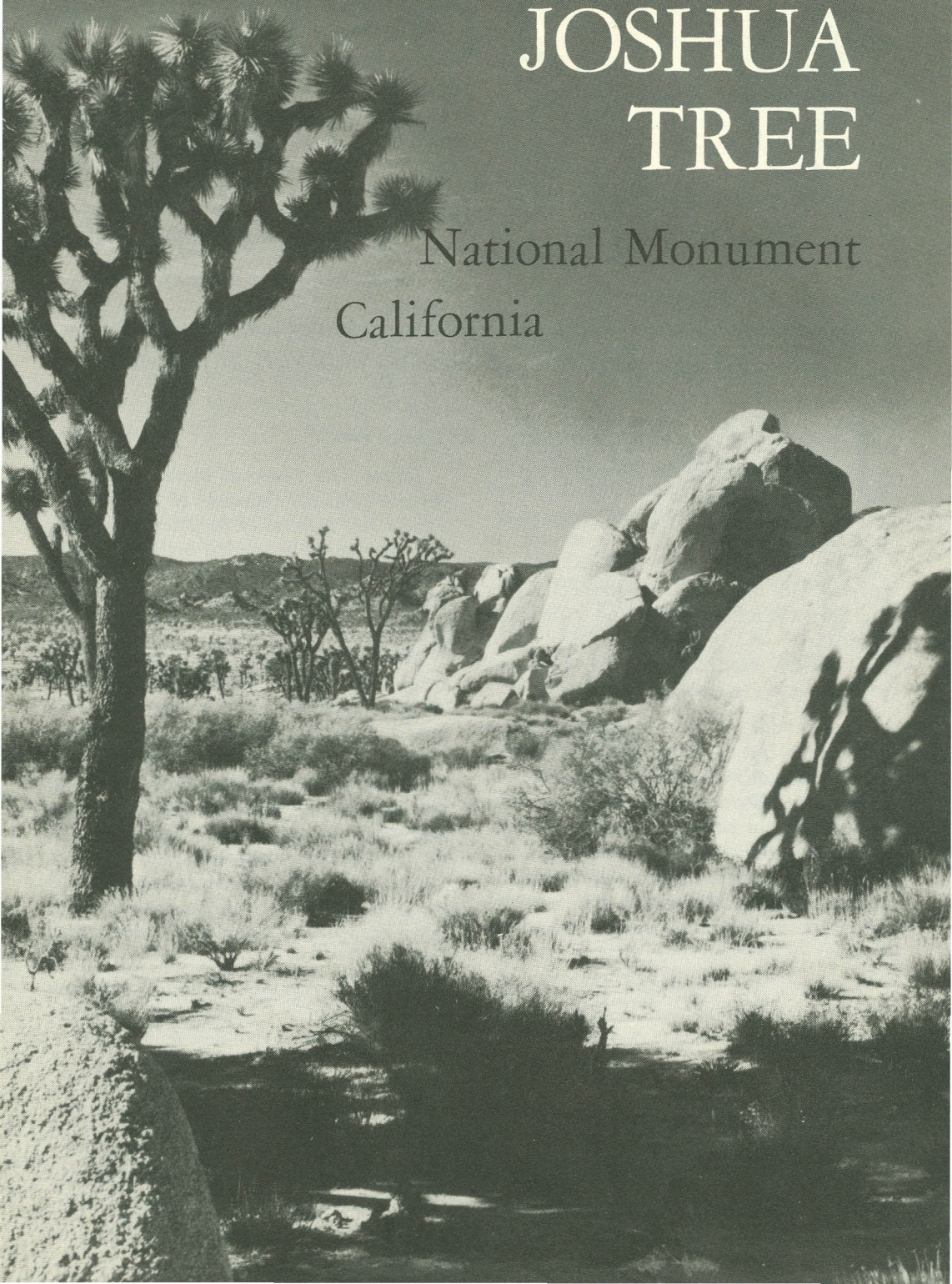


# JOSHUA TREE

National Monument  
California







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## NATIONAL MONUMENT

*Typical California desert country, preserving magnificent stands of Joshua-tree, cholla cactus, and other desert flora, and containing striking granite formations*

