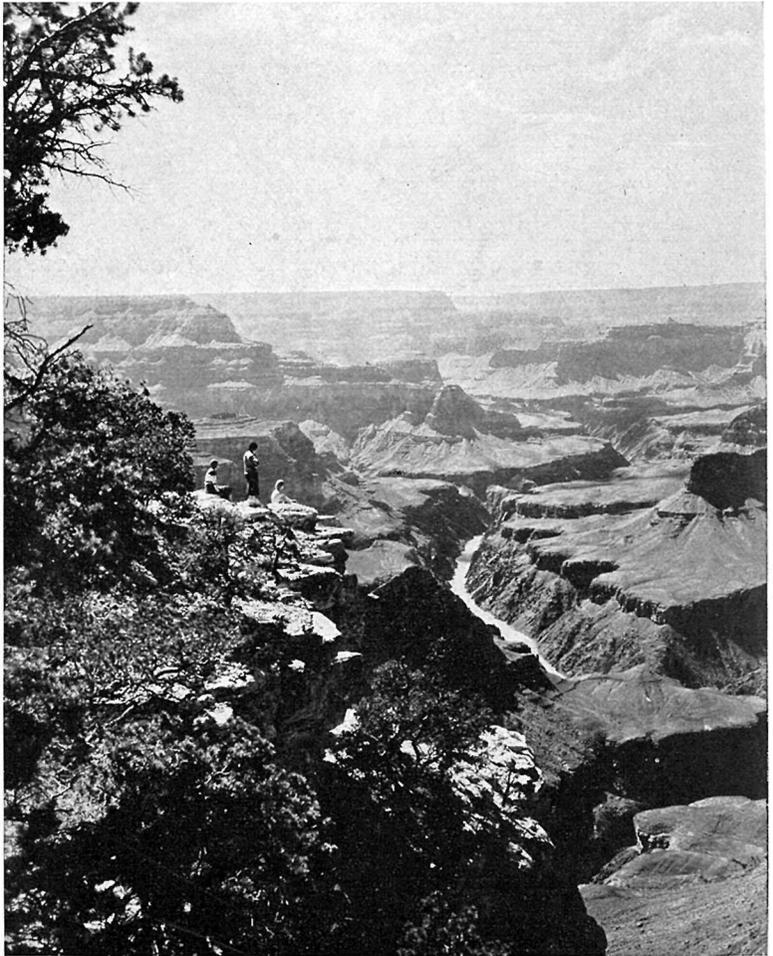


GRAND CANYON

NATIONAL PARK

ARIZONA

*Inner Gorge
between
Mojave
and Pima
Points*



UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE



AUTO CAMP LODGE IN PUBLIC CAMP GROUNDS, SOUTH RIM



Photograph by Fred Harvey
NAVAJO FALLS, SUPAI INDIAN RESERVATION IN GRAND CANYON NATIONAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR

HAROLD L. ICKES, Secretary

NATIONAL PARK SERVICE

HORACE M. ALBRIGHT, Secretary

GENERAL INFORMATION REGARDING

GRAND CANYON NATIONAL PARK

ARIZONA



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THE NATIONAL PARKS AT A GLANCE

Acadia. A group of granite mountains rising from Mount Desert Island, off the coast of Maine, with headlands on the near-by mainland. Formerly called Lafayette National Park. It contains 18 square miles.

Bryce Canyon. Southwestern Utah. In the same general desert region that produced the Grand Canyon and Zion, lies Bryce Canyon. Countless array of fantastically eroded pinnacles of vivid coloring. Area, 55 square miles.

Carlsbad Caverns. Magnificently decorated limestone caverns in southwestern New Mexico believed to be the largest yet discovered.

Crater Lake. One of the most beautiful spots in America. A rugged, picturesque area in southwestern Oregon embracing 250 square miles. Lake of extraordinary blue in crater of extinct volcano.

General Grant. Created in 1890 to preserve the celebrated General Grant Tree—a giant redwood 40.3 feet in diameter. It is located in middle eastern California, 35 miles by trail from Sequoia National Park.

Glacier. In northwestern Montana. Rugged mountain region, unsurpassed in alpine character. It contains over 250 glacier-fed lakes of romantic beauty, 60 small glaciers, and precipices thousands of feet deep. Area, 1,533 square miles.

Grand Canyon. North central Arizona. The greatest example of erosion and the most sublime spectacle in the world. Area, 1,009 square miles.

Grand Teton. Northwestern Wyoming. Included in its area of 150 square miles is the most spectacular portion of Teton Mountains—an uplift of unusual grandeur.

Great Smoky Mountains. This area in North Carolina-Tennessee is not to be developed as a national park until at least 427,000 acres have been donated to the United States. Meanwhile that portion already in Federal ownership (297,719.7 acres) is being protected by the National Park Service.

Hawaii. Kilauea and Mauna Loa, active volcanoes on the island of Hawaii. Haleakala, a huge extinct volcano, on the island of Maui. Area, 245 square miles.

Hot Springs. Middle Arkansas. Reserved by Congress in 1832 as the Hot Springs Reservation to prevent exploitation; 47 hot springs said to possess healing properties. Many hotels and boarding houses, and 19 bath houses under Government supervision. Area, 1.48 square miles.

Lassen Volcanic. Northern California. Lassen Peak, 10,453 feet—only active volcano in the United States proper. Cinder cone (6,913 feet), hot springs, and mud geysers. Area, 163 square miles.

Mesa Verde. Southwestern Colorado. The most notable and best-preserved prehistoric cliff dwellings in the United States, if not in the world. Area, 80 square miles.

Mount McKinley. Alaska. Highest mountain in North America—rises higher above surrounding country than any other mountain in the world. Area, 3,030 square miles.

Mount Rainier. Largest accessible single-peak glacier system—28 glaciers 50 to 500 feet thick. Wonderful subalpine wild-flower fields. Area, 377 square miles.

Platt. Southern Oklahoma. Contains sulphur and other springs said to possess healing properties. Area, 1.32 square miles.

Rocky Mountain. North middle Colorado. Remarkable records of glacial period. A snowy range of peaks 11,000 to 14,255 feet altitude. Gorgeously colored wild flowers grow in profusion in sheltered gorges. Area, 405 square miles.

Sequoia. The Big Tree National Park. California. Scores of sequoias 20 to 30 feet in diameter, thousands over 100 feet in diameter. General Sherman Tree 36.5 feet in diameter and 272.4 feet in height. Towering mountain ranges. Startling precipices. Mount Whitney. Kern River Canyon. Area, 604 square miles.

Wind Cave. South Dakota. Remarkable limestone cavern having numerous chambers elaborately decorated with fantastic formations. Surface area, 18 square miles, part of which is game preserve.

Yellowstone. Northwestern Wyoming. Best known of our national parks and the largest—area, 3,437 square miles. Contains more geysers than all the rest of the world combined. Boiling springs, petrified forests, Grand Canyon of the Yellowstone remarkable for gorgeous coloring. Large lakes, streams, and waterfalls. Vast wilderness—one of the greatest wild bird and animal preserves in the world. Exceptional trout fishing.

Yosemite. In middle eastern California. Valley of world-famed beauty. Lofty cliffs, romantic vistas, many waterfalls of extraordinary height, three groves of big trees, good trout fishing. Area, 1,176 square miles.

Zion. Magnificent gorge (Zion Canyon) which has a depth of 1,500 to 2,500 feet; precipitous walls. Of great beauty and scenic interest. Area, 148 square miles.

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NATIONAL MONUMENTS

Speaking generally, national monuments are preserved in Federal ownership because of outstanding historic, prehistoric, or scientific features, as distinguished from scenic beauty, the chief attribute of national parks. In addition to these 39 national monuments administered by the National Park Service, there are 15 under the jurisdiction of the Department of Agriculture and 24 under the War Department

- Arches.** UTAH. Gigantic arches, windows, and other unique examples of wind erosion.
- Aztec Ruins.** NEW MEXICO. Pueblo ruins; one containing 500 rooms.
- Bandelier.** NEW MEXICO. Vast number of cliff-dweller ruins.
- Canyon de Chelly.** ARIZONA. Cliff dwellings in caves and crevasses of canyons with red sandstone walls 700 to 1,000 feet.
- Capulin Mountain.** NEW MEXICO. Cinder cone of geologically recent formation.
- Casa Grande.** ARIZONA. Outstanding relics of prehistoric age and people.
- Chaco Canyon.** NEW MEXICO. Cliff-dweller ruins, including communal house.
- Colonial.** VIRGINIA. Portions of Jamestown Island, Yorktown and Williamsburg connected by parkway.
- Colorado.** COLORADO. Wonderful examples of erosion.
- Craters of the Moon.** IDAHO. Volcanic region with weird landscape effects.
- Death Valley.** CALIFORNIA. Weird scenery; unusual plant and animal life; lowest point in United States; surrounded by great mountain ranges.
- Devils Tower.** WYOMING. 1,200-foot rock tower of volcanic origin.
- Dinosaur.** UTAH. Fossil remains of prehistoric animal life.
- El Morro.** NEW MEXICO. Sandstone rock eroded in form of castle. Inscriptions by early Spanish explorers. Cliff-dweller ruins.
- Fossil Cycad.** SOUTH DAKOTA. Deposits of plant fossils.
- George Washington Birthplace.** VIRGINIA. Rehabilitated site of birthplace of George Washington. Museum.
- Glacier Bay.** ALASKA. Tidewater glaciers of first rank.
- Gran Quivira.** NEW MEXICO. Important early Spanish mission ruin.
- Grand Canyon.** ARIZONA. Torowep Point. Vulcan's Throne. Magnificent views of Grand Canyon of the Colorado.
- Great Sand Dunes.** COLORADO. Among largest and highest sand dunes in United States.
- Hovenweep.** UTAH AND COLORADO. Four groups of prehistoric towers, pueblos, and cliff dwellings.
- Katmai.** ALASKA. Volcanic area of great interest. Valley of Ten Thousand Smokes. Large numbers of Alaska brown bear.
- Lewis and Clark Cavern.** MONTANA. Immense limestone cavern. Closed to prevent vandalism.
- Montezuma Castle.** ARIZONA. Cliff dwelling of unusual size in niche of vertical cliff.
- Muir Woods.** CALIFORNIA. Noted redwood grove. Seven miles from San Francisco.
- Natural Bridges.** UTAH. Three natural bridges, among largest examples of their kind.
- Navajo.** ARIZONA. Numerous pueblos, well preserved.
- Petrified Forest.** ARIZONA. Petrified coniferous trees of great beauty. Outstanding scientific interest.
- Pinnacles.** CALIFORNIA. Spirelike rock formation 600 to 1,000 feet high.
- Pipe Spring.** ARIZONA. Old stone fort, memorial to pioneer days.
- Rainbow Bridge.** UTAH. Natural bridge of special scientific interest; 309 feet above water.
- Scotts Bluff.** NEBRASKA. Historic and scientific interest. Many famous pioneer trails passed through area.
- Shoshone Cavern.** WYOMING. Large cavern; not open to visitors at present.
- Sitka.** ALASKA. Best examples of totem poles. Scene of Indian massacre of Russians.
- Tumacacori.** ARIZONA. Seventeenth century Franciscan mission ruin.
- Verendrye.** NORTH DAKOTA. Crowhigh Butte from which Verendrye first beheld territory beyond Missouri River.
- White Sands.** NEW MEXICO. Deposits of wind-blown gypsum.
- Wupatki.** ARIZONA. Prehistoric dwellings of ancestors of Hopi Indians.
- Yucca House.** COLORADO. Relic of prehistoric inhabitants on slope of Sleeping Ute Mountain.

RULES AND REGULATIONS

(BRIEFED)

The following summary of rules is intended as a guide for all park visitors. You are respectfully requested to facilitate the best in park administration by carefully observing the regulations.

Preservation of Natural Features. The first law of a national park is preservation. Disturbance, injury, or destruction in any way of natural features, including trees, flowers and other vegetation, rocks, and all wild life, is strictly prohibited.

Camps. Camp or lunch only in designated areas. All rubbish that will burn should be disposed of in campfires. Garbage cans are provided for non-inflammable refuse. Wood and water are provided in all camp grounds.

Fires. Fires are absolutely prohibited except in designated spots. Do not go out of sight of your camp, even for a few moments, without making sure that your fire is either out entirely or being watched.

Dogs, Cats, or Other Domestic Animals. Such animals are prohibited on Government lands within the park except as allowed through permission of the Superintendent, secured from park rangers at entrances.

Automobiles. The speed limit of 35 miles an hour is rigidly enforced. Park drives are wide and smoothly surfaced. It should always be remembered that each driver's own carefulness and responsibility to others is the greatest safety factor involved.

Trail Travel. Hikers and riders shall not make short cuts, but shall confine themselves to the trails at all times. Saddle animals have the right of way over pedestrians. The latter will take the outer side of the trail whenever possible, and shall stand quietly until animals have passed.

Hunting. Hunting within the park boundaries is prohibited. No firearms are allowed except as provided for through permission of the Superintendent, secured from park rangers at entrances.

Fishing. From June 1 to September 30, inclusive, fishing is allowed in certain park streams. A State of Arizona license is required.

Park Rangers. Park rangers are public servants. They are here to answer your questions and otherwise help you in every possible way. Help them to better serve you by observing these regulations.

CARELESSNESS BREEDS DESTRUCTION

TAKE NO CHANCES

IMPORTANT EVENTS IN THE HISTORY OF GRAND CANYON

- 1540—Don Lopez de Cardenas, with a party of twelve men, members of Coronado's expedition from Mexico, discovered the Grand Canyon.
- 1776—Father Garces and Father Escalante, Spanish padres, led exploring parties into the Grand Canyon region.
- 1826—First Americans visited the Grand Canyon. James O. Pattie, beaver trapper, and his father followed the South Rim from west to east.
- 1858—First Government exploring party visited the Grand Canyon region. Lieutenant Ives and party from the War Department traveled by steamboat up the Colorado River to Black Canyon (in which Hoover Dam is now being built), thence overland along the south side of Grand Canyon.
- 1869-71—Major J. W. Powell made the first successful boat trip down the Colorado River.
- 1890-91—The Bright Angel Trail, following an old Indian route, was constructed by a group of prospectors.
- 1892—Captain John Hance built a cabin east of Grand View. It was the first house on the rim of Grand Canyon.
- 1897—Grand View Hotel opened. A stage using three changes of horses brought visitors from Flagstaff, 72 miles distant, in 12 hours.
- 1898—Bucky O'Neil, one of Colonel Roosevelt's Rough Riders, built a cabin at Rowe Well, three miles west of Grand Canyon village. The cabin still stands.
- 1900—The Bright Angel Hotel was established. One cabin and tents.
- 1901—September 18, first passenger train to the Grand Canyon.
- 1904—Hotel El Tovar was built.
- 1903-4—F. E. Matthes made the United States Geological Survey map of the Bright Angel section of Grand Canyon and named many of the temples and buttes.
- 1905—Uncle Jimmy Owens came into the Kaibab Forest as a lion hunter. In following years Uncle Jimmy killed several hundred lions along the North Rim.
- 1908—Theodore Roosevelt, as President of the United States, made Grand Canyon a national monument.
- 1919—Grand Canyon created a national park by Act of Congress.
- 1921—The old Dave Rust aerial tram across the Colorado River at the mouth of Bright Angel Creek was replaced by a suspension bridge. This structure was later (1928) replaced by the present bridge.
- 1924—Fossil footprints were discovered in the Grand Canyon.
- 1924—Kaibab Trail (from rim to rim) was started.
- 1928—Grand Canyon Lodge, on North Rim, was officially opened to the public. This building was destroyed by fire on September 1, 1932.
- 1928—The Kaibab Trail was opened to the public on May 21.
- 1929—Marble Canyon Bridge, across the Colorado River seven miles downstream from Lee's Ferry, was built.

GRAND CANYON NATIONAL PARK

GENERAL DESCRIPTION

The Grand Canyon National Park was created by an act of Congress February 26, 1919. It is under the supervision of the National Park Service of the Department of the Interior. Senator Henry F. Ashurst's bill to make it a national park was approved 33 years after Benjamin Harrison, then Senator from Indiana, introduced the first of several bills to give it park status. Politics, local apathy, and private interests, which sought to utilize its water power and to find minerals in its depths, were the principal causes of delay. All efforts failing to make it a national park, in 1908 President Roosevelt made it a national monument. Once a railroad was surveyed through it. A scenic railroad was projected along its south rim. Less than a year before it became a park efforts were made in New York to raise money to dam its waters for power and irrigation.

The Grand Canyon National Park is in northern Arizona. Its 1,009 square miles inclose 56 miles of the Grand Canyon stretching west of its beginning at the mouth of the Marble Canyon. Through it winds the Colorado River for a distance of 105 miles. From rim to rim that portion of the canyon within the park varies from 4 to 18 miles in width; it is more than a mile deep measured from the north rim, which averages nearly a thousand feet higher than the south rim. The eastern boundary includes the lofty painted walls, east of which lies the Painted Desert. Its western boundary includes the broad Havasu Canyon, tributary from the south, in whose depths we find the Havasupai Indian Reservation and a group of fine waterfalls markedly different from any in our other national parks.

The park boundaries hug the rims closely. Very little of the country back of the rim is included in the reservation. Additions have been recommended in order to include complete representation of the fauna and flora of the region. The northern rim is heavily forested with pine, fir, and spruce, interspersed with beautiful glades of quaking aspen. The southern rim carries a slender semiarid flowering vegetation of rich beauty and wide variety; and south and east of the railroad station lie about 50 square miles of fine yellow-pine forest.

A MIGHTY SPECTACLE

The Grand Canyon is one of the world's greatest spectacles. It is impossible to compare it with the tremendous white spectacle of the Himalayas, or with the House of Everlasting Fire of the Hawaii National Park, or with the 17,000 feet of snow and glacier which rise abruptly between the observer's eyes and the summit of Mount McKinley, because it has nothing in common with any of these. But of its own kind there is nothing in the world which approaches it in form, size, and glowing color; it is much the greatest example of stream erosion. And in its power to rouse the emotion of the looker-on, to stupefy or to exhilarate, it has no equal of any kind anywhere, unless it be the starry firmament itself.

Approaching by rail or road, the visitor comes upon it suddenly. Pushing through the woods from the motor camp ground, or climbing the stairs from the railroad station, it is there at one's feet, disclosed in the sublimity of its temple depths, in the bewildering glory of its gorgeous coloring. There is no preparation of mind and spirit. To some the revelation is a shock, no matter what the

expectation. The rim of the Grand Canyon is one of the stillest places on earth, even when it is crowded with people.

To describe the Grand Canyon is as impossible as it is unnecessary. Few natural spectacles have been so fully pictured, few are so familiar even to the untraveled. Its motionless unreality is one of the first and most powerful impressions it makes. And yet the Grand Canyon is really a motion picture. There is no moment that it does not change. Always its shadows are insensibly altering, disappearing here, appearing there; lengthening here, shortening there. There is continual movement. With every quarter hour its difference may be measured.

There is the Grand Canyon of the early morning, when the light slants lengthwise from the Painted Desert. The great capes of the northern rim shoot into the picture, outlines in golden light against which their shapes gloom in hazy blues. Certain temples seem to rise slowly from the depths, or to step forward from hiding places in the opposite walls. Down on the green floor the twisting inner gorge discloses here and there lengths of gleaming water, sunlit and yellow.

An hour later all is wholly changed. The dark capes have retired somewhat and now are brilliant-hued and thoroughly defined. The temples of the dawn have become remodeled, and scores of others have emerged from the purple gloom. The Granite Gorge, now detailed fully, displays waters which are plainly muddy even at this great distance. And now the opposite wall is seen to be convoluted, possessing many headlands and intervening gulfs.

And so, from hour to hour, the spectacle develops. Midday, with sun high behind the south rim, is the time of least charm, for the opposite walls have flattened, and the temples of the depths have lost their defining shadows. But as afternoon progresses the spectacles of the morning creep back, now reversed and strangely altered in outline. It is a new Grand Canyon, the same but wonderfully different.

And just after sunset the reds deepen to dim purples and the grays and yellows and greens change to magical blues. In the dark of a moonless night the canyon suggests unimaginable mysteries.

THE FIRST VIEW

From the railroad station the south rim visitor ascends to El Tovar Hotel and a view of the canyon at a very interesting point. Here is where the temples loom up in contrast to the plateau at their feet; the plateau still being 1,200 feet above the river. The view at El Tovar is restricted by the extension of Grandeur Point and Maricopa Point on either side. These cut off the view of the great reaches of the canyon east and west. El Tovar view is a framed picture of limited size. It is better so; better for the newcomer to enter gradually into the realization of the whole which will come when he walks or rides out to the many points which push northward from the south rim; better also to return to after days spent on the rim or in the canyon's depths.

Those visiting the north rim gain their first idea of the sights in store for them from fleeting glimpses of Roaring Springs Canyon, a tributary of the Grand Canyon, as the approach road to Bright Angel Point and Grand Canyon Lodge skirts its rim on the last mile of the trip by motor car. From Bright Angel Point or from the lounge room of the lodge the full panorama of the Grand Canyon bursts into view as a sweeping vista across the Transept and the canyon of Bright Angel Creek.

Having studied either of these views for general outlines and the canyon's conformation, stratification, and coloring, the visitor will find for himself, on foot or by motor stage or horseback, many points which will afford him varied outlooks upon the broad reaches of the canyon. It is advisable to see the canyon from end to end from the rim before exploring the trails to the floor and the river.

The traveler who is unlucky enough to have no more time at his disposal may, even in one day, see much of the Grand Canyon either from the rim or by mule-back descent to the depths as preference dictates. Probably the 1-day visitor on the south rim can see more by taking the 16-mile round-trip Hermit Rim Road drive west in the forenoon and the 60-mile round-trip drive east to Grand View and Desert View in the afternoon than in any other way. Both the rim drives and the descent into the canyon may be made in two days. Every day added to the schedule will give the visitor further novel experiences and glorious views, such as the Phantom Ranch trip, or to the north rim of the canyon, visiting Ribbon Falls and Roaring Springs en route, or the long motor trip over the Navahopi Road to Tuba City and Moenkopi.

The north rim visitor may, in one day, make the trip by auto to Point Imperial, Farview, and Cape Royal over excellent oiled roads. An unimproved road also extends westward to Point Sublime. A canyon trip by mule back may be had in one day, going as far as Roaring Springs only. Two days are required for the round trip to the Colorado River from the north rim.

When you go to the Grand Canyon leave the duration of your stay open for decision when there. You will probably then remain from five days to two weeks. Two weeks of fairly steady going will enable you to see the Grand Canyon thoroughly without undertaking trips which are a hardship to persons unaccustomed to trail riding.

PARK SERVICE INFORMATION BUREAU

A free information bureau is maintained on the south rim by the National Park Service in the Administration Building which is located at the terminus of the south approach road, on the south side of the railroad tracks, southwest of the depot. Park visitors are welcome and are advised to apply to the ranger in charge of this bureau for official information of any kind; also for lost and found articles.

A suitable reference library is being accumulated for the use of visitors, and the Government maps and other publications relating to the Grand Canyon may be consulted or secured here.

Automobile arrivals are requested to register at this bureau, unless previously registered at a checking station.

