

Cholla Cactus Garden Trail



PRICE 10 CENTS IF YOU TAKE THIS BOOKLET HOME

JOSHUA TREE NATIONAL MONUMENT

ABOUT THE NATIONAL PARK SYSTEM

Joshua Tree National Monument is one of the areas administered by the National Park Service, a bureau of the United States Department of the Interior, dedicated to conserving the scenic, scientific, and historic heritage of the United States for the benefit and enjoyment of its people.

The wildlife, plantlife, and all other natural features are preserved here for your pleasure and for the enjoyment of the many visitors who will follow you in the years ahead. You can help to preserve the beauty of Joshua Tree National Monument by taking away only pictures and pleasant memories, and leaving behind nothing except possibly your own footprints.

CONSERVATION — CAN A LAYMAN HELP?

If you are interested in the work of the National Park Service and in the cause of conservation in general, you can give active expression of this interest, and lend support by aligning yourself with one of the numerous conservation organizations which act as spokesmen for those who wish our scenic heritage to be kept unimpaired for the enjoyment of future generations.



PRODUCED IN COOPERATION
WITH THE
NATIONAL PARK SERVICE

KEEP AMERICA BEAUTIFUL

INTRODUCTION

Pinto Basin, in which you are now located, is a part of the Colorado Desert. Rainfall is very light and summer temperatures may be uncomfortably hot. Nevertheless, a number of hardy plants and animals manage to survive. Some of these will be identified along the nature trail.

During summer cloudbursts, the dry washes you have crossed may temporarily become muddy torrents. During the short time when water is present, the roots of thirsty plants quickly absorb as much as they can. The water then stored in the roots or fleshy stems is sparingly used, for months may pass before the parched desert is refreshed by another rain.

A WORD OF WARNING

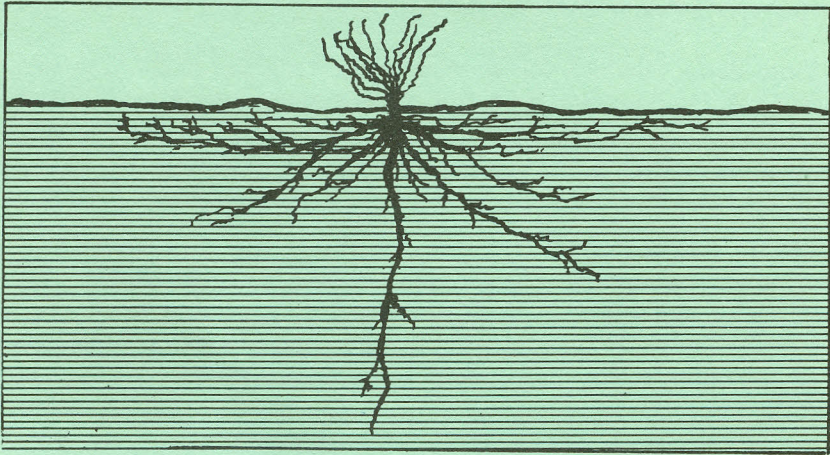
The few minutes which you spend on this nature trail will help you to become better acquainted with the animal and plantlife here. However, unless you are careful, this may be a painful experience. *Please do not touch the cactus. Keep pets in your car and watch your children.*

THE CHOLLA CACTUS GARDEN TRAIL

1. JUMPING CHOLLA (*Opuntia bigelovii*). Sometimes called "teddybear" cholla (CHOH-yah), this is considered by many to be the most handsome of our cactuses. It is certainly the spiniest. The spines are sharp and barbed, thus enabling them to penetrate any soft object they come in contact with. The fleshy joints fall off easily and may take root. In this way the stands can become quite dense, covering large areas. This cactus does best in soils heavy with sand, or sand and decomposed granite.



