and Kaibab Trails before attempting the wilderness trails.

Day hikes. For safe and comfortable day hikes, decide in advance how many hours you want to hike; when one-third of your time has elapsed, start hiking back out. Trails suited for day hiking from South Rim are Bright Angel and South Kaibab, as well as the shorter trails Hermit and Grandview. From the North Rim there is the North Kaibab Trail. **HIKING TO THE COLORADO RIVER AND BACK IN ONE DAY IS NOT RECOMMENDED.** Permits are not required for day hikes. **ALWAYS CARRY PLENTY OF WATER.** In hot weather, carry at least 4 liters (4 quarts) of water per person per day.

Overnight hikes. To safeguard the delicate desert environment of the canyon, the Park Service limits the number of overnight campers. **OVERNIGHT PERMITS ARE REQUIRED AND ADVANCE RESERVATIONS ARE USUALLY NECESSARY** for camping on wilderness trails and in the four Inner Canyon campgrounds: Indian Gardens on the Bright Angel Trail; Bright Angel Campground at Phantom Ranch; Cottonwood and Roaring Springs Campgrounds on the North Kaibab Trail. Advance reservations are strongly recommended for: groups, hikes planned from about March 1 to April 30, weekends, holidays, and other popular vacation periods. Groups are strictly limited to 15 people. For details on trails, campgrounds, and permits write to: Backcountry Reservation Office, P.O. Box 129, Grand Canyon, AZ 86023. Or phone (602) 638-2474—answered 1 p.m. to 5 p.m. daily, Mountain Standard Time.

Phantom Ranch is just north of the river on North Kaibab Trail. Reservations for lodge and dormitory accommodations and meals there must be made with Reservations Dept., Grand Canyon National Park Lodges, Grand Canyon, AZ 86023; phone (602) 638-2401.

For additional information or for camping permits if you arrive without one, go to the Backcountry Reservations Office, South Rim Visitor Center, or the NPS Information Desk, Grand Canyon Lodge, North Rim.

From some places along the rims of the Grand Canyon, you can't even see the Colorado River down below. But from any vantage point, the river's handiwork is abundantly clear.

These photographs by David Muench show the Grand Canyon from Toroweap (cover shot); from Bright Angel Point on the North Rim looking across Deva Temple and Angels Gate to the South Rim (right); and into the depths of the canyon from Hopi Point on the South Rim to Hermit Rapids (left).

REMEMBER: ALL HIKERS CAMPING BELOW THE RIM MUST HAVE TRAILHEAD OR CAMPGROUND RESERVATIONS AND MUST OBTAIN A PERMIT BEFORE DEPARTURE.

Backpacking equipment.

In summer only, you can rent equipment from Grand Canyon Trail Guides at the Santa Fe Railroad Depot in Grand Canyon Village, South Rim.

Mule Trips

South Rim. Trips to Plateau Point (1 day) and Phantom Ranch (2 days) are conducted year-round, weather permitting. Make reservations well in advance: Reservations Dept., Grand Canyon National Park Lodges, Grand Canyon, AZ 86023.

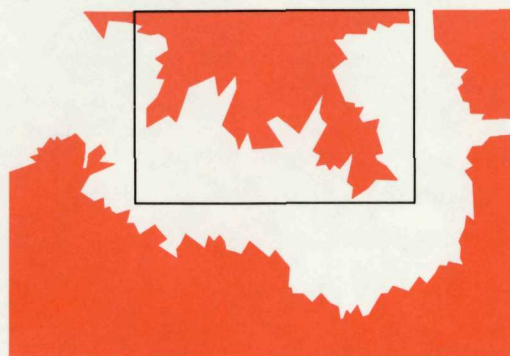
North Rim. Trips go down the North Kaibab Trail as far as Roaring Springs, 15 kilometers (9 miles) round trip. Write to Grand Canyon Scenic Rides, Kanab, UT 84741, or inquire at Transportation Desk, Grand Canyon Lodge.

PERSONS WEIGHING MORE THAN 90 KILOGRAMS (200 pounds) AND CHILDREN UNDER 12 YEARS OLD ARE NOT PERMITTED ON THE MULES.

