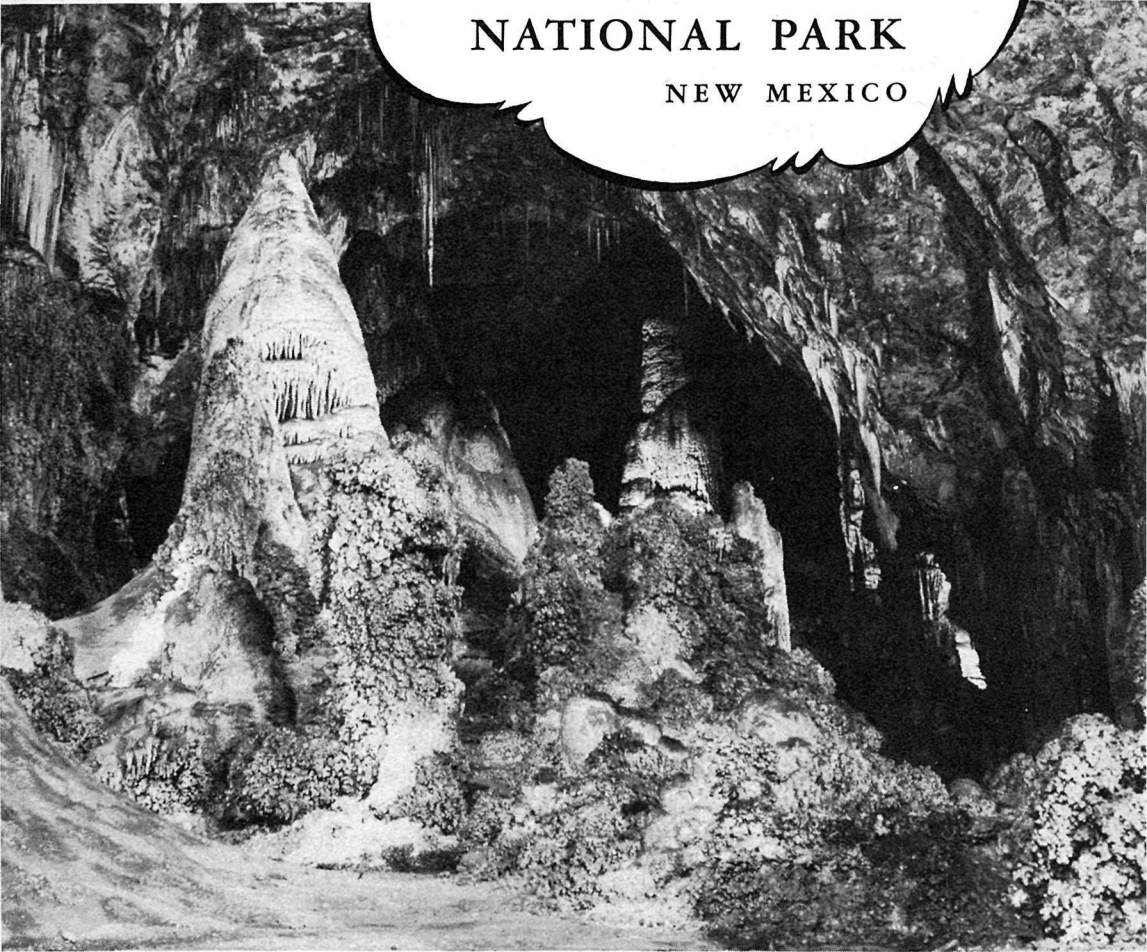


# Carlsbad Caverns



NATIONAL PARK  
NEW MEXICO



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## NATIONAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR

Douglas McKay, Secretary

NATIONAL PARK SERVICE, Conrad L. Wirth, Director

OPEN  
ALL  
YEAR

Carlsbad Caverns, one of the superb areas administered by the National Park Service of the Department of the Interior, is a series of connected caverns of unusual magnificence and size. These caverns are located in the semidesert country of southeastern New Mexico in the rugged foothills of the Guadalupe Mountains.

While many miles of passages have been explored, the extent of Carlsbad Caverns is not known. Development has been limited to the 750-foot and 829-foot levels reached by trail from the natural entrance and by elevator. An extension of the lower level may be seen at the "Jumping-Off Place" in the Big Room. Extending eastward from the lunchroom is an unopened passage which has been explored to a depth of 1,100 feet. Lower unopened levels may exist.

