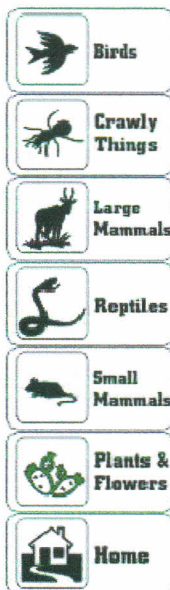




WILDLIFE

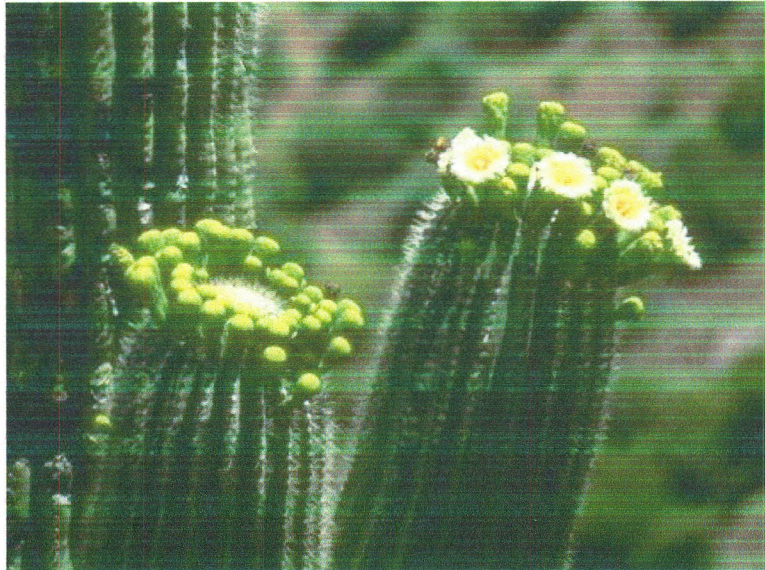


Saguaro cactus, (*Cereus giganteus*) 30-50 feet mature height

The northeastern portion of the Sonora desert, the Arizona upland desert, is home to the giant saguaro (sometimes spelled sahuaro and pronounced sah-wah-roh). This cactus has become the symbol of Arizona, and it is the most massive cactus in the United States, though it may be exceeded in size by some of the giant cacti of Baja California, southern Mexico and Brazil.



Creamy white flowers with golden pollen centers are carried at the ends of the branches. These blossoms are the state flower of Arizona. The [white-winged dove](#) is an important pollinator of these flowers.



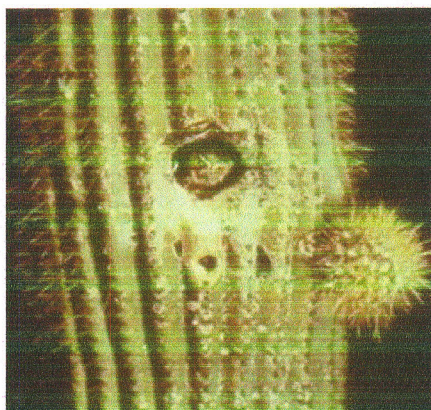
Saguaros grow slowly and need the protection of a "nurse plant" such as a bush or small tree when they are young. It takes about fifteen years for a young saguaro to reach one foot in height, and forty years to reach ten feet in height. It is about then that they begin to bloom.

They continue to grow for 100 years and may live for 200 years. They are generally about thirty feet high when full grown. The saguaro has a perfect mechanism for storing water in its accordion-fold structure. During dry periods the folds pucker up into ridges and when there is plenty of water available the cactus absorbs it until it becomes plumb and round and the ribs almost disappear. A wide-spreading network of shallow roots harvests the desert rains; a mature plant may soak up as much as 200 gallons of water during a storm. Since the saguaro is composed mainly of water, it is very sensitive to freezing temperatures and does not survive unprotected except in areas that never have periods of 24 hours or more with temperatures below freezing.





