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No. 1

Kaktos Komments

*a bimonthly publication of the Houston Cactus and Succulent Society
to promote the study of cacti and other succulents*



Pilocereus palmerii
by Karla Halpaap-Wood

MEMBERSHIP**JULY OLSON**

The November 20th meeting was attended by thirteen members, and three guests. Our guests were Adam Black, Isabel Retiz, and Harry Krueger. Our president, Josie Watts, donated a gorgeous pencil cactus for the door prize, which was won by Frank Lee.

On December 8th, in lieu of a meeting, the club had their annual dinner at Riva's Italian restaurant surrounded by its enchanting Christmas decor! Gifts were exchanged, food was enjoyed, and we announced this coming years officers. It was an amazing time to get to know each other better, and continue to share our love of these wonderful plants we all enjoy!

Please send news of HCSS members or their families to kathyfewox@gmail.com or Saint.juniper@gmail.com



Photo by July Olson

Calendar:

January 8, 2020	7:30 pm Board Meeting at Metropolitan Multi-Service Center.
January 22, 2020	7:30 pm Membership Meeting at Metropolitan Multi-Service Center. Program: Cacti in Habitat, Part 3 by David VanLangen, HCSS
February 26, 2020	7:30 pm Membership Meeting at Metropolitan Multi-Service Center. Program:
March 1, 2020	Deadline for submitting articles for the KK.

HCSS 2020 President's Greeting

Dear HCSS Members,

It is yet again time to start a new year. I feel so great about the Kaktus Klub this year. I would like to welcome all the new faces. We all learn from each other. Never feel too much of a novice to ask questions, share plants and expertise, and participate in our activities. Part of the great stuff that is happening is due to the hard work on the part of members in 2019. We had record sales at our sales and an influx of new members. Thanks to Wally for his incorrigible continued work with the programs, and I'll try not to leave you stranded without AV equipment next year. Karla is the nerve center of the club, managing two very huge jobs, that of KK editor and information coordinator. Rolando, we couldn't have done the sales without you and I am forever grateful. Thanks to Cindy and Kathy for their tireless, noncomplaining efforts long distance. Your loyalty is never taken for granted. And Bruce keeps churning out those treasurer's report. Dave Van Langen, thank you for your work lining up our educational programs. July, we love you and appreciate your smiling face. You are such a great addition to our board. I also look forward to working with the new members of the board. Dave Thomas, all I can say is "What would we do without you?" Lastly, Liliana, you have made such a huge difference this year. Thank you for all the thought and effort you put into publicity. I hope I didn't leave anyone out. It was a good year, with potting parties and field trips. Hopefully we'll have "more of same" next year, including a trip to Big Bend!!! Dates will be pinned down soon.

One sad bit of news is that our long-time member, Richard Holland, has had to stop attending meetings. Richard, please know that you are missed and we would always be happy to have you drop in. Richard was always there to lend a hand with anything, though his official job for many years was that of arranging our cactus and succulent of the month.

Now, to announce the new board of directors for 2020:

President: Josie Watts, along with apprentice, Pinké Neck
First Vice President: Wally Ward
Second Vice President: Cindy Gray
Secretary: Kathleen Canty
Treasurer: Bruce Moffett
Membership: July Olson and Kathy Fewox
KK editor and Information Coordinator: Karla Halpaap-Wood
Plant Exchange: Mary Turk and Teresa Garcia
Ways and Means: Rolando Ontiveros
Education: David Van Langen
Publicity and CSSA affiliate: Liliana Cracraft and July Olson.

Also, we always welcome suggestions, volunteers for programs, help with the various jobs to be done, and participation in the club activities and fun.

Happy New Year,
Josie

January Cactus of the Month

Andrea Varesic

**Pachycereus pringlei**

Synonyms (listed 2 of 5)

Cereus pringlei S. Watson*Pilocereus pringlei* (S. Watson) F. A. C. Weber in Dois

Common names

Mexican giant cardon

Elephant cactus (when old the trunk is gray and wrinkled, so it looks like an elephant leg)

False saguaro

Habitat/Distribution

Sonoran Desert, Baja California, Baja California Sur, México all below 700m of elevation

Description

It can reach 20m in height and 5m in width. The trunk can be 2m in diameter and it can weigh several tons.

