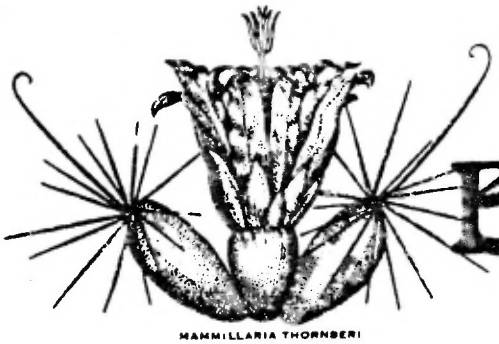

Espinas y Flores

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

Vol. XVI, No. 2 February 1981

February Meeting

Saturday, February 14, 1981
1:30 pm
Casa del Prado, Room 101, Balboa Park

"Argentina South of Buenos Aires"

Victor Turcek will give a slide program titled "Argentina South of Buenos Aires". It will cover Cactus & Succulents in the Provinces of La Pampa, Rio Negro and Neuguen up to the foot of the Andes. Victor was raised in Argentina and he has traveled through much of the country in search of cactus & succulents. Victor is now living in the Los Angeles area and he is a member of CSSA. He was the winner of the "Best Individual Display" award at the 1980 CSSA Show.

In This Issue — Page

Cactus-of-the-Month

Mammillaria Haworth

Frank C. Thrombley

Mammillaria (măm-i-lā'-ri-a)

Group: Mammillariae

The genus Mammillaria is predominatly of Mexican distribution. Its range does extend to Colombia and Venezuela in South America with two species that are endemic to that region. In the West Indies, there are two species also endemic to those islands. The species found in the United States range from South-Central Texas westward through Southern New Mexico, Arizona and Southern California. All of the species found in the United States are also found in Mexico. If one were to be asked where a specific specie of Mammillaria originated, he would be safe in saying Mexico. There are more than 300 species native primarily to Mexico.

Adrian Haworth established the genus in 1812, deriving the name from the Latin term, Mamilla, which means "nipple". This alludes to the tubercles of the plants which are arranged in spirals downward from the apex in both clockwise and counter-clockwise directions. The tubercles are variable in form and arranged in intersecting spirals which are, in general, a diagnostic character of the relative species. There are no ribs on these plants.

A genus of plants mostly clustering or branching, low, globular or oval or cylindrical and sometimes much elongated. Some will stay solitary throughout their lives, and others will form very large clustering mounds, Their sizes range from:

Mammillaria saboae: Body remaining small, simple or offsetting, from 1/2" to 1" high. (This plant was named for its discoverer, Kathryn Sabo, president of CSSA).

Mammillaria guerreronis: Body cylindric, 2 1/2" dia. by 24" high and caespitose.

The spines are arranged in various positions within the areole at the apex of the tubercle. Some species bear only central spines and others bear only radial spines, while most species have both. The variation in spine size and structure is often influenced very strongly by the environmental conditions as well as the hereditary factors, hence the spine count as a species separation factor is in many cases an artificial division and individual members of a species will often overlap these arbitrary limits. The central spines may be either straight, bent or hooked at the tip, but the radial spines are nearly always straight or at most, only slightly bent in their over-all length.

The flowers arise from the axils (depressions between the tubercles) and not from the areoles. The flowers are variable in size, but mostly small, colors ranging from white to yellowish to red. The flowers appear in a ring from the axils of the previous years growth and never from the apex of the plant. The club-like fruits of the flowers appear from the axil at maturity and are green to red in color.

It is not uncommon to have a ring of flowers and a ring of fruit on a plant at the same time - a very pretty sight.

The Mammillaria genus is further divided into two divisions. The sap that is found in the tubercles has been used as one of the major dividing factors. One fairly well defined group of species has a nearly clear to amber-colored or so-called watery sap while the other group has a whitish or so-called milky sap. The group with the watery sap is in the HYDROCHYLUS division. The group with the milky sap, which is not found in any other member of the cactus family, is in the GALACTOCHYLUS division.

