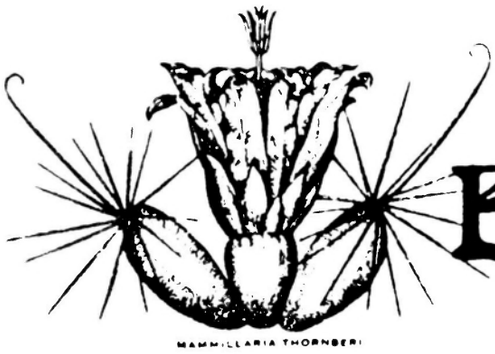


Espinas y Flores

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

Volume XXIII, Number 4 April 9, 1988

APRIL MEETING

Saturday April 9, 1988

1:30 p.m.

Casa Del Prado, Room 101, Balboa Park

PROGRAM

BOTANICAL EXPOSITION TO SUDAN
by Seymour Linden

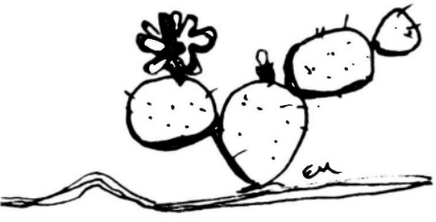
In November 1987, Seymour Linden, in the company of other fervent plant explorers, went to the Sudan to study and photograph the succulents of the area. He will present a slide show of the rare and unusual plants that he found there. This is sure to be both educational and interesting.

IN THIS ISSUE

DEADLINE FOR THE MAY ISSUE --April 23,1988 -- Thanks Mary

Remember, if you have any questions of a Botanical nature, Bob Kent would be happy to help you. Please send your questions to me and I will see that he gets them. Allow time for the deadline or they will be in the next issue.

BRAGGING PLANT WINNERS.....



1st Place - Wayne Zaranka for his Ferocactus glaucescens

2nd Place - Beverly Kirkegaard for her Neoporteria nidus senilis

Tied for 3rd Place - Dorothy Dunn for her Mammillaria canelensis and

Rudy Lime for his Operculicaria decaryi

- - - - - - - - - - - - - - - - - -

Those who have volunteered to bring refreshments for April are:

Jeanette Dutton	Donna Couchman	Marylyn Harms
Robyn Natwick	Curt Hammel	Kathi van Arum
Frances J. Nardi	Brunhilde Scheffler	Virginia Natwick
Judy Hannula	Sarah Jervey	Ethel Standish

The refreshments have been wonderful and plentiful. We appreciate all efforts. Mary

- -

Anyone who would like to order a name tag may do so through Perlso Lewis at the reception desk. The price $3.00 each. Must have 10 names to put the order through.

- -

SHOW SCHEDULE FOR APRIL AND MAY

All shows are held at the Casa del Prado, Balboa Park, unless otherwise indicated.

Apr.	2 & 3	Exotic plant Society 10th Show	Sat:11am-4:30pm Sun:11am-4:30pm
Apr.	16 & 17	San Diego Bonsai Club 23rd Show	Sat:11am-5:00pm Sun:11am-5:00pm
Apr.	23 & 24	San Diego Rose Society 61st Show (Balboa Park Club - Balboa Park)	Sat:2pm-6:00pm Sun:10am-5:30pm Admission: $1.50
Apr.	23 & 24	Ikenobo Chapter of San Diego Show	Sat:11am-4:30pm Sun:11am-4:30pm
Apr.	30/May 1	San Diego-Imperial Co. Iris Soc. 23rd Show	Sat:12:30pm-5pm Sun:11am-5:00pm
May	8	San Diego Epiphyllum Society 18th Mother's Day Show	Sun:11am-5:00pm
May	14 & 15	San Diego Geranium Society 16th Show	Sat:Noon-5:00pm Sun:10am-5:00pm