### History of the Caverns

Circular rock cooking pits and grinding bowls on the surface and the paintings, or pictographs, on the caverns entrance wall attest to the occupation of the entrance and the adjacent area by Indians. It is not probable, however, that they ventured far into the caverns.

The National Park System, of which Carlsbad Caverns National Park is a unit, is dedicated to the conservation of America's scenic, scientific, and historic heritage for the benefit and enjoyment of the people.

Early pioneer trails passed near the caverns entrance. The Spanish conquistadors are believed to have come into the Pecos Valley near the caverns, and the historic Butterfield Express Trail (first express trail across the West) crossed the route of the Spaniards. Today, wagon irons and other relics of ambushed wagon trails are sometimes unearthed.

Cattlemen, the first permanent settlers, arrived in the 1880's. They knew of the caverns, referred to them as the Bat Cave, and may have explored portions of them. The first real interest in the cave, however, resulted from the finding of its valuable deposit of bat guano, a nitrate-rich fertilizer. At the turn of the century mining began, and among the miners was a local youth, Jim White, who took every opportunity to explore the caverns. Later, Jim became an unofficial guide, and subsequently, under the National Park Service, he was made a park ranger. Finally he was appointed chief ranger.

The fame of the caverns grew. In 1923, a report by Robert Holley, of the General Land Office, United States Department of the Interior, so stressed the scenic beauty of the caverns that President Coolidge proclaimed the area Carlsbad Cave National Monument on October 25, 1923.

National publicity was provided when the National Geographic Society published findings of comprehensive explorations made in 1923 and 1924 by Dr. Willis T. Lee, of the U. S. Geological Survey. Later, by act of Congress, approved May 14, 1930, the area became Carlsbad Caverns National Park.

When first established, the park's surface area was only 700 acres. It has since been enlarged and now contains 45,846.59 acres of federally

owned land. Within its bounds are many other caves of either scenic or archeological interest, which have not yet been developed.

### Formation of the Caverns

Carlsbad Caverns are openings made by underground water in two rock formations

known as the Tansill and Capitan limestones. The limestones were deposited in a shallow sea 200 million years ago during the Permian period of the earth's history. The area later emerged from the sea, and, 60 million years ago, was subjected to the earth movements which formed the Rocky Mountains. Since that time the vast caverns have been hollowed in the limestone and within them the amazing decorative deposits formed.

Settling of the original sediments and repeated earth movements made numerous cracks in the limestone rocks. The caverns began when fresh waters from above found their way along these cracks and through pores of the rock.

All large caverns owe their origin to the solution of limestone by water. This took place deep down in the rocks, in the zone of complete water saturation. Small original crevices grew larger through solution until they became rooms and corridors. More and more water entered and all cavities were kept full, allowing effective solution work to proceed on all exposed surfaces.

A later series of earth movements was experienced here. This, the Guadalupe uplift, lowered the water table and allowed surface streams to cut deep canyons into the limestone. The water filling the caverns was drained away, first from the upper sections and later from the lower portions as well. Air replaced the water in the underground chambers; then solution stopped and deposition began.

During this second period of development Nature converted these gray cavities into a wonderland. Myriads of beautifully sculptured formations hang from the ceilings. Some of them are inverted spires variously ornamented and known as stalactites; some are small, delicate growths resembling plant structures. Where surface water entered any opening faster than it could be evaporated, part of it fell to the floor and evaporated there, gradually building up masses of limestone, known as stalagmites. Sometimes stalactites and stalagmites join to form columns. Less commonly, irregular spiral and curiously twisted and branched forms developed—these are called helictites. All these fascinating forms are due to the deposition of carbonate of lime, carried in solution by descending ground water, which crystallizes upon the floors, ceilings, and walls of the cave as the water evaporates or is agitated. The constant addition of small particles to the surface is the method by which cave formations grow.

Many of the formations are delicately colored.

This results from a small amount of iron oxide (shades of tan) or other mineral matter in the limestone. When saturated with water, formations appear brilliant and translucent. If seepage of water is stopped, a cave's appearance gradually becomes dull and the surface of the formations slowly assumes a powdered look. Such a dry cave is spoken of as mature or dormant.

Carlsbad Caverns are unique among the world's caves because of the vast size of the underground chambers and their high ceilings—features brought about, in part, by rock collapse. During the solutional phase, large wall and ceiling blocks were undermined and fell into the already formed cavity. Collapsing continued even after the cavern became dry, but ended once stability was achieved. No rock has fallen within the cave for thousands of years.

