



Fall Guide



Black Rock Campground at sunset.
NPS/Hannah Schwalbe.

One Hundred Years of Service

THE NATIONAL PARK SERVICE ISN'T THE ONLY ONE who turned 100 this summer! On June 22, 2016, Susan Luckie Reilly celebrated her 100th birthday. She was born the same summer that the National Park Service was established. How fitting that she has lived a life of service as a naturalist, conservationist, and NPS ranger right here at Joshua Tree.

Susan's birthday celebration was held at the Oasis Visitor Center and featured lemon cake, her favorite. Every seat in the room was taken as she was presented with a Certificate of Congressional Recognition from Congressmen Paul Cook and Raul Ruiz. Superintendent David Smith thanked Susan for her service, her family and friends spoke about her life, and Susan spoke about her love for Joshua Tree National Park.

Susan considers herself to be lucky. She developed an early passion for the desert during her childhood. She grew up exploring the area that was to become Joshua Tree National Monument in 1936, and her family had a keenness for the outdoors. She thinks back on her youth fondly, saying, "My father used to take me on long walks through the park when I was a child, and I loved it."

Susan left the area to study at Stanford University and it wasn't until years later, in 1965, when a position opened up at the park and Susan donned the green and gray of the

NPS. Among Susan's cherished memories of her work is educating visitors about the diversity of the desert: "I talked with visitors about the beautiful flowers. . . . It's a wonderful thing to help teach people about the wonders of the park."

As a woman ranger-naturalist in the 1960s, she was a true groundbreaker. But she will be remembered most vividly, perhaps, not as a ranger but as a tireless advocate for desert conservation. Susan's efforts are evidenced by the work she did four decades ago in halting the construction of a large-scale power transmission corridor that would have run through the Morongo Basin, disrupting scenic views and negatively impacting wildlife. She rallied local opposition to the project and, after several years, the project was dropped. The Mojave Desert, Susan said, "is too good of a thing to ruin."

One ranger at her birthday celebration said it perfectly: "You have quite the legacy, Ma'am, quite the legacy." The future of national parks and other public lands depends on the hard work of people like Susan Luckie Reilly.

Our NPS Centennial birthday wish? That in the next century, we care for America's public lands as well as Susan Luckie Reilly did in the last.

by Hannah Schwalbe, Great Basin Institute



Welcome to your park.

What an amazing year it has been! We are finishing off our first hundred years of national parks—ready to begin another century of protecting America's Best Idea.

As your park superintendent, I am delighted to see hundreds of thousands of new visitors finding their national park in Joshua Tree. The wild landscapes, pristine viewsheds, and diversity of life make Joshua Tree a gem for over two million people a year.

Use the Centennial to reflect on what parks mean to you and your family as you explore these desert lands. Courageous people stood their ground over a century ago to protect these areas and today, we benefit from their foresight. What will your legacy be a hundred years from now? What stories and places will you protect for coming generations?

This year, we took an amazing step in preserving important stories about civil rights by protecting the Stonewall Inn in New York City as our newest national park site. What lands, trails, or stories will we protect in the coming years? In the end, it really is up to you. These are your parks.

On behalf of your staff, thank you for your continued support. I look forward to seeing you in the park this fall!

Sincerely,

David Smith

David Smith
Superintendent



Susan Luckie Reilly leading a nature walk for kids in the late 1960s.



Superintendent David Smith presents Susan Luckie Reilly with a ranger doll at her 100th birthday party in June.

Where Plates Collide

Earthquakes and uplift and faults, oh my! Joshua Tree National Park's landscape is shaped by the nearby San Andreas Fault zone that marks the boundary between tectonic plates. GeoCorps Geology Intern Kylie Caesar looks at how the San Andreas affects the park and region on **p. 8**.

Why Wilderness?

Wilderness is a legal designation as well as a state of mind. Here in Joshua Tree National Park, over 84% of the park's 792,510 acres are managed as wilderness. Park Ranger Sara Sutton explores the many meanings and values of wilderness on **p. 10**.

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FINDYOURPARK



National Park Service
U.S. Department of the Interior

Joshua Tree National Park preserves and protects the scenic, natural, and cultural resources representative of the Colorado and Mojave Deserts' rich biological and geological diversity, cultural history, wilderness, recreational values, and outstanding opportunities for education and scientific study.

Superintendent
David Smith

Park Information
760-367-5500

Emergency
Dial **909-383-5651** or 911

Mailing Address
74485 National Park Drive
Twentynine Palms, CA 92277

Website
www.nps.gov/jotr

Social Media
instagram.com/JoshuaTreeNPS
twitter.com/JoshuaTreeNPS
facebook.com/JoshuaTreeNPS
flickr.com/JoshuaTreeNP
youtube.com: search JoshuaTreeNPS

Email
jotr_info@nps.gov

Lost & Found
Report lost items on the park website at nps.gov/jotr/planyourvisit/lostandfound.htm or email jotr_lost_and_found@nps.gov

Newspaper Editor
Cathy Bell, cathy_bell@nps.gov
Please email with comments or corrections.

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

EXPERIENCE YOUR AMERICA™

Safety: What You Need to Know

We want your trip to Joshua Tree to be safe and enjoyable. Ultimately, your safety is your responsibility. This information will help you prepare.



BRING WATER WITH YOU
Water is available at only a few locations around the edges of the park:

- Oasis Visitor Center in Twentynine Palms
- Black Rock Campground
- Cottonwood Campground
- West Entrance (no RV water access)
- Indian Cove Ranger Station (no RV water access)

STAY HYDRATED & EAT SALTY SNACKS

We recommend drinking a minimum of one gallon (about 4 liters) of water per person, per day. You will need more fluids if you are active: vigorous hiking, cycling, or climbing can cause you to lose water and salts at a rate of 1 ½ quarts per hour. Replace these fluids and electrolytes by drinking water or sports drinks and consuming salty foods.

PREPARE FOR CHANGING WEATHER

Prepare for temperature extremes by dressing in layers. Highs in early October may hit 100°F (38°C), while winter lows can plunge into the teens (-10°C). Hypothermia is a hazard even when the air temperature is above freezing. Always have extra layers with you.



These rock climbers carry extra layers of clothing that allow for comfort and safety.



CELL PHONES ARE UNRELIABLE
Most of Joshua Tree National Park is remote wilderness and there is *no cell coverage*. Do not count on your phone for navigation or in case of emergency.

IN CASE OF EMERGENCY

Emergency phones are found at two locations:

- Indian Cove Ranger Station
- Intersection Rock parking area near Hidden Valley Campground

If you are in an area with cell service and you have an emergency, dial **909-383-5651** or 911 for assistance.

WINTER DAYS ARE SHORT

Planning a hike? Be sure you give yourself plenty of time to get back to the trailhead before dark. In December, sunset can be as early as 4:30 pm. Plan to be back at your vehicle no later than 4:00 pm to give yourself enough time.

PREVENT BITES & STINGS

Joshua Tree is home to seven species of rattlesnakes, as well as venomous scorpions and spiders. These animals are less active in winter, but may still be present on a warm day. You can avoid problems by paying attention to your surroundings. Never step or reach into places you cannot see. Use a flashlight or headlamp at night. Campers, check your shoes and bedding for critters before use.



Never reach into rock crevices or onto ledges where you can't see.



GIVE WILDLIFE A BRAKE
Park roads are narrow and winding, and some areas are often congested. Obey posted speed limits. The maximum speed in the park is 45 mph (73 kph), and in many locations the speed limit is lower. Driving slowly and cautiously helps protect park wildlife. If you want to stop to view animals or scenery, please use a pullout and get completely out of the travel lanes to prevent accidents.

DON'T TRUST GPS FOR DRIVING DIRECTIONS
In the desert, some GPS units or navigation apps may try to direct you to roads that are unsafe for your vehicle. For safety, refer to the park map for navigation, or check with a ranger.

TURN AROUND, DON'T DROWN
Flash floods occur when monsoon thunderstorms pour large amounts of rain in a short time. Avoid canyons and washes during rainstorms and be prepared to move to higher ground. While driving, be alert for water running across the road. Wait for floodwaters to subside rather than trying to drive through.

STAY OUT, STAY ALIVE
Many old mine sites exist within the park. If you choose to visit them, use extreme caution, appreciating them from a safe distance. Never enter old mine tunnels, shafts, or fenced areas.



Many historic mine sites exist within Joshua Tree National Park. Admire, but do not enter.

Rules and Regulations



Watch wildlife respectfully

We recommend staying at least 25 yards (23 m) from wildlife. If an animal reacts to your presence by changing its behavior, you are too close—even if you are more than 25 yards from it. Move quietly away to give the animal space. Remember, the park is home for wild animals. We are just visitors here.



Never feed any wild animals

Consuming human food is unhealthy for wildlife and may encourage aggressive behavior. Coyotes, squirrels, ravens, and other animals should be left alone to rely on natural sources of food. All food, trash, scented products, and cooking tools must be stored securely in a vehicle or hard-sided container.



Travel responsibly with your pet

Pets are allowed in the park, but their activities are restricted. Pets must be on a leash at all times. They cannot go more than 100 feet (30 m) from a road, picnic area, or campground. Pets are not allowed on hiking trails. Owners must never leave a pet unattended or tied to an object. Bag and dispose of pet waste.



No drones or remote controlled vehicles

Remote controlled vehicles, including aircraft and rockcrawlers, are prohibited in Joshua Tree National Park. Drones and other remotely-operated craft can disturb wildlife and disrupt the visitor experience.



Campfires

Campfires are allowed only in designated fire rings or grills that are found in park campgrounds and picnic areas. Campfires are not allowed in the backcountry. Bring your own firewood and extra water to douse your campfire. Do not use park vegetation, living or dead, for fuel.



No collecting park resources, including living or dead vegetation

It is the mission of the National Park Service to preserve all natural and cultural resources unimpaired for future generations. Please leave everything in the park as it is for others to enjoy. Do not destroy, deface, dig, collect, or otherwise disturb any park resources including plants or animals (whether they are dead or alive), rocks, fossils, or artifacts.



