



Visitor Guide

2008 / 2009



Dante's View

Safety Hazards in Keane Wonder Mine Area

Death Valley has more abandoned mines than any other national park. Out of the 6000 to 10,000 abandoned mines, approximately 3000 need some safety mitigation. All mines are inherently dangerous, but those in the Keane Wonder area pose the most immediate safety hazard.

Unstable ground

The Keane Wonder Mine was one of the most successful gold mines in Death Valley. Miners followed rich veins of ore deposited in fractures in the metamorphic rock. Tunnels were dug, side tunnels were added, always removing as much ore as possible. Eventually the mine became a series of chambers supported by pillars... then even the pillars were removed!

So much rock was mined that the entire area became unstable and started to collapse. Besides the obvious danger of entering a crumbling mine, just being on the surface above or near the mine has become hazardous.

Toxic Waste

Cyanide and other toxic chemicals were used to extract the gold from the ore at the Keane Wonder Mill. Near the parking area are the remains of tanks used for the cyanide process and fine-grained tailings. Testing has shown elevated levels of lead and mercury in these tailings. Erosion constantly exposes this material and wind blows the dust around. This is not something you want to breathe!

Collapsing Structures

The historic structures of Keane Wonder Mill and tramway suffer from rot, rust, and decay. These structures are in danger of collapse and need to be stabilized.

Closed Area

Until the site can be made safer, the National Park Service has closed the Keane Wonder Mine and surrounding area to public access. The closed area is from the junction of Beatty Cut-off Road and Keane Wonder Road east to Chloride Cliff. This includes the Keane Wonder Mine and Mill, Big Bell Mine, King Midas Mine, Cyty's Mill and Keane Wonder Spring.



Stay Out—Stay Alive!

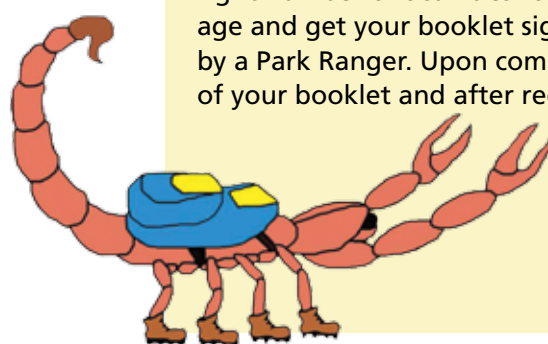
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Junior Rangers

Want to have fun while exploring Death Valley? You can become a Junior Ranger with the **Junior Ranger booklet** that can be picked up at any Death Valley National Park Visitor Center. Just complete the right number of activities for your age and get your booklet signed by a Park Ranger. Upon completion of your booklet and after reciting

the Junior Ranger pledge, you will receive your **Junior Ranger Badge**. Why not join a Park Ranger for a **Junior Ranger Program** and receive a certificate? During the fall, winter or spring, stop by a Visitor Center at Furnace Creek or Scotty's Castle to check on times, and locations. Present your Junior Ranger certificate or completed Junior Ranger booklet at any Visitor Center bookstore and you can purchase a special **Junior Ranger Patch** for a small fee. What a great way to explore Death Valley!



Park Information

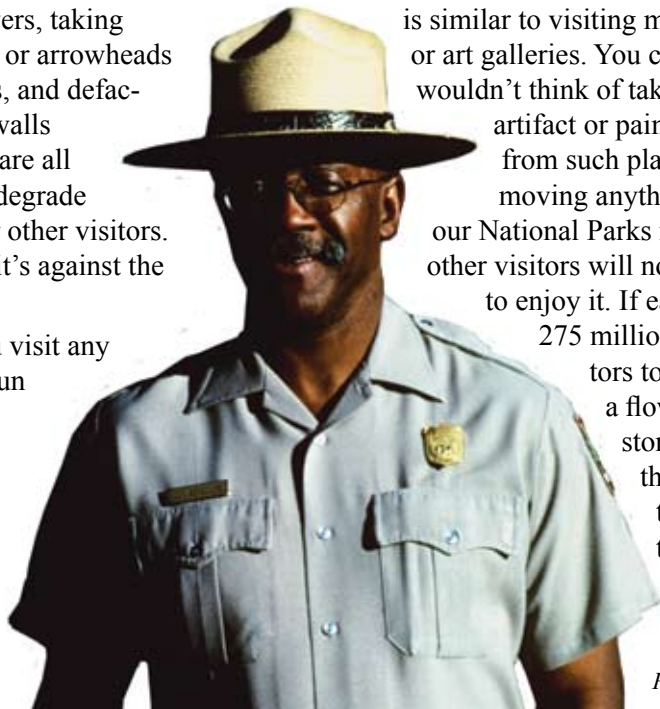


Help Protect America's Treasures

While visiting the White House, would you take a piece of silverware home for a keepsake? How about tearing off a piece of the Declaration of Independence? Or spray painting your name on the Statue of Liberty?

Similar actions sometimes take place in our National Parks. Picking wildflowers, taking home stones or arrowheads as keepsakes, and defacing canyon walls with graffiti are all actions that degrade the parks for other visitors. In addition, it's against the law.

When you visit any of the sites run by the National Park Service, you are viewing America's treasures.



Park Superintendent J.T. Reynolds

These parks were created because they have special meaning to all Americans. The laws that created these special places for us to own and enjoy also mandate they be protected for the enjoyment of future generations of Americans as well.

Visiting any of our national parks is similar to visiting museums or art galleries. You certainly wouldn't think of taking an artifact or painting home from such places. Removing anything from our National Parks means that other visitors will not be able to enjoy it. If each of the 275 million visitors took away a flower or a stone or anything from the parks they visit, they

would leave behind empty landscapes that nobody would enjoy.

Help protect America's National Park sites by leaving everything in its place and not defacing the natural resources. Other park visitors and future generations of Americans will thank you.

How to Help

Please remember and obey the following regulations during your stay:

- **Collecting or disturbing** any animal, plant, rock or any other natural, historical or archeological feature is prohibited.
- **All vehicles must remain on established roads.** This includes motorcycles, bicycles, and four-wheel drive vehicles. All motorized vehicles and their drivers must be properly licensed. Vehicles with off-road registration "green stickers" may not be operated in the park.

- **Do not feed or disturb wildlife,** including coyotes, roadrunners & ravens. When wild animals are fed by humans they tend to depend upon this unhealthy food source rather than forage for their natural diet.
- **Hunting and use of firearms** in the park is illegal. Firearms may be transported through the park only if they are unloaded and cased.
- **Keep pets confined or leashed.** Pets are allowed only in developed areas and along paved or dirt roads.
- **Camping is limited to developed campgrounds** and some backcountry areas. For details on backcountry camping and to obtain a free permit, stop at the Furnace Creek Visitor Center or any ranger station.
- **Campfires are allowed** in firepits provided in developed campgrounds. They are prohibited elsewhere in the park. Gathering wood is unlawful.
- **Please do not litter.**

CAMPGROUND	Season	Elevation	Fee	Sites	Water	Tables	Firepits	Toilets	Dump Station
Furnace Creek	all year	-196'	\$18**	136	yes	yes	yes	flush	yes
Sunset	Oct-Apr	-196'	\$12	270	yes	no	no	flush	yes
Texas Spring	Oct-Apr	sea level	\$14	92	yes	yes	yes	flush	yes
Stovepipe Wells	Oct-Apr	sea level	\$12	190	yes	some	some	flush	yes
Mesquite Spring	all year	1800'	\$12	30	yes	yes	yes	flush	yes
Emigrant (tent only)	all year	2100'	free	10	yes	yes	no	flush	no
Wildrose	all year	4100'	free	23	yes	yes	yes	pit	no
Thorndike*	Mar-Nov	7400'	free	6	no	yes	yes	pit	no
Mahogany Flat*	Mar-Nov	8200'	free	10	no	yes	yes	pit	no

