



MAMMILLARIA THORNERI

Espinas y Flores

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June Meeting

Saturday, June 14th, 1980

1:30 pm

Casa del Prado, Room 101, Balboa Park

"Mesembs in Habitat"

by Steven Hammer

This program will feature a slide presentation on Mesembs in the field, given by Mr. Steven Hammer of Santa Cruz. Mr. Hammer began collecting Lithops at the age of fifteen and his interest in them, and in the other Mesembryanthemums, has grown ever since. He is currently engaged in propagating rare, spheroid Mesembs, chiefly Conophytum, and studies their seedling development, hybridization and self-fertilization. This Spring, he was fortunate enough to visit Southern Africa and study his favorite plants in the field. In addition, Mr. Hammer is a musician and teaches at The University of California at Santa Cruz.

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COTYLEDON & ADROMISCHUS

by Rick Latimer

"Cotyledon" was the name first applied to some unidentified plant by Hippocrates, the father of Medicine. Its earliest recognizable use to a plant known today was by Dioscorides, Cilician-Greek physician of Nero's Court, at about 50 A. D. In his Codex Vindobonensis is illustrated what we know today as Umbilicus erectus, but then was named Cotyledon. Cotyledon derives from the Greek root word "Kotyle", which means "socket", presumably due to the shape of a typical Umbilicus leaf. (The word "Umbilicus" is Latin for navel). When modern botany began with the publication of Species Plantarum by Linnaeus in 1753, seven species were listed under Cotyledon:

1. Cotyledon orbiculata-the type species of our modern Cotyledon
2. C. hemispherica-now Adromischus hemisphericus
3. C. serrata-now Rosularia serrata (of the Sedoideae)
4. C. spinosa-now Orostachys spinosus (of the Sedoideae)
5. C. renens-now Umbilicus erectus
6. C. tuberosus-now Umbilicus pendulinus
7. C. laciniata-now Kalanchoe lacinata

All of these plants are of the Old World. It was forty years later that the first New World cotyledon reached Europe and was named C. coccinea (now Echeveria coccinea). (The word "cotyledon", of course, turns up in Monocotyledon and Dicotyledon).

In the modern-day Crassula family there is (among six) the subfamily Cotyledonoideae. Within this subfamily are six (or seven) genera-Adromischus, Chiastophyllum, Cotyledon, Mucizonia, Pistorinia, and Umbilicus. Adromischus derives from the Greek words "hadros" meaning thick and "mischos" meaning stalk. All of the species are native to southwestern Africa and mainly to Cape Province, Namaqualand, and Transvaal. A few species have a wide range to their habitat, but most are quite limited. Most species are short stemmed and form miniature clumps. The succulent leaves are mostly olive to pine green, often with purple spots, but some may have grey or reddish leaves. A. festivus (usually found under the name A. cooperi) has the typical leaf coloring, and with its elongated leaves, is commonly known as "Plover's Eggs". An unusual species is A. cristatus, with its undulate leaf tips and red-haired stems. The main period of growth for

this genus is in the fall and winter. The summer is usually taken up by the flowers. This genus is excellent for those with a limited space to grow plants or those who just like miniatures.

The genus Cotyledon consists of two vegetative types. First there are the "evergreen" species, which generally have been around longer, are more common, and may be grown just out in the yard. Such species as C. ladismithiensis (with its fuzzy leaves with brown tips gives it the common name "Bear Claws"), C. orbiculata, and C. undulata (the most beautiful of all with its chalky leaves with the undulate edges reminiscent of Adromischus cristatus) are well known. The "deciduous" Cotyledons are highly favored by succulent collectors. They lose their leaves in the summer and go dormant. A few such species are C. wallichii (a poisonous plant that kills livestock), C. dinteri, and C. grandiflora (aptly named). Cotyledons are native to, mainly southern Africa, but also Ethiopia and southern Arabia.

Adromischus was established by Lemaire in 1852. It is distinguished from Cotyledon in having flowers which are usually tubular and racemose rather than campanulate (buds look like chili peppers) paniculate. Yet, the leaf and flower characteristics intergrade in certain species between the two genera. For example, C. pygmaeum, C. sinus-alexandrii, and C. buchholziana approach Adromischus in having similar growth, nearly tubular flowers that are erect, and small growing habit. On the other hand, A. schaeferianus, A. casmithianus, and A. phillipsiae have colorful flowers resembling those of Cotyledon. A solution to this problem (pointed out to me by October 1979 speaker Walter Wisura) has been to place at least some of those species listed above in this paragraph in a new genus Tylecodon (an anagram of Cotyledon). See the Toelkin references below, if you can find copies.