Rock climbing

Climbers may replace existing bolts if they are unsafe. New bolts may be placed in non-wilderness areas if in accordance with the bolting checklist, available on the park website. Bolting in wilderness requires a permit. Hand drills only.



All motor vehicles and bicycles must stay on roads

The desert environment is more fragile than it may look. The ruts and scars left by vehicles and bicycles illegally taken off-road can last for years or even decades. Red and green sticker dirt bikes, ATVs, and UTVs are prohibited in the park.



Watch for tortoises

The desert tortoise is a threatened species that often dies from being hit by cars. Drive carefully in the park: small tortoises on the road look a lot like rocks. Though tortoises typically stay underground during the winter months, fall visitors should still take care. Tortoises may drink from puddles on the roads after rains or take shelter from the hot sun under vehicles. Leave tortoises undisturbed.



Firearms and weapons

Firearms may be possessed in accordance with California state and federal laws. However, they may not be discharged in the park. Fireworks, traps, bows, BB guns, paintball guns, and slingshots are not allowed in the park.

What to See and Do



Snowfall is a rare treat in Joshua Tree National Park. This beautiful scene greeted visitors on New Year's Eve two winters ago.

THE DESERT IS AT ITS BEST WHEN viewed up close and at a slow pace. From a whizzing car, the landscape may at first appear bleak or drab. Closer examination, though, reveals a fascinating variety of plants and animals. Rocks sculpted by weather and time contrast with the brilliant blue of the desert sky.

Joshua Tree National Park has endless opportunities for exploration and discovery. Begin your trip at a park visitor center, where a ranger will be happy to answer your questions and get you oriented. The two northern visitor centers are outside the park, in the communities of Twentynine Palms and Joshua Tree. See p. 7 for hours.

IF YOU HAVE A FEW HOURS IN THE PARK:

- Drive between the West Entrance and North Entrance to see our famous Joshua trees and boulder fields.
- Drive to Keys View for a lovely vista of the Coachella Valley. On days with little air pollution, you may be able to see beyond the shining Salton Sea to Signal Mountain in Mexico.
- Enjoy a short walk on one or two of the park's nature trails (p. 4) to get an up-close look at desert scenery and plants.
- Kids of all ages are invited to participate in our Junior Ranger program (p. 11).
- Take a short side trip into the Pinto Basin to visit the Cholla Cactus Garden and Ocotillo Patch.

IF YOU HAVE AN ENTIRE DAY:

- Drive through both the Mojave Desert and the Colorado Desert by going from the West Entrance to the South Entrance. See where Joshua trees grow in the Mojave, in the western half of the park, and observe the different vegetation of the Colorado in the lower elevations of the Pinto Basin and Cottonwood areas.
- Attend a ranger-led activity like a patio talk, guided walk, or evening program (p. 12). If you'll be visiting on a weekend, consider calling ahead to make a reservation for a Keys Ranch tour (fee).
- Hike one or two of the park's longer trails (p. 4).
- Pleasant fall temperatures bring rock climbers to Joshua Tree from all over the world. Not a climber yourself? You may still enjoy watching climbers in action around Hidden Valley Campground and Intersection Rock.

IF YOU HAVE MORE THAN ONE DAY:

- Spend the night in one of our campgrounds (p. 5). Or, if you have the right gear, experience, and fitness level, consider an overnight backcountry trip.
- Explore the longer hiking trails around Black Rock or Cottonwood (p. 4).
- If you have a mountain bike or high-clearance vehicle, consider exploring a backcountry road (descriptions at right) to experience parts of the park that most visitors never see. The Geology Tour Road is often a great choice. Ask a ranger for advice before leaving the pavement.



Backcountry Roads



JOSHUA TREE'S BACKCOUNTRY roads allow properly equipped visitors to explore remote areas of the park, but preparedness is crucial. Errors in judgment can be deadly. Always ask a ranger for current information about road conditions before venturing out.

For your own safety and the protection of natural features, all wheeled vehicles (including bicycles) must remain on designated roads. Off road driving and riding are prohibited.

GEOLOGY TOUR ROAD 18 mi (29 km) loop

This route starts 2 mi (3.2 km) west of Jumbo Rocks. Pick up an interpretive guide from the brochure box at the start. A round trip takes about two hours. The first few miles of the road are open to most vehicles, with four-wheel drive needed after marker 9.

QUEEN VALLEY ROADS 13.4 mi (21.7 km) total

Usually passable to all vehicles, this network of dirt roads crisscrosses a valley of boulder piles and Joshua trees. The Queen Valley dirt roads are popular with cyclists and dog walkers.

COVINGTON FLATS ROADS 9 mi (21.7 km) total

Covington Flats is home to some of the park's largest Joshua trees, junipers, and pinyon pines. You can drive all the way to the summit of Eureka Peak (5,518 ft/ 1,682 m) for panoramic views from Palm Springs to the Morongo Basin. High clearance recommended.

BERDOO CANYON ROAD

11.5 mi (18.4 km) within the park
Connecting the south end of Geology Tour Rd. with Dillon Rd. in the Coachella Valley, this challenging road requires a high level of driver skill as well as high clearance and four-wheel drive; narrow wheel-base suggested.

PINKHAM CANYON ROAD 20 mi (32.4 km) one way

This challenging road begins at Cottonwood Visitor Center, travels along Smoke Tree Wash, and then turns south down Pinkham Canyon. Sections of the road run through soft sand and rocky plains. High clearance and four-wheel drive are required; narrow wheel-base suggested.

BLACK EAGLE MINE ROAD 9 mi (14.5 km) within the park

This dead-end dirt road begins 6.5 mi (10.5 km) north of the Cottonwood Visitor Center. It runs along the southern edge of Pinto Basin, crossing several dry washes before reaching the park boundary. Beyond that is BLM land. High clearance and four-wheel drive required.

OLD DALE MINE ROAD

12.3 mi (19.8 km) within the park
Starts at the same point as Black Eagle Mine Rd., but heads north across sandy Pinto Basin, a dry lake bed. It then climbs steeply to the park boundary. About 11 miles (17.7 k) north of the park, it connects with Hwy 62. High clearance and four-wheel drive required; narrow wheel-base suggested.

Leave No Trace

LEAVE JOSHUA TREE PRISTINE FOR those who visit the park after you. Learn and practice the seven Leave No Trace principles.

PLAN AHEAD & PREPARE

- Know the regulations and special concerns for the area you'll visit.
- Prepare for extreme weather, hazards, and emergencies.
- Schedule your trip to avoid times of high use.
- Visit in small groups when possible. Consider splitting larger groups into smaller groups.
- Repackage food to minimize waste.
- Use a map and compass. Do not set up rock cairns or other physical markers.

TRAVEL & CAMP ON DURABLE SURFACES

- Durable surfaces include established trails and campsites, rock, and gravel.
- No camping in rock shelters or caves.
- Allow wildlife free access to scarce desert water sources. Do not camp nearby.
- Good campsites are found, not made. Altering a site is not necessary.

- In popular areas, concentrate use on existing trails and campsites.
- In pristine areas, disperse use to prevent the creation of campsites and trails. Avoid places where impacts are just beginning.

DISPOSE OF WASTE PROPERLY

- Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food and litter.
- Deposit solid human waste in catholes dug 6 to 8 inches deep, at least 200 feet from water, camp, and trails. Cover and disguise the cathole when finished.
- Pack out toilet paper and hygiene products. These items do not break down in the arid desert environment, even when buried.

LEAVE WHAT YOU FIND

- Preserve the past: examine, but do not touch, cultural or historic structures and artifacts.
- Leave rocks, plants and other natural objects as you find them.

- Avoid introducing or transporting non-native species.
- Do not build structures, furniture, or dig trenches.

MINIMIZE CAMPFIRE IMPACTS

- Campfires are allowed only in established metal fire rings in campgrounds and picnic areas with fire grates. All wood must be brought in from outside the park—no collecting.
- Keep your fire small. Put it out completely before you leave your site.
- No campfires in the backcountry. Use a lightweight stove for cooking.

RESPECT WILDLIFE

- Observe wildlife from a distance. Do not follow or approach animals.
- Never feed animals. Feeding wildlife damages their health, alters natural behaviors, and exposes them to danger.
- Protect wildlife and your food by storing rations and trash securely.
- Avoid wildlife during sensitive times: mating, nesting, raising young, or harsh weather conditions.

BE CONSIDERATE OF OTHER VISITORS

- Respect other visitors and protect the quality of their experience.
- Be courteous. Yield to other users on the trail. Hikers traveling uphill have right-of-way.
- Step to the downhill side of the trail when encountering pack stock.
- Take breaks and camp away from trails and other visitors.
- Let nature's sounds prevail. Avoid loud voices and noises. Respect campground quiet hours.



Learn more about how to minimize recreation impacts and protect Joshua Tree's wildlands for the future. Talk to a ranger or visit www.LNT.org.

Hiking



Carefully review the safety information and regulations on p. 2. There is no guarantee of safety in a national park.

Leave information about your planned route and expected return time with a friend or family member before hiking. Check in with this person when you return. In an emergency, call [909-383-5651](tel:909-383-5651) or 911.