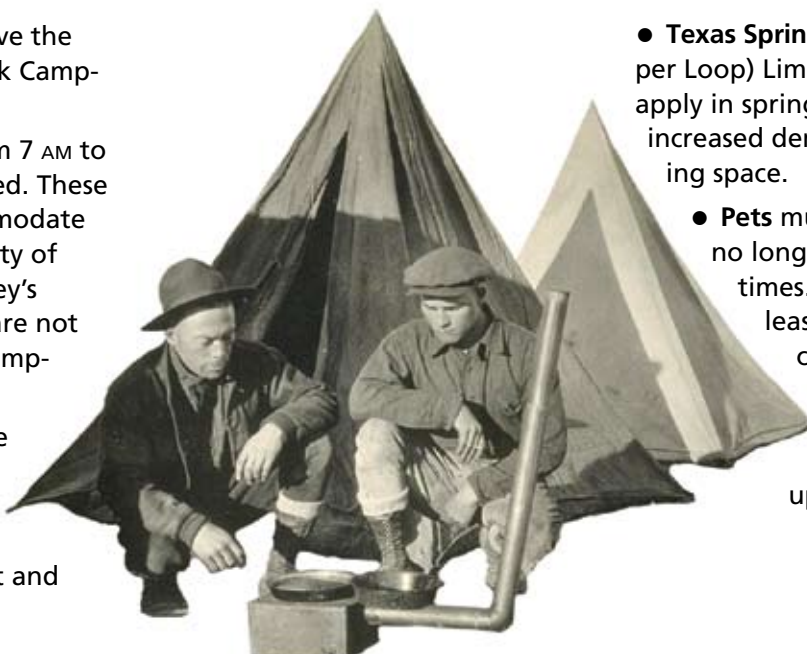
*Accessible to high-clearance vehicles only. 4-wheel drive may be necessary.
 **Furnace Creek Campground fee changes to \$12 per night from mid-April to mid-October

Campground Rules & Information

- **Camping reservations** are available only for Furnace Creek Campground and group campsites through National Recreation Reservation Service. Reservations can be made for the camping season of October 15 through April 15. Furnace Creek Campground reservations can be made six months in advance. Group campsites reservations can be made 11 months in advance. For reservations call toll-free at: 1-877-444-6777 or visit the website at recreation.gov
- **Group size** of no larger than 8 people and 2 vehicles is allowed per campsite. Only one RV allowed per site. Larger groups that want

to camp together can reserve the group sites at Furnace Creek Campground.

- **Generator hours** are from 7 AM to 7 PM, unless otherwise posted. These hours are chosen to accommodate the needs of the wide variety of people who use Death Valley's campgrounds. Generators are not allowed at Texas Springs Campground.
- **RV Hookups** are available only at the concession-run Stovepipe Wells RV Park and the privately-owned Furnace Creek Ranch Resort and Panamint Springs Resort.



- **Texas Springs Campground** (Upper Loop) Limits on RV site use may apply in springtime to accommodate increased demand for tent camping space.
- **Pets** must be kept on a leash no longer than 6 feet at all times. Keeping your pet leashed protects other campers and wildlife as well as your pet. Pet owners are responsible for cleaning up after their pets.

Desert Survival



Staying Safe & Sound

Water: Drink at least one gallon (4 liters) of water per day to replace loss from perspiration. Carry plenty of extra drinking water in your car.

- **Heat & Dehydration:** If you feel dizzy, nauseous or a headache, get out of the sun immediately and drink plenty of water. Dampen clothing to lower your body temperature. Heat and dehydration can kill.

- **Hiking:** Do not hike in the low elevations when temperatures are hot. The mountains are cooler in summer, but can have snow and ice in winter.

- **Summer Driving:** Stay on paved roads in summer. If your car breaks down, stay with it until help comes. Be prepared; carry plenty of extra water.

- **Flash Floods:** Avoid canyons during rain storms and be prepared to move to higher ground. While driving, be alert for water running in washes and across road dips.

- **Dangerous Animals:** Never place your hands or feet where you cannot see first. Rattlesnakes, scorpions or black widow spiders may be sheltered there.

- **Mine Hazards:** Do not enter mine tunnels or shafts. Mines may be unstable, have hidden shafts, pockets of bad air and poisonous gas.

- **In Case of Emergency:** Dial 911 from any telephone or cell phone. Cell phones may not work in many parts of the park, do not depend on them.



Panamint Speckled Rattlesnake

Deadly Summer Heat

Ingrid and Gerhard Jonas were only a few days into their summer vacation in the United States when they arrived in Death Valley. A guidebook they had brought from home described the hike from Golden Canyon to Zabriskie Point, which proved irresistible to Gerhard. The trail was only a few miles from developed Furnace Creek so it seemed safe. Although he would be getting a late start at noon and the temperature was already more than 100° F (38° C) in the shade, Gerhard believed the hike would take only half an hour to complete. He was mistaken. Even on a mild winter day the nearly three mile hike over highly eroded badlands takes 1½ to 2 hours. He was also mistaken to think he would need less than a liter of water to complete the hike on that hot June day, which was becoming hotter by the minute.

Ingrid agreed to drive around and meet him at Zabriskie Point. From

the viewpoint she could watch for Gerhard to cross over the colorful landscape. Three hours after their arranged rendezvous time there was still no sign of him; she became worried enough to seek help. She told rangers at the visitor center about her overdue husband and a search was begun in 112° F (45° C) heat. A quick overflight in the park airplane revealed a figure fitting his description in lower Gower Gulch, the next drainage south of Golden Canyon. Although rangers reached Gerhard only 1½ hours after he was first reported missing and only 5 hours after he had started his hike, he was dead. Heat stroke proved to be the culprit.

Could this death have been prevented? With better planning, better timing, and enough water this story may have ended differently.

Death Valley National Park now receives more than one million visi-

tors a year. In recent years, the biggest increase in visitation has been in summer months. People from around the globe are able to travel through the sweltering heat of the valley in

the comfort of air conditioned cars. With that ease of travel, visitors often underestimate the dangers of being in one the hottest places in the world.



Manly Beacon

Desert Wildlife: Masters of Survival

The extremes of summer in Death Valley pose the ultimate test of survival for wildlife. Animals must have special adaptations of bodies and habits to survive the severe climate.

Kangaroo rats can live their entire lives without drinking a drop of liquid, a very handy ability when living in a place famous for its aridity. All of the water they need to survive can be metabolized within their bodies from the dry seeds they eat. They also conserve moisture; their kidneys can concentrate urine to five times that of humans.

Kangaroo rats avoid the intense heat of the day in underground burrows that are both cooler and higher in humidity than outside. Water vapor in the humid air is reclaimed by special membranes in their nasal passages, and is also absorbed by the food stored within the den. They may even

plug the burrow's entrance with dirt to keep out heat and intruders.

Sidewinders are the type of unwelcome guests the kangaroo rat is trying to keep out. These small rattlesnakes also spends the hot days in underground dens. Rather than digging their own burrows, they simply move into one previously occupied by the unlucky rodent eaten for dinner.

Although best known for their odd looping motion of travel, sidewinders are well adapted to the extremes of Death Valley. Like kangaroo rats, sidewinders do not need to drink water. All the moisture they need comes from the juicy animals they eat.

Endothermic (warm-blooded) animals such as kangaroo rats and humans use food as fuel to produce body heat internally, but ectothermic (cold-blooded) reptiles like sidewinders must absorb heat from their envi-

ronment. Deserts have a lot of heat, but little food, so reptiles are excellent desert dwellers.

The tiny **pupfish** of Salt Creek are also ectothermic, yet they cannot escape the high temperatures of solar-heated pools. Pupfish are among the most heat tolerant of all fishes. Some species even live in warm springs. They have been known to survive in water temperatures of 112° F.

Another obstacle these fish face is high salinity. Pupfish can survive in water three times saltier than sea water. Excess salts are excreted through their kidneys and gills.

During your visit, keep in mind that only the ability to carry water and to create artificial shelter allows you to be here in relative comfort. You are not as physically adapted to survive in Death Valley's heat as its wildlife residents.

