

Espinas y Flores

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

Volume XX, Number 3

March 9, 1985



MARCH MEETING

Saturday March 9, 1985

1:30 P.M.

Casa Del Prado, Room 101, Balboa Park

PROGRAM

SEYMOUR LINDEN

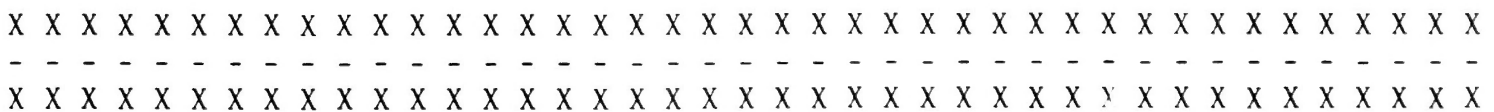
Seymour Linden of the Sunset Society in Santa Monica, will be presenting a program on his spring 1984 trip with Myron Kimnach, John Donald and Henry Varney to Bolivia and Peru. Seymour is an enthusiastic grower of succulent plants and an even more enthusiastic traveler to the Succulent World. Last year he won the 50th Anniversary Trophy for overall high points, the Bert Greenberg Memorial Trophy for high points in succulents, as well as the Ed Aby award for best Euphorbia and the John Bleck award for best Aloe in Show at the 19th Annual CSSA Cactus and Succulent Show in Arcadia. Presently he's a member of the board of directors in CSSA.

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Deadline for contributions to the Espinas Y Flores is March 29, 1985.
Thanks, Mary

SUCCULENT OF THE MONTH FOR JANUARY

SARCOCAULON (sarcos-'fleshy' and caulis - 'branch')

This member of the family Geraniaceae, is a fleshy, spiny shrublet with a unique wax impregnated bark. The "bushman candle" grows in cracks and sandy places, among rocks, in dry localities and more arid areas from Cape Province to Angola in Africa.

Varying in size from a few inches to about two feet tall the fourteen species grow in open spaces and are leafless most of the year. The petioles of the kidney shaped leaves remain as spines and water loss is prevented by the waxy bark. The pale yellow, pink or reddish flowers are large for the plant and look as if made of thin crepe paper.

This very desirable plant is dormant during our summer and grows in fall and winter. Water should be withheld during the dormant period as these plants are highly adapted to long dry periods and rot easily if watered 'out of season' or planted in poor draining soil.

PELARGONIUM (pelargo - 'stork')

Another member of the Geraniaceae, this large genus of 200 species plus uncountable hybrids is from temperate and sub-tropical areas in South and South West Africa. The shrubs or sub-shrubs have white to red flowers and, in the more succulent species, thick branches and/or tuberous roots. The growth forms are very diverse and the leaves vary from almost round to very frilly.