REFERENCES:

Myron Kimnach, "The Genus Adromischus", CSSA Journal, (25:2), March-April 1953, p. 41-48.

Gordon Rowley, The Illustrated Encyclopedia of Succulents.

A. W. Smith, A Gardener's Dictionary of Plant Names.

H. R. Toelken, "New Taxa and a New Combination in the Genus Cotyledon", Bothalia, (12:2), 1977, p. 191-194.

H. R. Toelken, "New Taxa and New Combinations in Cotyledon and Allied Genera", Bothalia, (12:3), 1978, p. 377-393.

Eric Walther, Echeveria.

Cactus-of-the-Month

Echinocactus Link and Otto 1827

Frank C. Thrombley

Echinocactus (ē-kī' -nō-kak' -tūs)

Echinocactus Group

A genus of cacti from Mexico and the United States. The name of June's cactus-of-the-month is derived from two Greek words meaning "hedgehog or sea urchin" and "prickly plant". They are small to very large plants, some of the latter the largest of all spherical cactus. The stem is globular or cylindrical, with prominent ribs, usually straight and continuous. The crown of the plant is woolly with large areoles. The areoles are very woolly at the top, and the flowers are borne on the new areoles at the center. The flowers are often deeply embedded in the wool. All plants have yellow flowers, with one pink exception. The fruit, like the flower, is scaly and woolly. The seeds are chestnut brown to black, smooth, glossy, with a minute scar at the point of attachment to its base.

In 1827 Link and Otto established the genus Echinocactus, describing and illustrating 14 species. Of the 14 species described, 12 of them were described as Melocactus. Karl Schumann, in his monograph of 1898, described 138 species, some of which were South American in origin. In all, there were more than 1000 names used in the Echinocactus genus.

Britton and Rose amended the genus in 1908 and described 9 species. They designated Echinocactus Platyacanthus as the type of the genus which was originally described by Link and Otto. Backeberg added Echinocactus Parryi to Britton and Rose 9 species for a total of 10.

Probably the most popular and best known specie is the "Golden Barrel Cactus", Echinocactus Grusonii, from Mexico. The young plants are globular with golden awl-shaped spines, hence, "Golden Ball". As the plant matures it becomes somewhat flattened at the top and the spines change color to pale yellow or white. This plant will grow to 4 ft. high by 3 ft. wide.

The largest of the genus is probably, Echinocactus Ingens, from Mexico. This plant can grow to six feet high by four feet in diameter. The Royal Botanic Gardens at Kew, near London England, possessed a specimen having a circumference and a height of 10 ft. It weighed about a ton. This was in 1846 and the plant was discovered and described in 1837. This means that this 10 foot giant, Echinocactus Ingens, was imported from Mexico, which was quite a feat.

The one species native to California, Echinocactus Polycephalus, is a plant of the most forbidding, hot, dry desert mountains. It grows from northern Inyo County and the panamints beside Death Valley to Randsburg and Victorville in the Mojave Desert. A small outlying colony occurs in the Coyte Mountains of Imperial County.

Two species, Echinocactus Horizontalonius and E. Polycephalus, are difficult to grow in cultivation. They need a higher temperature than most, and are sensitive to stagnant moisture. The other species are easy to grow and seem to have a greater tolerance to mans lack of knowledge or experience for the requirements for growing these plants.

I know a person who received a "Golden Barrel" cactus as a gift at Christmas in 1971. The following is a sequence of happenings to demonstrate the tolerance this plant had.

- . Christmas 1971/72 the plant was received in a 4" plastic pot. In January 1972 the plant was placed outdoors and left in the pot.
- . Between January 1972 and summer of 1973 the plant received no care other than water, when watering the garden.
- . In the summer of 1973 the plant was transplanted into a 6" clay pot. Dirt from the garden was used to fill the void in the new pot.
- . In March of 1975, once again the "Golden Barrel" was transplanted. This time into an 8" clay pot and once again with dirt from the garden.
- . In the spring of 1976 this person became interested in cactus and cactus culture. In August of 1976 the Golden Barrel, now called Echinocactus Grusonii, was transplanted into a 10" clay pot with a prepared soil mixture which was thought to have the right texture. Further, the dimension of this Echinocactus Grusonii was recorded. Care in watering was adapted.
- . November 5, 1978 the Echinocactus Grusonii was transplanted into a 14" clay pot. The plant measured 12" in diameter X 8" high.
- . In September and October of 1979 my golden barrel flowered.
- . On March 3, 1980, my Echinocactus Grusonii, sometimes referred to as "Golden Barrel Cactus", measured 13" in diameter X 9" high.