River Tours

Trips along the Colorado River are oar-powered or motor-powered and vary in length from 3 to 18 days. There are 22 river-running concessioners licensed by the National Park Service; names and addresses are available at South Rim Visitor Center or by mail from the park superintendent. Make inquiries and reservations as far in advance as possible.

North Rim



Information Centers

Jacob Lake Information Station, 72 kilometers (45 miles) north of Grand Canyon Lodge, is operated jointly by Grand Canyon National Park and Kaibab National Forest.

North Rim Entrance Station is about 21 kilometers (13 miles) north of Bright Angel Point, which is on the canyon rim.

North Rim Information Station is located in Grand Canyon Lodge at Bright Angel Point. Park rangers provide information and orientation; trail guides, brochures, and maps are available; and publications are for sale.

How to See the Park

Private auto. A 42-kilometer (26-mile) paved road leads from Grand Canyon Lodge to **Cape Royal**. It provides an eastward view of the canyon toward the Painted Desert. Angels Window is on Cape Royal. **Point Imperial**, 5 kilometers (3 miles) off the Cape Royal Road, offers the best park view across the canyon to the Painted Desert. **Point Sublime Road** begins 1.2 kilometers (3/4 mile) south of the North Rim Entrance Station. This primitive road is 27 kilometers (17 miles) long and is not recommended for vehicles with low bottom clearance. No camping; no water.

On foot. Take short or long hikes along the rim or on the self-guiding nature trails at Bright Angel Point, Cape Royal, and at Walhalla Ruins on Cape Royal.

Commercial tours. **Bus Trips** leave every afternoon in the summer from Grand Canyon Lodge to Cape Royal where geology talks are presented.

Other Visitor Activities: Summer Only

Evening programs are presented every night at the campground amphitheater and the Grand Lodge. Scheduled ranger guided walks and hikes are offered daily.

Religious services are conducted by the Christian Ministry at Grand Canyon (interdenominational), the Church of Jesus Christ of Latter Day Saints, and the Roman Catholic Church.

Visitor Facilities

Services and supplies. Camper store, U.S. Post Office, service station, showers and laundry, and sanitary dump station (at campground) are located on the North Rim. Additional service stations are located at VT Park and Jacob Lake north of the park.

Meals. Restaurants and refreshments are located on Bright Angel Point at Grand Canyon Lodge and outside the park.

Lodging. Inside the Park: For rates and reservations for Grand Canyon Lodge write T.W.A. Services, 451 North Main, Cedar City, UT 84720, phone (801) 586-7686.

Outside the Park: Motels are located at Kaibab Lodge, 28.8 kilometers (18 miles) north of Grand Canyon Lodge, and at Jacob Lake, 72 kilometers (45 miles) north. Both are in Kaibab National Forest. Other accommodations are available at Fredonia, Marble Canyon, and Page, Ariz., and Kanab, Utah.

Camping. If you plan to camp at North Rim Campground, you might consider staying at Jacob Lake the night before. The next morning, enjoy a leisurely drive across the Kaibab Plateau and arrive in the park early enough to assure yourself of a campsite.

North Rim Campground (operated by the National Park Service) first-come, first-served; fees; water and restrooms. For organized group reservations, write to Group Reservations, North Rim, Grand Canyon National Park, Grand Canyon AZ 86023.

De Motte Campground (operated by U.S. Forest Service) 8 kilometers (5 miles) outside the park boundary, first-come, first-served; fees; water and restrooms.

Jacob Lake Campground (operated by U.S. Forest Service) located at junction of U.S. 89A and Arizona 67, 51 kilometers (32 miles) from the park entrance; first-come, first-served; fees; water and restrooms.

Traveling From Rim to Rim

Though only 16 kilometers (10 miles) separate the developed areas of the North and South Rims, traveling from rim to rim is a challenge. The distance by road is 344 kilometers (214 miles), quite a trip despite the convenience of the automobile. The most direct way to cross the canyon is by foot on the Kaibab Trail, which leads from Yaki Point on the South Rim down to the river, across to Phantom Ranch, and then up the North Rim slope, ending 3 kilometers (2 miles) from Grand Canyon Lodge. The distance by trail is 33.6 kilometers (20.8 miles).

