

# Joshua Tree Guide



DESERT PRIMROSE, *Oenothera deltoides*—One of the many species of wildflowers that color the desert each spring. Look for them in dry washes, sandy flats, and along roadsides.

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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 (619) 367-7511 for additional information. Our TDD number is (619) 367-1549.

### 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 \$5.00 per vehicle and is good for seven consecutive days. A Joshua Tree Pass may be purchased for \$15 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.

### 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 (619) 767-4684; Living Desert (619) 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.

## Desert Wildflowers Where and When

When spring comes to the desert in Southern California, it is often accompanied by colorful wildflower displays. One of the best places for seeing the desert in bloom is Joshua Tree National Park.

Preserving and protecting almost 800,000 acres, Joshua Tree National Park contains superb examples of the Colorado and Mojave Deserts. Wildflowers of the lower Colorado Desert usually come into bloom by mid-March, followed in mid-April by those in the higher Mojave Desert. The timing of wildflower blooming is dependent on warming spring temperatures. However, rainfall during the winter and early spring months will dictate how plentiful and prolonged the display will be. If sufficient rainfall has been received by the end of February, green leaf rosettes will begin appearing at lower elevations. These wildflower leaves will hug the ground seeking radiated warmth from the soil, until warming temperatures trigger sprouting of the flower stalks. Usually around the middle of March, the familiar desert carpets of pale yellow desert dandelions, pink Arizona lupines, desert gold poppies, and yellow coreopsis will cover the alluvial fans of the Colorado Desert.

Even though the park received some precipitation this past winter, it was limited to occasional fall showers and scattered rain and snow that accompanied winter storms. By the first week in February there were noticeable patches of green scattered along the roadside, especially between Cottonwood and the south boundary and from the main road and Cottonwood junction down through Wilson Canyon, halfway to the Pinto Basin. However, there were equal patches of very brown, dry desert with no hint of green visible. Additional spring rainfall would help germinate those seeds that have not yet responded—and prolong the season.

Along the road below Cottonwood Canyon, by February, the alluvial fan was beginning to show leaf rosettes of the woody-bottle washers and brown-eyed primroses, leaves of several species of phacelia, at least three different lupines, desert dandelions, and desert gold poppies. One poppy was actually in bloom on February 1—an early promise of wildflowers to come? Several desert shrubs in the Cottonwood Canyon area were also beginning to bloom in early February. These included red chuparosa, yellow-flowered brittlebush, and orange desert mallow. Smaller annual wildflowers that had begun to bloom in early February included

white-flowered forget-me-nots and the low growing purple filaree. Another promising sighting was the beginning of buds on the colorful red flowering ocotillos below Cottonwood.

Joshua trees in the high desert were also showing the first spring buds. It will be interesting to watch the Joshua trees this year, as most branches still have dried flower stalks from two years ago occupying the terminal stems where new flowers should occur.

Despite a very dry winter, the Pinto Basin is a good area to search for wildflowers. Located in the lower portion of the Colorado Desert, it often has sand verbena, dunes primroses, and desert sunflowers. The one-mile hike to the sand dunes may well reward the energetic wildflower seeker. Look for the ocotillos along the roadside as well. When in bloom, their long red flower stalks are extremely showy and attract hummingbirds and orioles.

Along the north entrance to the park (located just outside Twentynine Palms) the elevation is about 2,300 feet and often offers good opportunities for early wildflower viewing. Dandelions are usually abundant along the roadside and, under creosote bushes, a variety of purple and blue phacelia can be found.

As one travels into the interior of the park, the elevation increases and spring comes later. It will be mid-April before the wildflowers of the high desert will be blooming. A journey into the Queen Valley region of the park could be rewarding at that time. Cactus should be blooming along roads and trails. Showy pink blossoms of the beavertail are usually first, followed by the red-flowered mound cactus and magenta calico cactus. Driving slowly along the Queen Valley dirt roads will afford the opportunity to see the harder-to-find old man and devil (sometimes called dead) cactus.

The upper portions of Pinto Basin Road will also come into bloom later in the spring. In past years the Wilson Canyon area, about fifteen miles south of Twentynine Palms, has had a variety of wildflowers. Take a short hike and look for delicate white desert stars and yellow wooly daisies hugging the ground, along with shimmering blazing stars and purple desert asters. This is also a good area to find sun cups (a yellow evening primrose), brittlebush, and Mohave yuccas in bloom.

If you walk some of the nature trails or stop along the road and wander out into the desert, you will be further rewarded. Often

*Welcome* to Joshua Tree National Park, a unit of the National Park Service and home to many unique and interesting arid land plants and animals. The beauty and diversity of this Southern California desert region prompted President Roosevelt, in 1936, to proclaim this area a national monument. On October 31, 1994, President Clinton signed the California Desert Protection Act expanding the boundaries of Joshua Tree and elevating it to national park status. Today the magnificence of this desert environment attracts over a million visitors each year.