It is tree like, columnar and it branches near the base or 2-3m above the ground. It is slender for many years and then it starts to thicken when it begins to branch. It can have up to 30 branches reaching a diameter of 10-12m. Branches are strongly fluted, blue-green to dark green. It has 10-16 ribs that are deep at first but get shallower with age.

Roots run shallow but can extend laterally for 20m or more.

Flowers are white, funnel shaped and can grow to 8cm in length. It blooms in late March to early April.

The fruit is globose. When it matures it is slightly dry and 7cm long. It can produce 500 seeds but most are abortive.

Cultivation/growth

It is propagated by seed or cuttings from mature plants.

It is slow growing. The rate and presentation depends on the habitat. The largest specimens are in protected canyons and can be 200+ years old. In wind exposed areas and on islands they are much smaller and trunkless.

It is best grown outdoors and can stand temperatures over 30C. The soil needs to drain well. It's need for water is higher in the summer but needs to stay dry in the dormant winter months. It will scar below 0C.

Uses

There are many traditional uses. Fruit were harvested by the Seri. It tastes like

molasses and it can be made into a drink or eaten raw. The stems are used medicinally. It is alkaloid, so it was used as an psychoactive plant. The trunks were used to construct huts. The pulpy stems can be eaten by people or livestock in times of need.

Availability online but I purchased mine from Home Depot

Remarks

The cactus has a symbiotic relationship with bacteria and fungi roots. They provide nutrients and they are packaged in the seeds of the plant.

It is called a false saguaro but it can be easily distinguished. It is more stout and closer to the ground. This is because the true saguaro, *Carnegiea gigantea*, has 19-25 ribs (instead of 10-16) allowing its height and reach.

References

- 1) Edward Anderson "The Cactus Family" Timber Press, Incorporated 2001
- 2) James Cullen, Sabina G. Knees, H. Suzanne Cubey "The European Garden Flora Flowering Plants: A Manual for the Identification of Plants Cultivated in Europe, Both Out-of-Doors and Under Glass" Cambridge University Press, 11/Aug/2011
- 3) David R Hunt; Nigel P Taylor; Graham Charles; International Cactaceae Systematics Group. "The New Cactus Lexicon" dh books, 2006
- 4) Felger, Richard; Mary B. Moser. "People of the desert and sea: ethnobotany of the Seri Indians." Tucson: University of Arizona Press. 1985

LLifle, The Encyclopedia of Cacti was the best synopsis available to me online.



January Succulent of the Month**July Olson*****Euphorbia decaryi***

This small perennial succulent shrub is endemic to Madagascar's Thorn Forest where it's, unfortunately, threatened by habitat loss, and is critically endangered in the wild. However, it's one of the most common varieties of Madagascar *Euphorbia* in cultivation.

Its popularity is owed to its easy growing nature. At about six inches tall it's wavy zigzag leaves grow from stems that spiral with spiked ridges as the growth spreads out in a mat. They are easy to grow in both pots or in the ground, and even in winter will accept a bit of water, though they need protection from frost. They can even be grown indoors if they receive good afternoon or morning light. Their leaves will turn from a rich green to a rusty purple if they are planted in direct sunlight, but they tolerate it well with adequate water.

There are two ways which are popular for growing this plant for different visual effect. Both use a very well draining loose soil. For a sprawling mat of thickly packed stems choose a wide flat pot for planting. However, for a "bonsai" like effect this plant can be kept in a smaller container, and thrive as a compact form for many years without needing repotting.

These fascinatingly strange plants are showy, but their flowers are definitely not. The tiny, cup like, flowers would be easy to miss. You can self pollinate them, with patience, and good eyesight, but this plant is much easier grown from cuttings. The method requires about two inches of the stem to be cut off, left to dry on the ends, and then placed in soil to root.

Generally this plant is tolerant of most skill levels, and does well in the Texas summer sun. It's paired down leaves, and swerving stems can look intimidating, but on close inspection, reveal a very carefree plant putting down roots, and racing to the edge of its boundaries.