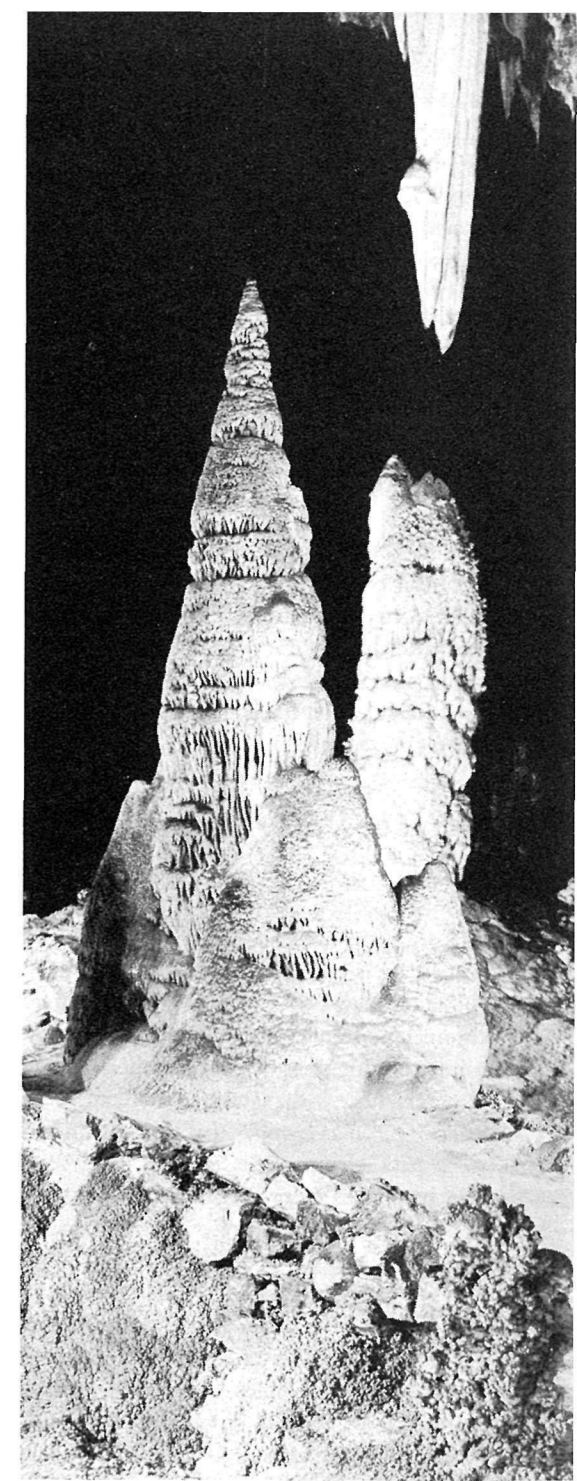
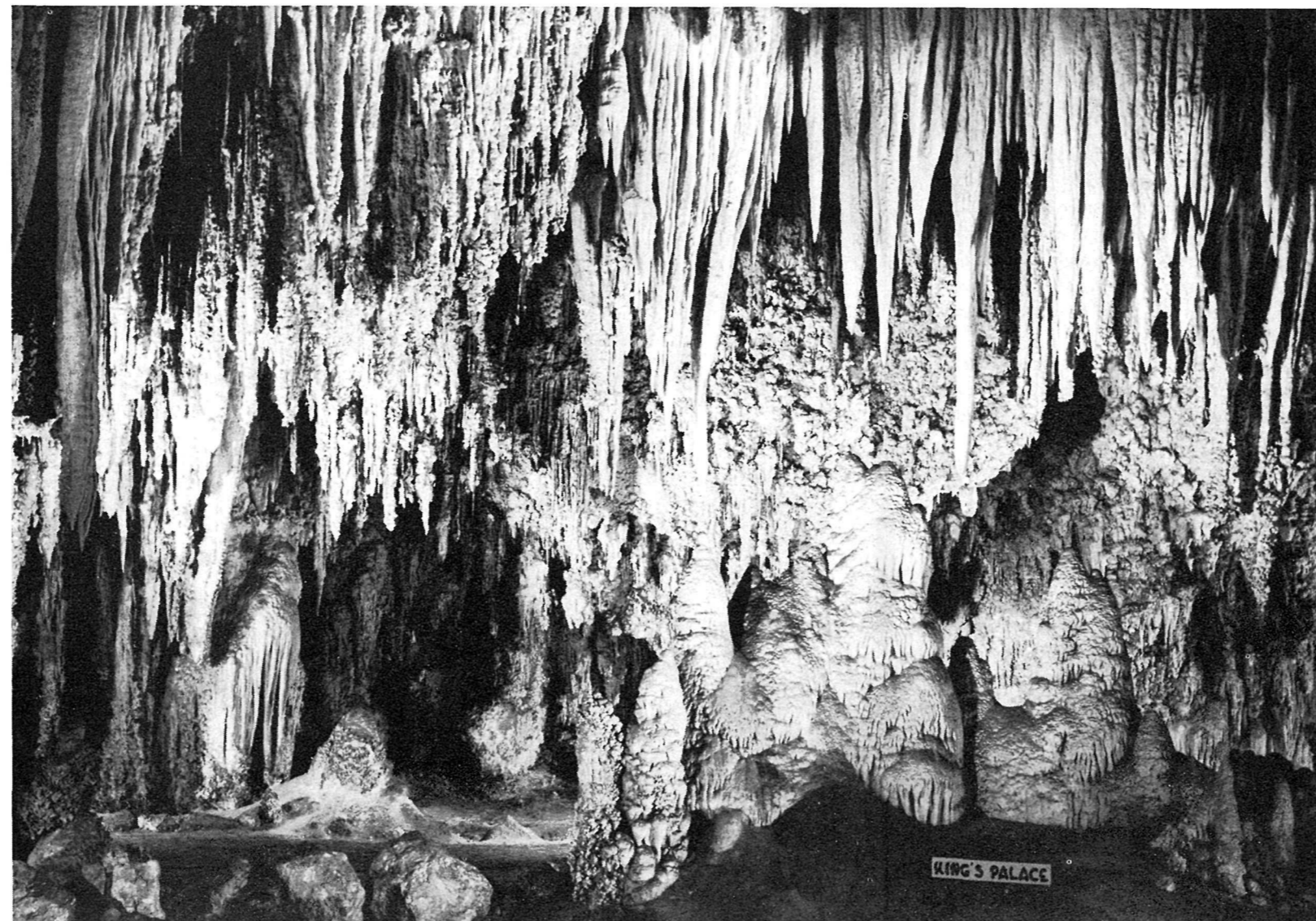
### The Bat Spectacle