When you visit Joshua Tree, 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 any questions or concerns about the many activities and attractions of this desert environment. An excellent way to start your visit is to stop by the Oasis Visitor Center in Twentynine Palms.

I hope you take advantage of Ranger-led programs. Please look for scheduled programs, hikes, and special events posted on bulletin boards throughout the park. With knowledge and experience come understanding and appreciation of this extraordinary place.

The staff at Joshua Tree National Park pledges to provide excellence in service and to help you enjoy your visit. Our goal is to fulfill the mission of the National Park Service—to keep forever unimpaired the finest examples of the nation's natural, cultural, and historical places.

The park is open year round, however, the spring season is one of the more popular times to be in the desert. Temperatures are most accommodating and one may see the desert in bloom. Thank you for helping to preserve and protect Joshua Tree National Park.

Do you have concerns or ideas for improving your national park? Please drop a note to: Superintendent, Joshua Tree National Park, 74485 National Park Drive, Twentynine Palms, CA 92277.



Ernest Quintana, Superintendent

early spring wildflowers are not obvious, but a short walk will turn up a variety of species and colors. Hiking trails, such as the 49 Palms Oasis trail, may also offer wildflower viewing. The final destination of this trail is a fan palm oasis about a mile and a half up the canyon. Along the way beavertail and barrel cactus are usually in bloom by April. This trail offers one of the few spots where yellow and white tuckermans have been seen together. Canyon Road, three miles west of Twentynine Palms, provides access to this trail.

The Lost Palms Oasis trail out of Cottonwood provides a longer hike, often with good wildflowers. This eight-mile roundtrip leads to the largest fan palm oasis in the park, passing through places where ocotillo, chia, and scarlet locoweed grow.

East of Twentynine Palms, Highway 62 provides access to some of the recently added portions of Joshua Tree National Park, including the north slopes of the Pinto Mountains, the Coxcomb Mountains, and the sandy flats near Clark's Pass. About fourteen miles east, the Gold Crown/Old Dale Road leads into the park and the Pinto Basin. Parts of this road require four-wheel drive. The area along Highway 62 is often an excellent spot to look for the showy, white desert lilies and yellow desert sunflowers.

If you have several days to spend in the area, there are other park roads to check

out. As spring progresses, usually by May, the Covington Flats area will come into bloom. Covington Flats may be reached from La Contenta Road, which extends south from Highway 62, about 20 miles west of Twentynine Palms. This is also one of the best Joshua tree areas in the region, but you have to come early for Joshua trees in bloom, as they often start in February, are done by April, and do not bloom every year.

Where and when one will find wildflowers in bloom in the desert is not totally predictable. A lot depends on rainfall and temperatures. If someone wants to see wildflowers in bloom, a lot also depends on the willingness to get out and look. If the wildflowers are not out this week, don't give up. Come back next week and there may be a great display. Or, call ahead to one of the wildflower hot lines listed under Important Information on page two. Throughout spring, park staff maintains a list of wildflower sightings. Please remember the park is here for all to enjoy. Removal of plants from park lands is unlawful and will deny others coming later the opportunity to see them. And while viewing wildflowers, please be careful where you put your feet.

Author Bill Truesdell is the former Chief of Interpretation and current volunteer at Joshua Tree.

# Spring Sky Watch

## February

New Moon: February 7  
Full Moon: February 22

Each evening, **Saturn** appears low in the west-southwest. If you want a good look at it in a telescope, find the planet as soon as possible after sunset. The lower it sinks, the more its image gets fuzzed up by the thick layers of atmosphere near the horizon.

**Mars** is bright enough to be seen with the naked eye, shining golden orange after it rises at mid-evening. If you have a telescope, Mars appears as a very tiny disk. It will enlarge a little each week until it's nearest Earth in mid-March. Late in the night when Mars is high in the sky, look for traces of its white polar caps and subtle surface markings.

In the low light of dawn, **Venus**, **Jupiter**, and **Mercury** are just above the southeast horizon.

## March

New Moon: March 9  
Full Moon: March 22

The Sun crosses the March equinox point at 5:56 a.m. on the 20th, marking the **start of spring** in the Northern Hemisphere.

On the night of March 23, the **Moon** will be nearly eclipsed by Earth's shadow.

**Mars** blazes brilliant red in the eastern sky even before full darkness. Its fiery glow shines almost as bright as the brightest star, white Sirius. When the atmosphere is especially steady, a telescope may show signs of a white polar cap and touches of gray-green markings on the ochre-colored disk.

The other bright planets remain close to the Sun's glare this month and are more difficult to observe. **Saturn** sinks below the west horizon before dusk has fully faded in early March. By mid-month the Sun's afterglow hides Saturn completely.

**Jupiter** is fairly easy to spot very low in the southeast as dawn brightens.

**Venus** and **Mercury** are hidden in the Sun's glare for most of March. Toward the end of the month, you should be able to spot Mercury very low in the west as evening twilight fades.

