

WILDFLOWER BUS TRIP

# Espinas y Flores

THE NEWSLETTER

OF THE SAN DIEGO CACTUS & SUCCULENT SOCIETY, INC.

VOLUME XXIX NUMBER FOUR, SATURDAY APRIL 10, 1993



## PROGRAM FOR APRIL

The exciting world of terrestrial succulent *Bromeliads* including *ananus*, *abromeliella*, *hectia*, *dyckia*, *puya*, *bromelia*, *orthophytum* and *cryptianthus* by Dutch Vandervort, nurseryman, exotic plantsman and bromeliad specialist. Dutch will have many exotic *Bromeliads* for sale.



## EAGLE CANYON

SPECIAL EVENT:  
APRIL 3rd-SATURDAY  
THE LIVING DESERT &  
ANZA BORREGO DESERT  
WILDFLOWER BUS TRIP  
CALL JOYCE 222-3216



White-eared Hummingbird — John Felsing

**PLEASE RENEW YOUR MEMBERSHIP**

**- PAGE 2 -**

**MEMBERSHIP:** LAURA DE MERRITT, 619-571-5127. DUES ARE \$10.00 FOR SINGLE MEMBERSHIP AND \$5.00 FOR EACH ADDITIONAL MEMBER OF SAME HOUSEHOLD (ONE ESPINAS y FLORES MAILED). CHECKS SHOULD BE MADE OUT TO S.D.C.& S.S. AND MAILED TO P.O.BOX 33181, HILLCREST STATION-102, SAN DIEGO, CA. 92163-3181.

**MEETING TIME:** MEETINGS ARE HELD THE SECOND SATURDAY OF EACH MONTH (EXCEPT FOR JUNE & DECEMBER) AT 1:30 pm IN ROOM 101 - MAJORICA ROOM, CASA DEL PRADO, BALBOA PARK. COME EARLY FOR PLANT, CONTAINER & SUPPLY SALES AND SOCIALIZING. BOARD MEETINGS ARE HELD AT NOON PRIOR TO GENERAL MEETING.

**PLEASE BRING GOODIES FOR THE REFRESHMENT BREAK!**

**San Diego Cactus & Succulent Society Badges are available - please inquire of Mrs. Laura DeMerritt - minimal cost - maximum effect!**

**NEW MEMBERS! WELCOME!**

- NORMAN C. ROBERTS
- GELEN ROBERTS
- DR. ALEOUNDRU CARDENAS MURPHY
- W.D. MUSSER
- FRANK THROMBLEY
- MARIANNE THROMBLEY



**Rainbow Gardens**  
Nursery & Bookshop  
1444 E. TAYLOR STREET  
VISTA, CA 92084  
Telephone (619) 758-4290  
Fax Only (619) 945-8934

**BRAND NEW BOOKS !!!**

**A reminder from John Williams:**

Some marvelous new books have just come on the market and are worthy of consideration for any plant enthusiast. Consider purchasing now as some items will not be offered in our next regular catalog (Note: we also accept phone and fax orders).

**EUPHORBIA JOURNAL #8** ---Has finally arrived! Two years in the making, it appears the wait was worth it. If you haven't already reserved or received a copy, order yours today!-----\$44.95

**GLOSSARY OF SUCCULENT PLANT TERMS** (Kurt Schremmer) Brand new Australian publication. Representing an enormous amount of work, descriptions and terminology are clear, concise--yet thorough, with many never-discussed before terms and definitions added. 108 pages, softbound-----\$9.95

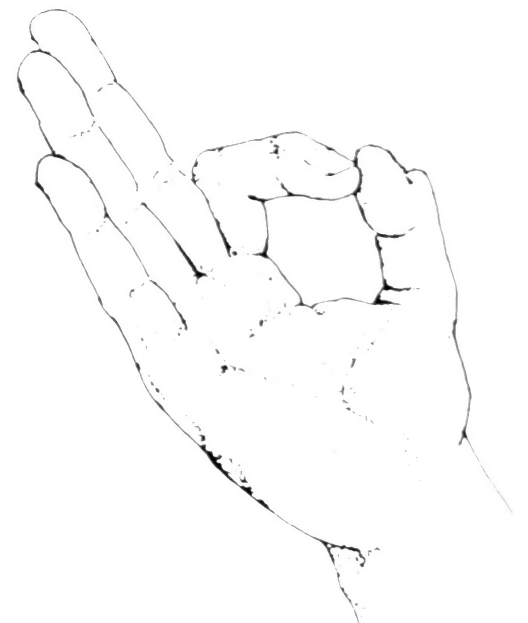
**ILLUSTRATED IDENTIFIER AND GUIDE TO CACTI** (M. Schneck) Finally in stock after 5 months of delays. Final result: A much better book than we could have imagined! Text is informative and instructional. Photos are very, very good. A large format, hardbound book (8 1/2" x 11"), 120 large color photos are spaced evenly throughout the book. Also includes 6 illustrations, 80 charts. 112 pages. Hardbound, with color dustjacket. Price: ONLY-----\$12.95

