

# Guadalupe Mountains

NATIONAL PARK • TEXAS

The Guadalupe Mountains stand like an island in a desert. At first glance they look like many other ranges, but up close they reveal something special: a spectacular exposure of the Capitan Reef which geologists say is the most extensive fossil reef complex on record.

The mountain range resembles a giant wedge or "V," with El Capitan, a 2,000-foot sheer cliff, at the point of the "V" in Texas and the arms extending to the northeast and northwest into New Mexico. Sheltered within the mountains and canyons is a unique remnant of forest plants and animals which have struggled for survival since Pleistocene times, 2 million to 3 million years ago. The 77,500-acre

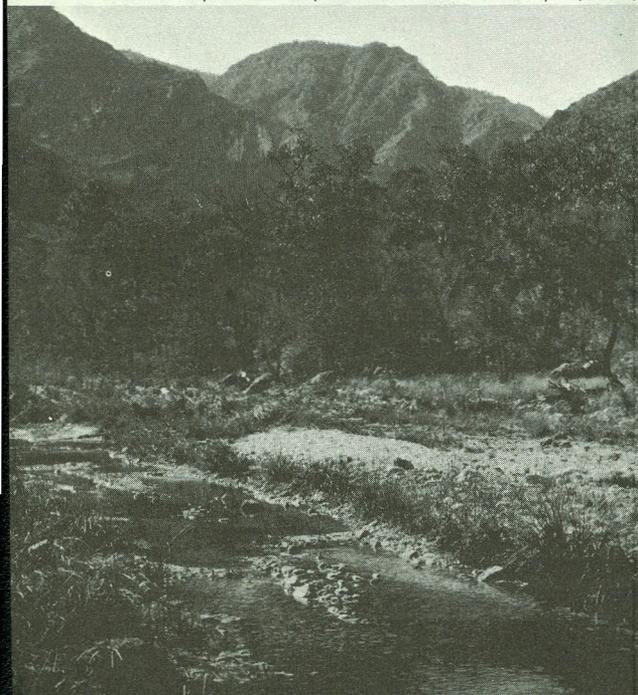
park lies astride the most scenic and rugged portion of these mountains. Elevations range from 3,650 feet at the base of the western escarpment to 8,751 feet on the summit of Guadalupe Peak, the highest point in Texas.

In the park you can explore desert lowlands, superb canyons, and forested mountains. You can study geology, visit historic sites, and see plants and animals uncommon to the surrounding semi-arid lowlands. Those who climb into the high country can enjoy outstanding views across the Salt Basin to the west, the Delaware Basin to the south and east, and into the deeply cut canyons to the north.



Barren El Capitan is a sharp contrast to McKittrick Canyon (below).

Among the common plants in the park is the smooth-leaf soto.



Its long tail helps balance the ringtail as it leaps.