Kit Fox hunting Kangaroo Rat

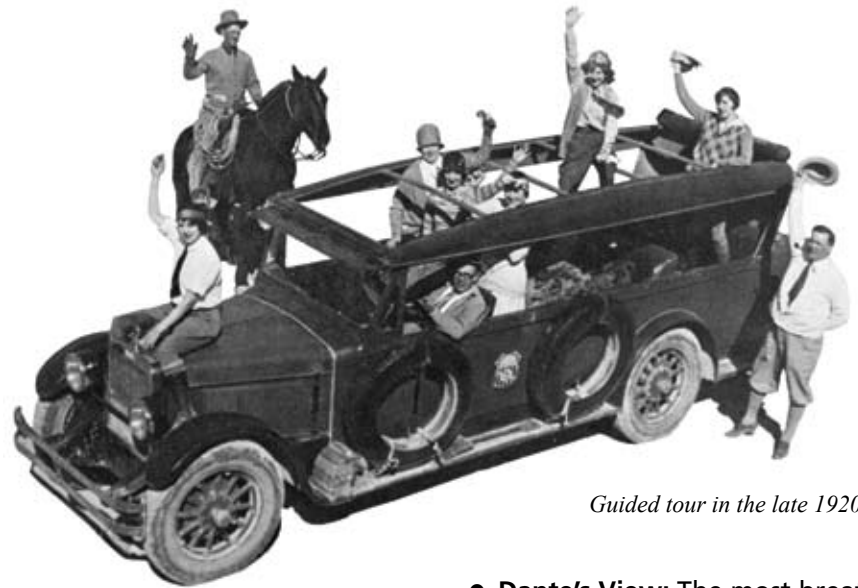


What to See



Furnace Creek Area

- **Golden Canyon:** Hikers entering the narrows of this canyon are greeted by golden badlands within. An interpretive pamphlet is available. Two-mile round-trip walk.
- **Artist's Drive:** Scenic loop drive through multi-hued volcanic and sedimentary hills. Artist's Palette is especially photogenic in late afternoon light. The 9-mile paved road is one-way and is only drivable with vehicles less than 25 feet in length.
- **Devil's Golf Course:** Immense area of rock salt eroded by wind and rain into jagged spires. So incredibly serrated that "only the devil could play golf on such rough links." The unpaved road leading to it is often closed after rain.
- **Natural Bridge:** Massive rock span across interesting desert canyon. The spur road is gravel and often rough. From the trailhead, the natural bridge is a ½ mile walk.
- **Badwater:** Lowest point in North America, Badwater Basin is a surreal landscape of vast salt flats. A temporary lake may form here after heavy rainstorms. Do not walk on the salt flats in hot weather.
- **Zabriskie Point:** Surrounded by a maze of wildly eroded and vibrantly colored badlands, this spectacular view is one of the park's most famous. Zabriskie Point is a popular sunrise and sunset viewing location. The viewpoint is a short walk uphill from the parking area.



Guided tour in the late 1920s.

- **Twenty Mule Team Canyon:** Winding through otherworldly badlands, this 2.7 mile, one-way loop drive is unpaved, but accessible to all standard vehicles other than buses, Rvs, and trailers.
- **Dante's View:** The most breathtaking viewpoint in the park, this mountain-top overlook is more than 5000 feet above the inferno of Death Valley. The paved access road is open to all vehicles less than 25 feet in length.



Badwater Salt Flats

Stovepipe Wells Area

- **Sand Dunes:** Tawny dunes smoothly rising nearly 100 feet from Mesquite Flat. Late afternoon light accentuates the ripples and patterns while morning is a good time to view tracks of nocturnal wildlife. Moonlight on the dunes can be magical, yet night explorers should be alert for sidewinder rattlesnakes during the warm season.
- **Mosaic Canyon:** Polished marble walls and odd mosaic patterns of breccia make this small canyon a favorite. The twisting lower canyon is so narrow hikers must walk through it single-file. Some rock scrambling is required. The canyon opens up after ½ mile to reveal the heights of Tucki Mountain, but hikers can continue another 1½ miles.
- **Salt Creek:** This stream of salty water is the only home to a rare pupfish, *Cyprinodon salinus*. Springtime is best for viewing pupfish; in summer the lower stream dries up and in winter the fish are dormant. The wooden boardwalk loops ½ mile through stands of pickleweed and past pools reflecting badland hills. Wheelchair accessible.
- **Titus Canyon:** One of the largest and most scenically diverse canyons in the park. Within its lofty walls visitors can find multi-colored volcanic deposits, a ghost town, Indian petroglyphs, bighorn sheep, and deep, winding narrows. Titus Canyon is accessible to high-clearance vehicles via a 26-mile, one-way dirt road beginning outside the park. Standard vehicles may reach the canyon's mouth from the west via a two-way section of road.

Panamint Springs Area

- **Father Crowley Vista:** A landscape of dark lava flows and volcanic cinders abruptly gives way to the gash of Rainbow Canyon below this viewpoint. Walk the dirt track east of the parking lot for a grand overlook of northern Panamint Valley.
- **Wildrose Charcoal Kilns:** These ten beehive-shaped structures are among the best preserved in the west. Built in 1876 to provide fuel to process silver/lead ore, they still smell of smoke today. The last 2 miles of gravel road to the kilns are passable to most vehicles.
- **Lee Flat Joshua Trees:** The finest stands of tree-sized yuccas in the park grow in this mountain-rimmed valley. Take the paved but rough Saline Valley Road to a junction in Lee Flat. The gravel roads in either direction will provide good views of Joshua trees.
- **Aguereberry Point:** 1000 feet higher than Dante's View, this viewpoint gives a perspective over Death Valley from the west. Along the gravel road is the remains of Pete Aguerberry's camp and his Eureka Mine. The last climb to the point may require a high-clearance vehicle.



Wildrose Charcoal Kilns

Scotty's Castle Area

- **Scotty's Castle:** Prospector "Death Valley Scotty" claimed this elaborate Spanish-style mansion was built by gold from his fictitious mine. In reality, it was the 1920s vacation home of his wealthy friends. Today, living history tours of the castle's richly furnished interior are given by costumed park rangers.
- **Ubehebe Crater:** More than 300 years ago the desert silence was shattered by a massive volcanic explosion caused by the violent release of underground steam pressure. When the cinders and dust settled, this 600 feet deep crater remained. Although easily visible from the paved road, hikers may want to circle the crater rim to see smaller craters.
- **Eureka Dunes:** Rising majestically nearly 700 feet, these are the highest dunes in California. Isolated from other dunes, they are an evolutionary island, home to rare and endangered species of plants and animals. To give them extra protection, the dunes are off limits to sandboarding and horseback riding.
- **The Racetrack:** Rocks mysteriously slide across the dry lakebed of the Racetrack, leaving behind long tracks for visitors to ponder. A high-clearance vehicle is needed to traverse the 27 miles of rough dirt road, but ask at a ranger station for current road conditions.

Walks and Hikes



Things to Know Before You Go

Before starting a hike, learn the current conditions, water availability, and weather forecasts. Backpackers should obtain a free permit.

Always carry water. Two liters for a short winter dayhike; 4 liters or more in the summer or for long hikes.

Constructed trails are rare in this park. Trails are provided in places that are heavily used and sensitive to damage. If a trail is there, please use it. Most hiking routes in the park are cross-country, up canyons, or along ridges. Footing can be rough & rocky.

Hiking in low elevations can be dangerous when it is hot. The high peaks can be covered with snow in winter and spring. The best time to hike in the park is October to April.

Dogs and bicycles are not allowed on trails or in the wilderness.

Trails & Routes

Golden Canyon

Length: 1 mile, one-way.

Difficulty: easy

Start: Golden Canyon parking area, 2 miles south of Hwy 190 on Badwater Road.

Description: Easy trail through colorful canyon. Red Cathedral located ¼ mile up canyon from last numbered marker. Interpretive trail guides are available.

Gower Gulch Loop

Length: 4 miles round-trip.

Difficulty: moderate

Start: Golden Canyon parking area, 2 miles south of Hwy 190 on Badwater Road.

Description: Colorful badlands, canyon narrows, old borax mines. Hike up Golden Canyon to marker #10, then follow trail over badlands and down Gower Gulch to finish loop. Two easy dryfalls must be scrambled down. Ask for Gower Gulch hand-out at Visitor Center.