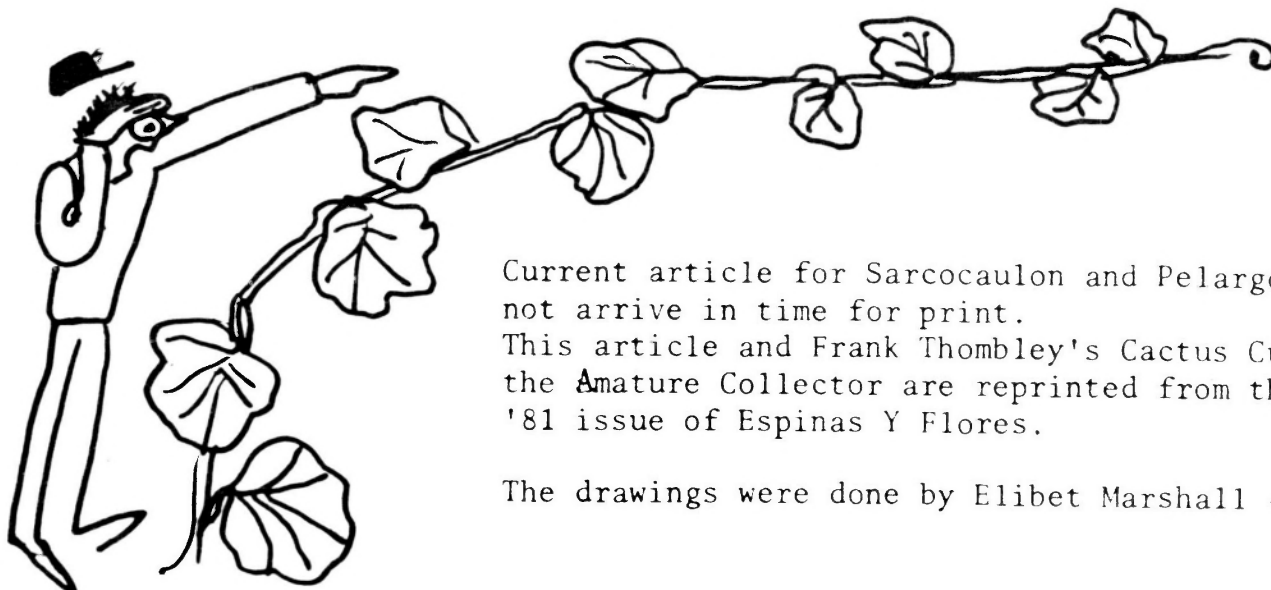
The plants grow in autumn and winter and should be kept on the dry side during spring and summer. They enjoy full sun and well drained soil

For more information refer to;

Pelargoniums of Southern Africa, by J.J.A. van der Walt

Succulents of Southern Africa, by B. P. Barkhuizen

Bothalia, Vol.12, #4, June 1979 ; The Genus Sarcocaulon, by R.O. Moffett



Current article for Sarcocaulon and Pelargonium did not arrive in time for print.

This article and Frank Thombly's Cactus Culture for the Amateur Collector are reprinted from the January '81 issue of Espinas Y Flores.

The drawings were done by Elibet Marshall - a new member

ETIOLATING OF CACTII

Frank C. Thrombley

Etiolation : (ē'-tī-ō-lā'-shūn) The bleaching or loss of chlorophyll caused by insufficient light and resulting in elongated internodes, (that portion of the stem between the nodes or joints).

From the definition above one can easily conclude this interpretive composition by saying, "Give your plants more sun or bright light". However, is that a just answer to the amatuer or hobbyist such as myself? We can read books that tell us of finding many cactii in habitat growing in deep grasses or under shrubs & bushes. Even advising the amatuer to grow certain plants in partial shade. So with this in mind here are my ideas on this subject.

Etiolation can start in some cactii that are wrapped in newspaper for shipment from the growers. I donot believe this to be serious. If the plant looks a little elongated when unwrapping in all probability it will revert back to normalcy in a short period of time after planting.

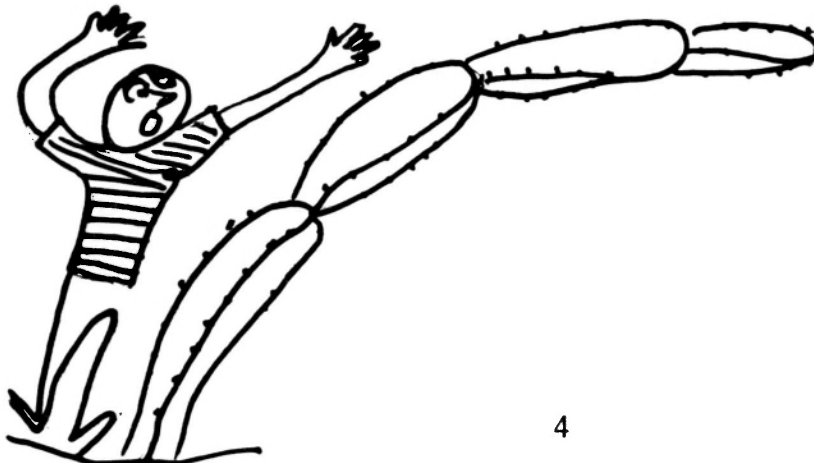
Etiolation of a plant that is growing in a location with to little light is the insidious danger. Two things can happen to us before we realize it and so slowly that we are not aware that it is happening.

