National Park Service
U.S. Department of the Interior

Joshua Tree National Park
California

Joshua Tree

VARIED
YET VULNERABLE

The desert has much to teach us about the marvels of adaptation. Relentless sun, little water, and summer temperatures over 100°F can make a forbidding world for non-desert dwellers. Yet hundreds of species conserve moisture and beat the heat in fascinating ways.

Hardy as these plants and animals are, their world is fragile. In the 1930s Minerva Hoyt, a community activist and desert-lover, recognized the threats from humans. She saw beauty in the spiny plants and slithery creatures where others did not. She persuaded President Franklin D. Roosevelt to proclaim Joshua Tree National Monument in 1936. In 1994, as part of the California Desert Protection Act, Congress renamed the area Joshua Tree National Park. Thanks to the efforts of Hoyt and others, this park protects 794,000 acres—nearly three-quarters of it designated wilderness—where the Mojave and Colorado deserts converge.

THE TRANSITION ZONE Deserts don't have firm boundaries, and much of the park lies in the overlap between the Colorado and Mojave deserts. This transition zone has a wealth of biological diversity and is home to species characteristic of each desert ecosystem. Below are some residents:


Bighorn sheep
© FRANK BALTHIS


Chuckwalla
© FRANK BALTHIS


Cactus wren
© FRANK BALTHIS


Beavertail cactus
© JOHN DITTLI

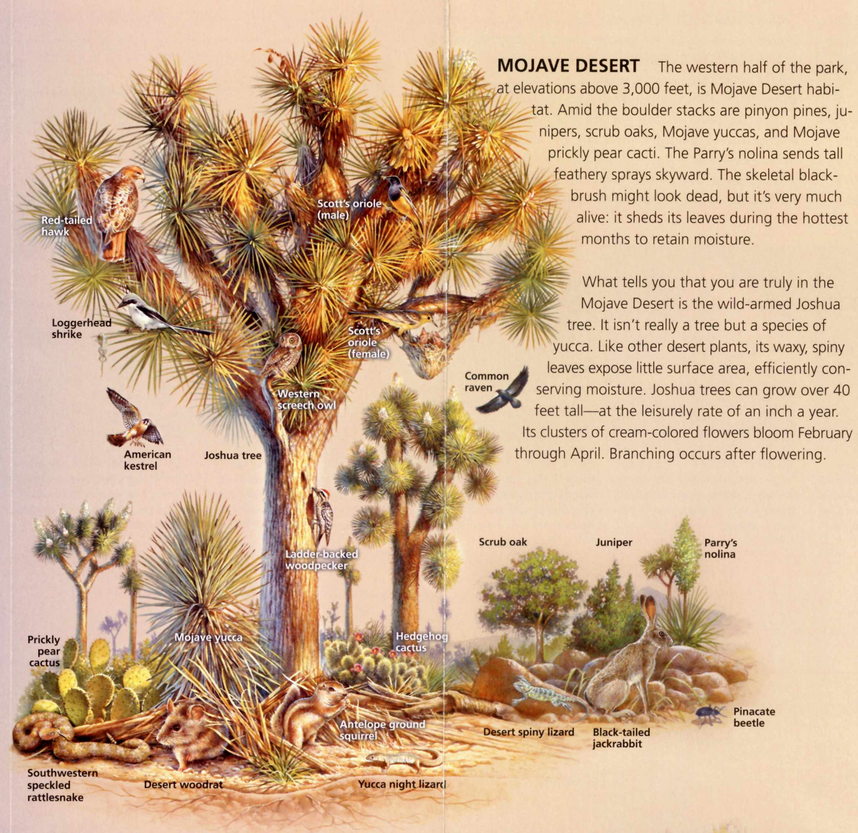

Greater roadrunner
© STEVE AND DAVE MASLOWSKI / PHOTO RESEARCHERS INC.


Gambel's quail
© FRANK BALTHIS


Desert tortoise
© JOHN DITTLI


Desert iguana
© RICHARD SLAMAN


In the Mojave Desert *(above)*, look for pinyon/juniper/scrub oak woodlands, Mojave yucca, and Joshua trees.
© TOM GAMACHE



MOJAVE DESERT The western half of the park, at elevations above 3,000 feet, is Mojave Desert habitat. Amid the boulder stacks are pinyon pines, junipers, scrub oaks, Mojave yuccas, and Mojave prickly pear cacti. The Parry's nolina sends tall feathery sprays skyward. The skeletal blackbrush might look dead, but it's very much alive: it sheds its leaves during the hottest months to retain moisture.

What tells you that you are truly in the Mojave Desert is the wild-armed Joshua tree. It isn't really a tree but a species of yucca. Like other desert plants, its waxy, spiny leaves expose little surface area, efficiently conserving moisture. Joshua trees can grow over 40 feet tall—at the leisurely rate of an inch a year. Its clusters of cream-colored flowers bloom February through April. Branching occurs after flowering.