Badwater Salt Flats

Length: as long or short as you like (the salt flats are 5 miles across)

Difficulty: easy to moderate; sections may be muddy or rough.

Start: Badwater parking area

Description: Follow the path out from Badwater Pool into the purity of white salt and the nation's lowest elevation at 282 feet below sea level. Avoid hiking here in the hot months due to the lack of shade and extreme temperatures.

Natural Bridge Canyon

Length: ½ mile to natural bridge, 1 mile to end of canyon.

Difficulty: easy

Start: Natural Bridge parking area, 1.5 miles off Badwater Rd. on gravel road, 13 miles south of Hwy 190.

Description: Uphill walk through narrow canyon. Large natural bridge at ½ mile. Trail ends at dry waterfall.

Salt Creek

Length: ½ mile round-trip.

Difficulty: easy

Start: Salt Creek parking area, 1 mile off Hwy 190 on graded gravel road, 13.5 miles north of Furnace Ck.

Description: Boardwalk along small stream. Good for viewing rare pupfish and other wildlife. Best in late winter/early spring.

Mesquite Flat Sand Dunes

Length: 2 miles to highest dune.

Difficulty: easy to moderate

Start: 2.2 miles east of Stovepipe Wells on Hwy 190.

Description: Graceful desert dunes, numerous animal tracks. Walk cross-country to 100 ft. high dunes. Best in morning or afternoon for dramatic light. Also good for moon-lit hikes. *No trail.*

Mosaic Canyon

Length: ½ to 2 miles, one-way.

Difficulty: moderate

Start: Mosaic Canyon parking area, 2 miles from Stovepipe Wells Village on graded gravel road.

Description: Popular walk up a narrow, polished marble-walled canyon. First ½ mile is narrowest section. Some slickrock scrambling necessary. "Mosaics" of fragments of rocks cemented together can be seen in canyon walls. Bighorn sheep sighted occasionally.

Darwin Falls

Length: 1 mile, one-way

Difficulty: moderate

Start: Darwin Falls parking area, 2.4 miles up gravel road toward Darwin, turn one mile west of Panamint Springs Resort on Hwy 190.

Description: Year-round waterfalls and lush vegetation tucked into a rugged canyon. Can be overgrown and has some rough spots. There is a trail to first waterfall but dangerous cliffs beyond.

Titus Canyon Narrows

Length: 1.5 miles, one-way.

Difficulty: easy

Start: Titus Canyon Mouth parking area, 3 miles off Scotty's Castle Road on graded gravel road.

Description: Easy access to lower Titus Canyon. Follow gravel road up wash 1.5 miles through narrows or continue to Klare Springs and petroglyphs at 6.5 miles.

Fall Canyon

Length: 3 miles, one-way.

Difficulty: moderately strenuous

Start: Titus Canyon Mouth parking area, 3 miles off Scotty's Castle Road on graded gravel road.

Description: Spectacular wilderness canyon near Titus Canyon. Follow informal path ½ mile north along base of mountains, drop into large wash at canyon's mouth, then hike 2½ miles up canyon to 35' dryfall. You can climb around the dryfall 300' back down canyon on south side for access to best narrows. Canyon continues another 3 miles before second dryfall blocks passage. *No trail in canyon.*

Little Hebe Crater

Length: ½ mile, one-way.

Difficulty: moderate

Start: Ubehebe Crater parking area, 8 miles west of Scotty's Castle.

Description: Volcanic craters and elaborate erosion. Hike along west rim of Ubehebe Crater to Little Hebe and several other craters. Continue around Ubehebe's rim for 1.5 mile loop hike.

Mesquite Flat Sand Dunes



Narrows of Fall Canyon

Summer Hikes

Dante's Ridge

Length: ½ miles to first summit, 4 miles one-way to Mt. Perry

Difficulty: moderate

Start: Dantes View parking area

Description: Follow ridge north of Dantes View for spectacular vistas and a cool place to escape summer heat. *No trail for last 3.5 miles*

Wildrose Peak

Length: 4.2 miles, one-way.

Difficulty: moderately strenuous

Start: Charcoal Kilns parking area on upper Wildrose Canyon Road.

Description: A good high peak to climb (9,064 ft.). Trail begins at north end of kilns with an elevation gain of 2,200 ft. Spectacular views beyond 2 mile point. Steep grade for last mile.

Telescope Peak

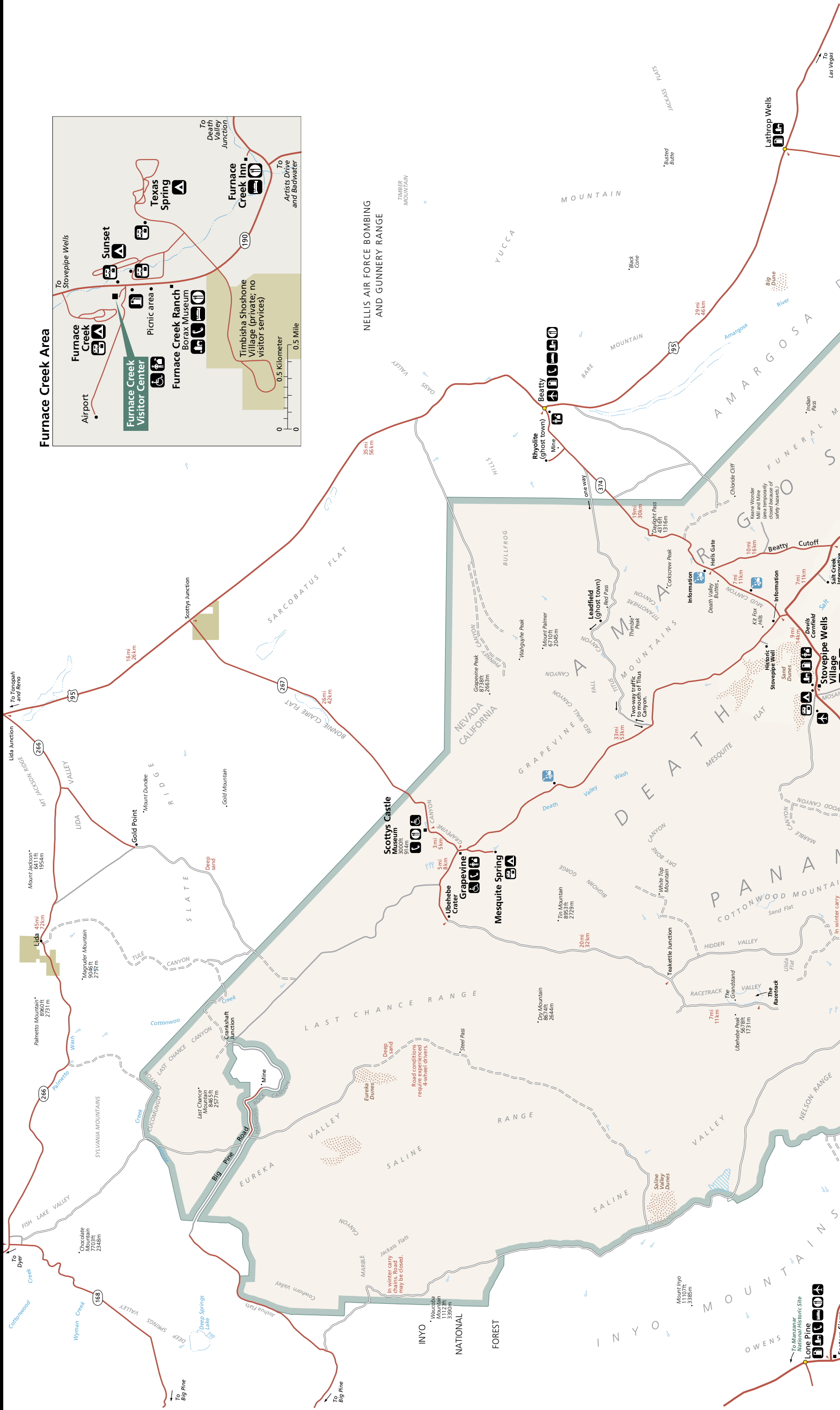
Length: 7 miles, one-way.

