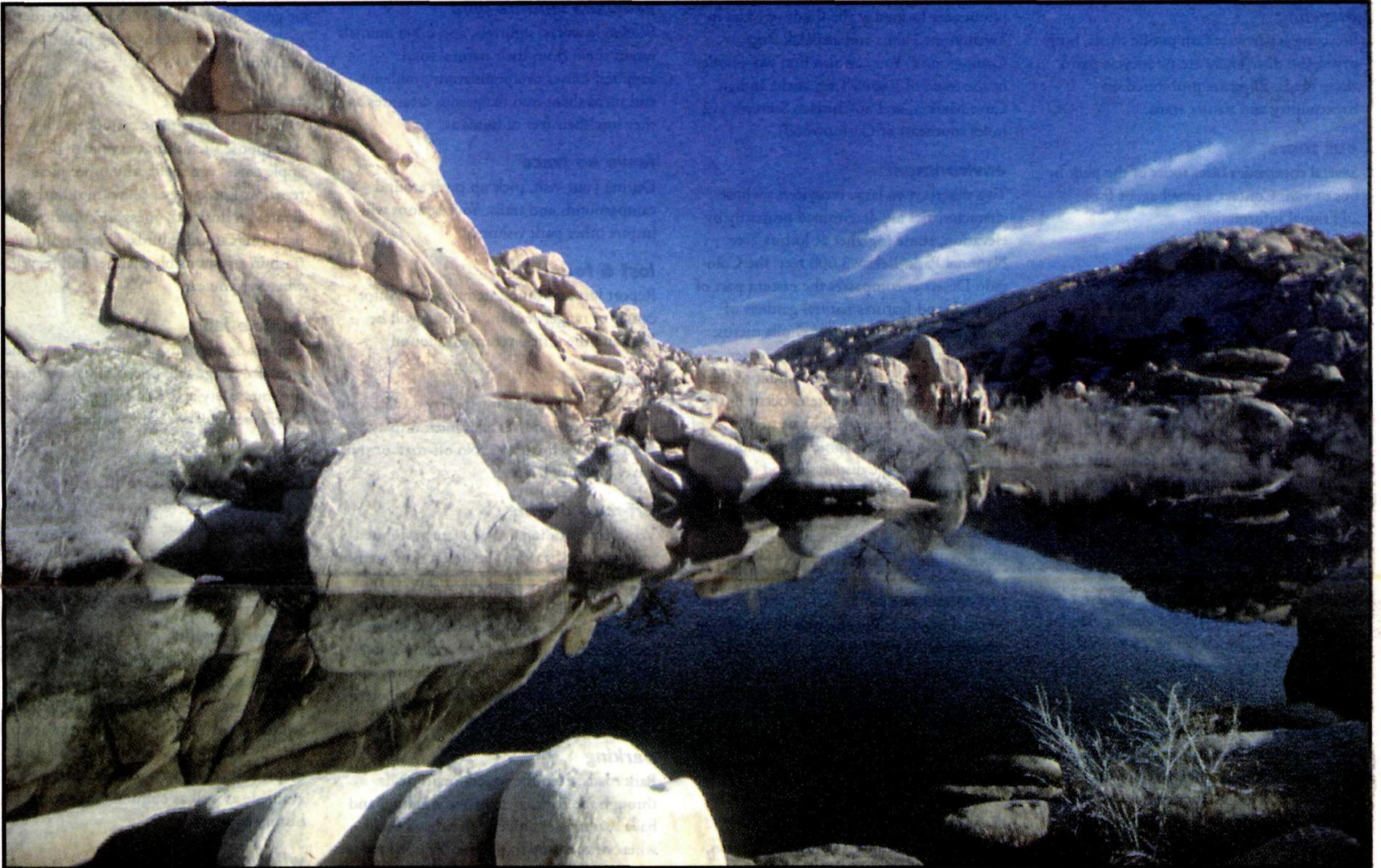


Joshua Tree Guide



David M. Barron shot this photograph of Barker Dam, a popular spot for wildlife viewing.

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

— Important information

accessibility

The nature trails at Cap Rock and the Oasis of Mara are accessible. An assistive listening system is available for use during ranger programs with prior notice. Call (760) 367-5500 for additional information.

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 along roads. Bikes are prohibited on backcountry and nature trails.

bus tours

Several companies offer tours of the park by bus or van. Contact a travel agent for additional information.

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 your own firewood.

climate

Days are typically clear with less than 25% humidity. Temperatures are most comfortable in the spring and fall, with an average high/low of 85° 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.

climbing

Motorized drilling is prohibited within park boundaries, and bolting is not allowed in designated wilderness. All fixed protection found in place should be considered potentially unsafe. For more information about climbing in Joshua Tree pick up a climbing brochure at an entrance station or visitor center.

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 Oasis of Mara in Twentynine Palms and at Black Rock Campground. You can also find pay phones in the town of Joshua Tree, at the Indian Cove Market, and at Chiriaco Summit (12 miles southeast of Cottonwood).

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 creosote bush, 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. The western part of the park 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

General admission to the park is \$10.00 per vehicle and is good for seven consecutive days. A Joshua Tree Pass may be purchased for \$25 and a Golden Eagle Pass, which is good for all NPS 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 Joshua Tree.

food, lodging, services

There are no concessions within the park. However, the communities that surround the park can fulfill most visitor needs. Contact local chambers of commerce for additional information (listed on page 3).

getting to the park

The park is located about 140 miles east of Los Angeles via I-10. The west and north entrances to the park are off CA Hwy 62 (Twentynine Palms Highway), at the towns of Joshua Tree and Twentynine Palms. The south entrance is at Cottonwood Spring, about 25 miles east of Indio off I-10.

horses

Horseback riding is a popular way to experience the park but, because of the

special requirements for horses and other stock in desert environments, you will want to request the site bulletin on horse use within the park before you come.

international visitors

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

keep the wildlife wild

Feeding coyotes, squirrels, and other animals weans them from their natural food supplies, causes overpopulation problems, and turns them into dangerous creatures as they lose their fear of humans.

leave no trace

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

lost & found

Report lost and found items to any visitor center or ranger station. A report will be filed and the article returned if found.

motorcycles

Motorcycle operators must carry a valid state driver's license and vehicles must display valid state license plates. No off-road or trail travel is allowed.