During the summer the park naturalist will conduct short trail trips along the canyon rim. He will explain all features relating to the natural history of the canyon. Full information regarding these trips may be had at the Park Information Office.

Similar information service, etc., is available to the north rim visitor at the north entrance checking station, at the Bright Angel Point ranger station, and through the ranger on duty at Grand Canyon Lodge. Trail trips from the north rim start at Grand Canyon Lodge and are made regularly during the season under the guidance of a ranger-naturalist.

YAVAPAI POINT OBSERVATION STATION AND TRAIL-SIDE MUSEUM

At Yavapai Point, 1½ miles east of El Tovar, the National Park Service maintains an observation station and trail-side museum, admission to which is free. Here may be found a model of the Grand Canyon, samples of the various formations which go to make up the canyon walls, specimens of the flora and fauna common to the Grand Canyon region, fossil remains of prehistoric plant and animal life, and complete maps and charts from which a better understanding may be had of the Grand Canyon and the forces of nature which formed it. A battery of high-power telescopes is also available. Each afternoon during the summer sea-

son there is given at this station by the park naturalist or by visiting geologists and other scientists of note a series of informal lectures on the origin, history, and animal and plant life of the Grand Canyon. Yavapai Point may be reached by auto road or by the paved footpath leading eastward along the rim from El Tovar Hotel.

WAYSIDE MUSEUM OF ARCHEOLOGY

Twenty miles east of Grand Canyon village, on a short spur leading off the Desert View drive, is the Wayside Museum of Archeology. This station is open to the public daily throughout the summer, and a trained naturalist is in constant attendance. The exhibits show stages in the development of early man, especially in relation to pueblo history in the Southwest. The building is located near the Tusayan Ruin—a small prehistoric pueblo which has recently been excavated.

ACCOMMODATIONS FOR VISITORS

Living at Grand Canyon is pleasant and comfortable. El Tovar Hotel, on the south rim, operated by Fred Harvey on the American plan, offers delightful conditions at rates reasonable for its high-class accommodations. Its porches are broad, its garden a collection of interesting semiarid vegetation, its rim walks inspiring.

Near El Tovar is a comfortable but lower-priced European plan hotel, also under Fred Harvey management, and known as Bright Angel Cottages.

There are comfortable cottages at Phantom Ranch about half a mile north of the Colorado River. It is modern in every respect and may be reached by the Kaibab Trail from either rim.

Grand Canyon Lodge at Bright Angel Point on the north rim provides excellent accommodations for visitors. This lodge is operated on the American plan by the Utah Parks Co.

On either rim there is horseback riding through many miles of yellow-pine forest and out to viewpoints on the rim, but there are no conventional sports such as golf or tennis. The canyon absorbs the whole attention of its visitors.

From April to November the south rim is free from snow, and the free public camp ground near Grand Canyon village is available to campers. Motorists are urged to bring their own camp equipment and make use of this camp, which is maintained by the National Park Service. No charge is made for camp sites, firewood, water, etc. Sanitary flush toilet facilities are provided, as are also open-air fireplaces for cooking, benches, tables, etc. Water is pumped from Indian Gardens, 3,500 feet below the south rim. This is a very costly process and visitors, especially campers, are asked to conserve in every way possible.

Gasoline and oil may be obtained in the camp grounds as well as at the garage in the village. There is also a general store near by where groceries can be purchased.

Housekeeping cottages are available at the auto camp grounds at reasonable rates. Autoists may rent blankets, linen, etc., in the event they do not have such equipment of their own.

In the camp lodge complete delicatessen service may be had.

Newspapers, magazines, etc., are for sale. There is also a large rest room for the convenience of campers and for shelter in inclement weather. This is equipped with fireplace and a large covered porch and may be used by all campers free of charge, whether or not they patronize housekeeping cottages.

During the summer months a camp-fire talk on some subject of natural history is given by a member of the educational staff at 8.30 o'clock each evening.

Free public camp grounds are also maintained at Desert View on the south rim and at Cape Royal on the north rim. The north rim free public auto camp is located on Bright Angel Point, convenient to the lodge and garage. This site is

in a beautiful grove of heavy pine and fir timber interspersed with quaking aspen and is located on the rim in such a way that splendid canyon views are obtainable. No charge is made for fuel or water, but visitors are requested to conserve water in every way possible, since it is pumped from near the bottom of the canyon at considerable expense. Sanitary flush toilet facilities are provided, as are also tables, benches, and open-air fireplaces for cooking.

Here, too, housekeeping cottages with or without bedding, linen, etc., are available at reasonable rates. Centrally located among the cabins is a comfort station including shower baths and facilities for clothes washing and ironing. A reasonable charge is made for shower baths and the use of electric washing machines and irons. In conjunction with the cabins is a complete and well-equipped combined cafeteria and store. These facilities and the garage and service station near by are operated by the Utah Parks Co.

It should be borne in mind that on account of snow and weather conditions the camp grounds on the north rim are open from June 1 to October 1 only.

AIRPLANE SERVICE NEAR BY

Grand Canyon Airlines (Inc.) maintains an airport approximately 18 miles from El Tovar Hotel, and operates daily scenic flights over Grand Canyon and to various points of interest in the vicinity of the park, using modern cabin-passenger planes, both tri-motor and single-motor. The daily scenic flight over the canyon from either rim, lasting about 35 minutes, covers approximately 60 miles. The rates are \$9 each for one or two persons; \$7 each for three or more. Daily trans-canyon flights are made at the rate of \$15 per person one way, or \$25 for a round trip, including stop-over privilege. Hangar space and service for visiting planes is available. The North Rim airport is about 18 miles from Grand Canyon Lodge, but no hangar space is available. Flight tickets are sold at hotels on either rim. The round-trip bus fare between either hotel and airport is \$4.

Chartered trips are available to Rainbow Bridge, Monument Valley, Betatakin, the Hopi Villages, Navajo Country, Hoover Dam, and various surrounding points of interest; also to the Pacific coast and near-by cities. Transcontinental airline connections may be made by arrangement at Winslow and Phoenix, Ariz.; Las Vegas, Nev.; and Salt Lake City, Utah. Rates for special charter service per hour are: 2-place single motor, \$20; 5-place single motor, \$35; and 9-place trimotor Ford, \$65.

A ranger-naturalist accompanies parties on the daily scenic flights, and points out places of special interest.

SEEING THE CANYON FROM THE RIM

East of El Tovar are several points reached by motor roads which afford fine views of the upper half of the Grand Canyon. The eastern terminus of the road is Desert View, which offers a view up the Marble Canyon and eastward over the famous Painted Desert. West of the hotel the auto stages stop at a succession of fine points, each with its own individual view of the mighty spectacle.

There is much to see also in the neighborhood of El Tovar.

The Yavapai footpath extends eastward along the rim to Grandeur and Yavapai Points. This footpath is constructed of asphaltic macadam and is so located as to give the best views of the canyon.

A similar footpath extends along the rim westward to Powell Memorial. The views from this footpath are very inspiring.

From Grand Canyon Lodge on the north rim regular trips by autobus may be made eastward over excellent roads to Point Imperial, Farview, Vista Encantada, and Cape Royal. Special trips may be arranged to Point Sublime over an unim-

proved road to V. T. Park and to other points of interest. Point Imperial (elevation 8,801 feet) is the highest point on either rim of the canyon. From it and from other stopping places on this road may be had splendid views across Marble Canyon and the Little Colorado River over the shimmering Painted Desert.

A recently constructed footpath enables the hiker to make the walk along the rim of the Transept and Roaring Springs Canyon from the hotel to the public camp ground, Bright Angel Point, prehistoric cliff dwellings, and other points of interest.

DESCENDING THE CANYON

There are two good trails from the south rim to the river. The one commonly used starts near El Tovar Hotel and descends the deep alcove between Grandeur and Maricopa Points. This is the celebrated Bright Angel Trail.

The descent of this trail is made on mule back in parties led by guides. It is a sad mistake for persons not in the soundest physical training to attempt it on foot, for the apparent distance as seen from the rim is misleading, and the climb back is most arduous at that elevation. The south rim of the canyon at park headquarters is 6,886 feet above sea level. Nearly every day one or more hikers, overconfident of their endurance, find the way up too arduous and have to be assisted by guides and mules sent down for them from the rim.

The descent is an experience of great charm. The trail is well built and kept in good condition. The traveler passes in review all the strata which form the canyon walls; their close examination will be a source of pleasure. Just under the rim the trail passes through a fine stand of Douglas fir, and from this down to the sage desert of the green floor the traveler will also pass in review a succession of plant growth equivalent to several climatic zones, and representing floral changes such as may be seen ordinarily only by traversing many hundreds of miles of level country. The old Bright Angel Trail has been completely rebuilt by the National Park Service in accordance with the highest engineering standards. Many of the sharp zigzags have been eliminated, grades have been greatly reduced, and a heavy rock guard wall has been placed along the outer edge of the trail. Even the most timid now should feel no hesitancy in taking this scenic trip. It may affect the unaccustomed nervously to see his mule hang his head over short abysses at the turns, but the traveler himself does not hang over them, and the mule is sure-footed, stolid, and indifferent. There is only one creature with less imagination than a mule, and that is his near relative, the burro.

Indian Garden, which lies on the floor of the canyon on the Tonto Plateau, is so named because Havasupai Indians once cultivated the soil through which passes the stream which originates in springs below the Redwall. It is called Garden Creek. The Indian Garden now is a tangle of high brush, principally willow, through which the trail passes out upon the Tonto Plateau, and presently plunges down the rocky gorge which leads to the edge of the muddy Colorado.

THE KAIBAB TRAIL

Even more spectacular from a scenic standpoint is the new Kaibab Trail, the only one crossing the canyon. It is uniformly broad, has no excessive grades, is well drained, and well maintained. Starting at Yaki Point, some 3½ miles east of El Tovar, the Kaibab Trail is built near the top of a spur jutting into the canyon, and it therefore affords an unobstructed view both up and down the Grand Canyon. Along this trail there are in place and accessible to the tourist several very interesting displays of prehistoric animal tracks and fossil ferns.

The trail crosses the Colorado River by means of the Kaibab Suspension Bridge. This is a thoroughly modern structure, built by the National Park Service and completed in the summer of 1928. The bridge is 440 feet long, sup-

ported from eight 1½-inch steel cables, provided with a structural steel truss acting both as a stiffening member and as guard rails. It is further stiffened by two 1½-inch wind cables, and, unlike the old "swinging bridge" which it replaces, the new bridge is free from sway or vibration even when loaded to capacity with a full string of saddle or pack animals. The south approach to the new bridge is through a tunnel 105 feet long, cut from the solid granite walls of which the inner gorge is formed.

About three-quarters of a mile beyond the Kaibab Bridge is Phantom Ranch, above which the trail continues through the spectacular Box Canyon of Bright Angel Creek, following for a distance of 8 miles the waters of this large and beautifully clear mountain stream, which was gratefully so named by Major Powell in 1869, in contrast to an unusually muddy creek found farther up the Colorado River and called by him the "Dirty Devil." Five and a half miles above Phantom Ranch on this trail is Ribbon Falls.

At the mouth of Manzanita Creek the trail leaves Bright Angel Canyon, and starts its long climb to the north rim by way of Roaring Springs Canyon and over grades averaging not more than 15 per cent. From this section may be seen one of the most beautiful sights in the entire Grand Canyon, the spectacular springs which gush forth with a loud roaring sound from beneath the Redwall limestone, and cascade in three large main streams down an oak-covered mountain side to the bottom of the canyon, 40 feet below.

The construction of the Kaibab Trail through the Redwall limestone is both daring and ingenious. Here, with drill and powder, the trail was hewn from the solid rock cliff in half tunnel sections. At such points, however, the trail is sufficiently wide, and it is provided with a heavy rock guard wall of such proportions that the traveler has no feeling of insecurity. At one point in the red sandstone of the Supai formation the trail passes through a full tunnel some 38 feet long. Above this it climbs through oak brush, pine, fir, and finally quaking aspen to top out on Bright Angel Point at an elevation of 8,350 feet.

This trail shortens the travel distance between El Tovar on the south rim and Grand Canyon Lodge on the north rim to about 25.6 miles, of which approximately 20.6 miles is made by trail between the two rims and the remainder of the distance may be covered by automobile on both rims. It is open for travel the year round between the south rim and Roaring Springs, and from there to the north rim from about May 15 until October 15.

THE HAVASU CANYON

The Havasu Canyon, in the far western end of the national park, is rarely visited. The trail begins at the end of a long semidesert road by descending precipitously to a gorge through which the Havasupai Indian Reservation is reached. There are less than 200 Indians on the reservation. These live by farming the land irrigated from Havasu Creek; corn is their principal product, but melons, figs, and peaches are also produced. The reservation fills a broad amphitheater in the gorge surrounded by lofty red sandstone cliffs of the Supai formation. There are no hotels or camps, and the heat is intense in summer. The Havasu Creek water is strongly impregnated with lime, and unpalatable though entirely wholesome. Nevertheless the visit to the reservation is one of unusual charm for those who do not object to a little hardship.

Below the reservation the canyon breaks into a series of waterfalls, three of which are unusual in kind and beauty. These are the Navajo, Havasu, and Mooney Falls. The former is a series of beautiful cascades, while the latter two drop over lofty shelves which are plastered on back and sides by richly carved festoons of lime travertine. Bright green cottonwoods, cactus, and other desert vegetation enliven the scene, which is entirely different from anything encountered elsewhere in the Grand Canyon National Park.

ORIGIN AND GEOLOGIC HISTORY OF THE GRAND CANYON ¹

The Grand Canyon is the deepest, widest, and wildest of a long series of canyons through which the Colorado River flows for 500 miles across a region of high table-lands known as the plateau province or the Colorado Plateaus. These canyons are unusually steep sided and unusually deep, but they are merely parts of the valley of the river, and, like most other river valleys, they have been formed by the stream that occupies them; they are not, as some who are unfamiliar with geologic processes have supposed, due to any violent or catastrophic breaking of the earth's crust. The Grand Canyon is the world's most spectacular illustration of erosion—of the combined action of running water, rain, wind, and the various atmospheric agencies that attack the rock and sculpture them into the forms that give character to a landscape.

A PECULIAR TYPE OF LAND SCULPTURE

The scenery of the Grand Canyon is the supreme expression of a type of land sculpture that is peculiar to the plateau country, a type whose elements are cliffs and tabular forms—buttes, mesas, terraces, and plateaus. The high plateau into which the river has cut its way is built up of layer upon layer of rock beds that lie nearly level and that extend continuously over great distances. These beds, as one may see in the walls of the canyon, consist of sandstone, shale, and limestone, which have been grouped by geologists into the formations shown in the generalized columnar section forming Figure 1. This figure presents a summary of the facts relating to the character of the rocks exposed in the Grand Canyon National Park and the thickness, attitude, order of accumulation, and structural relations of the formations.²

ARCHITECTURAL FORMS DOMINATE THE CANYON

As the formations lie in orderly horizontal layers, like beds of masonry, they have been carved into definite architectural forms, which are everywhere comparable in profile though varied and irregular in plan, and as they vary in their resistance to erosion, some being hard, some soft, every part of the canyon wall, every pinnacle and butte, is characterized by its own steplike alternation of cliff, slope, and shelf. Each resistant bed stands forth as a cliff, and each weak bed is marked by a slope. Each shelf or platform is made by the wasting back of a weak stratum that lies upon a resistant, cliff-making stratum, and the greater the thickness of the weak stratum the broader the shelf. The plateaus that border the canyon are themselves simply great terraces developed on a resistant formation, the Kaibab limestone, from which overlying softer beds have been washed away. As erosion goes on, parts of the canyon wall or plateau become separated by the widening and cutting headward of branch canyons or ravines and stand as solitary outliers capped by remnants of a hard bed of rock. These remnants are the buttes and temples. The great height of the plateau gives rapid fall to the streams that enter the canyon and enables them to cut powerfully and deeply and thus to carve the rocks into forms that are fashioned on a gigantic scale. The erosion accomplished by these streams, though spasmodic, because the streams are mainly fed by spasmodic rainstorms in an arid climate, is none the less effective. The slopes here are partly bare of vegetation because the desert plants grow far apart, and the concentrated energy of a single torrential shower may therefore wreak more havoc than would be caused by a season's rainfall on

¹ By L. F. Noble, geologist, U. S. Geological Survey.

² The term "formation" is generally applied to a group of rock beds that are of about the same age, as shown by the fossils they contain, or that are considered together for convenience in mapping or description. A formation is named from the place where it was first studied or from some place or region where it is well exposed. The Kaibab limestone, for example, is so named because it is well exposed on the Kaibab Plateau.

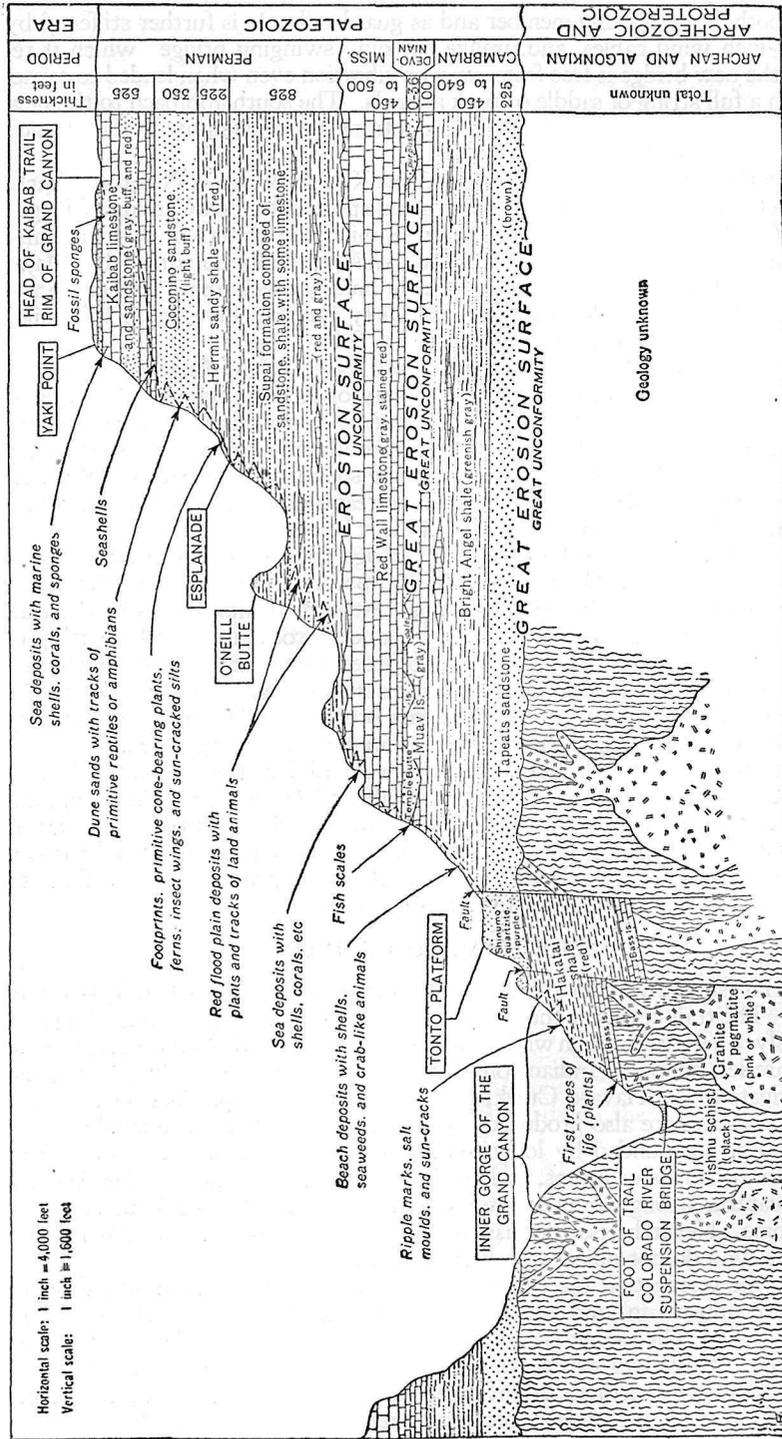


FIGURE 1.—A geologic cross section from a point on the south rim of the canyon to the suspension bridge in the inner gorge, showing the position, age, character, and thickness of the different rock formations. The section follows approximately the location of the Kaibab Trail, indicated by the dotted line.

plant-covered slopes in a humid region. It is this prevailing aridity that, by retarding the growth of vegetation and the formation of soil, keeps sharp and fresh profiles that in a moisture region would soon be dulled or obscured.

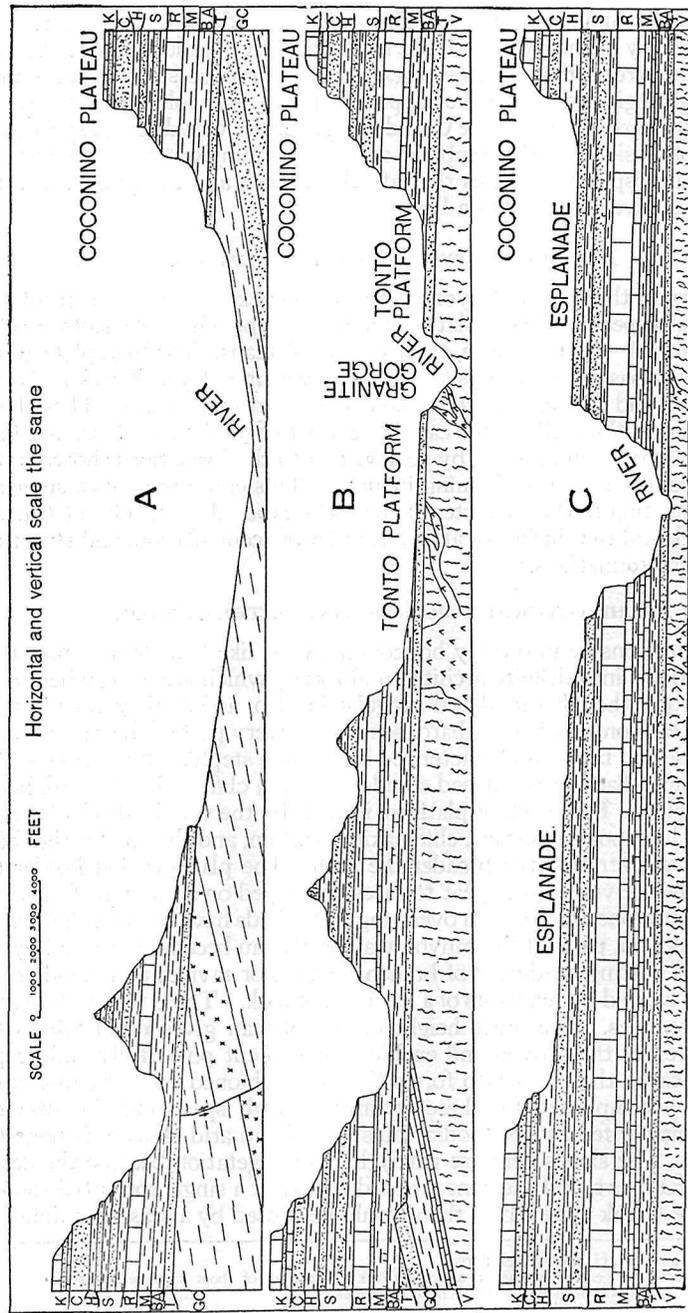


FIGURE 2.—Generalized sections across Grand Canyon, looking up Colorado River. A, in eastern Kaibab division, east of Desert View Camp; B, in central Kaibab division, near Hermit Trail; C, in western Kaibab division, west of Bass Camp. K, Kaibab limestone; C, Coconino sandstone; H, Hermit shale; S, Supai formation; R, Redwall limestone; M, Temple Butte and Muav limestones; BA, Bright Angel shale; T, Tapeats sandstone; GC, Grand Canyon series; V, Vishnu schist. The different profiles exhibited by the canyon in these sections are due to changes in the character and thickness of the rocks, as explained in the text.