1. The plant can slowly lose its proper color without elongating. Because of this and unless we are very sharp in our observation we think the plant is growing properly. A case in point: In May 1977 I purchased a Mammillaria glochidata which was planted in a 2" sq. plastic pot. I grew it in an EAST/WEST facing glass house. The east side of the glass house was shaded by a small tree. The west side of the house was shaded with slats similar to a lathe house. The plant grew very well in my opinion. It pupped and all the heads were tight, it was repotted each year and in 1980 it was in a 6" clay half pot. In 1982 the plant was in a show and one of my favorite critics in our club told me it was the worst looking M. glochidata that my favorite critic had ever seen. It was pointed out to me that the plants color was to light in color and the plant lacked vitality. It was lifeless in appearance. Constructive criticism from such a good grower should not be overlooked. I placed the plant outdoors on the north side of a large clump of Clistocactus in my garden. Today the plant resides in an 8" pot and is a rich dark green in color. It is now ready for another showing.

2. The plant can start to elongate and unless one is not fully cognizant of its proper growth habit, one can be fooled. Once again: In April of 1976 I purchased a Mammillaria zilmanniana and grew it in the same glass house previously described. This is a plant that should heavily cluster but mine did not. In the ensuing years it developed six fingers the longest being 8 1/2" in length. This plant has been growing in a brighter light during the past year but of course it will never revert to its proper shape.

The obvious answer is to grow the^e favorite plants of ours in bright light. But what about those plants that burn easily in direct sun. Growing many Notocactus in the direct sun not only burns them but they appear desicated. Even hardy plants such as Ferocactus when transplanted to a sunny location will burn. Now, since we live in Southern California, what we do here might not apply to those that live in England or Europe. We live approx. 32 degrees latitude from the Equator whereas the northern boundry of the U. S. A. and Central France is at latitude 48 degrees. Therefore let us learn from the professional growers in our area. All the growers nurseries that I have visited grow their plants in plastic covered greenhouses. The houses are usually all roofed with plastic with some of them having opened sides. The plastic diffuses the sunlight and gives a uniform bright light throught the house. In the hottest season the plastic (or glass house) is covered with a 50 to 60 percent shade cloth or covered with a white wash. Because of the diffused light and the reflective light from the interior the only shadow is under the benches. Now compare that with my glasshouse and its "set-up". First of all the sun is partially stopped by the tree and lathe which throws shadows. Further when the sun does look into the glasshouse the glass does not diffuse the light and so ther^e are some bright areas which are more or less pinpointed and very little reflected light. But let us go back to the Notocactus, for as we all know most of them, in habitat, live + or - 30 degrees latitude below the Equator. These are some of the plants that grow in grassy or shrubby areas and they do not etiolate in what may be considered semi-shady areas. The light from the sun however is reflected from the plants surrounding area and receives a fairly uniform bright light.

To conclude then, I believe that for growing potted cactii and prevent etiolating we should provide a uniform well lighted area. Each of us can devise their own ways of doing this. I offer one way that works fairly well for me. A 10 ft. long bench with room to place an avg. of three 8" pots deep was built. Attached to this a \wedge shaped roof of greenhouse grade plastic was built. The lower edges of this roof overhangs the bench and comes to within a few inches of the bench level. One side is hinged so that care of the plants is not hindered. The sides & bottom are left open. This structure at present houses 63 potted Mammillarias of various sizes. It also allows good ventilation and protection from the rains. For those of you who have more room can expand on this and of course can even create a small greenhouse with very little difficulty.



Part II: Containers and Water

Plant Container: The container is also a part of the soil; its nature is essential to success. The act of confining a cactus in a small pot is a radical departure from its normal way of life, where roots spread widely and seek the shelter and moisture of rock crevices.

Cactus can be grown in many different containers; clay pots, tin cans, wooden boxes, glazed pots or dishes and plastic pots. Pots are the most common containers used and so we will discuss them only.