Succulent-of-the-Month

LITHOPS

By Dorothy Dunn

These amazing South African leaf succulents belong to the Stone-Mimicry and Window-Plant group of the Mesembryanthemaceae, which is one of the largest families of succulents in the world, consisting of more than 150 genera and well over 2,000 species. They possess some of the most intriguing plant forms imaginable, and have perfected the devices of protective coloration, imitation, camouflage, and moisture retention to the highest possible degree. Because, in general, they inhabit the driest parts of South Africa, where rain may not fall for a period of two years or more, and where they are exposed to intense, dessicating sunlight, they have adapted themselves in a number of ingenious ways to compensate for the shortcomings of their environment. They have reduced themselves to one or two pairs of thick, fleshy leaves to serve as water reservoirs; they have become nearly round in shape to contain the greatest volume of moisture with the least possible surface exposed to evaporation; they have learned to "lie low" in the long months of drought with their new growths wrapped in a papery envelope of old leaves, or buried in the soil with only the leaf tips exposed. And to compensate for burying themselves in this way - which puts their breathing pores and chlorophyll cells underground, where air and sunlight cannot reach them - they have learned to transpire through their sides and to admit sunlight to their green cells within through translucent windows developed in their leaf tips exposed aboveground. However, the most remarkable aspect of these plants is their ability to camouflage themselves, take on protective colorations, and so perfectly mimic their natural surroundings that - especially in their dormant states - they are virtually invisible to the unpracticed eye.

To many, the most fascinating of all windowed and mimicry plants are the Lithops. According to the latest revision of the genus by Desmond Cole there are currently 36 species and innumerable varieties, forms, and cultivars totalling 145 taxa. They are all very small, cylindrical or conical plants, averaging only an inch or an inch-and-a-half in height, and consist simply of a pair of closely-united, fleshy, flat-topped leaves separated by a cleft. They grow in extremely hot, dry areas with each particular species resembling or mimicking the surrounding rocks, stones, or pebbles so perfectly that the common name "Living Stones" is literally true. In their natural habitat they grow quite closely withdrawn into the soil so that only their distinctively marked "faces" show. In cultivation, however, they should not be so deeply buried as this can promote rot in our more humid, unnatural conditions, and the plants will tend to "self-adjust" to varying light conditions. Lithops have a much wider, more diverse geographical distribution than many of the other genera in this group. They extend from the northern Transvaal near the border of Zimbabwe westward through the northern and central areas of the Cape Province, southward into the Little Karoo, and northward up the west coast through South West Africa and Namibia almost to Angola. The only condition the various

localities of Lithops have in common is the extremely arid state under which these plants grow. Otherwise they are found in every conceivable position on mountain tops or plains or grassveld, in stone, sand, or clay, under bushes or more often in the open, in acid or alkaline soils, or wedged in cracks of solid bedrock. Some species manage to exist along the edges of depressions called "pans" where they may be underwater for days or even weeks at a time during heavy rains! Almost all species are at the mercy, not only of the elements, but of foraging animals, birds, and rodents.

Lithops, as well as many other plants in this group of the Mesembryanthemaceae, follow the same general pattern of flowering, seeding, then going dormant and withering. The plant bodies whiten and shrivel, then break open and produce a fresh pair of leaves which forms the new plant body for the coming year. During the dormant or "resting" stage - usually our summer - the plants should be kept fairly dry. When new growth commences, generally around mid-September, watering may be resumed.

The fruit of the Mesembryanthemums is a five-sided capsule with an ingenious system of valves to regulate its opening. Unlike most seed pods, which open when dry, the Mesembryanthemums open only when wet. Because the areas they inhabit often receive no rain for two or three years, this "water-operated" release mechanism ensures there will be enough moisture for germination when the seeds fall to earth.

Light conditions in southern Africa vary from bright along the coast to vividly intense in the interior. For the purpose of cultivation this is one of the prime factors to be taken into account, along with excellent drainage and an understanding of their life cycle. Although these plants grow in a variety of soils in habitat, the one thing they have in common in all localities is a tremendous concentration of such vital minerals as phosphate, potassium, calcium, magnesium, iron, and various trace elements. On the other hand there is almost always a conspicuous and excessive lack of nitrogen, and often a total absence of organic matter. Therefore, your soil mix should consist of a large amount of pumice, coarse sand, or gravel, with only a very small amount of humus added, and your fertilizer should be one with a very low nitrogen content. They need very bright light to look their best, and prefer a dry rather than humid atmosphere with plenty of air circulation. To quote Ed Storms (The New Growing the Mesembs, 1986) "Taking all this into consideration, it is amazing that all species of Lithops can adapt to the growing conditions of our greenhouses and homes". And he should know!

Literature cited:

Cactus and Succulent Journal of America: various issues
Chidamian, Claude: The Book of Cacti and Other Succulents, pp. 104-119
Haselton, Scott: Succulents for the Amateur
Higgins, Vera: Succulents in Cultivation
Jacobsen, H. Lexicon of Succulent Plants
Rawe, Rolf: Succulents in the Veld
Storms, Ed: The New Growing the Mesembs

Haworthia sordida, scabra, starkiana, and smitii

This is one of a series comparing Bruce Bayer's, John Pilbeam's, and Charles Scott's taxonomic treatment of the genus Haworthia.

