



# Joshua Tree Guide

A Planning Guide for Visitors  
to Joshua Tree National Park  
Spring, 2004

## Let's Celebrate!

*Climb the mountains and get their good tidings; Nature's peace  
will flow into you as sunshine into flowers....*

~ John Muir

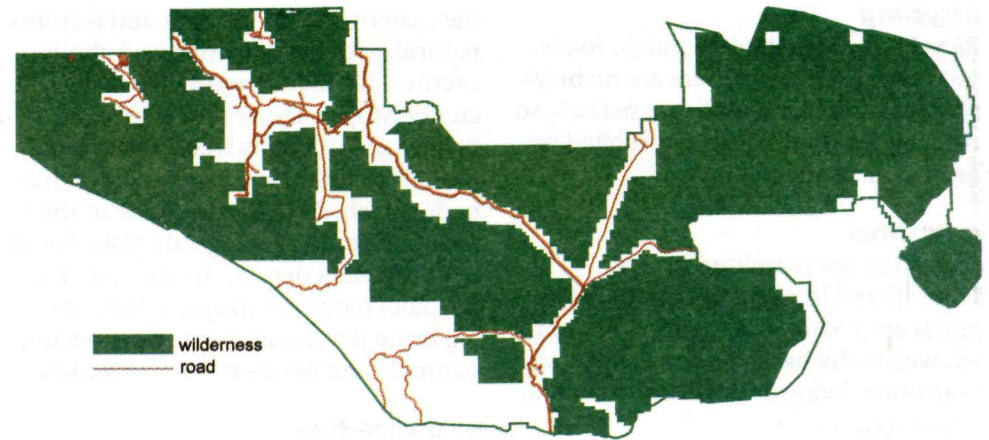
It is time to celebrate four decades of wilderness preservation, to evaluate the condition of our wilderness system, and to imagine where the next 40 years will take us.

On September 3, 1964, Congress passed one of the most significant conservation laws of the last century: "In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States...it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness."

So what is wilderness anyway? Ultimately we must each define it for ourselves, for it exists in the mind as much as on a map. The Wilderness Act describes it as a place where nature prevails and where humans don't interfere with natural processes. Characterized by clean water, clean air, habitat for wildlife, and scenic beauty unmarred by human invention, wilderness is the place where we harried urbanites can go to experience natural quiet, solitude, and open space. As John Muir said, "Everybody needs beauty as well as bread, places to play in and pray in, where nature may heal and give strength to body and soul."

Just like the idea of "national parks," wilderness preservation is an American idea. The Wilderness Act was the culmination of many years of collaboration among conservation groups and Congress that established a new standard of land conservation. And that standard has spread from its American roots to other nations: Australia, New Zealand, Canada, Finland, Sri Lanka, the former Soviet Union, and South Africa, for example, have also legislatively protected wilderness. Although not enacting wilderness legislation, Italy, Zimbabwe, Namibia, and the Philippines have declared wilderness zones in public parks, municipal watersheds, game reserves, and forests.

The National Wilderness Preservation System that was created by the Wilderness Act currently consists of over 105 million acres of federal public lands or 4.5 percent of the United States. Only Connecticut, Delaware, Iowa, Kansas, Maryland, and Rhode Island have no wilderness areas. The National Park Service manages over 40 percent of the National Wilderness Preservation System, and over 50 percent of National Park Service lands are designated as wilderness. (Joshua



Joshua Tree National Park Wilderness

Tree National Park embraces 585,000 acres of wilderness.) The U.S. Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service manage the remaining 60 percent of U.S. wilderness areas.

Wilderness, however, has not always been valued. For most of the history of this country nature has been viewed as, if not something to be feared as uncivilized and threatening, at the very least as a commodity to be utilized and consumed. So how has wilderness emerged over the decades to become appreciated and in some cases preserved?

**1500-1700** Explorers and colonists advanced into a temperate and wild land inhabited by indigenous peoples and abundant animal life. North America's wilderness was seen as a place to be tamed and utilized.

*Why remain in England and suffer a whole Continent to lie waste without any improvement.*

~ John Winthrop, defending his decision to settle in the New World.

**1700-1800** Fur trappers, mountain men, and explorers pushed the frontier boundary westward as civilization consumed the limited natural resources of the original settlements.

*Thus we behold Kentucky, lately an howling wilderness, the habitation of savages and wild beasts, become a fruitful field; this region, so favourably distinguished by nature, now become the habitation of civilization....*

~Daniel Boone, *The Adventures of Daniel Boone*, 1784

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JOSHUA TREE NATIONAL PARK  
74485 NATIONAL PARK DRIVE  
TWENTYNINE PALMS, CA 92277



## Important information

### accessibility

The nature trails at Bajada, Cap Rock, and the Oasis of Mara are accessible. Assistive listening systems and sign-language interpreters are available for some programs with prior notice.

### all terrain vehicles

ATVs may not be used in the park.

### bicycling

Bicycling is permitted on public roads, both paved and dirt. There are no bicycle paths and many roads are narrow, so ride cautiously. Bikes are prohibited on backcountry and nature trails.

### campfires

Campfires are permitted in campgrounds and in picnic areas where fire grates are provided. Campfires are not allowed in the backcountry. Collecting vegetation, living or dead, is prohibited, so bring firewood.

### climate

Days are typically clear with less than 25 percent humidity. Temperatures are most comfortable in the spring and fall, with an average high/low of 85°F and 50°F respectively. Winter brings cooler days, around 60°F, and freezing nights. It occasionally snows at higher elevations. Summers are hot, over—sometimes well over—100°F during the day and not cooling much below 75°F until the early hours of the morning.

### commercial filming

When filming or photography involves advertising a product or service, the use of models, sets, props, or the use of a restricted site, a film permit is required.

### day-use and restricted areas

Some areas within the park are privately owned; others protect wildlife or historical sites. Entering these areas is prohibited. Day-use areas are set aside to protect sensitive populations of wildlife. They are closed from dusk to dawn.

### dehydration

It is easy to become dehydrated in arid desert environments. Even if you only plan to drive through the park, you should have some water with you. If you are going to camp, we recommend one gallon of water per person per day. If you are going to be hiking or biking, you will want to take along two gallons per person. Drink the water and do not economize. When the water is half gone, it is time to turn back.

### emergency phones

In an emergency call San Bernardino Dispatch at 909-383-5651. Call collect. Pay phones are located at the visitor center in Twentynine Palms and at Black Rock Campground. You can find pay phones in the town of Joshua Tree and at Chiriaco Summit (12 miles southeast of Cottonwood). Emergency-

only phones are located at the Indian Cove ranger station and at Intersection Rock parking area.

### environment

Two deserts, two large ecosystems whose characteristics are determined primarily by elevation, come together at Joshua Tree National Park. Below 3,000 feet, the Colorado Desert encompasses the eastern part of the park and features natural gardens of ocotillo and cholla cactus. The higher, moister, and slightly cooler Mojave Desert is the special habitat of the Joshua tree. Joshua tree forests occur in the western half of the park, which also includes some of the most interesting geologic displays found in California's deserts. In addition, five fan palm oases dot the park, indicating those few areas where water occurs naturally and where wildlife abounds.

### entrance fees

Admission to the park is \$10 per vehicle and is good for seven consecutive days. A Joshua Tree Pass may be purchased for \$25 and a National Parks Pass, which is good for all National Park Service sites, costs \$50. Both are good for 12 months. A Golden Age Pass may be purchased by any U.S. citizen 62 or older for \$10, and it is good for life.

### firearms and weapons

Firearms, including fireworks, traps, bows, BB guns, paint-ball guns, and slingshots are not allowed in the park.

### food, lodging, services

There are no concessions within the park. However, surrounding communities can fulfill most visitor needs. Contact local chambers of commerce for information. Their telephone numbers and web addresses are listed on page six of this publication.

### getting to the park

The park is located about 140 miles east of Los Angeles via I-10. Entrances to the park are located off CA HWY 62 (Twentynine Palms Highway), at the towns of Joshua Tree and Twentynine Palms. A third entrance is located about 25 miles east of Indio off I-10.

### horses

Horseback riding is a popular way to experience the park. Because of the special requirements for stock in desert areas, you will want to request the site bulletin on horse use before you come.

### international visitors

Park information is available at visitor centers and entrance stations in Dutch, French, German, Italian, Japanese, and Spanish.

### keep wildlife wild

Feeding coyotes, squirrels, and other animals weans them from their natural food supplies, causes overpopulation,

and turns them into aggressive creatures as they lose their fear of humans.

### leave no trace

During your visit please pick up trash around campgrounds and trails. Your actions will inspire other park visitors.

### lost & found

Report lost, and turn in found, items at any visitor center or ranger station. Lost articles will be returned if found.

### off-road driving

Vehicles, including bicycles, are prohibited off established roads. The desert ecosystem is fragile. Off-road driving and riding creates ruts, upsetting delicate drainage patterns, compacting the soil, and leaving visual scars for years. Plants are crushed and uprooted. Wildlife shelters are destroyed, and food and water supplies are altered or obliterated.

### parking

Park roads, even the paved roads, are narrow, winding, and have soft, sandy shoulders. Accidents occur when visitors stop along the road to admire a view or make a picture. There are many pullouts and parking lots, so wait until you get to one before stopping.

### pets

While pets are allowed in the park, their activities are restricted. They must be on a leash at all times and cannot be more than 150 feet from a road, picnic area, or campground; they are prohibited from trails, and they must never be left unattended—not even in a vehicle.

### potable water

Water is available at the visitor center in Twentynine Palms, at Black Rock and Cottonwood campgrounds, at the entrance station south of Joshua Tree, and at the Indian Cove ranger station.

### rock climbing

Climbers may replace existing unsafe bolts, and new bolts may be placed in non-wilderness areas using the bolting checklist. Bolting in wilderness requires a permit. Bolting checklists and permit applications are available at entrance stations and visitor centers.

