

"rock exposures [were] everywhere provided without search [and] . . . beautifully delineated on the slopes of the distant mountains, revealing at a glance relations that in a fertile country would appear only as the results of extended and laborious investigation."

G.K. Gilbert,
Geologist, 1871

A COMPLEX GEOLOGY The rock layers exposed in Death Valley's mountain walls comprise a nearly complete record of the Earth's past, but that record has been jumbled out of sequence. The landscape here was created by the forces of faulting, folding, vulcanism, erosion and deposition, and the park is an outstanding place to learn how these forces work.

A recent event affecting Death Valley geology was the Ice Age. Though there were no glaciers in the valley, melt-water flowing from Sierra Nevada glaciers formed a huge lake here, which was the lowest and largest of a series of lakes that occupied valleys between the high Sierra and Death Valley. The lake itself has long since receded, but traces of its shorelines can still be seen on the north face of Shoreline Butte.

Under the arid conditions of more recent times, vegetation has been sparse and soil accumulation slow, making this region's varied geology and exposed rock formations into prospectors' favorites. Panamint City and the Wildrose Charcoal Kilns mark the activities of the earliest miners. The 1904 goldrush at Goldfield, Nevada, spawned mines and camps at Bullfrog and Rhyolite; Harrisburg and Skidoo. Borax miners worked the Death Valley region almost without interruption from 1881 until 1928, and have again from 1970 until the present.

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ADMINISTRATION

On February 11, 1933, using the authority given to Presidents by the Antiquities Act of 1906, President Herbert Hoover established Death Valley National Monument as a 1,600,000-acre preserve, wholly within California. The monument has been enlarged twice: by President Roosevelt in 1937, and by President Truman in 1952; its present size is more than 809,000 hectares (2,000,000 acres).

Although the Antiquities Act closes national monuments to mining, an Act of Congress reopened Death Valley National Monument to mining in June 1933. The act of September 28, 1976, again closed the park to mineral development.

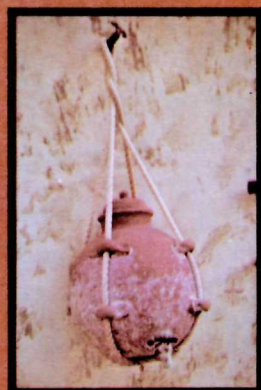
A superintendent, whose address is Death Valley National Monument, Death Valley, CA 92328, is in immediate charge.

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

**NATIONAL PARK SERVICE
U.S. DEPARTMENT OF THE INTERIOR**

Death Valley National Monument

California
Nevada



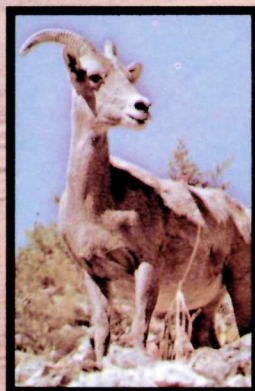
"January 19 we broke camp and set out for Death Valley by the old Borax road . . . emerging into Death Valley near the south end of its alkali-flat. On either side were high mountains and between them the narrow valley, not more than 10 miles wide. In the bottom of the valley was the snow-white stretch of salt and alkali, and to the northward, perhaps fifty miles away, mountains, valleys, and salt flats vanished in haze."

Frederick V. Coville, Botanist, 1872



The first impression of many visitors is that Death Valley is both huge and monotonous. At 7,770 square kilometers (3,000 square miles), it is huge. The sand dunes near Stovepipe Wells cover 42 square kilometers (14 square miles); the salt flats further south cover more than 500 square kilometers (200 square miles). Landforms this large create a deceptive impression of sameness. But impressions and realities often differ dramatically here. With elevation, moisture increases until on the high peaks there are forests with juniper, mountain-hogony, pinyon, and other pines. On the valley floor, marshes and a creek contrast with the surrounding desert. In these environments live animals as varied as bighorns and chuckwallas. In reality, Death Valley is a complete museum of the desert, North American style.

NOT DESERT ALONE In Death Valley, adjacent to each other, exist examples of every one of the dozens of kinds of terrain and life that exemplify the word "desert," including some probably not commonly associated with the term. Precipitous canyons pour alluvial fans onto the fault-formed basin floor that is Death Valley proper.



Badlands, salt-water springs, and dry lakes are all to be found here. But so are forested mountain peaks that are snow-capped much of the year and flowing springs of fresh water.