February Cactus of the Month

Robert Smith

HOLIDAY CACTUS

There are only three genus of cactus which are grown for the holiday sales.

The most popular one is the Thanksgiving because it's easy to make bloom at right time of year. Next is the Easter cactus because it bloom in spring time around Easter. The less popular one is Christmas cactus because it misses the holidays.

Thanksgiving and Christmas cactus have the same kind blooms only different is the color of the Pollen and Stem shape. Where as the Easter Stems shape is total different as well as the bloom.

All three are epiphytes grown on the moss covered trees on rocks. Sometimes they are found in small pockets of compose between rocks. Their home is in coastal mountains of south-eastern Brazil.

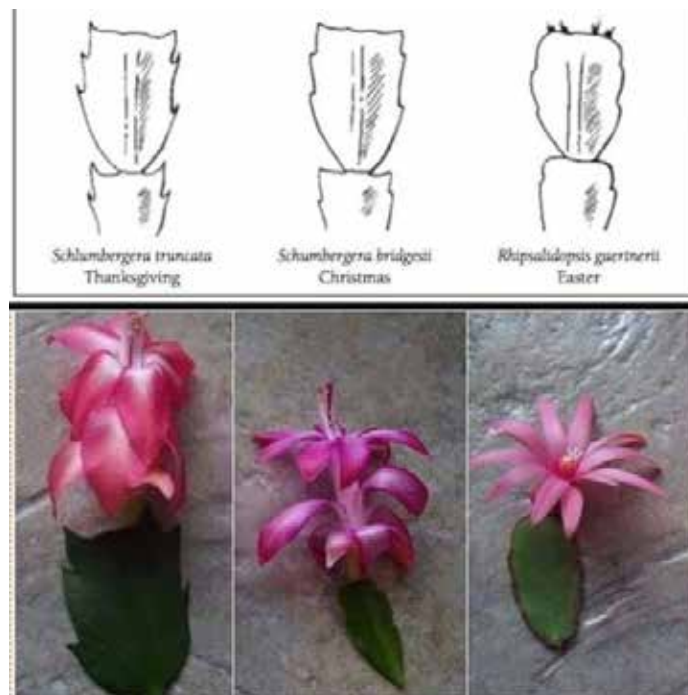
Each one has its own stem pattern. The Thanksgiving cactus belong to the Schlumbergera truncate family. While the Christmas belongs to the Schlumbergera Buckley family. They were just red and bright pink but now hybrid in colors red, pink, yellow, oranges and white. Their blooms last 3 to 4 days.

The Easter cactus is the Hatiora gaertneri its blooms close each night at dusk than reopen in the morning and last around 15 days. The shape is like a daisy with 16 to 14 petals which forms a cup like bloom. It come in pink, rose and white.

Their stem pattern are all different. The Thanksgiving stems have sharply serrated or toothed edged to its stems. Where as Christmas stems are just notched no rough edges. and the Easter has flattened to triangular stems with brownish bristles at the joint of the stem.

The best place grow all 3 of them is in a bright light place but no sun on them. Feed these after blooming with good indoor plant food. stop around the end of July. Keep the moist but not wet. A good potting soil with peat and grit added.

To propagate twist off or break at the joint of the stem about 3 joints, (do not cut) dip in rooting power, pot in moist but not wet potting soil. I found letting them dry for 3 or 4 days before potting.



February Succulent of the Month**David Van Langen*****Agave geminiflora***

Agave geminiflora is a solitary form of an *Agave* that forms neat rosettes of small thin leaves. Each dark green leaf is small and round and can grow up to around a foot and a half long creating a nice looking dense rosette from 2-3 foot across and 2 foot tall. Unlike the heavily armed *Agaves*, this plant has leaves that are fairly flexible with a sharp pointed tip but lacks the skin ripping teeth along the edges. This is also one of the *Agaves* that have long, white curled threads that appear on the leaves. The compact size and lack of arament makes the *Agave geminiflora* a very good landscape plant that can be located closer to human contact than most *Agaves*. At the age of appx 10-15 years old, a flower stalk of around 15 ft tall is formed. As with most *Agaves*, this plant dies after flowering. Usually a single headed plant, it is said that a pup or 2 might form from the dying base.

