



MAMMILLARIA THORNERI

Espinas y Flores

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

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PROGRAM:

Two Bromeliad Experts, Mary H. Birchell and Thelma O'Reilly, should surprise us with a smashing presentation.

September 13th, 1975, 1:30 pm, Rm 101, Casa del Prado, Balboa Park.

CACTUS OF THE MONTH: Rebutia.

SUCCULENT OF THE MONTH: Euphorbia.

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MEMBERSHIP: The San Diego Cactus and 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.

Single copy of E y F : \$ 0.50.

Meetings: 2nd Saturday of each month, 1:30 pm., Room 101, Casa del Prado, Balboa Park, unless otherwise indicated. Board convenes after the general meeting.

Deadline for October publication is September 16, 1975.

CACTUS-OF-THE-MONTH

Rebutia

Dr. George Radwin

Named after a French plant explorer of the Nineteenth Century, this genus includes a rather large number of species native to grassy and shrubby mountain slopes in Bolivia and northern Argentina and is characterized by small, globose to briefly cylindrical stems, generally caespitose (offset-forming) and without definite ribs; the areoles are located atop small tubercles. The flowers are small to medium-sized, funnel-shaped, and arise from the base or side of the stem; they are generally colored pink, red, orange, or yellow. The flower tube and ovary bear scales, with or without hairs. Most plants flower copiously and over an extended period of time, the blooms often completely obscuring the plant.

Several subgenera have been erected, these occasionally elevated to full generic status. Aylostera was introduced for those finely and densely spined Rebutias in which the pistil (female reproductive structure) is enlarged and almost fills the entire slender flower tube; Mediolobivia was introduced for those species with hair on the flower scales. Cardenas (1964) notes that Rebutia seems to intergrade morphologically with Lobivia, the dividing points seemingly arbitrary.

In a more recent article Donald (1971) argues convincingly that whereas Weingartia, Sulcorebutia, and Lobivia are closely related, determined by hybridization experiments, Rebutia is apparently a quite distinct group.

Rebutias require light, fairly rich soil and partial shade. They are hardy to cold and frost and are, therefore, very popular garden plants. Nevertheless, as with all slope-growing plants, their roots must not be kept wet for an extended period of time.

References: Cardenas, M., 1964, New Bolivian Cacti. J. Cact. Succ. Soc. Amer. XXXVI:38-41.
Donald, J.D., 1971, In Defense of Sulcorebutia Backeberg. J. Cact. Succ. Soc. Amer. XLIII: 36-40.
Marshall, W.T. & T.M. Bock, 1941, Cactaceae. 220 pp., Abbey Garden Press.

THE LIBRARIAN REPORTS: by Edith Werner.

Lithops by G.C. Nels. This is the best book written to date for identifying lithops. Mr. Nels spent 12 years collecting and studying this genus and his fascination for lithops is shown in the photographs and drawings. Mr. Nels does not give many hints on growing lithops; therefore, a good companion book is "Flowering Stones and Midday Flowers" by C. Schwantes.

1975 Yearbook is a supplement volume to the Cactus and Succulent Journal of America.

Excelsa # 1 through # 4 is a yearly publication of the Aloe, Cactus and Succulent Society of Rhodesia.

SUCCULENT-OF-THE-MONTH

Euphorbia

Family: Euphorbiaceae

Madelyn Lee

This large, world-wide family consists of over 6000 species, most of which are not succulent. The spurge that aggravates most gardeners, the Christmas poinsettia and the common "Christ-thorn" are all of the euphorbia family.

The succulent euphorbias number between four and five hundred and are mostly found in Africa, India and the Arabian peninsula. Also, a few species are found in Mexico and South America.

The first record of the family was in 460 B.C. when Hippocrates wrote of its medicinal uses and values. In 25 B.C., King Juba II named the first succulent species after his physician, Euphorbus. The 'Medusan Medicinal Aloe', as it was generally called, was used to cure everything from a headache to bladder infections. The powdered latex was mixed with pepper, cinnamon and other ingredients and either rubbed on the afflicted area or fed to the patient. This must have been incredibly painful as most of the euphorbias produce a toxic latex that is intensely irritating, or in some cases poisonous. It is understandable why it fell out of use by the late seventeenthcenturies.

The odd shapes, strange tuberous roots and wide variety of spines make this family a joy to collect. A collector can choose from miniature plants (E. decaryi, E. cylidrifolia, E. turbiniformis) to huge tree plants (E. lactea, E. ingens). There are those that form small bushes (E. aeruginosa, E. heptagona), and those that form large bushes (E. grandicornus). There are plants that form large tubers, (E. persistens, E. tortitrama, E. squarrosa) and plants that look like a pile of green tubers (E. globosa, E. ornithopus). There is a whole group of leafy plants from Madagascar in the milii or 'Christ-thorn' type (E. duranii, E. lophogona, E. leuconeura). And there are those plants that are hard to describe (E. bupleurifolia, E. obesa, E. platyclada, E. esculenta), because they don't look like any other plant. It is even possible to have a whole collection of just the 'Medusae' (E. caput-medusae, E. flanagani) type of euphorbias. The list is endless - and fascinating.