H. sordida, H. scabra, H. starkiana, and H. smitii are plants of the South African Cape region which, while not all growing close together, share a number of similarities. John Pilbeam placed all four species in his subsection Acaules, describing them as "stemless, weakly trifarious." While that may be stretching things a bit -- Scott required two separate sections for them -- it is a useful category, at least for this review. Leaves of the species are stiff, lanceolate or close to it, sometimes upright, sometimes spreading, and occasionally slightly incurving or twisted. They like good light and careful watering. All are desirable for collections.

There is disagreement between Bayer and Scott over names and relationships among this group. Pilbeam, with one exception, accepts Bayer's classification. These differences, together with the presence in nurseries of an occasional hybrid as well as occasional confusion on just what a particular plant may be, suggest caution when purchasing, particularly when done by mail.

Bruce Bayer:

1. H. sordida: A handsome plant, it is rare in cultivation, not necessarily because it is difficult but probably because of its painfully slow growth rate. At a guess, twenty or more years may be needed for it to reach a mature three inch size. Bayer does not accept Scott's breakdown of the species into two varieties.
2. H. scabra v. scabra: Another attractive plant, it is heavily tubercled and colored a dark green, with parts of the leave becoming purple in good summer light. Scott believes that the name "tuberculata" has priority for this variety.
3. H. scabra v. morrisiae: This variety -- called H. scabra by Scott -- is a lighter green and finely tubercled, (in spite of the differences between the two varieties, the collector may at times be puzzled by what appears to be an intermediate form; I have no solution to offer). Additionally there have been in circulation under this name plants which are probably hybrids. These plants grow more quickly and larger than the type and become caulescent.
4. H. Smitii: Although both Scott and Pilbeam recognize this species, Bayer does not, describing it in his handbook as a hybrid of H. starkiana and H. scabra.
5. H. starkiana v. starkiana: This species is somewhat like H. scabra in form but sharply different in appearance with its thicker, smooth, yellow-green leaves. It offsets at a moderate pace to form an attractive clump.

6. H. starkiana v. lateganiae: It is much like the species but with longer, sometimes rough-surfaced, gray-green leaves. Or so the description says. The difficulty I have at times in sorting them out, however, leaves me wondering if occasionally labels get switched before the plants hit the market or if there is an intermediate form.

John Pilbeam:
Pilbeam is in accord with Bayer, except that he recognizes H. smitii as a true species.

Charles Scott:
1. H. sordida v. sordida: This is the same as Bayer's H. sordida, minus the form Scott has described as H. sordida v. lavranii.
2. H. sordida v. lavranii: This form differs from the species in a greater tubercling of the leaves and, judging from Scott's photo, in having spreading rather than erect leaves. Pilbeam believes that the form, which is not available here, may be the same as the form H. sordida v. agavoides described in the 1930's and which may be found in European collections. (The H. sordida v. agavoides often available in California is not this plant; it is a hybrid.
3. H. tuberculata: Scott gave this name priority over "scabra" for the heavily tubercled form.
4. H. scabra: This is Bayer's H. scabra v. morrisiae. Scott wrote that H. scabra's "nearest affinity seems to be" H. tuberculata, but he placed the two in different sections. They should be regarded as separate species, he said, because of the differences in tubercles and inflorescence.
5. H. smitii: In Scott's view, this is a distinct species, first described some fifty years ago, lost, and then rediscovered by him. He does not believe that it grows near enough to H. scabra or H. starkiana to be a hybrid of those two species. Cross-pollinating of two H. smitii clones could resolve the question; unfortunately H. smitii is not yet available to collectors here.
6. H. starkiana: Scott combined the two varieties of H. starkiana recognized by Bayer, in spite of acknowledged physical differences. He believes that floral similarities between the two do not permit separation.

Bob Kent 3-88

SALE!

NOTICE NOTICE NOTICE

On the 16th. and 17th. of April from 10:00 AM to 3:00 PM the Mooney's will have an open garden and plant sales. All members are welcome.

BRING MONEY!!!

More News.

From the Anza-Borrego Desert Natural History Association:

Lecture and 4WD tour for the remainder of the season:

April 10, 9 a.m. Blair Valley Sector, 4WD Required. Meet at Christmas Circle.
Participants in the last of the 1987-88 ABDNHA FOUR-WHEEL DRIVE TOURS will meet at 9 AM Sunday, April 10, at Christmas Circle. From there participants will go to the Blair Valley patrol district of Ranger Joe von Herrmann, which has more elevation than other park districts and fascinating natural and human histories.