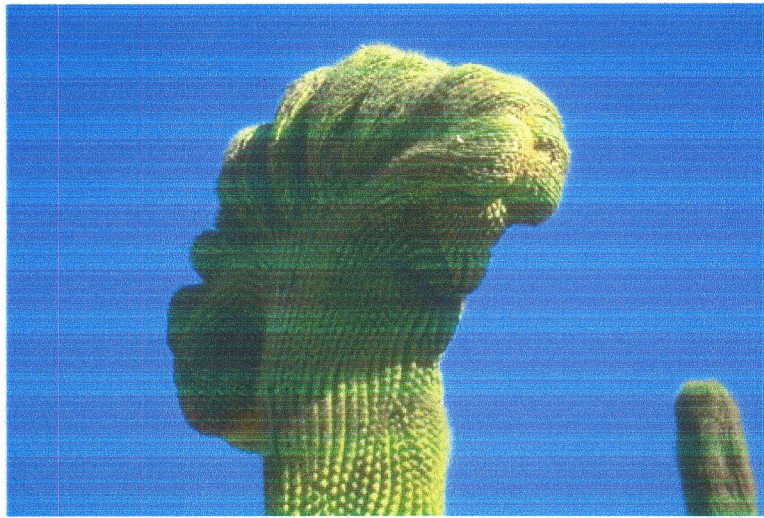
Woodpeckers sometimes drill holes in saguaros for nests; these may later be used by owls and other birds as well. Birds that may live in saguaros include Gila woodpeckers, elf owls, cactus ferruginous pygmy owls, flickers, and cactus wrens. The fruit and seeds of this cactus provide food for wildlife, and both living and dead plants are frequently used as nesting sites and shelters.



If you are in the Tucson area, you can see these amazing plants at either Saguaro National Park East or Saguaro National Park West. Visitors can enjoy scenic hikes and drives. The western park is near the Arizona Sonora Desert Museum, another popular spot for enjoying desert wildlife. The photo to the right shows a tiny owl inhabiting a saguaro at

Organ Pipe National Park, west of Tucson. Photo courtesy National Park Service.

The photo below shows a rare crested form that occurs in these plants from time to time. It is unknown what causes it.



Visitors to the southwest desert have always been awestruck by this plant. One of the earliest Americans to describe it was [John Russell Bartlett](#) of the Boundary Commission; in his *Personal Narrative* he described the saguaro as follows:

June 20, 1852

Today, for the first time since leaving Fort Yuma, we again encountered our friend the *petahaya*, or Giant *Cereus*, which we had met with the preceding September in Sonora; and much to our delight, we found it in bloom. The fruit, too, appeared in various stages of perfection. As no full and correct description has yet been given to the world of this extraordinary production of the vegetable kingdom, and as I had the advantage of seeing it at different periods of the year, in flower as well as in fruit, I shall endeavor to give a popular account of it. The buds, flowers, fruit, seed, &c. were collected by Mr. George Thurber, botanist to the Commission; and by him a scientific description of it will be prepared, with the aid of a distinguished botanist who has paid particular attention to the *cactacea* of North America.

This curious plant is found on the high tablelands on either side of the Gila, and in various parts of the State of Sonora, growing often in the crevices of rocks, and in other situations that would seem difficult for any vegetable production to find sustenance. The forms it assumes are various; sometimes rising like a simple fluted column, although more frequently it is furnished with several branches, which, after leaving the main trunk, turn gracefully upwards and rise parallel with it. Sometimes the branches are singularly contorted; but usually, their disposition is symmetrical, and the



appearance of the whole plant has been, not inaptly, compared to that of a giant candelabrum. The stem is from one foot to two feet six inches in diameter, usually smaller near the base, and from twenty to fifty feet in height. This immense column is admirably strengthened by a circle of ribs of strong and elastic wood, which are imbedded in the cellular mass of the plant, several inches within the circumference, and extend to the roots. This woody portion remains after the fleshy substance of the plant decays, looking like a huge skeleton. The stem is marked with longitudinal furrows, which are shallow towards the ground, and deeper and more numerous towards the summit; and above the ribs it is thickly set with clusters of spines or thorns. Of these there are six large and numerous small ones, in each cluster. As the plant increases in age, the larger spines fall off, leaving a ray of smaller ones, which lie close to the stem.

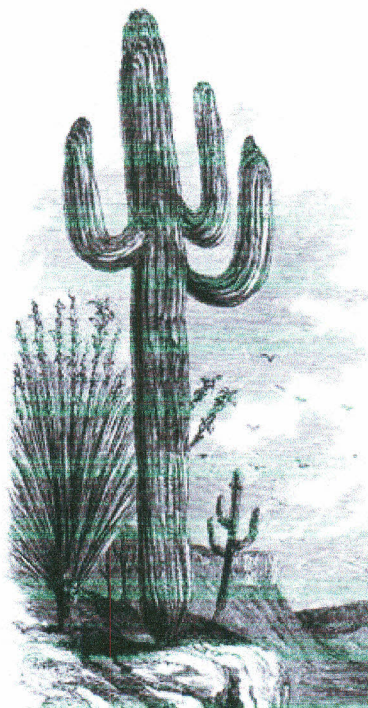
Many travellers who have noticed this cereus, have not been fortunate enough to see the fruit and flower, but have derived their accounts of them from the Indians. On our passage across the country in September, October, November, and December, we saw the tree; and on our return in June and July, we had the satisfaction of beholding the fruit in perfection, and occasional specimens of the flower. The plant probably blooms in May, or early in June; and the fruit is matured in July and August. The flowers are borne on the summits of the branches, are three inches in diameter, and about the same in length. The petals are stiff and curling, and of a cream-white color. The stamens are yellow and very numerous. The fruit is about the size and shape of an egg; sometimes rather longer than the true egg shape, having a few small scales, without spines. The color of the fruit is green tinged with red, when fully ripe. It consists of an outer coat or skin filled with a red pulp, inclosing numerous small, black, smooth seeds. The fruit, when mature, bursts at the top and exposes the pulp, which at this time is rather mawkish to the taste; but a few days' exposure to the sun dries it to about one third its original bulk, and the whole mass drops out of the skin. In this state it has the consistency of the pulp of a dried fig; and the saccharine matter being concentrated by drying, it somewhat resembles that fruit in taste. The Pimo and other Indians, collect the pulp and roll it into balls; in which state it probably keeps the whole year, as it was offered to our party which passed through in January. They also boil the pulp in water, and evaporate it to the consistence of molasses; after which, it is preserved in earthen jars.