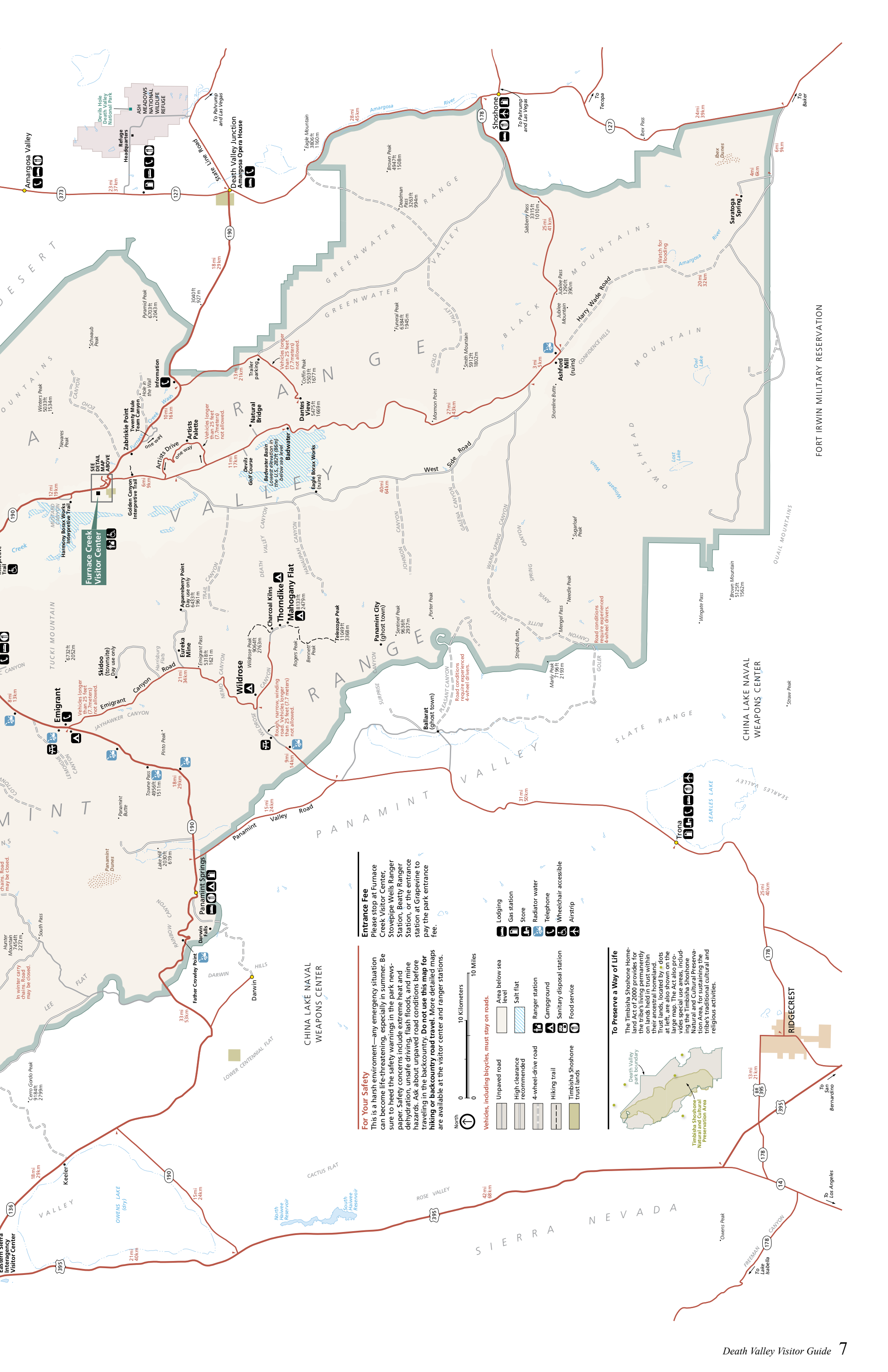
Difficulty: strenuous

Start: Mahogany Flat Campground at end of upper Wildrose Canyon Road. Rough, steep road after the Charcoal Kilns.

Description: Trail to highest peak in the park (11,049 ft.) with a 3,000 ft. elevation gain. Climbing this peak in the winter requires ice axe and crampons, and only advised for experienced winter climbers. Trail is usually snow-free by June.

Death Valley National Park





FORT IRWIN MILITARY RESERVATION

CHINA LAKE NAVAL WEAPONS CENTER

For Your Safety

This is a harsh environment—any emergency situation can become life-threatening, especially in summer. Be sure to heed the safety warnings in the park newspaper. Safety concerns include extreme heat and dehydration, unsafe driving, flash floods, and mine hazards. Ask about unpaved road conditions before traveling in the backcountry. Do not use this map for hiking or backcountry road travel. More detailed maps are available at the visitor center and ranger stations.

Entrance Fee

Please stop at Furnace Creek Visitor Center, Stovepipe Wells Ranger Station, Beatty Ranger Station, or the entrance station at Grapevine to pay the park entrance fee.

- Unpaved road
- High clearance recommended
- 4-wheel-drive road
- Hiking trail
- Timbisha-Shoshone trust lands
- Area below sea level
- Salt flat
- Ranger station
- Campground
- Sanitary disposal station
- Food service
- Lodging
- Gas station
- Store
- Radiator water
- Telephone
- Wheelchair accessible
- Airstrip

0 10 Kilometers
0 10 Miles

Vehicles, including bicycles, must stay on roads.

To Preserve a Way of Life

The Timbisha-Shoshone Homeland Act of 2000 provides for the return of 20,000 acres of trust lands held in trust within their ancestral homeland. Trust lands, located by dots at left, are also shown on the large map. The Act also provides special use areas, including the Timbisha Shoshone Natural and Cultural Preservation Area, for sustaining the tribe's traditional cultural and religious activities.



Research and Education



What is Death Valley R.O.C.K.S.?

Death Valley ROCKS (Recreation Outdoor Campaign for Kids thru Study) is the realization of Park Superintendent J.T. Reynolds' career long dream that students experience nature and history firsthand. During his 30+ years with the National Park Service, Reynolds has worked personally and professionally to help students maintain self-esteem in a world that is often at odds with this goal.

"Spending time out of doors enables students to learn in a different way and is reflected in their intellect, memories, and hearts rather than just in their scholastic grades," Reynolds said.

Death Valley ROCKS fuses the wisdom of established outdoor programs at other National Parks with new, experimental methods to bring students from inner city schools in Nevada and California to the park. Students, many visiting the desert and

Death Valley National Park for the first time, have the opportunity to contribute to the park by completing work projects, learning about the desert and themselves.



Making Superintendent Reynolds' dream come true has not been a "one man effort" and there are many people to thank. One of the most important contributors to the program has the

Death Valley Natural History Association (DVNHA). Director David Blacker who made Death Valley ROCKS one of the top priorities for fund raising this past year. The majority of transportation costs have been paid for through private donations to the DVNHA fund. You too can contribute through the DVNHA website or by stopping by the DVNHA bookstore. For those who want to help this program in a personal way, volunteers are needed to assist with the on-site programs, prepare and organize supplies and materials and conduct educational programs.

For further information, to offer your help and support or to find out how your school can get involved with Death Valley ROCKS, contact the Education Specialist at 760-786-3226. You too can play a role in improving one of these kid's future!

All-Taxa Biological Inventory Makes Connections

An All Taxa Biological Inventory (ATBI) is a complete inventory of all life forms within a given area, from bugs to bighorns, flatworms to finches, viruses to vireos, lupines to lizards, microbes to mesquite. Beyond a mere laundry list of critters, there are many other goals as well. This intensive study will also aid the park in understanding plant and animal distribution, associations and ecological relationships as well as relative abundance. This will also be an important record of organisms, habitats and conditions that will form a baseline for future efforts that document potential effects from climate change or other landscape-scale dynamics and alterations.

Another important aspect is engaging the public, especially school groups, whether college groups, high school science classes, or other environmental educational efforts. This engagement is not only to obtain needed assistance in the inventories, but more importantly, foster a connection and relevancy with younger audiences and to light a spark in them towards environmental education, natural processes and National Parks.