April 22, 7:30PM, Gregg Hennessey, "Establishment of Ansa-Borrego Desert State Park".
High School Library.
If any questions please write: P.O. Box 311 - Borrego Springs, CA 92004
I do not have a telephone number.

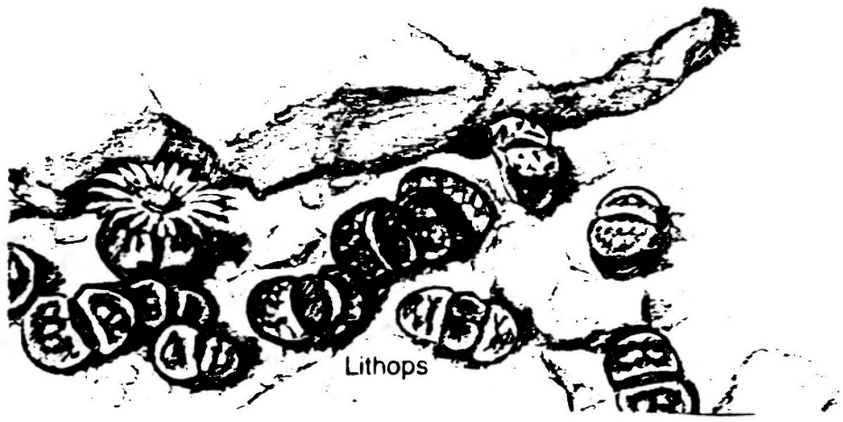
EDITORIAL

At our last meeting, one of our members announced that someone has come onto his property and stolen one of his most valuable plants. Other plants were pushed aside so it is obvious that whomever did this knew what they were doing.

As most of our members know, I am not in to growing and taking care of the plants, but I do enjoy knowing and watching these devoted members. They generously share their knowlege in the care of cactii and succulents. They also go to a great deal of trouble to bring in these not always easy to handle plants. All this so the rest of us can share in their well-done work.

This stealing was done by an conscienceless person, and I doubt these words will make any difference, but I feel better for having written them.

Mary Aubuchon - Editor



CACTUS OF THE MONTH

MAMMILLARIAS WITH LARGE FLOWERS

Many of us who collect plants have a great compulsion to collect all the plants in a single group--we feel a need to be able to say, "I have all the Fouquierias," or "all the Haworthias," or even "all the Escobarias." After a time we may decide to become more selective, and we narrow it down to something like "all the Escobarias native to the United States." Now, many of us collect Mammillarias, and there are even a few (very few!) people who own a specimen of every known Mammillaria, but this makes for a very large and unwieldy collection. So here is a possible satisfactory solution: just collect those Mammillarias that have large flowers.

For the purposes of this article, "large flowers" are defined as being those that are more than an inch (2.5 cm) in diameter. And there is a catch in growing these plants: many are difficult in cultivation, and some present a real challenge. Here is a brief guide for those who can't resist a challenge.