These plants are more friendly to certain animals than to man. Cactus wrens build their nests among the spiny branches and, for added safety, line the nest entrance with the spines. Even this formidable fortification does not hinder lizards, crickets, mice, and small snakes from setting up housekeeping in the abandoned nests. This



The expansive root system of the creosotebush

cactus, by providing shelter for wildlife, is indirectly beneficial to man.

Jumping chollas usually start to bloom around May 1. The delicately shaded, greenish-yellow flowers filled with golden-colored anthers, are inconspicuous but very attractive.

For the photographer — dramatic effects can be achieved by the use of back lighting. Late afternoon is a good time.

2. SPREADING CREOSOTEBUSH (*Larrea divaricata*). Here is a plant exceptionally well adapted to withstand prolonged drought. Leaves of the creosotebush are covered with a natural form of varnish which helps reduce moisture loss due to evaporation. The expansive root system permits the plant to quickly take up water from the infrequent rains. By these means, the creosotebush is able to grow in the hottest and driest parts of North America.

Bright yellow flowers appear in the spring and sometimes following summer rains. The flowers are followed by a crop of fuzzy-white seed-balls.

Lizards and snakes often take refuge from the hot sun in the shade

“The wild things of this earth are not ours to do with as we please. They have been given to us in trust, and we must account for them to the generations which will come after us and audit our accounts.”

—William T. Hornaday

at the base of the plant. Burrows for kangaroo rats and other rodents frequently start near the roots.

3. DESERT SENNA (*Cassia armata*). Many people think these plants are dead. During much of the year this impression is understandable. They are leafless except for a brief period in the spring when tiny leaves appear.

A nearly solid mass of bright yellow flowers bursts out in April and May. At that time, this is one of the most beautiful of desert shrubs.

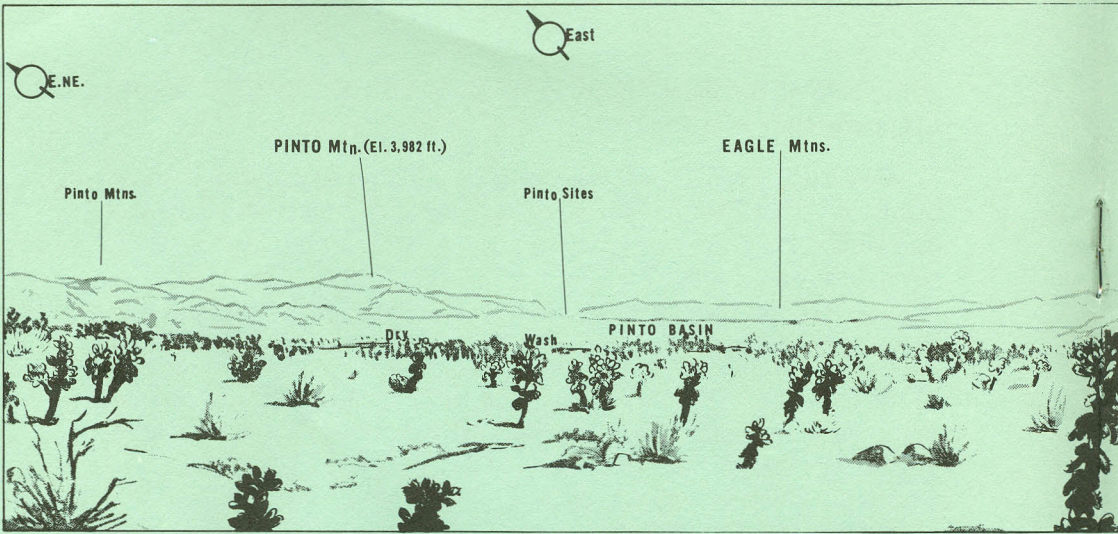
4. WOODRAT HOME. The industrious builders of this prickly house were woodrats (*Neotoma spp.*). Better known by the name of "trade" or "pack" rat, this interesting rodent is actually *not* a true rat. By contrast to his city relatives (true rats), he is a clean animal and does little damage.