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 homes and shelters are destroyed, and their food and water supplies are altered or obliterated.

parking

Park roads, even the paved, main roads through the park, are narrow, winding, and have soft sand shoulders. Accidents occur when visitors stop in the middle of a lane to take a picture or park alongside the road and get out to take a closer look. Park in designated pullouts and parking lots.

pets

While pets are allowed in the park, their activities are quite restricted. They must be on a leash at all times, they must never be left unattended—not even in a vehicle, and they are prohibited on trails.

potable water

Water is available at the Oasis of Mara in Twentynine Palms, at Black Rock and Cottonwood Campgrounds, at West Entrance, and at Indian Cove Ranger Station. Water sources within the park are not potable and are reserved for wildlife.

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 in the vicinity of old mine workings. Mine shafts are unstable and are often filled with harmful gases.

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 and creates an unsightly mess and plastic six-pack rings strangle birds. 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 the 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. during spring. The Cottonwood Visitor Center is open from 8 a.m. to 4 p.m. A variety of books, videos, maps, and other park-related items are available as well as cultural and natural history exhibits.

wildflowers

Spring blooming periods vary with the elevation, the temperature, and the amount of moisture in the soil. You can get up-to-date information by calling one of the wildflower hot lines: Anza-Borrego (760) 767-4684; Living Desert (760) 346-5694; or The Payne Foundation (818) 768-3533.

world wide web

If you are "connected," check out the National Park Service publications on the web (<http://www.nps.gov>). We are adding more information all the time.

you are responsible

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

“I Speak for the Trees” Dr. Suess, *The Lorax*

Surrounded by twisted, spiky trees straight out of a Dr. Suess 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 wonder; and the rock climber



Joshua tree

shouts the occasional “Yowch!” as a path to the 5.10c route is blocked by dagger-like spines.

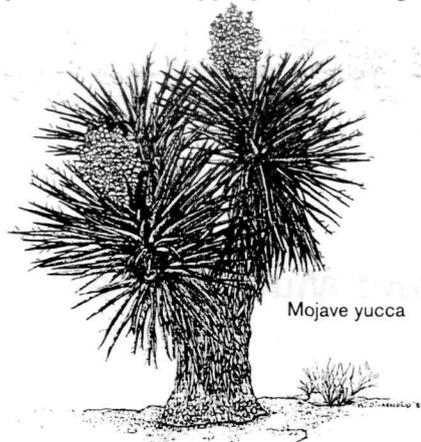
Known as the park namesake, the Joshua tree, *Yucca brevifolia*, is a giant member of the lily family. Like the California fan palm, *Washingtonia filifera*, the Joshua tree is a monocot, in the subgroup of flowering plants which also includes grasses and orchids. Don't confuse the Joshua tree with the 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 Native Americans for its useful properties; tough leaves were worked into baskets and sandals, and raw or roasted flower buds and seeds made a healthy addition to the diet. The local Cahuilla tribe has long referred to the tree as “hunuvat chiy'a” or

“humwichawa;” both names now rest with a few elders still fluent in the language.

By the mid-19th century, Mormon migrants had made their way across the Colorado River. Legend has it that these pioneers named the tree after the prophet Joshua, seeing the Joshua tree limbs 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,



Mojave yucca

a grand presence in the Queen Valley forest; it is estimated to be over *nine-hundred 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.

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

Coyotes' Adaptive Nature

Many park visitors see coyotes as living symbols of the wild and they sometimes seek the thrill of approaching, photographing, or even feeding these wild creatures. Yet doing so threatens the very animals with whom they seek to connect.

The Advantage of Adaptability

Coyotes are an integral part of the ecosystem here and they live successfully because of their adaptability, particularly when it comes to food. Coyotes are omnivores and scavengers, which means they eat anything—dead or alive. Rodents comprise sixty percent of their diet. They also eat berries, bean pods, fruits, lizards, fish, rabbits, and birds. With such a varied diet, coyotes rarely go hungry.

Left alone, coyotes remain within their natural habitat, playing an important role that contributes to the overall balance and stability of the ecosystem.

The Threat

You may have seen a coyote strolling through a campground or picnic area, looking very much at home. If so, you saw an individual who has adapted to being around humans and to eating human foods. When we feed a coyote directly or leave food near a campsite or car, the coyote learns to associate humans with food.

When a coyote adapts to human food, it stops hunting and becomes a “beggar.” Food provided by humans creates an artificial abundance triggering the birth of more coyote pups than summer food supplies can support. The malnourished pups become sickly and can even starve.

Though “campground coyotes” are adapted to being fed by humans, they remain wild animals: they will bite if they feel threatened. Because rabies and bubonic plague exist in the desert, we at Joshua Tree National Park must consider visitor safety. If a coyote bites a human or domestic pet, we must either relocate or shoot the coyote. Because coyotes are often too smart to get caught in relocation traps, they usually have to be killed.

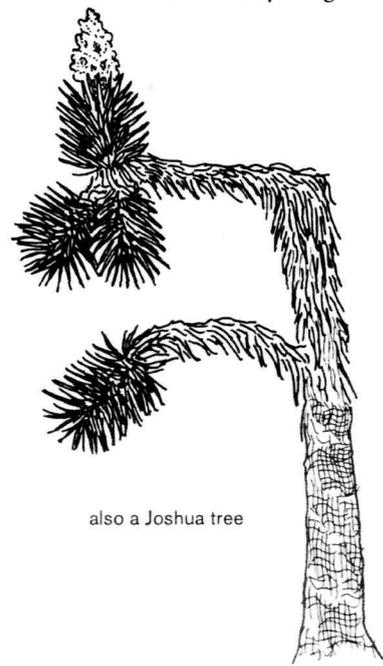
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followed by branching. You may notice some Joshua trees grow like straight stalks; these trees have never bloomed—which is why they are branchless! In addition to ideal weather, the pollination of flowers requires a visit from the yucca moth. The moth 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 the yucca branches. At the base of rocks you may find a wood rat nest built with protective spiny yucca leaves. 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 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 at home. Like the Lorax we speak for the trees, but more often the trees speak to us.



also a Joshua tree

Backcountry Camping *and* Hiking

Joshua Tree National Park is a backpacker's dream with its mild winter climate and interesting rock formations, plants, and wildlife. It embraces 792,000 acres of which 630,800 acres have been designated wilderness. By observing the guidelines below, your venture into the backcountry should be safe and enjoyable.