Most species are of easy cultivation in any good loamy soil. As a general note I would recommend a moderately rich but well drained gritty soil. Due to the wide distribution, some of them inhabit cold hilly regions, or the plains of the praires, and at times covered with snow. Others inhabit areas with sandy soil, or even a soil stony and gritty. Most of them prefer full sunshine, only a few prefer half-shade during the hottest period of summer. In their native habitat a great majority of these plants are afforded partial shade from grasses and dried up wild annual plants which grow around them. They adapt very well to pot culture, but one should be aware that they will not tolerate stagnant water.

To study and grow these fascinating plants with their various forms could be a lifetime with many happy hours. What a hobby!

References used:

Backeberg, Curt. 1977. Cactus Lexicon. Blandford Press, England

Borg, J. 1976. Cacti. Blandford Press, England

Craig, R.T. 1945. The Mammillaria Handbook. Abbey Garden Press Pasadena, California

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Special Announcements

San Diego Botanical Garden Foundation Show schedule in Balboa Park (Casa del Prado), San Diego, California 92101.

February 7 & 8	San Diego Camellia Show (Conference Building)	Sat: 1-5 pm. Sun: 10-5 pm.
February 7 & 8	San Diego Orchid "Mini" Show	Sat: 12-5 pm. Sun: 10-5 pm
February 28 & March 1	Ohara Chapter of Ikebana Exhibit (both days)	11 am-4:30 pm.

February 17 Colors in the Desert Plants by Dorothy Loa Mc Fadden. Lecturer and author of two well known books on Gardens of Europe and the United States on Tuesday at 7.30 pm in the Majorca Room, Casa del Prado, Balboa Park. Free of charge.

SUCCULENT OF THE MONTH * FEBURARY

OTHONNA and SENECIO family; COMPOSITAE

Of approximately 20,000 species in the 'Sunflower' or'Daisy' family the genera Othonna and Senecio are two unique members of the largest plant 'family' in the world. The success of this family is mainly due to the composite 'flower' which is not one, but many florets packed tightly together and held by strong bracts. The florets produce pollen from the center outward and therefore the time available for pollination is extended giving the plant a longer opportunity for some agent to fertilize the flowers. The seed is efficiently distributed by 'parachute' like that of a dandylion, and is less likely to compete with the mother plant for space or food. The family is spread world wide, but the succulent Othonnas and Senecios are mainly restricted to south Africa. (A Key for each genera is found in the Lexicon of Succulent Plants by H. Jacobson.)

SENECIO

A species of this genera can be shaped like a tree, a creeper, a low bush, a rosette, a tuber or even a stapeliad. There are some with fleshy leaves, and some with fleshy stems, and some with both. The flower usually looks like a daisy without petals and is usually yellow, but sometimes coral or purple.

Senecios are not difficult to grow as long as you remember their growing season is in fall and winter. Water lightly in our spring and summer. Some of the species require winter warmth, but most of them will grow best out in the garden in full sun.

OTHONNA

The succulent Othonnas are mostly tough shrubs or sub-shrubs of a caudiciform habit. The alternate leaves vary in shape and are only on the plant during the short growing season from October to January. They are native to south and south-west Africa and grow in open areas in shallow, sandy soil. The long, pedicillate, daisy-like flowers are usually yellow, but white and purple are known.

These plants are not easy to grow. They will not tolerate and do not want water during their resting period. They are best grown in full sun, starved, and with little or no water until leaves appear in late fall. They do very well from seed and, as long as they are grown hard, will obtain their interesting native character under cultivation.

FOR MORE INFORMATION READ:

The Illustrated Enclyclopedia of Succulent Plants - G. Rowley
Succulents of Southern Africa - B.P. Barkhuizen
Lexicon of Succulent Plants - H. Jacobson
Cactus and Succulent Journal, U.S. - Many articles

REMEMBER!! ONLY YOUR PARTICIPATION MAKES THE PLANT OF THE MONTH TABLES A SUCCESS. BRING A CACTUS OR SUCCULENT SO YOUR SPEAKERS HAVE SOMETHING TO TALK ABOUT.....