On any desert hike, remember the Ten Essentials:

- water
- food
- layers of clothing
- sun protection
- first aid kit
- sturdy shoes
- navigation (map & compass)
- pocket knife or multitool
- flashlight or headlamp
- emergency shelter

Trail	Trailhead Location	Distance	Estimated Time	Description
Short Walks and Nature Trails				
Arch Rock	White Tank Campground, opposite site 9	0.3 mi (0.5 km)	30 minutes	Loop. Explore the geology of a unique area and view a natural arch on this short walk.
Bajada 	South of Cottonwood Visitor Center; 0.5 mi (0.8 km) north of the South Entrance	0.25 mi (0.4 km)	15-20 minutes	Loop. Walk on a bajada and discover plants of the Colorado Desert on this easy, accessible path.
Barker Dam	Barker Dam parking area	1.1 mi (1.8 km)	1 hour	Loop. Explore cultural history and view a water tank built by early cattle ranchers. Watch for bighorn sheep.
Cap Rock 	Cap Rock parking area, at the junction of Park Blvd. and Keys View Rd.	0.4 mi (0.6 km)	30-45 minutes	Loop. View boulder piles, Joshua trees, and other desert plants on this easy, accessible path.
Cholla Cactus Garden	20 mi (32 km) north of Cottonwood Visitor Center	0.25 mi (0.4 km)	15-30 minutes	Loop. View thousands of densely concentrated, naturally growing cholla cactus. Stay on the trail, wear closed-toe shoes, and be aware of prickly cactus.
Hidden Valley	Hidden Valley picnic area	1 mi (1.6 km)	1 hour	Loop. Discover a rock-enclosed valley that was once rumored to have been used by cattle rustlers.
Hi-View	Northwest of Black Rock Campground	1.3 mi (2.1 km) from board at parking area. 3 mi (4.8 km) from visitor center.	1½ hours	Loop. Discover the world of Joshua tree forests. Hike up a ridge on the western side of the park and take in panoramic views of the area. There are some steep sections, as well as several benches to take a break and enjoy the view.
Indian Cove	West end of Indian Cove Campground	0.6 mi (1 km)	30-45 minutes	Loop. Walk on a gently rolling path with a few steps. Take a closer look at desert plants and learn about their traditional uses by Native Americans.
Keys View 	Keys View	0.25 mi (0.4 km)	30 minutes	Accessible overlook. Short, paved loop path is steeper and may be accessible with assistance. Breathtaking views of the San Andreas Fault, Mt. San Jacinto, Mt. San Gorgonio, and the Salton Sea.
Oasis of Mara  	Oasis Visitor Center, Twentynine Palms	0.5 mi (0.8 km)	30-45 minutes	Loop. Explore a desert oasis on this easy, accessible walk. See how the Oasis of Mara has been used by wildlife and people throughout time.
Ryan Ranch	Ryan Ranch trailhead, about 0.5 mi (0.8 km) east of Ryan Campground	1 mi (1.6 km)	1 hour	Out and back. Enjoy an easy hike along an old ranch road and see a historic adobe structure.
Skull Rock	Skull Rock parking area just east of Jumbo Rocks Campground; also accessible from within Jumbo Rocks Campground	1.7 mi (2.7 km)	1-2 hours	Loop. Take an easy hike and explore boulder piles, desert washes, and of course the namesake Skull Rock.
Moderate Hikes				
Fortynine Palms Oasis	Fortynine Palms parking area, accessed off Hwy 62	3 mi (4.8 km)	2-3 hours	Out and back. There is a 300 ft (91 m) elevation gain in <i>both directions</i> , as you hike up and over a ridge dotted with barrel cactus. Beyond the ridge, descend to a fan palm oasis in a rocky canyon. Avoid this trail when it's hot out.
Lost Horse Mine	Lost Horse Mine trailhead off Keys View Rd.	4 mi (6.4 km)	2-3 hours	Out and back. Explore around one of the most successful gold mines in the park. Stay outside the fenced area to protect the millsite and mine. For a longer option, see Lost Horse Loop, under Challenging Hikes.
Mastodon Peak	Cottonwood Spring parking area	3 mi (4.8 km)	1½-2½ hours	Loop. An optional rock scramble takes you to the top of a craggy granite peak. The trail then loops around past an old gold mine. Elevation change is about 400 feet.
Pine City	Pine City trailhead at end of Desert Queen Mine Rd.	4 mi (6.4 km)	2-3 hours	Out and back. The highlight of this fairly flat trail is a dense stand of junipers and pinyon. The trail also goes to an old mining site.
Split Rock Loop	Split Rock picnic area	2.5 mi (4.0 km)	1½-2½ hours	Loop. Distance includes side trip to Face Rock.
West Side Loop	Black Rock	4.7 mi (7.6 km)	2½-4 hours	Loop. Explore the ridges and washes west of Black Rock campground.
Wall Street Mill	Barker Dam parking area	2 mi (3.2 km)	1½-2½ hours	Out and back. Travel to the remains of an historic gold milling site.
Challenging Hikes — avoid these trails when it's hot out				
Boy Scout Trail	North end: Indian Cove backcountry board. South end: Boy Scout Trailhead.	8 mi (12.9 km)	6 hours	One way. Go deep into the Wonderland of Rocks. Stay on trail to avoid getting lost among the boulders. Most hikers prefer to start at the south trailhead, inside the West Entrance, and finish at Indian Cove. Vehicle shuttle strongly recommended for hikers interested in doing the full length of the trail.
California Riding and Hiking Trail	Several.	35 mi (56.3 km)	2-3 days to hike entire length	One way. Shorter hikes possible on sections of this long trail. Travel from Black Rock Canyon to the North Entrance of the park, passing through a variety of Mojave Desert landscapes.
Lost Horse Loop	Lost Horse Mine trailhead off Keys View Rd.	6.5 mi (10.5 km)	3-4 hours	Loop. For a shorter option, see Lost Horse Mine, under Moderate Hikes.
Lost Palms Oasis	Cottonwood Spring parking area	7.2 mi (11.6 km)	5-6 hours	Out and back. Enjoy sandy washes and rolling terrain, then hike down into a canyon to explore a remote fan palm oasis. Climbing back out of the canyon is strenuous.
Panorama Loop	Black Rock	6.6 mi (10.6 km)	3½-4½ hours	Loop. Gain about 1,100 feet (336 m) in elevation as you hike up a sandy wash, then follow the ridgeline of the Little San Bernardino Mountains. Enjoy scenic views, dense Joshua tree forest, and pinyon-juniper woodland.
Ryan Mountain	Parking area between Sheep Pass and Ryan Campground	3 mi (4.8 km)	1½-2½ hours	Out and back. Gain 1,000 feet in elevation as you hike to the summit of Ryan Mountain. This is one of the most popular hikes in the park.
Warren Peak	Black Rock	6.3 mi (10.1 km)		Out and back. Gain 1,000 ft (304 m) in elevation as you hike to the summit of Warren Peak. Enjoy panoramic views of the quiet western part of Joshua Tree.

Camping



Visitors staying overnight in the park must camp in a designated campground or backcountry camping area. Sleeping in your vehicle outside of a campground is prohibited, and there is no camping at roadside pullouts, trailheads, or along the side of the road.

A maximum of six people, three tents, and two cars may occupy an individual campsite, *if there is space*. Some sites only have enough parking for one vehicle.

Check in and check out are at noon. Camping fees must be paid within one hour of selecting a campsite. Quiet hours are from 10 pm–6 am. Generator use is permitted only from 7–9 am, 12–2 pm, and 5–7 pm. There is a 30-day camping limit each year. Only 14 of these nights may take place from October–May. All tents, tarps, and camping equipment must be set up within 25 ft of the picnic table or fire grate at a site. Do not set up slacklines in campgrounds.

Campground	Number of Sites	Fee	Elevation	Water	Flush Toilets	Pit Toilets	Tables	Fire Grates	Dump Station
Belle	18	\$15	3,800 ft	no	no	yes	yes	yes	no
Black Rock	99	\$20	4,000 ft	yes	yes	no	yes	yes	yes
Cottonwood	62	\$20	3,000 ft	yes	yes	no	yes	yes	yes
Hidden Valley <i>RVs and trailers may not exceed a combined maximum length of 25 ft.</i>	44	\$15	4,200 ft	no	no	yes	yes	yes	no
Indian Cove	101	\$20	3,200 ft	no	no	yes	yes	yes	no
Jumbo Rocks	124	\$15	4,400 ft	no	no	yes	yes	yes	no
Ryan	31	\$15	4,300 ft	no	no	yes	yes	yes	no
White Tank <i>RVs and trailers may not exceed a combined maximum length of 25 ft.</i>	15	\$15	3,800 ft	no	no	yes	yes	yes	no

Group Camping

Reservations are required for group camping. Sites can accommodate groups of 10–60 people and may be reserved up to a year in advance, online at www.recreation.gov or by phone at 1-877-444-6777.

Group camping is available at three locations in Joshua Tree National Park:

- **Cottonwood Group**, elevation 3,000 ft (914 m). 3 sites, \$35–40 depending on site capacity. Tents only. RVs and habitable trailers prohibited.
- **Indian Cove Group**, elevation 3,200 ft (975 m). 13 sites, \$35–50 depending on site capacity. Can accommodate RVs or trailers, maximum combined length 25 ft.
- **Sheep Pass Group**, elevation 4,500 ft (1372 m). 6 sites, \$35–50 depending on site capacity. Tents only. RVs and habitable trailers prohibited.

Equestrian Use

Horseback riding is a popular way to experience the park. The Backcountry and Wilderness Management Plan provides for more than 200 miles of equestrian trails and trail corridors that traverse open lands, canyon bottoms, and dry washes. Many riding trails are already open, clearly marked, and ready to be enjoyed. Other trails are in various states of development. **Trail maps** for the West Entrance area and for the Black Rock Canyon area are available.

Stock use is limited to horses and mules and is restricted to designated equestrian trails and corridors, open dirt roads, and shoulders of paved roads. Riders should travel single file to reduce damage to soil and vegetation. Stock animals are not permitted within ¼ mile of any natural or constructed water source. Horses and other stock are not permitted on nature trails, in the Wonderland of Rocks, in campgrounds, in picnic areas, or at visitor centers. A permit is required to camp with stock in the backcountry; call 760-367-5545.

The park has two **equestrian campgrounds** available only to visitors with horses. *Reservations are required.*

- **Ryan Horse Camp**, elevation 4,300 ft (1,310 m), is open October–May. 4 sites, \$15/night. No water. For reservations, call 760-367-5545.
- **Black Rock Horse Camp**, elevation 4,000 ft (1,219 m), is open all year. 20 sites, \$20/night. For reservations, call 1-877-444-6777.

For more information, please see the park website at <http://www.nps.gov/jotr/planyourvisit/horseback-riding.htm> or ask a ranger about horse use.

Backcountry Camping

Joshua Tree National Park is vast, and little of it is accessible by road. An overnight trip into the backcountry is a memorable experience that allows hikers and horseback riders to experience solitude and immersion in wild nature. Adequate preparation is key to enjoying the desert safely.

Bring Water

Water sources in the desert are scarce and are reserved for wildlife. You must carry with you a supply of water adequate for drinking, cooking, and hygiene. This means carrying at least two gallons (about 8 liters) of water per person per day of your trip. Minimize exertion during the heat of the day in order to help prevent dehydration.