References Used:

- Backeberg, Curt, 1977 Cactus Lexicon Blandford Press, England
- Barthlott, Wilhelm, 1979 Cacti Stanly Thornes, England
- Borg, J., 1976 Cacti Blandford Press, England
- Britton and Rose, 1937 The Cactaceae Dover Publications, New York City
- Dawson, E. Yale, 1975 Cacti of California University of California Press, California

JUNE OPEN HOUSE, SHOW AND PLANT SALE

Our Annual Open House will be held on Saturday, June 7th, (1 pm to 5 pm) and Sunday, June 8th, (10 am to 5 pm) in Room 101, Casa del Prado.

For those members who were unable to pick up their entry tags at the May meeting, contact Martin Mooney at the setup times (June 6, 1 pm to 8 pm) and (June, 7, 7 am to 10 am) to receive your tags.

The Registrar & Clerks Chairperson, Betty Athy, would like all members displaying plants to check in with her first before putting plants on the tables.

We strongly suggest that you do not water your plants just before the Show. The pots leave damp blotches on the table cloths, and the plants will not be so difficult to carry to the Show.

Fifty decals, "Cactus Lovers are Always Thorny", will be on sale at the Annual Open House for \$2.00 each.

Carl McLeod will be making special trips to several different nurseries to purchase common, rare and unusual cacti and succulents to sell for reasonable prices at the Annual Plant Sale. In addition, there will be plant donations for sale.

We should all work together to make this Open House an unforgettable success.

AN INVITATION TO ALL MEMBERS

WHAT: Judges' Pot Luck Luncheon

WHERE: Casa Del Prado Loggia

WHEN: Saturday, June 7th, 1 p.m.

SDCSS will furnish coffee, tea, punch, and place settings.

Bring dishes to kitchen or Loggia at noon as some workers will eat early in order to open the show at 1 p.m.

For reservations, call Pat Mooney, 427-6796.

CSSA Notes

The Cactus and Succulent Society of America's Annual Show will be held at the Los Angeles State & County Arboretum on July 4-5-6, 9 am to 5 pm. Setup times (July 2, 9 am to 9 pm) and (July 3, 9 am to noon).

NOTES ON RARE EUPHORBIAS

Euphorbia handiensis Burchard

by Madelyn R. Lee

Eight hundred miles southwest of the Straits of Gibraltar, west of Morocco, the Canary Islands hold their place in the Atlantic Ocean.

You think of these islands as lush and tropical. Pine and laurel forest, daisies, senecios, palms, leafy euphorbias, dragon trees, and aeoniums, aeoniums, aeoniums.

This is true of many of the islands except the two nearest Africa, Fuerteventura and Lanzarote. These two islands are too low to capture moisture from the North Trade Winds and the dry, hot winds from the Sahara Desert dry up what little water does fall. Ten inches of rain might fall in a "wet" year. In a dry year, none.

The island of Fuerteventura was probably part of the African Continent long ago. It now consists of sand dunes and hilly plains cut by volcanic ridges. The southern peninsula, Jandia, is the highest point on the island and the higher ridges are rich in plant life. The steep ridges drop sharply to sandy beaches and along these desolate slopes Euphorbia handiensis is found.

The Canary Islands have been known since before the 1400's, but the first formal botanical work was not attempted until 1750. Many studies of the flora of the islands were made between 1800 and 1900; however, it was not until 1912 a German doctor, O. Burchard described this Euphorbia. The plant was no doubt hard to find in 1912. Today it is even harder to find, very rare, and endangered.

E. handiensis is a cactus-like, dark green shrub, 35 to 45 inches tall and densely branched, mostly from the base. The 2½ to 3½ inch thick branches have eight to fourteen angles with closely spaced white spine shields topped with about one inch long paired, straight spines. The flower is reddish and the seed capsule is brown or red.

Since the island of Fuerteventura at one time might have been part of the African Continent, it is possible E. handiensis and Euphorbia echinus either shared a common ancestor, or one or both plants have followed Darwin's theories of evolution. E. echinus is native to Morocco, the closest African country to the Canary Islands and the two plants are similar in growth patterns, flowers, and seed capsules.

E. handiensis does not seem difficult to grow. It does grow in a slightly different time pattern than most of the African euphorbias do. It seems to follow the Aeonium timing of dormant from May thru August, and growth from fall to early spring. I do not know yet if it will adapt to our growing seasons with time.

References: Bramwell; Wild Flowers of the Canary Islands.

Jacobsen; Lexicon of Succulent Plants.

Member Interviews: Warren Buckner

by Marcia Monroe

Originally from the Ozarks, Warren spent most of his early years living in University City, a suburb of St. Louis, Missouri. He attended the Missouri School of Mines, Rolla, Missouri, receiving a degree in mechanical engineering. For thirty-four years Warren has done scientific computing for General Dynamics and he is now retired from that company. His wife, Virginia is from Cochrane, Alabama, and she enjoys the art of cooking. The Buckners live in the city of Lemon Grove, and they have four grown sons. Currently, Warren holds these important positions: Director of the Helix Water District, Chairman of the Planning Commission of Lemon Grove and School Trustee of Lemon Grove (for the past twenty years).