**ILLUSTRATED ENCYCLOPEDIA OF ORCHIDS** ---A. Pidgeon. Published November, 1992. We don't even advertise this book, yet we can hardly keep it in stock! If you've ever wanted only one Orchid book, this one would definitely be your choice---it's definitely ours! Over 1,000 truly exceptional color photos, with clear, concise descriptions. 304 pages, 8 1/2" x 11", hardbound with color dustjacket! An exceptional buy at only-----\$39.95

**LES ALOES DE MADAGASCAR** ---G. Reynolds (1958). In French. A very limited quantity of this rare publication has reached our Bookshop. In French, over 18 color photos accompany descriptions of Madagascan aloes. 103 text figures, 1 map. 156 pages, 7" x 10 1/2", and beautifully hardbound with gold leaf lettering. Very limited quantities. First come, first served! (available 3/15/93)-----\$89.95

**THE HOYA HANDBOOK**---D. Kloppenburg (1993). The first of its kind ever written. Outlining the background of Hoya history, collecting and first descriptions, the bulk of the book is devoted to cultivation, care and pest control techniques of well over 100 different, most popular Hoyas available today. 142 gorgeous color photos. 140 pages total. 8 1/2" x 11", hardbound w/color dustjacket. In stock at-----\$42.95

**HOYAS IN PAPUASIA**---P. Forster/D. Liddle (1992). Another in a series of photo reprint reports on Hoyas and their localities in the South Pacific Region. Black & white line drawings throughout. 16 pages, 8 1/2" x 11", spiralbound. Semi-technical.-----\$2.95



**Our annual show is less than 60 days away, so please begin preparing you show winners!**



**REFRESHMENT VOLUNTEERS**

**FOR APRIL:**

- D'erdra Smothers
- Marie Pearce
- Elibet Marshall
- Mary Holman
- Judy Hannula
- Bob Taylor
- Dorothy Beyer
- Joey Betzler
- Rick Plant
- Sonia Garza

**for May:**

- Tom & Laura DeMerritt
- Marylyn Henderson
- Phil Favell
- Charles & Joanne Clark
- Don & Gall Bamber
- Floyd Gable
- Michael & Joyce Buckner
- Erik Gromberg

A "bountiful" thanks to Norman and Gelin Roberts for their Baja program and graciously contributing their honorarium to be utilized for the Baja Hill at the Wild Animal Park. A percentage of the book sale was also contributed to the SDC&SS Library. Thank you! thank you, we all really enjoyed the program!

We were pleased to see Michael Chapman (and daughter) at our March meeting; Michael did a little hospital time - it's good to see him on his feet!

Another wonderful catalog for us - we gardeners - everything you could possibly need for any type of gardening - growing - greenhouse operation, small or large. You need this catalog! Call A.M. Leonard, Inc, serving nurserymen, landscapers, foresters, arborists, contractors, and gardeners since 1885. Write: 6665 Spiker Road, P.O.Box 816, Piqua, Ohio 45356; or telephone: 1-800-543-8955.

We just received THE SANSEVIERIA JOURNAL, volume 2 #1, editors B. Juan Chahinian and Arnie Mitchnick. "A magazine to promote and strive to disseminate all possible data, hitherto unpublished in the English language, so that the study and culture of this genus realizes the popularity which it deserves." Annual subscription \$10.00 per year, mailing address: 9821 White Oak Ave., Northridge, CA 91325; phone: 1-818-349-9798. We'll have them in our library, too.

For you desert people (who isn't) who love roadrunners (who doesn't), a new book: THE ROADRUNNER by Wyman Meinzer, Texas Tech Univ, c.1993; cloth \$37.50, paper \$19.95; call 1-800-832-4042.

DEADLINE for May ESPINAS y FLORES is April 23rd. We look forward to Mammillarias of Baja by Phyllis Flechsig and Sanseverias by Kay Quijada. Also to be featured in May: NEW BOOKS IN THE LIBRARY by Rick Latimer.



....AND WE THOUGHT THE DESERT WAS IN BEAUTIFUL BLOOM LAST YEAR  
... IT'S GONNA BE FANTASTIC THIS YEAR!

BUS LEAVES SAN DIEGO ON SATURDAY, APRIL 3rd PROMPTLY @ 8:00 FROM THE PARKING LOT BEHIND THE ORGAN PAVILION IN BALBOA PARK. AN ADDITIONAL PICK-UP SPOT FOR NORTH COUNTY RESIDENTS WILL BE AT THE CAL TRANS PARK & RIDE LOT ON THE EL NORTE PARKWAY EXIT OFF ON I-15 IN ESCONDIDO (PLEASE BE THERE NO LATER THAN 8:30 AM). WE SHOULD ARRIVE AT THE LIVING DESERT AROUND 11:30. BUS TO DEPART AT 4:00 PM.

PRICE IS \$20.00 PER PERSON WHICH INCLUDES TRANSPORTATION & PARK ENTRY FEE. PLEASE WEAR YOUR SDC&SS BADGES IF YOU HAVE THEM.

BRING A GOOD LUNCH WITH PLENTY OF LIQUIDS (THERE IS A RESTROOM BUT NO WATER ON THE BUS). PLEASE USE PLASTIC CONTAINERS OR BRING CANS - NO GLASS IN PARK OR ON THE BUS. THERE IS A NICE SHADED PICNIC AREA AND NO FOOD SERVICE IN PARK. DON'T FORGET HAT OR UMBRELLA, SUNSCREEN, SUNGLASSES, COMFORTABLE (CLOSED TOE) WALKING SHOES & JUST IN CASE A SWEATER, IF ONLY FOR THE AIR-CONDITIONED RIDE HOME.

