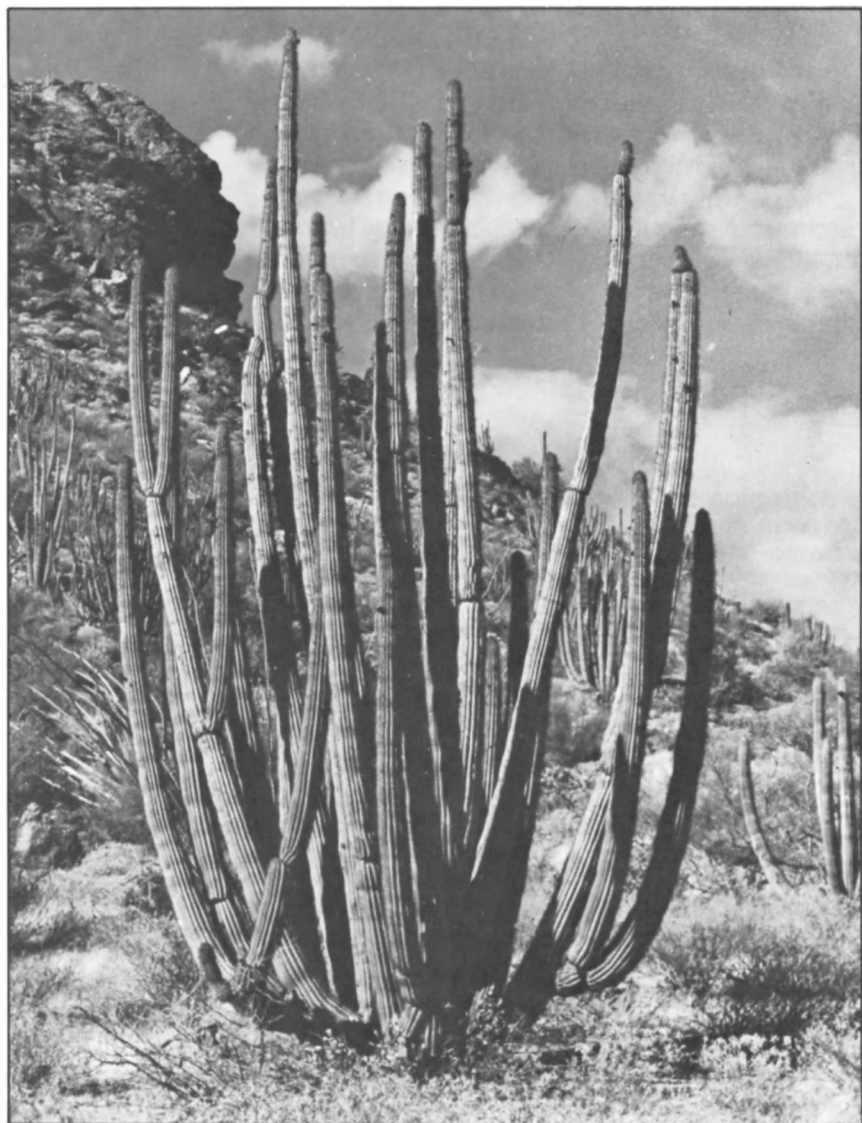




Visitor Center Nature Trail
Organ Pipe Cactus National Monument,
Arizona

This booklet is yours to use while discovering the fauna and flora along the Visitor Center Nature Trail. If you wish to take the booklet home the cost is \$.25. We appreciate your cooperation in helping us keep this booklet in print.

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INTRODUCTION

The Sonoran Desert, a harsh land by human standards, abounds with life. The plants and animals that survive here have adapted to conditions of intense summer heat and low annual rainfall. Many have adapted to the desert so well that they could not survive anywhere else.

This short walk will acquaint you with some of the more common desert plants and animals and their special adaptations for desert survival. The trail is an easy .1 mile walk ending at the parking lot. Numbered stakes along the trail correspond to numbers in this leaflet.

1. The buckhorn cholla (*Opuntia acanthocarpa*) gets its name from its branching stems which resemble the antlers of a deer. These cacti exhibit a lot of individual variation. Stems may be green, brown or purple, while spring blossoms may be brown, orange, yellow or red. The cholla's spines protect the cactus from hungry animals and also provide a bit of shade from the desert sun.

2. The giant saguaro cactus (*Cereus giganteus*) produces small black seeds that fall to the ground during the hottest part of the summer. Seeds that fall and lie exposed on the desert floor quickly bake and die. Those that survive usually begin to grow under the shade of "nurse plants" which shelter the young seedlings. This saguaro sprouted in the shade of a palo verde tree (*Cercidium floridum*) perhaps 100 years ago. The palo verde itself is well adapted for summer heat and drought. It has an extensive root system that can penetrate the ground fifty feet or more and can sometimes actually tap the groundwater. The small leaves reduce water loss and in dry periods may be lost altogether.

3. This saguaro may have started growing in the open without the benefit of a protecting nurse plant. More likely, it simply outlived its nurse plant and possibly even hastened the death of its nurse. A relatively large saguaro such as this (which is probably over fifty years old) no longer needs the protection of another plant. The large quantities of water stored in the pulpy tissue allow the cactus to survive even prolonged drought. The thick waxy coating prevents excessive moisture loss on hot summer days.