### stay out and stay alive

Mining was an important activity in this area and numerous mining sites can be found within the park. If you choose to visit them, use extreme caution and do not enter old mine workings.

### take only pictures

Over 1.25 million people visit Joshua Tree National Park each year. If each visitor took only one rock or one branch from a bush, the park, our national heritage, would soon be gone. Removal, disturbance, destruction, or disfigurement of anything in the park is unlawful.

### trash

Our dry desert climate cannot quickly decompose such things as orange peels, apple cores, egg shells, and other picnic remains. Loose paper blows into bushes creating an unsightly mess, and plastic six-pack rings can strangle wildlife. Dispose of your trash in a responsible manner and recycle whatever you can.

### vehicle laws

Park roads are narrow and winding. Some areas are congested. Speed limits are there for your safety and well-being. State and federal vehicle laws apply within the park.

### visitor activities

Ranger-led programs are offered on the weekends from mid-October through mid-December and from mid-February through May. Check at visitor centers, at entrance stations, and on campground bulletin boards for a current schedule.

### visitor centers

The park's main visitor center is located at the Oasis of Mara in Twentynine Palms. It is open 8 a.m. to 5 p.m. The Cottonwood Visitor Center is open from 8 a.m. to 4 p.m. Books, videos, maps, and related items are available, as well as cultural and natural history exhibits, and park rangers to answer your questions. wildflowers  
Spring blooming periods vary with elevation, temperature, and the amount of moisture in the soil. You can get current information by calling the park.

### wildlife viewing

It is a thrill to see wild animals in the park, but remember: this is their home and they should not be disturbed. This includes the use of artificial light for viewing them.

### world wide web

If you are "connected," check out the National Park Service publications on the web at [www.nps.gov](http://www.nps.gov). We are adding more information all the time. For information about other desert attractions in California, surf over to [www.californiadesert.gov](http://www.californiadesert.gov).

### you are responsible

You are responsible for knowing and obeying park rules. Check at visitor centers, at entrance stations, and on bulletin boards to find out what they are. When in doubt, ask a ranger.



Let's Celebrate continued from page 1

**1800 - 1850** Romanticism in art and literature changed perceptions of nature. Those distanced from the western frontier began to reflect on the human relationship to nature.

*There is a pleasure in the pathless woods, There is a rapture on the lonely shore. There is society where none intrudes...I love not man the less, but nature more....*

~Lord Byron, *Apostrophe to the Ocean*, 1816

**1850 - 1900** As the American frontier surrendered to human settlement, civilization displaced wildlife and American Indians.

*Do not ask us to give up the buffalo for the sheep.*

~Chief Ten Bears, Comanche, in a speech at the Medicine Lodge Council, 1867

**1900 - 1950** The Antiquities Act allowed U.S. Presidents to proclaim national monuments and the National Park System was established. It was an era of ardent battles for wilderness preservation.

*The tendency nowadays to wander in wilderness is delightful to see. Thousands of tired, over-civilized people are beginning to find out that going to the mountains is going home; that wildness is a necessity; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but fountains of life.*

~John Muir, *Our National Parks*, 1901

**1950 - 2000** Public awareness, activism, and conservation efforts led to landmark environmental legislation including the Wilderness Act.

*Without wilderness, we will eventually lose the capacity to understand America. Our drive, our ruggedness, our unquenchable optimism, zeal, and elan go back to the challenges of the untrammelled wilderness. Britain won its wars on the playing fields of Eton. America developed its mettle at the muddy gaps of the Cumberlands, in the swift rapids of its rivers, on the limitless reaches of its western plains, in the silent vastness of primeval forests, and in the blizzard-ridden passes of the Rockies and Coast ranges. If we lose wilderness, we lose forever the knowledge of what the world was and what it might, with understanding and loving husbandry, yet become.*

~Harvey Broome, co-founder, The Wilderness Society

This anniversary year provides an opportunity to reflect on your connection to wild places. In our rapidly changing world with increasing development, it is important that we remain connected to Earth and its community of life. Wilderness illustrates our nation's values, character, and experience and contributes to the development of a shared national identity that unites an increasingly diverse population. And finally, wilderness is part of the American legacy that we will leave to future generations.

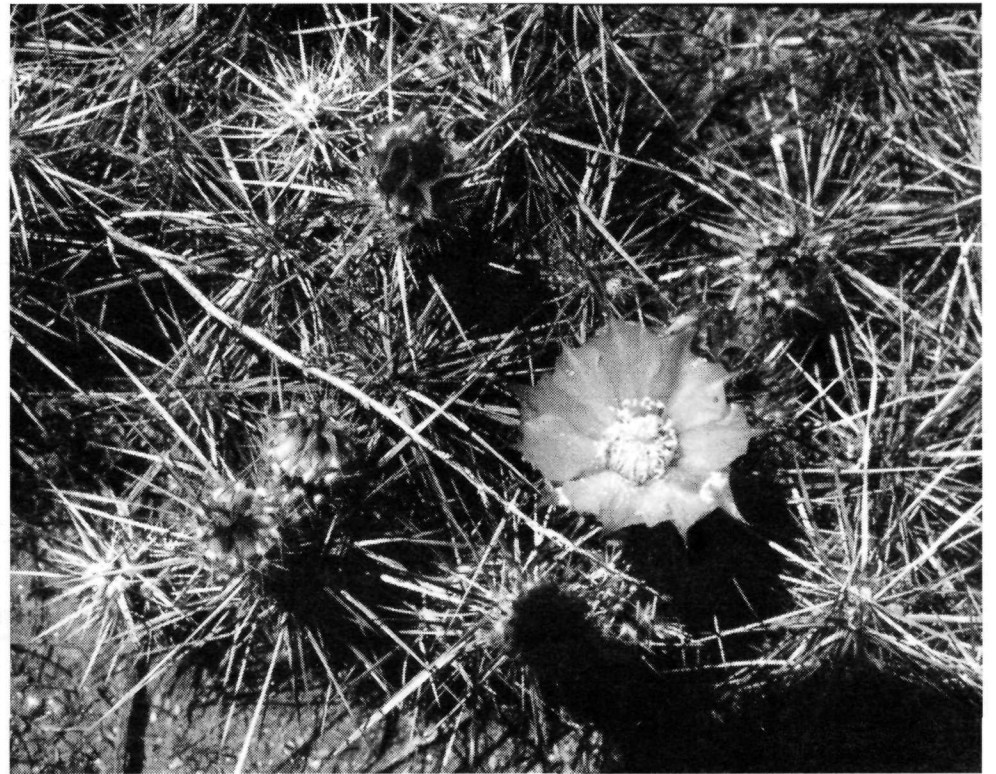
## New Camping Fees

On February 17, 2004 the National Park Service (NPS) began charging \$5.00 per campsite at Belle, Hidden Valley, Jumbo Rocks, Ryan, and White Tank campgrounds. Campers are required to fill out a "fee envelope," enclose their campground fee, and place the envelope in an "iron ranger." Campers should place the stub from their fee envelope on their vehicle's dashboard so it can be clearly seen by rangers in the campgrounds.

Golden Age and Golden Access pass holders will receive a 50 percent discount for the site they occupy but National Park Pass and Golden Eagle pass holders will not qualify for the discount. Fees may be paid by cash, check, or travelers check in U. S. currency. Change will be unavailable and refunds will not be made for overpayments or early departures.

Site availability is still first-come, first-served. The October through May, 14-day camping limit (the 14-day limit is for a total of 14 days of camping in one or more campgrounds) continues to be in effect, as is the maximum of six people, three tents, and two vehicles per campsite.

## When Dead Cactus Bloom



"I'm going to see if the dead cactus are blooming. Want to come with me?"

"Can't it wait until evening when it's a bit cooler? It is after all the middle of July, 102 degrees Fahrenheit, and nearly time for lunch! Even if this dead cactus blooms in summer, everyone knows the best times to see fresh blooms are mornings and evenings."

"It's now or not at all. There will be no bloom this evening. So let's be off to Queen Valley on the southern edge of the Mojave Desert and I'll tell you about the dead cactus as we travel.

"The formal name of the plant we seek is *Opuntia parishii*, Opuntia for the genus or kind of cactus and parishii, in honor of the man who discovered and classified it. At the turn of the century, before roads and air conditioning, S. B. Parish mounted arduous biological expeditions into the deserts of southern California and was rewarded by having many plants named for him, including 12 that grow in Joshua Tree National Park.

The common names for *Opuntia parishii*: dead cactus, devil cactus, club cholla, mat cholla, horse crippler, and leather sticker reveal a lot about its character. A single plant may cover a quarter of an acre with a two-inch thick mat of horizontal joints. The joints send down roots and sprout spines tough enough to pierce leather. Sometime in late winter, a joint is produced perpendicular to the joint node that occurs every two to three inches along the plant. This juvenile sports a bright green skin and red spines. Anyone not

acquainted with the vagaries of the breed would expect blooms to develop soon. Alas, spring fades, the bright blush of youth turns the ashen gray of age, the desert heats, and summer follows spring.

And that is when the dead cactus produces another protuberance. This one is more slender than the joint, covered with spirals of small yellow spines, and topped with a pink conical cap. For two weeks it will wax fuller and riper in the morning and wane into the desiccated finger of a ripened seed chamber in the evening.

"But not today, today is bloom day and here they are.

"Hey, you were right! The petals are open and are they pretty!"

"Yes, the colors vary from buttercup yellow to greenish gold."

Oh, look inside! Tiny wasps, beetles, and flies are already crawling amidst the bounty."

"Have you noticed that as the petals fully open, and begin to close again, they deepen in color to burnished copper?"

"Do you believe it? We've been here less than four hours and the show is all over."

"That's right, if we had come this morning and again this evening, we would have noticed little change."