Modern man has an advantage the early Indians and explorers did not have: a steel suspension bridge spanning the Colorado River wide enough to carry a man as well as a mule. The bridge was built in 1928. From the South Rim, pack mules carried 122 tons of steel, equipment, camp supplies, and other materials 10.2 kilometers (6.3 miles) down the trail to the river. Each of the eight suspension cables was unwound along the rim of the canyon and then carried to the site by 42 Havasupai Indians hired for the occasion.

In Case of Emergency

Contact a park ranger or phone (602) 638-2477. A **FIRST-AID ROOM** (registered nurse on duty) is at the Information Desk, North Rim Lodge. The nearest physician is at Kanab, Utah, 130 kilometers (81 miles) north of the North Rim.

Planning Your Visit to the North Rim

Seasons. Because of heavy snowfalls, the North Rim is closed every year from about mid-October to mid-May. The other seasons, however, offer something special and quite different from the South Rim. Elevation on the North Rim ranges from 2,400 to 2,700 meters (7,800 to 8,800 feet) above sea level; thus the climate is cooler and wetter than on the South Rim, where elevation is about 2,100 meters (7,000 feet).

Winter (December, January, February)—The North Rim is closed, often buried under as much as 3 meters (10 feet) of snow. Average high and low temperatures: 4°C and -8°C (39°F and 18°F); average monthly precipitation: 7.8 centimeters (3.1 inches).

Spring (March, April, May)—The North Rim is usually open by mid-May, sometimes earlier, but even before the snow has completely retreated, warm updrafts from the Inner Canyon will have caused spring flowers to bloom on Cape Royal. Between the North Entrance and Bright Angel Point, flower-filled meadows are ringed by snowbanks near the forest's edge. But despite the sunshine, the air is chilly and the nights are cold. Average high and low temperatures: 12°C and -2°C (53°F and 28°F); average monthly precipitation: 4.7 centimeters (1.8 inches).

Summer (June, July, August)—One of the most rewarding experiences of a summer visit is a drive to Cape Royal past fragrant locust in bloom and countless field and mountain flowers. Summer days are generally clear and crisp with occasional afternoon thunderstorms or heavy rains. Evenings are chilly. Average high and low temperatures: 24°C and 6°C (75°F and 43°F); average monthly precipitation: 4.8 centimeters (1.9 inches).

Fall (September, October, November)—The days from September until the snows arrive and close the North Rim in mid-October are pleasant. Aspens mantle the hillsides with gold, and the crisp air is invigorating. Average high and low temperatures: 15°C and 0°C (59°F and 32°F); average monthly precipitation: 4.1 centimeters (1.6 inches).

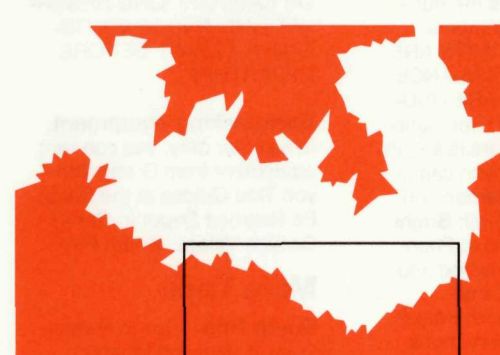
Transportation

Private motor vehicles. Arizona 67 leads southward from U.S. 89A at Jacob Lake. The distance from Jacob Lake to the North Rim Entrance Station is 51 kilometers (32 miles); the canyon rim at Bright Angel Point is 21 kilometers (13 miles) further south. The park road is closed by snow from about mid-October to mid-May.

There is no bus or rail service to the North Rim of Grand Canyon.

Grand Canyon Airlines provides charter flights to the North Rim. However, flights to this dirt airstrip are dependent on field conditions. Contact Grand Canyon Airlines, P.O. Box 186, Grand Canyon, AZ 86023; phone (602) 638-2407.

South Rim



Information Centers

The **visitor center**, located in Grand Canyon Village, 6 kilometers (3.5 miles) north of the South Entrance Station, is open every day; hours vary with the seasons. Park rangers provide information and orientation, trail guides, brochures, and maps are available at the Information Desk; publications and maps are for sale; and schedules of Park Service activities are posted on bulletin boards and listed in the park newspaper.

Exhibits in the visitor center museum sketch the natural and human history of Grand Canyon and the surrounding area.

Yavapai Museum, perched on the rim of the canyon 800 meters (0.5 mile) east of the visitor center, offers a view of the canyon from large observation windows. Exhibits highlight the geological history of the canyon.

