

SAGUARO NATIONAL PARK

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Written by Jeff Wallner and Melissa Urreiztieta

Edited by Melissa Urreiztieta

Designed by Carole Thickstun

Photography by Cover: Jeff Gnass/GEO-LIGHT; Page 1: Randy Prentice; Page 2 (top): Charles W. Melton, (center): NPS, (bottom): Paul and Joyce Berquist; Page 3 (both): NPS; Page 4 (wren, lizard, and coyote): Paul and Joyce Berquist, (bat): Merlin D. Tuttle, Bat Conservation International, Inc., (owl): NPS, (tortoise): George H. H. Huey; Page 5: Fred Hirschmann; Page 6 (top left): Jack Dykinga, (toad): Bureau of Land Management, (tadpoles): Lawrence Ormsby; Page 7: Jeff Gnass/GEO-LIGHT; Page 8 (top): NPS, (rattlesnake): Paul and Joyce Berquist; Page 9 (all): NPS

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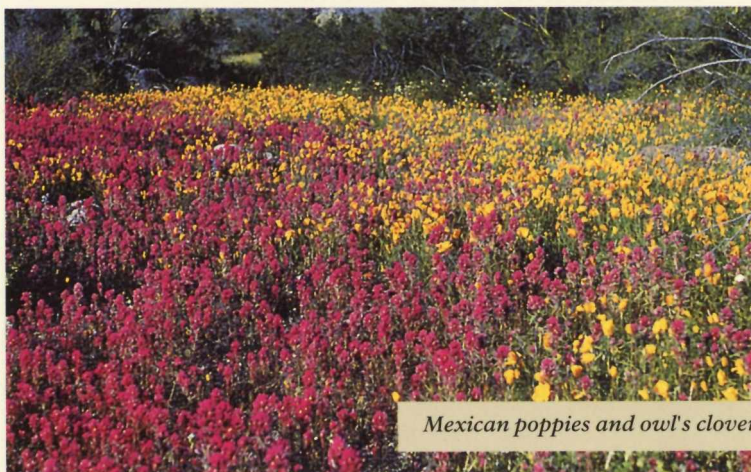
WELCOME TO CACTUS FOREST DRIVE

You are about to drive through one of the most remarkable landscapes in the Southwest: a forest of giant saguaro cacti. From here, generations of saguaros stretch for miles to the north and south and up the foothills of the Rincon Mountains to the east. In this patch of Sonoran Desert, protected by the National Park Service, this cactus forest supports its own interconnected world of fascinating species.





Lucifer hummingbird



Mexican poppies and owl's clover



Gambel's quail

What you will see depends on the season. In winter, precipitation dusts the peaks above you with snow and creates ephemeral creeks in the desert canyons. During this time most reptiles lie dormant underground, but overhead raptors soar, many on their annual migrations.

In spring, wildflowers often fill the desert with a rainbow display. Cactus flowers appear, too, as glorious blooms on prickly plants. Ocotillos announce their emergence from dormancy with bold green leaves and brilliant red flowers, like torches, attracting hummingbirds with sweet nectar.

By summer, all reptiles have emerged from their burrows. The buzz of cicadas fills the air and only a few animals brave the heat of day. Saguaro fruits split open and hungry critters share the bounty. After many months without rain, the desert awaits the summer monsoon, a time when all creatures are active, enjoying better hunting and foraging.

In early fall, the desert fills with the fruits of recent rains. You may see ripe fruits, also known as *tunas*, crowning prickly pear cacti, or sweet orange hackberries dangling on silvery-green bushes along rocky hillsides.

Cactus Forest Drive offers a chance to learn about the saguaro cactus and the Sonoran Desert ecosystem. Along the way there are many opportunities to stop and explore. Surrounded by saguaros of all shapes and sizes, you will discover an amazing landscape teeming with life adapted to living in a seemingly inhospitable place.