SECTIONS ACROSS THE CANYON

The three sections across the Grand Canyon shown in Figure 2, A, B, C (p. 10), illustrate the intimate relation between the profile of the wall and the character of the rocks. In A, where the rocks along the river are the weak shales of the Algonkian Grand Canyon series, the bottom of the canyon is a broad valley having gently sloping sides. In B these weak stratified rocks are replaced by the hard Archean crystalline rocks, and the river occupies a narrow gorge—the Granite Gorge. As these hard crystalline rocks are not arranged in beds and are all about equally resistant to erosion, the walls of the Granite Gorge have a steep, continuous slope which presents a striking contrast to the steplike profile of the wall in the overlying bedded Paleozoic rocks. In C the river occupies a narrower, box-shaped, vertical-walled canyon in the hard Tapeats sandstone, the basal formation of the horizontal Paleozoic beds.

In C the weak Hermit shale, in the upper wall of the canyon, is thick and consequently wastes far back from the summit of the underlying hard Supai sandstone, leaving a wide platform known as the Esplanade. This platform, because of its great width and its conspicuous red color, is the dominant feature of the canyon landscape in all the western part of the national park. But the Hermit shale steadily gets thinner eastward in the canyon, as may be seen in sections B and A, whereas the overlying cliff-making Coconino sandstone, which defends the retreat of the wall above the Esplanade, gets steadily thicker in the same direction. The Esplanade thus becomes a narrow bench in B and fades to an inconspicuous ledge in A.

In B the weak Bright Angel shale has determined a similar platform in the bottom of the canyon. This platform, known as the Tonto platform, or the "lower plateau," is widest in the region about and east of Bright Angel Trail, where it is a familiar feature to tourists. It gets narrower westward as the overlying Muav and Redwall formations grow thicker and become firmer in texture.

This marvelous adjustment of external form to the inequalities of rock structure and character affords to the geologist the strongest evidence that the canyon is the work of erosion.

A UNIQUE REVELATION OF GEOLOGIC HISTORY

A large part of ancient geologic history is revealed more clearly in the walls of the Grand Canyon than in any other place in the world. Most of the beds of rock seen in the canyon were laid down in water as layers of sand, mud, and limy ooze. Some, however, consist of dune sand drifted in a desert landscape. In time all were hardened into rock by the great weight of the layers above them, the lime and silica that they contained cementing their particles together. Rocks of this kind are called sedimentary rocks by geologists, and as they were laid down in beds one above another they are said to be stratified, and the beds are called strata.

The horizontal strata seen in the walls of the canyon were formed during the Paleozoic era (the era of "old life"); they represent the oldest series of rocks that have yielded clearly identifiable traces of life. Many of the strata contain the remains of marine animals and were therefore evidently laid down on the bottom of the sea, although the region now stands high above the present sea level. Others, notably certain beds of red shale and sandstone in the Supai and Hermit formations (see fig. 1, p. 8), appear to have been spread out as mud and sand on semiarid, low-lying land or on delta plains by shifting streams; and one formation, the Coconino sandstone, is supposed by many geologists to be sand dunes. Nearly all the Paleozoic formations contain some traces of life—in the Kaibab and the Redwall limestones there are corals and many kinds of marine shells; in the formations of the Tonto group, the remains of primitive shellfish, worm trails,

and immense numbers of the modes of seaweeds; in the Temple Butte limestone, the remains of an ancient type of fish; and in the Hermit shale, impressions of long-extinct plants. Fossil tracks of small animals, probably early forms of amphibia, occur in the Hermit and Coconino sandstone. The aggregate thickness of the Paleozoic rocks varies from place to place, but in the part of the Grand Canyon that is included within the national park it averages 4,000 feet.

ROCKS OLDER THAN IN THE PALEOZOIC

Ancient as are the formations of the Paleozoic era, two great systems of rocks—the Algonkian and the Archean—are buried beneath their base and appear only in the depths of the canyon. The rocks of the older system, the Archean, form the walls of the "Granite Gorge," which would more appropriately be called the Vishnu Gorge, for it is not a gorge in granite. They are the foundation rocks of the region, and they are totally unlike the Paleozoic rocks, for they are entirely crystalline, are not stratified, and show a crumpled banding, due to the arrangement of their constituent minerals in parallel layers, an arrangement produced by heat, pressure, and recrystallization. The Archean rocks are mainly of the type known as gneiss and schist, but they include granite in large masses and dikes that have been intruded while molten into the gneiss and schist. These Archean rocks have been named the Vishnu schist. They are probably over a thousand—perhaps over fifteen hundred—millions of years in age. They contain no traces of life.

The rocks of the younger of these two systems, the Algonkian or Proterozoic, are intermediate in age between the Archean and the Paleozoic rocks and occur here and there in the depths of the canyon in wedge-shaped masses that lie between the Archean and the Paleozoic. They can be easily distinguished by the casual observer in the region between Grand View and the mouth of the Little Colorado, where at least 12,000 feet of them remain. Small masses are exposed near the mouth of Bright Angel Creek opposite El Tovar, on Crystal Creek, on Shinumo Creek, and along the Colorado River west of Powell Plateau. These rocks, like the Paleozoic, are stratified and do not differ greatly in character and appearance from some of the Paleozoic strata, notably the red Supai and Hermit formations, but, unlike the Paleozoic strata, they have been tilted from the horizontal position in which they were originally deposited, so that they are inclined at various angles. These Algonkian rocks have been named the Grand Canyon series. No animal fossils have been found in the Algonkian rocks, but reefs of limestone built up by algae are seen in the Unkar, at the base of the series.

GREAT UNCONFORMITIES

Each of these two great rock systems—the Archean and the Algonkian—is separated from the one that overlies it by a nearly even surface that cuts across or truncates all underlying beds or masses. This truncation marks what is known to geologists as an unconformity. Each unconformity means that the rocks below it were worn down by streams or waves to a nearly level surface before the material that formed the overlying rocks was deposited.

The top of the Paleozoic series is also marked as an unconformity, for although the Paleozoic beds are the highest that appear in the wall of the Grand Canyon they actually once lay beneath a later thick series of horizontal deposits. The traveler who comes to the Grand Canyon from the north descends step by step in southern Utah a great series of cliffs and terraces carved in horizontal beds, much like the Paleozoic. The most noted scenic features of southern Utah—Zion Canyon, Bryce Canyon, and the Vermilion, White, and Pink cliffs—are carved in these beds, which overlie the Paleozoic and represent deposits of later systems, the Triassic, Jurassic, and Cretaceous, which are of Mesozoic age, and

part of a still later system, the Tertiary. These later beds once extended across the entire region in which the Grand Canyon lies, covering it to a thickness at least twice as great as the canyon is deep, but nearly all of them have been worn away by erosion. A few small masses of them still remain as buttes on the Coconino Plateau south of the Grand Canyon. One of these, Red Butte, lies 18 miles south of El Tovar. Another, Cedar Mountain, lies 2 miles east of the rim of the Grand Canyon near Desert View. Cedar Mountain is interesting because the formation that caps it, the Shinarump conglomerate, contains logs of petrified wood. The petrified forests of Arizona (Petrified Forest National Monument), which lie southeast of the Grand Canyon region, occur in a formation that immediately overlies the Shinarump conglomerate and that is exposed over wide areas, but has been removed from Cedar Mountain and Red Butte by erosion.

The rock record just described is laid bare in the Grand Canyon and in the cliffs of southern Utah with the clearness of a diagram, so that the sequence of geologic events in the region can be read from it with ease and certainty. The nature and composition of these walls of the inner gorge show that they are types formed at great depths—say 4 or 5 miles. We may conclude, therefore, that the Vishnu schists were folded and uplifted to form mountains probably as much as 20,000 feet high, and that these mountains were worn down in the course of time to a low plain before the strata lying in the schists were deposited.

When the land had been worn down to a plain it sank and was buried under at least 12,000 feet of mud and sand that now form the Grand Canyon series of Algonkian age. After these beds had thus accumulated they were uplifted, tilted, and broken into huge blocks that must have formed high ranges of mountains. Then followed a long period of erosion, during which the mountains were worn down nearly to a plain. This plain is represented by the unconformity that separates the eroded Archean and Algonkian rocks from the overlying horizontal Paleozoic strata. Exposed as it is for the entire length of the "Granite Gorge" and for many miles upstream from the "Granite Gorge," and visible everywhere from the rim of the canyon, this unconformity is the most spectacular known illustration of such a feature. It was not so even a surface as the older unconformity, for some of the hard sandstones of the tilted Algonkian blocks long resisted erosion and stood as low hills on the plain. A section of one of these hills is visible in the canyon wall from El Tovar. It lies under Cheops Pyramid, just west of the mouth of Bright Angel Creek, and it rises well above the base of the Paleozoic beds, which were deposited around it.

SUBMERGENCE, DEPOSITION, UPLIFT, AND EROSION

At the end of Algonkian time the land was again submerged, and the horizontal Paleozoic, Mesozoic, and early Tertiary strata were slowly deposited. Measured by the rate of atomic decomposition of the radioactive minerals—probably our most accurate method—the time covered by these strata, whose aggregate thickness exceeds 15,000 feet, was around 600 millions of years, a long time even in the geologic sense of the word. It spans the long ages during which life was evolved from the primitive marine shellfish to the apelike predecessor of man. Yet, as noted above, it was short in comparison with the time consumed by the succession of events recorded before the Paleozoic strata were laid down.

In Tertiary time the region was again uplifted and a period of erosion began. Streams cut channels into the surface of the land and in time formed broad valleys, which thus continued to expand until at last most of the land stood but little above the level of the sea. At the end of this period of erosion, which is sometimes called the great denudation, most of the strata above the Paleozoic

had been removed from the Grand Canyon region; their edges had been worn back northward 50 miles to the border of Utah, and the surface of the region had been reduced to a nearly even plain. The present course of the Colorado River must have been determined by a topography different from that of to-day, for in most of the region that lies within the national park, as one may see at El Tovar, the land south of the canyon slopes directly away from its rim, so that the canyon runs across instead of down a slope.

FOLDING AND FAULTING

The uplifts of the region that raised the Paleozoic and Mesozoic strata in Tertiary time were very different from those recorded beneath the unconformities in the canyon walls. The rocks were not compressed and folded, like the Archean, nor were they broken into tilted masses, like the Algonkian; instead, the whole region was lifted bodily, the strata still preserving essentially the horizontal attitude in which they were laid down. Yet the uplift was not equal over all parts of the region. If, for example, we should cross the Kaibab Plateau from east to west, say from House Rock Valley to Ryan, we should find the limestone strata at its western margin ending suddenly in a cliff and appearing again 1,500 feet below, on the surface of the plateau on the west—the Kanab Plateau. Such a break, along which the strata on one side have slipped past those on the other, is known as a fault. At the eastern margin of the plateau we should find the strata bending suddenly downward in a great curve, returning again as sharply to a horizontal attitude, and continuing eastward as the surface of the Marble Platform. This type of dislocation is known as a flexure, or fold.

The uplifted Grand Canyon region is divided into great horizontal plateau blocks like the Kaibab Plateau by dislocations of the type just described, either folds or faults, that trend north and south; and the Grand Canyon crosses these plateaus from east to west. The corresponding name of each plateau has been given to that section of the canyon which crosses it. Thus the section of the canyon that transects the Kaibab Plateau is known as the Kaibab division. The Grand Canyon National Park includes all the Kaibab and part of the next western division—the Kanab.

In addition to the great dislocations that separate the plateaus, there are numerous small faults and folds in the region, many of which extend into or across the Grand Canyon. Frequently, visitors who notice these faults ask whether the canyon does not owe its origin or at least its course to a great fault. This appears not to be the case. The present course of the river dates in general from a time when the region was a lowland and the river was flowing in comparatively soft beds, such as loosely consolidated sands and shales. Contemporarily with the uplift of the region the river cut its way downward through these softer beds and eventually wore its way into the harder beds where we now find it. The softer beds which were once present above the Kaibab limestone have been removed by erosion from the area immediately adjacent to the canyon. Faulting, however, assisted by the alternating sequence of hard and soft formations has been an important factor in the development of the sheer walls and boxlike canyons. Faults have guided the course of many tributary gorges in the Grand Canyon and have locally influenced the course of the Colorado River. Movement along some of the faults, by crushing the adjacent rock, has formed zones of weakness, which, under the searching action of erosion, have become ravines or gorges. An example is the gorge of Garden Creek, which is followed by the Bright Angel Trail in front of El Tovar. The course of this gorge has been determined by a small fault, which has shattered the great cliffs of the Coconino sandstone and Redwall limestone and has made possible the construction of the trail. The strata have been displaced about 100 feet by the

faults, those on the west side having been relatively elevated. Another illustration is seen in Roaring Spring Gulch, where faulting and crushing have made possible the way of the Kaibab Trail across the Redwall limestone.

THE WORK OF MAKING THE CANYON

During the last great uplift of the region, which may still be in progress and which has raised the plateau to its present height, the land rose so gradually that the river remained in its original channel and kept cutting deeper and deeper. The canyon is thus deep because the land is high and because in this arid region, the river, fed by the rains and snows of the Rocky Mountains and armed with great quantities of mud and sand and gravel, washed into it by its tributaries, has lowered its bed faster than its tributaries could lower the adjacent plateau. But, although the Colorado River has thus dug the canyon, the various forms of rock sculpture seen in the walls of the canyon have been determined by variations in the behavior of the beds under the attack of the agents of erosion. And this erosion is still going on. The observer of to-day who stands in awe on the brink of the canyon or who finds his way precariously down the trails that lead to its depths should realize that the work of making this mighty chasm is not yet finished. The various agents that have modeled the canyon—the rushing torrent below and the small streams that descend to join it, the intermittent rain and snow and frost, and those subtle yet effective chemical activities that aid in the decay of the rocks, and, above all, the ever dominant pull of gravity on all loose particles—all are still at work on this wonderful piece of earth sculpture. In the Grand Canyon of to-day we see the accumulated results of the action of powers that apparently leave from year to year but slight traces of their action but that, persisting in their work through uncomputed ages, have produced results of marvelous immensity.

HISTORY OF THE CANYON³

Don Lopez de Cardenas, of Coronado's expedition, discovered the Grand Canyon in 1540, as a result of stories told by the Hopi Indians to Don Pedro de Tovar. The old records describe a chasm which seemed to be more than 3 or 4 leagues across in an air line—"que avia mas de tres o quatro leguas por el ayre."

For a long period thereafter the Grand Canyon region and the Colorado River remained practically unknown. It is next recorded as having been seen by two Spanish priests in 1776; Padre Garces, crossing eastward from the lower Colorado to the Hopi towns, halted, he says, "at the sight of the most profound box canyons which ever onward continue, and within these flows the Colorado," and Padre Escalante, who, in searching for a place to cross from the north after his failure to proceed westward from Santa Fe to Monterey, finally found the old Ute ford, used by Indians for centuries, near the foot of Glen Canyon (in latitude 37°), and by means of it was able to reach Zuni. The ford then became known as *El Vado de los Padres*—the Crossing of the Fathers—for long the only known crossing of the Colorado in a distance of several hundred miles.

The first American to visit the region was James O. Pattie, accompanied by his father. They trapped beaver on the lower Colorado in 1825 and 1826. In 1826, returning eastward, they traveled for 13 days, following, apparently, the Grand Canyon as well as they could, but unable to reach the river at any point, till at last they arrived at a place where the river "emerges from these horrid mountains." This was the first extended trip on record of any human being along the brink of the Grand Canyon.

³ Furnished by courtesy of Frederick S. Dellenbaugh.

The same year that the Patties went to the lower Colorado, 1825, General Ashley, in pursuit of his fur-trading enterprise, attempted to descend Green River from near the present crossing of the Union Pacific Railroad. They were forced after great hardship to give up the effort in the Uinta Valley.

The famous American trapper and pioneer, Jedediah Smith, crossed the river going west in the Mohave country in 1826 and again in 1827. In this latter year the Patties returned to the lower Colorado and trapped down the river from the mouth of the Gila in dugouts, the first navigators of this portion since Alarcon, of the Coronado expedition, came up in 1540. Quite unexpectedly they made the acquaintance of the great bore at the mouth of the river where they were in waters that Lieutenant Hardy, of the British Navy, had entered the year before.

Other trappers after beaver then followed into the region, and the Government began sending out exploring parties. One of these under Sitgreaves crossed the Colorado in 1851 about 150 miles above Yuma, and three years later another under Whipple, surveying for a railway along the thirty-fifth parallel, crossed a few miles above the mouth of Bill Williams Fork.

When the California gold rush developed one trail of the Forty-niners led down the Gila and across the Colorado at its mouth, and then various activities on the low river began. The first steamboat was brought to the mouth of the Colorado and up it in 1852. It was named the *Uncle Sam*.

Edward F. Beale, surveying a Government wagon road, crossed and recrossed in 1857 and 1858, near the mouth of Bill Williams Fork, and in January, 1858, the Government exploring expedition under Lieutenant Ives proceeded from the mouth up the river in a small stern-wheel iron steamer, the *Explorer*, as far as the foot of Black Canyon, whence the ascent was continued in a small boat to the mouth of the Vegas Wash. This was not the first steamer up, however, as Captain Johnson, of a commercial navigation company, had steamed up and passed with his steamboat clear through Black Canyon to its head some days before, mainly to "get ahead" of Ives, who had earlier displeased Johnson. Ives then proceeded overland to the mouth of Diamond Creek and to the Hopi towns via Havasu Canyon.

"It seems intended by nature," says Lieutenant Ives, after vainly trying to reach the rim, "that the Colorado River, along the greater part of its lonely and majestic way, shall be forever unvisited and undisturbed."

This same year of 1858 saw the first recorded crossing of the Colorado from the north, by white men, since Escalante. This was accomplished by Jacob Hamblin, a well-known Mormon, a missionary and Indian agent, from Utah to the Hopi towns. An Indian guided him to the Ute ford (Crossing of the Fathers) and he used it thereafter almost yearly. These Mormons for long years were the only persons besides Navajos and Utes to cross the river anywhere. The ford, known to few, was difficult and dangerous at all times and impossible except at low water.

In 1862 Hamblin went around the Grand Canyon by the west end to the Hopi towns and returned by the Crossing of the Fathers at the east end, practically, as Marble Canyon begins a few miles below. The next year he again went around by the west end to the Hopis, visiting on the way the "hermit" tribe, the Havasupais, in their deep canyon home, being the first white man on record to do so after Lieutenant Ives. The party returned to St. George around the west end of the Grand Canyon. Nobody, as yet, went to the rim and there was no known crossing of the Grand Canyon itself anywhere by white men.

Another attempt to descend Green River from the California Trail (near the present Union Pacific Railroad) was made in 1849, by William Manly and party. They expected to find a shorter and easier road to the California gold fields. After a hard time they emerged into Uinta Valley, where they met the noted

Ute chief Wakar ("Walker"), who was good to them and urged them not to try to go farther down the river.

In 1867 a man named James White was picked up from a raft near Callville, below the mouth of the Virgin, in an exhausted condition, and those who aided him immediately but erroneously assumed that he had come down through the Grand Canyon, the result of an ignorance as great on their part as on that of White. He knew nothing about the interior of the great canyon and mentioned that he had run one big rapid, whereas he should have mentioned big rapids by the dozen.

So nothing was definitely known about the mysterious interior of the Grand Canyon or of the canyons of the Colorado River above as far as the Uinta Valley on Green River until Maj. John Wesley Powell, one-armed veteran of the Civil War, made his famous passage of all the canyons. He started with nine men and four boats from Green River City, Wyo. (on the Union Pacific Railroad, then the only railway across the continent), on May 24, 1869. One of the men (Goodman) was disheartened and left the party in the Uinta Valley.

The terrifying waterfalls and underground passages described by trappers and Indians were not found, but the declivity was often extremely great and continuous (as in Cataract Canyon, where it is continuous for about 20 miles), producing violent cataracts, with huge waves and a water velocity of over 20 miles an hour, frequently studded with giant rocks.

The trip was one of incredible hardship and danger, led by the one-armed major, who had lost his right arm at the Battle of Shiloh. The plunging rapids in the whole length of the journey numbered several hundred to overcome the 6,000 feet difference in altitude between Green River City and the sea. The boats were often upset and the passage of many of the rapids was perilous to a degree. Frequently the party would be forced to embark on long foaming declivities without being able to discover what other, perhaps greater, falls might lie around the precipitously walled bends in front of them.

One of the boats, some of the scientific instruments, and a considerable amount of the food supply were lost in the Canyon of Lodore; and some that was rescued had to be left, as the remaining boats were overloaded. For weeks the clothing of the adventurers was never dry; and when they finally entered the mighty depths of the Grand Canyon itself, in August, there was little food remaining.

The sharpest rapids occur in the granite, and the first Granite Gorge, running past the Powell Monument, contains the worst portion of the whole river. When, therefore, another "Granite Gorge" developed below Diamond Creek, the men, stalwart and full of nerve though they were, were disheartened, having become somewhat demoralized by lack of food and tremendous strain. Three of them consequently announced that they would go no further.

This was desertion, but they preferred it to risking the difficulties they saw ahead. They believed they could climb out and reach the well-known Mormon settlements on the north, and they believed a river party would be lost or starve.

"At one time," says Powell in his report, "I almost concluded to leave the river. But for years I have been contemplating this trip. To leave the exploration unfinished, to say that there is a part of the canyon which I can not explore, having already almost accomplished it, is more than I am willing to acknowledge, and I determine to go on. . . . For the last time they entreat us not to go on, and tell us that it is madness to set out in this place,"—the same appeal that Dunn made to Hawkins, the cook of the party, as Hawkins himself tells it.

William R. Hawkins, writing of this in after years, says the three men had "made up their minds to go, and Dunn said he hated to leave Hall and myself, as we had been together a long time, and that we would perish in the river. [Note the fear of the river which had developed in the minds of at least three.]

While we were talking, the major came up to me and laid his left arm [he had no right] across my neck, tears running down his cheeks. By that time the rest of the boys were present, and the major said to me: 'Bill, do you really mean what

you say?' [that he would stick to the major on the river]. I told him that I did, and he said that if he had one man that would stay with him he would not abandon the river. I just simply said that he did not know his party."

He certainly had reason, with three men about to desert, to believe that others might. The other five were true, however, and it is only just to say that one of the deserters would have stood true also had it not been for his brother, who was determined to leave. They all then drank coffee together. The boat party went on, the deserters climbed out on the north, each party thinking the other party doomed. The deserters would have fared well enough and would have arrived at the Mormon settlements had it not been that the Shewits Indians on the plateau believed, or said later that they believed, that these were miners who had committed depredations on a tribe to the south. The men were therefore killed not far from Mount Dellenbaugh, and their clothing, rifles, and other equipment appropriated.

