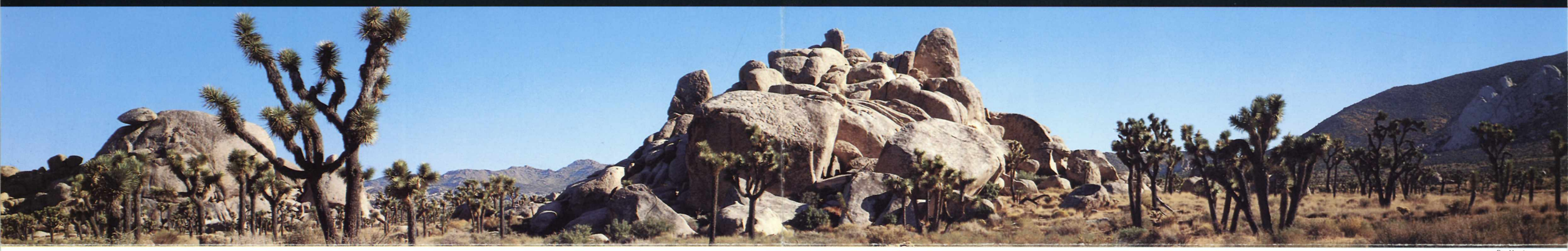
Joshua Tree

National Monument
California

National Park Service
U.S. Department of the Interior



Roy Murphy

The desert is immense and infinitely variable, yet delicately fragile. It is a land shaped by sudden torrents of rain and climatic extremes. Rainfall is sparse and unpredictable. Streambeds are usually dry and waterholes are few. This land may appear defeated and dead, but within its parched environment are intricate living systems, each fragment performing a slightly different function, and each fragment depending upon the whole system for survival.

Two deserts, two large ecosystems primarily determined by elevation, come together at Joshua Tree National Monument. Few areas more vividly illustrate the contrast between high and low desert. Below 910 meters (3000 feet), the Colorado Desert, occupying the eastern half of the monument, is dominated by the abundant creosotebush. Adding interest to this arid land are small stands of spidery ocotillo and jumping cholla cactus. The higher, slightly cooler, and wetter Mohave Desert is the special habitat of the undisciplined Joshua tree, extensive stands of which occur throughout the western half of the monument.

Standing like islands in a desolate sea, the oases, a third ecosystem, provide dramatic contrast to their arid surroundings. Five fan-palm oases dot the monument, indicating those few areas where water occurs naturally at or near the surface, meeting the special life requirements of these stately trees. Oases once serving earlier desert visitors now abound in wildlife.

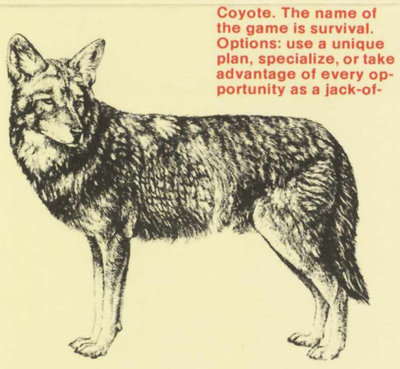
The monument encompasses some of the most interesting geologic displays found in California's deserts. Rugged mountains of twisted rock and exposed granite monoliths testify to the tremendous earth forces that shaped and formed this land. Arroyos, playas, alluvial fans, bajadas, pediments, desert varnish, granites, aplite, and gneiss interact to form a giant desert mosaic of immense beauty and complexity.

As old as the desert may look, it is but a temporary phenomenon in the incomprehensible time-scale of geology. In more verdant times, one of the Southwest's earliest inhabitants, Pinto Man, lived here, hunting and gathering along a slow moving river that ran through the now dry Pinto Basin. Later, Indians traveled through this area in tune with harvests of pinyon nuts, mesquite beans, acorns, and cactus fruit, leaving behind rock paintings and pottery ollas as reminders of their passing. In the late 1800s explorers, cattlemen, and miners came to the desert. They built dams to create water tanks and dug up and tunneled the earth in search of gold. They are gone now, and left behind are their remnants, the Lost Horse and Desert Queen Mines and the Desert Queen Ranch. In the 1930s homesteaders came seeking free land and the chance to start new lives. Today many people come to the monument's more than 200,000 hectares (half million acres) of open space seeking clear skies and clean air, and the peace and tranquility, the quietude and beauty, only deserts offer.

The life force is patient here. Desert vegetation, oftentimes appearing to have succumbed to a sometimes harsh and unforgiving environment, lies dormant, anxiously awaiting the rainfall and moderate weather that will trigger its growth, painting the monument a profusion of colors. At the edges of daylight and under clear night stars is a fascinating multitude of generally unfamiliar desert wildlife. Waiting out daytime heat, these creatures run, hop, crawl, and burrow in the slow rhythm of desert life. Under bright sun and blue sky, bighorn sheep and golden eagles add an air of unconcerned majesty to this land.

