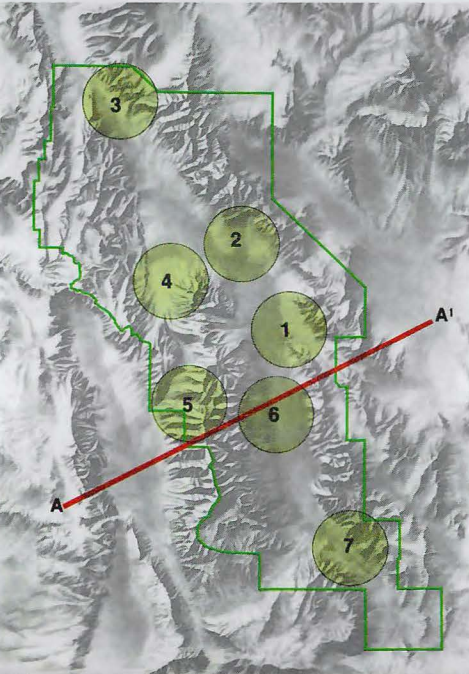




Golden Canyon near Zabriskie Point. Photograph by David Muench.



Death Valley. The name is foreboding and gloomy. Yet here in this valley, much of it below sea level, or in its surrounding mountains you can find spectacular wildflower displays, snow-covered peaks, beautiful sand dunes, abandoned mines and industrial structures, and the hottest spot in North America.

G.K. Gilbert, a geologist who worked in the area in the 1870s, noted that the rock formations were "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." The rock layers that Gilbert noticed comprise a nearly complete record of the Earth's past, but that record has been jumbled out of sequence. The reason is that the rock layers that form the mountains are very ancient, but only in recent geologic time have they risen.

Even as the mountains rose, erosion began to wear them down. An example of this is the formation of the alluvial fans. Intermittent streams, resulting mostly from the bursts of infrequent rains, rush down the steep canyons scouring boulders, soil, and other debris and

pushing and carrying the whole mass with it and then depositing it on the valley floor at the canyon's mouth.

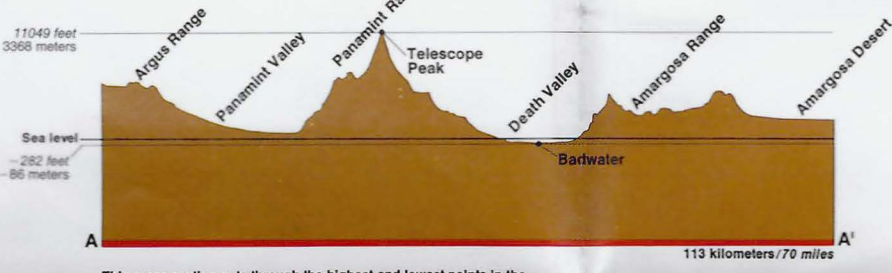
On any given day, this valley floor shimmers silently in the heat. The air is clear—so much so that distances are telescoped—and the sky, except perhaps for a wisp of cloud, is a deep blue. Six months of the year unmerciful heat dominates this scene; for the next six the heat releases its grip only slightly. Rain rarely gets past the guardian mountains. The little that falls, however, is the life force of the wildflowers that transform this desert into a vast garden.

Despite the harshness and severity of the environment, more than 900 kinds of plants live within the park. Those on the valley floor have adapted to a desert life by a variety of means. Some have roots that go downward 10 times the height of an average person. Some plants have a root system that lies just below the surface but extends out far in all directions. Others have skins that allow very little evaporation. Different forms of wildlife, too, have learned to deal with this heat. The animals that live in the desert are mainly nocturnal, for once the sun sets the temperature falls quickly because of the dry air. Night, the time of seeming vast

emptiness, is the time of innumerable comings and goings by little animals. Larger animals, such as the desert bighorn, live in the cooler, higher elevations. With height, moisture increases, too, until on the high peaks there are forests with juniper, mountain-mahogany, pinyon and other pines. And often the peaks surrounding the valley are snow-covered.

This then is Death Valley, a unit of the Mojave and Colorado Deserts Biosphere Reserve. Today it is an active world of exciting contrasts and wonders—quite the opposite of its name.

Because of the faulting in Death Valley, the vertical rise from the lowest point to the top of Telescope Peak is one of the greatest in the United States. The diagram at right, exaggerated five times, shows the cross section indicated on the map at left.



