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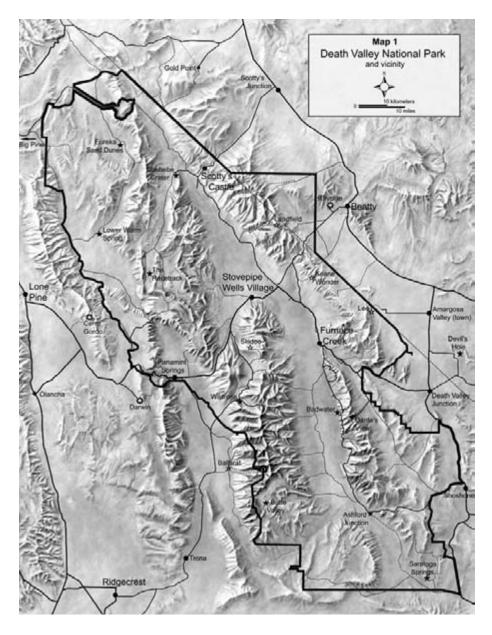
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An Introduction to Death Valley National Park and Vicinity

In 1957, famous naturalist Dr. Edmund C. Jaeger wrote: "The complete natural history of Death Valley will never be written. . . . [It] is a subject too vast." That might well be true, for Death Valley National Park encompasses an immense area that is unique in its diversity.

- The park is nearly 150 miles long from north to south, about 60 miles wide from east to west, and covers 3,372,402 acres (or 5,269 square miles). In addition, considerable portions of the adjacent mountains and valleys are culturally and biologically part of Death Valley.
- The park's elevations range from desiccated salt flats 282 feet below sea level near Badwater, where the average rainfall is less than two inches per year, to pine-clad peaks higher than 11,000 feet above sea level in the Panamint Range, where heavy snow falls in the winter.
- Death Valley's life zones follow the changes in elevation, ranging from the Lower Sonoran life zone, through the Upper Sonoran and Transition life zones, to the Canadian life zone; the very highest peaks qualify for the Arctic (or Boreal) life zone.
- Summer temperatures on the valley floor routinely reach over 120°F (50°C), and there is nothing unusual about winter days as cold as 0°F $(-18^{\circ}C)$ in the higher mountains.
- More than 1,000 species of plants, at least 16 of which are endemics found nowhere else, inhabit the park along with at least 440 species of animals.
- Death Valley includes hundreds of archaeological sites, most of which have never been fully documented but some of which may be more than 9,000 years old.



- The park's geology encompasses everything from recrystallized metamorphic rocks at least 1.8 billion years old to salt crystals that grow larger as you watch them.
- Mining for precious metals, borax, and talc led directly to Death Valley's discovery, fame, tourist industry, and the creation of the national park itself.

• The park contains 260 miles of paved highways and over 1,000 miles of dirt roads, everything from major state highways to four-wheel-drive routes of poor quality.

Obviously, it takes time and effort to fully experience the variety that Death Valley has to offer. This book provides information for all of Death Valley's visitors, from first-time travelers just learning about the area to those who are able to return for in-depth explorations.

FORMAT OF THIS BOOK

This book is divided into five sections.

Part I (Chapters 1 through 6) discusses the geology, human history, plantlife, and wildlife of the park.

Part II (Chapter 7) deals with the desert environment—Death Valley's climate and, with that, the precautions that explorers should take before venturing into the park. This includes the National Park Service regulations that all park visitors should keep in mind.

Part III (Chapters 8 and 9) provides ideas for day hiking, backpacking, and bicycling in Death Valley.

Part IV (Chapters 10 through 21) first introduces and then describes the entire park in eleven sections of detailed mile-by-mile road logs that cover every road within and several roads outside the national park boundary.

Part V (Appendices A, B, and C) provides historical information about Death Valley's ghost towns and railroads and the modern interpretive services, lodging and camping facilities, and special events. There is also a suggested reading list for sources of further information.

LAND CLASSIFICATION

National Park Service. Most of the land described in this book lies within Death Valley National Park, which is a unit of the National Park Service (NPS) of the U.S. Department of the Interior. Land-use regulations within the park are more stringent than they are on most of the public lands outside the park boundary. Especially worth noting is that most of the national park is wilderness, and the wilderness boundary is just 50 feet from the centerline of nearly all backcountry dirt roads. Only foot or, by permit, horseback travel is allowed within the wilderness areas. Also, no collecting of any kind—plant, animal, fossil, mineral, or archaeological artifact—is allowed within the national park. The headquarters for the park is adjacent to the Furnace Creek Visitor Center.