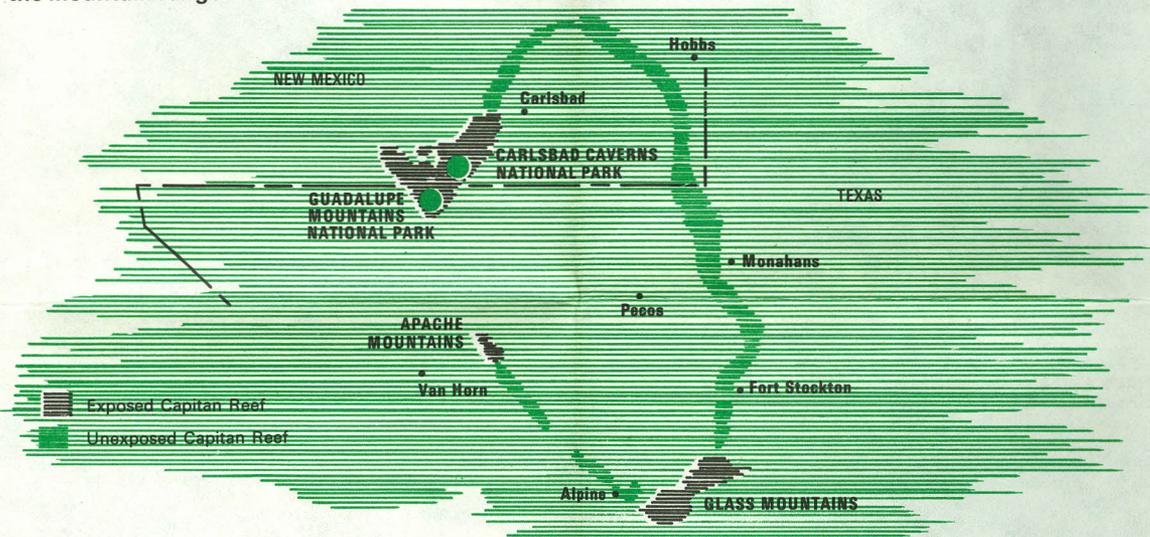


## COVERED BY A SEA

The rocks which make up the Guadalupe Mountains were formed during the Permian period, 225 to 280 million years ago. An inland sea which covered more than 10,000 square miles of Texas and New Mexico controlled their formation. It was in the shallow water near the shore of this sea that the Capitan barrier reef was built by lime-secreting algae and other organisms. As the reef grew upward and seaward upon talus broken loose by storms, sediments also were being deposited in a lagoon between the reef and the land.

In time, the arm of the sea filling the Delaware Basin was cut off from the rest of the ocean, and the basin became excessively salty. Deposits of mineral salts gradually filled the basin to the height of the reef and then layered deposits buried the long-dead reef.

A series of earth movements eventually raised the region several thousand feet and tilted its western end upward. Erosion cut away the softer sediments, and additional movements helped shape the mountain range.



The south face of the Guadalupe Mountains marks the location of the seaward face of Capitan Reef. The portion of the range extending northward from the reef slope is composed of sediments deposited in the lagoon. The reef extends like a giant horseshoe across 350 miles of western Texas and southeastern New Mexico. Most of it is buried far beneath the arid plain (see diagram above). The most extensive exposure is the 40-mile-long eastern Guadalupe escarpment, which stretches northward through Carlsbad Caverns National Park. It also is exposed in the Glass and Apache Mountain ranges to the south.

A striking cross section of the Capitan Reef complex, which includes the massive reef-core, fore-reef, and back-reef deposits, is in the 1,900-foot-high north wall of McKittrick Canyon.

## A MIX OF PLANTS AND ANIMALS

A rare mixture of biotic communities occurs in the Guadalupe Mountains. Here, species from the Rocky Mountains reach their southern and eastern limit and meet species from Mexico at the northern extent of their range. Plants and animals of the

eastern and central plains also reach into the Guadalupe.

Vegetation typical of the southwestern deserts, such as creosotebush, lechuguilla, Parry agave, yucca, and sotol, is found at the lower elevations. The high country contains a forest of ponderosa pine, Douglas-fir, limber pine, and a few aspens, a relict of a forest that covered this area thousands of years ago when the climate was cooler and the rainfall was greater than they are today.

In the sheltered canyons, where moisture is more abundant, ferns, big-tooth maple, chokecherry, walnut, hophornbeam, Texas madrone, and other species occur with vegetation from higher and lower elevations. Protection of these rare associations of plants is of paramount importance.

Animals commonly seen include elk, mule deer, wild turkey, ringtail, raccoon, porcupine, kit and gray foxes, coyote, and bobcat. Black bear and cougar pay occasional visits. More than 200 species of birds and 70 species of reptiles and amphibians have been identified.

## A HOME TO MAN

For the past 12,000 years, the mountain caves, springs, plants, and wildlife provided shelter and sustenance to various groups of people. Spanish conquistadors passed the Guadalupe on their journeys north from Mexico in the late 1500's and found the Mescalero Apaches inhabiting this area.

Military surveyors mapping a transcontinental route to the California goldfields in 1849 passed along the base of the Guadalupe just south of El Capitan. A route was opened through Guadalupe Pass in 1858, and it was used for the next 2 years by the Butterfield Overland Mail Line to carry mail and passengers from St. Louis, Mo., to San Francisco, Calif. The first eastbound and westbound stagecoaches to travel the new route met just west of Guadalupe Pass on September 28, 1858. Pine Springs ("The Pinery") Station was a regular stop for changing teams on the four-horse, Concord stagecoaches.