The various species found on the desert are especially interesting since they have adapted themselves to areas where there is little water. They can derive sufficient moisture from the various plants which they eat. Note how they use cholla segments to line their runways and as a protective cover over their underground burrows. These segments, with their numerous spines, serve as a protection against such natural enemies as coyotes and ringtails. However, they do not protect our friend from snakes intending to dine on his youngsters. The woodrats are seldom seen in daylight, but after dark they scurry around gathering food and carrying about the objects that interest them. It is remarkable how they are able to carry cholla segments and even climb around on these dangerous plants without harm.



Depending on the time of day and season, other wildlife you may see includes the roadrunner (strange cousin of the cuckoo), desert iguana (a large plant-eating lizard), desert tortoise, ladder-backed woodpecker, loggerhead shrike, coyote, kit fox, kangaroo rat, and black-tailed jackrabbit.



Panoramic view of the Pinto Basin

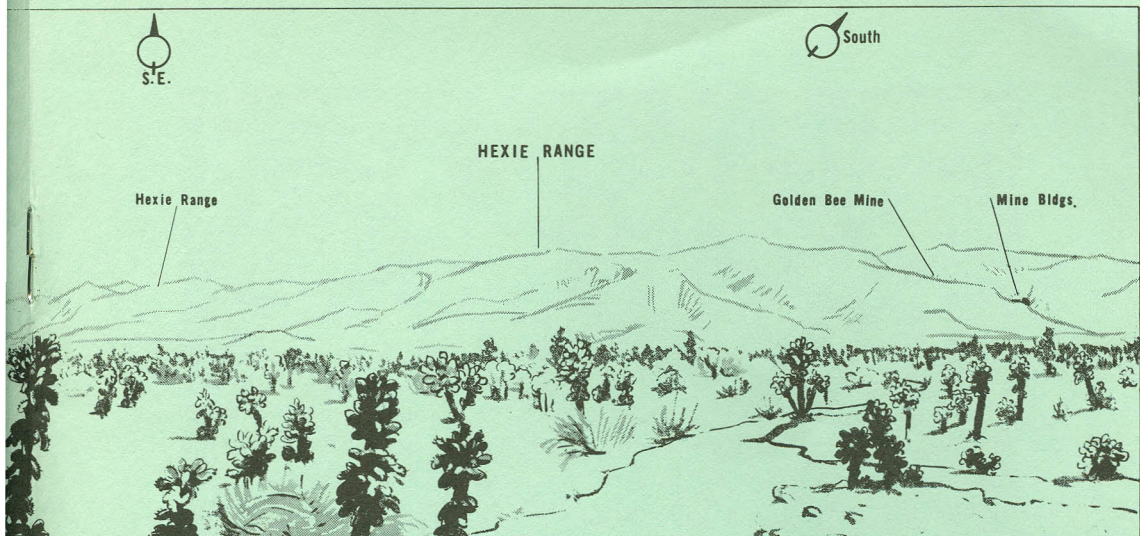
5. ENGELMANN ECHINOCEREUS or "CALICO" CACTUS (*Echinocereus engelmannii*). This colorful cactus may be seen in nearly all parts of the Monument.

Here it is growing around the base of a jumping cholla. As you can see, the spines vary in color from white to brown, and on many specimens dark, blood-red spines occur. This variation in color suggests the common name of "calico" cactus. In Arizona it is commonly called "hedgehog" cactus.



Flowers appear as early as April in the lower elevations. They are large, softly silky in texture, and deep purple to pink in color. The red fruits, which may be eaten by man, are an excellent source of food for birds and rodents.

6. HOLYCROSS CHOLLA (*Opuntia ramosissima*). This cactus is also known by such names as "diamond" cactus, "pencil" cactus, and "desert darning needle." This latter name can be easily appreciated by a close examination of the beautifully formed and delicately



Pinto Basin and surrounding mountains

colored spines. The thin woody segments vary in color from green to purple on different plants.

Flowers, which bloom in early summer, are bronze-green, fading to a salmon color. Although highly attractive, they are so small and inconspicuous as to be seldom noticed.