Warren became interested in cacti twenty-six years ago when his sons gave him Mammillaria hahniana for a birthday present. The plant is still in excellent condition and it is now 15 inches tall. He has been collecting for 15 years taking several extensive trips into Baja California, and on one occasion he went on an excursion to Sonora (state of Northwest Mexico, on the Gulf of California and the South Arizona border). Warren is a member of the Cactus & Succulent Society of America, and he has been a member of the Affiliate Society of San Diego for 14 years. He is also a member of the Mexican Cactus & Succulent Society.

During his membership in our Society, Warren has held the following positions: president, vice-president, member of the board of directors, treasurer, secretary and he has served on numerous committees. He has helped to set up exhibits at the Del Mar Fair, and he also has won numerous awards at our annual show including Best Educational Exhibit for his Aloe, Haworthia and Gasteria display (a CSSA award). Too, Warren has been a judge at the Carlsbad Flower Show.

Warren has successfully grown over 1000 different species of cacti and succulents, and he warns that overwatering can be a plant's worst enemy. He recommends 1/3 standard mix, 1/3 sand and 1/3 pumice for regular cacti and for epiphytic cacti (Schlumbergera, Zygocactus, Epiphyllum and Rhipsalis) he suggests using 1/2 potting mix (Hawaiian Magic® or a similar product) and 1/2 pumice. He has a special liking for epiphytic cacti and mammillarias, and his many plants are housed in a lathe house or a greenhouse. He raises his Rhipsalis on his patio.

Without active members like the Buckners, Warren for his continued assistance and Virginia for her moral support, our Society would lack vitality and strength.



News of Interest

Betty Athy has seed distribution lists from the Cactus & Succulent Society of Great Britian and the Mammillaria Society.

There is also a Spring seed list from the David Roberts Wildlife Limited, Lake Baringo, Nakuru, Kenya. Contact Marcia Monroe for more information.

We welcome this month the following new members:

Mark Johnson, Vista
Peggie Skop, San Diego
Jim Geier, Solana Beach
Desert Botanical Garden, Phoenix, Arizona

A reminder that the following members have signed up to provide refreshments for the June meeting:

Marianne Thrombley, Evelyn Chatham, Melba Batchelor, Nita Cotten, Helen Bowen, Beverly Kirkegaard, Sarah Jervey, Pat Mooney, Jean Hapeman, Kurt Richardson, Mr. & Mrs. Charles Clark and Margaret Daigle.

Winners of the "Bragging Plant" competition for May were:

1st: Floyd Gable - Bursera microphylla
2nd: Ronald Monroe - Rebutia espinosae
3rd: Martin Mooney - Pterodiscus speciosus

The Society would like to thank Bill & Ruth Nelson for their gifts to the library:

Biles, R.E. - The Complete Book of Garden Magic.
Patraw, Pauline M. - Flowers of the Southwest Mesas.

We wish to thank Martin and Pat Mooney for their donation of the perpetual trophy "Best Aloe in Show" in Barbara Jeppe's honor to the San Diego Cactus & Succulent Society.

In addition, a "Sweepstakes Trophy" (high point winner) was presented to our Society by Ronald and Marcia Monroe.

The Annual Picnic will be held at Quail Gardens on Saturday, July 19, 1980.

=====Deadline for the July issue is June 27=====

San Diego Cactus & Succulent Society

Officers

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Elizabeth Athy, Shirley Berry, Dr. Ronald Monroe, Martin Mooney,
John Pasek, Dr. Leroy Phelps

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Cacti - Frank Thrombley and Dr. Ronald Monroe
Succulents - Richard Latimer and Dr. Leroy Phelps
Exhibits:
Bragging Table - Shirley Berry
V.I.P. (Very Important Plants) Table - Sandra Buck
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Membership: Joan Johnson
Open House: Martin Mooney
Plant Exchange Table: Doris Rake and John Roth
Plants & Supplies Table: Carl McLeod
Programs: Richard Latimer
Publication: Marcia Monroe (ph. 461-8444)
Reception: Rose D'Attilio and Veryl Snowhill
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Representatives:
Balboa Park Desert Garden - John Pasek
Quail Botanical Gardens - Audrey Johnson
S.D. Botanical Garden Foundation -
S.D. Floral Association - Verna Pasek

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 \$7.00 per family. Single copies of Espinas y Flores are 60¢.

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Address Correction Requested

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