4. The creosote bush (*Larrea tridentata*) cannot store much water, yet it thrives in some of the hottest and driest parts of the desert. Examine the small green leaves and you will notice that they are sticky and waxy. This varnish-like coating helps reduce water loss. To further reduce water loss and minimize evaporation, the evergreen leaves curl up during the hottest part of the day. The creosote bush also produces a growth inhibitor which is toxic to many neighboring plants and prevents them from growing nearby. This effectively reduces competition for scarce moisture and accounts for the widely spaced "landscaped" look of the creosote bushes.

5. The Ajo Mountains rise to the east, far across the highway. From Mt. Ajo, the highest point in the monument at 4,808 feet, a hiker can see as far as the Gulf of California on clear days. Junipers, oaks, rosewood and other plants grow at the higher elevations in the Ajo Range. They could not tolerate living conditions here on the desert floor.

The Ajo Mountain Drive, a 21 mile scenic loop, winds through the foothills of the Ajo Mountains and will introduce you to the plants and animals living there.

6. Watch out! The joints of the chain-fruit cholla (*Opuntia fulgida*) detach readily and their barbed spines inflict painful wounds.

Spines provide protection for cacti, but also serve another purpose for the chain-fruit cholla. When the spiny joints detach, they often cling to animals that transport them to other locations. The joints then fall to the ground and will take root if the soil is favorable. Since the chain-fruit cholla rarely reproduces from seeds, reproduction from "cuttings" is very important to the plant's survival.

7. The ocotillo (*Fouquieria splendens*) is not a cactus and does not store water. Rather, it sheds its leaves and goes dormant during dry periods. An ocotillo plant can shed and regrow leaves up to eight times a year. An easy way to tell if the desert is in a wet or dry period is to take a consensus of nearby ocotillos. If most are leafless, it has probably been dry for at least several weeks.

8. Triangle-leaf bursage (*Ambrosia deltoidea*) grows commonly throughout the monument. It abounds in low, flat areas where many other plants have difficulty surviving because of poor soils. Bursage is a perennial plant, growing through all seasons for many years.

In contrast, annual plants live only one season. They have just a few weeks while rainfall is generous and temperatures are tolerable in which to germinate, flower and produce seeds. Depending on the time of year, a number of different annual plants may be growing in this area. Spring comes early in this portion of the Sonoran Desert, with most wildflowers blooming in late February and early March. The intensity of the wildflower display varies with the amount and timing of the winter rainfall. An outstanding wildflower display may occur only once in several years.

9. The Engelmann prickly pear cactus (*Opuntia phaeacantha*) is scattered throughout the monument. Prickly pears are closely related to the cholla cacti, although they usually have flat wide pads instead of cylindrical joints. They have adapted to a variety of climates and can withstand prolonged cold spells. Species of prickly pear grow throughout most of the United States and as far north as Canada.

10. Unlike the prickly pear, the organ pipe cactus (*Cereus thurberi*) does not grow any farther north than this part of southern Arizona. Even here the organ pipe cacti are most abundant on south-facing slopes where they receive the most sun and heat. Organ pipe cacti are common further south in Mexico, but cold weather limits their distribution north of the monument. Organ Pipe Cactus National Monument was established to protect this cactus as well as other plants and animals that live here.

11. This hardy barrel cactus (*Ferocactus covillei*) stores water for use during the early summer drought. However, if you cut into the cactus, you would not find a cool pool of water. The cactus stores moisture as a bitter-tasting sticky sap, not as drinkable water. In fact, there are few reliable sources of drinking water in the monument outside the visitor center and campground areas. If you do any hiking in the monument, take plenty of water with you.

12. Many desert animals cannot stand the hot summer sun for more than a few minutes. To avoid hot temperatures, they will burrow two or three feet underground where they spend the hotter part of the day. Rodents have dug small holes around the shrubs along the trail, but the original occupants are not necessarily still living there. Rodent holes often provide shelter for rattlesnakes, lizards, tarantulas, insects and other animals. In summer, desert wildlife is most active after sunset.

13. Is a lively bird with a speckled breast chattering from a nearby perch? If so, it is probably the cactus wren, which jumps gracefully among the branches of the chain-fruit cholla without impaling itself on the sharp spines. The wrens often nest in the cholla, and you can probably find old tunnel-shaped nests remaining from past years.

The cactus wren is well adapted for desert living. Like many desert animals, it can survive long periods without drinking water, getting necessary moisture from the food it eats.

14. The white metal cylinder near the trail houses an official sensor of the National Weather Service. From mid-June through mid-September, daytime temperatures often hover between 100 degrees F. and 112 degrees F. The official temperatures are recorded in the shade, five feet above the ground. In direct sunlight on the desert floor, temperatures can approach 170 degrees F.!

Annual rainfall averages 9.28 inches, with most of the rain falling in late summer and in winter.

If you continue to explore the desert remember that the climate can be harsh. Unlike the plants and animals living here, humans have no special adaptations for desert survival. If you plan to hike in the monument, be sure you go prepared. Check at the visitor center for suggestions on where to hike and what to take. Inexperienced hikers should not attempt long walks during the summer months when temperatures are extremely high. For those who are prepared, a hike or walk anywhere away from the developed areas of the monument is an excellent way to become acquainted with this corner of the Sonoran Desert.