FUTURE GENERATIONS OVERLOOK

Homer Shantz, a botanist and president of the University of Arizona, understood the importance of protecting this dense stand of saguaros from the threats of cattle grazing and development. In 1933 he convinced President Herbert Hoover to set aside this land as Saguaro National Monument, preserving the cactus forest for future generations.

The Civilian Conservation Corps, then a new federal program, provided work for Tucson's unemployed, and laborers for the new monument. Operating

from a camp on Tanque Verde Creek, the “CCC boys” filled old mine holes, pulled down huts, and built an observation station. Their lasting accomplishment, completed in 1939, is this eight-mile road designed to blend with—and showcase—a slice of the Sonoran Desert.



Saguaro's CCC-built road

Homer Shantz



SONORAN DESERT OVERLOOK

An incredible diversity of plants and animals is adapted to living in the Sonoran Desert. These species have many ways of coping with extreme conditions.

Cactus spines are an example of an adaptation with many benefits. The spines help regulate the plant's temperature by allowing air flow—cooling it in summer and insulating it in winter. They also provide shade for the plant, and deter some hungry critters.

While some animals are deterred, others are inspired. Cactus wrens construct football-shaped nests of grasses and twigs in the middle of spiny cholla cacti and raise their young in these soft, protected retreats. Gila woodpeckers and gilded flickers build nests in the flesh of saguaros, which are naturally cooled by liquid

stored in the cactus. And many desert animals rely on cactus for food.

The prickly pear cactus is an example of a spiny storehouse of desert delicacies. Spring's yellow blossoms offer nectar to bats, butterflies, and birds, before giving way to juicy red fruits. By fall these fruits disappear into the stomachs of coyotes and foxes, thrashers and squirrels, but winter's green pads continue to feed javelina, spines and all!

Below (clockwise from top left): cactus wren, lesser long-nosed bat, desert spiny lizard, coyote, juvenile western screech owl, and desert tortoise



CACTUS FOREST OVERLOOK

The saguaros surrounding you are part of a recovering cactus forest that once appeared to be on the brink of extinction. Now protected within the boundaries of Saguaro National Park, new generations of saguaros are growing—slowly, but surely.

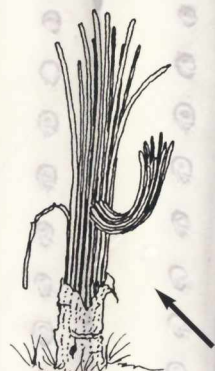
After reaching around 35 years of age, saguaros begin to produce flowers in late spring. Once pollinated, these flowers turn into green oval fruits that burst open to reveal a red pulp, filled with thousands of tiny seeds. They produce so many seeds because few actually grow to become mature saguaros.

In order to germinate, a saguaro seed must remain on the surface and receive at least 1½ inches of rain within a few days. If there is too little rain, animals gobble the seeds before they sprout; too much and the seeds

wash away. Once seedlings appear, they are subjected to foraging animals and occasional frosts. Less than 1 percent survives to reach one year of age, at which point the seedling may be only ¼ inch tall.

Seeds that sprout near a mesquite or palo verde tree have the greatest chance for survival, as the “nurse plant” protects the young saguaros from the blazing sun, extreme temperatures, and some animals as well. After 5 years, a saguaro may reach 1 inch tall; after 15 years it may reach 1 foot. After 150 years (the average life span), a saguaro may stand around 40-feet tall.

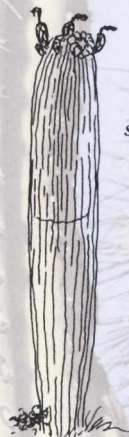
When a saguaro dies, it continues to provide food and shelter to desert animals. Many arthropods feed on its decaying flesh, and saguaro rib skeletons provide shelter for snakes and other crevice-seeking critters.



Saguaro cacti may live 200 years or more. Death may come from freezing, lightning, disease, wind, old age, or vandalism.



The first arm on a saguaro usually appears between 60 and 70 years of age.



Blossoms appear when the saguaro is about 35-40 years old.



Saguaro blossoms appear in May. Each blossom lasts only 24 hours.