THERE IS A TRAM TOUR FOR NON-HIKERS (EXTRA COST TO INDIVIDUAL). THERE IS ALSO A RARE PLANT NURSERY AND A WELL STOCKED GIFT SHOP.

TO RESERVE A SEAT (WE STILL HAVE A FEW AT THIS TIME) PLEASE CALL MICHAEL OR JOYCE @ 222-3216 - LEAVE MESSAGE WHEN TO CALL BACK.

## EAGLE CANYON WILDFLOWER BUS TRIP

**T**HE LIVING DESERT has 1200 acres, 200 of which are developed as a zoo, botanical garden and natural history museum interpreting deserts of the world, and as a conservation center for desert plants and animals. There are indoor and outdoor exhibits, paved and unpaved walkways, busy centers and private retreats, close-up views and broad vistas in this part of The Living Desert, all contributing to an unusual variety of experiences for visitors. The gift shop, plant nursery, food service, visitor convenience facilities, education building and administrative offices are also located in this developed area.

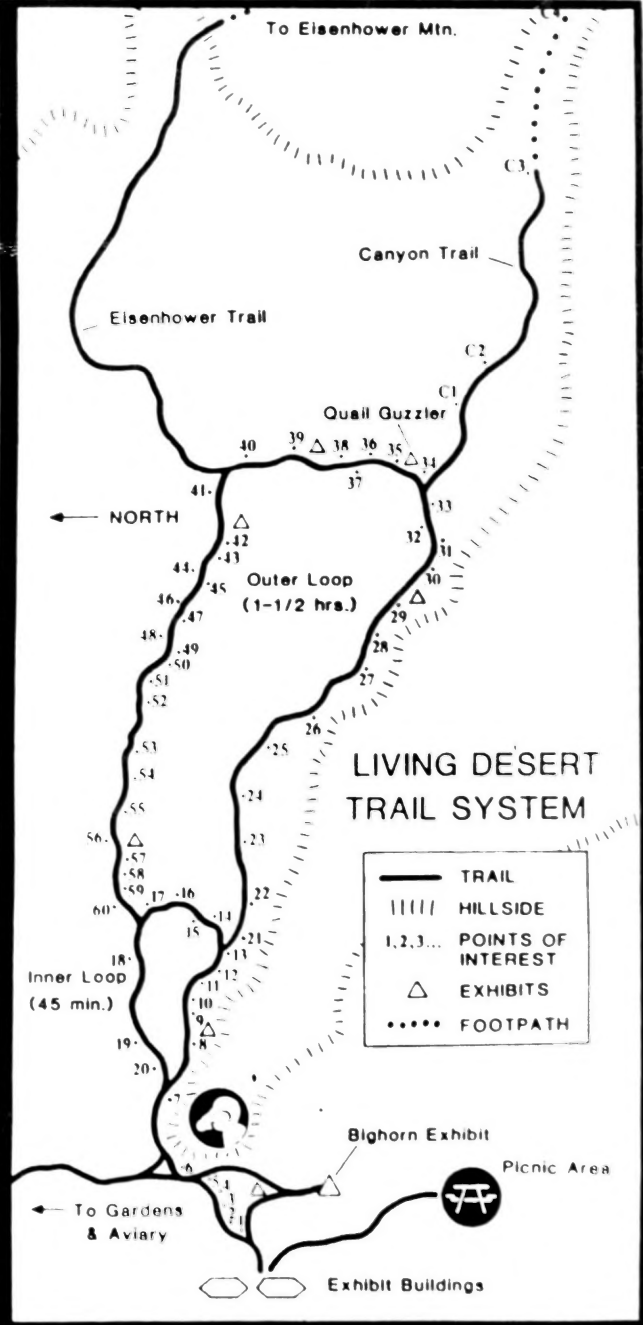
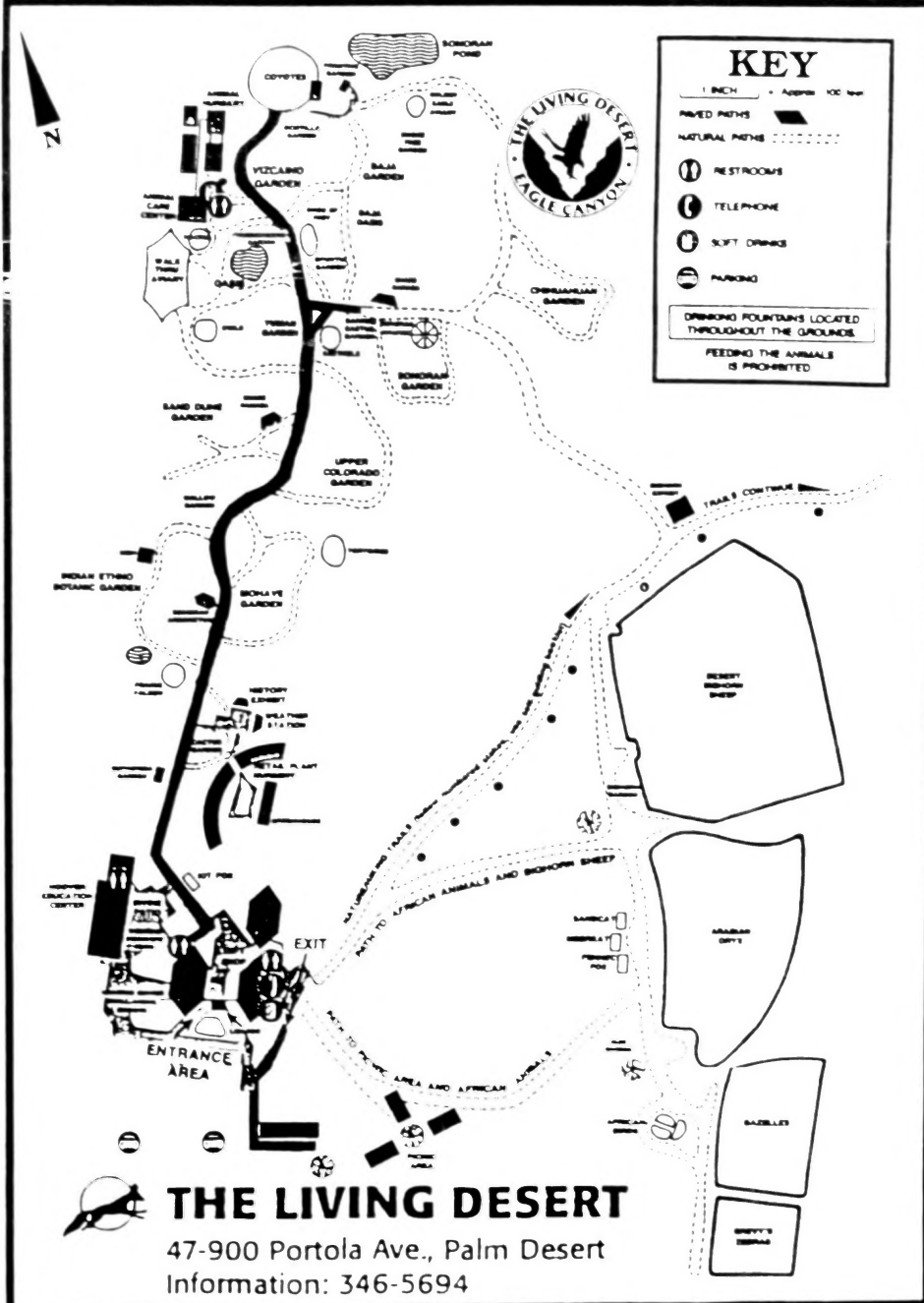
The other 1000 acres of Living Desert are a wilderness park, held in trust as a permanent natural preserve. The natural area is accessible by nature and hiking trails. It has few visitor amenities, but many personal wilderness discoveries.