The desert. Some think it wretched and seemingly useless. For all its harshness the desert is a land of surprising variety and complexity, a land of extreme fragility. Today's moment of carelessness may leave lasting scars or disrupt an intricate system of life that has existed for eons. Viewed from the roadside, the desert only hints at its hidden vitality. To the close observer, however, a tiny flower bud or the lizard's frantic dash reveals Joshua Tree National Monument as a place of beauty and life. Take your time as you travel through this area. Joshua Tree National Monument provides a space for finding freedom from everyday routines, space for self-discovery, and a refuge for the human spirit. Let the desert take hold of you.

Faces and Forms of Life Within the Desert



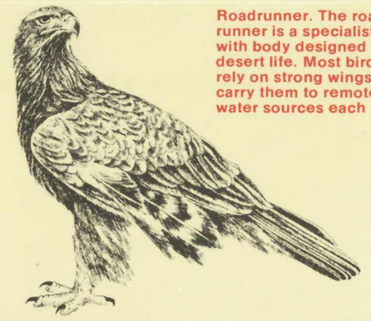
Coyote. The name of the game is survival. Options: use a unique plan, specialize, or take advantage of every opportunity as a jack-of-all-trades. The desert's most successful opportunist is the coyote. Its skill as a hunter, and its appetite for anything swallowable, ensures this desert carnivore's success. Its diet may include insects, lizards, snakes, birds, rodents, rabbits, carrion, fruit, nuts, grass, tennis shoes, or young tortoises. Coyotes are renowned for howling, but they also bark playfully.



Burrowing Owl. *Coo-c-o-o.* Hear the mellow, rolling call of the burrowing owl at evening. Vacant rodent burrows in open areas provide ready-made, well insulated homes for this small owl. Feeding on insects, reptiles, and rodents at dusk, it spends the warm daylight hours basking at the burrow entrance. Agitated, it bobs and bows, and cackles to ward off intruders.



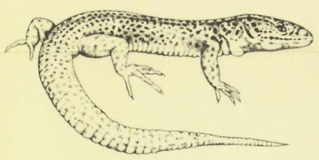
Bobcat. The short, powerful bobcat body is adapted to pounce from ambush on birds, rodents, and rabbits. Keen senses, patience, and night shadows aid this shy cat.



Golden Eagle. The rabbits and squirrels that evade the night hunters must still search the daytime skies for the silhouette of the stately golden eagle. Its keen eyes scan the landscape for the slightest motion as it soars from the mountain heights out over the valleys and desert floor. Its golden nape is visible only at close range. Its soft voice is rarely ever heard.



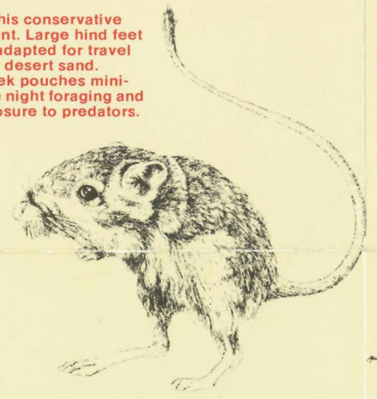
Roadrunner. The roadrunner is a specialist with body designed for desert life. Most birds rely on strong wings to carry them to remote water sources each day. Roadrunners get moisture from their prey: reptiles, insects, rodents, and young birds. Powerful legs, rather than wings, serve the bird well.



Yucca Night Lizard. This lizard may live its entire life under the protective bark of a decaying Joshua tree. Its narrow body fits in small crevices where it feeds on ants and termites attracted by the host tree's shelter from predators and climate.



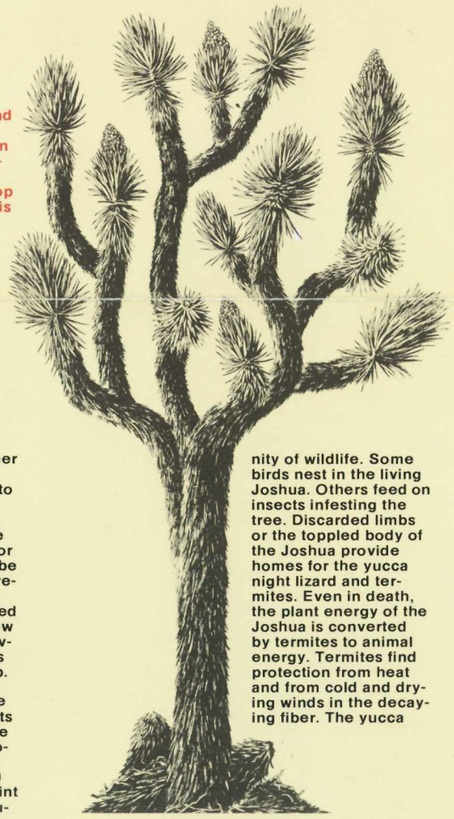
Jackrabbit. Muted jackrabbit fur colors provide a motionless defense from the searching eyes of many predators: coyote, bobcat, and eagle. Strong eyes and keen hearing send powerful legs into motion. Young are born well furred.