The place on the river where they left the major is now known as Separation Rapid. The day after they departed Powell and "the faithful five" reached the end of the great chasm without serious mishap. The names of the three deserters have justly been omitted from the roll of honor inscribed on the Powell Monument.

Powell's journal of this famous voyage is one of the most fascinating tales of adventure in literature. A large part of his meager notes having been lost, Powell repeated the trip on a more extensive basis in 1871 and 1872, obtaining then the data on which his report was based.⁴ There is no account of this second vital expedition except in "A Canyon Voyage," by Frederick S. Dellenbaugh, a member of that party. Afterwards Powell became director of the United States Geological Survey and of the Bureau of Ethnology, which he established.

ACCESSIBILITY OF THE CANYON

The Grand Canyon is very much more than a wonder place or a scientific museum on a titanic scale. It is a scenic spectacle of the first order. It may be visited any day in the year. The railroad to the south rim is always running and the hotel there always open.

During the winter snow falls in the pine forest along the rim; but though the upper portions may be snow-covered, the trails into the canyon are open and safe, for more moderate weather prevails there.

The weather in July and August is warm, but not hot on the rim; the altitude takes care of that. There are cool mornings, evenings, and nights, no matter how warm it may be at midday.

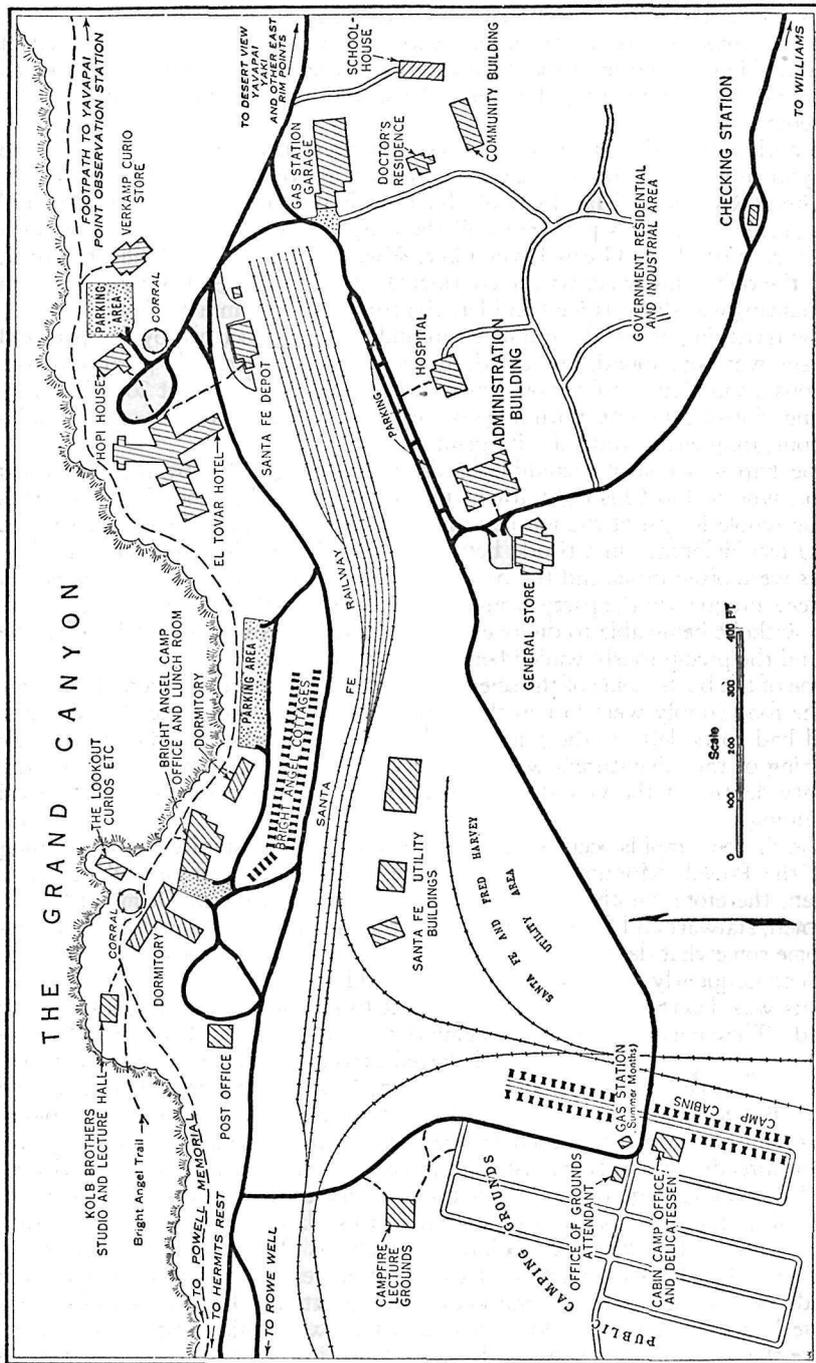
Arizona is a land of sunshine; the air is dry and the winds are light. While spring and fall are more attractive than midsummer or midwinter, each season has its special charm. From December to March snow is more or less abundant on the rim and a few hundred feet down the trail. Camping-out parties must then confine themselves to the inner canyon, which is more comfortable than the rim areas.

It should be borne in mind that on account of heavy snows the north rim is closed to visitors from about October 15 to May 15.

THE NORTH RIM OF THE CANYON

There is a remarkable difference between the north and south rims. The north rim, a thousand feet higher, is a colder country, clothed with thick lusty forests of spruce, pine, fir, and quaking aspen, with no suggestions of the desert. A few springs are found here, usually in accessible places under the rim. Deer

⁴ Some idea of the conditions encountered by Major Powell on these trips may be gained from the illustrated lecture given daily at Kolb Bros.' studio (see p. 30).



were once more plentiful than in any other single area in the United States, as many as 1,000 having been counted along the North Approach road in an evening. It is a region now being visited each year by thousands of vacationists.

The views from the north rim are markedly different. One sees there close at hand the vast temples which form the background of the south rim view. One looks down upon them, and beyond them at the distant canyon floor and its gaping gorge which hides the river; and beyond these the south rim rises like a great streaked flat wall, and beyond that again, miles away, the dim blue San Francisco Peaks. It is certainly a spectacle full of sublimity and charm. There are those who, having seen both, consider it the greater. One of these was Dutton, whose description of the view from Point Sublime has become a classic. But there are many strenuous advocates of the superiority of the south rim view, which displays close at hand the detail of the mighty chasm of the Colorado, and views the monster temples at parade, far enough away to see them in full perspective.

Constant improvement in north rim road conditions has made that section of the park readily accessible by autobus and motor car from Cedar City, Zion, and Bryce Canyon National Parks, and other southern Utah points. The auto route to the Grand Canyon from the north takes the visitor through the famous Kaibab Forest, a splendid stand of virgin timber, the home of fine herds of mule deer and the Kaibab whitetail squirrel, and makes a never-to-be-forgotten trip of indescribable charm and a fitting prelude to the silent symphony of the Grand Canyon itself.

With the recent completion of the Lees Ferry Bridge over the Colorado River autoists will find the trip between the north and south rims reduced to 228 miles via House Rock Valley, Lees Ferry Bridge, and a portion of the Painted Desert country. Further information concerning this route is given on page 28.

The trail trip to the north rim is now perfectly feasible by the Kaibab Suspension Bridge over the Colorado River and the Kaibab Trail up Bright Angel Canyon. It is about 22 miles from the head of the Kaibab Trail on the south rim to the Grand Canyon Lodge on Bright Angel Point. About 7 miles are made the first day, stopping overnight at Phantom Ranch; the remaining 15 miles are covered the second day. Rates covering the transcanyon trip by trail will be found on page 43.

TABLES OF DISTANCES AND ALTITUDES

ROADS

Hermit Rim Road, Grand Canyon to Hermit Rest—7.9 miles

Place	Distance from—		Altitude	Remarks
	Grand Canyon	End of road		
	Miles	Miles	Feet	
Grand Canyon	0	7.9	6,886	Administrative headquarters of Grand Canyon National Park.
Road to Havasupai . . . . .	.5	7.4	6,820	To Havasupai Indian Reservation, 47 miles distant.
Trail to Hermit Rest	1.4	6.5	6,960	By foot or horseback to Hermit Rest or Hermit Trail, 5 miles.
Powell Memorial	2.0	5.9	7,050	Memorial to Maj. John Wesley Powell, Sentinel Point.
Hopi Point	2.2	5.7	7,071	Fine view of sunset.
Mohave Point	3.0	4.9	7,000	View of canyon and river.

Hermit Rim Road, Grand Canyon to Hermit Rest—7.9 miles—Continued

Place	Distance from—		Altitude	Remarks
	Grand Canyon	End of road		
	Miles	Miles	Feet	
The Abyss	4.0	3.9	6,850	Looking down from the Great Mohave Wall.
Cut-off to Hermit Rest	4.7	3.2	6,800	Old Road to Hermit Rest.
Piñon Cove	5.7	2.0	6,750	Grove of piñon pines.
Pima Point	6.7	1.2	6,750	Fine view of canyon and river.
Cut-off to Grand Canyon	7.5	.4	6,700	Old road to Grand Canyon, 5 miles.
Hermit Rest	7.7	.2	6,690	Interesting Harvey rest house. Light refreshments.
Trail to Natural Bridges	7.6	.3	6,680	Natural Bridges in limestone, ½ mile.
Loop	7.9	0	6,665	End of road.

Grand Canyon, Grand View, Desert View Road—Grand Canyon to Desert View—24.8 miles

Place	Distance from—		Altitude	Remarks
	Grand Canyon	Desert View		
	Miles	Miles	Feet	
Grand Canyon	0	24.8	6,886	Administrative headquarters of Grand Canyon National Park.
Road to Yavapai Point . . . . .	.77	24.0	6,940	Yavapai observation station. Kaibab Suspension Bridge visible beneath.
Road to Yaki Point	2.9	21.9	6,925	Trail through forest. Sometimes called Cremation Point.
To Grand View Point	11.0	13.8	7,406	Magnificent view of canyon, Painted Desert, Navajo Mountain, river, etc.
Moran Point	17.2	7.6	7,157	Canyon View. Named for artist with Major Powell's expedition.
Zuni Point	18.0	6.8	7,284	View of canyon and river.
Forks-Desert View, Navahopi Road	21.2	3.6	.....	To Little Colorado River Bridge at Cameron, 42 miles.
Lipan Point	22.5	2.3	7,359	Locally called Lincoln Point.
Desert View	24.8	0	7,450	Navajo Point. Fine view of Marble Canyon, Painted Desert, Navajo Mountain, etc.

Log of road between north and south rims via Lees Ferry Bridge

	Miles from north rim (read down)	Miles from south rim (read up)
Grand Canyon Lodge ^{1, 2}	0	220.4
Public camp ground (one-fourth mile west; auto cabins, cafeteria, etc.)	1.2	219.2
Ranger station (Park Service administrative headquarters)	1.4	219.0
Kaibab Trail	2.1	218.3
Cape Royal Junction	3.0	217.4
Point Sublime Junction	12.2	208.2
Checking Station	12.6	207.8
Park Boundary	12.8	207.6
Airport	16.7	203.7
V. T. Ranch Hotel ^{1, 2}	18.2	202.2
Jacobs Lake ^{1, 2}	43.8	176.6
House Rock ²	57.3	163.1
Burch filling station ²	62.7	157.7

¹ Meals and lodging.

² Gas, oil, and water.

Log of road between north and south rims via Lees Ferry Bridge—Continued

	Distance from—		Remarks
	North Rim	Bryce	
Marble Canyon Lodge (D. C. ("Buck") Lowery) ^{1,2}	87.6	132.8	
Lee's Ferry Bridge	88.0	132.4	
Indian trading post (D. C. ("Buck") Lowery) ²	88.6	131.8	
Navajo Springs (good water one-half mile east)	91.7	128.7	
Cedar Ridge, Indian trading post (Charles Bergman) ^{1,2}	122.2	98.2	
The Gap, Indian trading post (Brown and Lee) ^{1,2}	129.5	90.9	
Tuba City Junction	150.9	69.5	
Cameron Bridge, Indian trading post (Hubert Richardson) ^{1,2}	160.5	59.9	
Grand Canyon Junction	161.0	59.4	
Desert View	195.6	24.8	
Grand Canyon Village, El Tovar Hotel ^{1,2}	220.4	0	

¹ Meals and lodging.

² Gas, oil, and water.

Supai Road, Grand Canyon to Hill Top, head of Havasu Trail via Coconino Basin—38.5 miles

Place	Distance from—		Altitude	Remarks
	Grand Canyon	Hill Top		
Grand Canyon	0	38.5	6,886	Administrative headquarters, Grand Canyon National Park.
Rowe Well Store	3.3	35.2	6,650	Privately-owned camp ground and store.
Bass Homestead	5.4	33.1	6,417	Old homestead of W. W. Bass.
Sheep Tank	16.5	22.0	6,235	Watering place for stock.
Forks of Bass Camp Road	24.5	14.0	6,125	To Bass Camp, Havasupai Point, and Pasture Wash ranger station.
Hill top	38.5	0	5,415	Head of trail to Supai Indian Reservation.

Approach Road, Grand Canyon to National Old Trails Highway and Santa Fe Railroad at Williams

Place	Distance from—		Remarks
	Grand Canyon	Williams	
Grand Canyon	0	60.0	Administrative headquarters of Grand Canyon National Park. Hotels, information, etc.
Checking station	0.3	59.7	All cars stop and register.
Park boundary	4.9	55.1	Entrance to Grand Canyon National Park.
Airport Junction	15.6	44.4	To airplane landing field.
Red Lake	48.4	11.6	Flag stop on Santa Fe Railroad.
Highway U. S. 66	57.5	2.5	National Old Trails Highway.
Flagstaff	91.0	36.0	County seat of Coconino County. Trips to Walnut Canyon, San Francisco Peaks, Ice Caves, etc.
Williams	60.0	0	Nearest shopping point to Grand Canyon.

North Rim Grand Canyon National Park to Zion and Bryce Canyon National Parks

Place	Distance from—		Remarks
	North Rim	Bryce	
Grand Canyon Lodge	0	165.9	Excellent hotel accommodations, garage, camp grounds, Kaibab Forest post office.
Bright Angel ranger station	1.3	164.6	Administrative headquarters, National Park Service, north rim.
Head of Kaibab Trail	2.1	163.8	Canyon trail to Roaring Springs, Phantom Ranch, and south rim.
Cape Royal Junction	2.9	163.0	Road to Cape Royal and Point Imperial.
Checking station	12.7	153.2	All cars stop and register.
Park boundary	12.9	153.0	North entrance to Grand Canyon National Park.
DeMotte Park	18.3	147.6	V. T. Ranch Hotel. Meals and lodging.
Jacobs Lake	44.7	121.2	Road to Lee's Ferry Bridge. Gas and oil.
Fredonia	76.7	89.2	Only town in "Arizona Strip." Hotel, garage.
Arizona-Utah line	80.6	85.3	
Kanab	84.3	81.6	Most southerly town in Utah. Mormon settlement. Hotels, stores, garages.
Mount Carmel	101.5	64.4	Mormon village. Junction of new road to Zion National Park.
Zion National Park Lodge	128.6	91.5	Yosemite done in oils.
Orderville	106.2	59.7	Old Mormon village. Gas and oil.
Glendale	110.4	55.5	Mormon town. Hotel, garage.
Cedar Junction	125.5	40.4	Forks of road, 28 miles to Cedar Breaks, 48 miles to Cedar City.
Hatch	138.4	27.5	Small village. Gas and oil.
Road forks	147.0	18.9	Right-hand road to Bryce Canyon National Park, via Red Canyon.
Bryce Canyon National Park	165.9	0	Exquisite beauty and grotesque grandeur astonishingly blended by forces of erosion.

North Rim Grand Canyon National Park to Cape Royal and Point Imperial

Place	Distance from—		Remarks
	North Rim	Cape Royal	
Grand Canyon Lodge	0	23.0	Excellent hotel accommodations, garage, camp grounds, cafeteria, Kaibab Forest post office.
Bright Angel ranger station	1.3	21.7	Administrative headquarters, National Park Service, north rim.
Head of Kaibab Trail	2.1	20.9	Canyon trail to Roaring Springs, Phantom Ranch, and south rim.
Main road junction	2.9	20.1	Road to Fredonia, Kanab, Zion, and Bryce.
Point Imperial Junction	8.4	14.6	Road to Point Imperial.
Point Imperial	11.2	17.4	Highest point on either rim of Grand Canyon. Excellent view of canyon, Painted Desert, and House Rock Valley.
Farview	9.6	13.4	Splendid view of canyon and Painted Desert.
Vista Encantada	13.1	9.9	Do.
Parking place, end of road	23.0	0	Footpath 0.4 mile to extreme end Cape Royal. Excellent view of canyon, Colorado River, and Painted Desert.

TRAILS

Grand Canyon to north rim ranger station via Kaibab Trail—26.6 miles

Place	Distance from—		Altitude	Remarks
	Grand Canyon	North Rim		
Grand Canyon	Miles 0	Miles 25.60	Feet 6,875	Administrative headquarters of Grand Canyon National Park. Hotels, etc.
Head of Kaibab Trail	3.50	22.10	.....
Kaibab Suspension Bridge	10.00	15.60	2,500	Built by National Park Service in 1928.
Phantom Ranch	10.85	14.75	2,550	Interesting Harvey Camp, stone cottages. Well located for hiking, climbing, etc.
Phantom Creek	11.90	13.70	2,950	A deep canyon coming in from the west.
Head of Box Canyon	14.55	11.05	3,350	Near end of granite in Bright Angel Creek.
Ribbon Falls	16.25	9.35	3,750	Very beautiful falls where creek drops over Redwall.
Wall Creek	16.75	8.85	3,850	Creek coming from the right. Old name is Beaver Creek.
Cottonwood Cabin	18.50	7.10	4,150	The Transept on left.
Manzanita Creek	18.90	6.70	4,450	Union Pacific hydroelectric plant.
Roaring Springs	19.85	5.75	4,750	
Foot Redwall limestone	20.50	5.10	5,350	
Head Kaibab Trail	24.10	1.50	8,350	
Grand Canyon Lodge	26.60	0	8,250	North Rim Hotel.

Short walks near Grand Canyon

Place	Distance and direction from El Tovar	By—	Altitude	Remarks
The Lookout Telescope.	0.3 west	Grand Canyon Rim Trail.	Feet 6,866	Observatory. Curios on sale. Pictures.
Kolb Bros. Studio	0.4 west . . . . .	.....do.....	6,850	Studio. Grand Canyon moving-picture lecture daily of voyage through canyon.
Pictograph Rock, Hole in Wall.	0.6 west	Grand Canyon Rim Trail and foot trail.	.....	Interesting foot trail from Bright Angel Trail. Ancient Indian pictographs.
Picnic Rock	0.8 west	Rim foot trail	6,870	Walk through woods. Fine view of San Francisco peaks.
Maricopa Point	1.8 west	Grand Canyon Rim foot trail.	7,000	Fine view of canyon.
The Battleship	2.5 north	Bright Angel Trail.	5,867	Rough foot trail from Bright Angel Trail.
Indian Gardens	3.7 north . . . . .	.....do.....	3,876	Fine creek of good water.
Independent Store	0.3 east	Grand Canyon Rim foot trail.	6,880	Indian handiwork and curios.
Grandeur Point	1.3 east . . . . .	.....do.....	7,050	Fine view. Kaibab Suspension Bridge visible.
Yavapai Point	1.5 east . . . . .	.....do.....	.....	Observation station. Trail-side museum.
Rowe Well	3.6 southwest	Rowe Well Road.	6,681	Good water.

HOW LONG TO STAY

While one should remain a week or two, a stop-over of three or four days from the transcontinental trip will give the traveler a fairly comprehensive idea of the canyon. From the south rim the Hermit Loop overnight trip, down one trail and up another, requires two days and a night, as does also the overnight trip to Phantom Ranch. One day should be devoted to an auto ride along the Hermit Rim Road, and by auto to Grand View and Desert View. Another day go down Bright Angel Trail and back. A fourth day spent in short walks to near-by points or on horseback will enable visitors to get more intimate views.

For the north rim visitor the Kaibab is the only trail available for trips into the canyon. Two days' time is required for the trip to the Colorado River with an overnight stop at Phantom Ranch. In one day over this trail one may get a fairly good idea of the canyon depths by taking the trip to Roaring Springs. Another day should be spent in taking the auto trip eastward to Point Imperial, Farview, and Cape Royal over excellent roads. Special auto trips to Point Sublime over an unimproved road may also be arranged. A day or more may be very profitably spent in taking saddle-horse trips and hikes on the rim to a number of very interesting points, recently made accessible by the construction of new bridle and foot paths.

The north rim offers the best opportunity for camping out during the summer months. The high altitude makes the weather uniformly cool, while the magnificent forest through which roam thousands of deer creates a delightful setting. There are a number of springs, and the water supply is not such a serious problem.

Bright Angel Creek has been well stocked by the National Park Service with both rainbow and Loch Leven trout. Fishing in this stream is excellent. The creek may be reached via the Kaibab Trail from either the north or the south rim. (See Regulation 5, p. —.)

The National Park Service of the Department of the Interior recommends to the traveling public that stop-overs of as long duration as practicable be planned at points within the park; that Grand Canyon National Park be regarded not alone as a region which may be glimpsed on a hurried trip but also as a vacation playground for rest and recreation.

WHAT TO WEAR

If much hiking is done, stout, thick, hobnailed shoes should be provided. Women will find that short walking skirts, knickers, or riding breeches are a convenience; riding breeches are preferable, but not essential, for the horseback journey down the zigzag trails. Traveling caps and (in summer) broad-brimmed straw hats are useful adjuncts. Otherwise ordinary clothing will suffice. Riding breeches, divided skirts, and straw hats may be rented at El Tovar Hotel or Grand Canyon Lodge.

ADMINISTRATION

Grand Canyon National Park is under the jurisdiction of the Director, National Park Service, Department of the Interior, Washington, D. C. The headquarters development is located on the South Rim. The address of the park superintendent, Miner R. Tillotson, is Grand Canyon, Ariz. Information, maps, and pamphlets may be obtained at the park office, where visitors are cordially welcomed. The office of the superintendent is at the terminus of the south approach road, south of the railroad tracks, southwest of the depot.

Mail for visitors to the north rim should be addressed to Kaibab Forest, Ariz., with "Grand Canyon Lodge" added in the case of hotel visitors.

El Tovar Hotel and Bright Angel cottages on the south rim and Phantom Ranch at the mouth of Bright Angel Creek are always open. Accommodations may be had at Grand Canyon Lodge on the north rim during the summer months only.