Member Interviews: Sandra Buck

by Marcia Monroe

Sandra was born in Mansfield, Ohio, but spent most of her earlier years in the mountain states. She attended the following colleges in Colorado: Western State College, Colorado University and Denver University. In undergraduate school she majored and received a degree in art. As a graduate student, she obtained a Masters in English and worked, for a while, on a Ph D. in drama. Sandra lives and teaches (art and English at W.C. Crawford High School) in San Diego, California.

When Sandra started buying plants, she decided that she should study them individually and she states, "I have always been very interested in native and animal uses of plants, probably because I grew up in the mountains where people learned quickly the rudiments of food and health survival from plants which could be harvested from nature. Additionally, ranch women as well as Indians commonly collected plants for dyeing wool and leather which we all knew about - if we didn't actually participate, or buy the product. I think these considerations are really more important to me than that plants look good in pots."

Her first interest was Ceropegia (purchasing Ceropegia woodii for 75 cents). Living in an apartment, Sandra is a balcony gardener with limited space which makes special demands on the plants she has. She grows them hard (using more sand and pea gravel, and she underpots them).

She is a member of the International Asclepiad Society and the Cactus and Succulent Society of America. Joining our Club about 4 years ago, she says, "the excellent information I have gotton in the San Diego Cactus and Succulent Society has taught me to enjoy all the species. I find that the adaptive aspects of plant life is the most intriguing attraction to me and I have really enjoyed my membership in the Society. I think it is one of the best I have ever joined. Perhaps one of its best qualities, aside from the huge amount of learning I have received in it, is that although I can think of no way it needs to improve, the Society continues to make adjustments which make it even better year after year! It seems to me that makes a statement about the quality of the membership. Don't you agree?".

Conservation and Endangered Species -- An Historical Philosophy

Dr. Ronald E. Monroe

Although a recent article by Bob Kirkpatrick (Endangered Species: Are They? Who Can Prove It?; Espinas y Flores XV: 6, December 1980), prompted me to write this paper, I must confess that it is long overdue. People attuned to the various news media are constantly barraged with terms such as environmentalists, conservationists, endangered species, threatened species, etc., and seldom do they ever get an honest definition of what these terms actually mean. Hopefully, this paper will help in this regard; too, we must keep an open, analytical mind to the historical parameters of life on this Earth, whether plant or animal, as these are living resources that are normally renewable, but which can so easily slip toward extinction.

To begin with, this country was founded on the basis of "taking and using". It was so big and there was so much of it there, that it was ridiculous to think that we would ever have to worry about saving. This concept, unfortunately, spilled over into many early nurseries -- dig it up and offer it for sale; when it's sold, or it dies, go dig up some more; afterall, it's inexhaustible!

This attitude of early pioneers prevailed for years and animals and plants became extinct and the list is a very long one. Yes, man can and does cause extinction, and we all know that extinction is forever.

We then became aware of two new concepts: environmentalism and conservationism. The former is heralded by a large group of well-meaning persons who believe that as much land and life thereon should be protected from "use" as possible. They are known for being vocal, well funded and persistent, and they appear to spend much of their money in the courts fighting land developers, legislators, hobbyists, clubs, etc., and they bring considerable weight to bear on lawmakers everywhere to champion their cause via legislation. The latter concept, conservationism, is the idea that we should conserve but that we also need to use it too. Thus, forests may be cut for use, but as they are cut so must new trees be planted for future generations. In regard to succulents, several dozen plants of a "new species" could be removed (and plants should be chosen from different populations to insure gene pool variation) and these plants given to nurserymen known for their ability to propagate. The remainder of the plants should be left alone for possible scientific study or for esthetic value to interested persons everywhere. Thus, conservationism appears to be the wisest choice for us to take -- we can have our cake and we can eat it, too. True, large, hard-grown field-collected plants would no longer be available for general sale, but seed-grown plants or plants grown from rooted cuttings are just as enjoyable to own and just as valuable for the collector. Most importantly, it will leave the "gene pool" removed from habitat in one, two or three, etc., locations rather than have it scattered uselessly among the hundreds of collectors who require only "one" (when a person has only "one" the propagation ability of that species is reduced because its gene pool is limited; if a person has six or more, the gene pool is larger and propagation by seed is enhanced and survival of the young plants is increased). True, conservation practices have worked miracles for years and such practices can be utilized handily in using and

saving our succulent plants so eagerly sought by hobbyists.