Holocross cholla is common in both the Colorado and Mojave Deserts. There are some beautiful specimens along the road several miles to the northwest.

7. PINTO BASIN STORY. Below and several miles away is a thin line formed by smokethorn and desert willow. This marks the course of a dry wash. During the last ice age, 10,000 years ago or longer, a stream probably flowed in about the same location as the dry wash. It meandered through the basin and into a small lake located at the far end of Pinto Basin. At this time the climate was wetter. Non-desert shrubs and trees, now long gone, provided a more hospitable landscape. Wildlife was more abundant, and included the pronghorn "antelope".

Several thousand years ago, a primitive people lived along the ancient lake shore. The bow and arrow was not yet in use in North America; instead, they used an *atlatl*, a type of throwing stick. Archaeologists who discovered their campsites named them the "Pinto Basin People."

As the climate gradually became warmer and drier, many plants died unable to stand drought conditions. Some animals adjusted to condi-

tions and stayed; but other species migrated or perished. The Pinto People, too, disappeared. Where they went, or who their descendants are, we do not know.

Note: It is often incorrectly assumed that this area was glaciated.

Actually, the nearest glacier was on Mt. San Gorgonio, approximately 50 miles west of here.

8. METAMORPHIC ROCK. The small rocks you see about you are remnants of what was once solid bedrock. The banded pieces are called *gneiss* (pronounced, "nice"). The surrounding mountains are largely composed of this material. Gneiss is a metamorphic type of rock, which means that its original structure has been changed. This changing process is usually caused by intense heat and pressure deep within the earth. The conclusion then follows that the material forming the mountains now seen was once buried deep within the crust of the earth.

9. MESA DALEA, or "INDIGOBUSH" (*Dalea schottii*). Like its relative, the desert senna, (both belong to the pea family), this dalea looks dead much of the year. Leafless and inactive for months, this shrub can withstand prolonged periods of hot dry weather. Deep purple flowers blossom in April and May.

10. MOUNTAINS. Pinto Mountain is the bulky, rounded-top mountain rising to the left of Pinto Basin. It was named "Pinto" because of the appearance of having been "painted" with different colors. The far side of Pinto Basin is bounded by the Eagle Mountains. Looking beyond post No. 9 one sees the Hexie Range. The buildings and road belong to the Golden Bee Mine, one of several inactive gold mines in the region.

11. CALIFORNIA JOJOBA (*Simmondsia chinensis*). The jojoba (pronounced, "ho-HO-bah") or "goatnut" is found here and in the Mojave Desert portion of the Monument. This interesting shrub is a member of the box family and, like a number of desert plants, is dioecious (i.e. male and female flowers are usually borne on different plants). The oily nuts, which taste much like filberts, but are a little bitter because of tannin, were an important article of food among Indians. The seeds were eaten fresh or, when dried, ground, and roasted, were used in the making of a beverage.

The little white-tailed antelope ground squirrel aids in dissemination by storing the fresh seeds, which may sprout and grow. The evergreen leaves are browsed by deer, bighorn sheep, and other animals. This is an example of how plants and animals depend upon each other.