Register

To camp overnight in the backcountry, you must first self-register for a free permit at a backcountry board (for locations, see park map, pp. 6–7). Leave your vehicle parked at one of the park's backcountry boards, too. An unregistered vehicle or a vehicle left overnight somewhere other than at a backcountry board brings up safety concerns. It is also subject to citation and towing.

Setting Up Camp

Your backcountry camp must be located at least one mile (1.6 km) from the road and 500 ft (152 m) from any trail. Avoid camping in washes: sudden storms may lead to flooding. No camping is allowed in rock shelters, caves, or day use areas. It is your responsibility to check the locations of day use areas, which are indicated on maps at the backcountry boards.

Leave No Trace

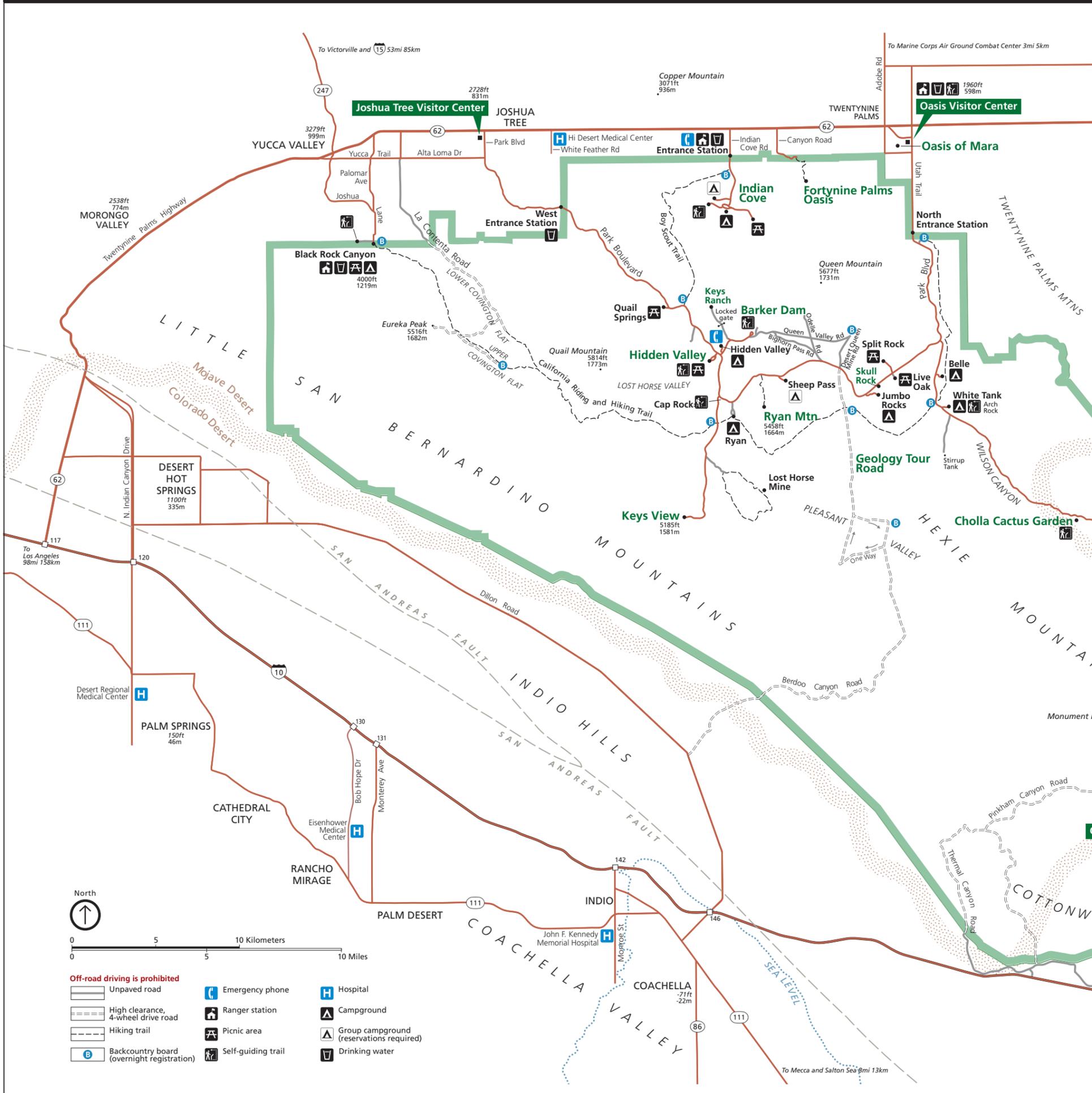
If you plan to cook or heat food, bring a camp stove and fuel. No fires are allowed in the backcountry. Pack out all trash, including leftover food items like apple cores, banana peels, and orange skins. These items can take years to decay in the dry desert environment. Similarly, while solid human waste should be buried in a cat hole at least six inches (15 cm) deep, used toilet paper must be packed out with all other trash. Remember to bring zip-top bags.

Wilderness

Almost 85% of Joshua Tree's 792,510 acres are managed as wilderness. The Joshua Tree Wilderness was protected by an act of Congress and is considered "an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." Wilderness is the highest level of conservation protection for federally-managed public lands. No mechanized transport is allowed in wilderness.

Help us preserve the wilderness character of Joshua Tree for future generations. Review the Leave No Trace principles on p. 3 as you prepare for your trip, then put them into practice.

Map of Joshua Tree National Park



Essential Information

Getting Here

Joshua Tree National Park is located in Southern California, about 140 miles east of Los Angeles, 175 miles northeast of San Diego, and 215 miles southwest of Las Vegas. Visitors may drive to Joshua Tree via Interstate 10 or Highway 62 (the Twentynine Palms Highway). The closest commercial airport is in Palm Springs. There is no public transportation to the park.

Dates and Hours of Operation

The park is always open; visitors may come and go at any time. However, several areas are designated for day use only.

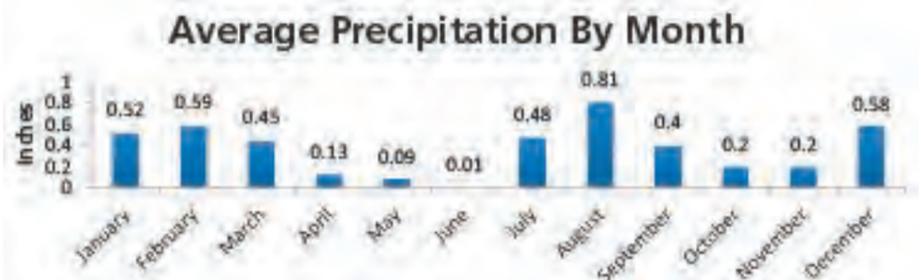
Entrance Fees

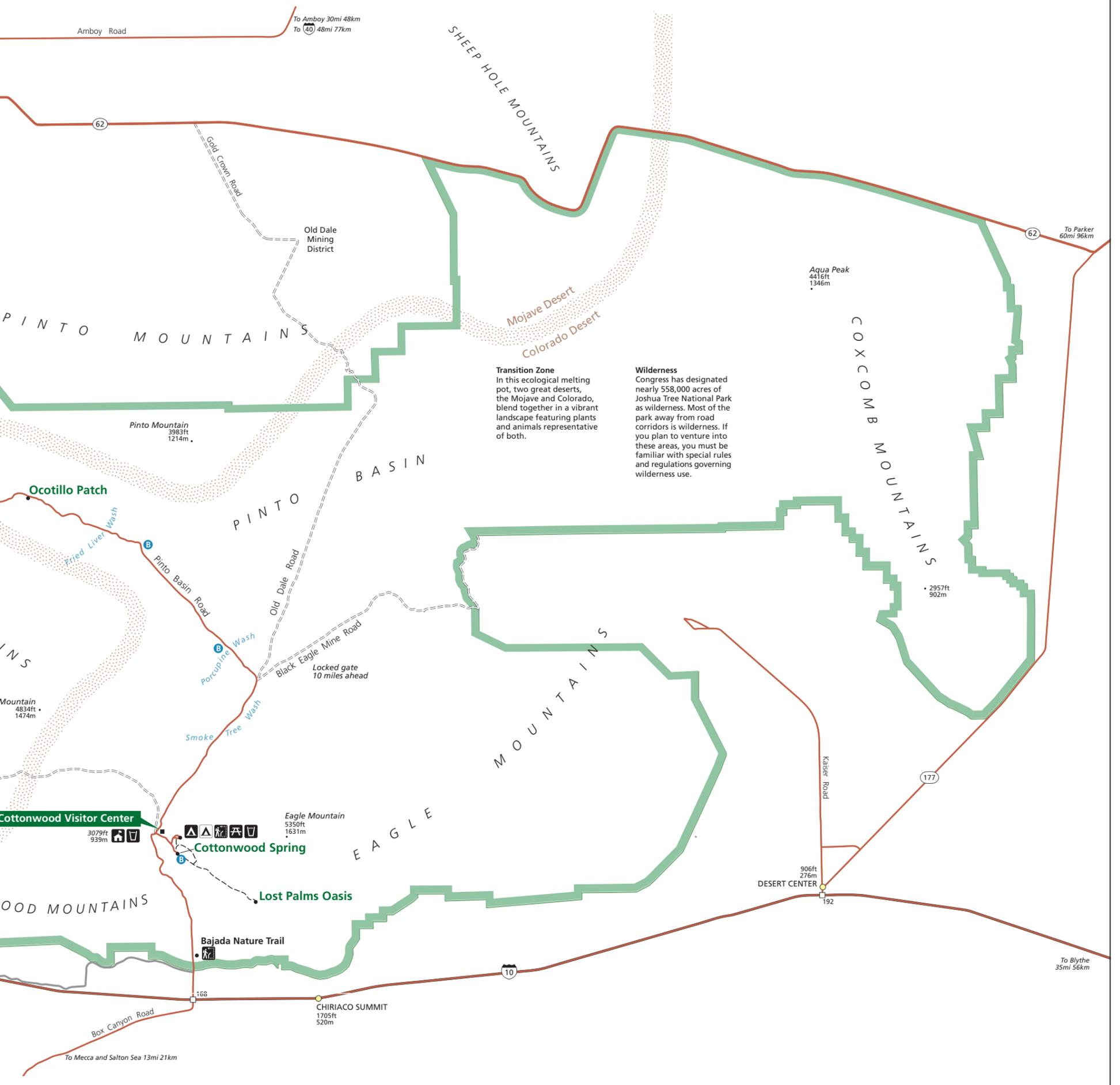
\$20 for a single, non-commercial vehicle.
\$10 per motorcycle.
\$10 per person on foot, bicycle, or horseback.