The National Park Service and Death Valley Natural History Association, in association with other partners, launched an ATBI in Death Valley on September 2007.

There are many ways that ATBIs may be accomplished, but most follow procedures similar to the world's first ATB—the one held at Great Smoky Mountains National Park. In this ATBI, information is often collected through a series of "bio-blitzes." These usually involve a group of people making a concentrated inventory effort within a short period of time—in essence a "snap-shot" in time across different plots or habitats.

Due to various reasons, our ATBI will take a period of time to ramp

up to a full-fledge effort. A small but important "bio-blitz" was held in September 29, 2007 with the assistance of Santa Monica College, California Mediterranean Research Learning Center (CAMRLC), Los Angeles Natural History Museum, University of New Mexico, Harvard University, University of California- Santa Barbara, Great Basin Cooperative Ecosystem Studies Unit and the Death Valley Natural History Association- and the list keeps growing!



Desert five-spot

On September 29th, approximately 30 students from Santa Monica College and staff from the CAMRLC participated in a bio-blitz at eleven stations spread out in 1,000-foot vertical increments starting near Stovepipe Wells and continuing in a southerly direction to the summit of Rogers Peak (approximately 10,000 feet). The target for this bio-blitz was surface/ground-dwelling organisms such as ants and spiders. From this effort, a total of 439 individual organisms were collected, comprising: silverfish, springtails, ants, spiders, termites, grasshoppers, mites, centipedes, dragonflies, flies, beetles, and some currently unidentified organisms. The majority were ants and spiders. A total

of 322 ants were collected, representing eleven species. All the ants collected on Rogers Peak (the 10,000-foot crew) and one of the ants collected at Mahogany Flat Campground (the 8,000-foot crew), represents a first record for this species within the state of California. In addition, a specimen collected near Stovepipe Wells Airport (the sea-level crew) represents a species that only was recently discovered in similar habitat in San Bernardino County, California. This species is still in the process of being described as a new species. Death Valley is now another known location of this new species. As for total species diversity, the Stovepipe Wells crew clearly beat everyone else, with a record four separate species of ants. In addition, this data appears to indicate that with one exception, the various species of ants appear to be restricted to specific habitat types. More will be learned of this later.

There was a high species diversity of spiders (14 species represented), with Emigrant Wash (the 3,000-foot crew) and Rogers Peak (the 10,000-foot crew) tied for the highest species diversity for spiders. A jumping spider collected from Emigrant Wash turned out to be a new, previously unknown species. This location may turn out to be the most southerly and most arid location for this entire genus, since this particular genus of spider is usually found in higher elevations and more northerly climates. Due to the number of species represented within the 21 individual spiders collected, specific habitat preferences cannot be made at this time, but more will be learned as time progresses. Spiders within Death Valley have never really been investigated- there will surely be many new surprises.

The sites sampled include: the alluvial fan above Stovepipe Wells, the

alluvial fan near Emigrant Ranger Station, Emigrant Wash, Emigrant Canyon, Wildrose Canyon, Harrisburg Flat, near the Charcoal Kilns, Thordike Campground, Mahogany Flat Campground, the shoulder of Rogers Peak and the summit of Rogers Peak. In addition, smaller stations were also established at Upper Emigrant Spring and near Wildrose Ranger Station. Between all organisms and taxa groups collected that day, the highest number of species represented came from Emigrant Wash (the 3,000-foot crew).

Overall, this was a valuable and productive effort, the students and staff appeared to have a good time, they learned some aspects of biodiversity and science projects, the students were introduced to Death Valley and the NPS, it added important information on the park's invertebrates, and it helped launch Death Valley National Park's All Taxa Inventory. We hope to continue such efforts beginning in late winter and continue through the year. Potential locations for the next few bio-blitzes include Surprise Canyon, Lee Flat, Hunter Mountain, White Top Mountain and Johnson Canyon. The students and faculty at Santa Monica College were so excited to be part of our new ATBI and in finding a new species, that they distributed a press release. Since that time, Melody Hanatani from the Santa Monica Daily Press wrote a front page article describing the excitement of this new find and opportunity for Santa Monica College. As the student's science instructor William Shelby stated such discovery opportunities are typically afforded research universities, not two-year colleges. It is these kind of opportunities that are an important part of ATBIs. The students, instructors, and local population around Santa Monica College now have a personal connection.



The Ultimate Challenge

The Devils Hole pupfish and other southwestern pupfish species have survived numerous challenges. Their ancestors arrived during the Ice Ages from another part of the continent, swimming up rivers and through lakes that no longer exist. The fish were able to take advantage of times when the local climate was cooler and, most importantly for fish, wetter. When the Ice Ages ended and the fishes became marooned in oases surrounded by the desert, only pupfish and a few other species were able to adapt to their new worlds. The fishes that could not adapt died – just like the woolly mammoths.

The Devils Hole pupfish found themselves land-locked in one of the most bizarre and challenging fish habitats imaginable. They live in a natural well formed along an earthquake fault that is pulling apart causing an open-air pit over a portion of the groundwater. The fish live in the smallest habitat for a vertebrate animal known in the world. And, while it looks like a calm fish bowl, looks can be deceptive.

Planetary earthquakes rock Devils Hole. For example, the 2002 Denali, Alaska earthquake that measured 7.9 on the Richter scale caused the water in the Hole to bob up and down 6 feet. A 6.6 magnitude Pakistani earthquake in 2005 caused the water level to fluctuate a few inches... and the 1992 magnitude 7.2 earthquake in Landers, California threw things all over inside Devils Hole.

Devils Hole is also at the bottom of a dry wash that can carry raging flash floods filled with rocks and gravel. Floods dump rocks on the 10 foot by 16 foot (3m x 5 m) shelf area covered by shallow water that is the entire nursery for the pupfish eggs and

young. Disastrous? It turns out that the earthquakes periodically flush the debris off the shelf down Devils Hole – and, the Hole does not fill up with gravel because it is over 500 feet (150 m) deep.

Last but not least, the earth's crust is thin in Nevada. It was stretched from east to west during the last 17 million years, so the water in Devils Hole is 92°F (33°C) – on the upper end of tolerance for fish and fish egg production and maturation. These are tough conditions for an animal that cannot sweat to cool itself and has no other place to go!

In recognition of the fact that Devils Hole is a singularly amazing place, President Truman added it to Death Valley National Monument in 1952. After local groundwater pumping threatened the survival of its pupfish in the 1960s and 1970s, a 1976 United States Supreme Court decision confirmed the importance of its water for maintaining its scientific value and protected the water rights of Devils Hole and its pupfish. Death Valley National Park has continued to monitor Devils Hole's water level and fight for its water rights in the decades since this important decision.

About 10 years ago, the population of the Devils Hole pupfish began to drop for reasons we do not completely understand. Biologists continue to study water quality, genetics, food chains, and other factors in order to discover what is happening and to help the fish. While the level of water over the pupfish nursery is not dropping quickly, due to regional development and related increased use of groundwater, there is a worrisome decline.



Devils Hole Pupfish

In a quest to tease out what has caused the decline, biologists are looking at another possibility... something that is a known environmental difference in the last ten years. Planetary air temperatures have reached record levels for historic times. Could the decline in pupfish breeding success be caused by a decreased amount of nighttime cooling as well as the higher daytime temperatures on the shelf?

Will the biologists unravel the puzzle regarding what is challenging Devils Hole pupfish survival before it is too late? Will the Devils Hole pup-

fish, survivors of earthquakes, floods, and the end of the Ice Ages, survive their current challenge?

Death Valley National Park Fish Biologist Mike Bower says of the Devils Hole pupfish:

“This species, one of the first species listed as Endangered under the Endangered Species Protection Act of 1966, has been declining in abundance in recent times and may, ironically, be attempting to teach us another lesson in sustainability.”

Icon of the Wild Desert

The coyote is the icon of wildness in most desert parks. When we see a coyote eating from peoples hands, roaming picnic areas and waiting along the roadside for handouts, we lose a lot of that wild experience we originally came to the park to enjoy.