After pollination, small fruits develop and ripen by July.



After ripening, the saguaro seeds fall to the ground or are deposited by birds.

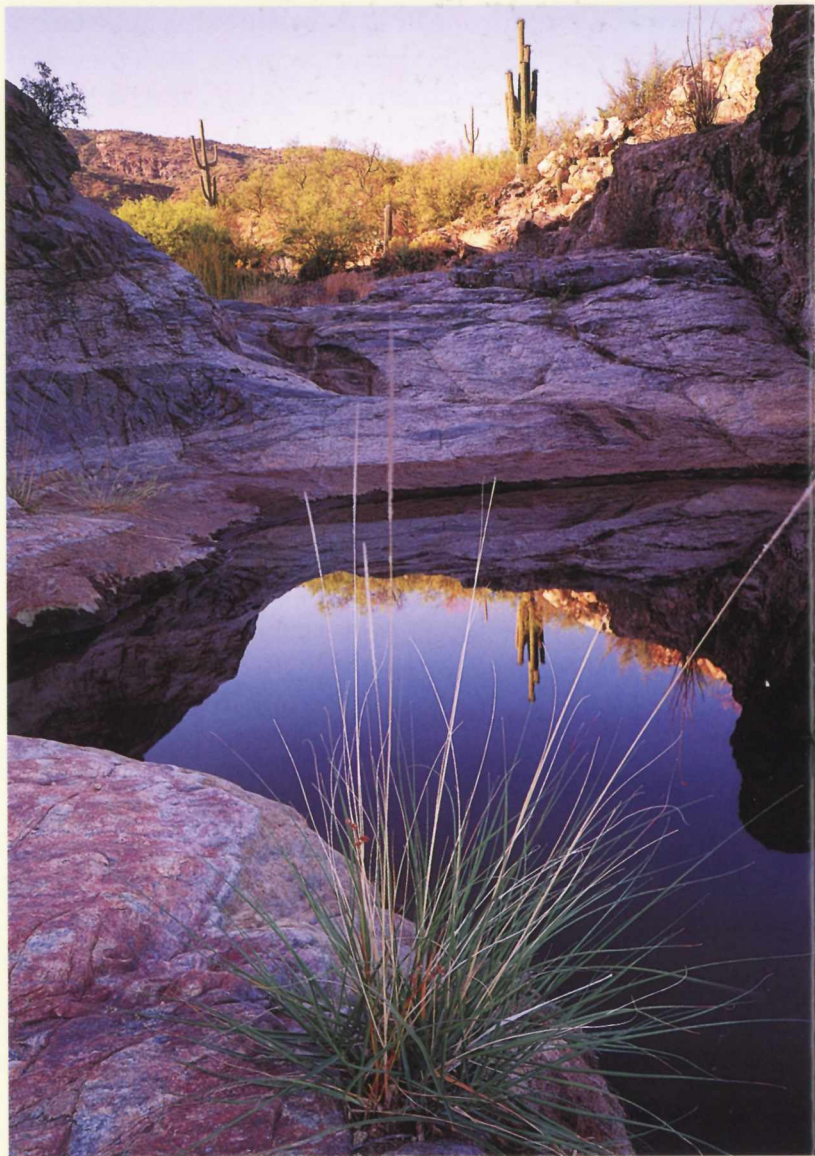


The seedling's highly variable growth depends on the amount of precipitation.



Young saguaros grow under protective “nurse trees.”

RIPARIAN OVERLOOK



Deep canyons slice through the Rincon Mountains and provide refuge for many desert dwellers. The canyon bottoms are cooler than the surrounding desert and harbor riparian vegetation, such as sycamore and cottonwood trees.

Water fills these canyons during spring runoff, creating waterfalls that cascade over towering boulders. During the heat of summer, the water recedes until all that remains are murky pools in the upper reaches of the canyons. The late-summer monsoon rains fill the canyons once again, scouring the rocky walls smooth.