March and April are the peak months for **Comet Hale-Bopp**. The comet is visible in the low sky at dawn starting in mid-January. As winter progresses into spring, it gets higher and brighter. It will put on a fine show in March in the

# 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 (1.6 km) from the road and 500 feet (150 m) 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 of them.

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.

The basins that are in the higher altitudes contain thousands of the giant yuccas known as Joshua trees, which from a distance appear as skeleton forests. These weird trees assume shapes well described as giants in agony.

Edwin F. Walker, 1931

northeastern sky before dawn. But most people will see it from mid-March through April when it is conveniently placed in the northwest after dusk.

## April

New Moon: April 7  
Full Moon: April 22

On April 10, there will be a lunar occultation of the bright star **Aldebaran**. An **occultation** happens when one astronomical body passes in front of another, hiding it from our view. To occult means literally to hide. A lunar occultation, in which the Moon hides a star or planet, is the most common kind and the easiest to see. On this April evening, skywatchers can see the dark edge of the waxing crescent Moon creep up to and cover the orange "eye" of the constellation Taurus the Bull. The occultation will appear around 10 p.m. Just keep the Moon and Aldebaran under watch starting as soon after sunset as you can find them.

## 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 (15 cm) 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 (3.8 l) of water per person per day just for drinking;

two gallons (7.6 l) 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 (22 degrees C) 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 (619) 367-3523 to inquire about obtaining a permit.

## May

New Moon: May 6  
Full Moon: May 22

**Comet Hale-Bopp** becomes lost from view by the beginning of May, heading south and setting soon after the Sun. The evening sky it leaves behind is almost devoid of bright planets. **Venus** is too low after sundown to be found easily. Only **Mars** is visible, fading from its March brilliance but still impressive.

Jupiter rises in the middle of the night, followed by Saturn even later. Mercury makes a weak showing low in the dawn sky.

**Mars** is unmistakable high in the southwest, shining below the right triangle that forms the back part of Leo. Mars will remain very conspicuous to the naked eye for a few more months, but it is shrinking into the distance. May offers the last chance for telescope users to try to detect vague surface features on its tiny disk.

**Venus** is too low in the western glow of sunset to be seen very easily in May. It sets before the sky gets dark.

**Jupiter** looms up in the southeast in the early morning hours. It's the brightest starlike object in the sky, and it far outshines anything else in its dim constellation of Capricorn, the Sea Goat. The best time to view Jupiter in a telescope is still at the beginning of dawn, when it is highest.

**Saturn** is visible very low in the east as the May dawn brightens.

**Mercury** is even lower in the dawn. Look for it with binoculars far to Saturn's lower left.

The Andromeda Society hosts Star Parties in Hidden Valley picnic area once each month. The programs take place the Saturday on or after the new moon. The viewing starts 20 minutes after sunset. Pick up a program schedule for details and directions.

## Campgrounds

Campgrounds	Elevation	Sites	Fee	Group Sites	Group Fee	Horse Camp	Water	Flush Toilets	Chemical Toilets	Tables	Fire Grates	Dump Station
Belle	3800'	18							*	*	*	
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							*	*	*	

There is a 30-day camping limit each year. However, only 14 nights total may occur from October through May.

Campsites are limited to six people, two tents, and two cars. Group sites accommodate ten to seventy people.

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.

Showers are not available, and there are no hookups for recreational vehicles.

Water is available at Oasis Visitor Center in Twentynine Palms, Indian Cove Ranger Station, West Entrance, and Black Rock and Cottonwood Campgrounds.

If you wish to have a campfire, bring your own firewood as all vegetation within the park is protected.

Quiet hours are from 10 p.m. to 6 a.m. This includes generators and motors.

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 that are dependent upon each other for their survival in this harsh environment. 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 National Park 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, time spent in Joshua Tree National Park 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 Joshua Tree National 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 Interstate 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 then winds up through canyons in the Eagle Mountains. The first 9 miles (14.5 km) of the road 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 dangerous to approach.

### Old Dale Road

This 23-mile (37.3-km) road starts at the same point as the Black Eagle Mine Road. For the first 11 miles (17.8 km), the road runs across the Pinto Basin, a flat, sandy

dry lake bed. Shortly after leaving the basin, the road climbs up a steep hill, then crosses the park boundary. Near that point a number of side roads veer off toward old mines and private residences. If you stay on the main road you will come out on Highway 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 Campground or at the dirt road opposite the Geology Tour Road. Several bike racks have been placed in this area so visitors can lock their bikes and go hiking.