Coyotes are both scavengers and predators and—like human beings—would rather take the easy way out. They will eat at any opportunity. When visitors offer food, coyotes will gladly take it. Death Valley National Park is their home; they belong here, but feeding wild animals does not. In fact, it is illegal.

The law is intended to protect park resources and people. Feeding wild animals habituates them to humans and our food. Coyotes lose their natural fear of humans and can become aggressive when food is not forthcoming or if they feel cornered or threatened. This poses a hazard to the visitor. Coyotes can inflict serious bite

wounds and have the potential to carry rabies. Small children and pets could become targets of hungry or angry coyotes. In addition, when a visitor stops in the road to feed or photograph a coyote, both become traffic hazards.

A begging coyote's behavior is not the animals' fault. It is doing what comes easiest, but that is not always the most healthful. YOU are the most important link in solving this problem. Please help us keep our wildlife wild and alive by not feeding any of the wild animals in Death Valley.



Coyote with its natural prey.

Scotty's Castle



A Monument to Friendship

Driving through Grapevine Canyon in northern Death Valley National Park you come upon a Spanish-style home that seems out of place in such a seemingly desolate landscape. You may wonder if you are seeing a desert mirage. But your eyes are not tricking you; this opulent enclave is Death Valley Ranch, better known as Scotty's Castle. Scotty's Castle is more than just a house. Some see the Castle as a monument to a surprising and remarkable friendship between two very different characters.

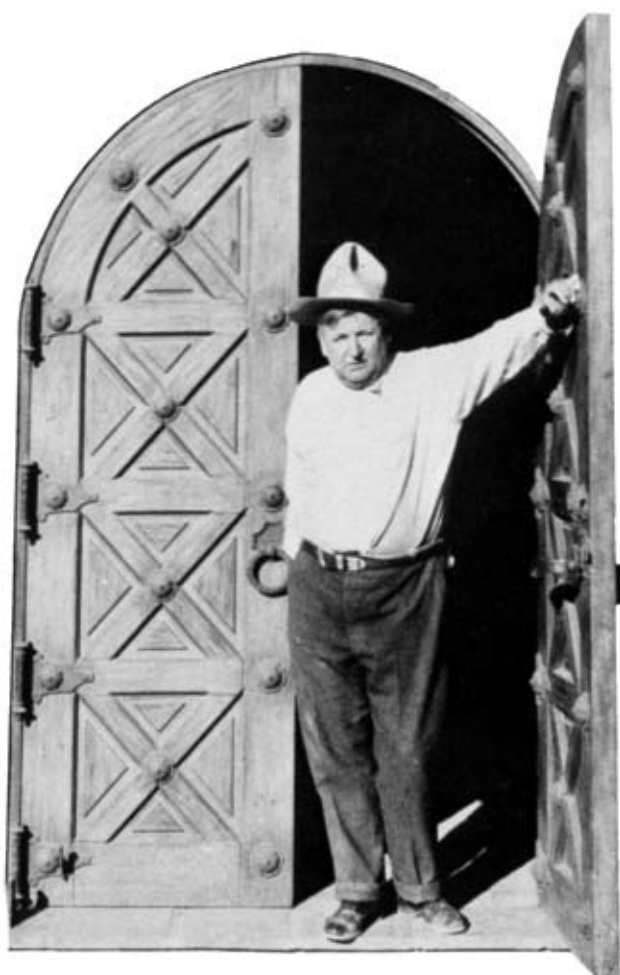
Walter Scott, known to all as Death Valley Scotty, was one of those characters. Scotty's beginnings were humble, hailing from the horse country of

Kentucky. He left school and home at the age of 11 to work on cattle ranches in Nevada with his older brothers. It was then that he first visited Death Valley, which would change both his life and American folklore. Scotty lived the life of a real Western cowboy until he was hired to be a show cowboy in Buffalo Bill's, "Wild West." He performed as a roughrider and sharpshooter with the show for 12 seasons. In 1902 Scotty quit work with Buffalo Bill and returned to Death Valley to become one of the best-loved and most infamous cowboy/con-artists of his day. He fabricated tales of a secret gold mine and convinced several wealthy Eastern businessmen to invest

in his mythical mine. One such investor was Albert M. Johnson, president of the National Life Insurance Company of Chicago.

Albert Johnson was a conservative, strongly religious man—perhaps a surprising man to value friendship with a desert rat like Scotty. Although Albert Johnson grew up in a strict and wealthy Quaker home in Ohio, he loved reading books about the West and dreamt of western adventures. Johnson received an engineering degree from Cornell University but ended up in the insurance business due to a train accident that broke his

Death Valley Scotty 1930



Scotty's Castle

back when he was younger.

Though opposite in their upbringing and lifestyle, Johnson and Scotty shared a love of Death Valley and the pleasure of each other's company. Not only had Scotty lived many of the adventures that Mr. Johnson had read about, he also led Mr. Johnson on some adventures of his own. Like anyone who has ever realized a lifelong dream, Mr. Johnson always appreciated how Scotty helped him realize his childhood fantasies about the west.

In 1905 Johnson visited Death Valley to check on Scotty's gold mine in person only to learn there was no gold mine! While you may have pressed charges if someone stole thousands of dollars of your money, Albert Johnson treasured his friendship with Scotty more than the money he lost. Exploring the desert together, Scotty and Johnson formed a friend-

ship that would last the remainder of their lives.

Albert and his wife Bessie enjoyed repeated visits to Death Valley with Scotty and so they built a vacation home in Grapevine Canyon. They named it Death Valley Ranch but Scotty, ever the publicity hound, told the reporters that Death Valley Ranch was really Scotty's Castle. Albert Johnson thoroughly enjoyed Scotty's antics, stories, claims and deceptions. When Albert Johnson was asked why he supported Scotty and why he allowed Scotty to claim the Castle as his own, his reply was always the same: "Scotty repays me in laughs." The Castle is a monument to their friendship; Albert Johnson and Death Valley Scotty had a unique partnership where friendship and a good story trumped the importance of money and truth.



Scotty's Castle Tours

Tour Fees

Adults.....	\$11
Age 62 or over.....	\$9
Adults with a disability.....	\$6
Children (6-15 years).....	\$6
Children under 5.....	free

Lower Vine Ranch Tours..... \$15

- Save \$2 by buying tickets to both types of tours during your visit.
- Hours of operation for Scotty's Castle and grounds vary seasonally. Contact the Castle at 760-786-2392 for current hours.
- Be sure to bring your flash cameras. Backpacks, tripods, water bottles, and food items are not allowed inside the Castle.
- Tickets are sold first come, first served. Large groups are recommended to make reservations.

Living History Tour

- 50-minute tour of the interior of the main house and annex.
- Offered each hour from May to October and more frequently from November to April.
- ADA accessible.

A trip through Scotty's Castle is a memorable part of any visit to Death Valley. Living History Tours are led by park rangers dressed in 1930s attire who take visitors back to the year 1939 at the Castle. Visitors will see intricate details of the iron-work and hand-carved redwood and experience the opulently furnished rooms including the Upper Music Room where they are treated to the sounds of a 1,121 pipe theater organ.

Underground Mystery Tour

- 50-minute tour of the Castle's basement, tunnels and Pelton waterwheel.
- Usually offered five times daily from October to April.
- This tour is not ADA accessible.

Underground Mystery Tours introduce visitors to the Castle's technological mystery of self sufficiency and comfort. Most visitors are in awe of what lies beneath the Castle. Guided by a uniformed ranger, the tour takes visitors into the Castle basement, through a maze of tunnels, and into the Powerhouse where rangers demonstrate the Castle's historic hydroelectric power system, which provided residents with contemporary amenities and comfort.

Underground Mystery Tours are an interesting alternative for visitors who have already attended a living history Castle tour. For the first time visitor, combining both tours makes for a complete Castle experience.

Lower Vine Ranch Tour

- 2½-hour, 2-miles round trip hike and tour of Death Valley Scotty's true home. not recommended for those with difficulty walking.
- Offered occasionally from November to April. See Ranger Programs list for times.
- Reservations recommended. Call (760) 786-2392 ext.226
- This tour is not ADA accessible.