Life forms, too, encompass a wide spectrum. Desert animals, including lizards, snakes, desert bighorn sheep and night-active rodents, share the park with migrating ducks and species of fish. Botanically, the situation is much the same, with thirteen species of cactus and three species of pines living where conditions permit.

A CLIMATE OF EXTREMES On any given day, Death Valley will be shimmering silently in the heat. The air will be clear—so much so that distances are telescoped—and the sky, except perhaps for a wisp of cirrus, will be deep and endlessly blue. Six months of the year, unmerciful heat dominates this scene; for the next six the heat releases its grip only slightly. Rain, which might make the heat and light bearable, is rarely allowed past the guardian mountains. The little that falls, however, is the life-force of the spring-blooming wildflowers that can, in a favorable year, briefly transform this desert into a vast garden.

There are people who love this land. Those people have stayed through the seasons, and, like all other living things here, have

acclimated themselves. The sort of extremes they have encountered have made Death Valley famous. In the summer, temperatures are normally well above 40°C (about 100°F). In July of 1913, the temperature at Furnace Creek reached 56.6°C (134°F), a record maximum for North America, but on January 8 of that year, the overnight low had been -9.4°C (15°F), the lowest ever officially recorded on the floor of Death Valley.

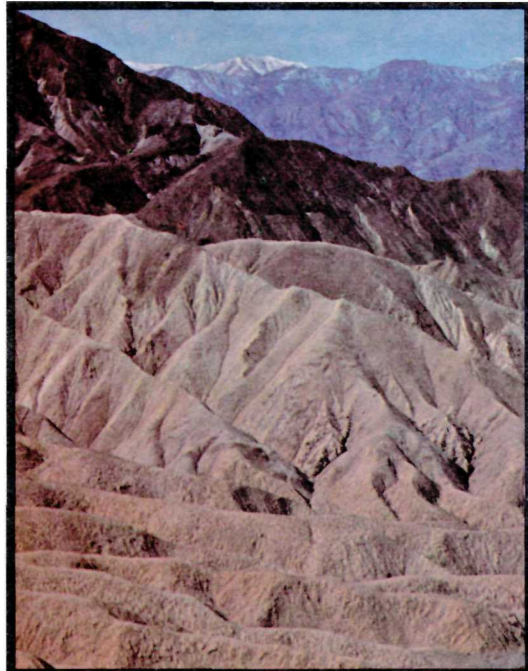
On the valley floor, precipitation is almost non-existent. In an average year, 33 millimeters (1.71 inches) fall. But yearly totals are highly variable. In 1913, 113 millimeters (4.54 inches) fell; in 1953, 2 millimeters (.09 inches). And Furnace Creek has on record one year, 1929, during which no rain whatever fell. When these figures are measured against a potential evaporation rate of 3.8 meters (150 inches) of rain per year, the complete aridity of the land becomes even more evident. Such are the extremes, and it is these extremes that those who live here have learned to avoid.

One way to avoid the heat in the summer is to venture forth only after dark. Night, the time of vast emptiness, is also the time of innumerable little animal comings and goings—the time when the dry air allows temperatures to slide precipitously to safe levels. Another way to find cooler temperatures is to ascend the mountains from the valley floor. Normally, the temperature decreases about 2°C (3.5-5°F) for every 300-meter (1,000-foot) increase in elevation. Perhaps the best way of all to avoid the heat is to do as the first people did. The Shoshone spent their summers in the mountains where temperatures were moderate and water was not so scarce. Only during the winter did they inhabit the valley floor.



FOR YOUR SAFETY
The desert can be dangerously hot in summer. Drive only on main roads in summer. Always carry water for you and your car. In case of breakdown, remain with your car until help arrives.

Never enter mines or tunnels; abandoned shafts are often deep and old timbers rotten. Always keep your children near you.



What to See and Do

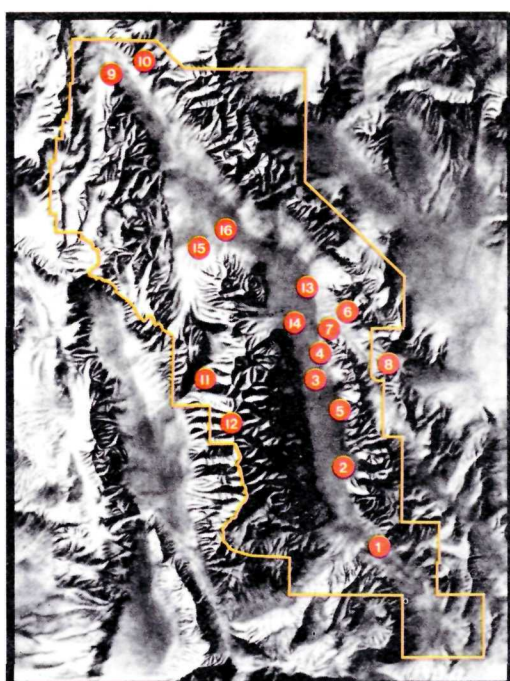
Information that will help you plan your visit can be obtained at the visitor center. And you can learn about Death Valley's history and natural history through the exhibits, audiovisual programs, and publications available there.

