



U.S. Fish & Wildlife Service

# Palm Canyon Trail

## *Kofa National Wildlife Refuge*

### Welcome to Kofa's Palm Canyon Trail



*Palm Canyon*  
All photographs USFWS.

Tucked away in the narrow, rugged canyons of the Kofa Mountains is the California fan palm, the only native species of palm tree in Arizona. The small, scattered clusters of palms in Palm Canyon are a major visitor attraction on Kofa National Wildlife Refuge. Hundreds of visitors each year hike the Palm Canyon Trail, a National Recreation Trail, to see the palms which seem unnatural in the desert landscape.

The California fan palms (*Washingtonia filifera*) found in Palm Canyon are probably descendants of palms growing in this region during the last periods of North American glaciation. Some botanists theorize that the trees, which are not date-bearing, gradually spread into these canyons and other protected niches as the climate warmed to desert conditions. Other researchers have suggested that the trees may have spread from other palm groves by birds or coyotes carrying seeds in their digestive tracts. Since palm trees do not grow annual rings like other trees, it is very difficult to say how old the trees might be. California fan palms typically live for 80 to 90 years.

The survival of these trees is directly dependent on the microclimate in this protected canyon. The palm trees are only able to live in the narrow side canyons where direct sunshine is limited and moisture is available.

### How to find Palm Canyon

Finding Palm Canyon is relatively easy. Take Highway 95, running north and south between Yuma and Quartzsite, Arizona, to milepost 85. Approximately 63 miles north of Yuma or 18 miles south of Quartzsite, watch for the brown Palm Canyon sign which indicates the junction with a dirt road. Follow the dirt road east for seven miles to a parking area. The road is passable in a passenger car, but the ride may be rough.



*Ironwood*



*Palo Verde*

The narrow canyon above the parking lot is Palm Canyon. A half-mile foot trail starts at the upper end of the parking area and leads into the canyon. The trail is easy to follow, but is rough most of the way due to large rocks and some steeper sections. Allow an hour to make the round-trip.

### Desert Vegetation

As you follow the trail across washes and up hills, you will pass several species of plants common to the Sonoran Desert. The palo verde (*Cercidium spp.*), a small tree with bright green branches and stems, rarely has leaves as it sheds them in times of drought. Its branches and twigs have enough chlorophyll to produce all the energy the tree requires. Ironwood (*Olneya tesota*), a grey-green tree with small leaves, is also present in the canyon. Its leafy stems are covered with thorns, as are the branches and stems of many other desert plants.

Near the end of the trail, you will notice numerous small bushes with holly-like leaves. This plant is Kofa Mountain barberry (*Berberis harrisoniana*). It is found only in the southwest corner of Arizona in the Kofa, Ajo and Sand Tank Mountains. It is not very common, even on the refuge.

The Palm Canyon trail ends at a small sign on a slightly elevated area near the middle of the canyon. By looking up at the narrow north-trending side canyon, you can see the palms. For a short time at mid-day, the trees are well-lit for taking photographs. The rest of the time, the trees are in shade.

In 2001, forty-one trees were counted in the main grove. About half of those were adult size with a trunk height of 20 feet or more. Some smaller trees are becoming established at the base of the larger trees. There are a few additional palms scattered throughout Palm Canyon and in Fishtail Canyon, the next canyon to the southeast.

As the fronds (large leaves) on the California fan palm die, they fold down

around the trunk of the tree and form a “petticoat.” The petticoat on younger trees extends from the ground to the top of the tree. The fronds on the older trees in Palm Canyon do not form a lengthy petticoat because they tend to self-prune. The fallen fronds decay and form an organic layer in which new trees germinate.

### Fire

You will notice from the viewing point that some of the tree trunks are black. A fire burned through the grove in 1953, seriously damaging the trees. Fortunately, most of the palms survived and young trees have become established.

It is a very steep and difficult climb up to the palm trees. If you decide to try it, plan on an extra 30-40 minutes to get up to the trees and back to the bottom of the canyon.

### Nolinas

As you look around the canyon, you will see palm-like plants which can sometimes be confused with the California fan palm. These plants are Bigelow’s nolina or Bigelow’s beargrass (*Nolina bigelovii*) and are growing out of cracks and on ledges, especially on the north wall of the canyon. The nolinas are much smaller than palms and do not develop a trunk.

### Wildlife

You may see a variety of wildlife as you walk along the trail. Keep watching the skyline on both sides of the canyon for desert bighorn sheep. These agile mammals may be seen in Palm Canyon in the early morning as they move along ridge tops or stare down at you. Listen; coyotes occasionally yelp. It is difficult to forget the sound of their call.

Birds are numerous most of the year in Palm Canyon. Watch for gnatcatchers, canyon towhees, and thrashers flitting about in the underbrush. In the winter and spring, look for the jet black phainopepla “hawking” insects. White-throated swifts can be heard calling back and forth as they dart overhead doing acrobatics in the narrow canyon. If you are lucky, you may hear the musical call of the canyon wren echoing off the canyon walls. High above, turkey vultures or golden eagles occasionally soar into view.

### Forming of the Canyon

Palm Canyon is cut through a formation of rhyolite, a volcanic rock. Water followed cracks in the rhyolite to form the canyon through erosion. The side canyons, where the palms are located, are being formed through the same process.



*Bighorn sheep*

If you have time, walk further up the canyon and look closely at the rocks you pass. Some large boulders appear to be made of many smaller rocks cemented together. These rocks are breccia, another volcanic rock that has fallen from the breccia formations high above Palm Canyon.

The downhill pace as you return to your car will be faster. Notice the relative coolness as you walk in the shade of the higher reaches of the narrow canyon. Stop and look out across the sunshine filled valley. It will be much warmer when you reach your car, even in the winter.

### La Posa Plains and Dome Rock Mountains

Before getting in your car for the drive back, look out across the La Posa Plains to the Dome Rock Mountains 30 miles away. Many of our visitors are thrilled by the wide open spaces of the southwest. We hope your walk into Palm Canyon was an enjoyable experience.



*Coyote*

### Things you should know

There is no drinking water or sanitary facilities on Kofa National Wildlife Refuge. Bring water with you and plan to take some on your walk. If you have pets, keep them on the trail and on a leash. Be mindful that rocks and spiny desert plants can be tough on your pet’s paws and skin.

Rattlesnakes live in this canyon and on the rest of the refuge. Be alert and watchful, especially if you decide to climb up to the palm trees.

If you stop your car to look at plants and wildlife or take pictures, keep your vehicle within 100 feet of the roadway to avoid damaging the fragile desert environment. Try not to stop near curves where other motorists may have difficulty seeing you and please be alert to oncoming traffic as you return to the highway.

Camping is permitted on the refuge and overnight parking is permissible in the Palm Canyon parking area. Please consult the regulations leaflet for details.

Please contact the headquarters for additional information or to report accidents, unusual incidents or unique and interesting observations.

U.S. Fish and Wildlife Service  
Kofa National Wildlife Refuge  
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Monday – Friday 8:00 a.m. - 4:30 p.m.

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