Kangaroo Rat. To survive in the desert on seeds alone is a challenge few can meet. Seed metabolism produces nutrients and minimal water, enough for this conservative rodent. Large hind feet are adapted for travel over desert sand. Cheek pouches minimize night foraging and exposure to predators.

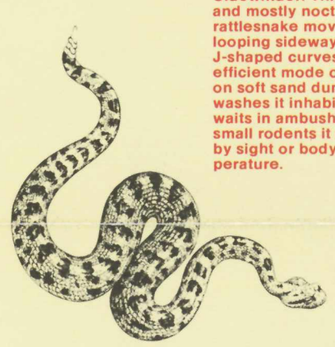


Stinkbug. Stilting across the sand, this large black beetle freezes in a handstand pose at the slightest disturbance. Emission of a pungent odor repels predators. The pose is enough to stop those familiar with this scavenger.





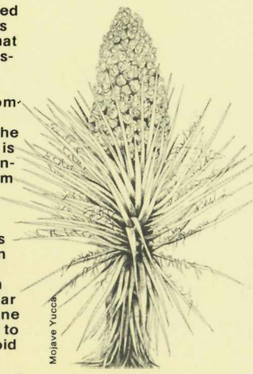
Tarantula. This largest desert spider is not poisonous to humans but bites painfully if provoked. It feeds on insects, but may fall victim to the large, colorful tarantula hawk wasp. A tarantula may inhabit a burrow for years.



Sidewinder. This small and mostly nocturnal rattlesnake moves by looping sideways in J-shaped curves, an efficient mode of travel on soft sand dunes and washes it inhabits. It waits in ambush for small rodents it detects by sight or body temperature.

Deserts are composed of plants and animals living together in what seems like an oppressive environment. Living and nonliving elements interact complexly, forming the desert ecosystem. The lifeblood, of course, is the sun's energy, converted to a living form by green plants.

Unlike most ecosystems, in which plants compete for space in the sun, the desert's sparsity is created in part by too much solar energy. Plants use one of two life strategies to survive. Annuals avoid the extremes, compress their life cycle, and exist while the environment is favorable. Sudden carpets of spring wildflowers are displays of awakened dormancy as seeds, like time travelers, revive to sprout, flower, and renew their kind. The alternate strategy is that of the patient perrenial. Conservative year-round residents like the Joshua tree flourish during the moist periods and bide their time during long droughts.



Mojave Yucca

Many animals derive their energy from plants, but desert plants give up the fruits of their production only reluctantly. Sharp spines and chemical-laden leaves complicate the lives of plant-eaters. The kangaroo rat avoids these obstacles by eating seeds. While safe to eat, seeds can be hard to find. Many are small, looking surprisingly like the sand grains that offer them sanctuary. The kangaroo rat uses sensitive front paws to sift through sand, discovering seeds by smell as well as touch. Seeds consumed by the kangaroo rat are converted into animal tissue. Energy continues to flow through the web as kangaroo rats and other plant-eaters, such as jackrabbits, fall prey to meat-eaters. It takes many rabbits and rodents to feed a single owl, coyote, bobcat, or eagle, so there must be far more prey than predators. The original solar energy converted to plant tissue has now been transformed several times as it moves through the food web.

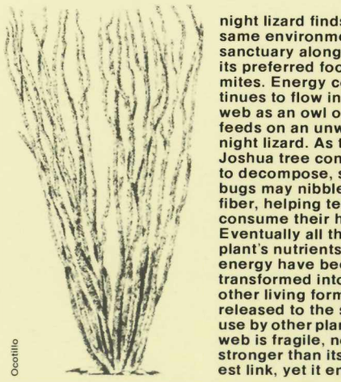


California Juniper

As the original source of living energy, plants fulfill a vital role in the food web. A large productive plant such as the Joshua tree (right) represents a focal point for a complex community of wildlife. Some birds nest in the living Joshua. Others feed on insects infesting the tree. Discarded limbs or the toppled body of the Joshua provide homes for the yucca night lizard and termites. Even in death, the plant energy of the Joshua is converted by termites to animal energy. Termites find protection from heat and from cold and drying winds in the decaying fiber. The yucca night lizard finds the same environmental sanctuary along with its preferred food, termites. Energy continues to flow in the web as an owl or snake feeds on an unwary night lizard. As the Joshua tree continues to decompose, stinkbugs may nibble on the fiber, helping termites consume their home! Eventually all the plant's nutrients and energy have been transformed into another living form or released to the soil for use by other plants. The web is fragile, no stronger than its weakest link, yet it endures.