Agave geminiflora is an endemic plant of the state of Nayarit in Mexico which is located about halfway down the Pacific coast of Mexico. The habitat of this plant is oak woodland at elevations of 3,000-4,000 feet above sea level and is usually found along rocky arroyos and grasses. The area recieves up to 35-40 inches of rain a year which makes it suitable for Houston's moist climate. It is also fairly frost hardy but needs some protection during long freezing spells that we get every now and then. Both in-ground or potted, this plant is easy to take care of. Good drainage is helpful and this *Agave* also can do well with a little shade in summer as it is found in moderate elevations and does not require the extremes of a true desert plant even though it is considered to be drought resistant.

This spring when hitting the C&S racks of every store in town, look out for this neat plant and get ya one-- or 2 !!! It is a superb plant to make a bold accent in a dryland type garden or display it with pride in container. CHEERS !!



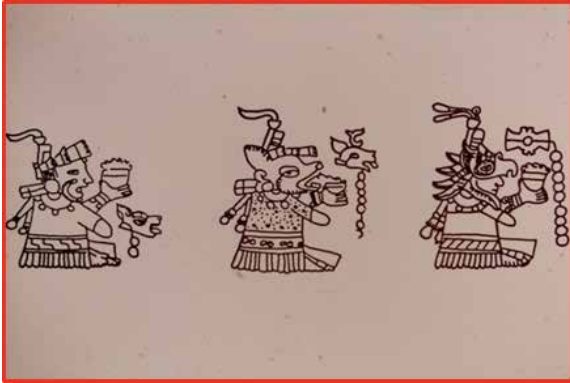
PREHISPANIC USES OF CACTUS & SUCCULENTS AMONG INDIGENOUS GROUPS IN MEXICO

by Liliana Cracraft

Part 2

SOURCE OF DRINKS

The mural of the Pulque Drinkers, found during the excavations of the Great Pyramid in Cholula, Puebla in 1968 dated 200-300 A.D., depicts the ancient beverage called ‘octli.’ This foamy, mildly alcoholic drink was originally obtained from the natural fermentation process occurring in the core of Agave plants by the Otomies. For the Aztecs, it became a very important ritualistic beverage.



Only the priests, the elderly and pregnant women were allowed to drink it. The fresh, sweet juice obtained from the core of some agaves before the fermentation process takes place is known as ‘aguamiel’ or honey water. Later it becomes pulque. A mature *Agave atrovirens*, one of the plants from which aguamiel can be obtained can yield 2-8 liters of sap per day, and remains in production for 4-6 months. Several gods were associated with pulque

with Mayahuel being the most important. Goddess. Sometimes, the fresh crushed pulp of prickly pear fruits were mixed with pulque, to create a drink now known as ‘Pulque curado de tuna.’

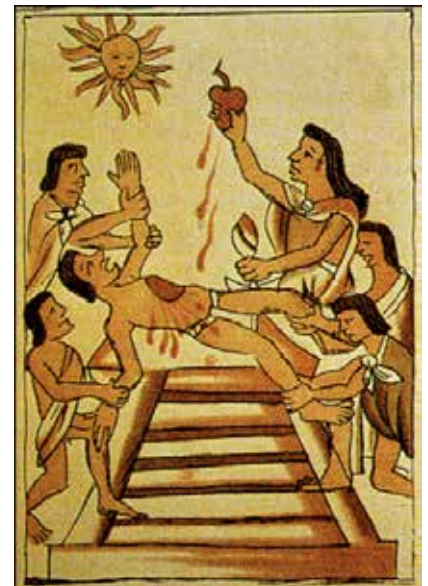
The strained juice of fresh tunas from *Opuntia streptacantha* was used by the Chichimecs to create a type of wine known as ‘Colonche.’ A *Torulopsis spp.* yeast that facilitates this fermentation process has been identified. Juices and alcoholic beverages were also obtained from the fruits of *Ferocactus acanthodes*, *Echinocereus conglomeratus*, and the Saguaro by the Seri and other groups in the Sonoran desert. Pulque continues to be popular in Mexico City and surrounded areas.

