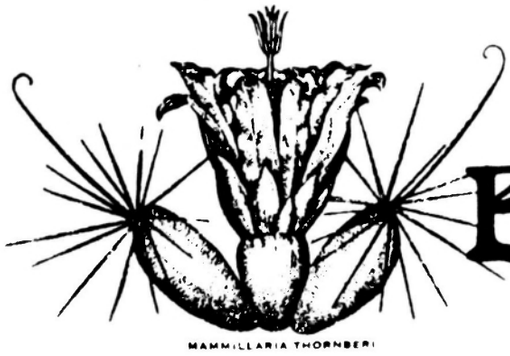

Espinas y Flores

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

Volume XIX, Number 9 September 8, 1984

SEPTEMBER MEETING

Saturday September 8, 1984

1:30 P.M.

Casa Del Prado, Room 101, Balboa Park

PROGRAM

"THE NEWST IN ALOES"

JOHN BLECK

The September Program,"The Newest in Aloes" will be presented by John Bleck. He's a well known Cactus show judge, specializing in Succulents, a former co-owner of Abbey Garden Nursey in Carpinteria, the author of several articles on succulent genera in "The Cactus and Succulent Journal", and presently hard at work on a hybridizing program of Aloes for the nursery trade at UCSB . He'll be presenting a slideshow as well as having examples of the Plants with him.

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IN THIS ISSUE Page

Deadline for the October Issue September 29 - Thanks Mary

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NEWS

THE WINNERS OF THE BRAG TABLE FOR AUGUST

1st Place Martin Mooney for his Cotyledon Buchholziana

2nd Place Dorothy Dunn for her Ferocactus Gracilis

3rd Place Lit Phan for his Bombax

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Those who have signed up for refreshments for September are:

Susan Shepherd
Amna Cornett
Sophie Loyland
Kathie Van Arum
Frances Johnson
Phyllis Sheldon
Ellen Low
Doris F. Rake
Judy Hannula
Peg Hilliard
Ethel Standish
Busel Evans

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PLEASE NOTE

THE DECEMBER MEETING IS DECEMBER 1, 1984. (This is a change from our regular day of the second Saturday.

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DON'T FORGET THE 1985 CSSA CONVENTION - LOOK FOR MORE IN THIS ISSUE!

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Will ALL TROPHY WINNERS please have their trophys ingraved and costs submitted to WARREN BUCKNER (Treasurer) prior to December 1984.

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THE OCTOBER MEETING will be held at the WILD ANIMAL PARK this year. More information at the September meeting. ALSO
HELP! Needs Ride! Please call Evenlyn Fried, 54th and University area - 583-0665

Succulent-of-the-Month

THE STONE-MIMICRY AND WINDOWED MESEMBRYANTHEMUMS

Argyroderma, Conophytum, Dinteranthus, Gibbaeum, Lithops

Dorothy Dunn

These amazing South African leaf succulents belong to the Mesembryanthemaceae, which is one of the largest groups 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 themsleves, 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.

The genus Argyroderma contains about ten species, with a somewhat limited distribution within the Vanrhynsdorp district, Cape Province, where they may grow in the nutritious but often saline, soft, spongey clay common to the region, or among white quartz rocks. They may receive a fairly good winter rainfall, but are fully exposed to the elements in the dry, hot summers. It is a genus of unusual variability; the seeds from one capsule can produce plants with white, yellow, or reddish-purple flowers. Some species have been known and cultivated for over 200 years. The name Argyroderma means "silver skin", and plants should be grown in the full sun to bring out the silvery color.

Conophytums are among the smallest of the Mesembryanthemums, ranging in size from that of a small pea to that of a large almond. However, they are among the easier ones to cultivate. The genus consists of about 300 species, plus innumerable varieties. Though this is one of the larger genera of the Mesembryanthemaceae, it has a comparatively restricted distribution; the densest concentrations are to be found in Namaqualand and the Richtersveld, where several species may sometimes be found on one hill. Almost all species occur within the winter rainfall areas, and the majority grow on mountains, often near the summit which gets the most rain. Others

grow on sand flats under the protection of bushes, or on eroded low granite banks or in hollows or crevices of rocks. Some grow in the driest, sunniest situations possible, while others occur in considerable shade and often embedded in moss. They seem to have solved the problem of combining the minimum amount of evaporating surface with the maximum amount of watery contents. Each growth produces only one flower each year, which lasts several days. Some are pleasantly scented, with an odor somewhat like cloves, and the flowers often have a much greater diameter than the growth bearing them. As with Lithops, Conophytums go through a very distinct and obvious resting period. The symptoms of "resting" include fading of healthy coloring, followed by shrinkage. Gradually the plant appears to be shriveling, and the skin becomes wrinkled and turns to a whitish, gray, or brown color. Death appears imminent, but do not despair - and do not throw the plants out! With the onset of fall and cooler temperatures, new growth and flowering commences almost overnight.

This genus is divided into three distinct groups: (1) the globose, obconic, or obovoid growths with the orifice nearly level with the top (this is the typical group of the genus); (2) the Biloba section, in which the growths are either distinctly two-lobed or sharply-notched at the top; and (3) the Fenestrata group, where the tops of the growths are divided by a transverse fissure into two broad lobes with flattened or convex (but not keeled) tops which are more or less pellucid, serving as windows to the body of the plant. In cultivation Conophytums seem to be happier with some light shading, especially in summer when they are dormant. Most have a fairly shallow root system, and will form large clumps with age.

