



MAMMILLARIA THORNERI

Espinas y Flores

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

Vol. X, No. 3

March 1975

PROGRAM:

Cacti and Succulents of San Diego County, by R. Mitchell Beauchamp. Mitch is one of our members who works for the County Agricultural Department as a Biological Consultant.
March 8th, 1:30 PM, Room 101, Casa del Prado, Balboa Park

CACTUS OF THE MONTH : COPIAPOA

SUCCULENT OF THE MONTH : MESEMBRYANTHEMA

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MEMBERSHIP: The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti, other succulents and exotic plants. Dues: \$5.00 annually, due in December of each year. Meetings: 2nd Saturday of each month, 1:30 PM. Board meets each Friday after general meeting, 7:30 PM, Casa del Prado, Balboa Park.

Deadline for April issue publications is March 15, 1975.

WORKS OF NATURE

Martin L. Mooney

The process of evolution as explained by Charles Darwin is very complicated, but reduced to simple terms it is this. All forms of life inherit characteristics from their parents, and a species may remain almost unchanged through many generations. In plant life a change may be brought about by inheriting characteristics from both parents as a result of the natural hybridization of different species. This may give rise to a new variety or species, but rarely to a new genus. According to Darwin, the most important changes are seen when mutation occurs. When this happens an entirely new characteristic is introduced, not previously possessed by either parent. The change can take any form or direction; it can be either beneficial or harmful to the plant. The process of evolution is then carried on by natural selection, or the survival of the fittest, and many mutants must "hit the dust" in the fight for space, food, and existence. Very little is known about the causes of mutation as it seems to occur at any time under all conditions without any pattern or regularity. The most obvious forms of mutation are cristate or monstrous forms growing with or on well-established plants.

Some maintained all variations are connected with reproduction, but what about the so-called "sporting plant", established plants which suddenly produced a single bud with a new and sometimes widely different character from all other buds on the same plant. These variations sometimes can be, and are, propagated by grafts, offsets and in some cases by seed.

One of the most remarkable features we see in our so-called domesticated plants is variations and adaptations not for the purpose of the plants own good, but for man's use or fancy. But no matter what the efforts of man are through hybrids, his skills and splendid results of his selection, the act of natural selection is immeasurably superior to man's feeble efforts, for the works of nature are those of art.

References: Charles Darwin - The Origin of Species
J. Borg - Cacti
D. V. Brewerton - Cactus and Succulent Journal of Great Britain
J. W. Martin - The National Cactus and Succulent Journal

The plants in this genus, named for the northern Chilean province of Copiapo, and apparently not closely related to any other cactus group, have, until quite recently, been rarities in cactus collections. Copiapoa species are globular to semi-cylindrical forms, many of which are clustering, with strong ribs, stout spination, and a heavy, wax-like, yellow or white epidermal coating. The roots are, almost without exception, tuberous, and the apical areoles produce copious white or cream-colored wool. With one exception (C. rubriflora) the flowers, produced from the wool-covered apical areoles, are yellow, with reddish perianth parts. All blooms are strongly scented, diurnal, self-fertile, and may be produced over a long period during warmer conditions; the ovary and flower-tube are generally naked. Young plants don't closely resemble mature plants. Even among mature plants of the same species great variability is the rule, a feature that has encouraged the introduction of many probably superfluous names. Offsets are unique in pushing through the epidermis of the parent plant fully formed with well-developed areoles and spines; these offsets can then be rooted or grafted at an earlier stage than elsewhere in the Cactaceae.

All Copiapoa species occur on the western Andean slopes and escarpments of the coastal region of northern Chile. This is the "Garua-zone" which is characterized by equable temperatures year-round (53°-140° F.), heavy fog extending far inland in the winter, with the resulting high humidity despite the low rainfall. In summer cloudless skies prevail, with high humidity from the ocean.

In cultivation Copiapoas are probably under-watered in most cases. They can utilize ample quantities of water and may split from over-watering, but rarely rot from this cause, even in winter; in Chile, Copiapoas grow during the cool, moist winter. Light frost will generally not cause loss of plants but strong sunlight may burn young plants; extremes between day and night temperatures can be beneficial.

Britton & Rose originally assigned six species to Copiapoa. As recently as 1959, Backeberg assigned 20 species here. Subsequent work by Backeberg and Ritter has raised the number of nominal species to more than 60 at present, many of which will undoubtedly be united with others when more is known about these beautiful cacti.

There are three or four groups of species based on morphological similarity.