Porous clay pots allow quick drying out and - if exposed to prolonged hot sun - scorching and death of the fine roots. To understand this, one must consider the relation between root and soil. The growing root attaches itself by means of hundreds of very fine root hairs, so closely to the soil particles that it seems almost as if united to them. Only in this way can the root absorb the thin layer of water which surrounds the particles of soil. Now if the soil dries out, its volume is reduced. This reduction in volume produces a tension which tears the root hairs apart and sometimes the very young roots too. The porous pot is continually drawing from the soil, water which evaporates from its surface. Further, nutritive salts also are constantly being drawn up from the soil in the pot, and, by continual watering, the soil becomes more and more leached. The advantage for the amature, however, is because the pot is porous. Unless we have a planned schedule we have a tendency to over water and lose plants to rotted roots. For those of us who live in the fog belt on the coast or where there is a great deal of overcast, I would certainly recommend clay porous pots. The exception to this recommendation would be pots under the 4" size. They dry out too fast and the cactus planted in them requires careful treatment.

Glazed or plastic pots, not being porous, do not have the disadvantages just described for the clay pot. One must remember, however, that most terrestrial cactus are especially sensitive to excessive moisture. Plants in these pots must be watered with more care because the moisture cannot escape from their sides. Glazed pots are usually selected for their decorative appearance. Plastic pots, also non-porous, are often used because they are light weight, inexpensive and come in a number of colors.

Consider the size of the pot in relation to the size of the plant being grown. Not only does a small plant look lost in a large pot, it rarely will survive. Unused soil generally becomes waterlogged and leads to rotting of the plants roots. Conversely, you cannot expect a large plant to respond in a tiny pot. Generally, for round or spherical plants use a pot one or two inches wider than the diameter of the plant. For vertical specimens choose a pot half as wide as the plant is tall.

Clean all pots before planting to be sure they are free of dirt and possible insect eggs. All pots must have drainage holes in the bottom. If you have a decorative container with no drainage hole you can plant the cactus in a clay pot which will fit inside the more attractive container. When potting, cover the drainage holes with broken sections of clay pots, screening or clean stones to prevent the compost from washing away. With plastic pots, it is a good idea to add extra stones or broken crocks to add weight to the bottom to help prevent the lightweight pot from tipping over with your prized cactus planted in it. When adding the compost, do not compress it around the plant with your thumb or fingers. Instead, gently tap the pot on the potting bench to "settle" the compost into the voids about the roots. Never fill the pot so that the compost covers the original soil line of the plant. It is best to leave at least a half inch or more below the base of the plant, this space can then be filled with decorative gravel so that the base of the plant is not in contact with the soil. Remember cactus are especially sensitive to excessive moisture and this is certainly true at its base.

Watering: Many factors govern the watering schedule for cactus; the type of soil, the kind of pot, the climate, the plant itself.

To say that cacti need "no water" or "little water" is nonsense. During the growing period they need water and like being dried as little as do other plants. If water is available to a cactus in its native land, then it grows, if there is none, then it goes to rest, at any period of the year. While all cacti, during the growing period, want a uniformly moist soil, a few genera and species are particularly sensitive to continual dampness, especially in cooler weather. Among these are the species from lower California; those from the coast of Chile, on the other hand, are very resistant to damp conditions. It is, therefore, impossible to lay down hard and fast rules about watering.

I started to collect cactus in the spring of 1976 and during the past four years have kept a file on each plant as I acquired them. During the first two years I used a moisture meter to probe the soil to determine when to water and logged this in the file. During this same two year period a compost mix was prepared which suited my needs. The knowledge gained from this led to the practice of watering my plants on a weekly, bi-weekly and monthly schedule, depending on the size and type of pot. I live in the Escondido area and so I would not recommend my watering schedule for one who lives on the coast. In the Escondido area we are hotter in the summer and colder in the winter months, with less dampness year around. As a side note I would add that using the moisture meter probe played havoc with the root ball of my plants. As a general rule for the beginner use a compost that drains immediately, this means that the water does not lie on the top of the pot for more than 30 seconds, preferably less. When watering be sure that the water is draining out through the bottom drain holes before you stop pouring water in the top. If air bubbles rise to the top of the pot while watering, continue until the bubbles stop. Never let your pots sit in water after watering. This could happen when you would place a potted plant inside another container that has no drainage hole. In the Southern California foothills to the coastal areas there are many micro-climates. We should establish a watering program for ourselves based on our area through trying and observing.