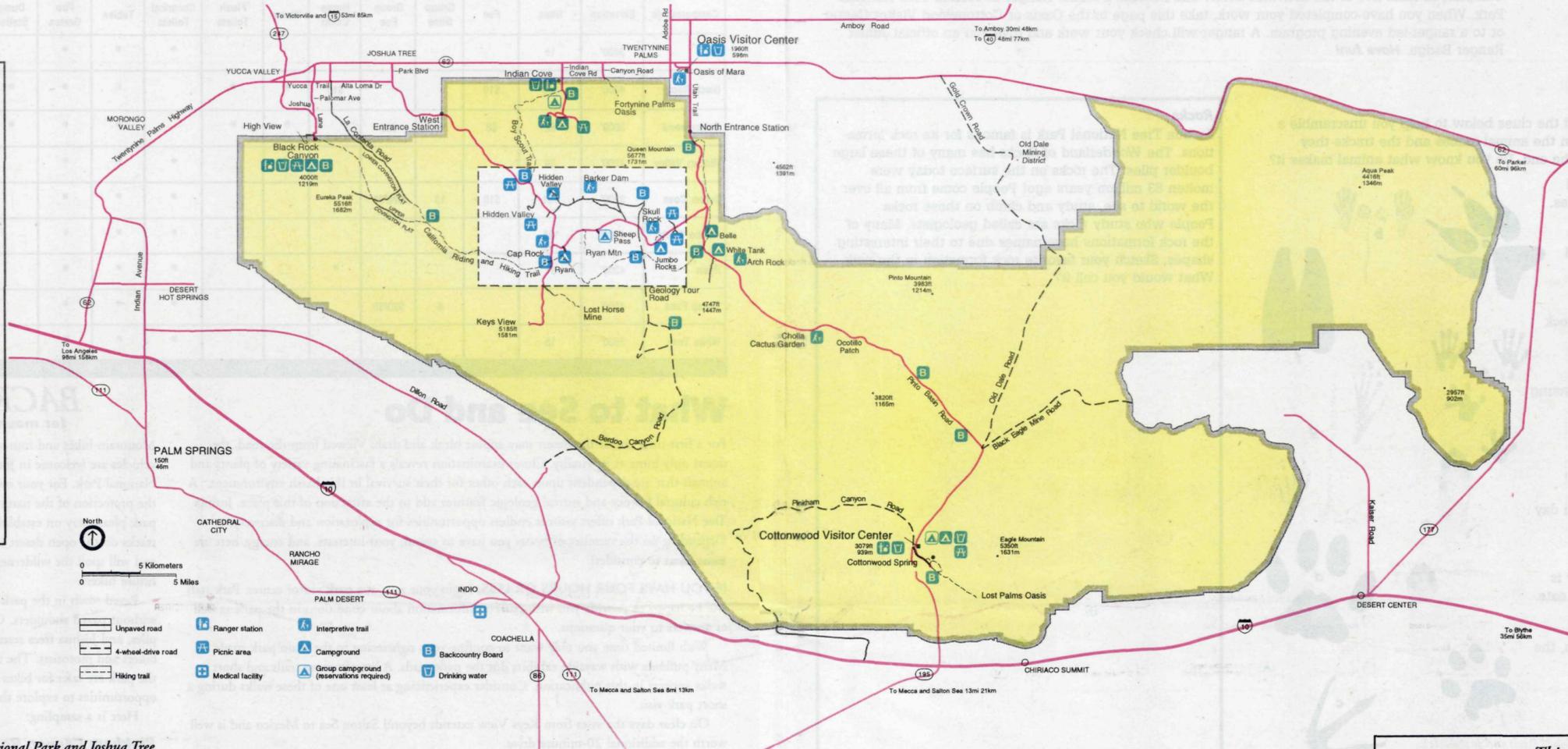
### Geology Tour Road

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 can be taken that 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. A nice trip is from the Covington Flats picnic area to Eureka Peak, 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



North

0 5 Kilometers  
0 5 Miles

Unpaved road  
4-wheel-drive road  
Hiking trail

Ranger station  
Picnic area  
Medical facility

Interpretive trail  
Campground  
Group campground (reservations required)