The Living Desert was established in 1970 as a desert education and conservation center. It is a private, non-profit organization, and finances almost all of its operations on income from admissions, memberships and gift shop and nursery sales. Donations are also a small but important source of operating support, and are greatly appreciated.



JOIN THE LIVING DESERT  
 SPECIAL EVENT:  
 APRIL 3rd-SATURDAY  
 THE LIVING DESERT &  
 ANZA BORREGO DESERT  
 WILDFLOWER BUS TRIP  
 CALL JOYCE 222-3216

# THE LIVING DESERT



# CALENDAR OF EVENTS

## APRIL CALENDAR OF BOTANICAL EVENTS

- PAGE 6 -

- Apr 3: **LIVING DESERT EAGLE CANYON DESERT WILDFLOWER BUS TRIP**  
A special SDC&SS event, limited to the first 47 people, \$20.00 per person. Info: (619)222-3216.
- Apr 3-4: **San Diego Exotic Plant Society 15th annual show, room 101, Casa del Prado, Balboa Park.**
- Apr 1 through September 6th: **San Diego Natural History Museum presents INSECTS, FACE TO FACE.** Giant robot insects and a dozen educational displays; open daily 9:30-4:30, adults \$6.00, Balboa Park, info: (619) 232-3821.
- Apr 8: **Lake Hodges Native Plant Club: FIVE SPRING GARDENS ON TOUR, \$3.00 donation, info: (619) 741-0829.**
- Apr 10-11: **Rancho Santa Ana Botanic Garden, Wildflower Show** exhibiting more than 200 native & Californian plants. Free admission; 1500 N.College Ave, Claremont; for info: (909) 625-8767.
- Apr 10: **Santa Barbara Botanic Gardens Easter Egg Hunt and other events, for info: (805)563-2521.**
- Apr 15: **Huntington Botanical Gardens - Myron Kimnach, curator emeritus & CSSA editor, will give an illustrated lecture: SOMALIA, 1986 RARE PLANT EXPEDITION.**
- Apr 17-18: **Coronado 68th Annual Flower Show - Sat 1:00-5:00, Sun 10:00-4:00; adults \$2 - children \$1, Orange Avenue in Coronado. (619) 437-8788.**
- Apr 17: **Inter-city Cactus & Succulent Show pre-show planning meeting and pot luck at Woody Minnich's CACTUS DATA PLANT NURSERY, Littlerock, CA. for info: (805) 944-2784.**
- Apr 21: **EARTH DAY - many activities**
- Apr 23-25: **Spring Home & Garden Show - 8th annual at the Del Mar Fairgrounds, 300 exhibits, non-stop seminars, \$5.00.**
- Apr 24: **ARBOR DAY - many activities - PLANT A TREE!!**
- Apr 24-25: **Los Angeles Zoo Annual Plant Sale in Griffith Park (213) 485-5027.**
- Apr 24-25: **San Diego Bonsai Club 28th Annual Show & Sale, room 101, Casa del Prado, Balboa Park, for info: (619) 222-9835.**
- Apr 25: **South Bay Epiphyllum Society Show & Sale at South Coast Botanic Gardens, Palos Verdes Peninsula, info: (310)544-1948.**
- Apr 25: **Avocado Festival in Fallbrook. Events include guacamole contest, best dressed Avocado contest, the Avo Regatta, and much more; free; info: (619) 728-5845.**
- Apr 29: **ART ALIVE, San Diego Museum of Art's three-day event: professional floral designers interpret famous paintings and sculptures in flowers. 1450 El Prado in Balboa Park; for info: (619) 232-7931.**