Joshua trees—alive or dead—are home to many animals. The loggerhead shrike often impales prey on sharp-pointed leaves. Other birds to look for are the Scott's oriole, red-tailed hawk, ladder-backed woodpecker, American kestrel, and western scrub jay. The Gambel's quail, perhaps with a string of youngsters in tow, scurries from one shrub to another.

Hidden in the rocks might be a red diamond rattlesnake, its eyes on a desert spiny lizard, which in turn is searching the rocks for insects. A marvel of desert adaptation, the pinacate beetle never drinks water. It derives moisture from meals of fungus and decaying vegetation. It is also known as a circus beetle because when threatened it does a "headstand" while emitting a foul-smelling secretion.

In the early morning or late afternoon, it is not uncommon to spot a black-tailed jackrabbit racing across the landscape. Gigantic ears help regulate body temperature: in warm weather the blood vessels dilate to release heat. When it's cold, the vessels constrict to retain warmth.

ILLUSTRATIONS NPS / ROBERT HYNES


OASIS When you're at one of the park's fan-palm oases, you're atop a crack in the Earth's crust. Geological faults crisscross the park area. When groundwater hits a fault plane, it rises to the surface and creates conditions for an oasis.

Dependable surface water nourishes lush vegetation, a welcome refuge from desert extremes. Besides the majestic California fan palms, there are cottonwoods and mesquites. Look carefully and you may see un-desertlike species like orchids and amphibians.

© FRANK BALTHIS

COLORADO DESERT The eastern half of the park, below 3,000 feet above sea level, lies within the Colorado Desert. This habitat of the lower Colorado River valley is part of the much larger Sonoran Desert, which spans southern Arizona and northwestern Mexico. Creosote dominates this sun-baked bowl, punctuated here and there by spidery ocotillo, green-barked palo verde, and patches of jumping cholla cactus. Jumping cholla is also called teddy bear cholla, but don't try to cuddle it! Intermittent water in washes and bajadas sustains smoke trees and ironwoods.

Wildflowers abound. Red-orange blossoms of the chuparosa attract hummingbirds, for which the plant is named, as well as the tiny checkerspot butterfly. Annuals like the desert sand verbena survive drought by living only in spring and going to seed when conditions harshen. Seeds can lie dormant for several years until conditions are again favorable. Animals here display many forms of adaptation. The kangaroo rat obtains water from the food it eats—seeds, leaves, stems, and insects. It can store food for weeks in its cheek pouch. Its large hind feet are adapted for hopping over desert sand, which it does throughout the night. In close pursuit may be a kit fox, equally well-adapted to desert travel.



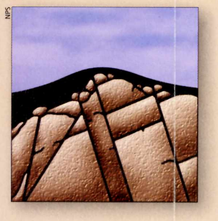
WHO PILED UP ALL THOSE ROCKS?

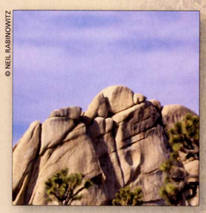
Roads and trails lead you through a jumble of stacked boulders where you can use your imagination to see unlikely shapes.

The rock piles began underground eons ago as a result of volcanic activity. Magma—in this case a molten form of the rock called monzogranite—rose from deep within the Earth. As it rose, it intruded the overlying rock, the Pinto gneiss formation.


NPS

As the granite cooled and crystalized underground, cracks (joints) formed horizontally and vertically *(left)*. The granite continued to uplift, where it came in contact with groundwater. Chemical weathering caused by groundwater worked on the angular granite blocks *(right)*, widening cracks and rounding edges. Eventually the surface soil eroded, leaving heaps of monzogranite scattered across the land like careless piles of toy blocks *(far right)*.


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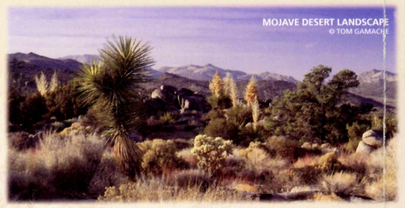

The ocotillo, a plant typical of the Colorado Desert, shows off red blossoms in spring and often again in fall.
©JOHN DITTLI

HOURS, FACILITIES, ACTIVITIES Joshua Tree and Oasis visitor centers are open daily, 8 am to 5 pm; Cottonwood Visitor Center is open 8 am to 4 pm. Visitor centers have exhibits and information on things to see and do, as well as publications for sale by the Joshua Tree National Park Association. Ranger-guided programs and Desert Institute classes run fall, winter, and spring.