Also available: \$30 Joshua Tree National Park Annual Pass, \$80 Interagency Annual Pass, \$10 Interagency Senior Pass for U.S. citizens or permanent residents ages 62 and over, free Interagency Access Pass, free Interagency Military Pass. Ask at an entrance station for more details.

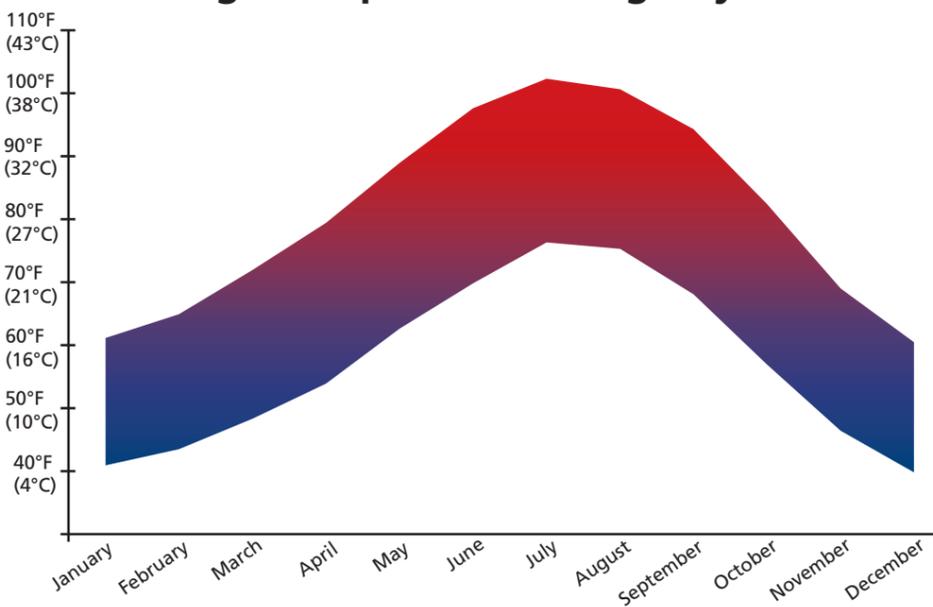
Preparing for the Weather

Fall and winter visitors to Joshua Tree National Park must prepare for a wide variety of conditions. Elevations range from 506 ft (154 m) to 5,814 ft (1,772 m) above sea level. The measurements shown in the average monthly precipitation and temperature graphs, below and at right, are based on data from Twentynine Palms, elevation 1,960 ft (597 m). **At higher elevations, expect temperatures to be 7-12°F cooler than shown.** While averages are shown, any individual day may be much hotter, much colder, or much wetter than expected based on these long-term averages.





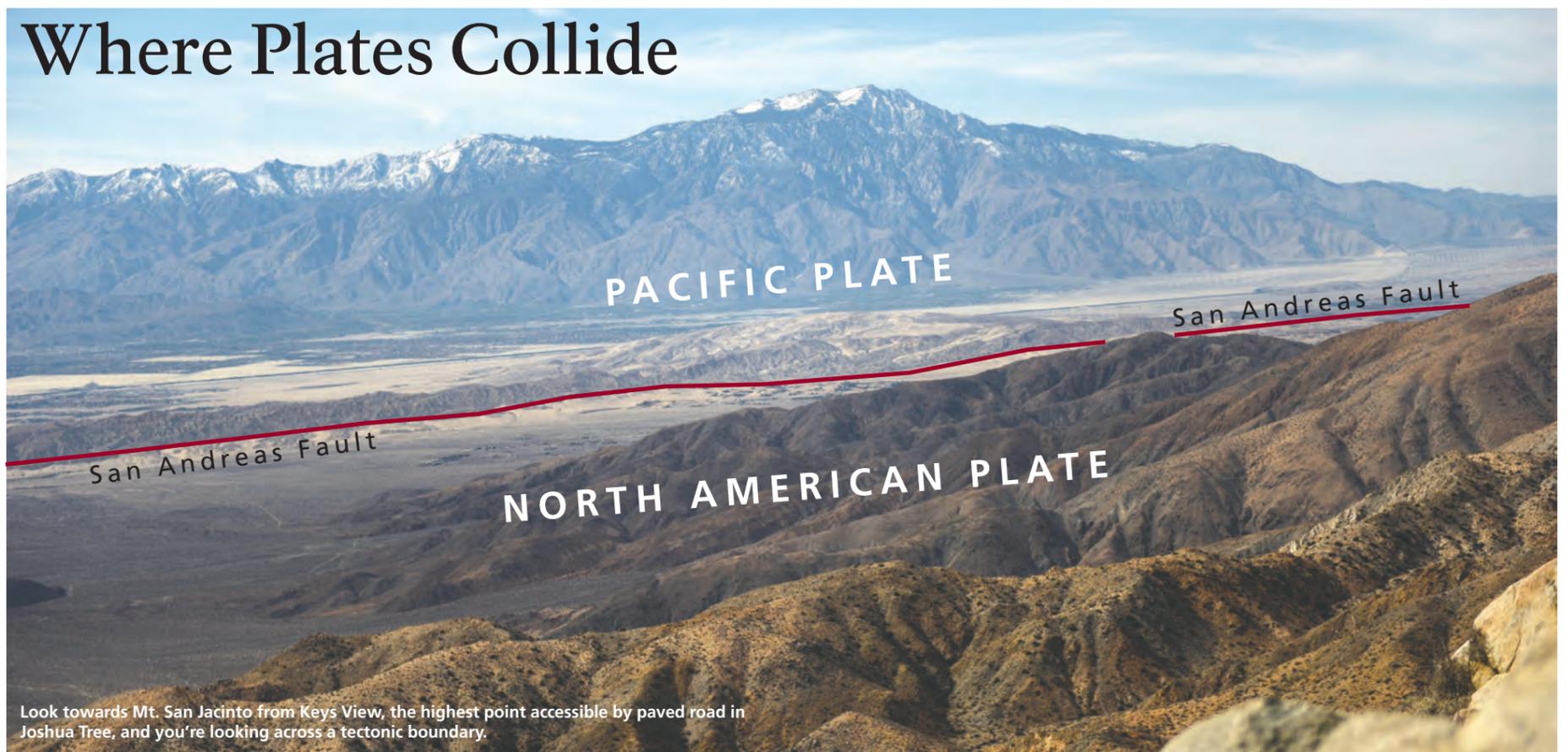
Average Temperature Range By Month



Visitor Center Hours and Locations

Visitor Center	Address	Hours of Operation
Oasis Visitor Center 760-367-5500	74485 National Park Drive Twentynine Palms, CA 92277	daily 8:30 am – 5:00 pm
Joshua Tree Visitor Center	6554 Park Boulevard Joshua Tree, CA 92252	daily 8:00 am – 5:00 pm
Cottonwood Visitor Center	6 miles (10 km) inside South Entrance; access from I-10	daily 8:30 am – 4:00 pm
Black Rock Nature Center open October – May	9800 Black Rock Canyon Road Yucca Valley, CA 92284	daily (except Friday) 8:00 am – 4:00 pm Friday 8:00 am – 8:00 pm

Where Plates Collide



Look towards Mt. San Jacinto from Keys View, the highest point accessible by paved road in Joshua Tree, and you're looking across a tectonic boundary.

HUNDREDS OF FAULTS CRISSCROSS Joshua Tree National Park, making the landscape a spectacular example of geology in action. In particular, one nearby fault has inspired blockbuster movies and earned the title of “the world’s most studied strike-slip boundary”: the San Andreas. The San Andreas Fault lies just outside the park’s southwest boundary and can be observed from Keys View. Although the San Andreas doesn’t cut through Joshua Tree, it has an enormous influence on the unique landscape we see here today.

The San Andreas Fault marks the boundary between the North American Plate to the east and the Pacific Plate to the west. The fault stretches 700 miles from the Gulf of California to Cape Mendocino north of San Francisco, running generally north-south. Along most of its length, the San Andreas is a transform fault: the southbound North American Plate and the northbound Pacific Plate grind past one another at an average rate just shy of two inches per year.

THE INFLUENCE OF THE SAN ANDREAS
In southern California, though, the story is more complex. Not far outside Joshua Tree, the fault turns to run northwest-southeast in what geoscientists refer to as the “Big Bend” (see graphic at right). Along this stretch, the two plates jam together in a collision instead of simply slipping past each other. This localized plate collision has formed deep basins and rugged mountain ranges, giving Joshua Tree its unique, strong-featured topography.

The colliding plates along this section of the San Andreas created the beautiful national park landscape, but they also increase Southern California’s risk of damaging earthquakes. Joshua Tree’s Chief Physical Scientist, Luke Sabala, recently collaborated with UNAVCO (a consortium facilitating geoscience research) and the Plate Boundary Observatory to install three plate boundary monitoring stations in the park. The stations measure the speed and direction at which the plates on either side of the San Andreas are moving and help researchers better understand this region of high seismic risk.

Sabala says Joshua Tree National Park is a crucial site for monitoring stations. “The Southern California region is the only convergent margin of the entire San Andreas Fault. The rest of the fault slips past somewhat easily. However, in this area, we get resistance and unusual vertical deformation within the transform boundary.” Essentially, the edges of the sliding plates become locked ... and then release suddenly in an earthquake. The longer the plates are locked against each other, the greater the potential for a big earthquake.

Recent measurements show that the Pacific plate is “dragging” the North

American plate to the north—the opposite of the way the plate wants to go. Sabala explains this is an indicator of a large seismic hazard. “These plates are not supposed to be moving in the same direction, and at some point something has got to give. The strain must be relieved and redistributed. Eventually the boundary has to let go.”