"I guess that is the way of the desert."

by Fee Collector Gloria Gillette

## Campgrounds

Campgrounds	Elevation	Sites	Group Fee	Group Sites	Horse Camp	Water	Flush Toilets	Chemical Toilets	Tables	Fire Grates	Dump Station	Camping Regulations
Belle	3800'	18	(\$5 as of 2/17)					*	*	*		<p>There is a 30-day camping limit each year. However, only 14 nights total may occur from October through May.</p> <p>Campsites are limited to six people, three tents, and two cars. Group sites accommodate ten to seventy people.</p> <p>Obtain reservations for sites at Black Rock, Indian Cove, and all group sites by calling 1-800-365-2267. Other campgrounds are first-come, first-served. Camp only in designated campsites.</p> <p>There are no hookups for recreational vehicles.</p> <p>Water is available at Oasis Visitor Center, Indian Cove Ranger Station, West Entrance, and Black Rock and Cottonwood campgrounds. Showers are not available.</p> <p>All vegetation in the park is protected. If you want to make a campfire, bring your own firewood.</p> <p>Quiet hours are from 10 p.m. to 6 a.m. Generator use is limited to six hours a day: 7 to 9 a.m., noon to 2 p.m., and 5 to 7 p.m.</p>
Black Rock	4000'	100	\$10		\$10	*	*		*	*	*	
Cottonwood	3000'	62	\$10	3	\$25	*	*		*	*	*	
Hidden Valley	4200'	45	(\$5 as of 2/17)					*	*	*		
Indian Cove	3200'	101	\$10	13	\$20/35			*	*	*		
Jumbo Rocks	4400'	125	(\$5 as of 2/17)					*	*	*		
Ryan	4300'	31	(\$5 as of 2/17)			*		*	*	*		
Sheep Pass	4500'			6	\$20/35			*	*	*		
White Tank	3800'	15	(\$5 as of 2/17)					*	*	*		

Be an inspiration to others; leave your campsite cleaner than you found it.

## What To See and Do

Viewed from the road the desert may appear bleak and drab. Closer examination reveals a fascinating variety of plants and animals and surreal geologic features. Joshua Tree National Park offers visitors endless opportunities for exploration and discovery. Depending on the number of hours you have to spend, your interests and energy, here are some ideas to consider:

**IF YOU HAVE FOUR HOURS OR LESS**, begin your tour at a park visitor center. Park staff will be happy to provide you with current information about conditions in the park as well as answers to your questions.

With limited time you may want to confine your sightseeing to the main park roads. Many pullouts with wayside exhibits dot these roads. A list of nature trails and short walks appears in this publication. Consider experiencing at least one of these walks during a short park visit.

On clear days the vista from Keys View extends beyond Salton Sea to Mexico and is well worth the additional 20-minute drive.

**IF YOU PLAN TO SPEND AN ENTIRE DAY**, there will be time to walk several nature trails or take a longer hike; several are listed on page 7 of this publication. A ranger-led program will add enjoyment and understanding to your visit. Check at visitor centers and on campground bulletin boards for listings. Or, call ahead and reserve a spot on the popular Desert Queen Ranch guided walking tour.

Some visitors like to experience the desert from the seat of a mountain bike. The park offers an extensive network of dirt roads that make for less crowded and safer cycling than the paved main roads. A selection of road trips is included in the article titled Backcountry Roads in this publication.

Joshua Tree has gained international attention as a superb rock-climbing area. Many visitors enjoy watching the rock climbers in action.

**WITH MORE THAN ONE DAY IN THE PARK**, your options increase. There are nine campgrounds and backcountry camping is permitted. You will find information concerning camping and backcountry use elsewhere in this publication.

Books and topographic maps give information needed for longer hikes. For "peak baggers," the park has ten mountains over 5,000 feet (1,524 m) in elevation. Or make it your goal to hike to all the park oases. Other trails lead you to remnants of the gold mining era, a colorful part of the park's cultural history.

Whatever you choose, your time will be rewarding. The desert holds much more than what is readily apparent to the casual observer. A NOTE OF CAUTION: The desert, fascinating as it is, can be life-threatening for those unfamiliar with its potential dangers. It is essential that you carry water with you—even if you are only driving through. Cars break down; keys get locked inside; accidents happen.

## Backcountry Roads

for mountain bikes and 4-wheel drive vehicles

Mountain bikes and 4-wheel drive vehicles are welcome in the park. For your own safety and for the protection of natural features, stay on established roads. Tire tracks on the open desert can last for years and will spoil the wilderness experience of future hikers.

Paved roads in the park are narrow with soft shoulders. Curves, boulder piles, and Joshua trees restrict the vision of bikers and motorists. The unpaved roads in the park are safer for bikes and offer many opportunities to explore the area. Here is a sampling:

### Pinkham Canyon Road

This challenging 20-mile (32.4-km) road begins at Cottonwood Visitor Center, travels along Smoke Tree Wash, and then cuts down Pinkham Canyon. Sections of the road run through soft sand and rocky flood plains. The road connects to a service road next to I-10.

### Black Eagle Mine Road

Beginning 6.5 miles (10.5 km) north of Cottonwood Visitor Center, this dead-end dirt road runs along the edge of Pinto Basin, crosses several dry washes, and winds through canyons in the Eagle Mountains. The first nine miles (14.5 km) are within the park boundary. Beyond that point is Bureau of Land Management land and a number of side roads. Several old mines are located near these roads. Use extreme caution when exploring old mines.

### Old Dale Road

This 23-mile (37.3 km) road starts at the same point as Black Eagle Mine Road. The first 11 miles (17.8 km), cross Pinto Basin, a flat, sandy dry lake bed. Leaving the basin, the road climbs a steep

hill, then crosses the park boundary. A number of side roads veer off toward old mines and residences. The main road leads to CA HWY 62, 15 miles (24.3 km) east of Twentynine Palms.

### Queen Valley Roads

A network of roads, totaling 13.4 miles (21.7 km), crosses this valley of boulder piles and Joshua trees. A bike trip can begin at Hidden Valley or the dirt road opposite Geology Tour Road. Bike racks have been placed in this area so visitors can lock their bikes and go hiking.

### Geology Tour Road

An 18-mile motor tour leads through one of the park's most fascinating landscapes. The road turns south from the paved road two miles (3.2 km) west of Jumbo Rocks Campground. There are 16 stops and it takes approximately two hours to make the round trip. The distance from the junction to Squaw Tank is 5.4 miles (8.8 km). This section is mostly downhill but bumpy and sandy. Starting at Squaw Tank, a 6-mile (9.7 km) circular route explores Pleasant Valley. A descriptive brochure that highlights each stop is available at the beginning of the road.

### Covington Flats

The dirt roads in Covington Flats offer access to some of the park's largest Joshua trees, junipers, and pinyon pines. From Covington Flats picnic area to Eureka Peak is 3.8 miles (6.2 km) one way. The dirt road is steep near the end, but the top offers views of Palm Springs, the surrounding mountains, and the Morongo Basin. Your trip will be 6.5 miles (10.5 km) longer if you ride or drive over to the backcountry board, a starting point for excellent hiking.



## BACKCOUNTRY CAMPING, HIKING, *and* HORSEBACK RIDING

Joshua Tree National Park is a back-packer's dream with its mild winter climate and interesting rock formations, plants, and wildlife. It embraces 794,000 acres of which 585,040 acres have been designated wilderness. By observing the guidelines below, your venture into the backcountry should be safe and enjoyable. If you have questions, ask a ranger. It is your responsibility to know and abide by park regulations.

### Registering

If you will be out overnight, register at a backcountry board. The map in this publication indicates the location of the twelve backcountry boards. An unregistered vehicle or a vehicle left overnight somewhere other than at a backcountry board is a cause for concern about the safety of the vehicle's occupants. It is also subject to citation and towing.

### Hiking

It is easy to get disoriented in the desert: washes and animal trails criss-cross the terrain obscuring trails, boulder piles are confusingly similar, and there are not many prominent features by which to guide yourself. Do get yourself a topographic map and compass or GPS unit and learn how to use them before you head out. Cell phones are often not usable inside the park.

Know your limitations and don't take risks. You should not attempt to climb steep terrain without adequate equipment, conditioning, and training. Accidents can be fatal.

Carry a minimum of one gallon of water per person per day just for drinking, two gallons in hot weather or if you are planning a strenuous trip. You will need additional water for cooking and hygiene.

And don't forget the other essentials: rain protection, a flashlight, a mirror and whistle, a first-aid kit, pencil and paper, a pocket knife, and extra food.

### Locating your camp

Your wilderness camp must be located one mile from the road and 500 feet from any trail. Make yourself aware of any day-use areas in the vicinity (they are indicated on the topo maps at the backcountry boards) and make certain to camp outside their boundaries.

Washes may seem inviting places to sleep because they are relatively level, but it is important to realize that they got that way because flash floods "bulldozed" the rocks and vegetation out of the way.

### Domestic issues

Water sources in the park are not potable and are reserved for wildlife, so you will have to carry in an adequate supply for drinking, cooking, and hygiene. You will want to give some thought to the trade-off between the water required to hydrate dried foods and the heftier weight of canned and fresh foods. If you want to heat something you will need to pack in a stove and fuel as open fires are prohibited in the backcountry.

Bring plastic bags to hold your garbage and pack it out. Buried trash gets dug up by animals and scattered by the wind; it is not a pretty sight. Do bury human waste in "cat" holes six inches deep. Don't bury your toilet paper; put it in plastic (zip-locks work nicely) and pack it out. Leave no trace, as they say.

### Coping with the weather

That old desert sun can damage eyes as well as skin. Wear a hat and sunglasses and use sun-blocking lotion liberally.

Temperature changes of 40 degrees within 24 hours are common. Bring a variety of clothes so you can layer on and off as conditions change.

Although rain is relatively rare in the desert, when it does come it can really pour down. Even when it isn't raining where you are, rain in the mountains can run off so fast as to cause flash floods. Stay alert.

### Horseback riding

Horseback riding is a popular way to experience the backcountry and there are 253 miles of equestrian trails and trail corridors that traverse open lands, canyon bottoms, and dry washes.

Because of the special requirements for horses, care should be taken in planning your trip. You may call 760-367-5500 and request that a horse bulletin be mailed to you.