Group 1 - contains most species, including C. cinerea and C. haseltoniana

Group 2 - contains several small, soft-bodied forms such as C. humilis, C. hypogaea, and C. tenuissima

Group 3 - contains two or three forms with soft white or yellow, bristly, hair-like spines and deep purple-green bodies. Examples are C. krainziana and C. scopulina

Group 4 - described as Pilocopiapoa, this group contains only P. solaris (= Copiapoa ferox) with hair on the flower tube.

References

Bleck, M. 1972,

Copiapoabr. & R. Cactus and Succulent Journal (U.S.), vol. 44,
pp. 239-242.

Marshall, W.T. & T.M. Bock, 1941,

Cactaceae. Abbey Garden Press, Pasadena, U.S.A. 220 pp.

Succulent-of-the-Month

Mesembryanthema

Madelyn Lee

Deciding what you are going to say about this remarkable family of plants is no problem. Where to start and where to finish is a problem.

The beginning was in April, 1652, when Jon van Riebeeck botanized the Cape region of Africa. He found seven species of a new plant which he named FICOIDES SEU FICUS AIZOIDES AFRICANA. (This name alone makes you appreciate Linnaeus)

In 1689, Jacob Breyne changed the name to Mesembryanthema, meaning "mid-day flowers".

By 1812, when Adrian Haworth made the first systematic classification, there were 206 of the species to work with. And in 1908 Alwin Berger listed 315.

It was not until 1921, when N. E. Brown decided to use the unique seed capsules for division of the species, that a fairly decisive method was found to classify the various genera.

In 1960 Herman Jacobson listed 122 genera and 2500 species. Plant explorers and botanists have added even more in recent years.

Okay, so much for history, What is a 'Mesem'? The plants are mostly from Southern Africa, they have petaloid staminodes (petal-like appearing male stamens), an inferior ovary (the ovary is down inside the flower) and hygrochastic capsules (the capsule opens when wet and closes when it is dry). Most of the more succulent genera grow during our winter and rest during our summer. A few of the genera available in our area are: Aloinopsis, Conophytum, Dactyloopsis, Dinteranthus, Faucaria, Fenestraria, Gibbaeum, Lapidaria, Lithops, Mesembryanthemum, Nananthus, Pleiospilos Rhombo phyllum, Titanopsis, and Trichodiadema.

Growing this family of plants is an individual experience. Each family group and sometimes each plant needs different soil conditions and care. Correct light, air movement and a dry atmosphere in the resting period seem to mean more to these plants than good soil.

Bring what 'Mesems' you have to the next meeting. We are lucky to have some 'Mesem' specialists in our club and will ask for their assistance in describing what works for them in the growing and care of the Mesembryanthema.

GARDEN HINTS

Sorry, no contributions by members-

THE LIBRARIAN REPORTS

By Edith Werner

The library is adding four new books to its collection this month.

"Interesting Newer Mammillarias", written by W. F. Maddams of the Mammillaria Society is a 40-page pamphlet. It is a concise but complete account of 24 of the newer mammillarias of which there are about 80 since Dr. R. T. Craig wrote the "Mammillaria Handbook." Each of the 24 is illustrated in clear black and white photographs. A section in the back lists others with a short description. William J. Bishop donated a second copy of this book to the library.

"Cacti and Succulents of El Paso" is a 100 page booklet by Clark Champie, who covers an area known as the Franklin Mountains and which is of importance to collectors. He also describes other plants of the area: grasses, trees, yuccas, agaves, etc. The book is illustrated with black and white photographs.

"Genera of the Mesembryanthemaceae" by H. Herre is an important book. It is beautifully illustrated with colored paintings and maps. One section is on the history of the discovery of the plants with biographical notes on the collectors.

"Basic Gardening Illustrated", published by Sunset Books, has been a donation by Helen Hegyi and its chapters pertaining to soils and fertilizers are particularly good.

Thank you, Helen Hegyi and Bill Bishop.

CEREUS-LY SPEAKING

Thank you, Regalement Committee: Jean and Leta Hapeman with the help of Lucile Beckfield, Edith Billmeyer, Helen Claydon, Suzanne Gillie, Pat Kennett, Keyte Lovelace, Jeanie Merrill and Verna Pasek made our social hour another culinary success.

Anyone interested in obtaining the plastic name tags which our enthusiastic president mentioned and who have not signed up yet (twenty-six of you did so at our last meeting) will get another chance to do so during our March meeting. The club has a chance to obtain them for \$2.00 a piece - a very reasonable price - if at least 50 members feel it worthwhile to have their names permanently engraved.