It is your responsibility to know and abide by park regulations. If you have any questions, ask a ranger.

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.

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 your camp outside.

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 versus the weight of canned and fresh. If you want to heat something you will need to pack in a stove and fuel as fires are prohibited in the backcountry.

Bring plastic bags to hold your garbage so you can 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.

Hiking

It is easy to get disoriented in the desert: washes and animal trails crisscross 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 and learn how to use them before you head out.

Know your limitations. You should not attempt to climb cliffs or any 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.

Coping with the weather

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

Temperature changes of 40 degrees within 24 hours are common. Bring a variety of clothes that 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.

Stock animals

To minimize vegetation damage and soil erosion, stock animals are restricted to marked trails and washes.

Plan to pack along sufficient water and feed (pellet form only) as your animals are not allowed to drink from any of the water sources in the park nor graze the vegetation.

A permit is required if you wish to camp in the backcountry with horses or other stock animals. You may call (760) 367-5545 to request a permit.

Black Rock Canyon Offers Good Hiking and Much More

Located in the northwest corner of the park, the road to Black Rock Canyon deadends 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 restrooms 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.

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 ridgelines overlooking the often snowy peaks of San Jacinto and San Geronio. 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 Black Rock! Wildlife sightings are frequent in the campground. Visitors often encounter ground squirrels, jackrabbits, and cottontails and frequent bird sightings include cactus wrens, Gambel's quail, great-horned owls, jays, and roadrunners. A serious birder might be rewarded with a glimpse of a Scott's Oriole 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.

Welcome to Joshua Tree National Park, an increasingly popular destination for people from throughout the United States and the world. Some come seeking solitude, others recreation; some come to learn about the natural and cultural wonders of this desert region, still others to be reassured that there are still areas offering a glimpse of the natural world as it once existed.

During your visit, I encourage you to get out of your vehicle and take the opportunity to look, listen, smell, and explore. Rangers are available to assist you with questions about the many activities and attractions of this desert environment.

The future of the national park service is as strong as the support and commitment of the people we serve. With your assistance Joshua Tree will survive intact for the enjoyment of generations to follow. Rest assured that the staff and volunteers at Joshua Tree National Park are committed to doing our part to defend and protect this special place.

Should you have any concerns or recommendations for improving the management of your national park, please write me at 74485 National Park Drive, Twentynine Palms, CA 92277.



Ernest Quintana, Superintendent

Coyotes' Nature

continued from page 3

Visitors who stop for coyotes sitting or lying on roads to beg for food create a traffic hazard that can result in both coyotes and visitors getting hurt or even killed.

Don't Feed Coyotes

There is a simple and effective solution: Don't feed coyotes! If we don't encourage coyotes to adapt to human food, they'll be much less likely to get hit by cars, starve during the summer, or be shot for visitor safety.

Coyotes can find plenty of natural food in the desert. Please don't endanger their lives or yours by feeding them.

This article, which appeared in Death Valley's Visitor Guide, was adapted and reprinted with permission.

Campgrounds

Campgrounds	Elevation	Sites	Group Fee	Group Sites	Horse Camp Fee	Water	Flush Toilets	Chemical Toilets	Tables	Fire Grates	Dump Station	Camping Regulations
Belle	3800'	18						*	*	*		<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, two tents, and two cars. Group sites accommodate ten to seventy people.</p> <p>Beginning March 15, 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. It is wise to arrive as early as possible.</p> <p>Showers are not available, and there are no hookups for recreational vehicles.</p> <p>Water is available at Oasis Visitor Center in Twentynine Palms, Indian Cove Ranger Station, West Entrance, and Black Rock and Cottonwood Campgrounds.</p> <p>If you wish to have a campfire, bring your own firewood as all vegetation within the park is protected.</p> <p>Quiet hours are from 10 PM to 6 AM This includes generators and motors.</p>
Black Rock	4000'	100	\$10		\$10	*	*		*	*	*	
Cottonwood	3000'	62	\$8	3	\$25	*	*		*	*	*	
Hidden Valley	4200'	39						*	*	*		
Indian Cove	3200'	101	\$10	13	\$20/35			*	*	*		
Jumbo Rocks	4400'	125						*	*	*		
Ryan	4300'	31				*		*	*	*		
Sheep Pass	4500'			6	\$20/35			*	*	*		
White Tank	3800'	15						*	*	*		

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

What to See and Do

For a first-time visitor the desert may appear bleak and drab. Viewed from the road, the desert only hints at its vitality. Closer examination reveals a fascinating variety of plants and animals. A rich cultural history and surreal geologic features add to the attraction of this place. 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 the park 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. If you visit on a weekend from mid-October to mid-December or mid-February through May, you can participate in a ranger-led program. Check at the visitor centers and on campground bulletin boards for program listings. These presentations will add enjoyment and understanding to your visit.

If solitude is what you are after, plan an all-day hike. A list of hikes is included in this publication and trail information can be obtained from visitor centers.

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 just 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, available at park sales areas, give information needed for longer hikes. For "peak baggers," the park has ten mountains over 5,000 feet (1,524 meters) 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 four-wheel drive vehicles

Mountain bikes and four-wheel drive vehicles are welcome in the park. For your own safety and for the protection of the natural features of the park please 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 without paved 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 I10.

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 9 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 but may be too dangerous to approach.

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 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), cross 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

The road turns south from the paved road 2 miles (3.2 km) west of Jumbo Rocks Campground. 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 guide 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, as well as to junipers, pinyon pines, and some of the lushest vegetation in the high desert. From the 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.

