

MAMMILLARIA THORNERI

Espinas y Flores

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Saturday September 13, 1986

SEPTEMBER MEETING

Saturday, September 13, 1986

Room 101, Casa del Prado, Balboa Park

1:30 p.m.

A BOTANICAL EXPEDITION TO SOMALIA

by

Dr. Seymour Linden

Dr. Linden, current President of the Cactus and Succulent Society of America, will present an illustrated talk on a four-week botanical expedition to Somalia, on the east coast of Africa, in September, 1985. Expedition members included such notable authorities on succulent plants as Susan Carter, Frank Horwood and John Lavranos, and many interesting discoveries were made, including some new or poorly known species of succulents. This should be a very informative and entertaining program, one you won't want to miss.

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DEADLINE FOR OCTOBER -----SEPTEMBER 27

Mary

CACTUS OF THE MONTH

WILCOXIA

by Phyllis Flechsig

The genus Wilcoxia Britton and Rose refers to a small group of distinctive cacti that have long, very slender upright stems, tuberous roots, and flowers that are pink, purple, or white, followed by fruits that may be more conspicuous than either the flowers or the stems.

Wilcoxias are native to northern and central Mexico and to the southwestern United States, where two species occur: W. poselgeri in southern Texas along the Rio Grande, and W. striata in southernmost Arizona as well as Sonora and Baja California. Wilcoxias often grow up through bushes, where they are very well concealed when not in flower or fruit.

Although Wilcoxia is so distinctive as to be easily identified as such by anyone familiar with cacti, taxonomists have not resisted lumping it in with other genera. Lyman Benson has placed a great many genera into Cereus, as a temporary holding device while waiting for more taxonomic research on the group, and among others he placed both Wilcoxia and Peniocereus in Cereus. These two genera have in common their large, tuberous roots and slender stems, though Peniocereus has much larger white nocturnal flowers as against Wilcoxia's smaller day-blooming flowers. Nigel Taylor, on the other hand, placed Wilcoxia albiflora, W. poselgeri, and W. schmollii in Echinocereus (renaming W. albiflora as E. leucanthus) and relegated the rest of the Wilcoxias to Peniocereus. Those who wish to learn Taylor's reasoning on this matter should read the appropriate section of his book on Echinocereus. Wilcoxia does clearly have strong affinities with Echinocereus, as shown by its purplish flowers and green stigmas.

Only about nine or ten Wilcoxias are known. A popular and easily grown one is W. albiflora, which differs from all the other species in having white flowers; it has very thin stems and blooms readily all summer. W. poselgeri is a little thicker and has pink flowers; W. striata has very stiff, thin, wiry stems and purplish flowers; W. viperina is thicker, fast-growing, and has pinkish-purple flowers followed by large, round, red fruits (it appears to be self-fertile, unlike the other species). These four species all have eight to ten ribs, tiny areoles, and minute but surprisingly annoying spines--rub a Wilcoxia stem in your fingers and you'll think you have been handling an Opuntia pad! Another but very different species is W. schmollii, which has soft white hair all over its weak, floppy stems--it definitely needs something to lean on.

Wilcoxias are fairly easy to grow, and when propagated from cuttings will produce tubers in a few months. They are also easily grown from seed. They need very good drainage and a pot large and deep enough to accommodate the tubers. No cactus is

sacred to mealybugs, who find Wilcoxia stems perfectly acceptable as a place to roost and feed, so watch out for them.

LITERATURE CONSULTED

- Backeberg, C. 1976. Cactus lexicon. Blandford: London.
 Benson, L. 1982. The cacti of the United States and Canada. Stanford University Press: Stanford, California.
 Taylor, N. P. 1985. The genus Echinocereus. Timber Press: Portland, Oregon.

Flower of *Wilcoxia schmollii*



SHOW SCHEDULE FOR THE REST OF THE YEAR

Sept 20 & 21	San Diego Bromeliad Show	Sat:1:00pm-4:30pm Sun:11-4:30pm
Sept 27 & 28	San Diego Bonsai Fall Show	Sat & Sun: 10am - 5:00pm
Oct. 4 & 5	Balboa Park African Violet Fall Show	Sat & Sun.10am - 4.00pm
Oct. 18 & 19	San Diego Orchid Fall "mini" Show	Sat:12-5pm Sun:10am-4:30pm
Oct. 25 & 28	Ikenobo Chapter of San Diego Show (10th Anniversary Show)	Sat & Sun. 11am - 4.30pm
Nov. 1 & 2	San Diego Tropical Fish Aquarium Show	Sat:12:-6pm Sun:9am-4:30pm
Nov. 23	Sumi-e Painting & Ikebana Show	Sun: 11am - 4:00pm
Dec. 5,6,7	San Diego Floral Association Christmas Show (Christmas on the Prado)	Fri: 5:pm-9:00pm Sat:11am-9:00pm Sun:11am-4:00pm