**J**OSHUA TREE NATIONAL MONUMENT, located in beautiful high desert country, preserves a typical California desert where birds and animals and even plants have acquired specialized habits in order to survive; where the sand may suddenly be covered with millions of wildflowers; where the oases shelter a colorful and varied bird population; and where the colorful cacti, the spidery ocotillo, and the grotesque Joshua-tree are symbols of the desert.

The altitude of this monument ranges from 1,000 feet in the eastern end to more than 5,000 feet in the Little San Bernardino Mountains. The weather is delightful most of the year and particularly on winter days. In summer, while it is hot at lower elevations, it is relatively cool at higher altitudes. The average annual rainfall is less than 5 inches, but there are wide departures from this average.

This area was established as a national monument in August 1936, and has a gross acreage of more than 557,000.

The National Park System, of which this area is a unit, is dedicated to conserving the scenic, scientific, and historic heritage of the United States for the benefit and enjoyment of its people.

### *Desert Plants*

Joshua Tree National Monument is preserved primarily because of the notable variety and richness of its desert vegetation. The monument lies within both the Mojave and Colorado Deserts. This is one reason for the many and varied species of desert plants.

Many of these are extremely rare. Among them is the rapidly diminishing Joshua-tree (*Yucca brevifolia*), one of the most spectacular botanical features of our western desert. It belongs to the lily family, as do many other tough desert plants, and attains heights up to 40 feet. Its cream-white blossoms grow in clusters, 8 to 14 inches long at the ends of heavy, angular, erratic branches. It is believed that the Mormons gave this giant yucca the name of Joshua-tree, or the "praying plant," because of the upstretched "arms."

Unlike a typical tree, the Joshua-tree trunk is not composed of annual rings or layers, hence it is impossible to determine its age.

The great feathery plume of the nolina (*Nolina parryi*) blossom is another striking feature of the landscape in early summer. It is not a yucca, but is frequently confused with the Mohave yucca (*Yucca schidigera*).

Widely scattered throughout the monument are the paloverde, manzanita, pinyon, live oak, juniper, ocotillo, desertwillow, indigobush, smokethorn, mesquite, catclaw, numerous species of colorful cacti, and a profusion of small bushes, plants, and shrubs whose blossoms lend brilliant patches of color to the desert in the spring after a wet winter. Then there is the common creosote-bush which forms a sea of dark green on every level area and valley. Desertholly grows in a few isolated areas.

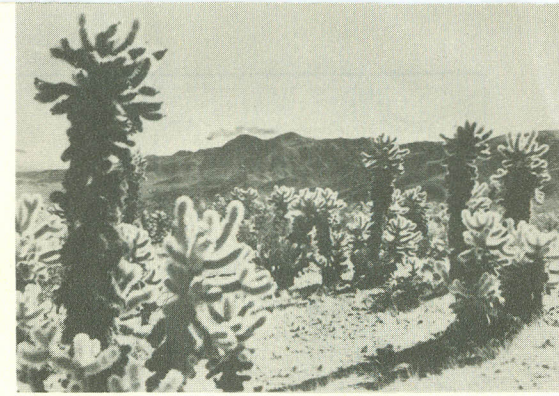
Wildflower displays are best observed during April and May, although flowering starts in March at the lower elevations and continues through June at the higher altitudes. As is typical of the desert, in some years there is no floral display because of unfavorable weather.

### *Palms and Oases*

There are several oases in the monument where groups of the California-palms (*Washingtonia filifera*) are found. Among these is the splendid group at Fortynine Palms Canyon, just inside the northern boundary and easily reached by trail. One of the best known stands is at the Twentynine Palms Oasis, first called Palm Springs by Col. Henry Washington, who conducted a Government survey party through the area in 1855. The largest group of palms within the monument is found in Lost Palms Canyon. This group of over 100 palms is reached from Cottonwood Spring over a 4-mile trail.