HOW TO REACH THE PARK

BY RAIL

The Grand Canyon National Park is directly reached by a branch line of the Atchison, Topeka & Santa Fe Railway extending 64 miles northward from Williams, Ariz. On certain trains through standard Pullman cars are operated to and from Grand Canyon station. Passengers using other trains and stopping over at Williams will find excellent accommodations at the Fray Marcos, station hotel. A Fred Harvey bus service is also operated between Williams and Grand Canyon for the benefit of passengers on main-line trains which do not connect with the train to Grand Canyon. This bus leaves Williams at 6.10 p. m. and arrives at Grand Canyon at 7.40 p. m. On the return trip it leaves Grand Canyon at 9 a. m., arriving at Williams at 10.30 a. m. The fare is \$4.56 each way, exactly the same as railroad fare, and those holding through tickets to Grand Canyon by rail may, upon application to the Santa Fe agent at Williams, exchange their railroad coupon for a bus ticket at no additional cost.

Stop-overs, not to exceed 10 days, are granted at Williams on all classes of railroad tickets for a visit to the canyon. Limits of through railroad tickets will be extended if necessary by agent at Grand Canyon. Through tickets may include side-trip coupons, Williams to Grand Canyon and return, at an additional charge of \$9.12.

Round-trip excursion tickets at reduced fares are on sale daily at practically all stations in the United States and Canada to Grand Canyon as a destination.

Baggage may be checked through to Grand Canyon station, if required. Passengers making brief side trips to Grand Canyon may check baggage to Williams only or through to destination. Certain regulations for free storage of baggage for Grand Canyon passengers are in effect.

For further information regarding railroad fares, service, etc., apply to railroad ticket agents, or address:

W. J. BLACK, passenger traffic manager, Atchison, Topeka & Santa Fe Railway, Chicago, Ill.
J. B. DUFFY, assistant passenger traffic manager, Atchison, Topeka & Santa Fe Railway, Coast Lines, Los Angeles, Calif.

The Union Pacific delivers travelers for the north rim at Cedar City, Utah, and the Denver & Rio Grande Western, at Marysvale. The former is approximately 190 miles from the Grand Canyon, and the latter approximately 207 miles. Regular stage service is maintained from both these points to the Grand Canyon National Park.

Complete information concerning these trips can be had from—

W. S. BASINGER, passenger traffic manager, Union Pacific System, Omaha, Nebr.
H. I. SCOFIELD, general passenger agent, Denver & Rio Grande Western Railroad, Denver, Colo.

Parties visiting the canyon from either of these Utah points can make an interesting trip covering Bryce Canyon National Park, Cedar Breaks, and Zion National Park.

If parties desire, they can make the trip from the north, take in all these features, cross the canyon, and continue their journey on the Santa Fe Railway. This can also be reversed, entering the park via the Santa Fe, crossing the canyon to the north rim, thence by motor bus to either of the two railways mentioned above, where the trip may be continued.

ESCORTED TOURS TO THE NATIONAL PARKS

Several of the larger railroads operate escorted tours to the principal national parks of the West, such as Grand Canyon, Zion, Bryce Canyon, Yellowstone, Yosemite, Rocky Mountain, Glacier, and Mount Rainier, and some even go as far as Hawaii and Mount McKinley.

The tour way is an easy and comfortable method of visiting the parks, as all arrangements are taken care of in advance. The total cost of the trip is included in the all-expense rate charged, and the escort in charge of each party attends to the handling of tickets, baggage, and other travel details. This is an especially interesting mode of travel for the inexperienced traveler or for one traveling alone. The escort, in addition to taking care of the bothersome details of travel, also assists the members of his party to enjoy the trip in every way possible.

Full information concerning these escorted tours may be obtained by writing to the passenger traffic managers of the railroads serving the various national parks.

BY AUTOMOBILE

A new road, built and maintained by the National Park Service, leaves the National Old Trails Highway, the main east and west highway through Arizona, at a point approximately $2\frac{1}{2}$ miles east of Williams. This road is oiled or paved the entire distance from the National Old Trails Highway to park headquarters, 57.5 miles. It is open the year around.

FLAGSTAFF.—It is 91 miles from Flagstaff to Grand Canyon via this new road. The town of Flagstaff is located in the heart of the San Francisco uplift and has good stores and garage facilities. In this vicinity are prehistoric cliff dwellings, extinct craters, volcanic cones, lava beds, and ice caves. The summit of Humphreys Peak, one of the peaks forming the San Francisco Mountains, is 12,794 feet above sea level.

WILLIAMS.—Williams, 60 miles from Grand Canyon, is 36 miles west of Flagstaff on the main east and west highway through Arizona. It is the nearest shopping center, and its stores and garages carry a good stock of everything necessary to the automobile tourist. Williams is a center for a number of interesting side trips.

The route from Williams passes near Bill Williams Mountain (elevation 9,264 feet), which has seven distinct crests, Red Lake, Howard Lake, and Red Butte, running along the line of the Grand Canyon Railway. No supplies can be purchased between Williams and Grand Canyon, except at a point 5 miles south of Grand Canyon.

NAVAHOPI ROAD.—The old Navahopi Road between Grand Canyon and Cameron is in very poor condition although it is usually passable during the summer months. Inquiry should be made at the superintendent's office before attempting this trip and it should be understood that the trip over this old road is made at the traveler's own risk. A new road from Desert View to Cameron is under construction and, until this new road is completed, visitors are advised to make the trip to Cameron by way of the Williams Approach Road and Flagstaff. Cameron is an Indian trading post on the Painted Desert. At this point there is a suspension bridge over the Little Colorado River on the road to Tuba City and the Lees Ferry Bridge. Here, too, may be had hotel accommodations as well as gasoline, oil, and general supplies. Cameron is 55 miles from Flagstaff and 147 miles from Grand Canyon via Flagstaff. The road between Flagstaff and Cameron is in good condition and passable the year around.

Auto roads to the north rim are uniformly good during the summer season, but they should not be attempted before about May 15 nor later than October 15. From Cedar City there is a splendid road as far as Zion National Park. From Zion a new road, remarkable for its scenic and engineering features, extends via

Pine Creek to the village of Mount Carmel. This road, carved from the walls of Zion Canyon, passes through more than a mile of tunnels and offers most spectacular views from its many galleries. At Mount Carmel connection is made with the main highway (U. S. 89) extending northward toward Bryce Canyon National Park and southward via Kanab and Fredonia to the north rim of the Grand Canyon and to the Lees Ferry Bridge.

A good road leads from Cedar City over Cedar Mountain, via Cedar Breaks, to Cedar Junction from which point the road forks, the branch to the north leading to Bryce Canyon National Park (41 miles distant) and the south branch to the north rim (125 miles), via Kanab, Utah, and Fredonia, Ariz. Supplies and hotel and garage facilities are obtainable at Cedar City, Kanab, and Fredonia, as well as at a number of small southern Utah towns between Kanab and Bryce Canyon. Gas and oil may be had at Jacobs Lake, 45 miles north of Grand Canyon Lodge.

The trip by auto between the south and north rims may be made by either of two roads. One of these is via Williams and Kingman, Ariz., Needles, Calif., Las Vegas, Nev., St. George, Utah, and Fredonia, Ariz. Good roads are had practically the entire route and the distance is approximately 682 miles. From this route a visit may be made to Boulder City and the Hoover Dam, now under construction, by a side trip of only 11 miles. The shorter route is via Cameron, Lees Ferry Bridge, House Rock Valley, and Jacobs Lake. The distance by this route is 311 miles via Flagstaff and 228 miles via the Navahopi Road and Cameron direct. As above stated, it is advisable to go by way of Flagstaff. The road from Flagstaff to Cameron is in good condition the entire year and a new high standard highway was completed during the 1931 season from Cameron north as far as Cedar Ridge, a distance of about 40 miles.

A splendid new road has also been built from House Rock Valley to Jacobs Lake and thence to the north rim. Between Cedar Ridge and House Rock Valley the route is a fair desert road, unimproved but entirely passable at all times during the travel season. Gasoline, oil, and food are obtainable at a number of points en route, such as Cameron, The Gap, Cedar Ridge, Lees Ferry Bridge, and Jacobs Lake. Meals and lodging are also obtainable at Cameron, The Gap, and Lees Ferry Bridge.

At the west end of Lees Ferry Bridge is located Marble Canyon Lodge, owned and operated by D. C. ("Buck") Lowery. Here surprisingly good hotel accommodations may be had with rates for rooms from \$2.50 up. A few rooms are available with bath. Regular meals are served at \$1 each and light lunches are also available. Gasoline and oils are obtainable and there is operated in connection with the lodge a trading post where native Navajo Indian rugs and jewelry may be had, as well as groceries and supplies. An ample supply of good water is available. Those making the trip by auto between the north and south rims via Lees Ferry Bridge will find Marble Canyon Lodge a first-class point at which to break the trip by an overnight stop.

The trip by way of Lees Ferry has much of interest to offer the tourist. Much of the route lies on the Painted Desert, which has a charm and fascination all its own. This is also within the Western Navajo Indian Reservation and the Indians to be seen either following their flocks along the road or gathered at the several trading posts en route are always objects of much interest. For those interested in the engineering features the trip is worth while to see the Lees Ferry Bridge alone. This is a structural steeldeck arch of the 3-hinged type, built by the State of Arizona in cooperation with the Federal Government and completed in the fall of 1928. The total length of the bridge is 833 feet, and the main span is 618 feet from center to center of end pins. The distance from the roadway to mean low water is some 467 feet, making this one of the highest highway bridges in the world.

ROAD-SIGN INFORMATION

As fast as the funds are available for that purpose the National Park Service is having standard signs placed along the roads and trails of this park for the information and guidance of the motorists and other visitors who use the park roads and trails.

These signs, in general, consist of information signs, direction signs, elevation signs, and name signs, all of which are of rectangular shape and mounted horizontally; milepost signs, rectangular in shape but mounted diagonally, all of which usually have dark-green background and white letters or vice versa; danger or cautionary signs, most of which are circular in shape and usually have red background, and white letters; and comfort station, lavatory, and similar signs, triangular in shape, having dark-green background and white letters.

The text on the standard road sign is in sufficiently large type ordinarily to permit its being read by a motorist when traveling at a suitable speed; however, as an additional safeguard, the motorist must always immediately slow down or stop or otherwise fully comply with the injunctions shown on the circular red cautionary signs.

Because of lack of funds, it has not been possible to place cautionary signs at all hazardous places in the roads; therefore, the motorist must always have his car under full control, to keep to the right, and sound horn when on curves that are blind, and not exceed the speed limit, which is 35 miles per hour on straight, fairly level road and 15 miles per hour on curves, narrow, or steep descending sections of road.

PUBLIC UTILITIES AND CONVENIENCES, SOUTH RIM

(For airplane service, see p. 5)

AUTOMOBILE SUPPLIES

At Grand Canyon village is an excellent garage under the management of Fred Harvey. Storage or repair service, as well as gasoline and oil, may be procured here. Gasoline is sold at prices prevailing on Highway 66.

GROCERIES AND SUPPLIES

The Babbitt Bros. Trading Co.'s general store at Grand Canyon carries a full line of groceries, meats, fresh fruits and vegetables, hardware, dry goods, leather goods, medicines and women's and men's furnishings, including outing apparel and supplies. Prices at this store are reasonable, in many cases comparing favorably with those of cities far less isolated from shipping points.

WATER

A supply of water for drinking purposes and for radiation, sufficient to last to Grand Canyon, should be brought from Williams or Flagstaff. Campers may obtain water on the camp ground at Grand Canyon free of charge.

POST OFFICE

The post office (second class), which does all kinds of postal business, is situated near the Hermit Rim Road, about 400 yards west of the railroad depot. It is open from 8 a. m. to 6 p. m. Mail trains arrive at 8 a. m. and 6.30 p. m. and leave at 11 a. m. and 7.15 p. m.

TELEGRAPH

The Western Union office in the El Tovar Hotel is open from 8 a. m. to 12 noon, and from 3 p. m. to 8 p. m. At the railroad depot messages are not received but may be dispatched between 6 a. m. and 9.30 p. m.

TELEPHONE

There is telephone connection between El Tovar Hotel, National Park Service office, ranger stations, Phantom Ranch, Havasupai Indian Agency, Desert View, and the north rim. Complete telephone service, both local and long distance, to all points is had through the commercial exchange of the Mountain States Telephone & Telegraph Co., located in the office of the park superintendent.

LECTURE

Every evening at 8 o'clock a lecture, illustrated with moving pictures and slides, is given on Grand Canyon National Park and the surrounding country. Admission to this lecture, which is given in the music room at El Tovar Hotel, is free, and all visitors to the park are invited to attend. This should not be confused with the illustrated lecture given daily by Kolb Bros., covering their trips down the Colorado River.

KOLB BROS.' STUDIO AND CANYON LECTURE

Kolb Bros.' studio is at the head of Bright Angel Trail. The Kolb Bros. give each day, in a spacious and well ventilated new auditorium, an interesting lecture, illustrated with motion pictures and slides, describing their boat trips through the canyons of the Green and Colorado Rivers. Two such trips were made, the first in 1911 and the second with the United States Geological Survey party in 1923. Pictures of both trips are shown. Admission, 50 cents.

The exhibition above referred to illustrates Major Powell's original exploration of the entire series of canyons on these rivers and should not be confused with other excellent travel talks on the Grand Canyon, which latter describe and illustrate what can be seen by the visitor in a stay of a week or so at the canyon.

Here, too, visitors may view the canyon through a telescope and obtain reliable information. Photographic views and other pictures representing many years' exploration of the Grand Canyon are for sale.

NATURE GUIDE AND LECTURE SERVICE

Each evening at 8.30 during the summer travel season, in the north end of the public camp ground, the park naturalist gives a free campfire lecture on the geology, history, origin, etc., of the Grand Canyon. Similar lectures are given in the afternoon at the Yavapai Point Observation Station, further described on page 3. On a short nature-guide walk or auto caravan conducted daily by the park naturalist various interesting features of the geology of the canyon are pointed out, together with those pertaining to the flora and fauna of the region. These facilities are offered by the National Park Service without charge and visitors are urged to make the fullest possible use of them.

VERKAMP'S SOUVENIR SHOP

Verkamp's is on the rim of the canyon, just east of the Hopi House. In this shop may be seen one of the largest and best paintings of the Grand Canyon, as well as other works of the late Louis Akin.

This store carries a complete line of canyon souvenirs and Indian handicraft. It makes a specialty of Navajo rugs and silverware, Chimayo blankets and Indian baskets, and carries post cards, folders, and photographs of the canyon.

FREE PUBLIC AUTO CAMP

A free public camp ground is maintained by the National Park Service. This is described in detail on page 4.

MEDICAL SERVICE

The National Park Service maintains a modern hospital near the administration building. A competent, experienced physician and an experienced and well qualified trained nurse is continuously on duty. The doctor's office is in the hospital, phone 14; residence phone 35.

KODAK FINISHING

The services of a first-class photographer are available for developing and finishing of kodak films and prints. Exposed film left at the Lookout or at El Tovar news stand before 12.30 p. m. will be developed promptly and the finished prints will be ready for delivery by 6 p. m.

THE LOOKOUT

The Lookout is a quaint observatory and rest house, built on the edge of the rim near the head of Bright Angel Trail. It is equipped with a large binocular telescope in the tower, for observing the most distant reaches of the canyon. Canyon photos are for sale. The reception room has spacious windows, a fireplace, Navajo rugs, and easy chairs; it is electric lighted and steam heated.

HERMIT REST

Where the Hermit Rim Road ends is a unique rest house, built into the hill, with a roofed-in porch and a parapet wall. As the name implies, it is intended to provide rest and shelter for parties who take the Rim Road drive. Guests may sit at the tables outside or sheltered by the glass front inside according to weather, and enjoy refreshments in unusual surroundings. Admission is free to those who arrive in Harvey transportation buses. The charge to others is 25 cents each. Open 9.30 a. m. to 12 noon; 1 p. m. to 5 p. m.

HOPI HOUSE

Opposite El Tovar is a reproduction of the dwellings of the Hopi Indians and several Navajo hogans.

In Hopi House are installed collections of Indian handiwork. Canyon souvenirs, Navajo rugs, and jewelry, basketry, and other examples of Indian handicraft may be purchased. Here also live a small band of Hopis, who are among the more primitive of our Indians. Each evening at 5.15 these Hopis give, at the Hopi House, a series of Indian dances to which no admission is charged.⁵

The homes of the Hopis are on the edge of the Painted Desert, perched on the crests of lofty mesas where they live as did their forbears and cling to their high dwelling place. They are industrious, thrifty, orderly, and mirthful. A round of ceremonies, each terminating in the pageants called "dances," marks the different seasons of the year. Subsisting almost wholly by agriculture in an arid region of uncertain crops, they find time between their labors for light-hearted dance and song, and for elaborate ceremonials, which are grotesque in the Katchina or masked dances, ideally poetic in the flute dance, and intensely dramatic in the snake dance. In the three and a half centuries of contact with the white race their manner of life has not materially changed. The Indian tribes that roamed over mountain and plain have become wards of the Government, but the Pueblo Indian has absolutely maintained his individuality.

The Navajo women weave fine blankets and many of the men are expert silver-smiths, who fashion bracelets, rings, and other articles from Mexican coin silver. The Navajo Indian Reservation—one of the largest in the United States—borders Marble Canyon on the east. They are a pastoral people, intelligent, and,

⁵ The last four above-mentioned facilities are under the management of Fred Harvey.

like the Hopis, self-supporting. They own large numbers of sheep, cattle, and horses. The Navajos are tall, rather slender, and agile. They have been rightly called the Bedouins of the Desert. Nowhere are they gathered into permanent villages. Although "civilized," they still cling to old customs and old religious forms. The medicine man, or Shaman, has a large following, if not a large per cent of cures. Their dance ceremonies are weird in the extreme. The fire dance is a spectacular 9-day ceremony, seldom witnessed by white men.

Supai Indians from Havasu Canyon frequently visit Grand Canyon village, and visiting Navajo and Hopi Indians may be seen occasionally.

PUBLIC UTILITIES AND CONVENIENCES, NORTH RIM

(For airplane service, see p. 5)

POST OFFICE

A post office (fourth class) is maintained from June 1 to October 1. Mail is brought by autotruck daily from Cedar City, Utah. The post-office address is Kaibab Forest, Ariz.

TELEGRAPH

A Western Union office is maintained during the season and the telegraphic address is North Rim, Grand Canyon, Ariz.

MEDICAL SERVICE

The services of an experienced doctor and of a nurse may be had at Grand Canyon Lodge. The nearest hospital is at Cedar City, Utah.

EDUCATIONAL SERVICE

Naturalists are on duty on the north rim during the summer travel season. Nature walks, lectures, informal talks and discussions, and conducted auto caravans are features of the service rendered by the park's educational staff on the north rim. It is suggested that park visitors consult schedules posted at Grand Canyon Lodge and other concentration points in order that no feature of the service, for which no charge is made, shall be missed.

AUTOMOBILE SUPPLIES

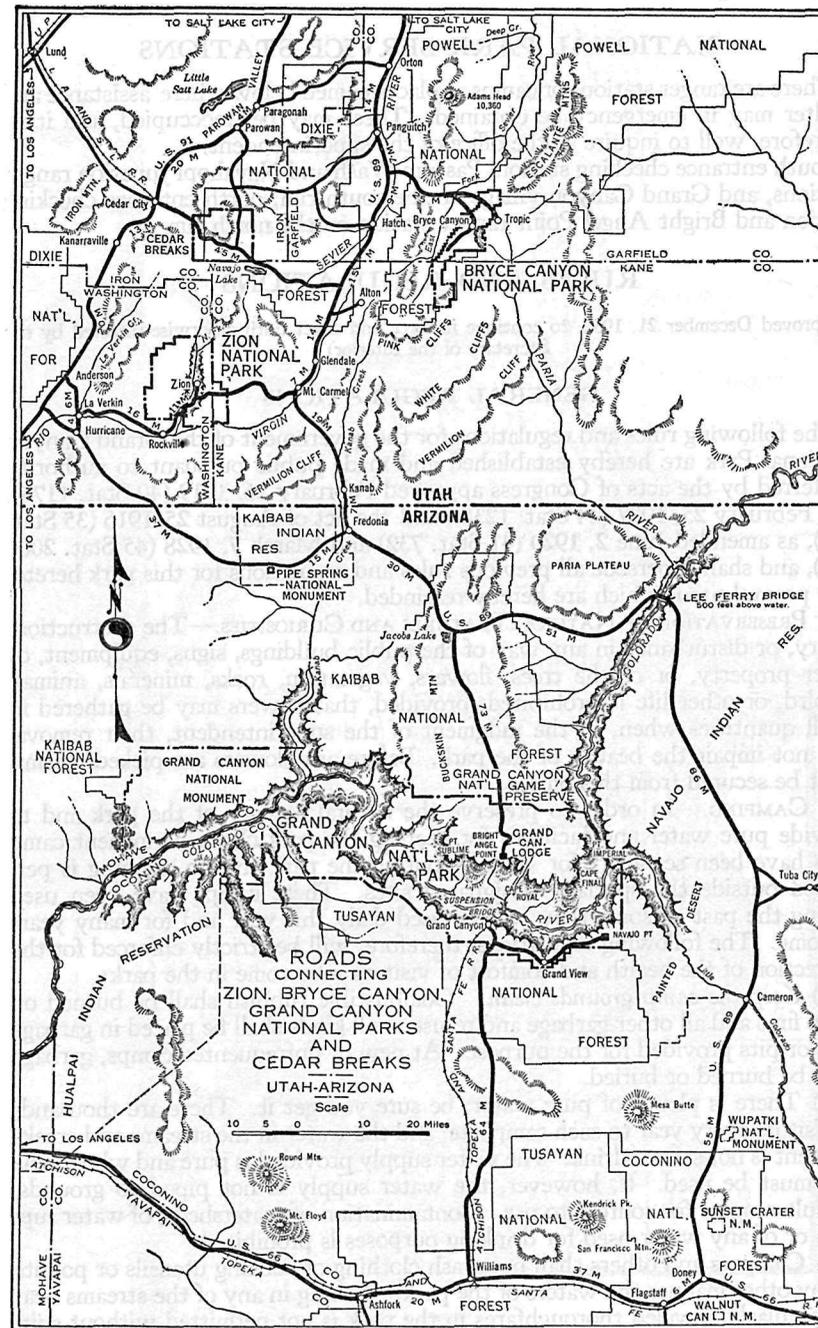
Under the management of the Utah Parks Co., there is maintained a first-class garage at which storage or repair service as well as gasoline, oil, and general automobile supplies may be had.

GENERAL SUPPLIES AND CURIOS

At the cafeteria building in the public camp ground there may be secured groceries, fresh and smoked meats, milk, eggs, butter, etc., as well as general campers' supplies, including cigars, cigarettes, tobacco, post cards, confectionery, kodak films, travelers' needs, proprietary medicines, etc. Indian handcraft, including Navajo rugs and jewelry, are also for sale here.

KODAK FINISHING

The services of a first-class photographer are available for developing and finishing of kodak films and prints. Orders for work of this nature may be placed with the attendant in charge at the curio shop.



ROADS CONNECTING SOUTHWESTERN PARKS

FREE PUBLIC AUTO CAMP

This is maintained by the National Park Service and is described in more detail on page 4.

NATIONAL PARK SERVICE STATIONS

There are ranger stations or camps at places named below where assistance and shelter may in emergency be obtained. These may be unoccupied, and it is, therefore, well to inquire at the office of the superintendent.

South entrance checking station, Pasture Wash and Navahopi Junction ranger stations, and Grand Canyon village on the south rim; north entrance checking station and Bright Angel Point ranger station on the north rim.