Another important ancient drink depicted in old paintings on rock walls is Sotol. This drink is obtained from *Daisylyrion wheeleri* (Desert Spoon), and was first made by the Apaches. Unlike agaves, the plant does not die after flowering, and can remain in production for a long time. Sotol is the official drink of the states of Chihuahua, Sonora, and Coahuila in México.

CEREMONIAL & RELIGIOUS USES

Two cactus plants are depicted as sacred in Aztec hieroglyphs: the prickly pear cactus, known as ‘Teonochtli’ in Nahuatl, and the barrel cactus known as ‘Huitznahuac.’ The red prickly pear fruits were associated with the human heart offered to the gods in sacrifice. The barrel cactus was used as an altar for human sacrifices.

Lophophora williamsii or ‘Peyote’ found mainly in the Chihuahuan desert, was used by the Chichimecs, Toltecs and Aztecs in religious ceremonies



and to drug those who were going to be the victims of sacrifice. It has many alkaloids including mescaline. Other mind-altering cacti used were *Lophophora diffusa*, *Ariocarpus fissuratus* (or false peyote). *Ariocarpus retusus* (or Chaute), and *Pelecyphora awelliformis* (or peyotillo).

The Huichol people from the state of Jalisco still use Peyote for their rituals, as well as *A. fissuratus* to provide endurance to runners. In addition to peyote, the Tarahumaras and Coras, who live in the sierras of Chihuahua, use *Coryphantha compacta*, *Epithelanta micromeris*, *Mammillaria beyderi* and other plants during their religious rituals.



Thorns were also used in rituals. The Aztecs inserted thorns under the skin of those with bad behavior and the Pima Indians tied cholla stems on the naked backs of those carrying heavy crosses in Catholic ceremonies. One more important succulent for the Aztecs was *Bursera glabrifolia*. From this bush, an aromatic resin was and still is obtained to prepare **copal**, a type of incense used in religious ceremonies.

MEDICAL USES



Several historical books have extensively documented the use of cacti and other succulent plants for medical purposes among the Aztecs. Similarly to the medicine practiced in Europe at the time, the plant-based remedies sometimes included mixing them with oils, honey, eggs, stones, and sometimes spells.

The Badianus Manuscript, published in 1552 and considered the earliest medical book in the Américas, describes the use of the prickly pear (*Tenochtli* - Divine Cactus) with *Sedum dendradeum* to decrease swelling, the prickly pear combined with ground stones to decrease tooth aches, and the sap of agaves to treat wounds. The book *History of the Plants of the New Spain*, written by royal court physician and naturalist Francisco Hernandez between 1570-75, describes medicinal properties of 3700 plants, including *Aloe vulgaris*, *Bombax ellipticum*, *Euphorbia prostrata*, *Jathropa*, *Yucca australis*, and *Opuntia*. Like many books of that era, it was not published until 1649. Another important series of books describing the narcotic capabilities of peyote and the use of prickly pear to facilitate childbirth was written by Franciscan missionary Bernardino de Sahagun, who lived among the Aztecs between 1529-70. *Opuntias* are still used in folk medicine to treat sore throats, diarrhea, and more recently, to control glucose and cholesterol.