Remember that the compost, container and water are dependent on each other for healthy growth. Do not be afraid to experiment, that is the joy of learning. Ask questions at the Society meetings; the more advanced grower is always willing to help. We should avail ourselves to the Society library and learn more about our plants habitat. By participating we learn "the common sense techniques" which is a subject for another time. GOOD LUCK!

References used:

Buxbaum, Franz 1958 Cactus Culture Based on Biology, Blandford Press, London
Rowley, Gordon 1978 The Illustrated Encyclopedia of Succulents Crown Publishers, Inc., New York



NEWS NEWS NEWS

From the library here is a list of new books --

- Chris H. Bornman, Welwitschia
- R. Allen Dyer, Ceropegia, Brachystelma, and Riocreuxia in Southern Africa
- O. A. Leistner, Brachystelma, Ceropegia, and Riocreuxia
- P. J. Mitchell, The Sempervivium & Jovibarba Handbook

Bothalia (3:4), "Adenia, Adromischus, etc."

Excelsa I ACSSR

Excelsa X ACSSZ

Rick Latimer

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Bragging Table Winners for February:

- 1st Place Joe Clements for his *Brighamia insignis*
- 2nd Place Beverly Kirkegaard for her *Mammillopsis senilis*
- 3rd place Teresita Lime for her *Euphorbia didieroides*

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Those who have promised to bring refreshments for March are:

- Susan Shepherd - Nellie Kennett - Charles Skutt - Robyn Natwick - Ellen Low
- Mr. & Mrs. Charles Clark - Mary Aubuchon - Helen Brinkley - Teresita Lime
- Sylvia Kramer - Judy Hannula - Cathy & Sandy Frost Thanks

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Welcome to New Members --

Charles E. & Olga Holtzer and Mrs. Elibet Marshall

Index according to month of plant as printed in the Espinas Y Flores

Adenium & Pachypodium	June '81	Sarcocaulon & Pelargonium	Jan. '81
Agaves	Jan. '82	Sclerocacti	Feb. '82
Aloes, Miniature	Nov. '82	Sedum	March '82
Aloes, Nonminiature	Feb. '83	Sempervivum & Jovibarba	Aug. '83
Anacampseros	Apr. '82	Succulents of the Canary Islands	Jan. '83
Anacampseros, Ceraria & Talinum	March '81	Tephrocactus Lemaire	Jan. '83
Astrophytum	June '81	Thelocactus	Mar. '83
Bolivocereus Samaipatanus	Dec. '83	Turbinicarpus	Sept. '82
Borzicactus	Jan. '81	Weingartia	Apr. '81
Bromeliads	Nov. '83	Yuccas	Apr. '83
Bulbine, Gasteria & Bowiea	Apr. '81	Yucca schidigera	Feb. '82
Bursera, Fouquieria Pachycormus	Apr. '83		
Caralluma & Frerea	Spet. '83		
Caudiciform Succulents	Oct. '82		
Cephalocereus-Pilosocereus Group	Feb. '83		
Cereus	Nov. '81		
Cissus & Syphostemma	June '83	The Genus Kalanchoe	Jan '84
Cleistocactus (Lemaire)	May '83	Tephrocactus Lemaire	Jan '84
Conophytum and Lithops	Feb. '82	Pachypodium-Adenium	Feb '84
Copiapoa	Oct. '81	Cephalocereus-Pilosocereus Group	Feb '84
Coryphantha	Apr. '83	Echinocactus	March '84
Cotyledon & Adromischus	Sept. '81	Sansevierias	March '84
Crassulas	June '82	Pelargonium and Sarcocaulon	April '84
Dudleya	Mar. '83	Copiapoa	April '84
Didiereaceae	May '81	Echeverias	May '84
Discocactus	Nov. '82	Melocactus	May '84
Echinocereus Engelmannii	May '82	Rebutia	June '84
Echinofossulocacti	Sept. '83	Oxalia	June '84
Epiphytes	Feb. '83	Peperomia	June '84
Espositoas & Thrixanthocereus	June '83	Peperomia	July '84
Euphorbias	Sept. '82	Pereskia	Aug. '84
Faucaria (Mesembryanthemaceae)	Oct. '83	Monadenium	Aug. '84
Ferocactus	Aug. '83	The Stone-Mimicry	Sept. '84
Frailea	June '82	Windowed Mesembryanthemums	Sept. '84
Gymnocalycium Pfeiffer	Jan. '82	Machaerocereus	Sept. '84
Haworthias and Astrolobas	May '82	Mesembryanthemums	Oct. '84
Hoodia	Aug. '82	Matucana	Nov. '84
Kalanchoe	Jan. '84	Cucurbitaceae	Nov. '84
Lobivia	Jan '83	Dioscoreaceae	Nov. '84
Loxanthocereus	May '81	Miniature Agaves	Dec. '84
Mammillaria Haworth	Mar. '82	Borzicactus	Dec. '84;
Mammillaria Magnifica	Nov. '83		
Mammillaria Nivosa	Aug. '82		
Monadenium	Oct. '81		
Neochilenia Backeberg	Oct. '83		
Natures Freaks	Dec. '82		
Neowerdermannia	Sept. '81		
Neopterteria	Mar. '81		
Notocactus	Aug. '82		
Pachypodium-Adenium	Feb. '83		
Parodia	April '82		
Sansevieria	Nov. '81		