INTERPRETIVE PROGRAMS

Posted throughout the park are program schedules. In winter, guided walks or auto caravans are conducted daily and illustrated talks are presented each evening. Check the activity schedule or inquire at the visitor center for times, locations and subjects. Regularly scheduled tours are conducted at Scotty's Castle.

DRIVES

Death Valley's size and the distances between its major features make the use of an automobile almost essential to your enjoyment. Please be sure that your car is in good mechanical condition and that your fuel tank is full before you begin each day's tour. Within Death Valley, gasoline is sold only at Furnace Creek, Scotty's Castle, and Stovepipe Wells.



Park roads are designed for your enjoyment of the scenery—not for speed. Please observe posted limits. When you stop for sightseeing or photography, pull completely off the road.

POINTS OF INTEREST

The small map is keyed to numbered points of interest in the text below. Used as a quick reference, it will assist you in locating areas detailed on the large map.

South Calif. 127 is a southern approach to the park that deserves consideration. From Shoshone, Calif., it is 111 kilometers (69 miles) to Furnace Creek via this route. In a wet spring, wildflower prospects in Jubilee Pass are excellent. **1.** Further west, you pass the ruins of **Ashford Mill**, built to process gold ore from mines in the nearby Black Mountains. **2.** Northward, the road skirts the edge of the **Death Valley Salt Pan**, bringing you closer to it than does any other paved road. You go below sea level shortly before reaching Ashford Mill and stay below all the way to Furnace Creek. In fact, you go as low as 85 meters (280 feet) below sea level at Badwater. **3.** North of Badwater, a short dirt spur road leads to the **Devil's Golf Course**. Here the Salt Pan surface is covered with jagged rock-salt pinnacles. **4.** A bit further is **Artists Drive**, a loop through colorful badlands and canyon country. **5.** **Dantes View** is 38 kilometers (24 miles) from Furnace Creek. On the Death Valley Salt Pan below you at this overlook point is the lowest spot in the Western Hemisphere. There are also spectacular views of the Panamint Range and surrounding mountains north, east and south. On clear winter days it is even possible to see 4,381-meter (14,375-foot) Mount Williamson in the Sierra Nevada. En route to Dantes View, you pass through the color-



ful badlands of Furnace Creek Wash. **6. and 7.** Points of interest along the way include the overlook at **Zabriskie Point** and the loop drive through **Twenty Mule Team Canyon**. **8.** About halfway to Dantes View, the old borax mining camp of **Ryan** is visible in the distance. Ryan, inactive since 1928, is closed to the public.

North In the northern part of the park are Ubehebe Crater and Scotty's Castle. **9.** **Ubehebe Crater**, 13 kilometers (8 miles) from Scotty's Castle, is a volcanic crater. It is 722 meters (nearly 2,400 feet) in diameter and almost 150 meters (490 feet) deep. **10.** **Scotty's Castle**, begun in 1922, was designed as a vacation retreat for wealthy midwesterner Albert M. Johnson. Walter E. Scott, better known as "Death Valley Scotty," was Johnson's friend and frequent guest. Scotty, who had spent many years in this region, is credited with suggesting



Grapevine Canyon, at Death Valley's northern extremity, as the spot for Johnson's desert home. To Mr. and Mrs. Johnson, the place was Death Valley Ranch. But to the press it has always been "Scotty's Castle." After Johnson's death in 1948, Walter Scott resided at the ranch for the six remaining years of his life. The U.S. Government purchased the ranch in 1970, and since then it has been a part of Death Valley National Monument.

West 11. The **Wildrose Charcoal Kilns** are in upper Wildrose Canyon, an 11-kilometer (7-mile) side trip from the Emigrant-Wildrose road to the west side of the park. These kilns were built more than 100 years ago to manufacture smelter charcoal from the surrounding pinyon pine-juniper forest. **12.** A strenuous all-day hike from the kilns takes you to **Telescope Peak**, highest peak in the park and home of a centuries-old stand of bristlecone pines.