Tusayan Museum, adjacent to Tusayan Ruins on the East Rim Drive, is 5 kilometers (3 miles) west of Desert View. Displays describe the life of the prehistoric dwellers of 800 years ago.

How to See the Park

Canyon shuttle. From Easter to mid-October, Grand Canyon Village is served by minibuses that provide transportation to lodges, restaurants, shops, and Mather Campground; to various ranger activities and visitor facilities; and Memorial Day through Labor Day, along scenic West Rim Drive.

Private auto. The **West Rim Drive**, from Grand Canyon Village to Hermit's Rest, is 12 kilometers (7.5 miles) long and passes several canyon overlooks. IN SUMMER, THE DRIVE IS CLOSED TO PRIVATE VEHICLES: ACCESS IS BY CANYON SHUTTLE. The **East Rim Drive** to Desert View is 40 kilometers (25 miles) long. At Desert View the Watchtower overlooks the canyon and the Painted Desert; along the way are Tusayan Ruins and museum and Lipan Point, with perhaps the finest view of the canyon.

Bicycles. Bicycles are permitted on all park roads including West Rim Drive in summer. Use caution and common sense.

On foot. Take short or long hikes on the self-guiding nature trails, paths, and undeveloped trails along the rim between Mather Point and Hermit's Rest, a distance of 14 kilometers (9 miles). The views change from point to point, and the canyon changes as the sun moves across the sky. Other enjoyable hikes begin at many canyon overlooks on both the East and West Rim Drives.

Commercial tours. Bus and Limousine Tours are provided by Grand Canyon National Park Lodges from Grand Canyon Village to: Hermit's Rest and Desert View. **Air Tours**, both fixed-wing and helicopter, leave from Grand Canyon Airport, 14 kilometers (9 miles) south of the Village, and from Tusayan, 13 kilometers (8 miles) south of the Village. Commercial air tours are also available at Page and Williams, Arizona, and Las Vegas, Nevada. **Guided Hikes and Vehicle Tours** (summer only) are offered by Grand Canyon Trail Guides, Santa Fe Railroad Depot, Grand Canyon Village. **Mule Rides**—See details under "Inner Canyon."

Other Activities

Evening programs by Park Rangers are presented year-round in Grand Canyon Village. Similar programs are given at Desert View Campground in summer.

Ranger-guided walks and hikes are presented on a scheduled basis at Grand Canyon Village throughout the year and at Desert View and Tusayan Ruins in summer.

Religious services are conducted by the Roman Catholic, Latter Day Saints, Grand Canyon Community (interdenominational Christian ministry), Southern Baptist, Assembly of God, and Seventh Day Adventist churches.

The **Grand Canyon Guide** has current information for visitors about services, facilities, interpretive activities, and current events.

Visitor Facilities

Services and Supplies. Grand Canyon Village: Babbitt's General Store, U.S. Post Office, and Valley National Bank are in the Mather Center, which is located across the main road from the visitor center.

On the main road, the automobile garage is west of the visitor center; the **service station** is to the east.

Propane is available in Tusayan, Flagstaff, Williams, and Cameron, Ariz.

Laundry and showers are in the Camper Services Building, Mather Campground.

A **sanitary dump station** is located in Trailer Village, just south of Mather Center. **Telephones** are located at most public use facilities. The **teleguide office** is in the Grand Canyon National Park Lodges General Offices.

A **pet kennel** is just west of the Village, phone 638-2631. Pets are not allowed on canyon trails.

Lost and found facilities are at the Visitor Center Information Desk and Grand Canyon National Park Lodges General Offices.

Desert View: General store and service station (CLOSED IN WINTER).

Tusayan: General store, service stations (diesel fuel).

Meals. Grand Canyon Village has restaurants in El Tovar Hotel and Bright Angel Lodge; cafeterias in Yavapai Lodge and the Motor Lodge; and a delicatessen in the General Store. Some facilities are closed in winter. There is a snack bar at Desert View; other restaurants are in Tusayan.