Many creatures rely on these ephemeral water supplies. Mule deer and javelina drink from these pools; mountain lions and jackrabbits, too. One local inhabitant, Couch's spadefoot toad, has the fastest life cycle of any amphibian in the West, an adaptation to ensure survival in the desert.

These toads use the "spades" on their hind feet to burrow underground, where they spend most of each year. When summer rains pound on the earth above, the toads emerge. They soak in puddles and gobble insects. They mate in a song-filled frenzy, and females lay eggs in the water. The eggs turn into tadpoles within a day and into toadlets over the next 10 days. This speedy start optimizes their chances for survival in an environment where the next rain is uncertain.



Couch's spadefoot toad



Tadpoles

RINCON MOUNTAINS OVERLOOK



Lift your eyes up the rocky ramparts of Tanque Verde Ridge. Those spots of green you see are outliers of other worlds far above the thorn-scrub saguaro desert.

On the rolling foothills of the Rincon Mountains desert grassland takes over as saguaros fade away. Beargrass and sotol, perennial grasses and agaves decorate the hillsides.

A bit higher, hardy woodland plants mingle with the grasses. The smooth reddish bark of manzanita contrasts with the rough texture of alligator juniper bark. A variety of oaks stay evergreen by sprouting new leaves while shedding the old.

Nearing the peaks, you enter a tall and dense forest of ponderosa pine and Douglas-fir, intermixed with bunches of muhly grass and groves of quaking aspen. These forests shelter black bears and tree squirrels, mountain lions and white-tailed deer.

The Rincon Mountains are part of a system of sky islands, mixed-conifer and pine forest ecosystems isolated by miles of lowland desert. You can see biotic communities found from Mexico to Canada here—all in the Rincon Mountain District of Saguaro National Park.

JAVELINA ROCKS OVERLOOK

What, exactly, is a javelina?

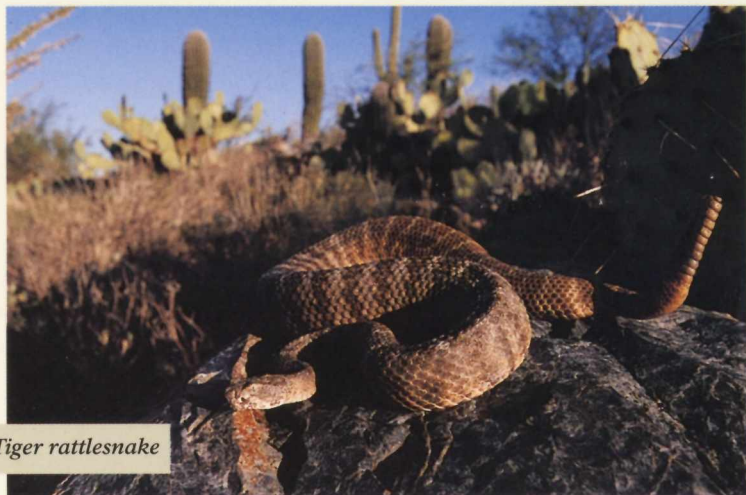
Although they look a lot like pigs, javelinas are actually collared peccaries, one of three species of a tropical American family. Relatively new to Arizona, javelinas expanded their range north from the tropical forests of Central America during the last 200 years. Milder weather combined with these animals' innate adaptability, and likely a reduction in the number of predators, have allowed javelinas to range north nearly to the Grand Canyon. Spanish explorers gave them their name due to their javelin-like tusks.