SAN DIEGO CACTUS & SUCCULENT SOCIETY

OFFICERS

President - Dr. Leroy Phelps 4094 - 36th Street, San Diego 92104	280-9690
Vice President - James Dice 6066 Portobelo Court, San Diego 92124	278-0326
Secretary - Susan Clements 42251 Sixth Street, Temecula 92390	676-6126
Treasurer - Warren Buckner 1744 Englewood Drive, Lemon Grove 92045	469-1391
Immediate Past President - F.C. Thrombley 16333 Roca Drive, San Diego 92128	487-5544

BOARD OF DIRECTORS

Dorothy Dunn, Phyllis Flechsig, Madelyn Lee
Joe Clements, Bud Aubuchon, Verna Pasek

COMMITTEES

Activities:

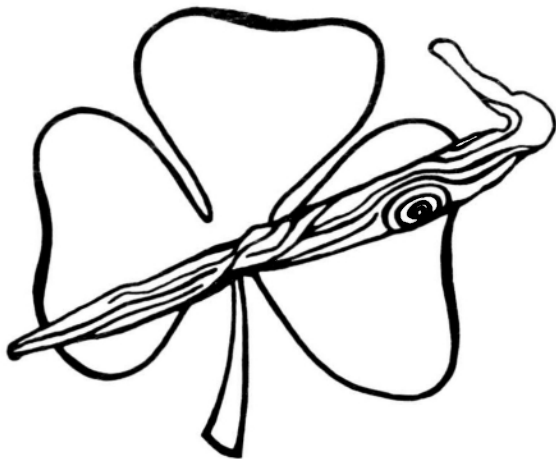
Audit: James Berry
Education: Cacti - Frank Thrombley
Succulents - Rick Latimer
Historian: Rick Latimer
Library: Rick Latimer
Membership: Warren Buckner
Open House: Frank Thrombley
Plant Exchange Table: Bill Miller
Plants & Supplies Table: Joe Betzler

Publication: Mary Aubuchon 427-3388
Reception: Perlso Lewis and Ethel Standish
Regalement: Warren Larberg and Doc Lemrow
Representatives:
Balboa Park Desert Garden - John Pasek
Quail Botanical Garden - Phyllis Flechsig
S.D. Botanical Garden Foundation - Elizabeth Glover
S.D. Floral Association - Verna Pasek
Liaison & Publicity: Kathy & Sandy Frost

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

Mary Aubuchon
1058 5th Avenue
Chula Vista, CA 92011



FIRST CLASS

FIRST CLASS

FIRST CLASS

CACTUS & SUCCULENT SOCIETY of AMERICA, Inc.