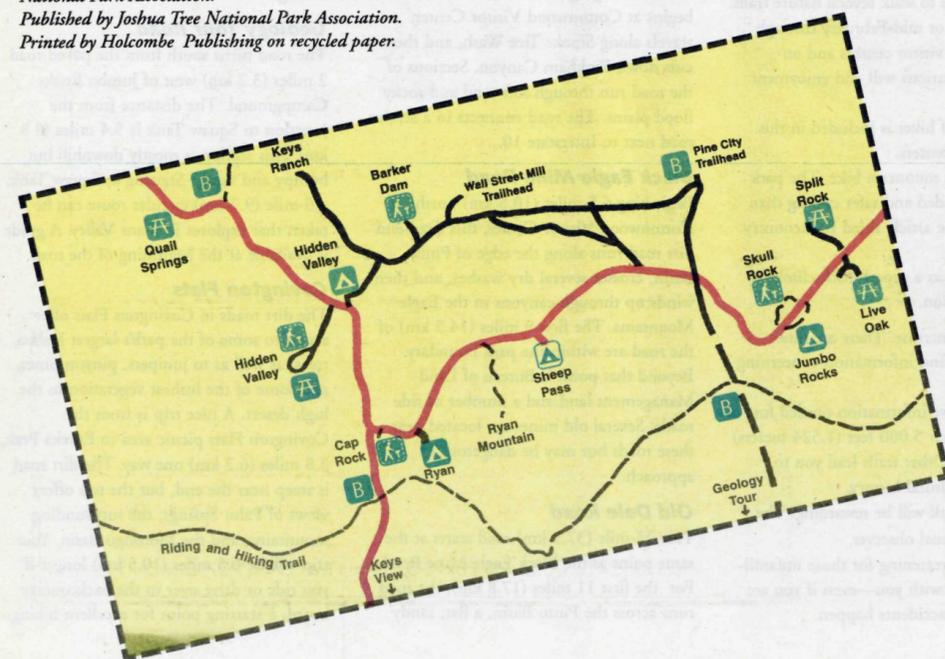
Backcountry Board  
Drinking water

## 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

Produced by the employees and the volunteers of Joshua Tree National Park and Joshua Tree National Park Association.  
Published by Joshua Tree National Park Association.  
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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 Highway 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, 5278 feet (1583 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, 3371 feet (1028 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, 5461 feet (1663 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.

Think Globally — Act Locally



REDUCE  
REUSE  
RECYCLE

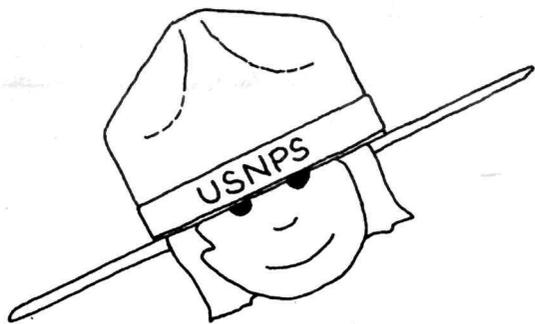


- Bring your aluminum and metal cans, glass, and plastic to a campground recycling center.
- Share or recycle this Joshua Tree Guide when you have finished reading it.
- Participate in recycling programs in your community.

### A Special Thanks to Our Sponsors —

This publication has been produced for Joshua Tree National Park visitors through generous contributions from the following businesses, organizations, and individuals. The Joshua Tree National Park Association and the National Park Service are grateful for their support.

- 29 Palms Inn, At the Oasis of Mara, Twentynine Palms, CA 92277. 619-367-3505
- Best Western Gardens Motel, 71487 Twentynine Palms Hwy., Twentynine Palms, CA 92277. 619-367-9141
- Park Center, 6554 Park Blvd., P.O. Box 295, Joshua Tree, CA 92252. 619-366-3448



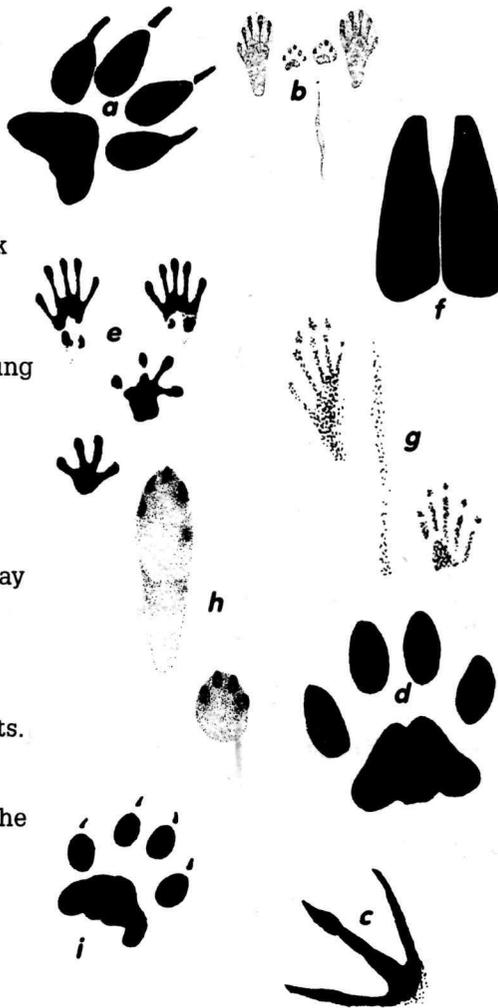
# Hey there, Junior Ranger!

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?

- 1 It builds its nest of cholla cactus for protection and decorates it with shiny objects taken from campsites.  
**TAWODOR =**
- 2 This bird has a forward-curving topknot and would rather run than fly.  
**ULAQI =**
- 3 This large mammal has horns and is an excellent rock climber.  
**NRGOIBH EEHSP =**
- 4 Females of this animal produce 3-4 litters of 4-7 young each year.  
**IATOCTNTL =**
- 5 The park is home to several species of this reptile.  
**DAZILR =**
- 6 This feline has a stubby tail and can be active both day and night.  
**TBBAOC =**
- 7 This animal does not drink water because its body is able to unlock the water stored in the dry seeds it eats.  
**GAROKNAO ART =**
- 8 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.