The bat spectacle is one of the park's great attractions. Flying out through the entrance arch each summer evening, incredible numbers of bats spiral upward, stream southward over the rim, and later separate into flocks for a night's foraging. The exodus continues for quite some time, but availability of insect food supply determines the size and quality of the flight. When night-flying moths and beetles are numerous, millions of bats are in flight, but during the winter months, with no insects available, most of the bats of Carlsbad Caverns migrate to warmer regions.

Bats return from their nocturnal feeding just before dawn. Diving speedily into the entrance, they fly directly to the Bat Cave to spend the daylight hours. Bats at roost hang head downward in dense clusters or mats from the walls and ceiling.

Because of its nocturnal habits, folklore and superstition have long vilified the bat. It is, however, quite harmless and, in destroying noxious insects and producing much-prized guano, is indeed beneficial.

*The King's Palace.*



*One of the spectacular formations in the Big Room.*

Of the 11 different species of bats found in the park, the Mexican free-tailed bat is by far the most numerous. Cave-dwelling, colonial, semitropical, and migratory, these bats are so named because of the fact that they are found abundantly in Mexico and the elongated tail projects about 1 inch beyond the tail membrane.

A talk on the bats by a National Park Service naturalist is given each summer evening at the caverns entrance just before the flight begins.

### The Desert Plants

In April or May, the caverns visitor might be fortunate enough to see many desert plants in full bloom—plants which flower briefly, go to seed, and then appear dead until the following spring. A cactus garden and a self-guiding nature trail provide identification of many of these interesting plants.

### The Underground Trip

Only a portion of the underground corridors and great chambers in Carlsbad Caverns National Park is open to visitors.

The main corridor of the caverns, beneath the entrance, is immense, but its beauty does not compare with that of the chambers beyond. These chambers—the Green Lake Room, King's Palace, Queen's Chamber, and Papoose Room—are unparalleled in their splendor. They are all seen before reaching the lunchroom, where a stop of about 40 minutes is made for lunch and rest.