How Far Is It?	Oasis of Mara	Cottonwood	West Entrance
Belle Campground	9	28	28
Black Rock Canyon	28	73	17
Cap Rock	19	40	16
Cholla Cactus Garden	18	20	36
Cottonwood	38	0	56
Hidden Valley	20	42	14
Indian Cove	10	48	13
Interstate 10	45	7	35
Jumbo Rocks	11	33	23
Keys View	24	45	21
Oasis of Mara	0	38	34
Ryan Campground	18	39	16
Sheep Pass Campground	16	37	19
West Entrance	34	51	0
White Tank Campground	11	27	29

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
indiochmbr@aol.com
<http://www.indiochamber.org>

Joshua Tree
P.O. Box 600
Joshua Tree, CA 92252
(760) 366-3723
<http://www.joshua-tree.com>

Palm Springs
190 W. Amado Rd.
Palm Springs, CA 92262
(760) 325-1577
PSCchamber@worldnet.att.net
<http://www.pschamber.org>

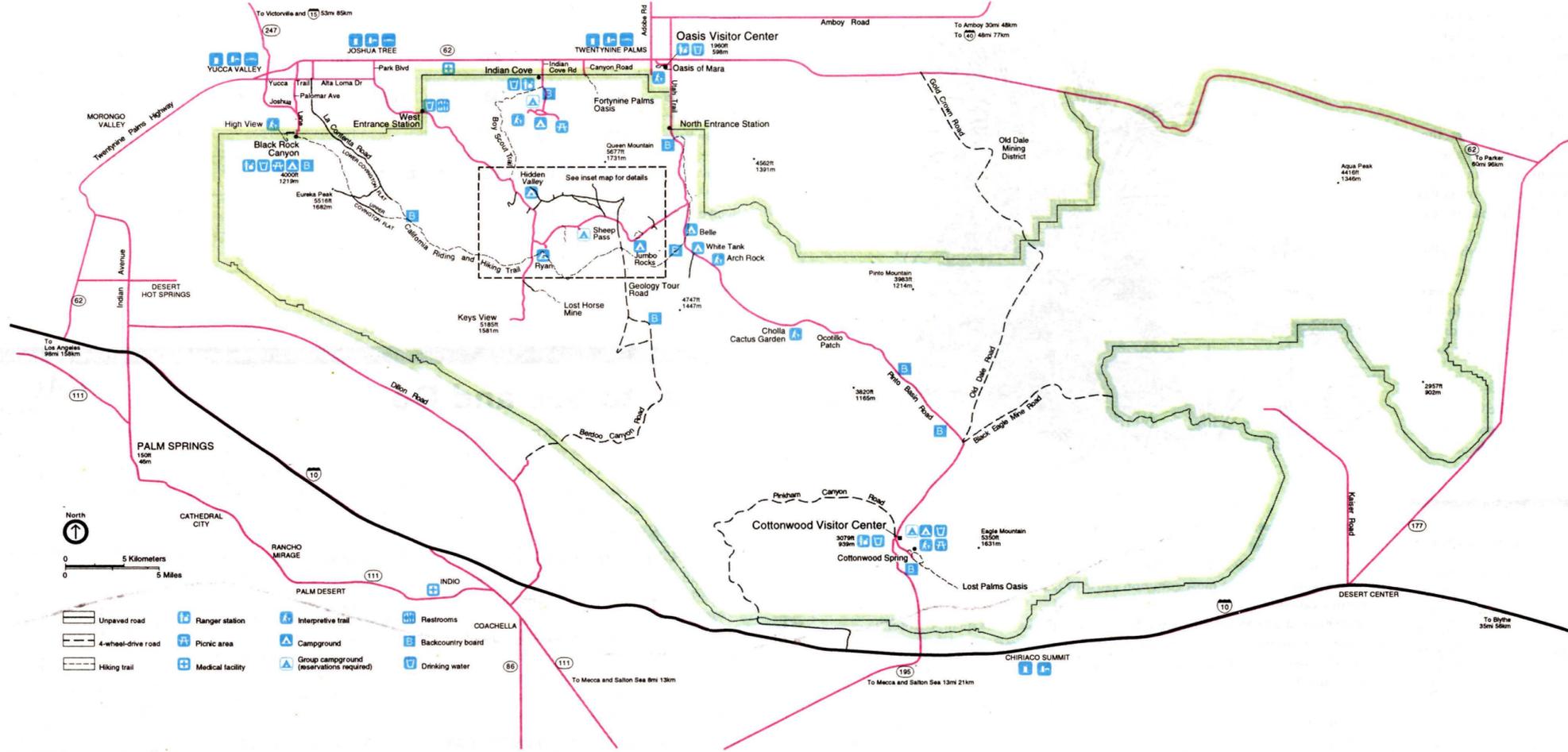
Twentynine Palms
6455 Mesquite Ave. Unit A
Twentynine Palms, CA 92277
(760) 367-3445

Yucca Valley
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Yucca Valley, CA 92284
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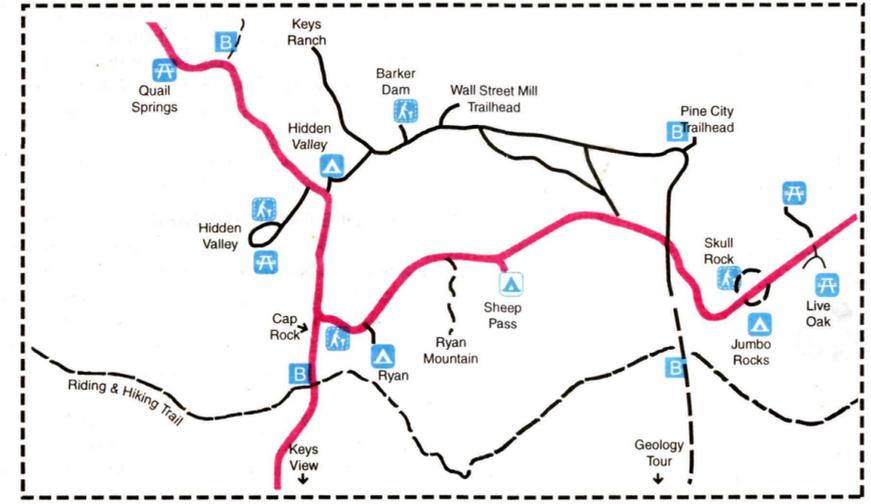
Park Center Gifts, Food, & Fine Art
6554 Park Boulevard,
Joshua Tree, CA 92252
760-366-3448