HIKING, CAMPING, CLIMBING There are trails for everyone, from paved, wheelchair-accessible trails to strenuous hikes. For backcountry camping you must park and register at a backcountry permit station. Campgrounds and picnic areas have tables, fire rings, and toilets. Most campgrounds do not have water. Rock climbing information is available at entrance stations, visitor centers, and on the park website.

GETTING TO THE PARK Joshua Tree National Park is 140 miles east of Los Angeles. From I-10, take state route 62 to the park entrance stations via Joshua Tree village or the city of Twentynine Palms. You can also enter the park from the south directly off I-10 at Cottonwood Spring, which is 25 miles east of Indio.

THINGS YOU NEED TO KNOW *People have died here from preventable accidents.* In emergencies, contact a ranger or call 909-383-5651 or 911. • Cell phone coverage is generally poor throughout the park. • Stay away from abandoned mines. • Supervise children, particularly around cacti and climbable rocks. • Carry at least one gallon of water per person per day. • Flash floods are a danger; avoid drainage areas during and after thunderstorms or severe weather. • Do not climb unless you are properly trained and equipped. Watch where you put your hands and feet, especially in spring and summer when snakes are active. • Pets must be leashed at all times; pets are prohibited on trails and beyond 100 feet from any park road, campground, or picnic area. • Motorized vehicles and bicycles must stay on established roads. Obey posted speed limits. Park only in designated parking areas, not on the roadside. OFF-ROAD DRIVING IS PROHIBITED. • Camping is permitted only in designated areas or with backcountry registration. • All natural and cultural features are protected by federal law. Do not disturb, mutilate, deface, or remove any natural or cultural objects. • Viewing wildlife with artificial lights is prohibited.


MOJAVE DESERT LANDSCAPE
© TOM GAMACHE

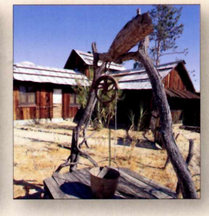
MORE INFORMATION Joshua Tree National Park is one of over 390 parks in the National Park System. To learn more about parks and National Park Service programs in America's communities visit www.nps.gov.

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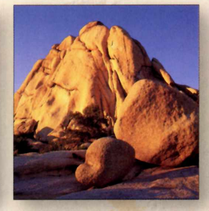
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OASIS OF MARA American Indians were the first people to live here. In the 1800s came prospectors, followed by homesteaders *(above, ca. 1940)*. The oasis is now home to park headquarters and the Oasis Visitor Center.
© HARLOW JONES


FORTYNINE PALMS OASIS Those who hike the moderately strenuous three-mile roundtrip trail to this oasis will be rewarded with shade from the palm canopy and perhaps sightings of wildlife.
© JOHN DITTLI


KEYS RANCH Bill and Frances Keys were among the few successful homesteaders in this area. Learn their fascinating story on a ranger-guided walking tour; call 760-367-5555.
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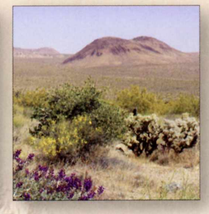

BARKER DAM Built around 1900 to hold water for cattle and mining use, the dam today forms a small rain-fed reservoir used by park wildlife. Birds abound! One-mile loop trail.
© JOHN DITTLI


HIDDEN VALLEY A one-mile loop trail starts in the picnic area and winds among massive boulders through this legendary cattle rustlers' hideout.
© JOHN DITTLI


KEYS VIEW From an elevation of 5,185 feet, you can overlook a stunning expanse of valley, mountain, and desert. Look for the San Andreas Fault in the valley below.
© PAT O'HARA


RYAN MOUNTAIN A three-mile roundtrip trail (moderately strenuous) to the 5,458-foot summit has lookout points with views of Queen, Lost Horse, and Pleasant valleys.
NPS


LOST HORSE MINE Representing the area's gold prospecting and mining history, the 10-stamp mill and mine site can be reached by a four-mile roundtrip trail.
© JOHN DITTLI


GEOLOGY TOUR ROAD Pick up a brochure at the beginning of this 18-mile driving tour to guide you through fascinating geological sites. After stop #9, four-wheel drive is recommended.
NPS


CHOLLA CACTUS GARDEN This "garden" is dominated by jumping cholla, named for its tendency to attach itself to the unwary. Guide brochures available at trailhead.
© ED CALLAERT


COTTONWOOD SPRING Cahuilla Indians used this spring for centuries, leaving behind bedrock mortars and broken pottery. Prospectors, miners, and teamsters later established gold mills here.
© ANDREAS NEUMANN


INDIAN COVE The comet Hale-Bopp shows over the rock formations. The campground here has individual and group sites. A 0.6-mile loop interpretive trail highlights the plant and animal life of a Mojave Desert wash.
© WALLY PACHOLKA / ASTROPICS