### WILDFLOWER HOTLINES!!

For the latest "up to date" recorded information on what's blooming and where call:

ANZA BORREGO DESERT (619) 767-4684

THE LIVING DESERT (619) 340-0435

THE THEODORE PAYNE FOUNDATION (818) 768-3533

"I, er, you know..." "Well, uh, well,

TEST YOUR SUCCULENT SAVVY - ANSWERS:

- 1) *Crassulaceae* or stonecrop family.
- 2) *Opuntia*
- 3) Crassulacean Acid Metabolism or CAM
- 4) East to West or in line with the passage of the sun overhead.
- 5) *Microphylla*
- 6) Andrew Carnegie, Saguaro is *Carnegia gigantea*.
- 7) *Blossfeldia* of Argentina and Bolivia, which blooms at under 1 cm in diameter.
- 8) True
- 9) *C. Simpsonii* is to the genus *Pedlocactus*.
- 10) Nonsense, who wrote this and what does it mean????!!!

Hmmm..."

BRAG TABLE WINNERS

Succulents -

- FIRST: Dorothy Byers - *Orthophytum burle marxii* in bloom.  
SECOND: Dylan Hannon - *Cyrtanthus falcatus*, a beautiful South African bulb with hanging tubular shaped flowers on an umbel.  
THIRD: Rudy Lime - *Pelargonium triste* bonsai by the master. Tied with *Velthemia bracteosa* multiple in full yellow flower spikes shown by Dylan Hannon.

Cactus -

- FIRST: Joe Quijada - *Thelocactus icphothele* - pristine!  
SECOND: Shirley Berry - *Cochemiea haleii* clump.  
THIRD: Kay Quijada - *Rebutia grandilaceae* in full red flower.

Dear Michael,

March 17, 1993

It is normal for membership dues to be sent to the treasurer of the society. However, in recognition of your tenacity and the affirmation that old succulents can be rerooted, I thought it would be apropos to send the enclosed check to you.

Webster gives the botanical definition of succulent as having thick, fleshy tissues for storing water. The horticulturist and hobbyist of the San Diego Cactus & Succulent Society know that the loss of water does not necessarily mean the demise of the plant. The loss of water leads to shriveling and wrinkling, such as this old member you are trying to restore.

Your thoughtfulness is appreciated and so please accept this check from Marianne & Frank Thrombley for the 1993 membership dues.

Kind regards,

Frank



## THE HUNTINGTON

LIBRARY • ART COLLECTIONS • BOTANICAL GARDENS

1151 Oxford Road, San Marino, California 91108 • (818) 405-2160 FAX 405-0225

BOTANICAL DIVISION

12 November 1992

San Diego Cactus & Succulent Society  
c/o Mr. and Mrs. Michael Buckner  
P.O. Box 33181  
Hillcrest Station 102  
San Diego, CA 92163-3181

Dear Club Members:

Since I've been at the Huntington, I can't think of a time when we've had a greater opportunity to acquire such a phenomenal group of plants as the Tegelberg collection. The opportunity was brought to our attention by our good friend Seymour Linden, and through his efforts and the wonderful cooperation of Clark Moorten, we were able to contact Gil Tegelberg. Mr. Tegelberg very generously decided to allow the most significant specimens of his collection to be given to the Huntington. As you know, this was a partial purchase, which means we pledged \$6,000.00 to Mr. Tegelberg toward the total value of the collection, the remaining portion being his donation.

At this point Seymour got busy and helped us discover how many more friends we have in the world of cacti and succulents. We have been most gratified by the responses to Seymour's request for donations. Your gift of \$50.00 applies directly to the purchase of the plants from Mr. Tegelberg, and helps make this significant addition to our collections a possibility.

We truly appreciate your response to Seymour's request. It is good to know that you are one of the many friends and supporters of the Huntington Botanical Gardens. We appreciate your contribution very much.

James P. Folsom,  
Director of the Gardens

Sincerely,

THE I.O.S.