Another early traveler to describe this giant cactus was [J. Ross Browne](#), a writer and illustrator who traveled through Arizona with Charles Poston in 1864. He describes it as follows:

"The next day we traveled over a series of gravelly deserts, in

which we saw for the first time that peculiar and picturesque cactus so characteristic of the country, called by the Indians the *petayah*, but more generally known as the suaro, and recognized by botanists as the *Cereus grandeus*. A difference of



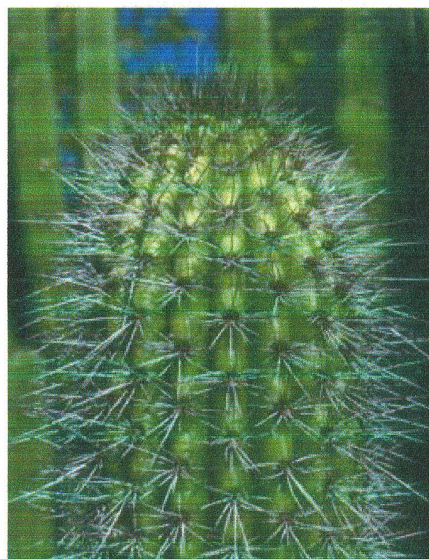
opinion exists as to whether the *petayah* is not a distinct species from the suaro; but I never could find any two persons who could agree, after exhausting all their erudition on the subject, upon any point except this -- that neither of them knew anything about it. I am inclined to believe the *petayah* is the fruit of the suaro, of which the Indians make a kind of molasses by expressing the juice. They also eat it with great avidity during the season of its maturity; and it is a common thing, in traveling along the road, to see these gigantic sentinels of the desert pierced with arrows. The Indians amuse themselves shooting at the fruit, and when one misses his aim and leaves his arrow sticking in the top of the cactus, it is a source of much laughter to his comrades. The

ribs or inward fiber of this singular plant become quite hard and tough. It presents a green, ribbed, and thorny exterior, with branches growing out of it toward the top, resembling in general effect a candelabra. Some of them grow as high as 40 or 50 feet; the average is probably from 20 to 30."

From J. Ross Browne, [*Adventures in the Apache Country*](#), Chapter VI, Gila City

Recommended reading:

Bowers, Nora and Rick. [Cactus of Arizona Field Guide \(Arizona Field Guides\)](#). Cambridge, MN: Adventure Publications, Inc., 2008. This book classifies cacti by stem type rather than flower appearance as many plant guides do. This is helpful in identifying plants when not in flower. Stems are broken down into Cylindrical, Segmented, Stick-like, and Columnar, with varieties being grouped within each type: e.g. pincushion, barrel, hedgehog, cholla etc.



This is a handy method of working and many varieties of each type are further described with close-up photos. An excellent guide to the Cacti of Arizona.

Epple, Anne Orth. [Plants of Arizona](#). Helena, MT: Falcon Publishing, Inc., 1995. More than 800 excellent photos and complete descriptions of plants.

Jaeger, Edmund C. *The North American Deserts*. Stanford: Stanford University Press, 1957. An excellent book unfortunately out of print. Look for it at your library or your favorite used book source.

Larson, Peggy Pickering. [The Deserts of the Southwest: A Sierra Club Naturalist's Guide \(Sierra Club Naturalist's Guides\)](#) 2nd edition. San Francisco: Sierra Club Books, 2000.

For more of Bartlett's travels see our Free e-book:
Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora and Chihuahua, 1850-1853, Volume 1, by John Russell Bartlett.
[Illustrated version](#), 2.1 MB
[Text only version](#), 378 KB