Leaving the lunchroom, the visitor enters the Big Room, the most majestic of the caverns' many chambers. The trail around the perimeter of this room is 1 1/4 miles long, and at one place the ceiling arches 285 feet above. Formations here are massive as well as magnificent; some resemble needles and others huge chandeliers. Here is found the Giant Dome which bears a striking similarity to the Leaning Tower of Pisa.

Returning to the lunchroom, one usually leaves the caverns by elevator. During periods of heavy travel, walkout trips to the surface are scheduled, climbing 754 feet in about 50 minutes. The total walking distance is 2 3/4 miles if one leaves the caverns by elevator. For those walking out, the added distance is 1 mile.

Trips are conducted every day in the year and require about 4 hours to complete, including a 40-minute luncheon stop. They are scheduled hourly during the morning in summertime; somewhat less frequently during the winter.

Entering the caverns by elevator, visitors may join walk-in groups in the lunchroom 1 1/4 hours after the start of the tour. From this point the Big Room trip can be made.

National Park Service guides conduct the party throughout the entire trip. Visitors are invited to ask questions of the guides who are glad to impart authentic information.

### How To Reach the Park

The park is serviced by the Santa Fe System on the north through Carlsbad, and by the Texas and Pacific, Rock Island, and Southern Pacific Lines through El Paso. Carlsbad Caverns Coaches operates to the caverns from both cities. Continental Airlines provides daily airplane service to the Carlsbad airport.

By automobile the park is reached by U. S. Nos. 62-180 and 285.

### What To Wear

Although the caverns temperature remains stationary at 56°, the surface temperature varies from nearly zero in winter to over 100° in summer. At all times of the year, therefore, a light sweater or wrap should be worn in the caverns, while on the surface, clothes should be suitable for the season. Trails and stairways are followed throughout the underground tour. Low-heeled shoes (not the wedge-heeled type) are recommended.

### Accommodations

There are no overnight accommodations in the park, but modern hotels, motels, and trailer courts in Carlsbad and nearby towns along the approach highway offer various types of service at customary prices. The National Park Service has no jurisdiction over them.

In the park, a store is maintained for the sale of refreshments and souvenirs. Operated by the Cavern Supply Co., Carlsbad, N. Mex., under Government franchise and supervision, its rates and service are approved by the Director of the National Park Service. This company also serves a moderately priced luncheon in the caverns lunchroom and operates a day nursery near the caverns entrance. A charge of \$1.50 a day for each child is made for this service, which includes lunch. Kennel service for pets is 50 cents.

### Fees

A fee of \$1 for guide service, plus 20 cents tax, is charged each adult entering the caverns. Fees may be waived for school groups visiting the caverns for educational purposes (excluding sponsors) and for members of the armed services. No charge is made for children 11 years of age or under.

### Administration

A superintendent is in immediate charge of Carlsbad Caverns National Park. Communications concerning the park should be addressed to him at Carlsbad, N. Mex. General information may also be obtained at nearby chambers of commerce, hotels, camps, garages, or transportation offices.

### Please Help Us Protect This Park

Park regulations are designed for the protection of the natural beauties and scenery, as well as for the comfort and convenience of visitors.

The park rangers and guides are here to help and advise you. When in doubt, ask an employee in uniform. The following synopsis of the regulations is for convenient reference and general guidance of visitors:

**Preservation of Natural Features.**—Trees, flowers, vegetation, rocks, mineral formations, or any animal, bird, or other life may not be disturbed, injured, or destroyed; and walls or formations in the caverns may not be defaced by writing, carving, or otherwise marring them. Canes, umbrellas, or sticks of any kind may not be taken into the caverns unless permission is granted by the superintendent or one of his representatives, this permission being given only when such cane or stick is necessary for the visitor to make the caverns trip. Tossing or throwing rocks or other material inside the caverns is prohibited.

**Fees.**—No person or persons may enter the caverns unless accompanied by National Park Service employees or guides; fee and tax, \$1.20.