January	February	March	April	May	June	July	August	September	October	November	December
64.6	72.9	80.8	88.4	99.5	109.7	116.2	113.5	106.0	91.3	75.4	65.9
39.3	45.2	53.9	61.6	71.4	81.6	88.5	77.8	61.9	48.4	40.3	40.3
87	91	101	109	120	125	134	126	120	110	97	86
.21	.33	.15	.12	.06	.02	.11	.06	.10	.11	.19	.19

The temperatures on this chart are in Fahrenheit and the rainfall measurements are in inches. To convert to degrees Celsius, subtract 32 and multiply by $\frac{5}{9}$. To change inches to centimeters, multiply by 2.54.

Death Valley's temperature and rainfall records are among the oddest in the country. These averages give you an idea of what to expect each month.

As you read this folder, use the small map above as an easy reference to the major locations in the park. The sites located in each of the seven numbered areas are listed here. For roads and details use the large map on the reverse side.

1. Harmony Borax Works interpretive trail, Furnace Creek Visitor Center, Death Valley Museum, Golden Canyon interpretive trail, Zabriskie Point, and Artists Drive.
2. Historic Stovepipe Wells, Salt Creek interpretive trail, and Hells Gate.
3. Scottys Castle, Grapevine, Ubehebe Crater, and Mesquite Spring.
4. Stovepipe Wells, Emigrant, and Mosaic Canyon.
5. Wildrose, Thorndike, Mahogany Flat, Charcoal, Kilns, and Telescope Peak.
6. Devil's Golf Course, lowest elevation point, Badwater, and Eagle Borax Works.
7. Jubilee Pass and Ashford Mill Ruins.

Planning Your Visit

U.S. 395 passes west of Death Valley and connects with Calif. 178 and 190 to the park. U.S. 95 passes east and connects with Nev. 267, 374, and 373 to the park. I-15 passes southeast and connects with Calif. 127.

Limited bus and air services are available from Las Vegas, Nev., to Death Valley. For schedules and further information write: Las Vegas-Tonopah-Reno Stage Line, 922 East Stewart Avenue, Las Vegas, NV 89101, or Air Nevada, Box 11207, Las Vegas, NV 89111. Commercial airlines, Amtrak, and interstate buses serve Las Vegas. Amtrak passenger trains as well as interstate buses stop at Barstow, Calif. Cars may be rented in both cities; advance reservations are advisable.

In this large park, $1\frac{1}{2}$ times the size of Delaware, there is much to see and do. And the distances you need to travel from one place to another make careful planning essential.

You can get information that will help you plan your time in the park by stopping at the Fur-

park are interpretive program schedules that give times, locations, and subjects. In winter, guided walks and naturalist talks are conducted daily and illustrated talks are presented each evening. If you have questions about these programs, inquire at the visitor center or ask a park ranger.

Camping The park has nine campgrounds. Three are open all year: Furnace Creek, Mesquite Spring, and Wildrose. Three others are open October to April: Texas Spring, Sunset, and Stovepipe Wells. And three other campgrounds are open April to October: Emigrant, Thorndike, and Mahogany. For further information, write for the folder *Camping in Death Valley*.

Lodging Two resorts provide lodging and other commercial services within the park. Facilities are operated at Stovepipe Wells by a concessioner. From May through October, services are limited. Furnace Creek Inn and Ranch is privately run. Write to Fred Harvey, Inc., P.O. Box 187, Death Valley, CA 92328, for details. No other lodging is available within the park. TWA Services, Inc., provides gasoline, souvenirs, and snack service at Scottys Castle.



Rainstorms can make the desert bloom. This desert fivespot displays its finery.

Driving

Death Valley's size and the distances between its major features make the use of an automobile essential. 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 the park, gasoline is sold only at Furnace Creek, Scottys Castle, and Stovepipe Wells.

Park roads are designed for your enjoyment of the scenery—not for speed. Please observe posted speed limits.

The approach to the park from the south is via Calif. 127. From Shoshone, Calif., to Furnace Creek is 69 miles. In a wet spring, wildflower displays in Jubilee Pass are stunning. Further on you pass the ruins of Ashford Mill built to process gold ore. Turning northward the road skirts the edge of the Death Valley Salt Pan, coming closer to it than any other paved road. The road goes below sea level shortly before reaching Ashford Mill and stays below all the way to Furnace Creek. In fact, it goes as low as 282 feet below sea level at Badwater. 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 spikes. A bit further, on the east side of the main road, is Artists Drive, a loop through colorful badlands

and canyon country. From the vicinity of the Furnace Creek Visitor Center a road leads 24 miles through the colorful badlands of Furnace Creek Wash to Dantes View. Points of interest along the way include the overlook at Zabriskie Point and the loop drive through Twenty Mule Team Canyon.

From the overlook at Dantes View, you can see the lowest point in the Western Hemisphere, plus spectacular views of the Panamint Range and the surrounding mountains. On clear winter days it is even possible to see 14,375-foot Mount Williamson in the Sierra Nevada.