California Fan Palm



Ocotillo

Illustrations by Gene Dieckhoner

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For Your Enjoyment

The monument may be visited year around, and each season adds its personality to the desert's character.

Visitor centers, ranger stations, entrance stations, and wayside exhibits are located along main roads leading into and through the monument. These provide you opportunities to acquaint yourself with park resources. Publications on the monument are sold by the Joshua Tree Natural History Association at most information stations.

Park rangers are here to help you have an enjoyable, safe visit. Detailed information on weather, road conditions, backcountry use, campgrounds, and regulations may be obtained from the rangers on patrol or at visitor centers or stations. Ranger-conducted activities, available on weekends during the fall and spring, can increase your understanding of the monument. Ask about current programs. For further information write: Superintendent, Joshua Tree National Monument, 74485 National Monument Drive, Twentynine Palms, CA 92277 or call (619) 367-7511.



Facilities and Services

Nine campgrounds, with tables, fireplaces, and toilets, have been developed. Several picnic areas for day use are available. You must bring water and firewood. Find motels, gasoline and dump stations, stores, and restaurants in nearby towns. Walks, hikes, and campfire talks are conducted principally in spring and fall; information is posted on campground bulletin boards and at ranger stations and visitor centers.



For Your Safety

The desert, fascinating as it is, can be unforgiving for those unfamiliar with its potential dangers.

Periodic rainstorms produce flash flood conditions. Avoid canyons and washes during rainstorms. If you encounter flowing water, do not attempt to cross until it has subsided and the way is safe.

Boulder piles attract children as playground equipment does in city parks—be aware of the hazards. Weathering makes rock climbing hazardous, loosening rock particles.

Desert animals are wild. Respect them. Rattlesnakes are indigenous to the desert, seeking warm sunshine in cool weather and the shade of bushes and rocks in warm weather.

Abandoned mine shafts, (some extending hundreds of meters/yards in depth) with loose rock at their openings, make "getting a closer look" a potential disaster. Stay clear!

Be cautious and use common sense in the out-of-doors.





Getting Here

Joshua Tree National Monument lies 225 kilometers (140 miles) east of Los Angeles. You can approach it from the west via Interstate 10 (US 60) and 29 Palms Highway (Highway 62) to the north entrances of the monument at the towns of Joshua Tree and Twentynine Palms. The south entrance at Cottonwood Springs, which lies 40 kilometers (25 miles) east of Indio, can be approached from east or west, also via Interstate 10.

Cactus photos courtesy of Penny Knuckles

Points of Interest, Keyed to the Map

Oasis of Mara (1)
Inhabited first by Indians and later by prospectors and homesteaders, the oasis today provides a home for monument headquarters and the Oasis Visitor Center.

Fortynine Palms Oasis (2)
This oasis, where water loving plants thrive and thirsty animals come to drink, is accessible by a 2.5-kilometer (1.5-mile) moderately strenuous trail.

Hidden Valley (3)
A trail system winding between massive boulders leads you through this legendary cattle rustler's hideout and introduces some of the plants and animals of the Mohave Desert.

Barker Dam (4)
Built around the turn of the century to hold water for cattle and mining purposes, the dam today forms a small rainfed reservoir utilized by monument wildlife.

Lost Horse Mine (5)
This historic site, representative of the monument's gold prospecting and mining history, is accessible by a 2.5-kilometer (1.5-mile) trail.

Keys View (6)
This outstanding scenic point in the monument gives a superb sweep of valley, mountain, and desert from its elevation of 1576 meters (5185 feet).

Ryan Mountain (7)
A 2.5-kilometer (1.5-mile) moderately strenuous trail to the 1660-meter (5461 feet) summit offers several lookout points with fine views of Queen, Lost Horse, Hidden, and Pleasant Valleys.

Geology Tour Road (8)
This 29-kilometer (18-mile) self-guiding motor nature tour along a dirt road winds through some of the monument's most fascinating landscape.

Cholla Cactus Garden (9)
Bigelow cactus concentrate to form this unique garden. A short self-guiding nature trail featuring plants and animals of the Colorado Desert winds through this unusual area.

Cottonwood Spring (10)
Noted for its birdlife, this manmade palm oasis is easily accessible by road. A small visitor center with displays is located approximately 1.6 kilometers (1 mile) away.

Lost Palms Oasis (11)
This oasis, representing the largest group of palms in the monument, may be reached by a 6.4-kilometer (4-mile) trail through interesting desert landscape.

Transition Zone (12)
An ecological melting pot where two great deserts, the Mohave and the Colorado, meet to form a zone that contains plants and animals representative of each.

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