Lodging. Inside the Park there are cabins, motel units, and hotels. Make reservations well in advance to Reservations Dept., Grand Canyon National Park Lodges, Grand Canyon, AZ 86023; phone (602) 638-2401. There is no lodging at Desert View. **Outside the Park** motels are located at Tusayan, 13 kilometers (8 miles) south of Grand Canyon Village; Cameron, 51 kilometers (32 miles) east of Desert View; Gray Mountain, 14 kilometers (9 miles) south of Cameron; and Flagstaff and Williams.

Camping. Grand Canyon Village: Mather Campground, operated by National Park Service; open year-round; fees; first-come, first-served except reservations available in summer; tables, fireplaces, water, and restrooms. For reservations write Grand Canyon National Park, P.O. Box 129, Grand Canyon, AZ 86023. **Trailer Village**, operated by concessioner, open year-round; utility hookups; sanitary dump station (closed in winter). For reservations write Grand Canyon National Park Lodges, Grand Canyon, AZ 86023; phone (602) 638-2401.

Desert View: Campground operated by National Park Service; closed in winter; fees; first-come, first-served; tables, fireplaces, water, and restrooms.

Outside the Park: On U.S. 180, Ten-X Campground; operated by the U.S. Forest Service; open spring through fall; 16 km (10 mi) south of Grand Canyon Village.

Private Campgrounds on U.S. 180 at Tusayan and Valle, 12.8 km (8 mi) and 50 km (31 mi) respectively, south of the Village.

In Case of Emergency

Contact a park ranger or phone 638-2477. A physician, pharmacist, and dentist are at the **Grand Canyon Clinic**, Center Road between South Entrance Station and Grand Canyon Village. Telephone: 638-2551.

24-Hour Telephone Information

For a recorded message about current Park Service visitor activities and programs, call (602) 638-9304. For up-to-date information about weather, road conditions, and park information, call (602) 638-2245.

Planning Your Visit to the South Rim

Seasons. The South Rim, like the canyon, changes with the seasons. Roads and many facilities are open all year, and each season has its advantages and disadvantages.

Spring (March, April, May)—If you visit the park during Easter vacation and the weeks surrounding it, you'll have to do more advance planning than at other times of the year. Many facilities are still closed, and moderately heavy snows can occur through April, with light snow as late as mid-May. School vacations contribute to crowded conditions when the weather is good. In early spring trails may be snowpacked and icy. Average high and low temperatures: 16°C and 0°C (60°F and 32°F); average monthly precipitation: 2.5 centimeters (1.0 inch).

Summer (June, July, August)—Long lines and crowded conditions are the rule at most visitor facilities. Campgrounds are often full by 8:00 a.m., and other accommodations may fill before noon. Afternoon showers, thunderstorms, and occasional heavy rains can be expected. Average high and low temperatures: 28°C and 11°C (82°F and 51°F); average monthly precipitation: 7 centimeters (2.7 inches).

Fall (September, October, November)—This is the best time to visit Grand Canyon! The park is not crowded and the weather is delightful, although snow can fall in late October. Average high and low temperatures: 18°C and 2°C (64°F and 36°F); average monthly precipitation: 3.0 centimeters (1.2 inches).

Winter (December, January, February)—Many believe that the canyon is at its best when snow mantles its higher elevations. The park is not crowded, but many facilities are closed; those open are usually filled to capacity during holiday periods. Snows are frequent—you should have snow tires or chains any time between late October through April. Average high and low temperatures: 6°C and -7°C (43°F and 20°F); average monthly precipitation: 3.8 centimeters (1.5 inches).

Transportation

Private motor vehicles. I-40 (U.S. 66) crosses northern Arizona through Flagstaff and Williams. Grand Canyon Village is 132 kilometers (82 miles) northwest of Flagstaff, and 97 kilometers (60 miles) north of Williams. Desert View, the east entrance to the South Rim, is 51 kilometers (32 miles) west of Cameron, which is located on the Navajo Indian Reservation on U.S. 89.

Air. Grand Canyon Airport, 14 kilometers (9 miles) south of Grand Canyon Village, is served by Republic Airlines, Scenic Airlines, and numerous others. Commercial ground transportation is available for getting to the park.

Bus. Navi-Hopi Tours provides scheduled bus service from Flagstaff to Grand Canyon Village; phone (602) 774-5003.

Car rentals are available at hotels on the South Rim, Grand Canyon Airport, and in Flagstaff. Flagstaff is served by commercial air and bus lines and by Amtrak.