HIKING

Although trails do not exist to the places described below, it is fairly easy to find your way to them. **13.** **Harmony Borax Works** lies about 2 kilometers (1.5 miles) north of the campgrounds at Furnace Creek. Harmony dates from 1881 and was the first successful borax plant in Death Valley. **14.** **Golden Canyon** is about 5 kilometers (3 miles) south of Furnace Creek. Drive, walk, or bicycle there. Then spend an hour or so exploring this canyon of colorful rocks below Zabriskie Point. **15.** **Mosaic Canyon** can be reached from Stovepipe Wells by a 4-kilometer (2.5-mile) walk or drive up an alluvial fan. Immediately above is an 800-meter (0.5-mile) stretch of polished marble narrows. **16.** **The Sand Dunes**, east of Stovepipe Wells, offer abundant opportunity for a casual stroll or an all-day jaunt. Photographers will find them at their best at dawn or in the late afternoon.

JEEP ROADS

Besides automobile roads, there is a network of primitive roads in Death Valley National Monument. These jeep roads are not recommended for sedans or oversize vehicles. Check at the visitor center or a ranger station for conditions before venturing onto any jeep road. Light trucks can travel most Death Valley jeep roads. A few roads are unsafe without the use of four-wheel drive.

Getting to the Park

U.S. 395 passes west of Death Valley and connects with Calif. 178 and 190 to the park. U.S. 95 passes east of the park and connects with Nev. 72, 58 and 29 to the park. Interstate 15 passes southeast of the park and connects with Calif. 127 to the park.

Limited bus and air service are available from Las Vegas, Nev., to Death Valley. For schedules and further information, write:

- Las Vegas-Tonopah-Reno Stage Line
922 East Stewart Ave.
Las Vegas, NV 89101
- OMNI Airlines
Box 11171
Las Vegas, NV 89111

Several airlines and interstate bus lines serve Las Vegas, Nev. Interstate buses and Amtrak passenger trains serve Barstow, Calif. Cars may be rented at several agencies in Las Vegas. There is an Avis Rent-A-Car agency in Barstow. Advance reservations are advisable in either city.

Where to Stay

CAMPING

Campgrounds are at four widely separated locations within the park: Furnace Creek, Grapevine, Stovepipe Wells, and Wildrose Canyon. For further camping information, write for the folder *Camping in Death Valley* or pick up a copy at the visitor center or any ranger station.

LODGING

Resorts provide lodging and other commercial services at two locations within Death Valley National Monument.

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| Facilities are operated at Furnace Creek by: | and at Stovepipe Wells by: |
| •Fred Harvey, Inc.
P.O. Box 187
Death Valley, CA 92328 | •Stovepipe Wells Village
Death Valley, CA 92328 |

From May through October, services at these locations are limited. Write to the addresses above for details. No other lodging is available within the park. TWA Services, Inc., a National Park Service concessioner, provides gasoline, curios, and snack bar services at Scotty's Castle.

SOME REGULATIONS TO GUIDE YOU

Camp only in designated locations. Be sure to make your camping plans well before sunset, for roadside camping is not permitted.



Collecting plants or rocks, gathering or cutting plants or disturbing any natural or historic feature is not allowed. Since collecting firewood is prohibited throughout the park, please bring adequate fuel with you.

Please dispose of trash in the receptacles provided and place a bucket under your sink drain. For your convenience, sanitary disposal stations are located at Furnace Creek, at Stovepipe Wells, and at Mesquite Spring campground.

To preserve the scenery, please do not drive off established roads. Maps showing locations of jeep roads are available at the visitor center and at ranger stations.

Pets must be leashed at all times. They are not allowed in the visitor center or other public buildings, or in back country.

National parks and monuments are wildlife sanctuaries. Carrying firearms that are not cased or otherwise rendered inoperative is prohibited. Shooting firearms is not allowed.

A complete set of regulations can be seen at the visitor center information desk.

Forgotten caches of explosives are occasionally found in mine areas. Do not touch them, but report them to a park ranger as soon as possible.