- PAGE 8 -

The *International Organization for Succulent Plant Study* (IOS) was established to *promote the study of succulent and allied plants and to encourage international cooperation amongst those interested in them.* The IOS is a Commission of the International Union of Biological Sciences and seeks to achieve its goal through biennial *international congresses, working sessions* and its *Bulletin*. It is also a strong advocate of *conservation* and has an extension *Code of Conduct*. The Board believes the IOS can play a significant role in providing researchers with the opportunity to share ideas and to support one another in their research activities.

The IOS is truly an *international organization*, with more than 200 members from 33 countries. This makes possible the attainment of one of the primary goals of IOS: to provide an international forum for the presentation of papers and the sharing of ideas. The IOS holds *Biennial Congresses* alternating with *Inter-Congresses*; these thus provide an annual forum for members.



# CACTUS OF THE MONTH

## ECHINOFOSSULOCACTUS/STENOCACTUS

Marylyn Henderson

- PAGE 9 -

The genus *Echinofossulocactus* was established by Lawrence, a gardener in England, in 1841, from the Latin words "echinus" meaning hedgehog, and "fossula" meaning small furrow or trench.

*Stenocactus* was established by Schuman in 1898, and was still used by J. Borg in his book "CACTI" from the first printing in 1937 through the third edition in 1959.

Britton & Rose used the earlier name following the rules of botanical nomenclature, that the older name remains valid. Both names are still used commercially. I have found plants under each of the two names in the past three months.

There are more than thirty recognized species, of which many are probably forms, and natural hybrids. They are closely related to *Ferocactus* and *Echinocactus*. They are all native to Mexico, extending from Coahuila and Durango in the north to Oaxaca in the south. They grow mostly in dry grassland, invariably in partial shade beneath bushes, and often almost invisible in the grass.

They are all rather small globular or short-cylindrical plants, to 4.5 inches in diameter and rarely to 6 inches high, and seldom offsetting.

Almost all *Echinofossulocacti* (with the exception of *E. coptonogonus* have very numerous, 30-120, thin gill-like, often wavy ribs. Seedlings look like *Mammillarias*, as the thin ribs are not formed until about the second year. They often have only 1 or 2 areoles on each rib, and fine unhooked radial spines, and often flat, papery, central spines. Some have numerous spines completely covering the plant.

### CHARACTERISTICS OF SOME SPECIES

SPECIES	# RIBS	RADIAL SPINES	CENTRAL SPINES	FLOWER COLOR
<i>albatus</i>	35	10	4	white
<i>coptonogonus</i>	10-15	3-5	-	white/purplish median line
<i>crispatus</i>	26-35	7-8	1	purple
<i>grandicornus</i>	35	8	3	greenish white
<i>hastatus</i>	35	5-6	1 porrect	white/purple stripe
<i>heterocanthus</i>	40-50	10-13	4	greenish yellow
<i>lamellosus</i>	30-35	5	1	flesh w/carmine stripe
<i>lancifer</i>	numerous	8	-	pale pink
<i>lloydii</i>	numerous	10-15	3	almost white
<i>multicostatus</i>	80-120	6-9	3	white w/purple stripe
<i>obvallatus</i>	25	4	1	purplish red
<i>ochoterenus</i>	30	many*	4	whitish w/purplish line
<i>pentacanthus</i>	25-50	5	-	yellowish white w/**
<i>phyllacanthus</i>	30-35	2-7	-	yellow white; red center
<i>tricuspidatus</i>	25-55	9-11	-	greenish yellow
<i>vaupelianus</i>	30-40	12-25	1-4	creamy yellow w/dk stripe
<i>violaciflorus</i>	35	7	-	white w/violet stripe
<i>zacatecasensis</i>	55	10-12	3	white w/violet tint

\*glassy white

\*\*deep violet center.

**CACTUS OF THE MONTH: ECHINOFOSSULOCACTUS/STENOCACTUS**  
by Marylyn Henderson

Flowers are borne in early spring close to the apex, and have a short or very short tube. Flowers rarely exceed one inch in diameter, and are white, yellow, and pink, often with a darker median stripe on each petal.

These plants are all of easy culture, but not fast growing. They require good light for successful flowering but they need light shade from midday sun, especially the varieties with few spines. They will grow in an average cactus mix, and should be watered the same as most other cacti. Watch for scale, the worst pest to effect these very interesting and collectable gems.