PREPARING FOR “THE BIG ONE”

The most recent large earthquake along the San Andreas in the Joshua Tree region took place over 300 years ago. Scientists believe that this fault segment is just waiting to release its built-up stress. In fact, the United States Geological Survey estimates there is a 19% chance of a 6.7 or larger earthquake in this region within the next 30 years.

Three early warning seismic stations were recently installed in Joshua Tree that will alert people when shaking waves generated by an earthquake are expected to arrive at their location. Though these stations provide only a few seconds or minutes of advance warning, that may be enough for people to act to protect life and property in a large earthquake.

Sabala believes that the early warning stations will also help communicate imminent shaking to personnel responsible for key structures such as bridges, trains, hospitals, and schools—potentially limiting large scale casualties and property damage. He hopes that seismic stations in Joshua Tree National Park will help to “save lives by being prepared.”

by GeoCorps Geology Intern Kylie Caesar



In Southern California, the San Andreas Fault takes a big bend. Instead of slipping sideways past each other, the North American Plate and the Pacific Plate jam into each other, creating a compression zone. Joshua Tree National Park lies within this highly geologically active region.

Newspaper Trivia Hunt

You can find the answers to these questions in the pages of this park newspaper!



1. The National Park Service celebrated its 100th birthday on August 25, 2016. What is the name of the former park ranger who also turned 100 years old this summer?
2. Wilderness areas have the highest level of protection of any public lands. About how much of Joshua Tree National Park is managed as wilderness?
3. Fall is the best time of year for seeing wild tarantulas in the park. These big spiders can live a long time as long as people leave them alone. How old can a female tarantula get?
4. The Orionid Meteor Shower happens every October when the Earth passes through a dust trail in space. What is the name of the comet that left behind the space dust?
5. People love the rocks in Joshua Tree! They take many strange shapes and it’s fun to imagine what they look like. What are the two keys to the appearance of the rocks today?
6. If you stand at Keys View and look towards Mt. San Jacinto to the southwest, you are looking across what major geologic feature?

Joshua Tree's Boulders

THE BOULDERS AND ROCK formations of Joshua Tree National Park define the park landscape. The rocks catch the eye of climbers, photographers, hikers, and motorists. Most everyone asks, “What are they?” “Where did they come from?” or “What’s with all the strange shapes?”

WHAT ARE THEY?

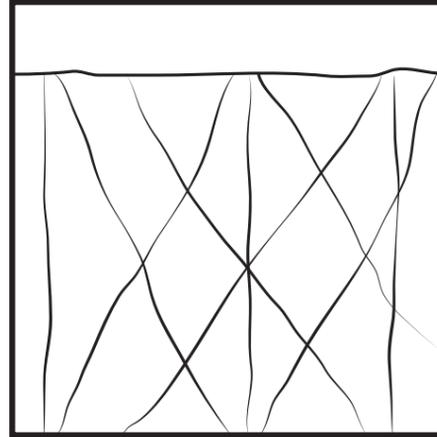
Many visitors think the rocks look like layers of sandstone, but they are actually a kind of granite, not unlike the rock commonly used for countertops. Granites are igneous in origin, meaning they formed when hot, molten fluids within the earth’s crust gradually cooled into hard rock.

Most granites in the park are a particular type called “monzogranite.” Joshua Tree’s monzogranites solidified beneath the surface of the Earth starting about 245 million years ago, with the youngest rocks formed over 100 million years ago.

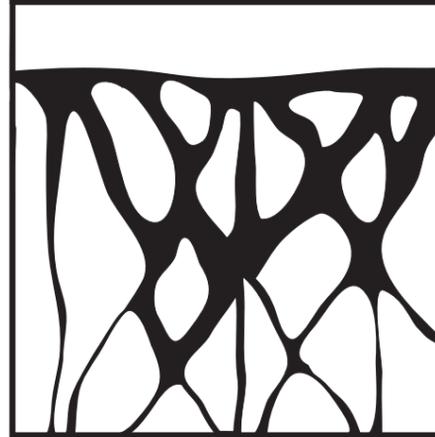
WHERE DID THEY COME FROM?

About 250 million years ago—before the dinosaurs came to dominate the planet—the thick North American plate began riding over the thinner Pacific Plate. The water-rich oceanic plate was forced under the continent at an angle.

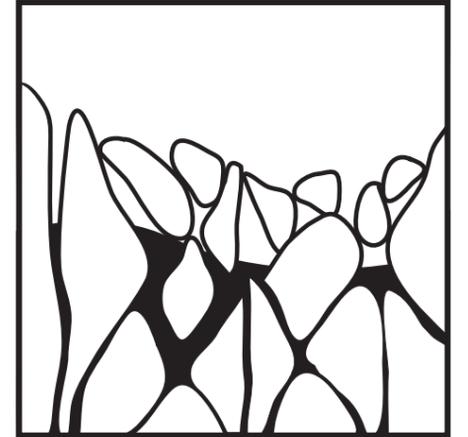
Water at depth, where temperatures are extremely hot, helped to melt the rock into granitic magma. It was hot, liquid, and lightweight, and was able to ooze upward along deep-seated cracks in the crust that had been fractured by the fierce crunching of the charging plates.



1. Parallel sets of fractures formed in the hard monzogranite while it was still underground. Water began infiltrating along the cracks.



2. The edges and corners of buried rock blocks became rounded as water broke the rock down into smaller particles.



3. Erosion carried away the small particles of broken-down rock, exposing the rounded rocks that had once been beneath the surface.

The liquid granite couldn’t force itself all the way up to the surface, so the granite stalled and formed huge, ball-shaped masses within the ancient rock. Over a long period of time, the great blobs of granite cooled and hardened.

The ancient rock, called gneiss (pronounced “nice”), began to erode. Over millions of years, the gneiss has completely vanished from the surface in most of the park. The gneiss, dark in color, does remain exposed on mountain tops. Younger and lighter-colored monzogranites are seen in the valley bottoms.

WHAT’S WITH ALL THE STRANGE SHAPES?

In many places in the park, the boulders appear as if some gigantic child piled them up. Some boulders have carved faces, are shaped like animals, or take other fanciful forms.

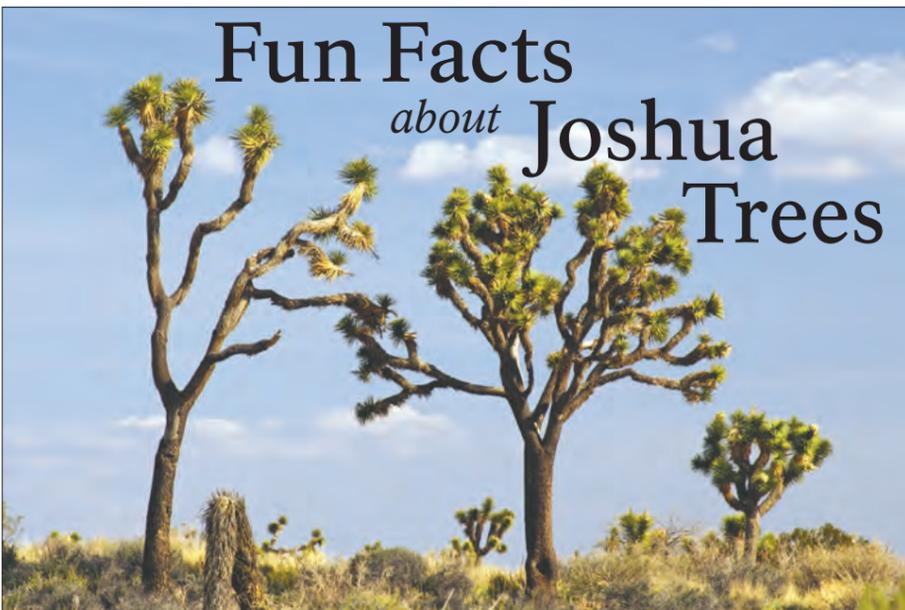
Cracks in the rocks and water are the keys to the appearance of our rocks today.

Horizontal stresses from the collision of tectonic plates created sets of parallel, vertical fractures within the buried rock. Later, mountain building pushed the rocks upward

to form sets of X-shaped cracks standing at angles in the granite. All the fractures were avenues for rainwater to seep downward through the rocks to etch and shape and round the originally angular blocks into the varied forms seen today in the park.

During the last Ice Age, the climate was cooler and wetter; rainwater was abundant. Much of the water etching occurred then. No glaciers existed this far south at these elevations, so glaciers were not a factor in making the landscape we see today.

by Dar Spearing, Ph.D.



Fun Facts about Joshua Trees

- Joshua Tree National Park is named after the Joshua tree, an iconic plant of the Mojave Desert.
- Joshua trees are *not* found in every part of Joshua Tree National Park, nor are they found only in the park. They grow throughout much of the Mojave Desert.
- Rangers’ favorite places for viewing Joshua trees include Black Rock and the Juniper Flats area along the road to Keys View. Our Joshua tree forest is densest in the northwestern part of the park, at elevations of about 4,000-4,200 feet (1,200-1,280 m) above sea level.
- The tallest Joshua tree in the park is called the “Barber Pole.” It stands about 43 ft (13 m) tall along the park road in Queen Valley.
- A Joshua tree has spiky, succulent leaves, but it is not a cactus. It is a member of the agave family.
- Climate change threatens Joshua trees. Less available water means fewer young Joshua trees can grow.
- The inside of a Joshua tree is fibrous and has no growth rings. That makes it hard to know how old it is! Some researchers think a typical lifespan for a Joshua tree may be 150 years.
- According to legend, Mormon pioneers considered the limbs of the Joshua trees to resemble the upstretched arms of Joshua leading them to the promised land.
- The cover photo for the 1987 U2 album *The Joshua Tree* was not taken in Joshua Tree National Park, but closer to Death Valley.

What Makes Joshua Tree National Park Significant?

Joshua Trees, of Course!

Joshua Tree National Park preserves a world-renowned, undisturbed population of Joshua trees (*Yucca brevifolia*), an integral component of the Mojave Desert ecosystem.