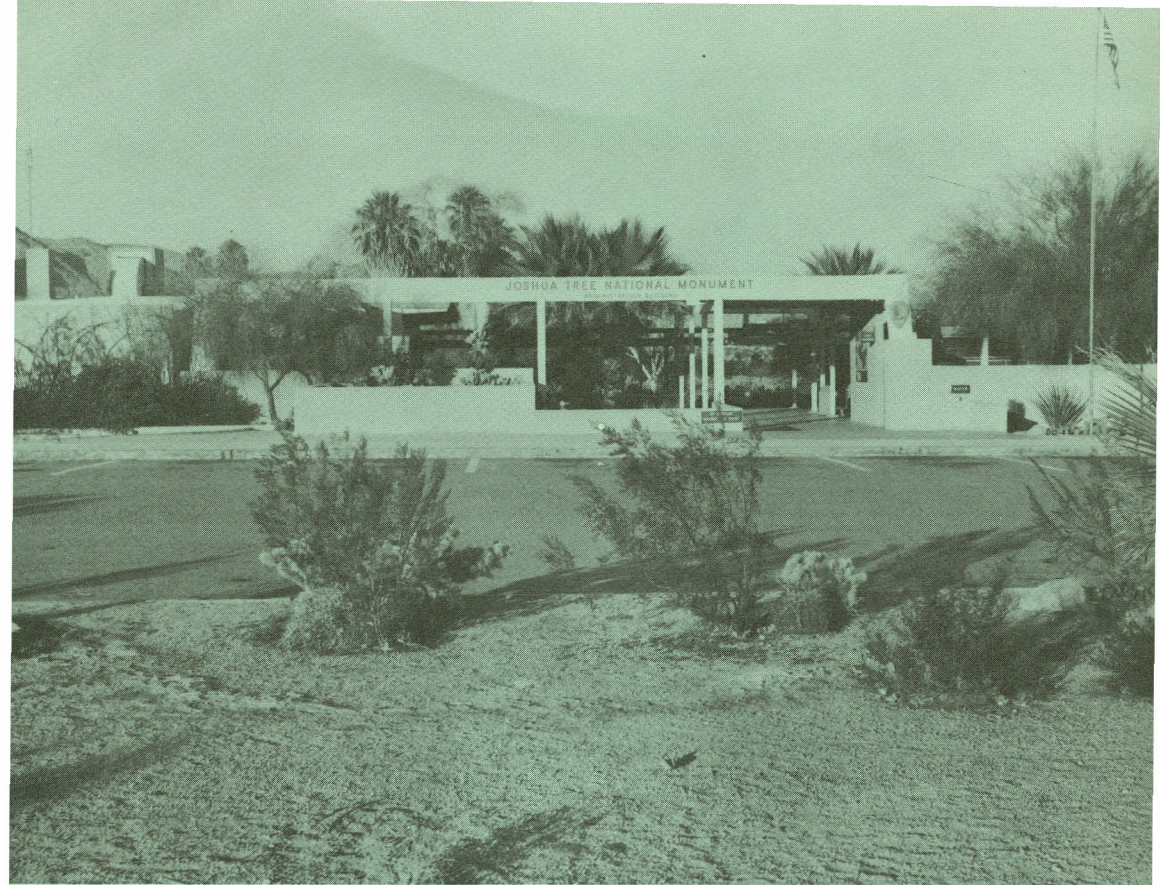


Night scene at the Cholla Garden

Other self-guiding natural history trails are located at Cap Rock in Lost Horse Valley, and the Twentynine Palms Oasis. Interpretive texts and markers may be found at Arch Rock (take trail from White Tank Campground), Indian Cave, and Salton View.

“Everybody needs beauty as well as bread, places to play in and pray in, where Nature may heal and cheer and give strength to body and soul alike.”

—John Muir



Oasis Visitor Center, Joshua Tree National Monument

An exhibit room and information desk are located in the Visitor Center at the Twentynine Palms Oasis. Park Service employees on duty there will be happy to answer your inquiries. Books concerning desert plants and animals may be obtained there. A free informational leaflet on Joshua Tree National Monument is available on request.

WE HOPE YOU HAVE ENJOYED YOUR VISIT

5th Edition—5M—3/69

This Booklet is Published by the
JOSHUA TREE NATURAL HISTORY ASSOCIATION

a non-profit organization pledged to aid in the preservation and interpretation of the scenic and scientific features of the Monument.

Much privately-owned property still remains within the Monument. The Joshua Tree Natural History Association has, as one of its purposes, the assistance in the acquisition of these properties so that the area may be properly preserved as a single unit.

Your support of this project will be most welcome.

U.S. DEPARTMENT OF THE INTERIOR

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources." The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States — now and in the future.