NATURE TRAILS

Trail	Mileage	Starting Point
Arch Rock	.3-mile loop (.5-km)	White Tank Campground, opposite site 9
Barker Dam	1.1-mile loop (1.8-km)	Barker Dam parking area
Cap Rock	.4-mile loop (.6-km)	Cap Rock parking area, at the junction of Park Blvd and Keys View Road
Cholla Cactus Garden	.25-mile loop (.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
High 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 (.4-km)	Keys View
Oasis of Mara	.5-mile loop (.8-km)	Oasis Visitor Center, Twentynine Palms.
Skull Rock	1.7-mile loop (2.7-km)	Jumbo Rocks Campground, just beyond loop E

Joshua Tree Guide
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HIKING TRAILS

Trail	Roundtrip Mileage	Time	Starting Point	Trail Description
Boy Scout	16 miles (25.8 km)	1-2 days	Indian Cove backcountry board or Keys West backcountry board 0.5 mile (0.8 km) east of Quail Springs picnic area	Scenic trail through the westernmost 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/ Mountain	4 miles (6.4 km)	3-4 hours	Parking area 1.2 miles (1.9 km) east of Keys View Road	Site of ten-stamp mill and foundations. Summit elevation: 5,278 feet (1,609 meters). 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: 3,371 feet (1,027 meters). 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: 5,461 feet (1,664 meters). 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.

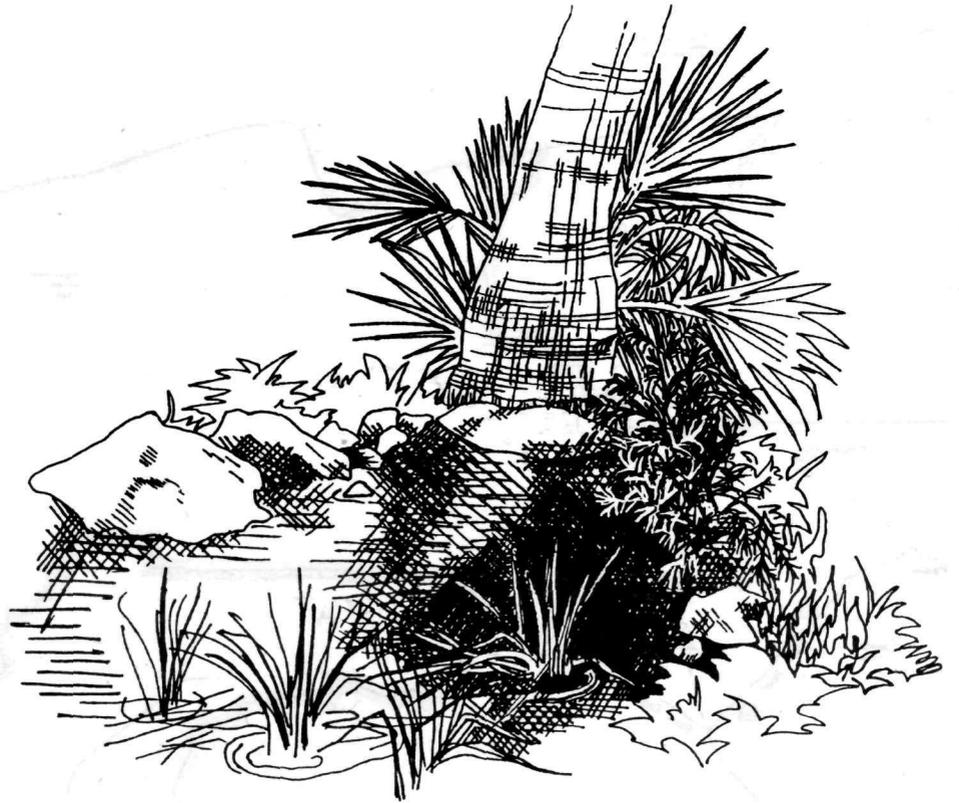
The Desert Fan Palm: A California Native

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, other 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.



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.

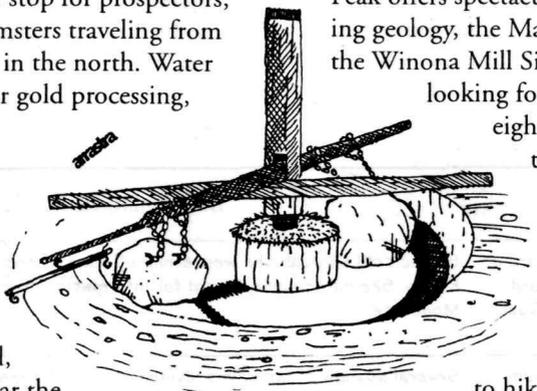
The cottonwoods that give their name to the spring are not native to this area. They were planted around the turn of the century by some early resident, and the palms were probably planted in the 1920s.

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 through this lower wash leads through palo verde and desert willow trees to the remains of Moorten's Mill Site.

The 3-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 restrooms, is located one-half mile from Cottonwood Spring via a signed nature 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 program; hikes, walks, and campfire programs are offered on weekends throughout most of the year.



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 to oases: bighorn sheep, Gambel's quail, coyotes. 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, who roosts only in palms. During the day, a flash of yellow-orange might be a hooded-oriole, who prefers to build its woven sack-like nest under the large green leaves of the 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 spends about five years chewing tunnels within the trunk of a desert fan palm. The chewing is so loud that flickers use the noise to locate the larvae. Successful larvae 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 over 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.