Transition Between Two Deserts

Outstanding examples of Mojave and Colorado Desert landscapes converge at Joshua Tree National Park to create a biologically rich system of plant and animal life characterized by iconic Joshua tree woodlands, native palm oases, and vast expanses of creosote scrub that are uniquely adapted to desert conditions. The park also contributes significantly to the connectivity of large protected areas across the California desert.

Desert Wilderness Close to Major Urban Areas

Joshua Tree National Park provides accessible and diverse opportunities in a remote desert wildland to large and burgeoning urban populations.

History and Cultural Traditions

Joshua Tree National Park preserves a rich array of prehistoric, historic, and contemporary resources that demonstrate the integral connection between deserts, land use, and human cultures.

Where the Pacific Plate Meets the North American Plate

Joshua Tree National Park lies along one of the world’s most active tectonic boundaries, the San Andreas Fault. Geologic processes, including tectonic activity, have played and continue to play a major role in shaping the mountains, valleys, and basins of the park.

Scientific Study

Joshua Tree National Park offers unparalleled opportunities for research of arid land ecosystems and processes, adaptations of and to desert life, sustainability, and indications of climate change. The proximity of the park to urban regions of Southern California and Nevada enhances the value of the park for scientific research and education.

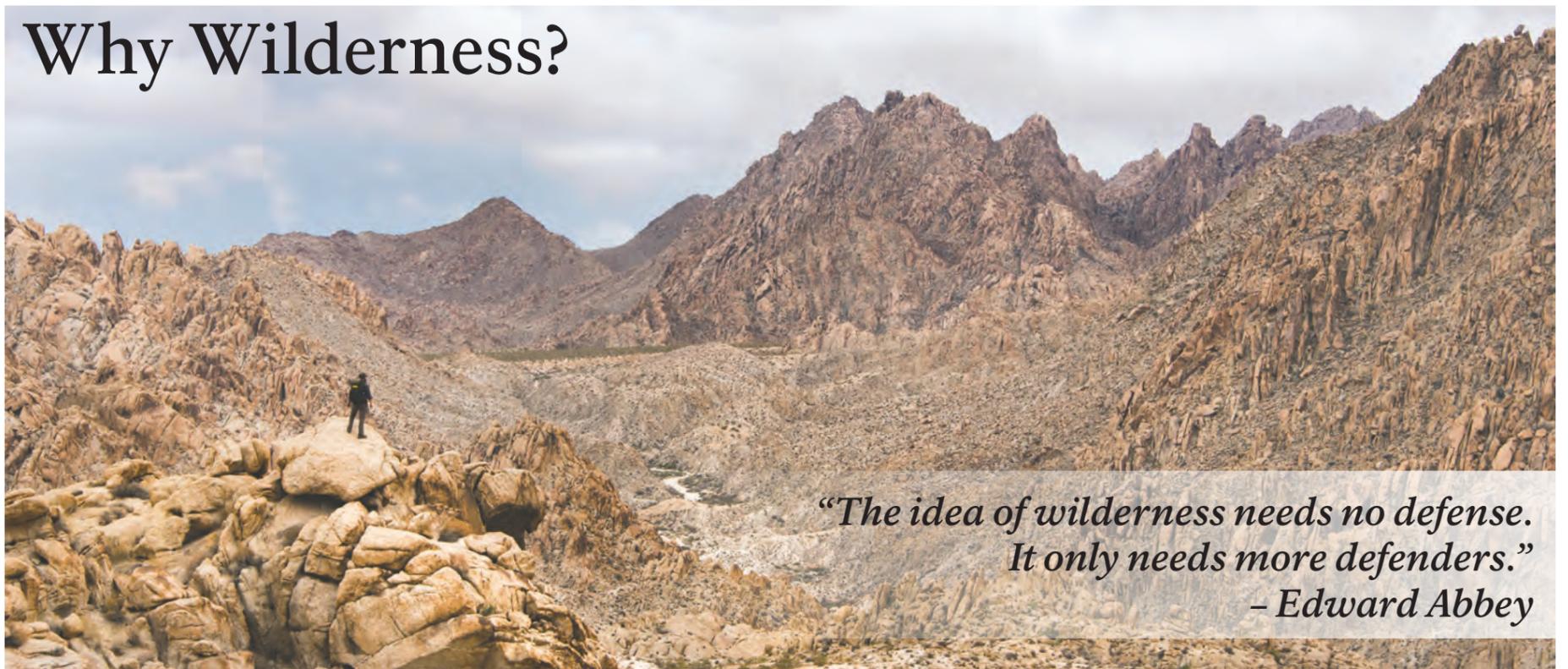
Bouldered Landscape

Huge, eroded monzogranite boulder formations are world-renowned natural features that provide unique aesthetic, educational, and recreational opportunities for Joshua Tree National Park visitors.

Beautiful Scenery

Geologic, climatic, and ecological processes create scenic landscapes unique to deserts and fundamental to the character of Joshua Tree National Park.

Why Wilderness?



“The idea of wilderness needs no defense. It only needs more defenders.”
– Edward Abbey

WHAT COMES TO MIND WHEN YOU think of wilderness? Do you imagine a forbidding, untamed landscape full of fierce creatures, or is your vision one of peaceful spaces and solitude? The idea of wilderness can hold vastly different meanings for each of us.

People come to Joshua Tree to view the surreal desert landscape, hike, camp, rock climb, and marvel at the unusual Joshua trees. Many also come to experience true wilderness.

While each person may understand the idea of wilderness differently, the Wilderness Protection Act of 1964 gives a legal definition: “A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.”

Over 84% of Joshua Tree National Park is managed as wilderness. The Wilderness Protection Act gave wilderness areas the highest level of protection under federal law. A stringent set of rules governs how designated lands must be managed and what activities are permitted. In designated wilderness, mechanized vehicles and equipment are not allowed. No permanent roads may be built; commercial enterprise is prohibited.

Establishing new wilderness areas is not easy. It literally requires an act of Congress—a bill passed and signed into law by the President. Here in Joshua Tree, large areas of land have been designated wilderness. Other areas, such as private in-holdings have been nominated as “potential wilderness.” These areas include private in-holdings that are surrounded by designated wilderness.

These areas are managed as if they were official wilderness lands.

With such a large amount of the park designated as wilderness, the question arises: why do wilderness areas matter? Joshua Tree’s wilderness is a meeting place. It is a place where two desert ecosystems merge. It is a place for each of us to encounter the unknown. Plants and animals persevere undisturbed, rock formations weather at their own pace, and evidence of bygone eras of human history is preserved. In wilderness, one can find naturalness, solitude, and places preserved for present and future generations.

For some, it’s impossible to think of wilderness areas and not think about what was and what is. Early pioneers viewed wilderness as wild, untamed land to be confronted. It was the blank space on the map. (In their eyes, the presence of Native

peoples on the land didn’t count as “civilization.”) Now, wilderness is an escape—a place where one can connect with nature and disconnect from civilization. It is a place that belongs to everyone and no one.

Wilderness.net states, “Wilderness is the land that was—wild land beyond the frontier . . . land that shaped the growth of our nation and the character of its people. Wilderness is the land that is—rare, wild places where one can retreat from civilization, reconnect with the Earth, and find healing, meaning and significance.”

No matter what your definition of wilderness is, it’s up to you to decide if these places matter and are worth protecting. Even if you keep to the beaten path and never step foot in wilderness, do you value it?

by Park Ranger Sara Sutton

Night Sky Almanac

OCT. 1 – NEW MOON

With the moon dark, this is the best time of the month for viewing the Milky Way and star clusters.

OCT. 7 – DRACONID METEOR SHOWER

Best viewed in the early evening. Expect about 10 meteors per hour ... but the Draconids occasionally produce a much more exciting show.

OCT. 15 – FULL MOON

OCT. 21-22 – ORIONID METEOR SHOWER
We see Orionids when Earth passes through dust grains left behind by Halley’s Comet. This shower will produce about 20 meteors per hour, but viewing this year won’t be at its best thanks to the waning gibbous moon.

OCT. 30 – NEW MOON

NOV. 4-5 – TAURID METEOR SHOWER

This meteor shower doesn’t produce many meteors, but they can be very bright fireballs! Best viewed shortly after midnight on Nov. 5.

NOV. 14 – FULL MOON

NOV. 17 – LEONID METEOR SHOWER

Best viewing will be pre-dawn, but the waning gibbous moon will wash out the expected 15 meteors per hour.

NOV. 29 – NEW MOON

DEC. 11 – MERCURY

Visible before sunrise, just above the horizon in the eastern sky.

DEC. 13 – FULL MOON

DEC. 13-14 – GEMINID METEOR SHOWER

This Geminids will produce up to 120 meteors per hour at the 2 am peak, but the full moon will hide them.

DEC. 21-22 – URSID METEOR SHOWER

This minor meteor shower is expected to produce about 5-10 meteors per hour.

DEC. 21 – SOLSTICE

The South Pole of the earth will be tilted towards the Sun, making this the shortest day of the year in the Northern Hemisphere (and the first day of winter).

DEC. 28 – NEW MOON

2017

JAN. 3-4 – QUADRANTID METEOR SHOWER

Expect about 40 meteors per hour.

JAN. 12 – FULL MOON, VENUS

As the full moon rises in the east this evening, look for beautiful, brilliant Venus in the west.

JAN. 28 – NEW MOON

Report Damage to Park Resources



Conservators at work removing graffiti from historic Barker Dam, spring 2015. As recently as 2011, there was no graffiti on this structure; by 2014 the dam was almost completely defaced.

If you see anyone committing an illegal act like vandalism or looting:

- Do not approach them.
- Note time, location, and other details including descriptions, and license plate/vehicle information. Take pictures if possible.
- Contact park staff as soon as possible at the nearest visitor center or entrance station. You may also report vandalism by calling park dispatch toll free at 909-383-5651 or 911.

We are all stewards of this land. If we want it to be here for future generations, we must keep it safe today.

