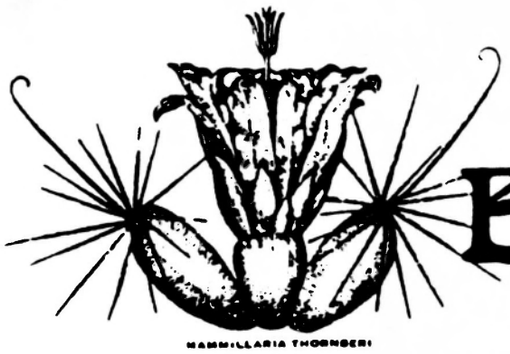

Espinas y Flores

BULLETIN OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY
Affiliate of the Cactus and Succulent Society of America, Inc.

Volume XXIII, Number 8 August 13, 1988

AUGUST MEETING

Saturday, August 13, 1988

1:30 p.m.

Casa del Prado, Room 101, Balboa Park

PROGRAM

INDIAN USE OF DESERT PLANTS
by David Eppele

David Eppele is the President of Arizona Cactus and Succulent Research, Inc., a non-profit scientific and educational institution dedicated to the conservation of arid regions and to providing the public with an opportunity to learn about the desert. Mr. Eppele's slide presentation will cover everything from "time-tested Indian recipes to Elmer's Glue." He will give us the Indian view of the desert and its plant life as learned from extensive interviews with over 30 Indian tribes of the Southwestern United States and Mexico.

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IN THIS ISSUE Page

DEADLINE FOR THE SEPTEMBER ISSUE - August 26, 1988

N E W S

WELCOME TO NEW MEMBERS - - -

Carl & Diana Peterson - Poway
Deborah Coughlin - El Cajon
Bill & Pam McCullough - San Diego
Rachel Walsh - San Diego
Nancy Abercrombie - San Diego
Elizabeth Gomes - La Mesa

* * * * * * * * * *

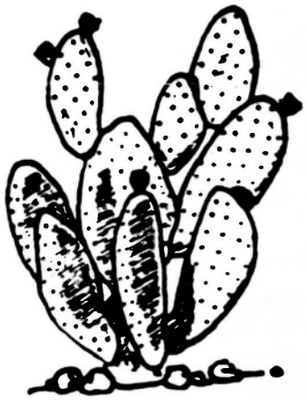
Those who have volunteered to bring refreshments for August are:

Mark St. Clair
Mary E. Holman
Jeanette Dutton
Frances Johnson
Mike Cullen
Susan Barker
Laura DeMerritt
Ethel Standish
G. S. Bajwa
Donna Couchman
Frances Nardi

Thanks for the wonderful goodies.

* * * * * * * * * *

BRAGGING PLANT WINNERS - - -



1st Place - Teresita Lime for her Aloe Albaflora

2nd Place - Jerry Brattmiller for his Caralluma Socotrana

3rd Place - Teresita Lime for her Begonia Fruticosa

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HIGHEST TOTAL OF TROPIES WON IN SDC&SS ANNUAL SHOWS

I checked through our complete file of, "Espinas Y Flores", and found that the highest total of tropies won in our annual shows for previous years was won by,.....

Robert Kent ..... 4 tropies in 1984
Robert Kent ..... 4 tropies in 1983
Dorothy Dunn ..... 4 tropies in 1981

and the above record was broken by,.....

Shirley Berry ..... 5 tropies for 1988.

Congratulation Shirley!

Submitted by Rudy Lime

CAUDICIFORM AESCLEPIADS

Leroy N. Phelps

There are five fairly common genera in the milkweed family which have succulent caudiciform species. Two of the genera, *Fockea* and *Raphionacme*, are apparently entirely caudiciform in that all species have swollen tubers at or near ground level. In his caudiciform book, Rowley states that there are about 11 species of *Fockea*. There are three species available in our area, *F. crispa*, *F. edulis* and *F. tugalensis* with the first being the rarest. I have seen other species, and have two of them, but so far as I know they are not regularly available. The tubers of these plants must be raised to appreciate them in cultivation. All three of the ones mentioned may become only partially dormant in our winters, meaning they hold their leaves, but do not actively grow. They are all vining plants, but can be trimmed so that they hold a head of branches.

The flowers of the fockeas are not spectacular--they are usually green or cream colored with very narrow petals, and can be easily missed. The fockeas are stated by all authorities to be dioecious (sexes on separate plants), but recently it has been found that instead they are self-sterile and any two plants will pollinate each other and produce fertile seeds. Some of the fockeas can apparently be propagated by branch or root cuttings, but neither method is commonly used.

There may be as many as 30 species of *Raphionacme*, but they have been poorly studied. *R. flanaganii* is the only species regularly available in our area. As with the fockeas, this plant is self-sterile and any two plants will pollinate each other. I have two other species of this genus, both of which have flowered, and seeds have never been set. The tuber is undergound in the members of this genus and must be raised for display. The flowers are more attractive than the previous genus, but still are not very showy.