National Park Service  
U.S. Department of the Interior

### Joshua Tree National Park

#### Designations

National Park - 1994  
Biosphere Reserve - 1984  
National Monument - 1936

#### Size

794,000 acres

#### Superintendent

Curt Sauer

#### Park Information

760-367-5500

#### Web Site

[www.nps.gov/jotr/](http://www.nps.gov/jotr/)

#### Mailing Address

74485 National Park Drive  
Twentynine Palms, CA 92277

#### E-mail

[jotr\\_info@nps.gov](mailto:jotr_info@nps.gov)

#### Fax Number

760-367-6392

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

## Black Rock Canyon Offers Good Hiking and More

Located in the northwest corner of the park, the road to Black Rock Canyon dead-ends at the campground. Campsites are located on a hillside at the mouth of the canyon surrounded by Joshua trees, junipers, cholla cacti, and a variety of desert shrubs. Spring blooms usually begin with the Joshua trees in late February followed by shrubs and annuals through May.

This quiet, family campground is a good introduction for first-time campers. Each campsite has a picnic table and fire ring with rest rooms and water nearby. If you forget to bring your firewood, shopping facilities are only five miles away in the town of Yucca Valley. Campsites vary in size and can accommodate both tents and RVs. A day-use picnic area and dump station are also available. For horse owners, a separate area is provided for overnight camping or staging a ride.

Campers register and pay camping fees at the nature center located in the middle of the campground. The staff at this small visitor center can help plan your hikes and sightseeing. Maps, books, nature guides, and children's activity books may be purchased there.

The hills behind the campground offer a variety of hiking trails including the Hi-View Nature Trail. The interpretive guide for this trail, available at the nature center, identifies the vegetation along this scenic 1.3-mile walk. For those looking for longer trails, Eureka Peak, Panorama Loop, and Warren Peak take hikers to ridge lines overlooking the often snowy peaks of San Jacinto and San Gorgonio. The trailhead for a 35-mile section of the California Riding and Hiking Trail is located at Black Rock. Backpackers can register at the backcountry board here for overnight wilderness trips.

But you don't have to hike to enjoy the Black Rock Canyon area. Wildlife sightings are frequent in the campground. Visitors often encounter ground squirrels, jackrabbits, and cottontails. Frequent bird sightings include cactus wrens, Gambel's quail, great horned owls, scrub-jays, and roadrunners. A lucky birder might be rewarded with a glimpse of a Scott's oriole, pinyon jay, or LeConte's thrasher. More elusive species such as bobcat, bighorn sheep, mountain lions, desert tortoises, and mule deer have all been seen in the area. As the sun sets, listen for the "singing" of coyotes living on the outskirts of the campground.

Please do not feed wild animals in Joshua Tree National Park. People food is unhealthy for them and they can become aggressive and harm you.

## Keep Wildlife Wild

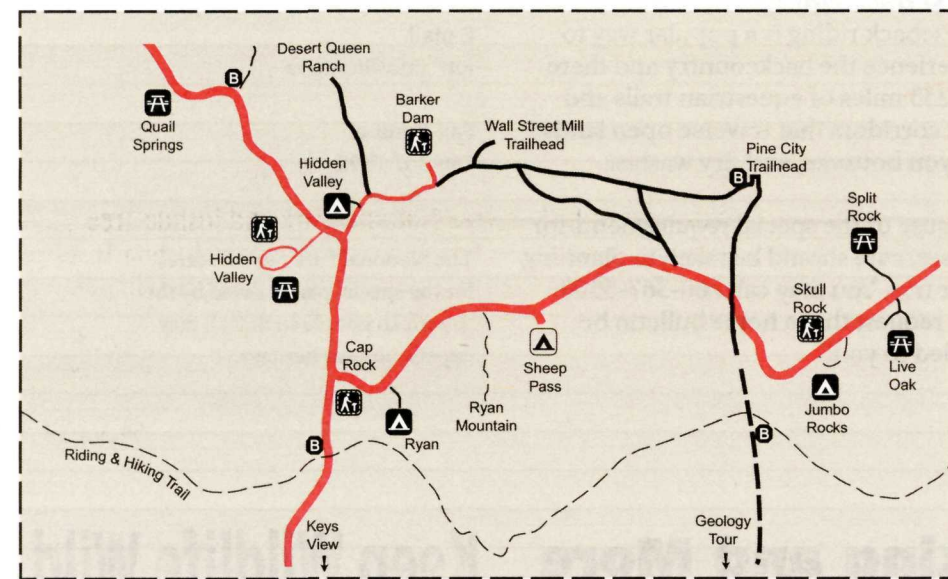
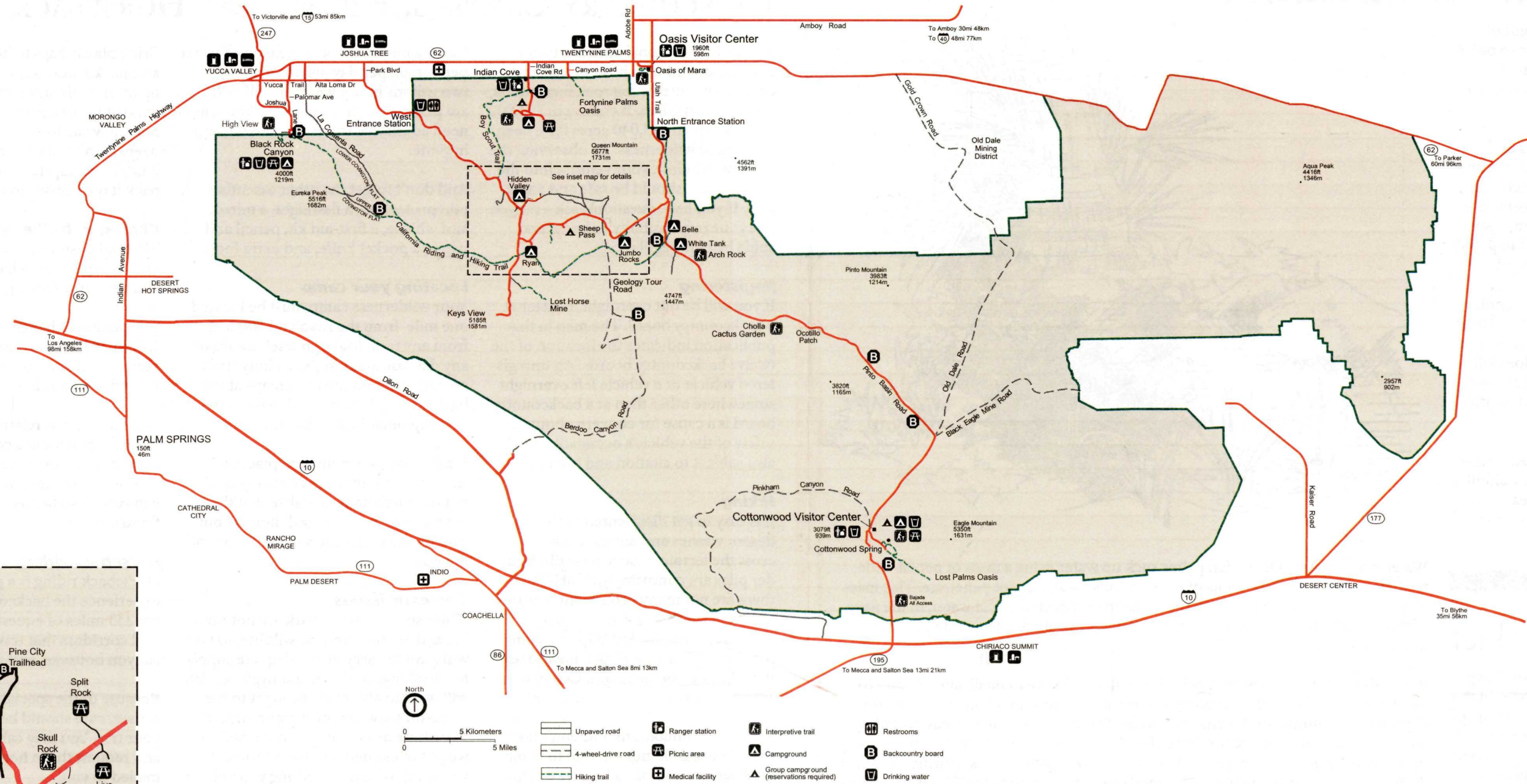


### Don't feed coyotes!

People food is not healthy for them. It makes them into beggars, and they might bite you. Also, it is against the law, and a ranger will give you a ticket, then you will have to pay a big fine!



How Far Is It?	Oasis of Mara	Cottonwood Spring	West Entrance
Belle Campground	9	28	23
Black Rock Canyon	28	73	12
Cap Rock	19	40	11
Cholla Cactus Garden	18	20	31
Cottonwood Spring	38	0	46
Hidden Valley	20	42	9
Indian Cove	10	48	18
Interstate 10	45	7	35
Jumbo Rocks Campground	11	33	18
Keys View	24	45	16
Oasis of Mara	0	38	29
Ryan Campground	18	39	11
Sheep Pass Campground	16	37	14
West Entrance	34	51	0
White Tank Campground	11	27	24



## NATURE TRAILS



Trail	Mileage	Starting Point
Arch Rock	.3-mile loop (0.5-km)	White Tank Campground, opposite site 9
Bajada All-Access	.25-mile loop (0.4-km)	South of Cottonwood, one-half mile from the southern entrance to the park
Barker Dam	1.1-mile loop (1.8-km)	Barker Dam parking area
Cap Rock	4-mile loop (6.4-km)	Cap Rock parking area, at the junction of Park Blvd. and Keys View Road
Cholla Cactus Garden	.25-mile loop (0.4-km)	20 miles north of Cottonwood Visitor Center
Cottonwood Spring	1-mile (1.6-km)	Cottonwood Spring parking area
Hidden Valley	1-mile loop (1.6-km)	Hidden Valley picnic area
Hi-View	1.3-mile loop (2.1-km)	Northwest of Black Rock Campground
Indian Cove	.6-mile loop (1-km)	West end of Indian Cove Campground
Keys View	.25-mile loop (0.4-km)	Keys View
Oasis of Mara	.5-mile loop (0.8-km)	Oasis Visitor Center, Twentynine Palms
Skull Rock	.25-mile (0.4-km)	Jumbo Rocks Campground

The Joshua Tree Guide is produced by the employees and volunteers of Joshua Tree National Park and Joshua Tree National Park Association and is published by Joshua Tree National Park Association. It is printed on recycled paper.