SUCCULENT MEMBERS OF THE MULBERRY FAMILY

[MORACEAE - Ficus and Dorstenia]

by Joey Betzler

The genus Dorstenia was created by Linneaus in 1753 to honor Theodore Dorsten, a german botanist. In this same publication the genus Ficus was erected, this name was taken directly from the Latin for fig (F. carica is the edible fig). Both of these genera are usually included in the Moraceae, Morus is the generic epithet for the Mulberry. Closely related families are Urticaceae, Cecropioidace, and Cannabaceae. These closely related families are usually wind pollinated. The fruit of a mulberry is made up of many 'berries' surrounding the receptive tissue (resembling a raspberry). The receptive tissue of Dorstenia is flattened and one side holds the small flowers and the other side is smooth. In Ficus the receptacle enfolds the flowers completely so that only the 'back' of the receptive tissue is to be seen with the flowers inside. The bracts form the opening of the fig. Thus there is a progression from berry to fig with Dorestinia in the middle.

Dorstenia has not been studied sufficiently for a definitive answer as to the pollination mode; but Ficus has been studied extensively (probably because because of its economic importance). There is a unique relationship between a wasp and Ficus species. The cycle starts with an emerging female wasp. She emerges from the side of an immature fruit and carries pollen from this plant. The wasp finds another developing fruit and at the opening of the fig encounters male wasps and mates with one. She then sheds her wings at the opening and enters the fruit. She lays eggs inside and also pollinates many flowers that make up the fig or syconium (botanically speaking). Then the female progeny of the first wasp emerge and the story repeats itself. The above events are actually more complicated, but this is not a story of fig wasps. For each of the 800 or so Ficus there is a corresponding wasp taxon. This genus is quite remarkable in the plant kingdom for its dependence on an insect vector in the pollination process, termed entomophily.

For all those facts there are only about three succulent members of the genus F. brandegeei, F. palmeri, and F. petiolaris. Ficus brandegeei has green heart shaped leaves. Plants grow from 3-10 m tall in rocky areas. The thickened trunks and roots seem to flow or melt over the rocks where it occurs naturally in Baja California. It is a very desirable plant and makes a nice addition to a collection of caudiciform plants and makes a great bonsai subject, although the leaves are large. F. palmeri is very similar to the previous taxon, though it is described as having leaves with a blueish cast and the young leaves have a pubescent under surface.

F. petiolaris grows on the side of cliffs on mainland Mexico across from the other taxa. The leaves are very glossy and the veins are red. Seedlings develop a

caudex very early and the whitish base contrasts nicely with the leaves (all three may belong to the same species with different leaf variations - then the correct epithet would be F. palmeri). All of these species are relatively easily propagated from seed and need a rest during the winter when they lose their leaves. In the summer leaved plants can be watered freely and fertilized. As for other succulent figs, there are bound to be some out there but none are under general cultivation now. A note of caution as far as insecticides are concerned, use them carefully. Some formulations will cause leaf drop which can lead to these valued plants' demise. Check with local growers for suggestions on pest controls.

Dorstenia, the second largest genus in this family (second only to Ficus) has about 200 species with approximately 10 succulent members native to Northeast Africa, the Southern most part of the Arabian peninsula and Socotra. These plants need good light and are successfully grown with most cacti and succulents. Most of these plants have a rest period in the winter. When they start to grow in the spring they can be treated as other growing succulents. Most of the species are not common in cultivation yet.

The inflorescence of this genus is compressed onto a group of flowers with bracts forming rays, remotely resembling a daisy in some species. This inflorescence is usually held on an elongated petiole. The inflorescence is referred to as a hypanthodium and shapes vary from narrowly linear 2 cm X 3 mm as in D. barnimiana to roughly circular as in D. gigas which is 12.5 cm in diameter. The flowers of the hypanthodium are usually a mixture of unisexual (individual male and female) flowers that are self fertile. In some species the male and female flowers are on separate inflorescences. Flowers are from 0.5 to 1.5 mm in diameter and the seed, an achene, is forcibly ejected from the face of the hypanthodium.

The following is a list of Dorstenia taxa that may change as investigators learn more about this group: D. hildebrandtii, D. gigas, D. gypsophila, D. foetida, D. phillipsae, D. crispa, D. crispa var. lancifolia (the preceding four are usually referred to as the D. foetida/crispa complex and may all be lumped under the previous name of D. obovata), D. ellenbeckiana, D. barnimiana, D. barnimiana var. tropaeolifolia, and D. palmata (these last three are also a complex and may represent one taxon).