**REFERENCES:**

Innes & Glass, CACTI

Cullman, Gotz & Groner, The ENCYCLOPEDIA OF CACTI

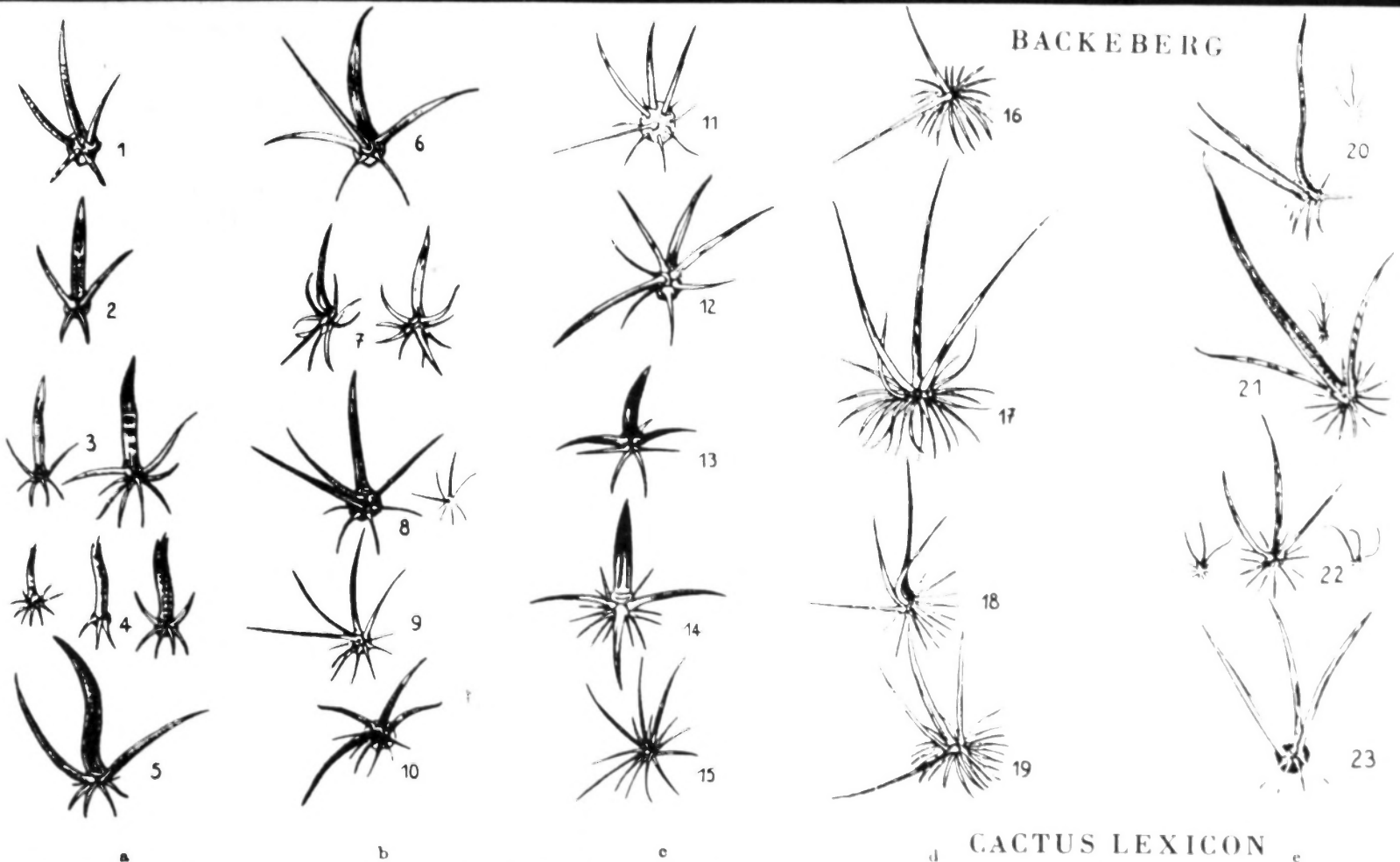
J.Borg, CACTI

Britton & Rose, The CACTACEAE

Backeberg, CACTUS LEXICON

Lamb, POPULAR EXOTIC CACTI IN COLOR

- PAGE 10 -



92. *Echinofossulocactus* Lawr.: Key to Spine-Arrangement, according to Oehme: —

a) 1: *E. coptonogonus* (Lem.) Lawr.; 2: *E. pentacanthus* (Lem.) Br. & R.; 3: *E. phyllacanthus* (Mart.) Lawr.; 4: *E. tricuspидatus* (Scheidw.) Br. & R.; 5: *E. grandicornis* (Lem.) Br. & R. (drawings by H. Oehme, from "Key to Spination" by Tiegel and Oehme: Beitr. z. Sukkde. u. -pflege, 78—82, 1938).

b) 6: *E. lamellosus* (Dietr.) Br. & R.; 7: *E. anfractuosus* (Mart.) Lawr.; 8: *E. crispatus* (DC.) Lawr.; 9: *E. gladiatus* (Lk. & O.) Lawr.; 10: *E. dichroacanthus* (Mart.) Br. & R.

c) 11: *E. hastatus* (Hopff.) Br. & R.; 12: *E. obvallatus* (DC.) Lawr.; 13: *E. violaciflorus* (Quehl) Br. & R.; 14: *E. heteracanthus* (Mühlpfrdt.) Br. & R.; 15: *E. albatius* (Dietr.) Br. & R.

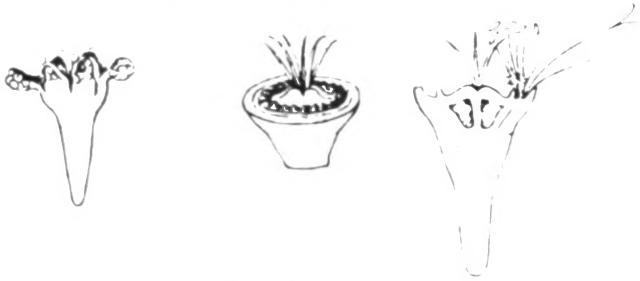
d) 16: *E. vouperianus* (Werd.) Tieg. & Oehme; 17: *E. wippermannii* (Mühlpfrdt.) Br. & R.; 18: *E. tetraziphus* (O.) Oehme; 19: *E. ochoterenus* Tieg.

e) 20: *E. arrigens* (Lk.) Br. & R.; 21: *E. lloydii* Br. & R.; 22: *E. zacatecasensis* Br. & R.; 23: *E. multicostatus* (Hildm.) Br. & R.