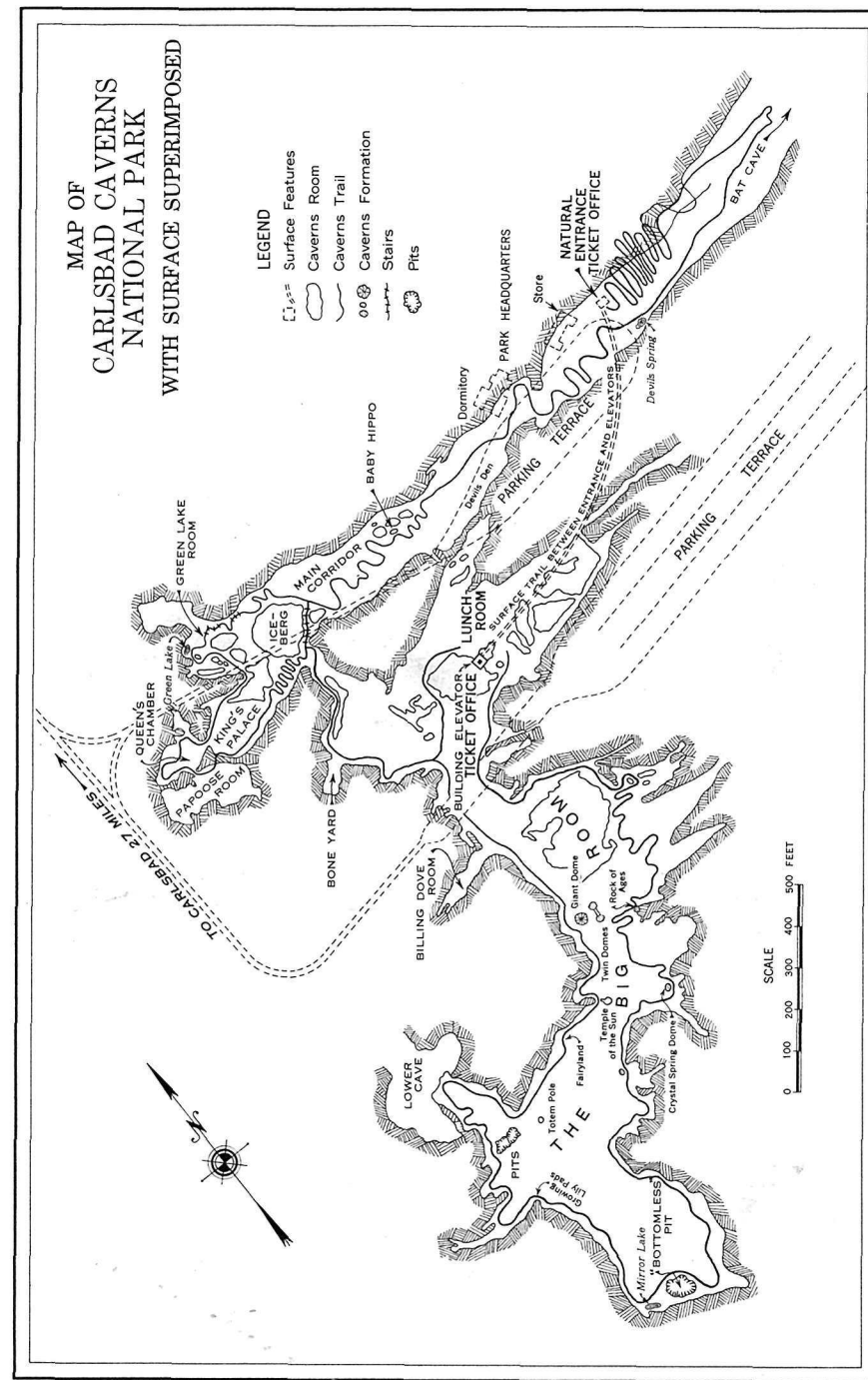
**Camping.**—There are no public camps within the park area, and no overnight accommodations. Lunches may be eaten only in designated places, and all trash must be placed in cans provided for the purpose.

**Fires.**—Especially care must be taken that no lighted match, cigar, or cigarette is dropped in any grass, twigs, leaves, or other combustible material.

**Hunting.**—The park is a sanctuary for wildlife, and the hunting, killing, wounding, frightening, capturing, or attempting to capture any wild bird or animal is prohibited.

**Dogs.**—No dogs are allowed in the caverns. Kennels are available at nominal charge.

**Cameras.**—Still and motion-picture cameras may be used freely on the surface. Professional photographers must obtain a permit from the superintendent when special equipment is required. Time exposures and flash pictures may be taken inside the caverns only on the special photographic party. Details regarding the time and extent of this tour can be obtained from uniformed personnel of the park.



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