Congratulations to Bob and Mildred Anders, our new representatives to the S. D. Botanical Garden Foundation. Bob and Mildred are new members who just joined our group in January and have already been put to work by your smart president.

Every once in a while the question of reading the minutes of the Board Meetings at our general meetings comes up. This procedure would certainly be too time consuming. However, for those who are interested: minutes of both, general meetings as well as Board meetings, are available and folders will be displayed at the library table. All Board meetings are open to the general membership unless held on special occasions in private homes.

DISCONTINUANCE OF SALES PRACTICES BY INDIVIDUALS

It is with sincere regret that I have to draw your attention to "Proposed Operating Procedures, Casa del Prado Garden Center" dated October 7th, 1971, compiled by members of the City Recreation Department and the San Diego Botanical Garden Foundation Inc. These proposed operating procedures appear to prohibit the type of plant sale from member to member so much enjoyed by our group. The Board of Directors of our Society voted to adhere to the rules listed below effective immediately.

32--Restrictions on commercial activities in the new building will be the same as for Conference Building and Floral Building in the past. Sales between members during regular meetings okay. No sales to the general public except from the Botanical Garden Foundation, Floral Association offices, and the Library. In these areas provisions for sales will be included in the Occupancy Permit. All net proceeds from sales must go into equipping and maintaining the building and the group's activity. Special pot and plant sales where proceeds go into equipment and improvement of the building may be arranged with prior approval by Recreation Director. Donations and admission fees for special events will be permitted on the same basis as in the past.

38--Regarding restrictions of commercial use of building, as per above, commercial educational displays related to group activities may be used in conjunction with other displays of sponsoring groups, such as in past during floral shows in Conference Building. But there must be no commercial sales from such educational displays. Such displays would include glass houses and garden equipment, fertilizer and insecticide use, etc., closely related to sponsoring activity. No fees may be charged for such displays and exhibits by sponsoring group or by anyone else.

CEREBRAL PALSY

By Wilson Wells

The group from this Society who has been working at the Cerebral Palsy School under the sponsorship of this organization wish to report to the Society that all funds derived from the sales tables during the last two meetings, have been turned over to the school. If you, as individuals or as a group, had been present when the students counted the bills and coins, you would have been thrilled to have had a small part in this project.

Recently, the working group has been advised that there will be no sales tables allowed at the Society. This is unfortunate for both, the school and the Society - the group will abide by the rules set forth by the San Diego Botanical Garden Foundation. However, the group will gratefully and gladly receive any donation of cacti and/or succulents. Those will be sold through other methods and at other places. The funds from these sales will still go to the Cerebral Palsy School.

For future locations of sales, watch E.Y.F. for places and time.

SAN DIEGO CACTUS & SUCCULENT SOCIETY

Officers

PRESIDENT - Martin L. MOONEY, 97 K Street, Chula Vista, CA 92011 427-6796
1ST V. P. - Nibby KLINEFELTER, 2201 Fairfield Street, San Diego, CA 92110 276-6517
2ND V. P. - Reed PIERCE, 3525 Wilshire Terrace, San Diego, CA 92104 291-1994
SECRETARY - Doris F. RAKE, 4410 38th Street, San Diego, CA 92116 282-1722
TREASURER - Madelyn LEE, 2310 Bella Vista, Vista, CA 92083 1-727-1364
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PAST PRES - Loyal J. BIBBEY, 490 Citrus Ave., Imperial Beach, CA 92032 423-5133

BOARD OF DIRECTORS

1-year term: Oliver K. LOYLAND and Ione HUBNER
2-year term: H. Warren BUCKNER and August PFEIFFER
3-year term: Mary H. BIRCHELL and Perlso LEWIS

1975 CSSA CONVENTION COORDINATORS

H. Warren Buckner, Dr. Philip G. Corliss and Walter R. Scott

COMMITTEES FOR 1975

ACTIVITIES -- Perlso LEWIS
EDUCATION -- Madelyn LEE, Succulents, Dr. George E. RADWIN, Cactus
EXHIBITS --
LIBRARY -- Edith WERNER, Pat MOONEY, Helen HEGYI and Mike JOHNSON
MEMBERSHIP -- Madelyn LEE
PLANTS & SUPPLIES -- Reed PIERCE
PROGRAMS -- Nibby KLINEFELTER
PUBLICATION -- Augie PFEIFFER, 5163 E. Bedford Dr. S. D. CA 92116 280-4444
RECEPTION -- Lucile BECKFIELD and Edith BILLMYER
REGALEMENT -- Jean and Leta HAPEMAN
Rep. to S. D. Botanical Garden Foundation -- Mr. & Mrs. Robert ANDERS

PEDILANTHUS MACROCARPUS - CONVERSATION PIECE!