Bureau of Land Management. Much of the land immediately surrounding Death Valley National Park is administered by the Bureau of Land Management (BLM), which is an agency of the Department of the Interior. Land-use regulations here are generally less stringent than are those of the NPS, but much of this land is wilderness where off-road travel is not allowed. The collecting of mineral specimens for personal, noncommercial use is permitted in most areas. Detailed regulations are available at the offices of the BLM Desert District in the town of Ridgecrest, California, and at and the Eastern Sierra Interagency Visitor Center just south of Lone Pine, California.

U.S. Forest Service. Relatively small areas bounding the northwestern part of the national park lie within Inyo National Forest, a unit of the U.S. Forest Service (USFS), an agency of the U.S. Department of Agriculture. Again, land-use regulations here are somewhat less stringent than they are within the national park, but they are also significantly different from those that apply to the BLM areas. The national forest's offices in Bishop and Lone Pine and the Eastern Sierra Interagency Visitor Center have detailed information and use regulations.

Indian reservations. The Timbisha Shoshone Village adjacent to the Furnace Creek Ranch and the Indian Ranch in Panamint Valley are private areas that are off-limits to entry except by invitation or unless the Indians are holding an advertised public event.

Military ground. The land bordering the extreme southwestern part of Death Valley National Park is within the Mojave Range B of the Naval Air Weapons Station–China Lake, and the land only a short distance south of the park's southern boundary lies within the Fort Irwin Army National Training Center. These areas are fenced and well-marked, and entry into them is strictly forbidden.

Private property. There is very little private property within Death Valley National Park. Most of these places are patented mining and related millsite claims that date to the late 1800s and early 1900s, before the establishment of the original national monument. Most of this land is unoccupied and undeveloped, and much of it may be quitclaimed to the NPS in the near future. There are, however, still a few private inholdings scattered in those areas that were added to the park by the 1994 expansion, and these may be posted against trespass. In addition, the grounds of the Furnace Creek Inn and Ranch Resort and those of the Panamint Springs Resort are private properties.

ROAD CLASSIFICATIONS

Death Valley's roads fall into four use categories.

Paved routes. Paved all-weather roads accessible to any vehicle. Some of these roads are narrow and may have broken asphalt and unmarked sharp curves.

High-clearance routes. Dirt roads on which vehicles with high clearance are recommended. Although some of these roads are graded on occasion and then can be driven with caution in any vehicle, they are subject to washouts and also may be extremely rough, making high-clearance vehicles desirable if not outright necessary.

Four-wheel-drive (4WD) routes. Unimproved dirt roads on which 4WD, highclearance vehicles are often required and therefore strongly recommended; this does *not* include all-wheel-drive automobiles. These roads typically have areas of loose sand or gravel, high centers, sharp pitches, steep grades and so on (often in combination).

Severe or questionable routes. Roads that are extremely rough and narrow and in such poor condition that driving them is not recommended except by experienced drivers accompanied by others.

As of mid-2009, all of the roads described here are open to use. This could change, however. Explorers are always encouraged to check with the Park Service for any updates about a road's status and condition, as well as about any changes in backcountry-use regulations.

MAPS

All of the maps used in this book have been produced from public domain base maps available online from the National Park Service, Harpers Ferry Center (www.nps. gov/carto/MAPS). The shaded-relief background was a jpeg file obtained from the same site. The originals were downloaded as large-format Adobe Illustrator files that were cut into smaller areas as appropriate. Symbols to indicate points of interest and road classifications were superimposed onto the base maps. All were produced at full, original scale but then were variously resized to fit this publication. The distance scales therefore vary from one map to another, but all show accurate layouts.

ROAD LOG MILEAGES AND GPS LOCATIONS

Mileages. Each route that is described in Part IV of this book has viewpoints, specific places of interest, and road turnoffs referenced according to car odometer readings. These must be taken as approximate only because trip odometer readings are often different from trip to trip, even when driven in the same vehicle; this is especially true on dirt roads. Also, most modern odometers are digital and only record the distance every 1/10 mile so that one "click" to the next represents more than 500 feet. *Global Positioning System (GPS) coordinates*. Especially in Death Valley's backcountry but also from time to time along the main roads, there are road intersections or points of interest that are unmarked and difficult to find. These places are noted by their geographic locations using coordinates that are easily checked using any handheld or vehicle GPS unit. In this book, latitude-longitude coordinates are used because that is the system employed by Death Valley National Park in its park maintenance database (which was used to double-check coordinates determined in the field or from topographic maps). All GPS coordinates in this book are considered accurate to within 50 feet.