Think Globally — Act Locally

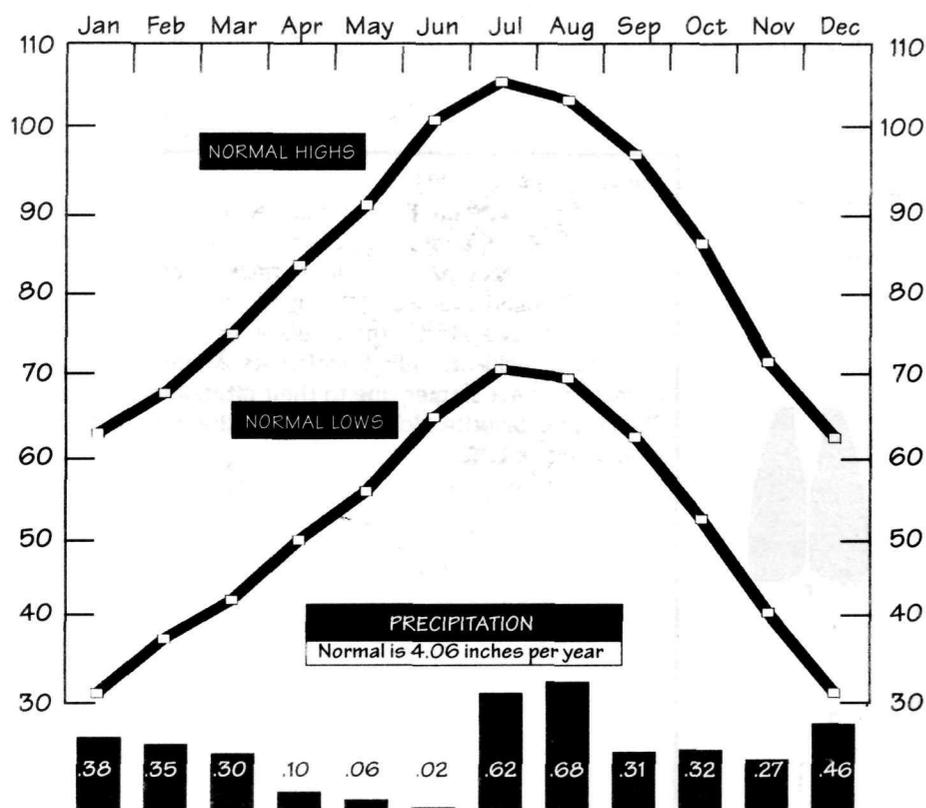


**REDUCE
REUSE
RECYCLE**



- 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 programs in your community.

The Weather



Measurements were taken at 1,960 feet (597 m). You can expect seven to twelve 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?

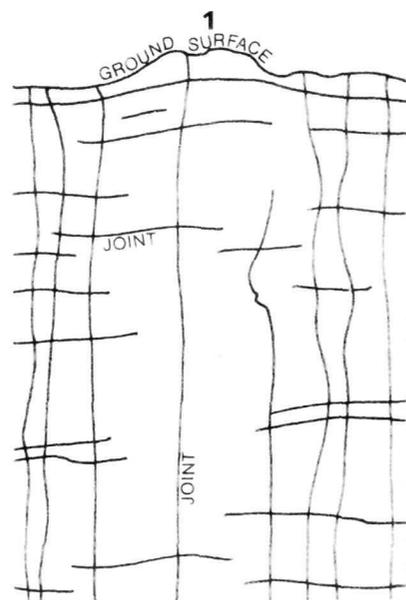
Geologists believe the face of our modern landscape was born more than 100 million years ago. Molten liquid, heated by the continuous movement of Earth's crust, oozed upward and cooled while still below the surface. These plutonic intrusions are a granitic rock called monzogranite.

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)

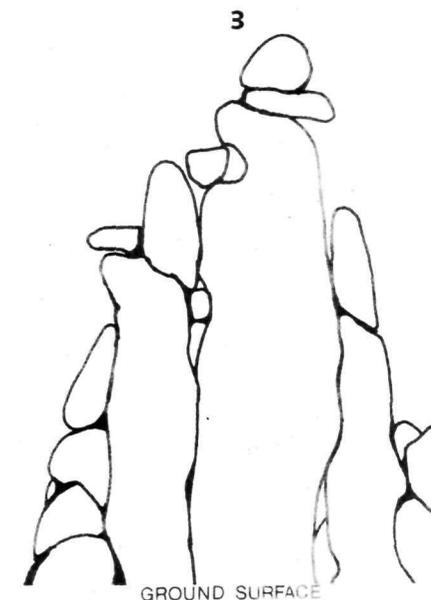
Visitors also wonder about the "broken terrace walls" laced throughout the boulders. These are naturally occurring formations called dikes. Younger than the surrounding monzogranite, dikes were formed when molten rock was pushed into existing joint fractures. Light-colored aplite, pegmatite, and andesite 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 the long-range effects of wind are small compared to the action of water.

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



CAMPGROUND ASTRONOMY

Camping away from city lights gives many of us city dwellers a chance to see the sky as we have never seen it. A great way to introduce someone to the "dark sky" is to tour the Milky Way with binoculars.

First just lay back on the ground and gaze at the band of light. Notice how it is brighter in places, with clumps of light and dark streaks where stars seem to be absent. Realize that the glow of light is from stars so far away that we can't quite make them out. The dark lanes are actually interstellar dust that blocks our view. The clumps of light are clouds of stars.

Find one of those star clouds and, without taking your gaze away from it, raise your binoculars to your eyes. The cloud will resolve into hundreds of stars, with perhaps smaller clumps and hazy patches in the field of view.

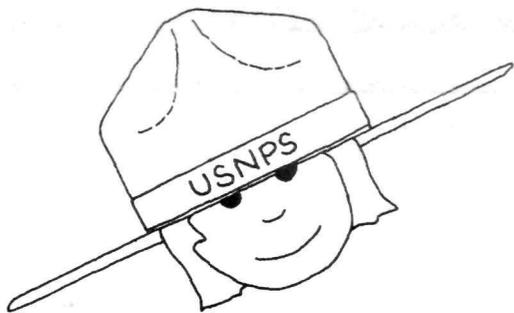
Notice how the milky way seems to be very bright and dense to the south near the horizon? You are looking toward the center of our galaxy, where the stars are richest. The constellations Sagittarius and Scorpion lie in this direction.

Just west of Sagittarius is Scorpion, one of the few constellations that look like its name. Scorpion is noted by the bright red star Antares, located in the scorpion's neck. Look at Antares with binoculars. See the large fuzzy ball of light next to it? That is a large globular cluster.

Turn your attention northward, above and to the left of the stars of Sagittarius. You will see a large cloud of stars. This is the Scutum star cloud. With binoculars you should easily see a hazy patch of light. This is a beautiful open star cluster.