When I spotted Pedilanthus Macrocarpus (Yes, I have the correct name, for once!) on the Loyland's beautiful plant table a short time ago, I chose it mainly because it looked so different, with two "hands" - crests to anyone else - pointing towards the sky! When a fellow enthusiast mentioned the small red flowers, like little birds, it produces, that did it. I just had to have it to add to my collection.

Ruth has since told me that it's sometimes called the redbird cactus ('though cactus it isn't), so now I cherish it all the more in memory of the redbirds (Cardinals) of Ohio and other Eastern States, which I miss so much here in California.

Geoff, Mike, and our varied visitors, also, are forever intrigued by the strange posture of this particular plant, and it has been likened to everything from Mr. Nixon's famous greating to various television commercials - especially the one (owing to a long "finger" on one hand pointing skywards) about the "one calorie"! As for me, I am very happy that my P.M. has already produced one redbird for me to see, and I am hoping for a whole flock of them before too long.

Audrey Johnson

TENTATIVE PROGRAM

Cactus & Succulent Society of America's 16th Biennial Convention

Bahia Motor Hotel, Mission Bay, San Diego, May 12-16, 1975

- Sunday, May 11:**
p.m. Early registration
8 p.m. Alfred B. Lau: "Cactaceae of South America"
- Monday, May 12:**
a.m. Registration from 9 a.m.
Preliminary delegates' meeting
noon Lunch on your own
Programs:
1:30 Howard Scott Gentry: "The Man-Agave Symbiosis"
2:15 Marlene Rainman: "Meet the Stapelias"
3:00 Larry W. Mitich "Charles Lemaire and the Rarest Cactus Book"
3:45 Louise Lippold: "Cacti and Other Succulents that like it Wet & Cold"
eve Banquet sponsored by the El Centro, Palomar and San Diego cactus and succulent clubs
Program: Dr. Philip Downs: "South African Succulents"
- Tuesday, May 13:**
a.m. All-day tour of North County cactus and succulent nurseries with the Palomar club members serving as guides and hosts
noon Box lunch
eve Dinner on your own
Program: 8 p.m. Hernando Sanchez Mejorada: "Some Notes on *Mammillaria solisii* and its close allies" and "The influence of the Mexican American War on the Discovery of Cacti"
- Wednesday, May 14:**
I.O.S. Day: programs by members of American Section of the I.O.S.
Programs:
10:00 a.m. Symposium: "What can be done to make the I.O.S. more effective" conducted by Myron Kimmach
11:00 a.m. Dr. Edward F. Anderson: "Cacti of the Galapagos Islands"
noon Luncheon on your own
p.m. Programs:
1:30 Dr. Lyman Benson: "The Great Cactus Boom & Bust"
2:30 Dr. George S. Lindsay: "The Genus *Ferocactus*"
3:30 Business meeting for I.O.S. members only (alternate program for non-members: Cactus Growers' Symposium conducted by David Grigsby)
eve Banquet sponsored by out-of-town clubs
Program: Dr. Reid Moran "Crassulaceae"
- Thursday, May 15:**
noon All-day trip to the Anza-Borrego Desert State Park
Box lunches
Alternate trips to local points of interest:
Balboa Park: Museum of Man, Museum of Natural History, Space Theater (Planetarium)
San Diego: Harbor excursion, Old Town (Bazaar del Mundo), S.D. Zoo and Wild Animal Park, Pt. Loma Observation Point, Sea World, Scripps Institute of Oceanography
eve Dinner on your own
8 p.m. Program: Frank Horwood: "Succulent Safari to Africa"
- Friday, May 16:**
a.m. Delegates' meeting
noon Luncheon on your own
p.m. Programs:
1:30 Dr. Leroy N. Phelps: "Bonsai for Succulents"
2:30 Dr. Gerald K. Arp: "Ecological Cactus Culture"
3:30 Madelyn Lee: "A Walk thru History with Euphorbias"
eve Boat ride on the Bahia Belle to the Catamaran Hotel, Mission Bay and Luau with entertainment by Michael Dean, Hypnotist; return boat ride to Bahia Hotel . . . end of convention.

Augie Pfeiffer
5163 E. Bedford Dr.
San Diego, CA 92116

Return Requested