## HIKING TRAILS

Trail	Round-trip Mileage	Time	Starting Point	Trail Description
Boy Scout Trail	16 miles (25.8km)	1-2 days	Indian Cove backcountry board or Keys West backcountry board 0.5 mile (0.8km) east of Quail Springs Picnic area	Scenic trail through the western most edge of the Wonderland of Rocks. See backcountry board for information on overnight use. Moderate.
49 Palms Oasis	3 miles (4.8 km)	2-3 hours	Parking area at end of Canyon Road, 4 miles (6.4 km) west of Twentynine Palms off Hwy 62	Several stands of fan palms, evidence of past fires, and pools of water are found at the oasis. The plants in this area are especially fragile, so walk lightly. Moderately strenuous.
Lost Horse Mine/Mt.	4 miles (6.4 km)	3-4 hour	Parking area 1.2 miles (1.9 km) east of Keys View Road	Site of ten-stamp mill and foundations. Summit elevation: 5278 feet (1609 m). Moderately strenuous.
Lost Palms Oasis	7.5 miles (11.2 km)	4-6 hours	Cottonwood Spring or Cottonwood Campground	A canyon with numerous palm stands. A side trip to Victory Palms and Munsen Canyon involves boulder scrambling. Moderate to oasis overlook, then strenuous.
Mastodon Peak	3 miles (4.8 km)	2-3 hours	Cottonwood Spring or Cottonwood Campground	Excellent views of the Eagle Mountains and Salton Sea. Summit elevation: 3371 feet (1027 m). Moderate.
Ryan Mountain	3 miles (4.8 km)	2-3 hours	Ryan Mountain parking area or Sheep Pass Campground	Excellent views of Lost Horse, Queen, and Pleasant Valleys. Summit elevation: 5461 feet (1664 m). Moderately strenuous.

Thirty-five miles of the California Riding and Hiking Trail pass through the park. Access to the trail is at its junction with Covington Flats, Keys View, and Squaw Tank (Geology Tour) Roads; at Ryan Campground; south of Belle Campground; and near the north entrance to the park. This allows for shorter hikes of 4, 6.7, or 11 miles (6.4, 10.7, or 17.6 km). Two to three days are required to hike the entire length of the trail.

## Area Information

For information about accommodations and attractions in surrounding communities, you may contact the following chambers of commerce:

**Indio**  
82503 Hwy 111  
Indio, CA 92201  
(760) 347-0676  
indiochamber@aol.com  
www.indiochamber.org

**Joshua Tree**  
P.O. Box 600  
Joshua Tree, CA 92252  
(760) 366-3723  
www.joshuatreechamber.org

**Palm Springs**  
190 W. Amado Rd.  
Palm Springs, CA 92262

(760) 325-1577  
PSChamber@worldnet.att.net  
www.ps-chamber.org

**Twentynine Palms**  
6455 Mesquite Ave. Unit A  
Twentynine Palms, CA 92277  
(760) 367-3445  
www.29chamber.com

**Yucca Valley**  
56300 29 Palms Hwy.  
Yucca Valley, CA 92284  
(760) 365-6323  
chamber@yuccavalley.org  
www.yuccavalley.org



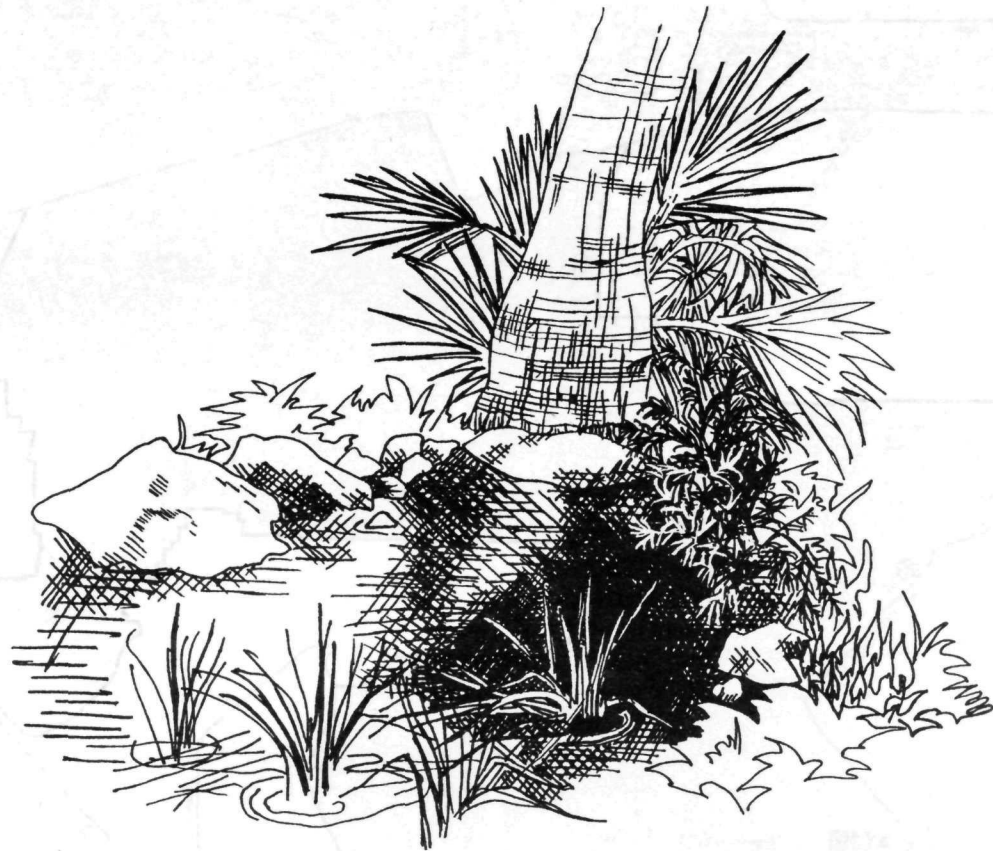
# The Desert Fan Palm: A California Native

In an otherwise hot and sparse environment, palm oases are a luxuriant gift of shade and solace. The verdant display requires a constant supply of water so oases often occur along fault lines, where uplifted layers of hard impermeable rock forces underground water to the surface. There are only 158 desert fan palm oases in North America. Five are located in Joshua Tree National Park.

The desert fan palm, *Washingtonia filifera*, is native to the low hot deserts of Southern California where it can live for 80 to 90 years. Towering up to 75 feet, the desert fan palm is among the tallest of North American palms. It is definitely the heaviest: a mature desert fan palm can weigh as much as three tons. Its distinctive leaves are shaped like a fan and folded like an accordion. They measure up to six feet in length and are nearly as wide. Looking much like "petticoats," the fan palm's dead leaves remain attached to its trunk until removed by fire, wind, or flood.

Fire is beneficial for palms and rarely kills an adult. In palms the vascular bundles, those tubes that transport water and nutrients, are scattered throughout the trunk. This arrangement provides insulation from the heat of a fire. In contrast, trees such as oaks have all their vascular tissue in a ring just beneath the bark. Fire does kill young palms, but it also removes competitors and opens up space for palm seeds to germinate. In fact, desert fan palms increase seed production immediately after fires. A healthy palm can produce as many as 350,000 seeds.

People have been attracted to palm oases since prehistoric times. Native Americans ate the palm fruit and used the fronds to build waterproof dwellings. The Cahuillas (pronounced: Ka-wee-yahs) periodically set fire to oases in order to increase fruit production and to remove the sharp-edged palm fronds littering the oasis floor. The Cahuillas also planted palm seeds in promising locations.



Water is a necessity. Desert fan palms suck up water using a mass of pencil-wide rootlets so dense that the roots of other plant species cannot penetrate. This mass may extend as far as 20 feet from the trunk in all directions. But water, in the form of flash floods, is also the most common cause of death for desert fan palms living in narrow canyons.

Water also draws animals such as bighorn sheep, Gambel's quail, and coyotes to palm oases. Coyotes help spread palms by eating palm fruit at one location and depositing the undigested seeds at another. The cool shade of an oasis provides habitat for animals that live nowhere else. After dark, a rush of air may be caused by the passing of a western yellow bat—they only roost in palms. During the day, a flash of yellow-orange might be a hooded oriole preparing to build its woven sack-like nest under the large green leaves of a desert fan palm. The dime-sized holes seen in the trunks of palms are exit holes of the two-inch, blue-black, giant palm-boring beetle, *Dinapate wrightii*, who lives exclusively in palm oases.

The larvae of the *Dinapate* beetle spend about five years chewing tunnels within the trunks of desert fan palms. The chewing is so loud that woodpeckers use the noise to locate the larvae. Successful larva pupate within the trunk then chew their way out. Because their rear end is wider than their front end, they exit going backwards to avoid getting stuck. Emerging in June, males and females mate and then die within a few weeks. Eventually these beetles can kill a palm, but they only inhabit older trees. Giant palm-boring beetles keep the palm population young and vibrant. The presence of these beetles is actually a sign of a healthy oasis.

Palms stand straight and tall, looking proud and invincible. But they aren't. Any place can be overly loved. As you explore these oases of wonder, take care. Use existing paths. Watch out for young palms—seedlings look like thick blades of grass. We do not want the presence of people to be a sign of a declining oasis.