BANQUETS

Opening banquet on Monday is included for SDSU residents.
 Farewell banquet on Friday will be an outdoor Mexican Fiesta under the stars with live entertainment.

TWENTY-FIRST BIENNIAL CONVENTION

SAN DIEGO STATE UNIVERSITY

8-12 July 1985 San Diego, CA

READ INSTRUCTIONS ON FOLLOWING PAGES BEFORE COMPLETING FORM

ROOM & BOARD AT SDSU

Check-in begins Sunday, 7 July any time after 10 a.m. The first meal at SDSU will be dinner Sunday evening. Your host society, the San Diego Cactus & Succulent Society will provide a buffet lunch on Sunday. You must check out of the dormitory by 11 a.m., Saturday, 13 July. You will be provided accommodations of your choice, either single or double occupancy, three meals a day, and use of campus facilities. If you require special assistance, please inform us when returning your registration form and we will make every attempt to meet your needs. There will be no smoking sections of dormitories for those who object to smoking.

As an added benefit to conventioners, arrangements can be made to stay at SDSU a maximum of two weeks before the convention and/or extend your stay up to two weeks after. The cost is \$20 per room a day. Each room will accommodate two people. Arrangements for pre or post convention housing must be made directly through SDSU housing & Residential Life Office, San Diego State University, San Diego, CA 92180-0568. Average hotel rates in San Diego are \$76 per day for a double room. The use of the SDSU housing enables you to enjoy a super bargain vacation. Pre and post convention reservations must be made well in advance as rooms are limited and will be on a first come first served basis. Persons taking the Sunday bus trip to Arcadia are encouraged to check in to SDSU on Saturday due to the early hour of bus departure. Arrangements must be made for Saturday arrival through SDSU Housing & Residential Life Office.

Those not participating in the buss trips on Wednesday will find many activities in and around San Diego. There will be an Activities desk at the convention to assist you in planning your day.

In order to better to serve you, early registration is encouraged.

It is interesting to note that at the 1975 convention held in San Diego, the cost of a double room was \$26 per day. After ten years of inflation, we able to offer you room PLUS BOARD for only \$37 a day.

The San Diego Cactus & Succulent Society looks forward to seeing you in July and are honored to act as your host.

Registration for those not wishing to attend the entire convention is \$20. per day.

Admission to the Wild Animal Park with dinner is \$32. without transportation, or \$42. with transportation. Sorry, the price is the same for San Diego Zoological Society members.

Names: _____
 (Print name & Society or City as you want them on your name badge)

Address: _____

Registration for members	_____ @	\$50.00 _____
Registration for non-members	_____ @	75.00 _____
Non-SDSU Residents	_____ @	75.00 _____
For all after 1 May 1985	_____ @	100.00 _____

BUS TRIPS

Sunday, 7 July, CSSA Show & Sale in Arcadia	_____ @	15.00 _____
Wednesday, 10 July		
(1) North County Growers (box lunch)	_____ @	15.00 _____
(2) North County Growers (box lunch) & Wild Animal Park with dinner	_____ @	47.00 _____
(3) Huntington Botanical Gardens (box lunch)	_____ @	15.00 _____
(4) Huntington Botanical Gardens (box lunch) & Wild Animal Park with dinner	_____ @	47.00 _____
(5) Wild Animal Park with dinner	_____ @	42.00 _____

BANQUETS

Monday Non-SDSU Residents Opening Banquet	_____ @	12.00 _____
Friday Farewell Mexican Fiesta	_____ @	10.00 _____

ROOM & BOARD AT SAN DIEGO STATE UNIVERSITY

Single Occupancy	_____ @	225.00 _____
Double Occupancy	_____ @	200.00 _____
After 1 May 1985: Single Occupancy	_____ @	250.00 _____
Double Occupancy	_____ @	225.00 _____

GRAND
 TOTAL _____

Do you need special assistance? Smoking Non-Smoking

Make check payable to: CSSA Convention Committee
 c/o Pat Mooeny, Registrar
 97 'K' Street
 Chula Vista, CA 92011