In the northern part of the park are Ubehebe Crater and Scottys Castle. Ubehebe Crater is 2,400 feet in diameter; it was created about 1,000 years ago during a tremendously destructive volcanic eruption. Eight miles away, in Grapevine Canyon, is Scottys Castle.

Car Trouble

In the summer, check your vehicle gauges frequently. Radiator water is available from storage tanks along park roads. Their locations are marked by red dots on the map on the reverse side. If your car develops vapor lock, wrap a wet rag around the fuel pump and line to speed cooling. And if your car breaks down, stay with it.



The lowest point in the Western Hemisphere is near Badwater.

Begun in 1922, it 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 everyone else it has always been "Scottys Castle." After Johnson's death in 1948, Scott resided at the ranch for the six remaining years of his life. In 1970 the U.S. Government purchased the ranch and made it part of Death Valley National Monument.

From Emigrant Canyon Road on the west side of the park you can reach Wildrose Canyon, where you will find a row of abandoned charcoal kilns. These kilns were constructed more than a century ago to manufacture charcoal for use in ore smelters from the surrounding pinyon pine and juniper forest. Chinese laborers built the kilns without mortar and Shoshone Indians tended them.

Jeep Roads Death Valley has a network of primitive roads that can be used by jeeps or light trucks. 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 them. A few primitive roads are unsafe except for vehicles with four-wheel drive. Maps showing the locations of jeep roads are available at the visitor center and at ranger stations.

Walking

A few points of interest are easily accessible for the casual or seasoned walker. Although formal trails do not always exist, it is fairly easy to find your way about. The Harmony Borax Works lies about 1.2 miles north of the campgrounds at Furnace Creek. Harmony dates from 1883 and

Mine Hazards

Death Valley contains hundreds of abandoned mines and associated structures that are potentially dangerous. Many hazardous mine openings have been closed, but it will take years before the job is finished. For your safety, use extreme caution in driving or walking around in the vicinity of all mine workings. Watch for open shafts, prospect holes, and adits. Supervise children closely and never enter abandoned mines. STAY OUT AND STAY ALIVE.

was the first successful borax plant in Death Valley. Golden Canyon is about 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. Mosaic Canyon can be reached from Stovepipe Wells by a 2.5-mile walk or drive up an alluvial fan. Immediately above is an 0.5-mile stretch of polished marble narrows. The Sand Dunes, east of Stovepipe Wells, offer abundant opportunities for a casual stroll or an all-day jaunt. Photographers will find the lighting on the dunes at its best at dawn or in the late afternoon. For more information on hiking, ask about current backcountry maps and publications on trails and trips at any ranger station, sales facility, or the visitor center at Furnace Creek.

For a longer hike, you may wish to consider the climb up Telescope Peak, the highest spot in Death Valley. At the end of the Wildrose Canyon Road at the Mahogany Flat campground, you come to the trailhead for this hike. It is a strenuous all-day hike to the top. On Telescope Peak is a stand of bristlecone pines. Trees of this species can live to be very old. The age of the bristlecone pines in Death Valley is not known.

Park Regulations

Camp only in designated locations. Be sure to make your camping plans well before sunset, for roadside camping is not permitted. •Collecting, gathering, cutting, or disturbing plants, rocks, or any natural or historic feature is not allowed. Since collecting firewood is prohibited throughout the park, bring an adequate fuel supply 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, Stovepipe Wells, and Mesquite Spring campgrounds. •Do not drive off established roads. •Pets must be leashed at all times. They are not allowed in the visitor center or other public buildings, or in the backcountry. •This is a wildlife sanctuary. Carrying firearms that are not cased or otherwise rendered inoperative is prohibited. Shooting firearms, even at targets, is not allowed.

Safety 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 often carry diseases, and they can bite. Do not feed or disturb them. •Never travel alone; always tell someone where you are going and when you expect to return.

Heat

Suggestions for safe hot weather travel in Death Valley can be found in the *Death Valley Guide*, available at roadside information kiosks, ranger stations, and the Furnace Creek visitor center. This is a harsh environment in the summer, and any emergency situation can easily become life-threatening.



Sighting an elusive bighorn such as this ewe is an exciting event few people have.

nace Creek Visitor Center. Here you can learn about Death Valley's history and natural history through exhibits, audiovisual programs, and publications. Uniformed staff members are available to help you.

Posted at the visitor center and throughout the



Death Valley is well-known for its 20-mile teams. During the first day of borax mining these

teams braved the harsh environment and pulled the loads of borax to the railroad. The back

wheels on the wagons that carried the enormous loads were taller than a human being.

[illegible]