## WHERE IN THE PARK IS COTTONWOOD SPRING?

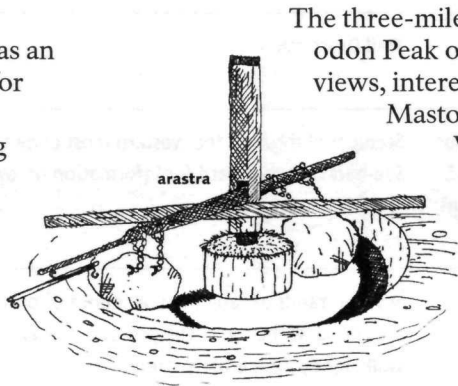
Cottonwood Spring Oasis, one of the best kept secrets in Joshua Tree National Park, is just seven miles from the southern entrance to the park. The spring, the result of earthquake activity, was used for centuries by the Cahuilla Indians, who left bedrock mortars and clay pots, or ollas, in the area.

Cottonwood Spring was an important water stop for prospectors, miners, and teamsters traveling from Mecca to mines in the north. Water was necessary for gold processing, so a number of gold mills were located here. The remains of an arrastra, a primitive type of gold mill, can be found near the spring, and concrete ruins mark the sites of two later gold mills in the area.

Cottonwood Spring was first mentioned in a gold mine claim filed in 1875, indicating that the trees are native. Fan palms first appear around 1920, perhaps growing from seeds deposited by a bird or coyote.

A number of hikes begin at Cottonwood Spring. A short, easy walk down Cottonwood Wash leads past a second oasis to a dry falls. In wet years, the falls can become a scene of rushing water

and red-spotted toads. Bighorn sheep often come up the wash for water in the early hours. An old teamster road drops down past the falls to the lower wash. A short hike leads through palo verde and desert willow trees to the remains of Moorten's Mill.



The three-mile loop trail to Mastodon Peak offers spectacular views, interesting geology, the Mastodon Mine, and the Winona Mill Site.

And, for those looking for a longer hike—eight miles round trip—and the largest stand of fan palms in the park, the Lost Palms

Oasis trail is a sure winner.

But you don't have to hike to enjoy Cottonwood Spring. This is one of the best birding spots in the park, so bring your binoculars and sit a spell.

The campground, which has water and rest rooms, is located one-half mile from Cottonwood Spring via a signed trail; there are also shaded picnic tables in the campground. To learn more about the plants, animals, and history of this fascinating place, join a ranger-led hike, walk, or campfire program, offered most weekends.



**Think Globally, Act Locally**

Bring your aluminum and metal cans, glass, and plastic to a campground recycling center.

Share or recycle this Joshua Tree Guide when you have finished reading it.

Participate in recycling in your community.



## Matt Riley's Fatal Mistake

It was 114 degrees (46° C) in the shade and the distance to the nearest spring was 25 miles (40 km) when Matt Riley and Henry Kitto set off on foot from the OK Mine at 9 a.m. They had one canteen of water between them.

Their plan was to refill the canteen at Cottonwood Spring, then continue on to Mecca to celebrate the 4th of July. Neither man knew much about the route.

Kitto became ill 12 miles (19 km) out. He gave the canteen to Riley and turned back. Kitto survived the walk back to the mine.

Riley pressed on, trying to get to Cottonwood before he ran out of water. He never made it. His body was found under a bush next to the road to Mecca.

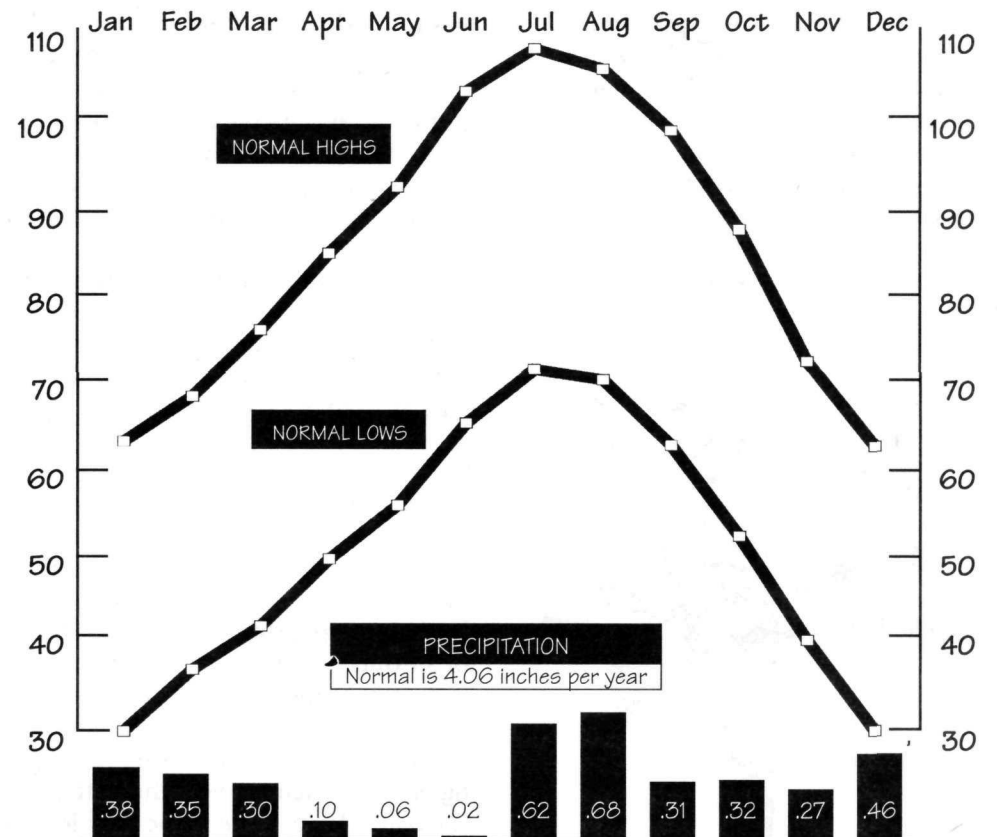
The tracks Riley left behind indicated he had passed within 200 yards (180 m) of Cottonwood Spring before turning back and circling aimlessly—a sign of disorientation, which is a common side effect of extreme dehydration.

Matt Riley's fatal mistake was to walk across the desert without enough water. To hike all day in the midsummer desert sun, a person needs to drink at least two gallons (7.6 liters) of water.

Riley and Kitto had set off with only one small canteen. There was no way they could have survived a 25-mile (40-km) trek in plus 100 degree heat with that small amount of water. Kitto's decision to turn back saved his life. When Riley decided to continue on, he doomed himself.

Matt Riley died 87 years ago, but his mistake is repeated by desert visitors every year. For a safe visit, be sure to carry adequate water with you when you venture into the park. Drink your water supply rather than trying to conserve it. When it is half gone, it is time to turn back.

## The Weather



Measurements were taken at 1,960 feet. You can expect seven to 12 degrees cooler temperatures and 3.5 inches more precipitation at higher elevations.

## Rockpiles

The geologic landscape of Joshua Tree has long fascinated visitors to this desert. How did the rocks take on such fantastic shapes? What forces sculpted them?

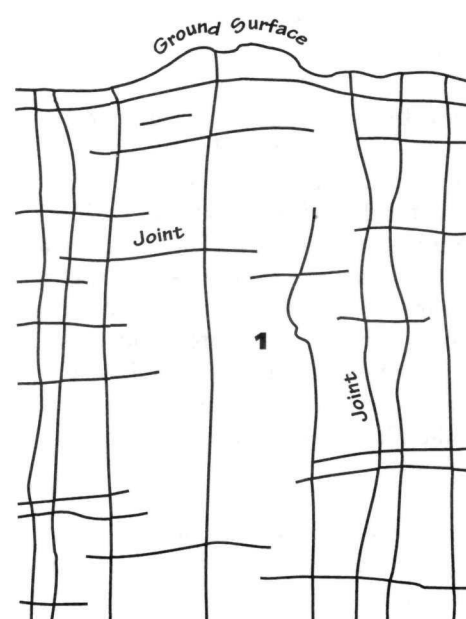
Geologists believe the face of our modern landscape was born more than 100 million years ago. Molten liquid, heated by the continuous movement of Earth's crust, oozed upward and cooled while still below the surface. These plutonic intrusions are a granitic rock called monzogranite.

The monzogranite developed a system of rectangular joints. One set, oriented roughly horizontally, resulted from the removal, by erosion, of the miles of overlying rock, called gneiss (pronounced "nice"). Another set of joints is oriented vertically, roughly paralleling the contact of the monzogranite with its surrounding rocks. The third set is also vertical, but cuts the second set at high angles. The resulting system of joints tended to develop rectangular blocks. (figure 1) Good examples of the joint system may be seen at Jumbo Rocks, Wonderland of Rocks, and Split Rock.

As ground water percolated down through the monzogranite's joint fractures, it began to transform some hard

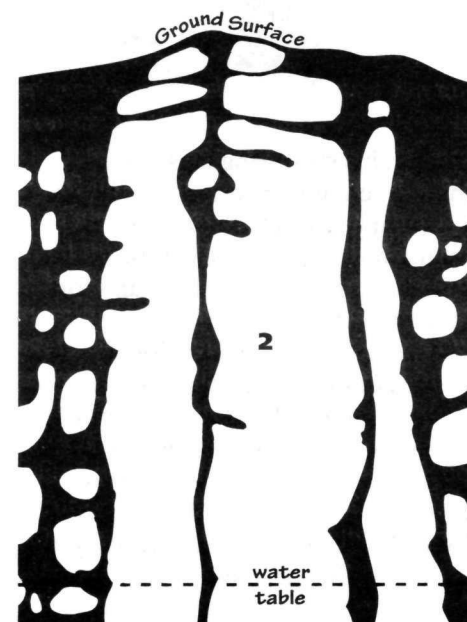
mineral grains along its path into soft clay, while it loosened and freed grains resistant to solution. Rectangular stones slowly weathered to spheres of hard rock surrounded by soft clay containing loose mineral grains. Imagine holding an ice cube under the faucet. The cube rounds away at the corners first, because that is the part most exposed to the force of the water. A similar thing happened here, but over millions of years, on a grand scale, and during a much wetter climate. (figure 2)

After the arrival of the arid climate of recent times, flash floods began washing away the protective ground surface.