Both of the above genera give rise to very large caudexes (caudices?) in nature, some weighing over 100 pounds. Generally in cultivation the caudex is much smaller. My experience has shown that the seedlings will develop good-sized caudexes only if they are grown underground in over-sized pots for the first few years.

The only American plant that fits into our category in *Gonolobus cyclophyllus*, for many years known as the Mexican aesclepiad. This is a unique plant with an above-ground caudex with a very corky bark. It is a vining plant with nearly one inch starfish flowers which are self-fertile. It does go dormant in the winter, and then the caudex can really be appreciated. It may lose its roots when dormant (whether watered or not!) but mine have rerooted readily in spring. I have been told this is a large genus, but this species may be the only caudex former.

The ceropegias are generally vining plants of this family, and while many of them are succulent, only a few have a tuber which may be displayed as a caudex. These plants are kept primarily because of their flowers, most of which have the petals united at the tip. Some of the flowers are reallyspectacular. The caudex rarely exceeds 3 inches in diameter, so here is a group of plants for the person with little space (so long as the plants are not allowed to vine!). *Ceropegia occulta*, *C. rendallii* and *C. conrathii* are three desirable species with

a single caudex. They are easily propagated by cuttings which form tubers readily. The tuber should be allowed to get to an inch in diameter before exposing it as a caudex, or it may not grow after exposure. *C. woodii* and *C. africana*, among other species, produce tubers along the vines which can be detached for propagation.

The last genus I will discuss is *Brachystelma*, the most difficult genus to cultivate (at least for me and apparently for many others since all species remain quite rare). The single tuber with non-vining stems is very desirable for the caudex-concious person. The genus is closely related to the previous genus, and there is some overlap in characters. To me, the twomost notable characters which differ concern the flowers. The flowers of the present genus are rarely connected at the tip and they are usually highly scented in an undesirable way (they stink!). The tubers of this genus are extremely susceptible to rot, especially during dormancy. I have been told they must be very dry but not allowed to shrivel. Not knowing how to accomplish that, all of my plants died during the first dormant period!

There are several other genera of plants in this family that have caudexed, but all are extremely rare in cultivation. The one very noticable common characteristic of all members of the family is the seedpod. It is either a single or paired horn(s) containing seeds with a piece of floss which allows the seed to float in the wind (remember the milkweeds back east?). All of the members of the milkweed family do <u>not</u> have milky sap, by the way.

Caudiciform and Pachycaul Succulents, Gordon D. Rowley, 1987, Strawberry Press, Mill Valley, CA
The Illustrated Encyclopedia of Succulents, Gordon D. Rowley, 1978, Crown Publishers, New York
A Handbood of Succulent Plants, Hermann Jacobsen, 1960, Blandford Press, London.

<u>NOTICE</u>: Please bring examples of these plants for show, and so I can talk about them at the meeting--I will only bring about 3 plants! Also, I will bring at least four seedlings of various plants as door prizes for this meeting.

Show Schedule

Aug. 6 & 7	San Diego Co. Dahlia Society Show	Sat: 2pm-5:00pm	Sun:10am-4:30pm
Aug. 20 & 21	San Diego Fern Society 10th Show	Sat: 1pm-5:00pm	Sun:10am-5:00pm
Aug. 27 & 28	San Diego Turtle & Tortoise Soc. 14th Show	Sat:10am-5:00pm	Sun:10am-5:00pm
Sept. 3 & 4	San Diego Prof. Horticulturists 5th Show	Sat:10am-5:00pm	Sun:10am-4:30pm
Sept. 17 & 18	San Diego Bromeliad Society 14th Show	Sat: 1pm-4:30pm	Sun:11am-4:30pm
Sept. 24 & 25	San Diego Bonsai Club Fall Show	Sat:10am-5:00pm	Sun:10am-5:00pm
Oct. 1 & 2	Balboa Park African Violet Soc. Fall Show	Sat:10am-4:00pm	Sun:10am-4:00pm

Cactus-of-the-Month

COPIAPOA

(Derived from Copiapo, a town and province of Chile)

By Robert Kent

Species of the genus Copiapoa are distributed only throughout a narrow coastal strip (generally from sea level to about 2200-2400 feet in elevation) in North Central Chile. They are usually described as growing in a harsh land with virtually no rainfall and depending on heavy sea fogs for their moisture. Ritter refines this, however, writing that "They grow only in a mild climate without harsh extremes and without or almost without night frosts. They are found only in areas with occasional winter rain and with summer drought". Ritter reports that he has also found Copiapoa solaris eastward of the fog zone and describes it as growing luxuriantly where other cacti, if their seeds do germinate, perish.

Ritter believes that the origin of the genus Copiapoa lies in the area where it now grows. He opines that Copiapoas have no near relationship with any other genus of cactus living today. This is a blessing for collectors, as taxonomists, faced with Copiapoa, have thus far not been able to indulge themselves in their game of unending switching of plants among genera, a practice which plagues so many other cacti.