SPEAKERS AND PROGRAMS

Dr. K. Johnson	New Zealand	Succulents in New Zealand
Richard May	Texas	Ecology of Sclerocactus
Dr. Michael Hawkes		Succulents of Pacific N.W.
Paul Thoma		
Henry Varney	California	Adromischus
Jim Dice	California	Dudleya
Susan Carter-Holmes	England	Euphorbias
Dr. Roberto Kiesling	Argentina	Carlos Spegazzini
		Cacti of Argentina
Dr. Charles Russell		The Versatile Prickly Pear
Dr. Arthur Gibson	California	
Dr. Charles Uhl		Crassulaceae
John Lavranos	South Africa	Succulents of Yemen
		Succulents of Socotra
Dr. Carlos Ostolaza	Peru	Cactu & the Ancient Peruvians
Dr. David Bramwell	Canary Islands	Origin & Evaluation of Canria Flora
		Canarian Succulent Flora
Dave Grigsby	California	Propagation
Dr. Kenneth Heil	Arizona	Cacti of the Desert S.W.
Dr. Lee Phelps	California	Succulents as Bonsai
Stephen Brack	New Mexico	Cacti of the Big Bend
Faith Campbell		Conservation
Dr. Allan Taylor		Hardy Cacti
Dr. Werner Rauh	West Germany	

This is a tentative list of speakers and their programs.

Martin L. Mooney
Convention Director

REGISTRATION FOR MEMBERS

Those eligible for the \$50 membership registration are CSSA Active, Associate, Life members and CSSA Fellows. All other must pay \$75 registration. You may become an Active Member by subscribing to the CSSA Journal for \$20 and paying \$6 CSSA membership dues for a total of \$76. Then, your spouse may become an Associate Member for \$1, saving \$24 on registration. Our motive is to expose you to the CSSA Journal, one of the best, if not THE BEST publication of its type in the world. It is our belief that once exposed you will become a permanent subscriber.

NON-SDSU RESIDENTS

Those convention attendees who do not elect to take room and board at SDSU. The higher registration fee is necessary as the University charges a daily use fee for persons not registered as guests of SDSU. There are no hotels or motels near the University. We suggest that you contact our official Travel Agent: Deborah Chen, Universal Travel, 8888 Clairemont Mesa Blvd., San Diego, CA, 92123-1193, 1-800-272-7888 to make hotel arrangements if you do not elect to stay at SDSU. She can also make travel arrangements for you.

BUS TRIPS

Sunday, 7 July: CSSA Show & Sale in Arcadia

Departs SDSU @ 9 a.m. and will return in time for dinner at SDSU. There will be a \$1.50 admission charge at the Los Angeles County & State Arboretum. Lunch is on your own.

Wednesday, 10 July:

(1) North County Growers

Departs SDSU @ 7:30 a.m. Box lunch is included for SDSU residents. Returns to SDSU in time for dinner. Tours to North County Growers will include stops at several nurseries both wholesale and retail to give you an opportunity to see how the plants are grown commercially and to meet the growers personally. Although time and space does not allow for plant sales, a number of these growers will be offering plants at the convention.

(2) North County Growers & Wild Animal Park With Dinner

Same as Trip #1 except, instead of returning to SDSU for dinner, will go to San Diego Wild Animal Park. Price includes park admission, monorail ride, deluxe dinner, authentic African entertainment with native dancers, plus all Park events and shows. This is a rather expensive item. However, it is a First Class entertainment package offered by the San Diego Wild Animal Park. No-host bar is available. Return to SDSU approximately 11 p.m.

(3) Huntington Botanical Gardens

Departs SDSU 7:30 a.m. Box lunch is included for SDSU residents. Return in time for dinner.

(4) Huntington Botanical Gardens & Wild Animal Park With Dinner

Same as Trip #3 except, instead of returning to SDSU, will go to San Diego Wild Animal Park. (see #2 for details of Wild Animal Park)

(5) Wild Animal Park

Departs SDSU @ 4:30 p.m. (see #2 for details of Wild Animal Park)