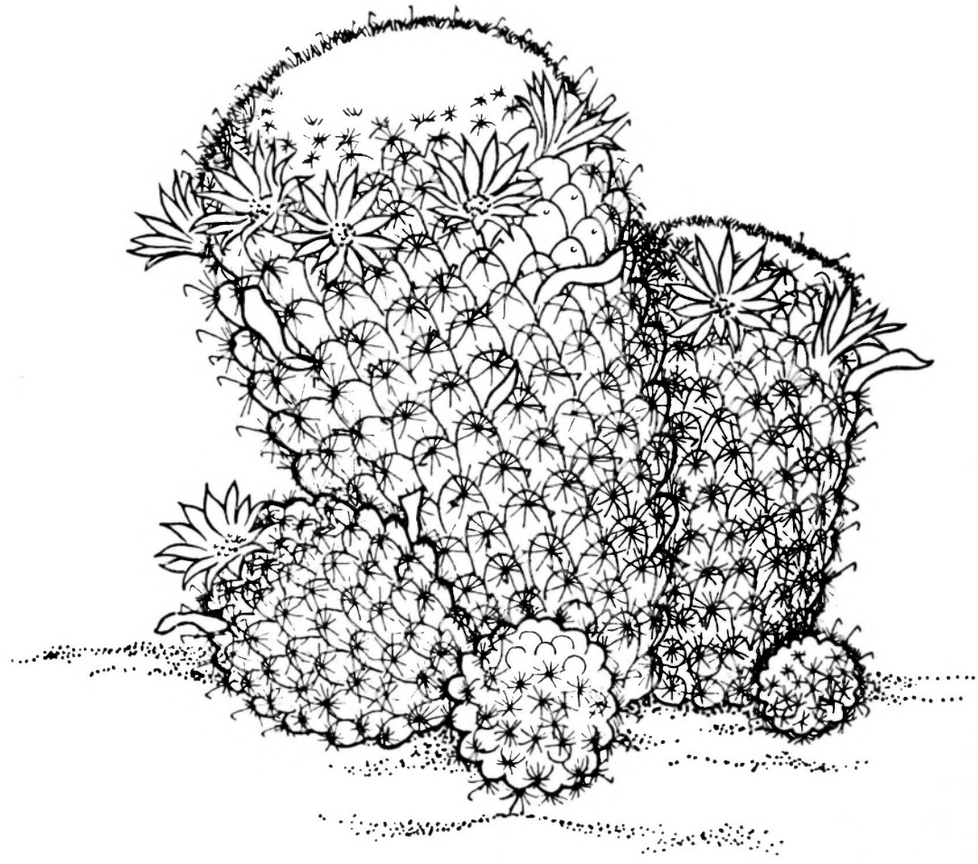
Following David Hunt's grouping of Mammillaria species as outlined in Pilbeam's book, "Mammillaria, a Collector's Guide," we find that large-flowered Mammillarias are all in the subgenus Mammillaria, section Hydrochylus--that is, plants with watery rather than milky sap. Further, all the large-flowered ones are to be found in one of two series, as arranged by Hunt: Series Longiflorae, those with distinct flower tubes, and Series Ancistracanthae, those generally having one or more hooked central spines. In addition, a few plants in the subgenus Dolichothele have large flowers--M. baumii and M. spherica, for example, as does the only plant in Hunt's subgenus Oehmea, M. beneckei. In Backeberg's "Cactus Lexicon" these three are all listed under the genus Dolichothele.

Returning to those plants in Mammillaria in its narrower sense, what do we have? First, in the Series Longiflorae, we have M. longiflora itself, for which the series was named. In fact, all six species in the series have large flowers on very small plants; most have no central spines at all, though of course M. longiflora has, confusingly, a hooked central spine. There are real gems in this group, of which the most outstanding is M. goldii, a tiny, difficult plant with a very large purple flower. Like the closely related M. theresae and M. saboae, there are no central spines, in fact no hard spines at all, just a quantity of tiny radials around a large areole on the tip of a tubercle. All three of these, as well as M. saboae fa. haudeana, are miniatures with delightful flowers. Also in this series are M. napina and M. deherdtiana and its variety dodsonii. Some of these plants can be difficult and may do better if grafted. It is important to grow them in a potting mix that is high in pumice and low in humus, and to keep the plant body from getting wet. Also, be very vigilant about insect pests--it doesn't take many mealybugs to demolish a miniature cactus!

The other series, Ancistracanthae or hooked-spined plants, is led by the outstandingly beautiful Mammillaria guelzowiana,

which has the largest flowers in the genus. About two inches across, they are a dazzlingly bright magenta. The plant is handsome, too, as it is covered with fluffy white wool, in which are hidden some of the meanest hooked spines in the business. This plant is fairly easy to grow, given the usual perfect drainage. Other Mams in this group are M. boolii, M. albicans, M. mazatlanensis, M. schumannii, and M. tetrancistra. Another beautiful plant is M. zephyranthoides, formerly included in Dolichothele. It has white flowers to about 1 1/2 inches wide. Finally, I would like to mention a pair that I have tried for years to grow with only a little success: M. wrightii and its variety wilcoxii, native to Arizona and New Mexico, which have bright purple flowers two inches across, and large seedpods the shape and size of Thompson seedless grapes. And they do not like the humidity near the coast! But as long as seed is available, I'll keep on trying, because I can't resist a challenge!

--by Phyllis Flechsig



MAMMILLARIA WILDII. Mexico. An easily grown house plant which requires only moderate sunshine in summer and average soil, watering, and cultural conditions, including a cool, dry winter rest. It produces many red-striped flowers all summer. The attractive red seed pods from the previous year's flowers persist for long periods of time.

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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¢.

Editor
Mary Aubuchon
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