- 1 How many campgrounds are in the park?
- 2 Name the four mammals pictured on the back of the map.
- 3 How many paved road entrances (red lines) are there into the park?
- 4 What highway runs along the north boundary of the park?
- 5 What can be seen at "Point of Interest #4?"
- 6 Lost Palms Oasis is what "Point of Interest" number?
- 7 What mountain range is in the far eastern portion of the park?
- 8 What is the symbol on the map for a picnic area?
- 9 Dirt roads are signified by what on the map?
- 10 Is water available at the Cottonwood Visitor Center?
- 11 What is the transition zone?
- 12 Keys View lies in what mountain range?
- 13 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
- (mystery animal) coyote, a
- MAP MANIA:**
- 1) nine
  - 2) bobcat, coyote, jackrabbit, kangaroo rat
  - 3) six
  - 4) Highway 62 or Twentynine Palms Highway
  - 5) Barker Dam
  - 6) i
  - 7) Coxcomb 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 \_\_\_\_\_

## DESERT MAGIC

What has tentacles creeping through the ground around you, resists whipping winter desert winds, has watched the sun rise and fall over hundreds of cloudless days, and is invisible to the untrained eye? Cryptobiotic crusts! Otherwise known as "desert glue," this layer of biotic organisms "hidden" (crypto-) in the surface of park soils is rarely noticed by even the most active desert hiker.



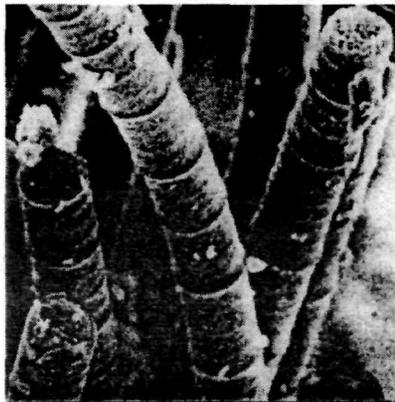
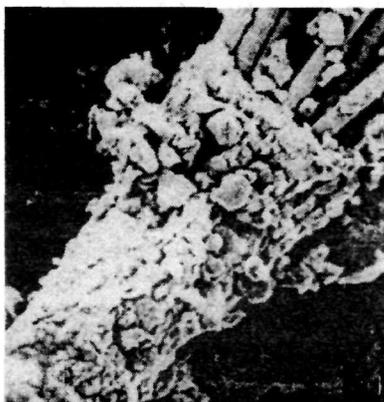
Magnified view of cryptobiotic crust structure

Living soil crusts are found throughout the world, from the hottest deserts to polar regions. In the desert, these crusts are dominated by *cyanobacteria* (blue-green algae), but also include lichens, mosses, green algae, microfungi, and bacteria.

So what's the big deal? Crusts play a vital role in desert health. *Cyanobacteria* in the desert form filaments surrounded by sheaths. With summer or winter rains, these filaments become moist and active, moving through the soils, leaving behind a trail of the sticky sheath material. The sheaths stick to surfaces such as soil particles, forming an intricate webbing of fibers. In this way, loose soil particles are joined together, and otherwise unstable, highly erosion-prone surfaces become resistant to both wind and water erosion. Basically, they hold the place in place!

These sheaths build up in the soil over long periods of time, up to 15 cm deep in some areas. Not only do they protect the soil from blowing away; they also absorb precious rainfall (reducing flash flood runoff) and provide a huge surface area for nutrients to cling to. They contribute nitrogen and organic matter to ecosystems which is critical in deserts where resources are few and far between. Unfortunately, many human activities are incompatible with these fragile crusts. The fibers that offer stability to the soil surface are no match for the boot of a hiker nor the weight of a tire. Crushed crusts contribute less nitrogen and organic matter to the ecosystem; under the best circumstances, a thin veneer may return in *five to seven years!*

So now what? Well, the best thing we can all do is try not to love our desert to death. Stay on established trails, and keep your vehicle on approved roads within the park. If you must walk through an area thick with crusts (you may see them as lumpy black bumps on



Magnified view of a cryptobiotic sheath (left) and filaments (right)

## March for Joshua Tree on Earth Day

Each year the National Parks and Conservation Association, in partnership with the National Park Service, sponsors the *March for Parks* event to coincide with Earth Day. *March for Parks* is a community-based activity whereby people turn out and march along a designated route in a public show of support for their local park.

Generally each *March for Parks* event includes a fundraising campaign in support of an identified park project. More important than the money raised is the chance for visitors and local residents to demonstrate support for "their" park.

Joshua Tree National Park will host its first ever *March for Parks* event on April 19, 1997. Current plans call for the *March* to begin in the town of Yucca Valley and proceed up Joshua Lane to Black Rock Campground. Once marchers arrive at Black Rock, there will be a brief program with guest speakers and other activities.

For more information or to volunteer to help, call park headquarters, 619-367-7511. Or, if you won't be able to join us here at Joshua Tree, check with the parks in your area to see if they will be conducting a *March for Parks* event this Earth Day.



the ground), walk in single file to destroy as small an area as possible. The desert will thank you for this in years to come, with bountiful wildflower displays in the crusted areas, as well as with land kept in place and a healthy ecosystem.