Homesteaders moving west reported seeing the Guadalupe Mountains for weeks before they reached them.

Shortly after the Civil War, ranching activities began and the area was soon settled. At times the settlers had to contend with outlaws, cattle rustlers, and Apache raiders.

In 1878 and 1879, soldiers from nearby military posts occasionally camped at Pine Springs while trying to subdue the remaining Apaches and move them onto a reservation.

### **ANTICIPATE STORMS**

In this semi-arid climate, the summers are generally warm and the winters mild. But severe and sudden changes in the weather often occur. You can expect strong winds in spring and autumn and electrical storms, sometimes accompanied by heavy downpours and flash flooding, in summer. Considerable variation, especially in temperature, between higher and lower elevations and between the eastern and western side of the range is also common.

### **PRECAUTIONS**

The following suggestions are offered to help make your visit safe and pleasant:

*Check with a park ranger before leaving the main roads.* Know where you want to go, how long it will take, and what type of equipment is needed. If an emergency or if an accident occurs, notify a park ranger or the information center.

*Do not climb the cliffs.* The reef limestone is unstable and considered unsafe even for most "technical" climbers.

*Beware of cactus and other desert shrubs.* Their spines can inflict painful injury.

*Watch for and respect rattlesnakes,* especially in brush areas, in rock piles, around cliffs and ledges, in damp places, and during the evening or the morning. If you should see one, do not kill it; just detour around it.

*Be prepared when you enter the back country.* Wear stout shoes and tough clothing. Be sure to carry plenty of water; in warm weather, a gallon per person per day is recommended. Gloves, a flashlight, and first-aid supplies are also advisable.

### **HELP PROTECT THE PARK**

*Natural and historic features.* Disturbing, harming, or removing any rocks, plants, wildlife, or historic objects is prohibited. The use of metal detectors, prospecting, and mining are prohibited by law.

*Caves.* Entry is not permitted into any cave without written permission of the superintendent. Permission will be granted only to qualified speleologists engaged in investigations which have demonstrable value to the National Park Service in its management and understanding of the park.

*Pets.* All animals must be leashed or under other physical restraint at all times and are not permitted in public buildings.

*Firearms.* The display or use of firearms is prohibited. Keep them unloaded and out of sight in your vehicle, which you should leave locked.

NEW MEXICO  
TEXAS

Salt Lake

PARK BOUNDARY

Dog Canyon

Lost Peak  
• 7834'

PX FIEL

GUADALUPE

MC KITTRICK

MC KITTRICK

Bush Mountain  
• 8076'

TRAIL

Hunter Peak  
• 8362'

PINE

SPRING

CANYON

Guadalupe Peak  
• 8761'

WILLIAMS RANCH  
Historic Site

El Capitan • 8078'