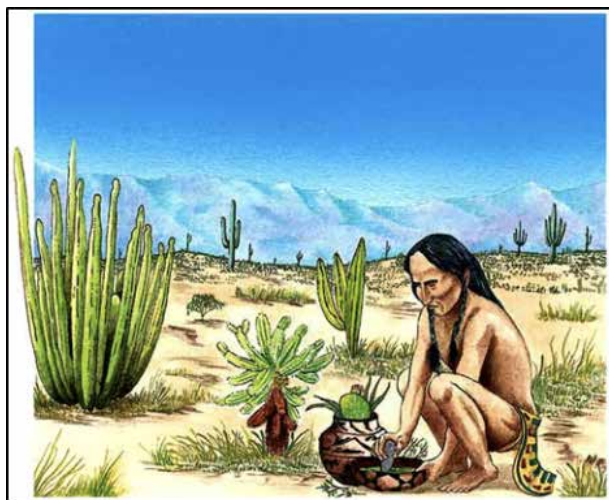
SOURCES OF DYES



Among the many uses of *Opuntia* in prehispanic México, the one that especially attracted the attention of the Spaniards, as well as that of multiple botanists and naturalists around the world, was the cultivation of the cochineal insect and the production of the dye “grana.” The dye was and to this day is still used to color textiles. 70,000 *Dactylopus coccus* female insects are needed to make a pound of the dye, which contains carminic acid, a natural deterrent for predators of the insect, especially ants. These insects thrive in some species of *Opuntia*, especially *O. tormentosa*. The pads infested with this insect were carefully protected by the Aztecs during the winter months.

Flowers of some cacti, such as *Ferocactus wislizenii*, *Opuntia polycantha*, and *O. schuamonii* were also used as direct sources of dyes for pottery and fabric.

OTHER USES



Many of these uses of cacti and succulents provided the ancient groups of México with multiple products, and many continue to be obtained in present times. The leaves of Agaves were used to wrap up meat for underground cooking using hot stones. The triterpenoids in the roots of *Peniocereus gregii* that grows in the Chihuahuan and Sonoran deserts, as well as *Stenocereus spp*, *Cereus repandus*, agaves and yuccas provided the native people of México with a substitute for soap. **Fibers** obtained from agaves, *Cephalocereus senilis*, and yuccas, were used to make sandals, rope, baskets, bags, scrubs, and clothing items. Hairbrushes easy to hold were made by trimming off long spines on one side of columnar cactus, such as *Pachycereus pectin-aboriginum*. The long **thorns** of some cacti were used as toothpicks as it was common practice for the

Aztecs to clean their teeth after each meal. Spines of *Ferocactus* and *Mammillaria* hooked spines were used to pick up fruits and some were used as needles, harpoons, or hooks to catch fish. The **sap** of *Agave lechugilla* and *Stenocereus gummosus* were used to stupefy or kill fish. Then the fish were scooped out of the water. A **glue-like substance** was obtained from *Stenocereus thurberi*, some ariocarpus, opuntias, and *Pachycereus hollianus* to mend broken pottery, or in adobe houses building. Several tall columnar cacti served as living fences. The most common was *Pachycereus marginatus*. *Fouquieria splendens* also served as a living fence. In many arid regions, the skeletons of many cacti were used as **firewood** (*Cylindropuntia*, *Opuntia*, Saguaros), or to make torches (*Cereus repandus*), and the dried agave leaves served as **paper** (called ixtle).

In conclusion, many cacti and succulent plants have benefited humans for thousands of years. Without a doubt, they will continue to provide many beneficial products. Deer, javelinas, rodents and birds use cacti

extensively as a source of nutrition and shelter. We all need to work on their protection and preservation.

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Some Prehispanic Uses of Cacti Among The Indians of Mexico. Gobierno del Estado de México. Secretaría de Desarrollo Agropecuario. March 1982.

Anderson, Edward. The Cactus Family. Timber Press, Portland, Oregon, 2001.

Walcott, Emily. The Badianus Manuscript (Codex Barberini, Latin 241). The Johns Hopkins Press, Baltimore, 1940.

Happy New Year Cactophiles,

Hope everyone had a great holiday season!

With the New Year upon us so is the time to renew your Houston Cactus & Succulent Society Membership. Dues is still \$20 for single and \$25 for family membership. The membership form can be found on the website at www.hcsstex.org; forms will also be available at the January Meeting.

I look forward to everyone renewing their membership for 2020. We have an exciting year ahead including a trip to Big Ben in April for Members Only. If you have not been to Big Bend with HCSS you are in for a treat.

Please complete the Membership Form along with your payment to the January meeting or mail to me at the address listed on the Membership Form.

Hope to see everyone at the January meeting.

Thank you!

Cindy Strickland
Second Vice President
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