A large number of these plants are easy to grow, and, if you live in a frost-free area, can be grown outside here in Southern California. The rest of the euphorbias do require warm (above 45 degrees F.) conditions in the winter time. Most of them require feeding at regular intervals and good amounts of water during the growing season.

Bring one of your euphorbias to the next meeting and share your plant and your experience with the other members.

FEROCACTUS

by Harry Boersma
Reprinted CSIE, July 74.

Ferocactus are the barrel cactus depicted so often in photographs, renowned for the life-saving of weary and thirsty desert travelers. "Fero" meaning ferocious and fierce is no doubt a well chosen name, for indeed, the formidable tough spines which may be flat and hooked were used by the Indians for fish-hooks to catch the swift and agile swimmers of the southern waters.

While these cacti come fairly easily from seed, they are rather slow growers and are therefore suitable for several years as windowsill plants, although finally growing too large for small collections. They do make good specimens in botanical gardens with their globular or cylindrical stems and very prominent ribs on which are the 'areole' cushions from which the spines arise. Ferocactus inhabit the deserts of Texas, Arizona and California southward into Mexico. They may eventually grow as high as ten feet and three feet wide, depending on species. The spines and the ferocity of the plant usually are the interesting features for northern collectors where they seldom reach flowering size, and in many places also do not get enough sunshine. In more southern areas buds can develop into flowers with plenty of available light. The flowers, if produced, are certainly very colorful and attractive, and may be yellow, red or violet and somewhat bell-shaped. The spines also can be very colorful, although plants grown from seed normally are less outstanding in color than collected specimens (which on the other hand are hard to get established). Spines on plants from the desert are very vivid and the vividness shows up even more by slightly dampening the spines with water, supposing you wish to photograph them. Of the thirtyfive species known, all are worthy of cultivation as they are very imposing plants and an asset to any collection where sufficient space is available.

CEREUS-LY SPEAKING

Never have so many depended on so few - the Battle for Britain - no, during our last meeting, when all of us enjoyed the goodies provided by but a few: Jean and Leta, with only the help of Margaret Evans, Madelyn Lee and Harriet Sopp. It would be appreciated if more members would partake in this culinary venture.

Good news: Ruth Nelson is home from the hospital; not pulling weeds as yet or repotting plants, but feeling a lot better.

Bad news: I just heard that Lauron Lovelace's home caught on fire - and just a couple of days after he returned home from the hospital where he had been treated for a broken leg.

Anyone in need of putting up a cat for adoption or wanting to adopt one, contact our own Dr. George Radwin, who is the president of "The Friends of Cats" shelter in El Cajon.

Coming events: Sat., Sep. 6th, 1975, at 1:30 pm, Quail Gardens Foundation's President Florence Seibert invites all interested to attend the Annual Meeting in the Ecke Family Building in the Gardens. A most interesting program will be presented by Dr. Donald Watson, former professor of horticulture at the University of Hawaii, who is the author of "Plants are for People" and, with his television appearances, has delighted plant lovers everywhere. Refreshments will be served.

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GARDEN HINTS

"Shampoo your Old Man! Cactus, that is!" - (From Cactus Capital Chatter, Vol. 10, # 2) Do you know that you can? A weak soapy warm wash will do no harm. It will give the plant a clean white appearance. The soil in the pot (or around the plant if in ground - The Ed.) should be covered with a paper or a cloth to keep soapy water from saturating the soil. In giving a shampoo, the hair should not be rubbed too hard, or in the opposite direction in which the plant is growing. Otherwise, a bald 'Old Man' may result. After the shampoo, a wash in clean clear water completes the operation.

Cheap solution to ant problem: Mix $\frac{1}{2}$ cup molasses, $\frac{1}{4}$ cup of sugar and a packet of dry yeast into a paste. Coat one side of small pieces of cardboard and place the coated pieces in the ant runways. You will no longer be troubled by the little pests.

On Pesticides: (by Kathy Kepner, in CSIE, Aug. 75) "You know I've got a hang-up on using pesticides which has recently been re-inforced upon reading a Pesticides Manual put out by the Michigan State University, an interdepartemental effort. At the end, there is a 3 page listing of oral and dermal toxicity ratings for some 300 chemical -- brand name and ingredient name, -- also with notes of which are persistent and accumulative, and which are highly toxic. While malathion is ranked as "low order of toxicity", Cygon (dimethoate) is ranked as moderately toxic. Al Irving (who heads up the Berkeley Botanic Gardens) told me he would under no circumstances use Cygon 2E but he would use Cygon 287 (or some such number indicating a dilute form) with gas mask and rubber suiting, etc. I was asking him because I had previously ordered Cygon 2E from a supplier in California and upon receiving the bottle decided not to use it because the directions said 'under no circumstances use this in a residence'. All I can say is avoid Chlordane which is persistent and accumulative. And absolutely No-No to the highly toxic: Thimet, Dansanit, Systox, Dyston, Temik, Phosdrin and Parathion. Those are the most lethal."