RULES AND REGULATIONS

(Approved December 21, 1932, to continue in force and effect until otherwise directed by the Secretary of the Interior)

GENERAL REGULATIONS

The following rules and regulations for the government of the Grand Canyon National Park are hereby established and made public pursuant to authority conferred by the acts of Congress approved February 26, 1919 (40 Stat. 1175), and February 25, 1927 (44 Stat. 1238), and the act of August 25, 1916 (35 Stat. 535), as amended June 2, 1920 (41 Stat. 732) and March 7, 1928 (45 Stat. 200-235), and shall supersede all previous rules and regulations for this park heretofore promulgated, which are hereby rescinded.

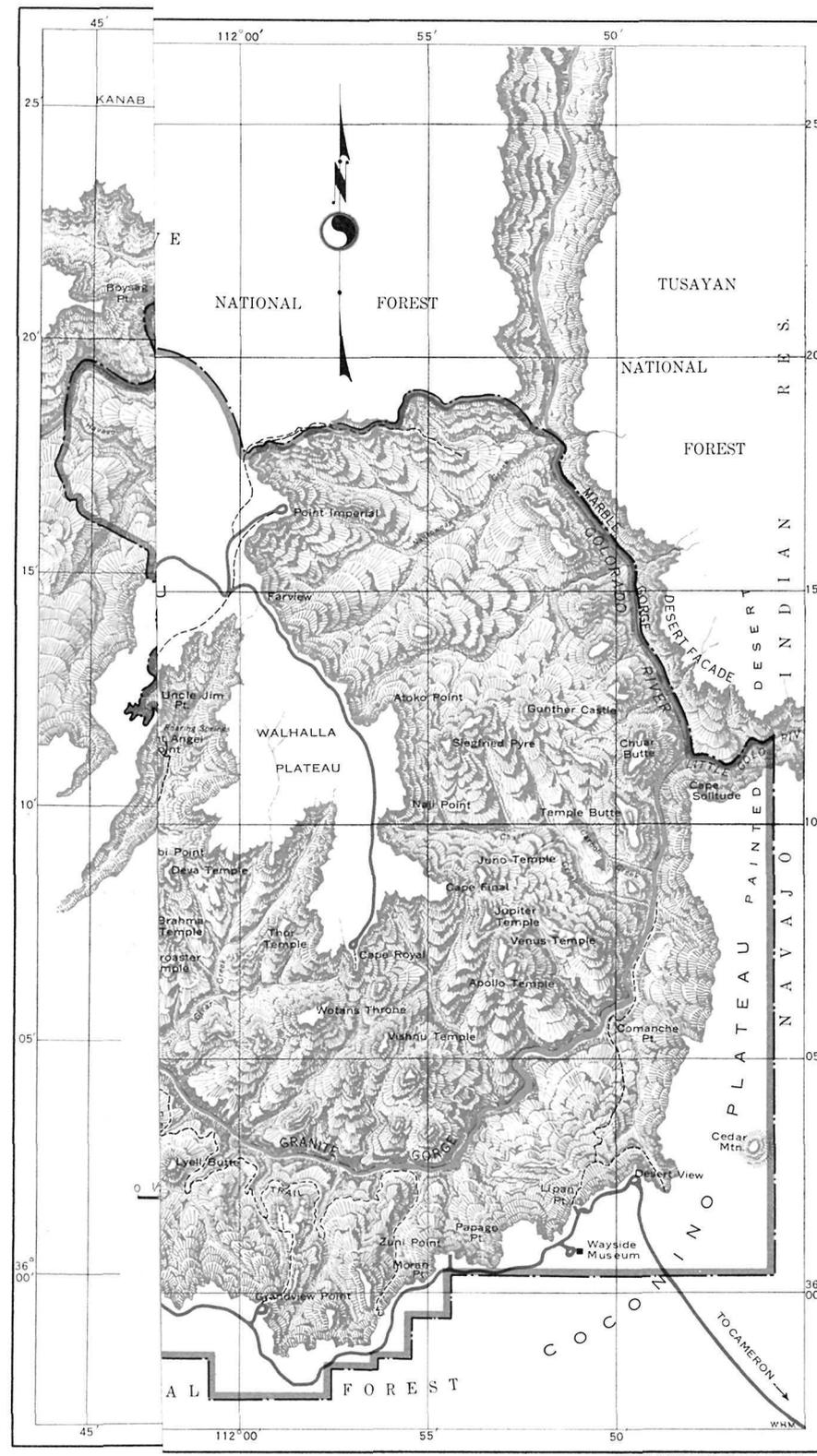
1. **PRESERVATION OF NATURAL FEATURES AND CURIOSITIES.**—The destruction, injury, or disturbance in any way of the public buildings, signs, equipment, or other property, or of the trees, flowers, vegetation, rocks, minerals, animal, or bird, or other life is prohibited; provided, that flowers may be gathered in small quantities when, in the judgment of the superintendent, their removal will not impair the beauty of the park. Before any flowers are picked, permit must be secured from this officer.

2. **CAMPING.**—In order to preserve the natural scenery of the park and to provide pure water and facilities for keeping the park clean, permanent camp sites have been set apart for visitors touring the park and no camping is permitted outside the specially designated sites. These camps have been used during the past seasons; they will be used daily this year and for many years to come. The following regulations, therefore, will be strictly enforced for the protection of the health and comfort of visitors who come in the park:

(a) *Keep the camp grounds clean.* Combustible rubbish shall be burned on camp fires and all other garbage and refuse of all kinds shall be placed in garbage cans or pits provided for the purpose. At new or unfrequented camps, garbage shall be burned or buried.

(b) There is plenty of pure water; be sure you get it. There are thousands of visitors every year to each camp site, and the water in the streams and creeks adjacent is not safe to drink. The water supply provided is pure and wholesome and must be used. If, however, the water supply is not piped to grounds, consult rangers for sources to use. Contamination of watersheds, of water supplies or of any water used for drinking purposes is prohibited.

(c) Campers and others shall not wash clothing or cooking utensils or pollute in any other manner the waters of the park. Bathing in any of the streams near the regularly traveled thoroughfares in the park is not permitted without suitable bathing clothes.



(d) The wearing of bathing suits, scanty or objectionable clothing, without proper covering is prohibited in automobiles, or around camps, villages, or hotels.

(e) All animals shall be kept a sufficient distance from camp sites and circulation areas in order not to litter the ground.

(f) Campers may use only dead or fallen timber for fuel.

(g) Any article likely to frighten horses shall be not hung near a road or trail.

3. FIRES.—Fires constitute one of the greatest perils to the park. They shall, not be kindled near trees, deadwood, moss, dry leaves, forest mold, or other vegetable refuse, but in some open space on rocks or earth. Should camp be made in a locality where no such open space exists or is provided, the deadwood, moss, dry leaves, etc., shall be scraped away to the rock or earth over an area considerably larger than that required for the fire.

All persons making trips away from established camps are required to obtain fire permits from the nearest ranger before building camp fires.

Fires shall be lighted only when necessary, and when no longer needed shall be completely extinguished, and all embers and beds smothered with earth or water, so that there remains no possibility of re-ignition.

Permission to burn on any clean-up operation within the park must be first secured from the superintendent's office, and in such cases as is deemed advisable such burning will be under Government supervision. All costs of suppression and damage caused by reason of loss of control of such burning operations shall be paid by the person or persons to whom such permit has been granted.

No lighted cigarette, cigar, match, or other burning material shall be thrown from any vehicle or saddle animal or dropped into any leaves, grass, twigs, or tree mold.

Smoking or the building of fires on any lands within the park may be prohibited by the superintendent when, in his judgment, the hazard makes such action necessary.

The use of fireworks or firecrackers in the park is prohibited except with the written permission of the superintendent.

4. HUNTING.—The park is a sanctuary for wild life of every sort, and all hunting or the killing, wounding, frightening, or capturing at any time of any wild bird or animal, except dangerous animals when it is necessary to prevent them from destroying human lives or inflicting personal injury, is prohibited within the limits of the park.

The outfits, including guns, traps, teams, horses, or means of transportation of every nature or description used by any person or persons engaged in hunting, killing, ensnaring, or capturing birds or wild animals within the limits of the park, shall be taken up by the superintendent and held subject to the order of the Director of the National Park Service. Possession within said park of the dead bodies or any part thereof of any wild bird or animal shall be prima facie evidence that the person or persons having the same are guilty of violating this regulation.

During the hunting season arrangements may be made at entrance stations to identify and transport through the park carcasses of birds or animals killed outside of the park.

Firearms are prohibited within the park except upon written permission of the superintendent. Visitors entering or traveling through the park to places beyond, shall, at entrance, report and surrender all firearms, traps, seines, nets, or explosives in their possession to the first park officer, and in proper cases may obtain his written permission to carry them through the park sealed. The Government assumes no responsibility for the loss or damage to any firearms, traps, nets, or other property so surrendered to any park officer, nor are park officers authorized to accept the responsibility of custody of any property for the convenience of visitors.



MAP OF
GRAND CANYON
NATIONAL PARK
ARIZONA

SCALE
0 1/2 1 2 4 8 MI.

LEGEND
 — Park Boundary
 — Roads
 - - - Trails
 1933

5. FISHING.—Persons desiring to fish in the waters of the park must secure a fishing license as required by the laws of the State of Arizona, the provisions of which shall govern fishing in the park except as otherwise defined in the following paragraphs.

These laws provide that no person shall take fish unless at the time of such taking he shall have such license on his person and shall exhibit the same upon request for inspection to any person. American-born residents or nonresidents of the State under 16 years of age may take fish without a license when accompanied by a person holding a valid license.

Fishing licenses may be obtained from any county clerk or authorized representative of the Arizona Fish and Game Commission. License fees are \$1.25 for residents of Arizona; \$2.50 for nonresidents (valid for 15 days from date of issue); \$10 for alien applicants for citizenship; and \$30 for aliens.

Fishing with nets, seines, traps, or by the use of drugs or explosives or in any other way than with hook and line, or for merchandise or profit, is prohibited. Fishing in particular waters may be suspended, or the number of fish that may be taken by any one person in any one day from the various streams or lakes, may be regulated by the superintendent. All fish hooked less than 6 inches long shall be carefully handled with moist hands and returned at once to the water, if not seriously injured. The limit for a day's catch shall be 10 fish. Possession of more than two days' catch by any person at any one time shall be construed as a violation of this regulation.

6. PRIVATE OPERATIONS.—No person, firm, or corporation shall reside permanently, engage in any business, or erect buildings in the park without permission in writing from the Director of the National Park Service, Washington, D. C. Applications for such permission may be addressed to the director through the superintendent of the park.

7. CAMERAS.—Still and motion picture cameras may be freely used in the park for general scenic purposes. For the filming of motion pictures or sound pictures requiring the use of artificial or special settings, or special equipment, or involving the performance of a professional cast, permission must first be obtained from the superintendent of the park.

8. GAMBLING.—Gambling in any form, or the operation of gambling devices, whether for merchandise or otherwise, is prohibited.

9. ADVERTISEMENTS.—Private notices or advertisements shall not be posted or displayed in the park, excepting such as the park superintendent deems necessary for the convenience and guidance of the public.

10. MINING.—The location of mining claims on Government lands in the park is permitted only with the prior approval of the Secretary of the Interior.

11. PRIVATE LANDS.—Owners of private lands within the park limits are entitled to the full use and enjoyment thereof; the boundaries of such lands, however, shall be determined, and marked and defined, so that they may be readily distinguished from the park lands. While no limitations or conditions are imposed upon the use of private lands so long as such use does not interfere with or injure the park, private owners shall provide against trespass by their livestock upon the park lands, and all trespasses committed will be punished to the full extent of the law. Stock may be taken over the park lands to private lands with the written permission and under the supervision of the superintendent, but such permission and supervision are not required when access to such private lands is had wholly over the roads or lands not owned or controlled by the United States.

12. GRAZING.—The running at large, herding, or grazing of livestock of any kind on the Government lands in the park, as well as the driving of livestock over same, is prohibited, except where authority therefor has been granted by

the superintendent. Livestock found improperly on the park lands may be impounded and held until claimed by the owner and the trespass adjusted.

13. AUTHORIZED OPERATORS.—All persons, firms, or corporations holding franchises in the park shall keep the grounds used by them properly policed and shall maintain the premises in a sanitary condition to the satisfaction of the superintendent. No operator shall retain in his employment a person whose presence in the park may be deemed by the superintendent subversive of good order and management of the park.

All operators shall require each of their employees to wear a metal badge, with a number thereon, or other mark of identification, the name and number corresponding therewith, or the identification mark, being registered in the superintendent's office. These badges must be worn in plain sight.

14. DOGS AND CATS.—Dogs and cats are prohibited on Government lands in the park except that upon written permission of the superintendent, secured upon entrance, they may be transported over through roads by persons passing through the park provided they are kept under leash, crated, or otherwise under restrictive control of the owner at all times while in the park; provided, however, that employees and others may be authorized by the superintendent to keep dogs in the park administrative area, or areas, on condition that they are kept within the confines of these areas, and subject to such further conditions in the interest of good park administration as may be determined by the superintendent.

15. DEAD ANIMALS.—All domestic or grazed animals that may die on Government lands in the park, at any tourist camp, or along any of the public thoroughfares shall be buried immediately by the owner or person having charge of such animals, at least 2 feet beneath the ground, and in no case less than one-fourth mile from any camp or thoroughfare.

16. TRAVEL ON ROADS AND TRAILS.—Pedestrians on trails, when saddle or pack animals are passing, shall remain quiet until the animals have passed.

Persons traveling on the trails of the park, either on foot or on saddle animals, shall not make short cuts but shall confine themselves to the main trails.

Any and all roads and trails in the park may be closed to public use by order of the superintendent when, in his judgment, conditions make travel thereon hazardous or dangerous, or when such action is necessary to protect the park.

17. TRAVEL—GENERAL.—(a) Saddle horses, pack trains, and horse-drawn vehicles have right of way over motor-propelled vehicles at all times.

(b) Load and weight limitations shall be those prescribed from time to time by the superintendent of the park and shall be complied with by the operators of all vehicles using the park roads. Schedules showing weight limitations for different roads in the park may be seen at the office of the superintendent and at ranger stations at the park entrances.

(c) All vehicles shall be equipped with lights for night travel. At least one light must be carried on the left front side of all horse-drawn vehicles in a position such as to be visible from both front and rear.

18. MISCELLANEOUS.—No pack-train or saddle-horse party shall be allowed in the park unless in charge of a guide or competent leader. Such guides or leaders may be required to pass an examination prescribed by and in a manner satisfactory to the superintendent. At the discretion of the superintendent, guides may be permitted to carry unsealed firearms.

19. FINES AND PENALTIES.—Persons who render themselves obnoxious by disorderly conduct or bad behavior shall be subjected to the punishment hereinafter prescribed for violation of the foregoing regulations, and/or they may be summarily removed from the park by the superintendent.

Any person who violates any of the foregoing regulations shall be deemed guilty of a misdemeanor and shall be subject to a fine of not more than \$500, or

imprisonment not exceeding six months, or both, and be adjudged to pay all costs of the proceedings.

NOTE.—All complaints by visitors and others as to service, etc., rendered in the park should be made to the superintendent, in writing, before the complainant leaves the park. Oral complaints will be heard daily during office hours.

Persons finding lost articles should deposit them at the Government headquarters or at the nearest ranger station, leaving their own names and addresses, so that, if not claimed by the owners within 60 days, articles may be turned over to those who found them.

The government is in no way responsible for any kind of accident.

AUTOMOBILE AND MOTOR-CYCLE REGULATIONS

1. AUTOMOBILES.—The park is open to automobiles operated for pleasure, but not to those carrying passengers who are paying, either directly or indirectly, for the use of machines (excepting, however, automobiles used by transportation lines operating under Government franchise), and any person operating an automobile in contravention to the provisions of this regulation shall be deemed guilty of its violation.

2. MOTOR TRUCKS AND BUSES.—Motor trucks and busses are admitted to the park under the same conditions as automobiles, except the superintendent will establish limits of size and tonnage capacity which may vary according to the different roads and bridges.

Commercial truck trailers engaged in hauling freight will be required to secure permission from the superintendent before using the park roads.

3. MOTOR CYCLES.—Motor cycles are admitted to the park under the same conditions as automobiles and are subject to the same regulations, so far as they are applicable.

4. PERMITS.—No motor vehicle may be operated in the park without a Grand Canyon National Park permit; provided, however, that residents of the park operating motor vehicles therein shall not be required to secure such permit.

The owner or driver of each motor-driven vehicle entering the park shall secure this permit at the entrance station.

This permit authorizes the operation of the vehicle therein described over the public roads in the park throughout the current calendar year. The permit is issued to the vehicle described therein and not to the owner or driver. This permit should be carried in the car and exhibited to park rangers on request. Permits purchased in December of any year are honored throughout the ensuing year.

5. FEES.—The fee for automobile or motor-cycle permit is \$1. No charge, however, shall be made for such permit issued to residents of Coconino County entering the park in the conduct of their usual occupation or business.

6. ENTRANCES AND ROADS.—Automobiles and motor-cycles may enter and leave the park by, and travel over, any of the roads therein which are open to motor vehicles.

7. SPEEDS.—Automobiles and other vehicles shall be so operated as to be under the safe control of the driver at all times. The speed shall be kept within such limits as may be necessary to avoid accidents.

All cautionary signs must be observed. Ambulances and Government cars on emergency trips are the only exceptions to this rule. The speed of all motor trucks over 1½ tons capacity is limited not to exceed 25 miles per hour on all park roads.

Speed is limited to 15 miles per hour on grades and when rounding sharp curves; 20 miles per hour in Grand Canyon Village area; and 35 miles per hour on straight, open stretches.

8. TEAMS.—When teams, saddle horses, or pack trains approach, automobiles shall be so manipulated as to allow safe passage for the other party. In no case shall automobiles pass animals on the road at a speed greater than 10 miles per hour.

9. RIGHT-OF-WAY, ETC.—Any vehicle traveling slowly upon any of the park roads, when overtaken by a faster-moving motor vehicle, and upon suitable signal from such overtaking vehicle, shall move to the right to allow safe passage.

When automobiles going in opposite directions meet on a grade, the ascending machine has the right of way, and the descending machine shall be backed or otherwise handled as may be necessary to enable the ascending machine to pass in safety.

10. MUFFLER CUT-OUTS.—Muffler cut-outs shall be closed at all times within the limits of the park.

11. ACCIDENTS—STOP-OVERS.—If cars stop because of accident or for any reason, they shall be immediately parked in such a way as not to interfere with travel on the road.

The driver of any motor-driven vehicle who meets with an accident shall report same at the nearest ranger station or to the superintendent of the park.

12. PARKING.—Parking of motor vehicles in Grand Canyon Village area, at scenic points, and at other points of concentration of traffic is limited to space provided for that specific purpose.

13. INTOXICATION.—No person who is under the influence of intoxicating liquor and no person who is addicted to the use of narcotic drugs shall operate or drive a motor-driven vehicle of any kind on the park roads.

14. LIGHTS.—All automobiles shall be equipped with head and tail lights, the headlights to be of sufficient brilliancy to insure safety in driving at night, and all lights shall be kept lighted after sunset when automobile is on the road. Headlights shall be dimmed when meeting other automobiles, motor cycles, riding or driving animals, or pedestrians.

15. HORNS.—The horn shall be sounded on approaching curves or stretches of road concealed for any considerable distance by slopes, overhanging trees, or other obstacles, and before meeting or passing other automobiles, motor cycles, riding or driving animals, or pedestrians.

16. FINES AND PENALTIES.—Any person who violates any of the foregoing regulations shall be deemed guilty of a misdemeanor and shall be subject to a fine of not more than \$500, or imprisonment not exceeding six months, or both, and be adjudged to pay all costs of proceedings, and/or may be punished by revocation of the automobile permit and by immediate ejection from the park. Such violation shall be cause for refusal to issue a new automobile permit to the offender without prior sanction in writing from the Director of the National Park Service or the superintendent of the park.

AUTHORIZED RATES FOR PUBLIC UTILITIES SEASON OF 1933

All the rates of the authorized public utilities for services within the park are approved by the Government. Employees of the hotels, camps, and transportation lines are not Government employees. Any suggestions regarding service furnished by these public utilities should be made to the superintendent.

The National Park Service has no direct supervision over the rates or the service given outside the park; rates are furnished for the information of the public.

THE SOUTH RIM

HOTELS AND PUBLIC CAMPS

(Hotels, housekeeping camps, and transportation facilities on the south rim are under the management of Fred Harvey)

EL TOVAR

El Tovar Hotel is located at the railroad terminus, near the head of Bright Angel Trail, at an elevation of 6,886 feet above sea level, and is open all the year. It is a long, low structure, built of native boulders and pine logs. There are 80 sleeping rooms, accommodating 140 guests. Sixty of these rooms are connected with private baths.

There is a music room and rendezvous. In the main dining room 165 persons can be seated at one time.

Steam heat and electric light are supplied. El Tovar also has a steam laundry.

Authorized rates at El Tovar Hotel

American plan:

1 person in room without bath, per day	\$6.50
2 persons in room without bath, per day	11.00, 12.00
1 person in room with bath, per day	8.00, ⁶ 9.00, 10.00, 12.00
2 persons in room with bath, per day	14.00, 15.00, 16.00, 17.00, 20.00

Meals only:

Breakfast	1.00
Luncheon	1.25
Dinner	1.50

Children, not transient, under 3 years, charge \$1.50 per day for meals only. No charge for rooms. Children 3 to 7 years, inclusive, \$3.00 per day for meals and room without bath; \$4.00 per day for room with bath.

Children 8 years and over, full rate.

BRIGHT ANGEL COTTAGES

Cozy lodgings in cottages or tents are available at Bright Angel Cottages, adjacent to El Tovar. The accommodations are clean and comfortable. There are two cottages, open the year around, and many tent-cabins for summer only. Both cottages have steam heat and electric light; one cottage also has baths. All tent-cabins have electric light, but no heat or baths. About 350 people can be accommodated here. Meals are furnished à la carte at the café. Kitchen facilities are ample for quick à la carte service.

Authorized rates at Bright Angel Cottages

Lodging only, per day, per person	\$1.50, \$1.75, \$2.00
Children 3 to 7 years, inclusive, half rate.	
Children 8 years and over, full rate.	

HOUSEKEEPING COTTAGES, CAMP LODGE, AND DELICATESSEN

AUTOMOBILE CAMP GROUNDS

A modern camp unit designed especially for the comfort and convenience of motorists is now available in the public camp grounds. This consists of housekeeping cabins, a delicatessen, and camp lodge. Each cabin is equipped with two double beds with springs and mattresses, a stove, table, sink, etc. The camp lodge has a large room with fireplace and a large covered porch which may be used by all campers free of charge, whether or not they patronize housekeeping cottages. Cooked foods and emergency groceries in small packages may be purchased at the delicatessen at rates approved by the National Park Service. About one-eighth of a mile east, toward the village, is a general store where food supplies, clothing, hardware, etc., may be purchased in any quantity.

⁶ Only 7 rooms with bath on the basement floor are available at this rate.