As we move farther north, higher in the sky, we see the star clouds in the constellation Cygnus, the swan. This constellation also looks like its name. We can see the neck pointing south, and the wings stretched east and west. The bright star behind the wings is Deneb, the "tail" of Cygnus.

To help identify the many objects you will find with binoculars, you will want a star chart. A circular "star finder", also known as a "planisphere", will show the location of many celestial objects.



Hey there, Junior Ranger!

Complete at least five of the activities below and become a Junior Ranger at Joshua Tree National Park. When you have completed your work, take this page to the Oasis or Cottonwood Visitor Center or to a ranger-led evening program. A ranger will check your work and give you an official Junior Ranger badge. **Have fun!**

Terrific Tracks

Many animals live in Joshua Tree National Park. Read the clues below to help you unscramble a few of these animal names. Then draw a line between the animal names and the tracks they would make. HINT: You will have one extra track at the end. Do you know what animal makes it?

- ❶ It builds its nest of cholla cactus for protection and decorates it with shiny objects taken from campsites.

TAWODOR =

- ❷ This bird has a forward-curving topknot and would rather run than fly.

ULAQI =

- ❸ This large mammal has horns and is an excellent rock climber.

NRGOIBH EEHSP =

- ❹ Females of this animal produce 3–4 litters of 4–7 young each year.

IATOOCTNTL =

- ❺ The park is home to many species of this reptile.

DAZILR =

- ❻ This feline has a stubby tail and can be active both day and night.

TBBAOC =

- ❼ This animal does not drink water because its body is able to unlock the water stored in the dry seeds it eats.

GAROKNAO ART =

- ❽ This solitary hunter has bigger ears than its cousin, the gray fox.

TIK XFO =



Rocks

Joshua Tree National Park is famous for its rock formations. The *Wonderland of Rocks* has many of these large boulder piles. The rocks on the surface today were molten 83 million years ago! People come from all over the world to see, study, and climb on these rocks. People who study rocks are called geologists. Many of the rock formations have names due to their interesting shapes. Sketch your favorite rock formation in the park. What would you call it?

Map Mania

Get to know Joshua Tree National Park by playing "Map Mania." Using the official map and guide to the park (available at park entrance stations and visitor centers), answer the questions below by yourself or race friends and family members for the correct responses.

- ❶ How many campgrounds are in the park?
- ❷ Name the four mammals pictured on the back of the map.
- ❸ How many paved road entrances (red lines) are there into the park?
- ❹ What highway runs along the north boundary of the park?
- ❺ What can be seen at "Point of Interest #4?"
- ❻ Lost Palms Oasis is what "Point of Interest" number?
- ❼ What mountain range is in the far eastern portion of the park?
- ❽ What is the symbol on the map for a picnic area?
- ❾ Dirt roads are signified by what on the map?
- ❿ Is water available at the Cottonwood Visitor Center?
- ⓫ What is the transition zone?
- ⓬ Keys View lies in what mountain range?
- ⓭ What type of vehicle do you need on the Geology Tour Road?

Native Americans

Hike the Barker Dam trail with an adult and visit the rock art site. Sketch two of the designs you see on the rocks in this box. Remember not to do rubbings. Rock art is protected.

What sort of vandalism occurred at this site?

Why should we protect cultural sites?

Plant Sketching

Desert plants have many different adaptations to survive the summer heat. Some plants can store water. Some use little white hairs on their leaves or white spines to reflect back the sun's rays. Other plants have hairs, spines, or leaves that provide shade for their stems. Still others have a waxy coating on their stems and leaves to prevent water loss.

Draw plants that you find with these adaptations. You can use a plant guide or ask a ranger to help identify the plants you drew so you can label your sketches.

Remember not to pick any plants inside the park!

This plant stores water.

plant name = _____

This plant has a waxy coating.

plant name = _____

This plant reflects sunlight.

plant name = _____

This plant provides its own shade.

plant name = _____

- Answers
- TERRIFIC TRACKS:
- 1) woodrat, e
 - 2) quail, c
 - 3) bighorn sheep, f
 - 4) cottontail, h
 - 5) lizard, g
 - 6) bobcat, d
 - 7) kangaroo rat, b
 - 8) kit fox, i
- MAP MANIA:
- 1) nine
 - 2) bobcat, coyote, jackrabbit, kangaroo rat
 - 3) six
 - 4) Highway 62 or Twentynine Palms Highway
 - 5) Barker Dam
 - 6) !
 - 7) Coconino Mountains
 - 8) A
 - 9) gray lines
 - 10) yes
 - 11) where the Mojave and Colorado Deserts meet
 - 12) Little San Bernardino Mountains
 - 13) four-wheel drive
- WATER:
- 1) five
 - 2) flash floods
 - 3) less than 5 inches
 - 4) No, it's too salty
 - 5) Loss of moisture from leaves/minimize loss of moisture
 - 6) Barker Dam/to hold water for cattle and mining/wildlife uses it today
 - 7) 1 gallon/2 gallons
 - 8) personal answers

Wordseek

Find these words: Bats, Bighorn, Bobcat, Cholla, Coyote, Creosote, Hawk, Joshua Tree, Quail, Rabbits, Snakes, Tortoise, Yucca.

C H L I A U Q B C J
 H R N E D H A W K O
 O F E R A B B I T S
 L S G O O H A I J H
 L E K B S H C T L U
 A K C M P O G N S A
 Q A R T Y S T I U T
 T N X O L V J E B R
 Z S T W Y U C C A E
 Y E T O R T O I S E

Clean up the Park

Help keep Joshua Tree National Park clean by picking up litter that you see. Show your bag of litter to a parent or a ranger and have them initial here to verify your hard work.

Attend a Park Program

Ask at the visitor centers or look on park bulletin boards for the schedule of ranger-led programs offered by the park. Choose one that interests you and your family. When it is finished, have the ranger initial here to verify that you attended. What did you learn from the program?

Water in the Desert

Water is essential for survival in the desert. A palm oasis, with its huge fan palm trees, is a place where water occurs naturally at or near the surface of the ground. Visit one of the oases found on your park map to help you find the answers to the questions below. Be creative in where you look for information!