Author Jane Rodgers is the Vegetation Specialist at Joshua Tree.

On your mark, get set for the



## 4th Annual 24 Hours Photographing Joshua Tree National Park

Join other photographers for 24 hours capturing the varied beauty of Joshua Tree National Park. On April 4, at 4:30 p.m., participants will meet at park headquarters to receive final instructions and pose for a group photograph. One second after midnight, the 24 hours begins!

Participating photographers may submit prints for the resulting photo mural. The deadline is April 21. That is also the deadline for submitting prints and/or slides for proposed magazine articles.

Photographers of all skill levels are invited to participate. There is no fee, however, you must register with a participating school or with Director Tim Terrell.

For registration information, send a self addressed stamped envelope to: Tim Terrell, P.O. Box 1134, 29 Palms, CA 92277

## Art Festival

April 11, 12, and 13  
9 AM to 5 PM

The 1997 Joshua Tree National Park Art Festival will be held at the Oasis Visitor Center in Twentynine Palms.

### Subject Matter:

Landscape, wildlife, people, history, and archaeology pertinent to Joshua Tree National Park and the deserts of the Southwest.

### Media:

Sculpture, drawing, painting, textiles, photography, and three-dimensional art forms.



## Spring Schedule of Interpretive Programs

Drawn to Joshua Tree National Park's stunning scenery? Learn about the stories behind the scenery by joining a ranger-led nature hike. Or hear stories about early settlers and their survival strategies for desert living. All programs are free. You may request a schedule at the Oasis Visitor Center, Cottonwood Visitor Center, or Black Rock Nature Center. You may also pick one up at an entrance station.

Ranger-led interpretive walks are offered in many areas of the park on weekends beginning February 15. From March 16 through May 10, programs will be scheduled daily.

Evening campfire programs conducted at Jumbo Rocks and Indian Cove Campgrounds feature fascinating plants, elusive wildlife, and more!

The Andromeda Society will host Star Parties in the Hidden Valley picnic area once a month. The programs take place the Saturday on or after the new moon. The viewing starts 20 minutes after sunset.

At Cottonwood Spring weekend programs include a variety of nature walks. Evening campfire programs feature slide-illustrated presentations and Native American stories.

At Black Rock Canyon once a month birdwalks begin in February. Saturday evening programs are offered inside the nature center. These slide-illustrated programs provide visitors with an introduction to Joshua Tree's diverse landscape and include hiking tips and wildflower identification.

## Elders of the Desert

As spring approaches and annual plants begin to rise — along with the temperature — tortoises, *Gopherus agassizii*, become restless within their burrows and emerge to feed, bask in the sun, and mate.

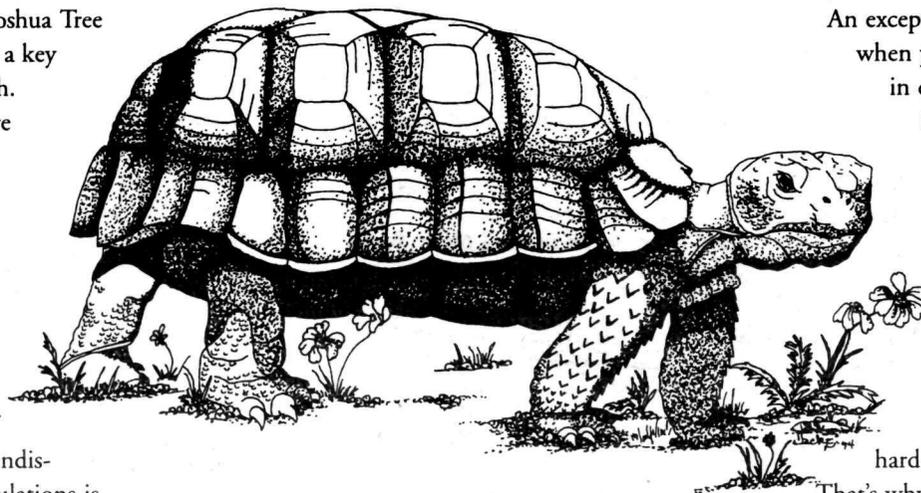
Tortoise populations have been declining for decades because of collecting, vandalism, loss of habitat, and disease. In 1990 the U.S. Fish and Wildlife Service listed the species as threatened. To better understand this species, land managers have been conducting intensive research for several years now. Joshua Tree National Park plays a key role in such research. Suitable habitat here is extensive and, unlike other areas, has remained relatively pristine due to the protection given to it and the limited impact by man. Knowledge of conditions within undisturbed tortoise populations is helpful in determining the effect of disturbances elsewhere.

Occupying a variety of habitats in the park, tortoises live in both the Mojave and Colorado Desert ecosystems and are generally found below 4,000 feet in Joshua tree communities, creosote bush and saltbush scrub habitats, and in some ocotillo-creosote habitats. These areas provide suitable soils for constructing burrows and adequate plants for nourishment.