Immediately, there is a problem -- every person who has a nursery feels that the right is theirs to decide the issues. Afterall, there is money at stake. And when money is "an issue", the major questions concerning conservation become heated, clouded and oftentimes lost in rhetoric. And every nurseryman thinks that he is the best nurseryman that ever was! What a pity that petty jealousies and vain egotism must be dealt with again and again. So who will get the plants for propagation? Obviously, it can only be those nurserymen who are bold, far-sighted, eager to try new propagation methods and sincere in their mission -- to propagate and offer the progeny for sale so that the wild population(s) remaining will have less collection pressure on them. And the nurserymen who still believe that constant field collection will always be possible and that field-collected plants should always be offered for sale and that they have the right to decide? Well, these persons, like the dinosaurs of old, have no current reasons for being, and their business must also become extinct less their product, the plants, are added to an ever lengthening list of extinct species -- and that is forever!

Therefore, we should be allowed to use so that propagation will be possible and the progeny should be easily made available to all collectors, but we must also conserve. Only those who are willing to face the facts of reality, that no resource must be exploited beyond reason, should be allowed to continue a nursery business, and the very people who keep them there, the collectors, are the biggest violators of all; thus, conservation begins and ends with the consumer who creates "the need" for the resource and his greed really causes all our problems. So, who is really at fault? We all are.

Now that the base for our problem(s) is established and one potential way to impede its deterioration has been discussed, one must still address the terminology brought about by years of abuse and neglect; that is, those species that are in some degree of trouble, usually because of interference by man:

Rarity -- this is a term all too frequently misused which very simply means, from an ecological view, that the species in question normally exists in very low populations naturally. This species is a victim of its environment and its population(s) is low because the land cannot support a larger one. One can only grow so many quail, deer, etc., on an acre of land. Try as one might, this "carrying capacity" cannot be exceeded without dire consequences. Yet, well meaning persons are forever suggesting that such and such a species can be removed freely as long as young ones are freely placed back into habitat. It doesn't work that way naturally, and there is a reason behind it, but this must await comment later.

Threatened Species -- this is a species that by population reduction or habitat destruction has had its population numbers reduced but it is still breeding somewhat normally, and is capable of a comeback, but which with more encroachment or manipulation by man could become truly endangered.

Endangered Species -- this is a species that by population reduction or habitat destruction has had its population numbers reduced to the extent that it is not breeding normally and is capable of a comeback only under unusualy strong measures, but which with more encroachment or manipulation

by man could become extinct.

Extinction -- a situation whereby a species can no longer be found to exist anywhere throughout its known former habitat or the remnants of its former habitat -- it is truly gone forever. True, geologic history is full of extinct species. There are far more extinct species in geologic formations than living species on this Earth today, and all this extinction occurred long before man ever came along. Thus, history has told us that whole groups of plants and animals behave like individual species that are born, grow to adults, reach maturity, grow to old age and then die; that is, these whole groups naturally appear, evolve into diverse groups filling all possible niches, evolve further into all possible phenotypes and then decline and die off, naturally, and man wasn't there! This is natural extinction and it is going on today, but man needn't enhance its speed nor control its destiny or direction.

And next we must decide what is endangered, how to measure it and what to do about it.