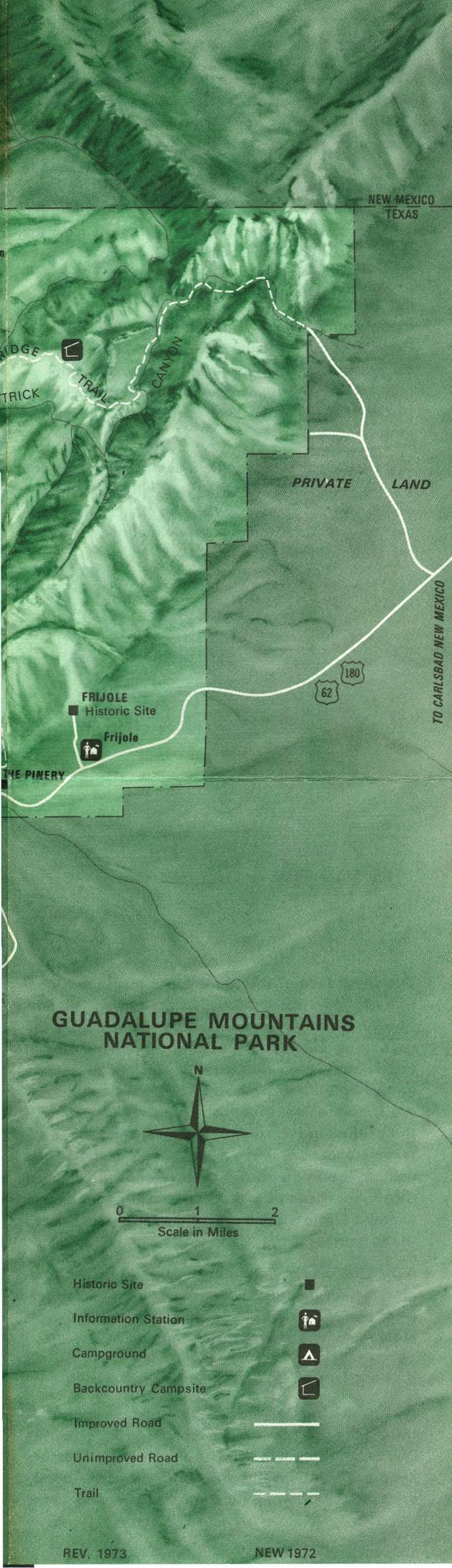
Salt Lake

62 180

54

TO EL PASO

TO VAN HORN



## GUADALUPE MOUNTAINS NATIONAL PARK



0 1 2  
Scale in Miles

- Historic Site
- Information Station i
- Campground ▲
- Backcountry Campsite ◻
- Improved Road
- Unimproved Road
- Trail

### WHAT TO SEE AND DO

Until development is completed, public-use facilities and staffing at this new national park are extremely limited. People visiting the back country should be prepared to "rough it."

*McKittrick Canyon*, noted for both its scenery and scientific importance, is open for day-use foot travel on a limited basis. A stream surfaces and disappears at various places along the canyon bottom. Rare and interesting plant communities are on the floor and lower slopes of the canyon. The canyon walls reveal segments of Capitan Reef and fore-reef and back-reef marine deposits. In autumn, the colors of the foliage are outstanding.

To enter the canyon you will need a high-clearance vehicle to travel over a private road to the parking area inside the park boundary at the canyon mouth. Keys to the private gate on the access road can be checked out at the information station on a first-come, first-served basis. Do not park along the road or disturb anything on the private land. Do not leave the trail while hiking in the canyon.

*Camping and backpacking.* Camping is limited to the primitive drive-in campground in Pine Spring Canyon and designated back-country sites.

Wood fires are not allowed in the back country, but containerized fuel stoves are permitted. The small, primitive campground at Pine Spring Canyon has tables, trash cans, and pit toilets. Water can be carried from the information station. The campground turnoff is 1 mile southwest of the Frijole Information Station near Pine Springs.

The park offers some fine opportunities to backpack in deserts and forests. However, water is not available and trails are faint. Before venturing into the park's interior, backpackers must make thorough preparations and check in at the information station to obtain campsite locations and to register destination and time of departure. They also should check in upon their return.

*Hiking.* The park contains 55 miles of rugged mountain trails. Virtually all the trail system is in poor condition and some routes are ill-defined. For safety, hikers should check in at the information station and have a good topographic map of the high country. Maps may be purchased at the information station. Good boots and an adequate supply of water are essential.

*Horseback riding.* The low-desert areas of the park lend themselves to horse travel, but the mountain trails are steep and rough. Horses are not permitted in McKittrick Canyon.

*Sightseeing by car.* U.S. 62-180 passes through the southeastern part of the park and offers spectacular views of El Capitan, Guadalupe Peak, and the eastern and western escarpments. Roadside picnic areas have been provided by the State of Texas in scenic and historic Guadalupe Pass. A National Park Service information station, open daily, is at Frijole, 1 mile east of Pine Springs.

## **ACCOMMODATIONS**

The park, 55 miles southwest of Carlsbad, N. Mex., and 110 miles east of El Paso, Tex., is on U.S. 62-180. White's City, N. Mex., is 34 miles northeast of the park; Dell City, Tex., 44 miles west, and Van Horn, Tex., 65 miles south. Overnight accommodations and food service facilities are available at each of these locations.

## **ADMINISTRATION**

Guadalupe Mountains National Park is administered by the National Park Service, U.S. Department of the Interior. The superintendent of Carlsbad Caverns National Park, whose address is 3225 El Paso Rd., Carlsbad, NM 88220, is in immediate charge.

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources." The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States—now and in the future.

**National Park Service**

**U.S. DEPARTMENT OF THE INTERIOR**