Authorized rates for housekeeping cottages

Minimum charge for cabin per day for 1, 2, or 3 persons	\$1.50
Each additional person, per day	.50

Above charge includes two double beds with springs and mattresses, stove for cooking and heating, electric light, table and benches, fuel, and water.

Visitors who are traveling light may rent bed clothes and towels at the following additional charge:

Blankets, pillows, sheets, pillow slips for each double bed and necessary hand towels, per day, 75 cents. Shower baths, 25 cents.

PHANTOM RANCH

On the north side of the Colorado River near the mouth of Bright Angel Creek; consists of well-built stone and tent-cottages with mess hall and rendezvous, with excellent accommodations for 42 persons. A sanitary sewerage system has been provided.

Authorized rates at Phantom Ranch

American plan, per day, per person	\$6.00
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SIGHT-SEEING TRIPS BY AUTOMOBILE

The following trips are available every day in the year by automobile:

TRIP No. 1

THE GRAND CANYON RIM DRIVE.—A complete 1-day motor trip of the south rim.

Morning: El Tovar west to Hermit Rest and return, 16 miles.

Afternoon: El Tovar east to Desert View and return, 52 miles.

Rate, \$7 per person, includes motor transportation, access to Hermit Rest (including light refreshments), and use of lounge and observation facilities (including light refreshments) at the Indian Watchtower and Kiva, Desert View.

Morning: Coaches leave El Tovar Hotel and Bright Angel Camp at 9.30, traveling westward over the famous Rim Road and along the brink of the canyon. Stops are made at important scenic points—Powell, Hopi, Mojave, and Pima—each affording its own superb view, and finally at Hermit Rest. The latter, a striking cliff house built of canyon boulders—with its rustic lounge, its great fireplace, and its observation porch—is an attraction in itself. The trip back to the hotels for lunch is made without stops along the same picturesque route. Round trip consumes approximately two hours.

Afternoon: Coaches leave the hotels at 1.30 traveling eastward over the new paved Desert View Road which winds through the Tusayan Forest and along the canyon's rim. Stops are made at Yavapai Observation Station, at Yaki Point, and at Moran, Lipan, and other interesting points which afford unusual views of the canyon. The eastward trip ends at the Indian Watchtower and Kiva whose marvelous observation facilities add greatly to the superb panorama of canyon and desert which Desert View Point commands. Round trip consumes approximately four hours.

For visitors who do not take the complete Grand Canyon Rim Drive these shorter trips are available.

TRIP No. 2

HERMIT REST.—El Tovar west to Hermit Rest and return, approximately 16 miles. Rate, \$3 per person, includes motor transportation and light refreshments at Hermit Rest. The itinerary for this trip is the same as that of the morning portion of the Grand Canyon Rim Drive, previously described. Coaches leave El Tovar Hotel and Bright Angel Camp at 9.30 a. m. and 1.45 p. m. Round trip consumes approximately two hours.

TRIP No. 3

DESERT VIEW.—El Tovar east to Desert View (Navajo Point) and return, approximately 52 miles. Rate, \$6 per person, includes motor transportation and use of lounge and observation facilities (including light refreshments) at the Indian Watchtower and Kiva at Desert View. The itinerary for this trip is the same as that of the afternoon portion of the Grand Canyon Rim Drive, previously described. Coaches leave El Tovar Hotel and Bright Angel Camp at 1.30 p. m. Round trip consumes approximately four hours.

Summer trips by automobile to the Navajo and Hopi Indian Reservation via the Navahopi Road, May 1 to October 31.

ONE DAY.—Automobiles leave El Tovar and Bright Angel Cottages at 7.30 a. m. daily. Route is via Desert View Road to Trash Dam, thence through the Coconino Basin to a point overlooking the canyon of the Little Colorado, where the first stop is made. The road then follows the Little Colorado due east, passing some specimens of petrified trees. Next stop is at the Navajo Indian trading post at Cameron. This is the western outpost of the Navajo Reservation and is 58 miles from the nearest railroad. The Little Colorado River is crossed at this point by way of the steel suspension bridge 660 feet long, and the route follows the main road across the Painted Desert to Tuba City where the headquarters of the Navajo Indian agent is located. Some 400 Indian children are seen at well-equipped Government schools here. The Hopi village of Moenkopi is next visited, where the visitor has a glimpse of Indian life almost untouched by white civilization. Return to Grand Canyon is over same route, arriving at hotels between 7 and 8 p. m. same day. Train connections are not guaranteed. This trip provides a unique opportunity to visit the well-known but little seen Navajo and Hopi Indian Reservations at a minimum of expense. Round trip, 160 miles. Rate, \$16 per passenger, all expense. Minimum of four fares required.

SPECIAL SUMMER TRIP BY AUTOMOBILE

Bass Camp, 30 miles, and Havasupai Point, 1 mile beyond. Rate, \$11, all expense. Minimum of four fares. This trip depends upon condition of the roads, and may be at times discontinued.

Authorized rates for special-car service

	1, 2, or 3 persons	4 persons	5 or 6 persons
Hermit Rest (regular rate, \$3).....	\$12	\$15	\$18
Desert View (regular rate, \$6).....	24	30	36

Tuba City and Moenkopi—one day (regular rate, \$16). Special car requires purchase of a minimum of five seats irrespective of number of passengers.

Should the demand for regular-trip drives be so heavy as to require use of all autos available, special autos may be discontinued.

CHARTERED AUTOMOBILE SERVICE

Six-passenger touring cars may be chartered for service within the park or elsewhere on routes not covered by scheduled transportation service at the rate of 35 cents per line car-mile, deadheading at 25 cents per car-mile, and \$25 per day for layover. A flat rate of \$30 is charged for special car service between Grand Canyon and Williams for passengers making connection with the Santa Fe Railway at Williams.

RATES FOR CHILDREN

On all motor trips there is no charge for children under 6 years. From the ages of 6 to 11, inclusive, the charge is one-half fare. All children over 11 years of age are charged full fare.

GARAGE SERVICE

There is at Grand Canyon a large stone garage with ample facilities for repairing and supplying automobiles. The rate for storage of automobiles is 50 cents per day.

HIRE OF CHAUFFEURS

Arrangements can be made for the hire of licensed chauffeurs to drive privately owned cars within or adjacent to the park.

BRIGHT ANGEL TRAIL.—The trail here is generally open the year round. In midwinter it is liable to be closed for a day or two at the top by snow, but such blockade is not frequent. The trail reaches from the hotel 6¼ miles to the Colorado River, with a branch terminating at the top of the granite wall immediately overlooking the river. At this latter point the stream is 1,272 feet below, while El Tovar Hotel, on the rim, is 3,158 feet above. The trip is made on mule back, accompanied by a guide.

Those wishing to reach the river leave the main trail at Indian Gardens and follow the downward course of Garden and Pipe Creeks.

Starting time, 9.15 a. m. for the river trip, 6¼ miles; return to rim about 5 p. m. Rate, \$6 each person, including lunch. El Tovar room guests will be given appropriate credit on their hotel bill. For special trips there is a party charge of \$5 for guide.

TWO-DAY PHANTOM RANCH TRIP.—Over new Yaki Point section of Kaibab Trail both ways, crossing Kaibab Suspension Bridge. All expense, \$22 per person. Start is made from El Tovar Hotel and Bright Angel Cottages at 1.30 p. m.

THREE-DAY TRIP TO ROARING SPRINGS VIA RIBBON FALLS.—Leave 1.30 p. m. Down Yaki Point section of Kaibab Trail, crossing the Colorado River by Kaibab Suspension Bridge, and reaching Phantom Ranch early afternoon. Overnight at Phantom Ranch. Following morning by way of Kaibab Trail in Bright Angel Canyon, 5½ miles to Ribbon Falls, beautiful clear waterfall in the form of a crystal ribbon shedding its waters on a natural rock altar in the midst of a verdant amphitheater and on to Roaring Springs, a beautiful series of cascades. Box lunch at falls and return to Phantom Ranch for overnight. On third day the return to El Tovar completes a never-to-be-forgotten experience. The all-expense rate for this trip is \$33 per person.

TWO-DAY TRIP ACROSS GRAND CANYON TO KAIBAB NATIONAL FOREST ON NORTH RIM, ONE WAY ONLY.—Overnight stop at Phantom Ranch. All-expense trip, \$30 in either direction. Leaving the south rim at 1.30 p. m., Phantom Ranch is reached at approximately 5 p. m. The night is spent at Phantom Ranch, leaving next morning at 9.30 o'clock. Lunch is had at Ribbon Falls and a stop made at Roaring Springs, arriving at the north rim at approximately 5 p. m. the second day. This \$30 rate does not include accommodations at either El Tovar or Grand Canyon Lodge.

On any of the trail trips, where an overnight stop is made at Phantom Ranch and the south rim is reached the next day, the all-expense rate includes lunch. Parties coming to the south rim by way of the Bright Angel Trail are furnished with a box lunch before leaving Phantom Ranch. Those coming direct over the Kaibab Trail reach the rim by noon or shortly after and are given at Phantom Ranch a meal ticket good for luncheon at El Tovar Hotel that day only.

DRIPPING SPRINGS.—This trip is made on horseback all the way, via Hermit Rim Road and Hermit Basin to Dripping Spring, returning to El Tovar and Bright Angel through the forests; starts at 8.30 a. m. Rate, \$6 each, including lunch. Private parties of one or more persons, \$5 extra for guide.

EMERGENCY TRAIL SERVICE

Visitors who walk down the canyon trails and desire saddle animals sent to meet them will be charged as follows:

BRIGHT ANGEL TRAIL.—Indian Gardens and above, \$4 per person and \$5 for guide. Below Indian Gardens, \$5 per person and \$5 for guide.

KAIBAB TRAIL.—Mormon Flats and above, \$7 per person and \$5 for guide. Below Mormon Flats, \$10 per person and \$5 for guide.

Recently many new bridle paths along the rim and through the pines of Tusayan have been opened up, so that horseback riding now is possible for all. The animals are well trained and dependable. Saddle horses cost \$5 a day, or \$3 a half day. English, McClellan, Whitman, or western stock saddles furnished as requested. Sidesaddles are not provided. Saddle horses for rim trips may be hired without a guide. Services of a guide may be had if desired at a rate of \$5 per day or \$3 per half day. No extra charge is made for a guide with parties of three or more. Horseback trips over any of the trails into the canyon are only permitted when accompanied by guide. This is necessary to avoid risk in meeting trail parties and pack trains.

There are several interesting foot trails near Grand Canyon village. Information as to these may be obtained at the superintendent's office.

INDEPENDENT CAMPING TRIPS

Independent camping trips with pack and saddle animals are organized, completely equipped, and placed in charge of experienced guides.

For climatic reasons it is well to arrange so that camping trips during the season from October to April are mainly confined to the inner canyon. For the remainder of the year, i. e., April to October, they may be planned to include both the canyon itself and the rim country.

The following rates are quoted for trips of 10 days or more; special arrangements may be made for trips of less than 10 days:

	Cost per day per person		Cost per day per person
1 person.....	\$27.00	5 persons.....	\$13.00
2 persons.....	20.00	6 persons.....	12.00
3 persons.....	15.00	7 persons or more.....	11.00
4 persons.....	14.00		

Rates include complete camping equipment, except provisions

HAVASU CANYON AND HAVASUPAI VILLAGE.—This is the most popular camping trip. The best time to make it is from May to October. A journey of about 50 miles; first by auto 38 miles across a timbered plateau, then on horseback down Topocobya Trail along Lee and Havasu Canyons, to the home of the Havasupai Indians.

The home of this little band of less than 200 Indians is in Havasu Canyon, a tributary of the Grand Canyon, deep down in the earth two-fifths of a mile. The situation is romantic and the surroundings are beautified by falls of water over precipices several hundred feet high, backed by grottos of stalactites and stalagmites. This water all comes from springs that gush forth in surprising volume near the Havasupai village.

The baskets made by the Havasupai women consist of the burden basket, a shallow tray, and a water bottle of willow. Those made by the older weavers are of fine mesh, with attractive designs, and bring good prices. Havasupai means "people of the blue water." Padre Garces was the first white man to visit their canyon home. In early days the Havasupais undoubtedly were cliff dwellers. They built nearly all the Grand Canyon trails, or rather their rude pathways were the advance guard of the present trails. Their summer homes resemble those of the Apaches. The winter homes afford more protection against the weather.

The round trip from El Tovar is made in five days.

Recently another of the great natural wonders of America has been made available to the Grand Canyon visitor. This is the interesting Rainbow Bridge. Although its existence has been known for 19 years, it is estimated that only about 600 white persons have ever seen this inspiring sight, as a hard two weeks' trip by pack train was necessary to reach it. Now autos can be driven to a point within 18 miles, and the remaining distance can be made in a 2-day pack trip.

The route of the trip is by auto via the Navahopi Road, Cameron Bridge, Painted Desert, Tuba City, Red Lake, Navajo Canyon, and Rainbow Lodge. By horseback it is over a spectacular trail, traversing hitherto impassable country to Bridge Canyon, where this wonder is found. The trip may be made in four or five days. The all-expense rate for the 4-day trip is \$232.50 for one person; \$146.50 each for two; \$117.50 each for three; \$103.15 each for four; \$94.50 each for five; and \$88.75 each for six.

In case private motorists intend to make the trip in their own cars they should inquire at the Government information office before starting.

The road is an average desert road.

The Rainbow Bridge is a national monument administered by the National Park Service.

THE NORTH RIM

(Lodge, autobus, and saddle-horse services on the north rim are operated by the Utah Parks Co., a subsidiary of the Union Pacific System. Trips by mule back into or across the Grand Canyon are under the management of Fred Harvey.)

AUTO STAGE TRANSPORTATION FROM UTAH POINTS

The north rim of the Grand Canyon National Park is reached from Cedar City, Utah, on the Union Pacific System, and from Marysville, Utah, on the Denver & Rio Grande Western Railroad, by automobiles. Regular autobus-stage service is operated from Cedar City by the Utah Parks Co.

Special all-expense tours are offered combining visits to Zion National Park, Cedar Breaks, and Bryce Canyon National Park. These tours leave Cedar City daily from June 1 to September 21.

Authorized rates

From Cedar City Utah⁷

- (a) 6-day tour of Zion National Park, Mount Carmel Highway, Grand Canyon National Park (north rim), Kaibab Forest, Bryce Canyon National Park, and Cedar Breaks; fare for automobile transportation only..... \$38.50
- (b) "All-expense," 6-day automobile tour as above and including 16 meals and 5 nights' lodging in standard lodges, per person..... 63.00

Parties arriving at the south rim of the Grand Canyon National Park via the Santa Fe lines and desiring to cross from the south rim to the north rim and then visit Kaibab Forest, Zion National Park, Bryce Canyon National Park, Cedar Breaks, and leave Cedar City via the Union Pacific System, or desiring to make the trip in the opposite direction, may arrange to do so. When made from the north rim to the south rim the trip from Cedar City to Grand Canyon National Park includes Zion National Park, Mount Carmel Highway, and Kaibab Forest. The cross-canyon trip requires two days and is made by mule back. (See p. 47 for details of this trans-canyon saddle trip.)

⁷ Reservations for these trips may be made with any representative of the Union Pacific System or its connections, or Utah Parks Co. at Cedar City, Utah.

From Grand Canyon Lodge, Ariz.:

2-day tour from Grand Canyon Lodge (north rim) to Cedar City via Kaibab Forest, Bryce Canyon National Park, and Cedar Breaks, 1-way tour; fare for automobile transportation and 6 meals and two night's lodging in standard lodge, per person . . . \$34.50

From Cedar City, Utah:

2-day tour to Grand Canyon National Park (north rim) via Zion National Park, Mount Carmel Highway, and Kaibab Forest, 1-way tour; fare for automobile transportation and 6 meals and 2 nights' lodging in standard lodges, per person . . . 34.50

For motor-bus transportation from Cedar City, half fare will apply for children of 5 years and under 12; children under 5 years will be carried free when accompanied by parent or guardian. Arrangements must be made with the lodge for children's rates for meals and lodgings. For children under 8 years the lodges make a half rate.

GRAND CANYON LODGE

The main building of the Grand Canyon Lodge, well remembered by thousands of park visitors, was destroyed by fire on the morning of September 1, 1932. This fire destroyed only two of the de luxe sleeping cabins and none of the standard cabins. Until the main building is reconstructed ample dining-room facilities will be maintained in the near-by cafeteria building, which also houses the temporary curio shop and post office. With sleeping quarters undamaged by the fire and with this temporary arrangement for serving meals, visitors will find the service entirely satisfactory even during the reconstruction period.

Authorized rates are as follows:

Standard lodges (American plan) without porch or private bath:	
Board and room, per day, one person in room	\$5.50
Board and room, per day, two persons in room, each	5.00
Breakfast	1.00
Luncheon	1.00
Dinner	1.50
Lodging, one person in room	2.00
Lodging, two persons in room, each	1.50
Children under 8, half of above rates	
Shower baths, per person . . . . .	.35
De luxe lodges (American plan) with porches and private bath:	
1 person in a room, per day	11.50
2 persons in a room, per person, per day	8.50
3 persons in a room, each, per day	7.75
Children under 8, half of above rates	

Emergency sleeping-tent accommodations, fully equipped for two persons, when regular lodging accommodations are filled to capacity, per person, per night, \$1.00.

(NOTE.—Guests occupying either de luxe or standard lodges continuously for a period of one week or more will be given a discount of 15 per cent from the above prescribed daily rates.)

HOUSEKEEPING CABINS AT AUTOMOBILE CAMPS

Housekeeping cabins are available at auto camp grounds. In the camp center building a cafeteria and store is operated, and centrally located among the housekeeping cabins are shower baths, clothes washing and ironing facilities, and modern comfort station.

Cabins of wood construction, electrically lighted, equipped with two standard double beds, springs and mattresses, combination cooking and heating stove with oven, partition curtains, table, sink, shelves, chairs, etc., capacity for 4 persons:	
Per cabin, per day, occupied by 1 or 2 persons	\$2.25
Per cabin, per day, occupied by 3 persons	2.50
Per cabin, per day, occupied by 4 persons	2.75
Cabins of wood construction, electrically lighted, equipped with 1 standard double bed, springs, and mattress, 1 folding military cot and cot pad, table, shelves, chair, and combination cooking and heating stove with oven, but no sink; capacity, 3 persons:	
Per cabin, per day, occupied by 1, 2, or 3 persons	1.50
Blankets, pillows, sheets, and slips for each double bed, and including necessary hand towels, per day . . . . .	.50

Blankets, pillow, sheets, and slip for folding military cot, and including necessary hand towels, per day	\$0.35
Shower baths, per person, 25 cents, including soap and towels . . . . .	.35
Clothes washing: Use of electric washing machine for each 30 minutes used, including water, drying racks, etc . . . . .	.25
Clothes ironing: Use of electric iron for each 50 minutes used, including ironing board, etc . . . . .	.25

(The shower baths, electric washing machine, and electricity for ironing are controlled by coin-device appliances.)

(NOTE.—Guests occupying housekeeping cabins continuously for a period of one week or more will be given a 15 per cent discount from the above prescribed daily rates for housekeeping cabin occupancy.)

TRANSPORTATION ON THE NORTH RIM BY MOTOR BUS

The following trips are available for a minimum of three persons:

Grand Canyon Lodge to Cape Royal and Point Imperial and return, per passenger	\$5.00
Grand Canyon Lodge to V. T. Ranch and return, per passenger	4.00

SADDLE-HORSE TRIPS

There is no more delightful way in which to spend a day or several days on the north rim than by taking the several available horseback trips through the wonderful Kaibab Forest over bridle paths recently constructed by the National Park Service. These paths are so located as to give splendid canyon views and to take the rider through the most beautiful sections of the forest. They extend to Point McKinnon on the west and to Natchi Point and Point Imperial on the east. Safe horses, good saddles, and competent guides are available at the following rates:

Personally escorted regular daily trips:	
To Point Imperial or Point McKinnon, per person	\$5.00
To Natchi Point, per person	3.00
Saddle horse without guide, 2 hours or less	1.50
Saddle horse without guide, 2 to 4 hours	3.00
Special guides provided, if available, for individuals or parties on basis, per guide per half day or less	3.00
For special full-day trips of 8 hours:	
Saddle horse, per person	5.00
Guide per day, for 1 or more persons in party	5.00

No full-day horseback trips permitted without guides.

Longer trips of several days' duration with pack mule and camp outfit may be arranged to Powell Plateau, the Thunder River country, and other points of great scenic interest.

CANYON TRAIL TRIPS

Trips by muleback into the Grand Canyon from the North Rim over the Kaibab Trail are under the management of Fred Harvey and are available from June 1 to October 1 only.

Trips across the canyon:

The trip across the Grand Canyon is made by mule back and requires 2 days. The night is spent at Phantom Ranch at the bottom of the canyon and the opposite rim is reached the following afternoon. All-expense cost of the 2-day cross-canyon trip, including saddle mule, mounted guide, 4 meals, and 1 night's lodging \$30.00

Any representative of the Union Pacific System will, upon request, make all arrangements in advance for the trip from the North Rim, or arrangements may be made upon arrival at the North Rim.

Trips into the canyon:

One-day trip to Roaring Springs and return	6.00
Departure time, 9:30 a. m.; lunch at Roaring Springs, returning approximately at 5 p. m. Bus from lodge to head of trail and return. Extra charge for lunch.	
Two-day trip to Phantom Ranch and return, all expenses	25.00

Departure time, 9.30 a. m.; lunch at Roaring Springs; stop made at Ribbon Falls, arriving Phantom Ranch approximately 4.30 p. m. Next day leave Phantom Ranch at 9.30 a. m.; lunch at Ribbon Falls; stop made at Roaring Springs, arriving North Rim approximately 5 p. m. Bus from lodge to head of trail and return.

EMERGENCY TRAIL SERVICE

Visitors who walk down the Kaibab Trail from the North Rim and desire saddle animals sent to meet them will be charged as follows:

From Roaring Springs and above, without special guide.....	\$5.00
From Roaring Springs and above, with special guide.....	10.00
Between Roaring Springs and Ribbon Falls, without special guide.....	7.00
Between Roaring Springs and Ribbon Falls, with special guide.....	12.00
Below Ribbon Falls and to Phantom Ranch, without special guide.....	10.00
Below Ribbon Falls and to Phantom Ranch, with special guide.....	20.00

LITERATURE AND MAPS

The following publications may be obtained free on written application to the Director of the National Park Service or by personal application to the office of the superintendent of the park:

Glimpses of Our National Parks. 66 pages, including illustrations.

Contains description of the most important features of the principal national parks.

Glimpses of Our National Monuments. 74 pages, including illustrations.

Contains brief description of all the national monuments administered by the Department of the Interior.

MAPS

The following maps⁸ may be obtained from the Director of the United States Geological Survey, Washington, D. C. Remittances should be made by money order or in cash.

BRIGHT ANGEL, 26 by 20½ inches, scale about 1 mile to 1½ inches, contour interval 50 feet. An account of the origin and geologic history of the Grand Canyon, with a description of the rocks, by F. E. Matthes, is printed on the reverse side of the map. 10 cents.

TOPOGRAPHIC MAP, east half of the Grand Canyon National Park, combining on one sheet the Vishnu and Bright Angel quadrangles, 41 by 45½ inches, scale about 1 mile to 1¼ inches, contour interval 50 feet. 25 cents.