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New Publication

Handbook of Succulent Plants. Published by the Brooklyn Botanic Garden, Brooklyn, New York. 1977. Volume 19, Number 3 and 69 pages. This work includes excellent discussions by botanical experts on the following subjects: What is a Succulent?; Ornamental Possibilities of Succulents; Stapeliads; Hybrid Epiphyllums and Their Relatives; What Is a Cactus?; Cacti Have Leaves; Culture of Succulents; Illustrated Dictionary (with color, black & white pictures) of 50 Succulent Plants for Home Culture; The "Flowering Stones" of Southern Africa; Succulents in Gardens; How to Graft Cacti; Insects & Nematodes; Outstanding Collections of Succulents; Cacti and Succulent Societies, etc. This booklet can be purchased in Room 104 (Casa del Prado, Balboa Park, San Diego, California 92101) and it is well worth the price. The only fault to be found with this publication is a need for it to be revised. The price is around $2.00.

Reviewed by Marcia Monroe

Machaerocereus eruca (Brandegee) Britton et Rose

Questions: 1. Who first named this species? 2. Who placed this species under Machaerocereus eruca? 3. Why was it named Machaerocereus eruca? 4. This species has at least two common names. What are they? 5. Give a general description of this species. 6. What is the origin of this species? 7. How should this cactus be cultivated? 8. The many stems serve as sand retainers. How could this benefit the surrounding area? 9. What desert fox burrows holes among the prostrate stems?

Answers: 1. (Brandegee) under Cereus eruca. 2. Britton and Rose. 3. Machairos is Greek meaning dagger or dagger-like. Cereus is Latin meaning waxy. Eruca is Latin meaning caterpillar. The central spines are dagger-like. When this cactus was first discovered, it was recorded as giving the appearance of being an oversized 'crawling' caterpillar. 4. Chirinola and creeping devil cactus. 5. a. The stem (12 ribbed, 1 to 3 meters in length and 4 to 8 cm.in diameter) is prostrate on the ground with the summit (tip) ascending. To quote Barthlott, "it can grow indefinitely in length, with the rearmost part gradually dieing off". In addition, it will grow right over any obstruction in its way. b. The areoles have dagger-like central spines 3 to 4 cm. in length. c. The funnel-shaped flowers are 'whitish' with a pleasant scent. 6. Lower California (Baja California, Mexico). 7. Machaerocereus eruca should be grown in a dry, warm location and in full sunlight. 8. Erosion is checked to aid in additional accumulation. 9. Vulpes macrotis devius.

Reference:

Backeberg, C. Cactus Lexicon. 1976. Page 250. England.

Barthlott, W. Cacti. 1979. Pages 191-192. England.

Britton, N.L. and Rose, J.N..The Cactaceae. 1963. Vol II. Pages 114-116. New York.

CSSA Convention Notes

The following schedule is a partial listing of events at the Cactus & Succulent Society of America Convention to be held at the University of New Mexico in Albuquerque on May 31 through June 5, 1981:

June 1: Cacti of New Mexico; Cacti of the 4-Corners and Banquet with plant drawing.

June 2: Conservation; How to Cope with Succulent Lovers; Cultivation of Pediocactus; New Mexican Indian Arts & Crafts, Part I; Grafting Cacti; New Mexican Indian Arts & Crafts, Part II; Is There Really a Cactus Soil Mix?; Kachina Dolls and Their Significance; Coryphantha; Regional Succulent Culture, North & South, East & West; Meet the Board of the CSSA, Part I; CSSA Board Meeting; Haworthias and CSSA Members' Open Forum.

June 3: Bus Trip to Cultural Exhibits in Albuquerque; Reproductive Biology of Cacti & Rare Plant Auction.

June 4: Haworthias, Problems in Culture and Taxonomy; Fouquieriaceae; Ariocarpus, The Living Rocks of the Cactus World; Growing Succulents Under Lights, Part I; Succulents from Seed, Part I; Dormacy Requirements of Difficult Succulents; Cacti and Other Succulents of New Mexico; Cacti in South America; Regional Succulent Culture, Part II; CSSA Succulent Registration Program for Documented Plants; Flowering Cacti for the Beginner; Natural History and Ecology of New Mexico; IOS Members' Meeting; Growing Succulents Under Lights, Part II; Succulent from Seed, Part II; Lithops in Habitat and Cultivation; Euphorbias and Delegates' Meeting.