Dinteranthus are generally found in quartz fields in the northern Bushmanland, the Prieska and Kakamas districts and the region south of Warmbad in South West Africa. These regions may receive both summer and winter rains. They need to bake in the summer sun to bring out their beautiful pink-gray colorings. The genus in named for Professor Dinter, a well-known South African botanist, and contains only six species.

Gibbaeums occur only in the Little Karroo, growing in very saline and alkaline heavy clay soils or among quartz pebbles on plains and low hills. They are easily distinguished from the other stone-mimicry plants by the usually unequal length of the two leaves, giving them a characteristic, oblique appearance sometimes described as a shark's head. They owe their apparent whiteness to a close covering of microscopic hairs which enables them to blend in with the white quartz slivers among which they often grow. There are 21 species in the genus.

To many, the most fascinating of all windowed and mimicry plants are the Lithops. 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 the four previously-mentioned genera. 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, 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.

All of these plants 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. 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.

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. Growing the Mesembs

MACHAEROCEREUS

by Frank Thrombley

Genus: Machaerocereus (mă-kē´-rō-sē´-rē-ŭs)
A genus with only two species, Both of which are Mexican origan. Their distribution is in Baja California and some of the offshore islands.

MACHAEROCEREUS gummosus is an erect, bushy type plant, branching from the base. Some of the stems can become decumbent or sprawling and are 3ft. to 6ft. in length at maturity. This is a very common cactus throughout the deserts of Baja, extending from Ensenada south to the cape regions. The nocturinal flower is white to pink and remains open throughout the following day.

The fruit, in my opinion, is the most outstanding feature of this species. They are red in color, about 2 1/2" diameter balls with many black seeds dispersed throughout the succulent fruit. After removing the outer spines and then peeling the skin it looks and tastes like a watermellon . It is very delicious cut up in a salad or eaten as a substitute for a mellon. This edible fruit is esteemed by the natives and is a part of the diet for those who live in the areas were these plants grow. This species is called ' Pitaya Agria ' by the natives.

MACHAEROCEREUS eruca is a prostrate growing cactus with only the tips of the stems upraised. It grows slowly at the tip, roots beneath, and dies behind. Thus it creeps along like a giant spiny caterpillar. The spines are like a dense armament of stiff gray/white evenly spaced pincushion clusters. The central spine of each cluster is daggerlike and pointing sharply backward. It is this daggerlike spine that seems to anchor the stem to the ground or any other object the stem wants to cross.

This strange cactus is called ' Chirinola ' by the natives and luridly, the ' creeping devil ' by the gringos. Thus it creeps along like a caterpillar, crawling over obstacles, including others of its kind. An occasional branch, dying off behind, becomes a separate caterpillar, to crawl its own slow and spiny way. The stems are up to 10ft. in length but usually between 3 and 6 feet long.

The flowers are in marked contrast to the forbidding stems. They are born in late summer, opening at night, are eight to nine inches long, slender and tubular below but four inches wide above. They are white at first but turn pinkish by morning. The two inch globular red fruit is edible. I have not eaten the fruit of this species and so cannot compare it to M. gummosus.

Unlike its close relative, M. gummosus, it is found only on the sandy Magdalena Plain of the Baja peninsula.

Chirinola was noted in 1867 by William Gabb, a paleontologist with the California State geological survey. It was not until 1889 however, that T. S. Brandgee saw this plant, noted the resemblance to huge caterpillars and named it Cereus eruca. 'Eruca' being latinfor caterpillar.

GENERAL NOTES:

- T. S. Brandegge was a pioneer botanical explorer of Baja California who later lived in San Diego and was a member of our Natural History Society.

- The widespread 'Pitaya Agria' also grows with 'Chirinola', and they flower at the same time. The similar flowers might be expected to attract the same polinators, but the two plants remain quite distinict, with no evident hybrids.

- Sources of information:
  Cactus Lexicon by Curt Backeberg
  Environment Southwest 1974 Feb/March issue San Diego Society of Natural History CREEPING DEVIL by Reid Moran

SHOW SCHEDULE FOR SEPTEMBER, OCTOBER AND NOVEMBER

Sept 15 & 16	San Diego Daytime African Violet Show	Sat & Sun: 10 am - 4:30pm
Sept 22 & 23	San Diego Bromeliad Show	Sat: 1pm - Sun:11am - 5pm
Sept 29 & 30	San Diego Bonsai Fall Show	Sat & Sun: 10am - 5:00pm
Oct. 6 & 7	Balboa Park African Violet Fall Show	Sat:10am-5pm Sun:10am-4pm
Oct. 20 & 21	Ichiyo Chapter of Ikebana Show	Sat: 11am-4:30 Sun: 11am-4:30Pm
Oct. 27 & 28	Sogstsu School of Ikebana Show	Sat & Sun: 11am -4:30 pm
Nov. 3 & 4	San Diego Tropical Fish Aquarium Show	Sat:12pm -6pm Sun:9am-4pm

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Orientation:

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.

Editor
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