- 1 How many fan palm oases are found within Joshua Tree National Park?
- 2 What water event must you be aware of in Rattlesnake Canyon?
- 3 On average, how many inches of rain does the Mojave Desert get per year?
- 4 Will the water inside a barrel cactus quench your thirst? Why?
- 5 What is transpiration? Why do desert plants have small leaves?
- 6 What man-made water source inside the park was built around 1900? Why was it built then? What purpose does it serve now?
- 7 How much water should a person carry on a day hike in mild conditions? In summer heat?
- 8 Sit quietly in an oasis for 10 minutes. How does this places make you feel? What do you like about it? What don't you like? What did you notice that surprised you?

TAKING THE JUNIOR RANGER PLEDGE

"I, _____, promise to do my best to be a friend of nature. I promise that I will not intentionally pollute, destroy, frighten, or harm plants or animals, however big or small. I realize my actions will be an example to other people older and younger. I promise not to destroy nature while I enjoy nature."

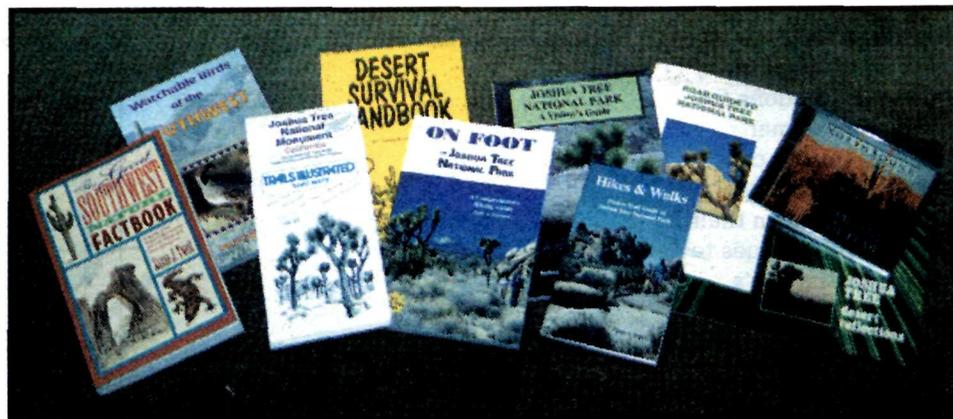
AWARDING THE JUNIOR RANGER BADGE

I certify that _____ completed at least five of the activities to become a Joshua Tree National Park Junior Ranger.

signed by: Ranger _____

Publications to help you plan your 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, or FAX from Joshua Tree National Park Association.



Getting to know Joshua Tree National Park

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

Joshua Tree Desert Reflections, Trimble. An excellent, easy-to-read book covering the geology, biology, and human history of Joshua Tree National Park. Beautiful color photos throughout. 33 pages PB \$4.00

Joshua Tree Video. An excellent introduction and overview to Joshua Tree National Park. 30 minutes VHS \$12.95; PAL \$15.95

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 \$4.95

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

75 Great Hikes in and Near Palm Springs, Ferranti. Covers Joshua Tree, Palm Springs, Indian Canyon, Mecca Hills, San Jacinto, and the Santa Rosas. 167 pages PB \$14.95

Hikes and Walks, Knapp. A pocket trail guide to Joshua Tree National Park with maps and descriptions of 26 trails. 34 pages PB \$4.95

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. \$7.95

Trails Illustrated Topographic Map of Joshua Tree National Park. Includes elevations, backcountry camping, hikes, routes, and safety. Waterproof and tearproof. \$8.95

Joshua Tree, The Story Behind the Scenery, Vuncannon. Full of color photos and fascinating text, the perfect introduction to the park. 48 pages PB \$7.95; \$8.95 for French or German.

Wildflowers of Joshua Tree. Pocket guide to the common flowering plants of Joshua Tree National Park. Includes a map and over 50 color photographs to help with identification in the field. PB \$9.95

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

On the Road in California

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 \$12.00

California Desert Byways, Huegel. Backcountry drives in Southern California's desert area, includes Joshua Tree and Death Valley National Parks. 158 pages PB \$18.95

California Deserts, Schad. Color photographs of California's desert regions. Features the California Desert Conservation Area, Mojave National Preserve, Joshua Tree National Park, Death Valley National Park, and Anza-Borrego Desert State Park. 103 pages PB \$14.95

California Roadmap. Includes a list of public recreational areas and places of interest. \$2.95

Ghost Towns of California, Miller. Color photos, maps, historical information, and descriptions fill this booklet. Great for history buffs and travelers alike. 48 pages PB \$4.95

California Historical Landmarks. Lists the location and significance of each of the 43 historical parks and 1,000 historical landmarks established by the State of California. 318 pages PB \$14.95

Earth Is Our Mother, Eargle. A guide to the Native Americans of California, past to present. Illustrated with photographs, drawings, and maps. 194 pages PB \$10.00

Tapes and CDs Nature's sounds set to music with A) flute, B) guitar, or C) classical. Excellent mood-setter for your driving tour of the Southwest's desert areas. Tape \$9.95/CD \$15.95. Designate A, B, or C.

Life in the Desert

The Great Southwest Nature Factbook, Tweet. Everything you ever wanted to know about nature in the Southwest. 223 pages PB \$14.95

Deserts, MacMahon. A National Audubon Society Nature Guide. A comprehensive field guide, fully illustrated with color photos, of the wildflowers, birds, reptiles, insects, and other natural wonders of North America's deserts. 478 pages PB \$19.95

Southwest Desert Wildlife. The sixty-five exquisite color photographs in this volume will affect the way you see, hear, and experience the environment. 32 pages PB \$4.95

Desert Palm Oasis, Cornett. An exploration of the lush, water-loving fan palms that are such a wonderful surprise in harsh desert environments. 47 pages PB \$9.95

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

Shrubs and Trees of the Southwest Desert, Bowers. An easy-to-use guide full of descriptions and line drawings of over 100 desert shrubs and trees. 140 pages PB \$9.95

70 Common Cacti. Colorful photographs and easy-to-read descriptions demonstrate the unique beauty of the common cacti of the Southwest. 70 pages PB \$7.95

Roadrunner!, Douglas. An avid roadrunner watcher takes a close look at the paisano, that wonderful, wacky symbol of the American desert. 48 pages PB \$5.95

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