### *Geology*

The relief of Joshua Tree National Monument is briefly a series of mountain blocks separated by desert flats, the result of shifting



*Stand of Cholla in Pinto Basin.*

along great cracks, or "faults," in the earth's crust. The land surface has been intensely modified by the sudden changes in wind, water, and temperature conditions typical of desert climate.

Rocks of eight different geologic ages, ranging from early pre-Cambrian to recent rhyolite, and wind-blown sand are found in the area.

Hundreds of light-gray or pinkish rock formations are scattered over a large portion of the monument, particularly in the high plateau region. This rock is called White Tanks monzonite, a rock once molten during the age of reptiles. This molten rock rose up into the crust as "magma," cooled and solidified not too far below the earth's surface, and is today exposed to our view because the overburden of rock has been worn away by erosion.

Many narrow bands of contrasting color are seen in these massive rock formations. These are dikes (aplite, pegmatite, or rhyolite) which resulted from molten material being forced up through cracks when the older mass of magma had cooled and contracted in the process of hardening into monzonite.

### *Early Human Habitation*

Prehistoric man has left behind relics of his occupation in this area, perhaps 9,000 years ago. The Pinto Basin is famous for a particular type of stone weapon point asso-



ciated with the distinctive culture of Pinto Man. These points were used to tip darts propelled with the atlatl (throwing stick) before the introduction of the bow and arrow. Pinto points, with other stone artifacts, are found along the shore of an ancient lake that was there during and following the Ice Age (Pleistocene Period). Subsequent decrease in rainfall left the basin so dry that it was no longer habitable by primitive man. Embedded in the shore deposits of the now-vanished lake are found fossilized bones of camels, horses, antelope, ground sloth, and other animals.

More recent Indians also inhabited the monument. Until about 1913, the Serranos, a branch of the Shoshone tribe, lived in this area and left arrow points, pottery, beads, metates, manos, petroglyphs, and pictographs.

### *Wildlife*

Many kinds of wildlife and the means by which they survive in this desert area are a source of surprise to most visitors. Among the animals are the desert bighorn, mule deer, coyote, bobcat, an occasional cougar, badger, desert fox, and many rodents ranging in size from the jackrabbit to the silky pocket mouse, one of the smallest mammals in North America. Since so little water is available, rodents have learned to satisfy their thirst by eating vegetation from which the necessary moisture is secured.

Birds are numerous especially around the oases. More than 155 species have been identified. Many are migrants, while a number live permanently in the area.

Reptile life is abundant, with the desert tortoise (*Gopherus agassizi*) leading in interest. Many colorful lizards can be seen darting across the hot sands. The rare *Xantusia vigilis*, one of the smallest species of lizards, is entirely dependent upon dead yuccas. Having no eyelids and vertical (cat-like) pupils, they are nocturnal. The chuck-walla, the largest lizard in this area, lives among the rocks.

### *Salton View*

Salton View is the outstanding scenic point in the monument. From an elevation of 5,185 feet, there is an unforgettable sweep of valleys, mountain, and desert combined in one magnificent panorama. The Salton Sea, 241 feet below sea level and 30 miles away, is visible from here.

In the foreground lie the renowned "date gardens" of Coachella Valley. Date palms were first brought to our shores by Spanish missionaries.

To the right is the blunt-faced escarpment of San Jacinto Mountain (elevation 10,831 feet). This sheer rise of about 10,000 feet within a distance of 5 miles, is one of the greatest in the country. To the north lies San Gorgonio Mountain whose top, snow-covered the greater part of the year, reaches an elevation of 11,485 feet, making it the highest in southern California.

The well-known San Andreas Fault, source of many earthquakes, can be seen directly below and to the west, extending approximately northwest to southeast on the near side of the Coachella Valley.

### *Beavertail—One of the Many Colorful Cacti.*