What do tortoises eat in the wild? Like many desert animals, tortoises' food preferences depend on locality and availability of food items. They feed on herbaceous perennial and annual wildflowers, such as spurges, blazing stars, lupines, forget-me-nots, desert dandelions, gilies, phacelias,

and coreopsis. Several species of grasses are also eaten, as well as the occasional fresh cactus pad or bud.

Water requirements for the tortoise are met largely by the moisture content of their food. When it rains tortoises will drink free water where it collects in pools near rocks or in depressions. An important survival feature that tortoises use to withstand dry periods is to store water in their bladders where it can be reabsorbed.



Tortoises spend most of their lives in burrows, which vary in length from two to 15 feet. During the warmer months they may occupy temporary burrows or pallets which barely cover their shells. But they use their larger burrows for escape from the elements, hibernation in winter, and a refuge from predators such as coyotes, ravens, kit foxes, golden eagles, and greater roadrunners.

Females lay one or more clutches of one to 12 eggs from mid-April to mid-July. The eggs, which are the shape and size of ping-pong balls, are concealed within the burrow by the female who will push with her hind legs to cover them with dirt. Hatching takes place in 70 to 120 days. If you are in the park between mid-July and mid-October keep an eye out for the sand dollar sized

babies, tucked under protective plants.

If you find a tortoise during your visit to the park, remember that tortoises are a threatened species and are protected by federal law. Please do not touch the animal or disturb it in any way. You should remain some distance away and observe it quietly. You do not want to frighten the tortoise since it may empty its bladder as a defense mechanism. This results in a critical loss of stored water for the animal, which then may not survive a dry period.

An exception to the "don't touch" rule is when you see one crossing a road and in danger of being hit by oncoming traffic. In that case approach the tortoise slowly and note which direction it is heading. Pick it up carefully, don't tip it from side to side or upside down, and take it 150 feet or so off the road in the direction it was going.

Desert tortoises are having a hard time in Southern California.

That's why they've been listed as threatened. Joshua Tree National Park is a sanctuary for tortoises, where they can roam free from the threats of off-road driving, urban sprawl, and livestock grazing. Enjoy them on your visit here. Living more than a hundred years, the tortoise you see today will hopefully greet your grandchildren's children in the year 2097.

Author Chris Collins is a former Joshua Tree Biological Technician.



CREOSOTE

© H.R. Mockel

Learn the names of a few desert flowers by drawing a line between the common names on the left and their scrambled versions on the right. When you make the right connection, you will also learn that blossom's color.

INDIAN PAINTBRUSH

BLADDERPOD

MOHAVE ASTER

APRICOT MALLOW

CHUPAROSA

DESERT LILY

SAND VERBENA

CREOSOTE

JOSHUA TREE

LUPINE

FILAREE

OCOTILLO

CANTERBURY BELLS

TOROCSEE

SDNA VANEER

DALPBRODDE

LOCOTOIL

PELUNI

UJHAOS ETER

RURYNTABEC LSLBE

COIRTPA WOMLAL

NAIDNI BHIAPRSUNT

EREAIF

REDTES YILL

HOMVAE TSAER

OSAUHCARP

yellow

purple

yellow

red

purple

white

blue

orange

red

purple

white

purple

red

## CAN YOU FIND THE WILDFLOWERS?

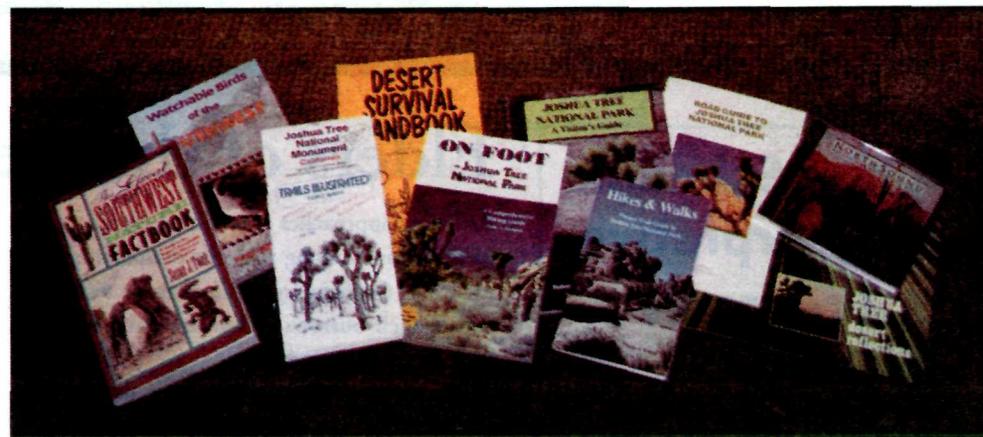
FILAREE



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## 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 \$11.99

**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. \$8.99

**Joshua Tree Bouldering,** Gingery. A guide to some of the more intriguing rock scrambling opportunities in the park. Includes maps, descriptions, and ratings. 76 pages PB \$9.95

**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 \$1.25

**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

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