June 5: Judging; Indian Arts and Crafts, Part II; Growing Mesems, Part I; Judging Seminar, Part II; Growing Mesems, Part II; Euphorbias and Judging Seminar, Part III.

Interested members should consult the November-December issue of the CSSA Journal for further information.

Reference:

CSSA Journal. Convention Program. 1980. 52: Page 298.

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CSSA Notes

Dr. Larry W. Mitich, from the University of California, Davis, was appointed to fill the vacany of Board Director.

J. Pilbeam, author of The First Fifty Haworthias and The Second Fifty Haworthias, will be in the United States for ten days starting March 13, 1981; then he is traveling to Baja California.

News of Interest

At the last Board Meeting it was announced that the San Diego Cactus & Succulent Society's Annual Show will be held on August 29-30, 1981. Martin Mooney was appointed Show Chairman by the Board.

To save money on postage Joan Johnson has announced that membership cards will not be sent out in the mail.

We welcome this month the following new members:

Dee Hughes, San Diego
Gerald Rudy, El Cajon
Mark Donnennell, Alpine
Gordon & Sylvia McTavish, Sierra Madre

The following members have signed up to furnish refreshments at the February meeting:

Helen Bowen, Susan Barker, Gail Clarke, Marianne Thrombley, Jan Miller, Larry Lovell, Douglas Diener, Suzanne Taylor, Vangie Englert, Curt Hammel, Helen Brinkley and Joan Fleer.

A few of the members, who signed up in December to furnish cakes & cookies for the February meeting, did not renew their membership. To fill this gap we would like to ask members, who have not signed up, to volunteer to bring in additional refreshments. You may contact Nancy Roth (Ph 425-1963).

Please bring all cakes & cookies in on paper plates.

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

1st: Phyllis Flechsig - Testudinaria elephantipes
2nd: Martin Mooney - Uebelmannia pectinifera
3rd: Marcia Monroe - Graptopetalum filiferum

Members, who win a 1st, 2nd or 3rd place during the year at the "Brag Table", will receive one extra free plant through the lottery at the Annual Christmas Meeting.

At the February meeting Calendars (approx. 15 by 20 inches) printed in Japan, with a stunning color picture of a cactus or succulent on each page, will be offered for sale by our Club for $3.50. Interested persons should contact Betty Athy at the next meeting.

==========Deadline for the March issue is February 26==========

FIRST CLASS

FIRST CLASS

FIRST CLASS

Marcia J. Monroe
5635 Severin Drive
La Mesa, California

92041

San Diego Cactus & Succulent Society

Officers

President - Rick Latimer
5990 Lake Murray Blvd., La Mesa, CA. 92041 463-1655

1st V. Pres. - Frank Thrombley
16333 Roca Drive, San Diego, CA. 92128 487-5544

2nd V. Pres - John Pasek
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Corresponding Secretary - Anna Cornett
3905 Ibis St., San Diego, CA. 92103 291-6426

Immediate Past Pres. - Tom Hamecher
996 Terrace Crest, El Cajon, CA. 92020 440-6245

Board of Directors

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

Committees

Activities: H. Warren Buckner
Audit: James Berry
Conservation: Dr. Ronald Monroe
Education:
Cacti - Frank Thrombley and Dr. Ronald Monroe
Succulents - Madelyn Lee and Dr. Leroy Phelps
Exhibits:
Bragging Table - Shirley Berry
V.I.P. (Very Important Plants) Table - Sandra Buck
Historian: Rick Latimer
Library: Elizabeth Athy, Ruth Nelson and Caroline Miller
Membership: Joan Johnson
Open House:
Plant Exchange Table: John Roth
Plants & Supplies Table:
Programs: Frank Thrombley
Publication: Marcia Monroe (ph. 461-8444)
Reception: Rose D'Attilio and Perlso Lewis
Regalement: Nancy Roth
Representatives:
Balboa Park Desert Garden - John Pasek
Quail Botanical Garden - 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¢.