As they were exposed, the huge eroded boulders settled one on top of another, creating those impressive rock piles we see today. (figure 3)

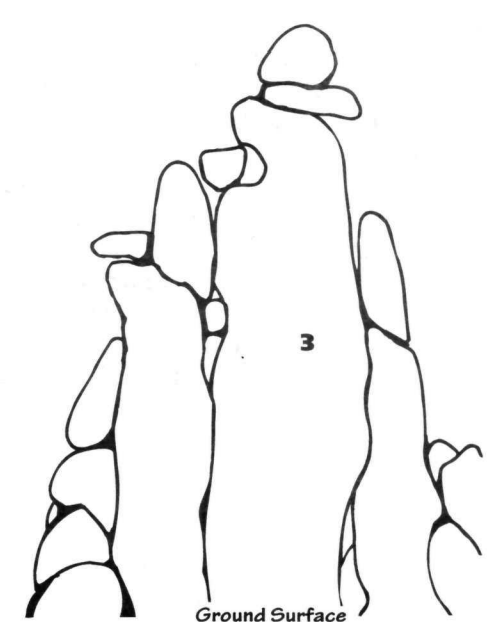
Visitors also wonder about the "broken terrace walls" laced throughout the boulders. These are naturally occurring formations called dikes. Younger than the surrounding monzogranite, dikes were formed when molten rock was pushed into existing joint fractures. Light-colored dikes formed as a mixture of quartz and potassium minerals cooled in these tight spaces. Suggesting the work of a stonemason, they broke into uniform blocks when they were



exposed to the surface.

Of the dynamic processes that erode rock material, water, even in arid environments, is the most important. Wind action is also important, but less so than the action of water.

The processes operating in the arid conditions of the present are only partially responsible for the sculpturing of the rocks. The present landscape is essentially a collection of relic features inherited from earlier times of higher rainfall and lower temperatures.





## "I Speak for the Trees" Dr. Seuss, The Lorax

Surrounded by twisted, spiky trees straight out of a Dr. Seuss book, you might begin to question your map. Where are we anyway? In wonder, the traveler pulls over for a snapshot of this prickly oddity; the naturalist reaches for a botanical guide to explain this vegetative spectacle; and the rock climber shouts "Yowch!" when poked by dagger-like spines on the way to the 5.10 climbing route.



a Joshua tree

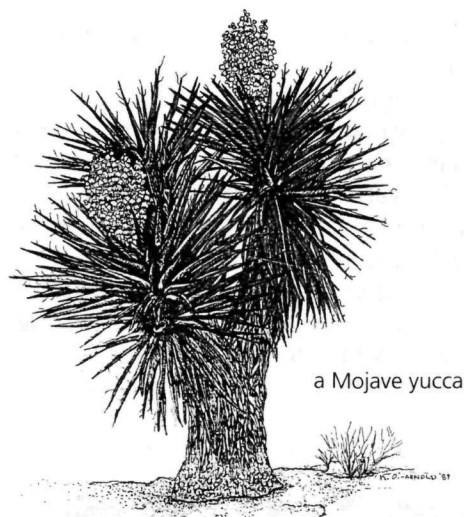
Known as the park namesake, the Joshua tree, *Yucca brevifolia*, is a giant member of the lily family. Like the California fan palm, *Washingtonia filifera*, the Joshua tree is a monocot, in the subgroup of flowering plants that also includes grasses and orchids. Don't confuse the Joshua tree with the Mojave yucca, *Yucca schidigera*. This close relative can be distinguished by its longer, wider leaves and fibrous threads curling along leaf margins. Both types of yuccas can be seen growing together in the park. The Joshua tree provides a good indicator that you are in the Mojave Desert, but you may also find it growing next to a saguaro cactus in the Sonoran Desert in western Arizona or mixed with pines in the San Bernardino Mountains.

Years ago the Joshua tree was recognized by American Indians for its useful properties: tough leaves were worked into baskets and sandals, and flower buds and raw or roasted seeds made a healthy addition to the diet. The local *Cahuilla* have long referred to the tree as "hunuvat chiy'a" or "humwichawa;" both names are used by a few elders fluent in the language.

By the mid-19th century, Mormon immigrants had made their way across

the Colorado River. Legend has it that these pioneers named the tree after the biblical figure, Joshua, seeing the limbs of the tree as outstretched in supplication, guiding the travelers westward. Concurrent with Mormon settlers, ranchers and miners arrived in the high desert with high hopes of raising cattle and digging for gold. These homesteaders used the Joshua tree's limbs and trunks for fencing and corrals. Miners found a source of fuel for the steam engines used in processing ore.

Today we enjoy this yucca for its grotesque appearance, a surprising sight in the landscape of biological interest. The Joshua tree's life cycle begins with the rare germination of a seed, its survival dependent upon well-timed rains. Look for sprouts growing up from within the protective branches of a shrub. Young sprouts may grow several inches in the first five years, then slow down, averaging one-half inch per year thereafter. The tallest Joshua tree in the park looms a whopping forty feet high, a grand presence in the Queen Valley forest; it is estimated to be about 300 years old! These "trees" do not have growth rings like you would find in an oak or pine. This makes aging difficult, but you can divide the height of a Joshua tree by the average annual growth of one-half inch to get a rough estimate.



a Mojave yucca

Spring rains may bring clusters of white-green flowers on long stalks at branch tips. Like all desert blooms, Joshua trees depend on just the perfect conditions: well-timed rains, and for the Joshua tree, a crisp winter freeze. Researchers believe that below freezing temperatures may damage the growing end of a branch and stimulate flowering, followed by branching. You may notice some Joshua trees grow like straight stalks; these trees have never bloomed—which is why they are branchless! In addition to ideal weather,

## Understanding Desert Wildfire

Recent wildfires throughout the West are causing federal land managers to take a careful look at prescribed fire programs. Prescribed fires attempt to remove dangerous accumulations of brush and restore fire as an accepted natural process in the wise stewardship of our public lands.

For the protection of life and private property adjacent to the park, Joshua Tree National Park will continue its current policy of complete fire suppression of all natural and human-caused fires. Following 1999's historic Juniper Fire Complex, managers and biologists reviewed the role fire plays in the Mojave Desert. During that year's lightning-caused fires, almost 14,000 acres of junipers, pinyon pines, scrub oaks, and Joshua trees burned, resulting in the largest wildfire in the park's history. Ecologists now theorize that the introduction of exotic grasses during the last century had major effects on the natural burn cycles in the park, resulting in much larger wildfires than had previously been observed.

The key to managing fire in Joshua Tree is in understanding how wildfires affect vegetation and wildlife in a desert environment where non-native grasses may have substantially altered

the local ecology. Native bunch grasses once found throughout the higher

*For the protection of life and private property adjacent to the park, Joshua Tree National Park will continue its current policy of complete fire suppression of all natural and human-caused fires.*

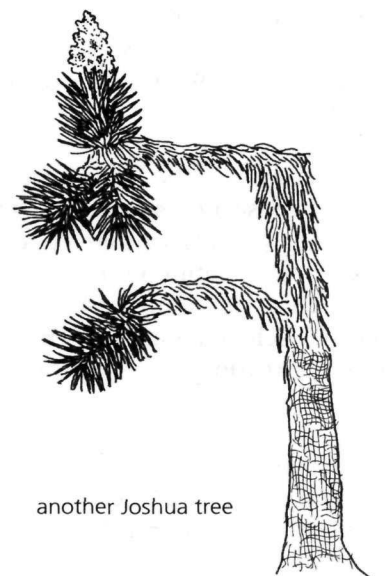
elevations of the park have dramatically declined and have been replaced with exotic weeds and grasses. Ecologists are still attempting to discover what the long-term consequences of these newly arrived plants will be.

To help preserve and protect wildlife, scenery, and natural processes, each park develops its own Fire Management Plan. At Joshua Tree, the plan calls for additional study to help determine the proper use of fire as a management tool in desert environments. Research planned for the next several years will seek to clarify the effects of fire in desert landscapes. Past studies have shown that in some ecosystems, fire plays a beneficial and natural role. However, there remain many unanswered questions about fire and its place in the Joshua Tree landscape.

the pollination of flowers requires a visit from the yucca moth. The moth collects pollen while laying her eggs inside the flower ovary. As seeds develop and mature, the eggs hatch into larvae, which feed on the seeds. The tree relies on the moth for pollination and the moth relies on the tree for a few seeds for her young—a happy symbiosis. The Joshua tree is also capable of sprouting from roots and branches. Being able to reproduce vegetatively allows a much quicker recovery after damaging floods or fires, which may kill the main tree.

Many birds, mammals, reptiles, and insects depend on the Joshua tree for food and shelter. Keep your eyes open for the yellow and black flash of a Scott's oriole busy making a nest in a yucca's branches. At the base of rocks you may find a wood rat nest built with spiny yucca leaves for protection. As evening falls, the desert night lizard begins poking around under the log of a fallen Joshua tree in search of tasty insects.

You may be at ease with pine or hardwood, or find shade under the domesticated trees in your city park, but in



another Joshua tree

the high desert, Joshua is our tree. It is an important part of the Mojave Desert ecosystem, providing habitat for numerous birds, mammals, insects, and lizards. Joshua tree forests tell a story of survival, resilience, and beauty borne through perseverance. They are the silhouette that reminds those of us who live here that we are home. Like the Lorax we speak for the trees, but often the trees speak to us.

*By Vegetation Specialist Jane Rodgers*



## Publications to help you plan a visit to Joshua Tree National Park

The following publications have been selected for their value in planning your trip to Joshua Tree National Park. These items and many more may be ordered by mail, telephone, fax, or on the web at [www.joshuatree.org](http://www.joshuatree.org).