Though long-closed to protect fragile cultural resources, visitors now have the opportunity to join a ranger-led hike and visit Death Valley Scotty's true home. Approximately eight miles from the elegant Castle, Albert Johnson built Scotty a simple, wooden cabin at the Lower Vine Ranch. Scotty called this ranch his home for over twenty years. He traveled up to the Castle to spin stories, visit his friends, and wash his laundry. A visit to Lower Vine Ranch reveals a more private side of the enigmatic prospector, storyteller, and swindler.

Plan Your Trip



The Best Time to Visit

Death Valley National Park is usually considered a winter park, but it is possible to visit here all year. When is the best time to visit? It all depends on what you're looking for.

- **Autumn** arrives in late October, with warm but pleasant temperatures and generally clear skies. The camping season begins in fall and so do the Ranger Programs, which continue through spring. Although it is relatively uncrowded at this time of year, the weeks leading up to Death Valley '49ers Encampment (second week in November) and the Thanksgiving holiday are busy.
- **Winter** has cool days, chilly nights and rarely, rainstorms. With snow capping the high peaks and low angled winter light, this season is especially beautiful for exploring the valley. The period after Thanks-

giving and before Christmas is the least crowded time of the entire year. Peak winter visitation periods include Christmas to New Year's, Martin Luther King Day weekend in January, and Presidents' Day weekend in February. Reservations will be helpful.

- **Springtime** is the most popular time to visit Death Valley. Besides warm and sunny days, the possibility of spring wildflowers is a big attraction. If the previous winter brought rain, the desert can put on an impressive floral display, usually peaking in late March to early April. Check our website for wildflower updates. Spring break for schools throughout the west brings families and students to the park from the last week of March through the week after Easter. Campgrounds

and lodging are usually packed at that time, so reservations are recommended.

- **Summer** starts early in Death Valley. By May the valley is too hot for most visitors, yet throughout the hottest months, visitors from around the world still flock to the park. Lodging and camping are available, but only the most hardy will want to camp in the low elevations in the summer. Most summer visitors tour by car to the main points of interest along the paved roads but do little else due to the extreme heat. Those wanting to hike will find the trails to Telescope and Wildrose Peaks are at their best in summer, but it is best to wait until autumn for most other hikes.

Temperatures

	Average Max	Average Min
January	65°F / 18°C	39°F / 4°C
February	72°F / 22°C	46°F / 8°C
March	80°F / 27°C	53°F / 12°C
April	90°F / 32°C	62°F / 17°C
May	99°F / 37°C	71°F / 22°C
June	109°F / 43°C	80°F / 27°C
July	115°F / 46°C	88°F / 31°C
August	113°F / 45°C	85°F / 29°C
September	106°F / 41°C	75°F / 24°C
October	92°F / 33°C	62°F / 16°C
November	76°F / 24°C	48°F / 9°C
December	65°F / 19°C	39°F / 4°C

- Record High: 134°F / 57°C July 1913
 - Record Low: 15°F / -9°C January 1913
- The official weather station is at Furnace Creek.



Useful Books & Maps

The Death Valley Natural History Association is a non-profit organization dedicated to providing visitors to Death Valley National Park with a quality educational experience. These suggested offerings from our publications were chosen to help you plan your visit and make the most of the time you spend in Death Valley. Prices may change without notice.

- ▶ **A Traveler's Guide to Death Valley National Park** (Lawson) Beautiful color photographs, informative text and maps organized into chapters describing areas of the park to visit in one day. 42 pages. \$8.95
- ▶ **Death Valley National Park: An Interpretive History** (Cornett) Filled with historic and professional photos, this guide provides a colorful introduction to this magnificent park and its history. Includes visitor tips, over-view map and park facts. 48 pages. \$7.95
- ▶ **Best Easy Day Hikes: Death Valley** (Cunningham & Burke) Includes concise descriptions and simple maps of 23 short, easy-to-follow routes within the park. 120 pages. \$6.95
- ▶ **Hiking Death Valley: A Guide to its Natural Wonders and Mining Past** (Digonnet) A comprehensive guidebook providing 280 hiking/driving destinations ranging from easy day hikes to multiple-day treks. 542 pages. \$19.95
- ▶ **Death Valley SUV Trails** (Mitchell) This is a four-wheeler's guide to 46 interesting back road excursions in the greater Death Valley Region. 314 pages. \$19.95
- ▶ **Death Valley National Park Guide Map** (Automobile Club of Southern California) A detailed map including points of interest, lodging and restaurants, campgrounds and services with descriptions. \$4.95
- ▶ **Death Valley National Park Map** (Trails Illustrated-National Geographic Maps) Waterproof, tearproof, 100% plastic topographic map. Included backcountry road descriptions, trails/routes, and safety tips. \$9.95

Death Valley Natural History Association



P.O. Box 188
Death Valley, CA 92328
1-800-478-8564
www.dvnha.org

Badwater & Telescope Peak

Nearby National Park Areas

Devils Postpile National Monument
760-934-2289
www.nps.gov/depo

Joshua Tree National Park
760-367-5500
www.nps.gov/jotr

Manzanar National Historic Site
760-878-2932
www.nps.gov/manz

Mojave National Preserve
760-252-6101
www.nps.gov/moja

Sequoia-Kings Canyon Nat'l. Parks
559-565-3341
www.nps.gov/seki

Yosemite National Park
209-372-0200
www.nps.gov/yose

Bryce Canyon National Park
435-834-5322
www.nps.gov/bzca

Cedar Breaks National Monument
435-586-9451
www.nps.gov/cebr

Zion National Park
435-772-3256
www.nps.gov/zion

Lake Mead National Recreation Area
702-293-8990
www.nps.gov/lame

Grand Canyon National Park
928-638-7888
www.nps.gov/grca

Great Basin National Park
775-234-7331
www.nps.gov/grba

Visitor Services



Furnace Creek Visitor Center

(760) 786-3200

The Visitor Center is operated by the National Park Service. The Death Valley Natural History Association operates the bookstore.

- Information
- Ranger Talks
- Orientation Programs
- Museum
- Auditorium
- free Wi-Fi
- Bookstore
- Campgrounds

Furnace Creek Inn & Ranch Resorts

(760) 786-2345

Furnace Creek Inn & Ranch is privately owned and managed by Xanterra Parks & Resorts.

- Historic Hotel
- ATM
- Post Office
- Carriage Rides
- Motel
- Gas Station
- Showers
- Borax Museum
- Restaurants
- Diesel
- Laundromat
- Golf Course
- Bars
- Propane
- Swimming Pool
- Tennis Courts
- General Store
- Tire Repair
- Horse Rides
- Paved Airstrip
- Gift Shops
- Towing

Scotty's Castle

(760) 786-2392

Scotty's Castle is operated by the National Park Service. The concession is operated and managed by Xanterra Parks & Resorts.

- Daily Tours
- Museum
- Gift Shop
- Trails
- Bookstore
- Snack Bar

Stovepipe Wells Village

(760) 786-2387

Stovepipe Wells Village is a park concession, operated and managed by Xanterra Parks & Resorts.

- Motel
- Convenience Store
- Showers
- Campground
- Restaurant
- Gas Station
- Swimming Pool
- Ranger Station
- Bar
- ATM
- RV Hook-ups
- Paved Airstrip
- Gift Shop

Panamint Springs Resort

(775) 482-7680

Panamint Springs Resort is privately owned and operated.

- Motel
- Gas Station
- Showers
- Restaurant
- Campground
- Bar
- RV Hook-ups

Medical Services

Amargosa Clinic
858 Farm Road
Amargosa Valley, NV
(775)372-5432

Death Valley Health Clinic
Hwy 127
Shoshone, CA
(760) 852-4383

Beatty Clinic
350 S. Irving St.
Beatty, NV
(775) 553-2208

Nye General Hospital
825 W Main
Tonopah, NV
(775) 482-6233

Desert View Regional Hospital
360 S. Lola Ave.
Pahrump, NV
(775) 751-7500

Southern Inyo Hospital
501 E. Locust
Lone Pine, CA
(760) 876-5501