Britton and Rose established the genus in 1922, referring to it some fourteen species of Echinocactus which they reduced to six species of Copiapoa. There has apparently since been little tinkering with the genus itself. One change was Ritter's creation of the genus Pilocopiapoa (happily accepted by Backeberg, who saw it as Ritter's acceptance of his, Backeberg's beliefs) for the one species, C. solaris, because of the hairiness of its ovaries, tubes and fruit. Ritter subsequently, however, returned C. solaris to the genus Copiapoa, deeming it a subgenus of Copiapoa.

If the genus itself stands strong and firm, identification of individual species is another matter. Species fixing of Copiapoa should give solid employment to untold generations of splitters and lumpers. The number of species (in all fairness undoubtedly aided by new discoveries) has gone from Britton and Rose's six to Borg's nine, Backeberg's fifty-five and down to Ritter's forty-six, with undoubted stops inbetween. In partial explanation, Backeberg commented that "It would seem that within the relatively restricted area of Chile there must once have been quite a small number of ancestral species which, in the course of time, hybridized and gave rise to transitional forms, thus making the determination of species an often difficult task. In some cases widely differing forms occur in any sowing from seed, even the spine characters varying widely...". To these problems must be added both the variations which may arise out of differences in soil, microclimate or elevation and the often great difference in appearance between plants growing in habitat and those propagated in the greenhouse.

Ritter splits the genus into five sections, based largely on the size, shape, and color of the body, roots, and ribs. The plants themselves may be globose or cylindrical, and some species offset to form enormous clusters containing hundreds of heads. They rarely dichotomize, but occasionally form crests. A mature plant may range from several inches to three or more feet in height. Flowers grow out of the apex,which will often produce white or cream-colored wool, and are usually yellow, sometimes with a bit of red. Roots may be turnip-like or fibrous. Spines are often strong and beautifully colored - black, brown, or white. Plants may be floury-white, grey, or various tints of green. Many have a frosty coating which provides protection from the sun and which may be wiped off. According to Ritter, dissemination of seed is performed only by ants (not the wind), which are attracted by the sweetness of the fruit. Copiapoas are found most often in granitic, alluvial soil. Some may grow together without hybridizing (C. columna-alba, C. longistaminea, and C. esmeraldana) while other readily hybridize in the field (C. cinerea and C. haseltoniana).

Cultivation of Copiapoas in the San Diego area is not difficult. Good drainage, a light situation (be careful of sunburn if plants have not been accustomed to direct sunlight), and watering and fertilizing throughout the growing season will produce healthy plants. (This writer has had fewer "fatalities" with Copaipoa than with virtually any other cactus genus.) The beauty of the hard-grown appearance of the plants in habitat is difficult, if not impossible, to duplicate in cultivation for those who wish to try. Dr. Ron Monroe suggests only "occasional feeding with a low nitrogen fertilizer (2-10-10 or 5-10-10) and lots of bright light".

Sources consulted:

1. Kakteen in Suedaweika, vol. 3, Friedrich Ritter
2. Cactus Lexicon, Curt Backeberg
3. The Cactaceae, vol. 3, Britton and Rose
4. A previous Cactus-of-the-Month paper on Copiapoa by Dr. R. Monroe
5. Ed and Betty Gay and their magnificent Copiapoa collection

New Books in the Library

Allen J. Coombes, Dictionary of Plant Names
Clive Innes, The Handbook of Cacti and Succulents
Paul Lesniewicz, Bonsai, The Complete Guide to Art & Technique
Park S. Nobel, Environmental Biology of Agaves and Cacti(2)
Norman Taylor, Taylor's Guide to Garden Design
Norman Taylor, Taylor's Guide to Trees

---Rick Latimer, SDCSS Librarian

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The San Diego Cactus & Succlulent 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 p.m. 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¢.

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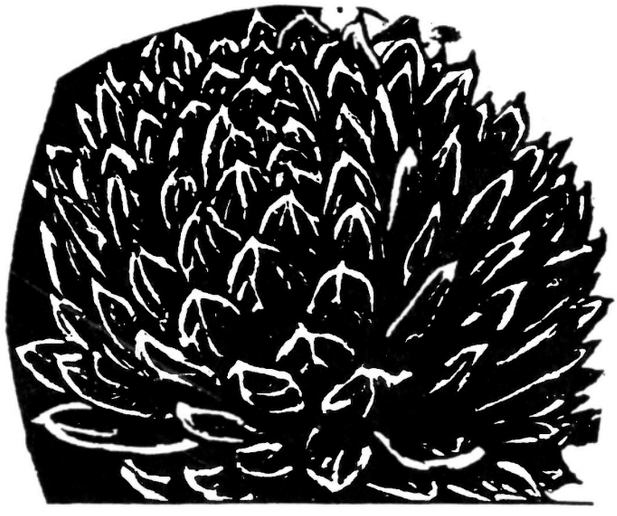

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