TOPOGRAPHIC MAP, west half of the Grand Canyon National Park, combining on one sheet the Shinumo and Supai quadrangles, 41 by 45½ inches, scale approximately 1 mile to 1¼ inches, contour interval 50 feet. 25 cents.

On the above maps the roads, trails, and names are printed in black, the streams in blue, and the relief is indicated by brown contour lines.

OTHER NATIONAL PARKS

Circulars of general information similar to this for the national parks listed below may be obtained free of charge by writing to the Director of the National Park Service, Washington, D. C.

Acadia National Park.	Mesa Verde National Park.
Carlsbad Caverns National Park.	Mount McKinley National Park.
Crater Lake National Park.	Mount Rainier National Park.
Glacier National Park.	Rocky Mountain National Park.
Grand Teton National Park.	Sequoia and General Grant National Parks.
Great Smoky Mountains National Park.	Wind Cave National Park.
Hawaii National Park.	Yellowstone National Park.
Hot Springs National Park.	Yosemite National Park.
Lassen Volcanic National Park.	Zion and Bryce Canyon National Parks.

⁸ May be purchased also by personal application at the office of the superintendent of the park, but that office can not fill mail orders.

SOLD BY THE SUPERINTENDENT OF DOCUMENTS

The following publications may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices indicated. Postage prepaid. Remittances should be made by money order or in cash.

The National Parks Portfolio. By Robert Sterling Yard. (6th edition.) 274 pages, including 312 illustrations. Bound securely in cloth. \$1.⁸

Contains nine chapters, each descriptive of a national park, and one a larger chapter devoted to other parks and monuments.

Guidebook of the Western United States, Part C, the Santa Fe Route, with a side trip to the Grand Canyon of the Colorado, by N. H. Darton and others. (Bulletin 613, U. S. Geological Survey.) 1915. 194 pages, 25 route maps, 42 plates, 40 text figures. \$1.⁸

This guide describes the country along the Atchison, Topeka & Santa Fe Railway from Kansas City to Los Angeles. Although the description of the rocks and their relations and the scenic features form a large proportion of the matter, nearly every page gives information as to notable historic events, industrial resources, plants, and animals. The story of the Indians, past and present, especially the characteristic Pueblo tribes, is told in some detail. Many of the facts regarding the rocks are here presented for the first time. The book contains numerous views of prominent scenic features and pictures of restoration of some of the very remarkable animals whose bones are found in the clays.

Exploration of the Colorado River of the West and Its Tributaries, by John Wesley Powell. Explored in 1869, 1870, 1871, and 1872. Pp. 291. Under the direction of the Secretary of the Smithsonian Institution. Illustrated. Government Printing Office, Washington, 1875. (Out of print.)

Pre-Cambrian Igneous Rocks of the Unkar Terrane, Grand Canyon of the Colorado, Ariz., by C. D. Walcott. U. S. Geol. Surv. 14th Ann. Rept., pt. 2, pp. 497-524, pls. 60-65. 1894. \$2.10.

The Grand Canyon. Senate Doc. No. 42 (65th Cong. 1st sess.), by Thomas Fulton Dawson, Government Printing Office, Washington, D. C., 1917. 67 pp. Price, 10 cents.

An article giving credit of first traversing the Grand Canyon to James White, a Colorado gold prospector.

Tertiary History of the Grand Canyon District, by Clarence E. Dutton. U. S. Geol. Surv. Mon. 2, 264 pages, illustrations, and atlas. 1882. \$10.

The Shinumo Quadrangle, Grand Canyon District, Ariz., by L. F. Noble. U. S. Geol. Surv. Bull. 549, 1914. 100 pages, including 30 illustrations and a colored geologic map. Price, 20 cents.

Describes the geology and scenic features of the Grand Canyon in the western part of the national park. Contains a detailed account of the Algonkian strata exposed on Shinumo Creek.

A Reconnaissance of the Archean Complex of the Granite Gorge, Grand Canyon, Ariz., by L. F. Noble and J. Fred Hunter. U. S. Geol. Surv. Prof. Paper 98-I, 1916. 20 pages, 3 illustrations.

Describes the rocks that form the walls of the Granite Gorge in the bottom of the canyon.

A section of the Paleozoic Formations of the Grand Canyon at the Bass Trail, by L. F. Noble. U. S. Geol. Surv. Prof. Paper 131-B, 1922. 50 pages, 15 illustrations.

Describes the Paleozoic strata of the Grand Canyon in detail and contains diagrams showing the strata in profile as they appear in the walls.

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⁸ May be purchased also by personal application at the office of the superintendent of the park, but that office can not fill mail orders.

- DELLENBAUGH, FREDERICK S. The Romance of the Colorado River. Pp. 401. G. P. Putnam's Sons, New York. Fully illustrated. (A complete account of the discovery and of the explorations from 1540 to the present time, with particular reference to the two voyages of Powell through the line of the great canyons.) Price, \$3.50.
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DERIVATION OF NAMES USED ON GRAND CANYON MAPS

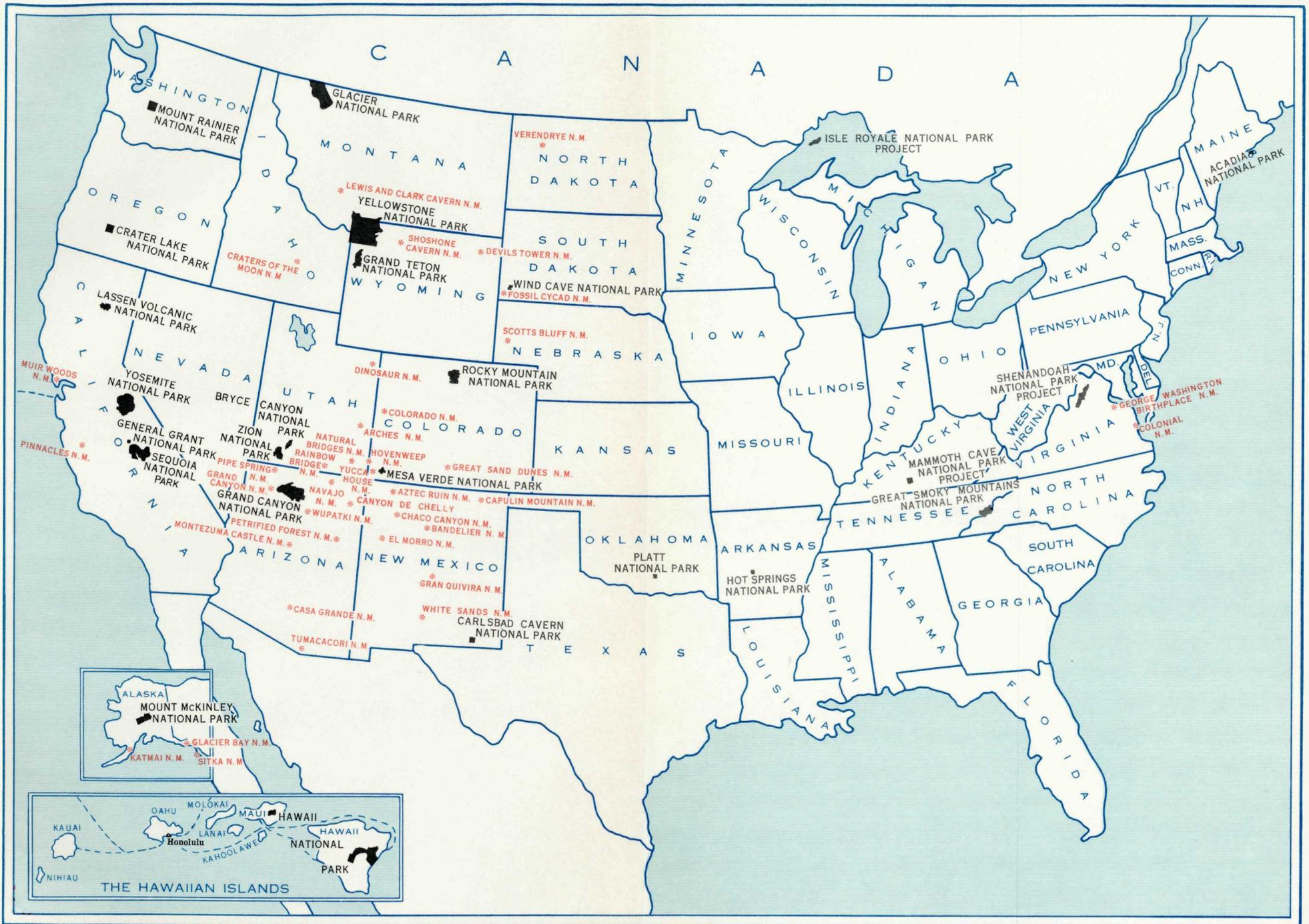
While some of the names are purely descriptive, many commemorate scientists, explorers, Indian tribes, leaders of religion, mythologic and romantic personages. Aztec and Indian terms occur, and the origin of a few names is unknown.

ALARCON TERRACE.—Spanish navigator, first to ascend the Colorado River.
APACHE POINT.—Name of a large Indian tribe of Arizona and New Mexico region which was untiring in raiding and depredating Pueblos and whites.
APOLLO TEMPLE.—The son of Jupiter and brother of Diana, god of the sun in Roman and Greek mythology.
AWATUBI CREST.—Awatubi, village of the Hopi Indians on the Painted Desert, destroyed in 1770.
AZTEC AMPHITHEATER.—General name for all Nahua tribes in Mexico at time of Cortez.
BASS CAMP.—Owned by one of the pioneer settlers.
BEALE POINT.—Army officer who surveyed first road across the Arizona Plateau.
BRAHMA TEMPLE.—In the Hindu triad Brahma was the evolver of the universe, Vishnu the redeemer, Siva or Shiva the destroyer.
BUDDHA TEMPLE.—The title of Siddhartha, founder of Buddhism in fifth century B. C.
CARDENAS BUTTE.—Member of Coronada's party and the first white man to see the Grand Canyon.
CASTOR TEMPLE.—Castor and Pollux were inseparable brothers in Greek mythology.
CENTEOTL POINT.—Probably an Aztec deity.
CHEMUHUEVI POINT.—The southernmost of the Pinto Tribe in Lower California.
CHEOP'S PYRAMID.—An Egyptian king of the fourth dynasty, builder of the famous pyramid at Gizeh.
CHUAR BUTTE AND CREEK.—Name of Indian chieftain.
COCOPA POINT.—A tribe of Yuma Indians living on the Colorado River.
COCONINO PLATEAU.—A name sometimes used for the Havasupai, who originally occupied much of the Arizona Plateau.
COMANCHE POINT.—Plains Indians from farther east, whose raids were greatly feared by the Pueblos.
CONFUCIUS TEMPLE.—The Chinese philosopher who taught practical morality. Lived in fourth century B. C.
CONQUISTADOR AISLE.—Spanish for "conqueror." The conquistadores were especially the members of Coronado's expedition.
COPE BUTTE.—E. D. Cope, 1840-1897. A great American naturalist, specializing in fossil animals.
CORONADO BUTTE.—In 1540 Coronado led the great Spanish expedition that penetrated as far as Kansas.
DANA BUTTE.—James D. Dana, 1813-1895. Noted professor of geology at Yale for many years.
DARWIN PLATEAU.—C. D. Darwin, famous English naturalist, founder of Darwinian theory of evolution.
DEVA TEMPLE.—Divine epithet, applied commonly to goddess Durga, wife of Shiva of the Hindu triad.
DE VACA TERRACE.—Cabeza De Vaca was shipwrecked on the Gulf coast and wandered for eight years among Indians before reaching a Spanish settlement.
DIANA TEMPLE.—Roman goddess of the moon, sister to Apollo and daughter of Jupiter.
DRUMMOND PLATEAU.—Henry Drummond, 1851-1897. A famous Scottish religious writer.
DUTTON POINT.—Maj. C. E. Dutton, United States Army, who wrote for the Government a monograph on the Grand Canyon.
ELAINE CASTLE.—The lily maid of Astolat in Tennyson's poem, "The Idylls of the King."
ESCALANTE BUTTE.—A Spanish missionary who crossed the Arizona Plateau in 1775.
EXCALIBUR.—The magical sword of King Arthur of the Round Table.
FISKE BUTTE.—John Fiske, 1842-1901. American philosopher.
FREYA CASTLE.—In Scandinavian mythology Freya is the goddess of love and womanly goodness.
GALAHAD CASTLE.—The purest knight of the Round Table, featured in "The Idylls of the King."
GARGES TERRACE.—A Franciscan who journeyed to the Hopi country in 1776.
GAWAIN ABYSS.—Gawain the courteous, one of the principal knights of the Round Table.
GEIKIE PEAK.—Sir Archibald Geikie, many years director British Geological Survey.
GUINEVERE CASTLE.—The wife of King Arthur of the Round Table.
GUNTHER CASTLE.—The Burgundian king of the Nibelungen epic, husband of Brunnhilde.
HANCE CREEK.—John Hance, a local character and pioneer.
HAVASUPAI POINT.—This tribe, formerly occupying Arizona Plateau, now lives in Havasu Canyon, about 60 miles from El Tovar.

HOLY GRAIL TEMPLE.—The cup used at the Last Supper, which the order of the Round Table was instituted to protect.
HORUS, TEMPLE OF.—In Egyptian mythology the son of Osiris and Isis, principal deities.
HOPi POINT.—The Hopis, sometimes called the Moquis, have maintained villages overlooking the Painted Desert since long before the Spanish invasion of 1540.
MOUNT HUETHEWALL.—Indian word for observation point.
HUXLEY TERRACE.—Famous English biologist, 1823-1895.
ISIS TEMPLE.—Principal female deity of Egypt, wife of Osiris, mother of Horus, and sometimes called "the daughter of Ra."
IVES POINT.—Lieut. Joseph C. Ives, United States Army, the leader of Colorado River exploration, 1857 and 1858.
JICARILLO POINT.—An Apache Tribe of northeastern New Mexico, cruel raiders.
JUNO TEMPLE.—Wife and sister of Jupiter, queen of heaven in Roman mythology.
JUPITER TEMPLE.—The supreme deity of the Romans.
KAIBAB PLATEAU.—Piute word meaning "mountain lying down."
KING CREST.—Clarence King was the first director of the United States Geological Survey.
KING ARTHUR CASTLE.—A British chieftain of the sixth century, who with his knights of the Round Table has inspired romances galore.
KRISHNA SHRINE.—In Hindu mythology Krishna is the name of the eighth of the ten incarnations of the supreme god Vishnu. The ninth was in the form of Buddha; the tenth is still to come.
KWAGUNT BUTTE AND CREEK.—Probably a Shoshonean name.
LANCELOT POINT.—A knight of the Round Table, featured in Tennyson's poem "Idylls of the King."
LECONTE PLATEAU.—Joseph LeConte was professor of geology in the University of California for over 30 years; died 1901.
LIPAN POINT.—An Apache tribe.
LYELL BUTTE.—Sir Charles Lyell was a famous English geologist.
MANU TEMPLE.—A Sanskrit word meaning "man," one of 14 demiurgic beings, each of whom presided over a period of race progression. Manu Vaivasvata, the sun-born, is the manu of the present race of beings.
MARCOS TERRACE.—Fray Marcos de Niza led the first expedition into our country from Mexico in 1539 as far as Zuni. His accounts inspired Coronado's exploration.
MARICOPA POINT.—A tribe of Yuma Indians who moved from Colorado River to join the Pimas.
MARSH BUTTE.—O. C. Marsh, the paleontologist, who made a specialty of extinct animals.
MENCIUS TEMPLE.—The Latin name of the Chinese philosopher, Meng, an early Confucian.
MERLIN ABYSS.—A semilegendary character of the fifth century who figures in Tennyson's "Idylls of the King."
MESCALERO POINT.—An Apache tribe that roamed principally in New Mexico.
MIMBRENO POINT.—An Apache tribe taking its name from the Mimbres Mountains in New Mexico.
MODRED ABYSS.—The treacherous nephew of King Arthur, King of the Round Table.
MOHAVE POINT.—A Yuma tribe living in vicinity of Needles, Calif.
MONTZUMA POINT.—Montezuma, 1479-1520, ruled the Aztecs at the time of the Spanish conquest. He was regarded by later Indians as a deity.
MORAN POINT.—The artist who was with Major Powell, surveying Colorado River country in 1873.
NATCHI POINT.—A noted Apache warrior.
NAVAJO POINT.—Nomadic Indians of the plateau region who maintained a long warfare against Pueblos and whites.
NEWBERRY POINT AND BUTTE.—J. S. Newberry, geologist with Ives's expedition to the canyon. Long-time professor Columbia College, New York City.
NEWTON BUTTE.—Sir Isaac Newton, 1642-1727, famous English physicist who discovered law of gravitation.
O'NEILL BUTTE.—"Bucky" O'Neill, Arizona pioneer and one of Roosevelt's Rough Riders.
OSIRIS.—Chief Egyptian deity of good, the principle of good closely associated with Ra.
PAPAGO POINT.—A branch tribe of Pima Indians of southern Arizona region.
PIMA POINT.—Popular name of tribes living in the valleys of Gila and Salt Rivers, Ariz.
PINAL POINT.—An Apache tribe.
PIUTE POINT.—A name applied to many Shoshonean tribes, but perhaps belongs properly only to those living in southwestern Utah.
POLLUX TEMPLE.—The devoted brother of Castor, in the Greek legends.
POWELL PLATEAU.—Maj. J. W. Powell made the first expedition down the Colorado River in 1869. Subsequently director of the United States Geological Survey and the Bureau of Ethnology.
QUETZAL POINT.—An Aztec word signifying a bird of iridescence.
RA, TOWER OF.—The Egyptian sun god, type of supreme deity, always victorious.
RANA SHRINE.—Hindu word for prince.
SAGITTARIUS RIDGE.—A zodiac constellation visible in southern United States in summer. Latin word signifying "Archer."

- SCORPION RIDGE.—One of the constellations of the zodiac.
- SCYLLA BUTTE.—The promontory at the entrance of the strait between Italy and Sicily, around which ancient mariners feared to go.
- SET, TOWER OF.—The brother or son of Osiris and his deadly enemy in Hindu mythology.
- SHALER PLATEAU.—An American geologist, long-time professor at Harvard University.
- SHEBA TEMPLE.—The ancient capital of the Sebaeans in Arabia, whose queen visited Solomon.
- SHINUMO CREEK.—Name applied by Powell to the Hopi confederacy.
- SHIVA TEMPLE.—The avenging associate of Brahma and Vishnu in ruling the universe, now the most popular Hindu god.
- SINYELLA, MOUNT.—Judge Sinyella, Indian chief, born 1853, has always resided on the Havasupai Indian Reservation. Living in 1923.
- SOLOMON TEMPLE.—Solomon, 1033-975 B. C., son David, king of the Jews, and Bathsheba.
- SPENCER TERRACE.—Herbert Spencer, 1820-1903, a distinguished English philosopher.
- SUPAI FORMATION.—The colloquial name of the Havasupai, a small tribe now occupying Havasu Canyon.
- THOMPSON POINT.—A. H. Thompson, brother-in-law of Major Powell, who accompanied him on his famous boat trip down the canyon.
- THOR TEMPLE.—Second principal Norse deity, god of thunder, son of Odin, the supreme being, and Jordh, the earth.
- TIYO POINT.—Indian name.
- TOVAR TERRACE.—Pedro de Tovar was sent by Coronado in 1540 to inspect the Hopi villages where he learned of the existence of the Grand Canyon.
- TOLTEC POINT.—The Toltecs were either an early tribe of Aztecs or a people that preceded them on the Mexican plateau.
- TONTO PLATFORM.—Spanish word "fool" applied to Indians of Arizona plateau, especially to the Apache Mohave.
- TOPOCOBYA TRAIL.—A Havasupai word, "To-po-co-bah," meaning "where the water comes down."
- UNKAR CREEK.—A Piute word meaning "red creek."
- VENUS, TEMPLE OF.—The Roman goddess of beauty and love.
- VESTA, TEMPLE OF.—The Roman goddess of the hearth in whose honor the Vestal Virgins kept the symbolic fire burning.
- VISHNU TEMPLE AND CREEK.—In Hindu mythology the associate of Brahma and Shiva who was the redeemer of the universe.
- WALHALLA PLATEAU.—The great hall of the Scandinavian gods, the warriors' heaven of the Vikings.
- WALLACE BUTTE.—An English explorer and naturalist and authority on natural selection.
- WHEELER POINT.—Gen. George M. Wheeler, United States Army, in charge of surveys west of one-hundredth meridian in 1872-1879.
- YAKI POINT.—Probably a version of the name of the Yaquis, the unconquerable tribe of north-western Mexico.
- YAVAPAI POINT.—These Indians are commonly known as the Apache Mohave, formerly roaming central Arizona.
- YUMA POINT.—Great family of Indians of several tribes in lower Colorado region. Called themselves Kwichana.
- ZOROASTER TEMPLE.—Founder of the ancient religion now represented by the Guebers and Parsees of Persia and India.
- ZUNI POINT.—The Zuni pueblo south of Gallup, N. Mex., is the remnant of the historic Seven Cities of Cibola.





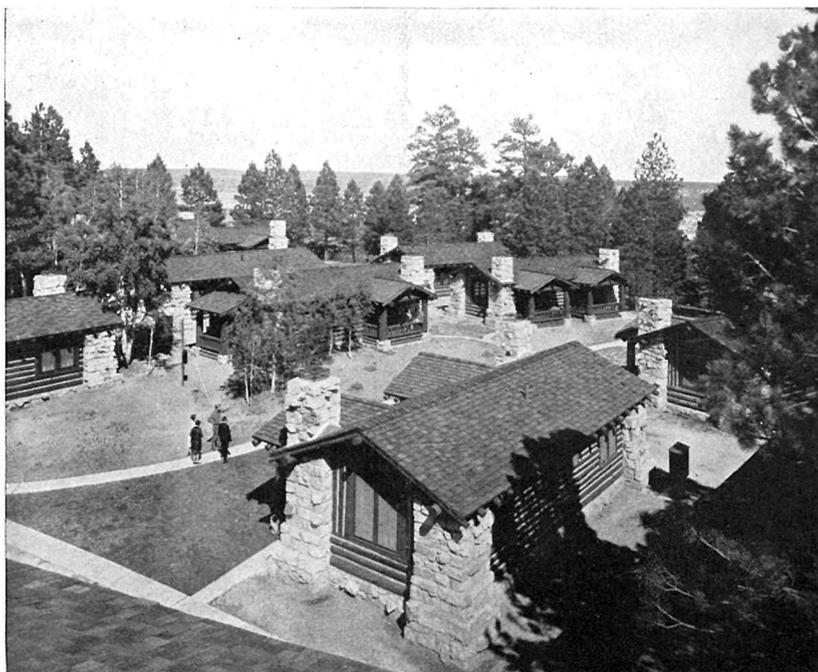
LOCATIONS OF 22 NATIONAL PARKS AND 38 NATIONAL MONUMENTS ADMINISTERED BY THE NATIONAL PARK SERVICE

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Photograph by Fred Harvey

THE INDIAN WATCHTOWER AT DESERT VIEW



DE LUXE CABINS AT GRAND CANYON LODGE, NORTH RIM