### Getting to Know Joshua Tree National Park

**Road Guide to Joshua Tree National Park**, Decker. Guides visitors on a driving tour through the land where the Mojave and Colorado Deserts meet. 48 pages PB \$5.95

**On Foot in Joshua Tree**, Furbush. A comprehensive hiking guide featuring 90 park hikes, 40 photos and illustrations, and 26 maps and reference charts. 152 pages PB \$11.95

**A Visitor's Guide to Joshua Tree**, Cates. A delightful, informative guide blending human and natural history. Equally enjoyable by desert rats and first-time visitors. 100 pages PB \$6.95

**Hiking California's Desert Parks**, Cunningham. Presents 111 hikes and backcountry trips in Anza Borrego, Joshua Tree, Death Valley, and Mojave. 373 pages PB \$16.95

**The Joshua Tree**, Gossard. An easy-to-read book filled with fascinating facts and stories about the symbol of the Mojave Desert. 112 pages PB \$9.95

**Joshua Tree Video**. Excellent introduction to Joshua Tree National Park. 30 minutes VHS \$12.95; PAL \$12.95

**Recreation Map of Joshua Tree**, Harrison. Colorful map of Joshua Tree National Park highlighting points of interest, campgrounds, picnic areas, topographic features, and backcountry roads and trails. \$8.95

**Trails Illustrated Topographic Map of Joshua Tree National Park**. Includes elevations, backcountry camping, hikes, routes, and safety. Waterproof and tearproof. \$9.95

**Joshua Tree, The Story Behind the Scenery**, Vuncannon. Full of color photos and fascinating text, the perfect introduction to the park. 48 pages PB \$9.95; \$10.95 for French or German.

**Joshua Tree National Park Geology**. Trent and Hazlett. Explores the geology and evolution of the Joshua Tree landscape. Includes sections on plate tectonics, regional geology, and seismic activity. PB \$9.95

**50 Best Short Hikes**, Krist. Covers Joshua Tree, Death Valley and Mojave. Hikes range from easy nature trails to more challenging routes suitable for a full day of hiking. 204 pages PB \$12.95

### On the Road in California

**California Trail**, Dodd and Gnass. This colorful book chronicles travels over the California-Oregon Trail in search of the land of El Dorado. 64 pages PB \$9.95

**California's Wilderness Areas**, Wuerthner. Seventy-four wilderness areas were created by the 1994 Desert Protection Act. Provides the information visitors need to explore these places. 320 pages PB \$27.95

**The Living Desert**, exploring national parks and monuments through natural sounds. Tape \$10.95, CD \$15.95.

**The Complete Guide to America's National Parks**, Fodor's. Up-to-date guide to all 384 National Park Service sites. 448 pages PB \$19.00

**California Roadmap**. Includes a list of public recreational areas and places of interest. \$3.95

### Life in the Desert

**Desert Survival Handbook**, Lehman. Explains how to deal with emergencies that might arise in a desert environment. Filled with examples, narratives, and illustrations to aid understanding. 91 pages PB \$7.95

**How Indians Used Desert Plants**, Cornett. An informative account of the ways early natives used a variety of desert plants for food, tools, building materials, and as an integral part of their daily lives. 62 pages PB \$9.95

**Geology Underfoot in Southern California**, Sharp and Glazner. An inside view of the southland's often active, sometimes enigmatic, and always interesting landscape. 224 pages PB \$14.00

**Desert Solitaire**, Abbey. The author's recollection of summers spent as a ranger in the canyon and rim country of southern Utah, including observations of the natural world. 269 pages PB \$13.00

**The Joshua Tree**, Cornett. Up-to-date information about this symbol of the Mojave Desert and namesake of our national park. 32 pages PB \$6.95

**Growing Up at the Desert Queen Ranch, Keys**, Kidwell. The true story of the Keys family and their struggle to survive on an isolated desert ranch in the 1920s and '30s. It is a look into a now lost American way of life. 118 pages PB \$14.95

**Wildlife of North American Deserts**, Cornett. A concise introduction to the most commonly encountered animals in the five North American deserts. 211 pages PB \$12.95

**Desert Palm Oasis**, Cornett. An exploration of the lush, water-loving fan palms that are such a wonderful surprise in arid desert environments. 47 pages PB \$10.95

**Watchable Birds of the Southwest**, Gray. A full-color guide to 68 of the Southwest's fun-to-watch species, big and small. Organized by habitat. 187 pages PB \$14.00

**100 Desert Wildflowers**, Bowers. Color photos and easy-to-read text highlight some of the most common wildflowers of the deserts in the southwest corner of America. 56 pages PB \$7.95

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## Coyote Stories

*So the Creator told the people to cremate his body, but to send Coyote away so he wouldn't eat the remains. The people sent Coyote to the east, where the sun comes up, to gather firewood. When he was far away they burned the body. Coyote saw it though and came running back. The people were all standing in a circle around the pyre. Suddenly Coyote jumped over Badger and grabbed the Creator's heart (all that was left) and jumped back over Badger again. He ran off with the heart in his mouth.*

— Ruby Modesto, from *Not for Innocent Ears, Spiritual Traditions of a Desert Cahuilla Medicine Woman*

Several Southwest Indian tribes have names for him that translate into English as “God’s Dog.” The name we use, “coyote,” descends from the ancient Aztecs, who called him “coyotl” (co-yo-til), which the Spanish mispronounced, and which we in turn have twisted to the shape of our culture’s tongue. To the Cahuilla of southern California, our predecessors and present-day neighbors in this desert, he is *isily*, a glutton and a deity and a clown and a mischief-maker, all condensed into a single skin. That skin, by the way, gets terribly abused in Cahuilla stories. In one story, Coyote is brought back from the dead only to have his head split open at the story’s conclusion. It’s a familiar punchline to any of us who grew up watching Wile E. Coyote play with dynamite while chasing a certain roadrunner. When we were children, we laughed when the bomb exploded and Wile E. Coyote’s smoking frame stood in the aftermath. As we got older, we started to pity the poor cartoon coyote. Couldn’t he catch that crazy roadrunner just once?

The fact is, human beings have always had mixed feelings about coyotes.

Picture a campfire. It could be a thousand years ago, or it could be tonight. Low voices, laughter, the smell of food cooking. Suddenly, everything in the desert stops and listens to a chilling chorus—howling, howling, howling, then sporadic yipping and barking. The wild dogs sound as if they’re just over the next pile of rocks. Are you concerned for your family’s safety? Or do you look at your children’s eyes and share with them awe at the boldness of these creatures? If you’re honest, you’ll probably discover some combination of these emotions inside you.

Encountering *Canis latrans*, the desert coyote, is a powerful experience for human beings. It always has been. The main difference between now and a

thousand years ago is that most of us who encounter coyotes today do not grow up hearing stories about them. Traditional coyote stories are about more than an anvil falling on a scrawny creature’s head. True, native Coyote stories have plenty of jokes; however, they are also embedded with poetry, mythology, ecology, and vivid lessons about the harmful consequences of greed or lust or laziness. A child who hears, during the winter story cycle, how Coyote’s insatiable appetite gets him into trouble would surely never throw food scraps to such an animal. Why, that would be worse than wasting food! Even children know that catering to Coyote’s hunger leads to larger problems. Or at least, the children used to know.

Today we have a problem in Joshua Tree National Park. Put simply, people who visit the park are throwing their food to coyotes.

The natural diet of coyotes includes a great deal of vegetable matter (about 40 percent by mass of their total intake is plants), and small animals that they catch: grasshoppers, mice, rabbits, kangaroo rats, and ground squirrels, among others. The natural diet of coyotes does not include greasy slices of pizza, salt-laden corn chips, glucose-rich candy bars, nor anything else that may be packed in your picnic basket. Feeding coyotes human food will lead to unhealthy animals. The coyotes can certainly survive on our scraps, but long-term complications like hair loss and liver damage can occur from a steady diet of human food. Even worse, feeding any wild animal encourages a dependence upon human beings. The fed coyote associates people with food and adapts its behavior to this new food source.

So, we now have coyotes that beg. And they, in turn, are teaching their pups to beg. The result of this dependence on human beings is as predictable

as it is tragic. Wildlife professionals have documented across a number of species (including *Canis latrans*) that fed animals become increasingly bold in their approach to people. Inevitably, a human being gets bitten, scratched, or attacked by one of these dependent animals.

What happens next? The offending animal is hunted down and destroyed, often along with any others in the neighborhood.

This is what passes for a coyote story in our culture. A nine-year-old girl is having lunch with her family at Hidden Valley Picnic Area. It is early summer; heat radiates in waves from the desert floor. The girl thinks she sees something moving beside the juniper tree. She wanders away from Mom and Dad, exploring in that beautiful, fluid way that is natural for children. There is a half-eaten ham sandwich in her hand. She has forgotten about it. When she finally makes eye contact with the coyote, it is less than five yards away. This coyote has been fed many times in the spring, but it is summer now, and fewer tourists are coming. This coyote is very, very hungry. The ham has a strong smell. The girl is smaller than most people the coyote has seen. This story does not end in a punchline. It ends with a seriously injured girl and a dead coyote, and no one is laughing.

At Joshua Tree National Park, we believe that our story is being written right now, as people visit this desert and interact with the plants and animals who live here. How do we, as park managers and park visitors, want our story to end? Surely not in tragedy, nor in death. And yet, a few ignorant people continue to feed coyotes. “Ignorant” is not meant to be insulting. People new to the desert honestly believe they’re helping coyotes by feeding them. They don’t know how harmful these actions can be.

Well, the word is out now. Let the new story start here, and let it spread around campfires; let it be whispered and shouted and yes, even howled, until everyone knows. It is not too late to steer the events of this tale toward a wiser course, one that incorporates both the modern principles of ecology and the ancient knowledge of cultures that have lived in this desert for thousands of years. This new version would truly be a wonderful coyote story, one well worth passing on to our children, and to our children’s children.



by Park Ranger Mike Cipra