What to do about alkalinity of soil: Particularly southern California with a minimal yearly rainfall, is plagued by a highly alkaline soil. Some plants, such as Gymnocalyciums and epiphytes, will not tolerate this condition. Just add a few drops of acetic acid (vinegar) to one gallon of water and use on specific plants. The vinegar will neutralize some of the excess alkalinity.

Cereus-ly Speaking, cont'd:

Quail Gardens tour should include the improved cactus and succulent areas. The months of July, August and September feature the following plants in flower: Bauhinia galpini (Nasturtium Bauhinia), Ceratostigma willmottianum (Chinese Plumbago), Chiranthodendron platanoides (Monkey Hand Tree), Clerodendrum bungei (Cashmere Bouquet), Clethra arborea (Lily-of-the-Valley Tree), Duranta stenostachya (Sky Flower), Iochroma lanceolata (Purple Tobacco), Jacaranda acutifolia (Green Ebony Tree), Passiflora manicata (Scarlet Passion Flower), Proteas varieties, Puya alpestris; Puya cerulea (Pineapple family, steelblue flowers, orange anthers), Sollya fusiformis (Australian Blue-Bell) Stenolobium stans (Yellow-Bells), and Tecomaria aurea; Tecomaria capensis; Tecomaria shirensis (Cape Honeysuckle).

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SEEDLINGS AFTER GERMINATION

by Robert Swan

Reprinted from CSIE, Jan. 75.

After they germinate, seedlings are very small, not only in the size of their plant bodies but also in the size of their roots. Therefore they are very easily stunted in their growth or even killed by adverse conditions. For this reason moderation in reference to growing conditions is a key to success. Ideally, the seedlings should be kept growing steadily without unnecessary shock.

Air and soil temperatures between 70 and 95 degrees F. are generally recommended. Soil heating cables or any other method of keeping the soil warm encourages active root growth which is essential for good growth of the plant body. Soil should be at least two inches deep and preferably deeper; otherwise it would be so shallow that it would dry out too rapidly. Seedlings should be kept uniformly moist, but not saturated with water because this would encourage disease and rotting. If they dry out between waterings, the sensitive young roots may be stunted in growth with the result that the seedlings will grow only slowly, if at all. The importance of this point cannot be emphasized too much, for the one thing we do most to our plants is water them. After the first year of growth, the need for uniform soil moisture is not as critical. If mould or other fungus disease such as orange-rot or damp-off becomes a problem, a good fungicide can be applied, such as Consan-20 (Physan 20) or Benlate. Often a good preventative measure is to insure adequate fresh air, since a stagnant moist atmosphere encourages fungus growth. Remove any badly diseased seedlings quickly to avoid spreading of the disease. Light, too, should be moderate. Light that is too strong may cause seedlings to redden and consequently stunt their growth, while weak light may cause seedlings to elongate unnaturally. Any change in light (or any other conditions for that matter) should be gradual so that seedlings may become accustomed without shock.

If your seed has not germinated within a couple of weeks, you may be tempted to throw them out. Conditions may not be to their liking. Many factors can effect germination. In addition, there are some species whose seeds are known to germinate poorly, if at all. These include: *Pediocactus*, *Sclerocactus*, *Utahia*, *Echeveria*, *Kalanchoe*, *Pachypodium*. In the writer's own experience, *Mam theresae* can be difficult to germinate. Twelve months after being planted only one seed has germinated. This small plant, $\frac{1}{4}$ inch high, already shows the characteristic feathery spines. Supposedly, *M. theresae* may need to age up to two years before germinating.

Transplanting seedlings before it is necessary may be shocking to them, especially if roots are damaged. Until they become so crowded that they touch, it is not necessary to transplant seedlings. Soil nutrients can be replaced by the addition of fertilizer. Keeping the idea of moderation in mind, the application of diluted fertilizer each time seedlings are watered is best.

Good luck with your seed raising. It can be quite a challenge to coordinate the conditions necessary to encourage germination, then to keep the seedlings growing. Later you will feel a real sense of accomplishment because you helped create a beautiful plant from what appeared to be a minute, lifeless seed.

SAN DIEGO CACTUS & SUCCULENT SOCIETY

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Cereus-ly Speaking, cont'd:

We are still with the coming events: Don't miss the Turtle and Tortoise Show, Casa del Prado, Balboa Park, Sep. 6th and 7th, 1975. Open from noon to 5 pm. Admission free.

Lillian Pickoff, under Affiliate News, reports in the "Open Gates" that, hopefully, Cynthia Giddy, the well-known Aloe and Cycad expert, will be available in January 1976 to give a program at the L.A. Arboretum. Also, looking into the more distant future, Dr. Werner Rauh is expected in August 1976. Might we hope to have these excellent speakers at some of our own meetings???

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All of us, I am sure, tremendously enjoyed Frank Harwood's program last month on Southwest Africa. While I shall always remember his excellent presentation in detail, I must admit that the name of the succulent shown in his last slide keeps escaping me.

Keep your eyes on President Mooney at the next meeting. He has a special offering in the making!

~~Augie Pfeiffer~~
~~5163 E. Bedford Drive~~
~~San Diego, Calif. 92116~~

~~Address correction Requested~~

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