Of the following the largest is the Socotrian species D. gigas, which grows from 1.5 to 2.5 m tall and a diameter of about 0.5 m. Unfortunately this is one of the rarest members of the succulent genera. D. gypsophila is the gypsum loving species from Somalia. This is another large growing species up to 1.2 m tall with branching stems to 10 cm in diameter. The leaves of this species are 4 cm long and 3.5 cm wide,

roughly oval in shape with undulating margins, and as the dry season begins the leaves turn orange before they drop. Another odd thing about this plant is the characteristic odor resembling the common 'Nasturtium' of our gardens.

The easiest *Dorstenias* to purchase are *D. hildebrandtii* and *D. foetida/crispa*. *D. hildebrandtii* is relatively easy to grow and propagates easily from cuttings and seeds. This species will become rather spindly if not grown in a small pot. The plants of the *D. foetida/crispa* complex are the other commonly sold plants and can be grown quite successfully with other succulents. The other remaining taxa, *D. barnimiana*, *D. palmata*, and *D. ellenbeckiana* all form small tubers 5 - 8 cm in diameter and 2 - 3 cm tall and are usually subterranean. The leaves of these are usually larger than the tubers. The inflorescences are held above the leaves and form linear hypanthodia that look very weird, even for this group. These three taxa are very seldom seen. For a great summary of the genus refer to the articles by Horwood.

References used:

- Horwood, F.K. 1974. *CSSA* 46:223. Some Notes On the Genus *Dorstenia*
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- Jacobson, H. 1959. *A Handbook of Succulent Plants*
- Lavranos, J.J. 1972. *CSSA* 44:257. Notes On the Succulent Flora of North-East Africa and Southern Arabia
- Lippold, L. 1981. *CSSA* 53:129. *Dorstenias*-Two Little Charmers For Greenhouse or Windowsill
- Ramirez, B.W. 1969. *Science* 163:580. Fig Wasps:Mechanisms of Pollen Transfer
- Rauh, W. 1966. *CSSA* 38:165. Little Known Succulents of Southern Arabia
- Rowley, G.D. 1980. *Name That Succulent*
- Zomlefer, W.B. 1986. *Common Florida Angiosperms Part II*
- Various ISI or other listings for *Ficus* (All are for The *CSSA*)
1969. 41:62., 1970. 42:82., 1972. 44:35., 1979. 51:94.

WELCOME TO NEW MEMBERS - - - - -

Marion E. Collier - Santee	Alta Renton - San Diego
Lionel & Linda Mordecai - Chula Vista	Joan Varga/Marla Knutson - Lemon Grove
Robt. & Sue Marder - San Diego	Piet & Karen Van de Mark - San Diego
Katherine Koch & Hyam L. Leffert - Encinitas	
Richard J. Plock - San Diego	Michael R. Phelps - San Diego
Tineke Wilders - San Diego	

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BRAGGING PLANT WINNERS FOR AUGUST

1st Place Marilyn Lemrow for her Sansevieria gracilis (dwarf form)

2nd Place Dorothy Dunn for her Notocactus graesneri

3rd Place Joey Betzler for his Orbeopsis candata rhodesica

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THOSE WHO HAVE OFFERED TO BRING REFRESHMENTS FOR SEPTEMBER ARE:

Susan Shepherd	Marianne Thrombley	Susan Clements
Brunhilda Scheffler	Nellie Kennett	Teresita Lime
Wayne Zaranka	Mary Holman	Susan Barker
Sarah Jervey	Reed Pierce	Ethel Standish

Remember to pre-cut your cakes into serving size pieces - That is a great help in the kitchen. Thanks

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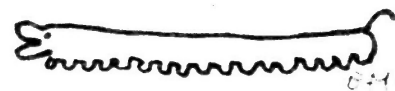
Those of you who work in the dirt and with fertilizer be sure and get booster tetanus shots for lock jaw. It doesn't need to be done very often, but check with your doctor.

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PERSONAL

Mr. Charles Hansen Is moving and must sell all of his collection of about 500 Euphorbia, cactii. Many are unusual grafts, some of them are his hybreds, and many are very large. All are in pots. If interested please call 420-5579

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The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti, other succulents and exotic plants. Meetings are held the second Saturday of each month at 1:30 pm in Room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held after the general meetings. Annual dues are \$8.00 per single member per year, \$2.00 for each additional member of a household within a family. Single copies of Espinas y Flores are 60 cents.

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