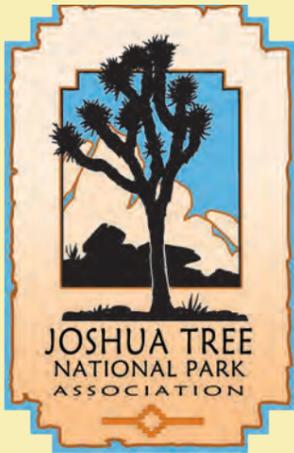
Increasing popularity brings more and more people to Joshua Tree National Park every year. Most visitors are respectful, but there are the few who decide to leave a lasting impact on the park.

In recent years, park managers have been forced to close areas due to excessive vandalism. Some resources have been damaged to the extent that they can never be fully cleaned or replaced.

Despite its apparent harshness, the desert is a land of extreme fragility. All parts of the park are protected by federal law. And remember: **graffiti in a national park is not art.**

Joshua Tree National Park Association

Park Partner



Be a Part of the Adventure

The Joshua Tree National Park Association has been supporting preservation, scientific research and education at Joshua Tree National Park since 1962. As the park's primary non-profit partner, we operate four visitor center bookstores that are often the first stop for visitors from around the world; offer a field institute with classes taught by experts in natural sciences, cultural history and the arts; and raise funds for the park through public events and our membership program. Join us and make the most of your Joshua Tree experience!

Connect with Nature

Whatever your passion, you'll learn more about Joshua Tree National Park at our visitor center bookstores. Wildflower identification, climbing and hiking guides, birding, geology, stargazing, native plants, and local history are just a few of the topics included in our great selection of books. And don't forget the kids: we have games, activity books, everyone's favorite desert animals and Junior Ranger gear. Start your journey now at our online store, www.joshuatree.org/store/

Experience the Great Outdoors

Pick up a trail guide in the bookstore, or sign up for a Desert Institute field class and make the park your classroom. If you don't see exactly what you're looking for, a custom program will ensure a perfect fit! Classes are not offered in the summer months, but take home a schedule and plan ahead.

Become a Member

Join the Joshua Tree National Park Association and you'll support park programs and projects while enjoying some great benefits. Our members are a committed group of supporters whose contributions each year help the park fulfill its educational, interpretive, and research plans. As a member you'll have the satisfaction of knowing that you are supporting youth programs, scientific research and the park's historical collections, and you will assist in the preservation of our fragile desert environment for generations to come.

Your annual membership includes these benefits:

- 15% discount on merchandise at Joshua Tree National Park Association bookstores, with reciprocal bookstore discounts at many other National Parks
- *Keys Views*, our JTNPA newsletter, and a monthly e-newsletter update on park events
- Invitations to special events
- \$10 discount off every Desert Institute class

Please ask for a membership brochure at one of the Joshua Tree Visitor Centers or call 760-367-5535.

www.joshuatree.org

Just Looking for Love



Ahead of you, you're startled to see something that looks almost like a little hand in the middle of the road. The "fingers" wave as it glides slowly across the pavement. You stop, not wanting to run it over. Only then do you realize you've spotted a tarantula.

Tarantulas are a common sight in October, when the males venture out to search for females' burrows. They'll drum the ground nearby to see if she's interested in mating.

Tarantulas spend most of their time underground, emerging at night to hunt insects and other small animals. The fall mating season is a special time because we get a chance to see these usually shy and solitary creatures.

If you're lucky enough to spot a tarantula on your visit, enjoy it without getting too close. A frightened tarantula may rear up on its hind legs and flick barbed hairs from its belly at its attacker. The hairs can cause skin irritation. Tarantulas can bite, but it's usually no worse than a bee sting for a human. Just give the spider space, and you'll both walk away happy.

Please drive carefully to avoid squishing our tarantulas. These big spiders are part of the desert wildlife community that makes Joshua Tree National Park so special. They are also protected by law.

Tarantula Facts

The park is home to three tarantula species, including the inch-wide Joshua Tree tarantula (*Aphonopelma joshua*), found only in and around the park.

Tarantulas live a long time! Females may live for 25-30 years. Males often don't make it past age 10 or 12—still impressive.

A male tarantula can travel up to 50 miles while seeking a female.

Tarantulas have eight eyes, but don't rely on them while hunting. Instead, tarantulas sense prey using the vibration-detecting hairs (called *setae*) that cover their bodies.

The tarantula hawk is a parasitic wasp. Females paralyze tarantulas with a sting and lay an egg. When the wasp larva emerges, it burrows into the tarantula to consume the abdominal organs and fluids. In other words: it eats the tarantula alive.

Be a Junior Ranger

Kids of all ages are invited to participate in Joshua Tree National Park's Junior Ranger program.

Kids can earn a Joshua Tree Junior Ranger badge by completing the official activity book. Stop by any park visitor center or entrance station to pick one up.

In addition to completing age-appropriate activities in the booklet, kids are asked to attend a ranger-led program such as a patio talk, guided walk, or evening program (see schedule, p. 12). We even offer a

special Junior Ranger Discovery Walk at the Oasis Visitor Center on Sunday mornings at 10:00.

If attending a ranger program isn't possible, kids can fulfill this requirement by learning from exhibits in a visitor center or along a trail.

The Junior Ranger program is designed for kids ages 4-14, but anyone can do it. (Older "kids" should expect to be asked to do more activities!)



Ranger Programs

Ranger-led interpretive programs are a great way to have fun and learn about the park!

Programs start promptly at the times noted below, so arrive a few minutes early to allow time for parking. Children under age 16 must be accompanied by an adult.

Please dress in layers to prepare for changing conditions. Wear

closed-toe shoes to protect your feet. Carry plenty of water with you. For evening programs, bring extra warm layers and a flashlight.

Programs take place outdoors, but may be canceled or moved inside during inclement weather or if there is a danger of lightning.

For October programs, ask a ranger at a visitor center.



Program	Meeting Location	Duration, Distance	Sun.	Mon.	Tue.	Wed.	Thur.	Fri.	Sat.
Mural Talk <i>November 14 - January 21</i> Discover the past, present, and future of our diverse desert ecosystems.	Joshua Tree Visitor Center by the back patio mural	15-30 min						9:00 am	9:00 am
Patio Talk <i>November 14 - January 21</i> Ranger's choice! Learn about one of many fascinating aspects of the park.	Joshua Tree Visitor Center	15-30 min	9:00 am	9:00 am	9:00 am	9:00 am	9:00 am		
	Oasis Visitor Center	15-30 min		10:00 am	10:00 am	10:00 am	10:00 am	10:00 am	
	Cottonwood Visitor Center	15-30 min	2:00 pm	2:00 pm	2:00 pm	2:00 pm	2:00 pm	2:00 pm	2:00 pm
Artists' Tea <i>November 14 - January 21</i> Meet a local artist! Find inspiration and see how the artistic community can help protect and promote the beauty of Joshua Tree National Park. Bring your own mug to enjoy a free cup of tea. Participating artists vary from week to week.	Cap Rock parking area	drop-in	9:00 am - 11:00 am						
Mastodon Peak Hike <i>November 14 - January 21</i> Discover the early mining history of the park. This hike has steep grades and is strenuous.	Cottonwood Springs parking area	2-3 hours 3 mi (4.8 km)							9:00 am
Cottonwood Springs Chat <i>November 14 - January 21</i> Drop by for a casual conversation with a ranger. Bring your questions about Cottonwood Springs and the Colorado Desert.	Cottonwood Springs parking area	drop-in						9:00 am - 10:30 am	
Joshua Tree Rocks! <i>November 14 - January 21</i> Examine the geology of this remarkable area.	Skull Rock parking area	1-1.5 hours 1 mi (1.6 km)						9:30 am	
Desert Reflections <i>November 14 - January 21</i> Join a ranger for an interactive discussion about an issue facing the park. Check at a visitor center for topics.	Oasis Visitor Center	1-1.5 hours							10:00 am
Cholla Garden Chat <i>November 14 - January 21</i> Drop by for casual conversation with a ranger. Bring your questions about the Cholla Cactus Garden and the Pinto Basin.	Cholla Cactus Garden	drop-in	10:00 am - 11:30 am						
Jr. Ranger Discovery Walk <i>November 14 - January 21</i> Especially for families with children! This short hike will help kids on their way to earning a Jr. Ranger badge.	Oasis Visitor Center	1-1.5 hours 1 mi (1.6 km)	10:00 am						
"I Speak for the Trees" Walk <i>November 14 - January 21</i> Take a walk with a ranger and discover the park's namesake.	Cap Rock Nature Trail	1 hour 0.4 mi (0.6 km)	2:00 pm						
Keys Ranch Tour <i>November 14 - January 21</i> Explore the colorful story and numerous artifacts of this premier historical site. Tickets are required. Tickets must be purchased in person <i>on the day of the tour</i> at the Oasis Visitor Center from 9:00 am - 12:00 noon. Adults (12 & up) \$10; Senior Pass or Access Pass holders \$5; children ages 6-11 \$5; children under 6 free.	Keys Ranch Gate tickets required	1.5 hours 0.5 mi (0.8 km)					2:00 pm	2:00 pm	2:00 pm
Oasis Walk <i>November 14 - January 21</i> Explore the history and ecology of a desert oasis.	Oasis of Mara Visitor Center	1-1.5 hours 0.5 mi (0.8 km)			3:00 pm				
Evening Program Relax beneath the stars and enjoy a presentation about the park's fascinating natural or cultural history. Check at a visitor center for topics.	Jumbo Rocks Campground Amphitheater <i>November 14 - January 21</i>	45 min						7:00 pm	7:00 pm
	Cottonwood Campground Amphitheater <i>November 14 - January 21</i>	45 min						7:00 pm	7:00 pm
Full Moon Hike <i>see specific dates at right</i> Explore the park after dark with a ranger.	check at a visitor center for location	1.5 hours 1 mi (1.6 km)		Nov. 14 7:00 pm	Dec. 13 7:00 pm			Jan. 12 7:00 pm	



National Park Service
U.S. Department of the Interior

Joshua Tree National Park
74485 National Park Drive
Twentynine Palms, CA 92277

Emergency
Dial 909-383-5651 or 911



The National Park Service turned 100 on August 25, 2016, and we're celebrating all year! The centennial kicked off a second century of stewardship of America's national parks and engaging communities through recreation, conservation, and historic preservation programs. Learn more at www.findyourpark.com.