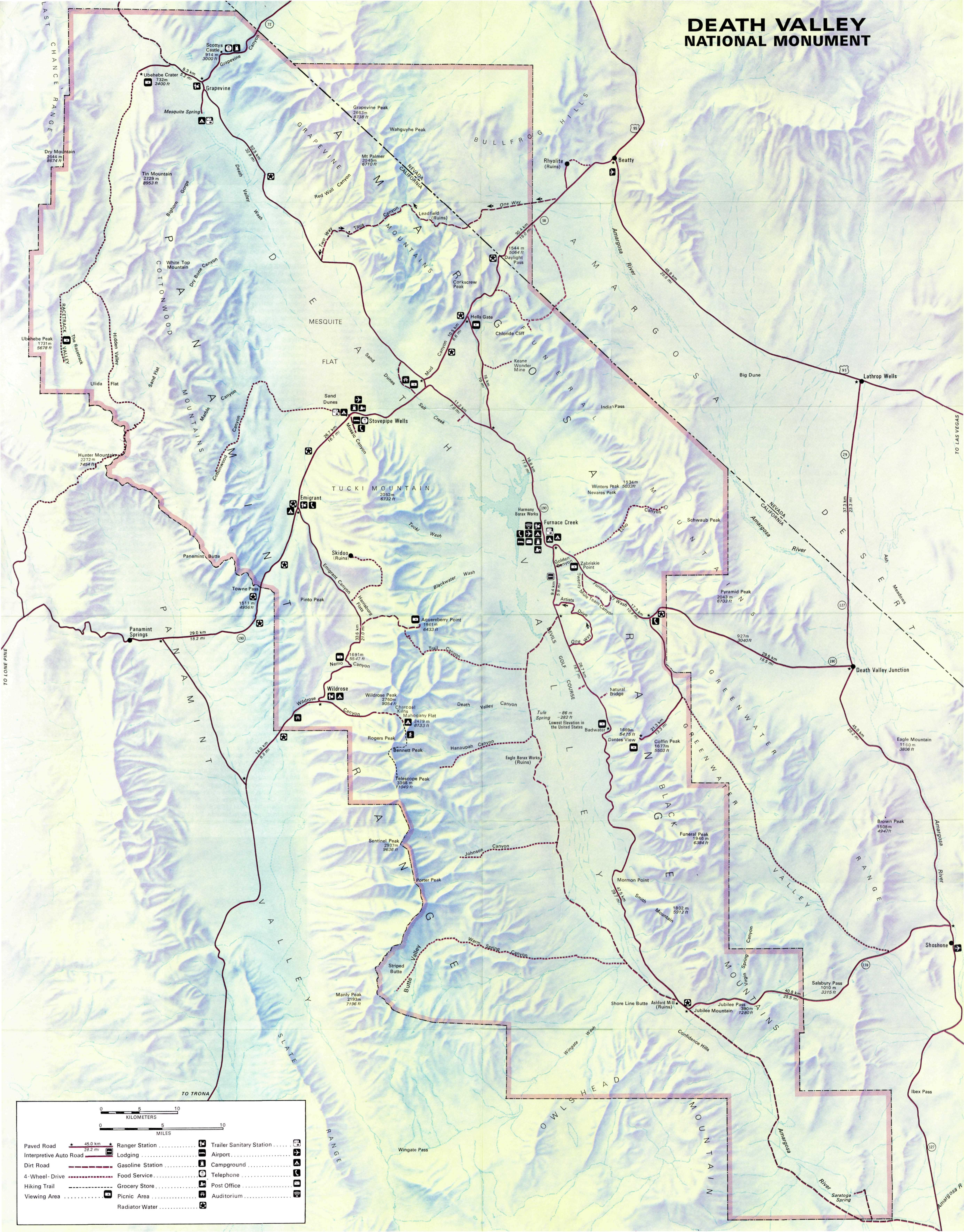
Be alert for flash floods when it looks stormy. Do not ford low places when water is running. Flood waters can undercut pavement or sweep a car from the road.

All animals in the park are wild. They can bite and/or carry diseases. Never feed or molest them.

Never travel alone. Always tell someone where you are going and when you expect to return. Be extremely cautious in this wild area.

If you travel in Death Valley in summer, pick up the folder, *Hot Weather Hints*, at distribution boxes at any entrance to the National Monument, at the visitor center, or at a ranger station.

DEATH VALLEY NATIONAL MONUMENT



Scale:
 0 5 10 KILOMETERS
 0 5 10 MILES

Paved Road	Ranger Station	Trailer Sanitary Station
Interpretive Auto Road	Lodging	Airport
Dirt Road	Gasoline Station	Campground
4-Wheel-Drive	Food Service	Telephone
Hiking Trail	Grocery Store	Post Office
Viewing Area	Picnic Area	Auditorium
	Radiator Water	