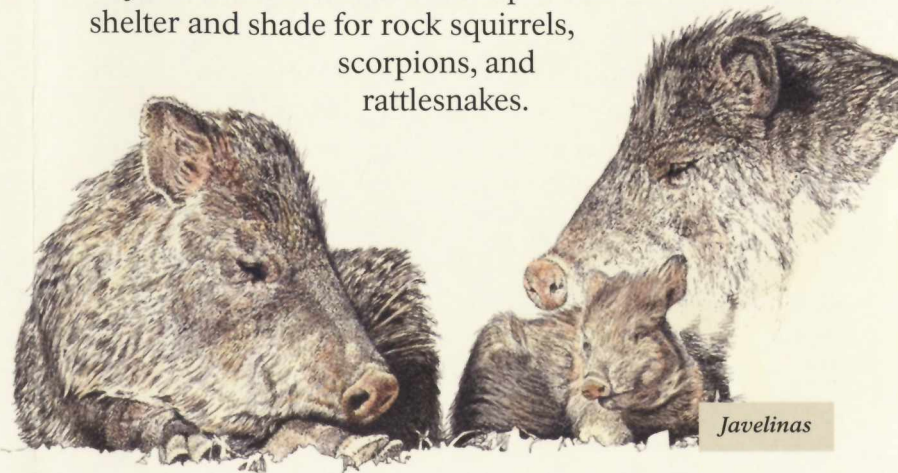
Saguaro National Park's Rincon Mountains provide habitat for other tropical animals as well. Currently there's a healthy population of the white-nosed coati, a slender relative of the raccoon. Ringtails also patrol the canyons at night, hunting for insects and rodents. And,

in the past, the Rincons have been the northern frontier for the jaguar, a large spotted cat with a taste for javelina.

A number of other desert critters crawl in the crevices of Javelina Rocks. These rocks provide shelter and shade for rock squirrels, scorpions, and rattlesnakes.



Tiger rattlesnake



Javelinas

DESERT LIVING OVERLOOK

Think of the Cactus Forest Drive as an “open house”: a tour through a natural home in the desert and a chance to meet those who live here. Just beyond, you’ll return to the sprawling city of Tucson. Some visitors wonder, “Can these two places—desert and city—co-exist?”

We know that people have an enormous impact on natural resources; but we also know that we can save both *spaces* and *species*. Saguaro National Park is a start. What more we do for the Sonoran Desert is up to all of us. The cacti may not say “thank you,” but future generations will.



Crested saguaro



1931



1961



1992

The cactus forest has changed a great deal over the years. In the early 1900s this was the most spectacular stand of saguaros in Arizona. During the following decades a number of factors, including weather, disease, cattle grazing, and development decimated the forest. By 1980, few young saguaros could be found. Now protected by the National Park Service, the cactus forest continues to rebound as new generations of saguaros begin their life cycles.

FURTHER EXPLORATIONS

MICA VIEW LOOP

From the Mica View Picnic Area, head north on Mica View Trail. All along this 2-mile loop you can see young saguaros sprouting beneath “nurse trees” such as mesquite and palo verde. After 0.7 miles turn right on the Shantz Trail (named after the park’s founder) and then turn right again on the Cactus Forest Trail. Look up for good views of Mica Mountain and Tanque Verde Peak. After 0.6 miles, another right turn onto the Mica View Trail will take you back to the parking lot.

DESERT ECOLOGY NATURE TRAIL

This 1/4-mile paved loop trail is an easy stroll into the desert and is wheelchair accessible. The trail follows Javelina Wash. Many signs along the way introduce you to plants and animals of the Sonoran Desert.

CACTUS FOREST TRAIL

This 2 1/2 mile (one-way) multi-use trail bisects the Cactus Forest Drive. Park at either of the Cactus Forest Trail signs, and head out on foot into the Cactus Forest. Watch for roadrunners, black-tailed jackrabbits, and lizards. Watch out for horses, cyclists, and runners. After about 1 mile, depending on where you start, a sign will direct you to the historic lime kilns.

FREEMAN HOMESTEAD NATURE TRAIL

The Freeman Homestead Nature Trail is a 1-mile loop that travels past the remains of the Freeman Homestead. After the arrival of the railroad to Tucson in 1880 and the end of the Apache Wars in 1886, settlers began to establish ranches in the foothills of the Rincon Mountains. In 1929 Safford Freeman built a

three-room adobe structure here, though now only the foundation and sandy remnants of adobe bricks remain. Signs along the trail provide information about living in the desert and suggest activities for children. A shaded bench offers a place to rest and reflect on this part of the park’s past.