SUCCULENT OF THE MONTH: *TITANOPSIS/ALOINOPSIS*



M.H. R. VI. 1933

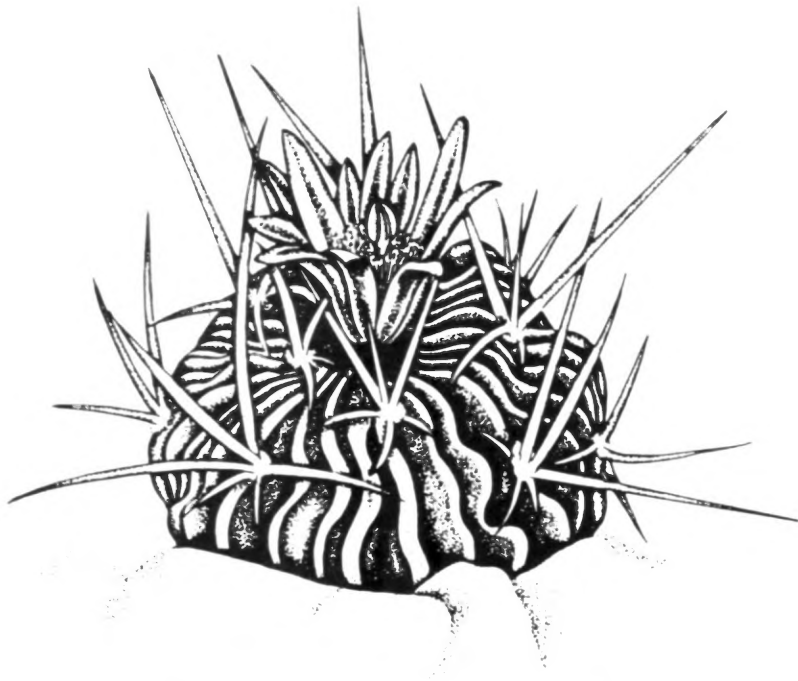


*Titanopsis calcarea*

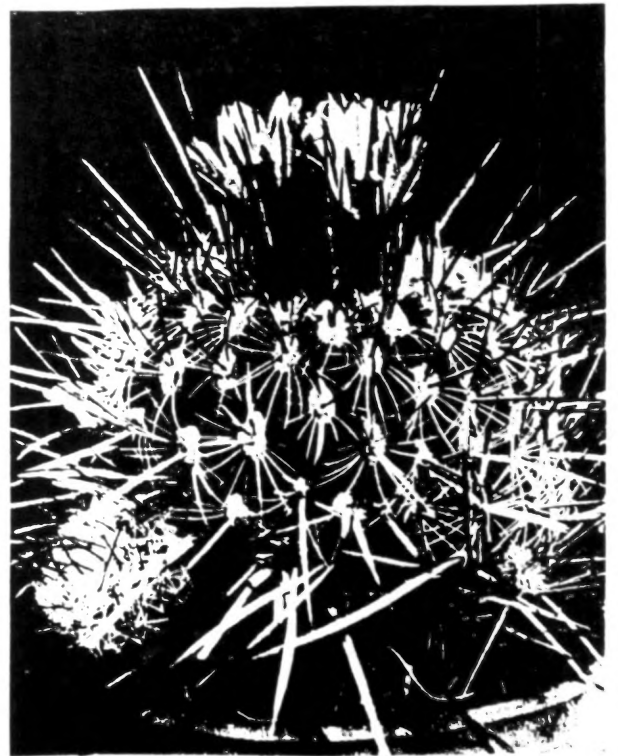


*Aloinopsis spathulata*

ECHINOFOSSULOCACTUS/STENOCACTUS



*Echinofossulocactus lanceifer*



*Echinofossulocactus ochoterenus*

CACTUS OF THE MONTH

---

# SUCCULENT OF THE MONTH

THE CHALK PLANTS OF NAMIBIA AND CAPE PROVINCE :

'THESE PLANTS PUT ALL OTHER MIMICRY PLANTS IN THE SHADE'

---

*Titanopsis* is a group of succulent perennial plants with fleshy, sometimes carrot like roots. The plants produce short crowded branches with 6 to 8 fleshy leaves. These dense rosettes hug the ground, rarely forming conspicuous clumps. The leaves are spoon shaped to club shaped and covered with warts, bumps and pustules. It appears that the leaves are some sort of rock, and they mimic the habitat. When Professor Marloth first discovered this genus he commented that 'these plants put all previously known mimicry plants in the shade'. Quite a comment from a botanist, but some of these plants match the geology around them. *Titanopsis* refers to Titanos, chalky and oopsis - appearance, the plants have a chalk like texture. Though the plant body may be quite close to the background, the flowers cannot be missed.

The flowers identify this genus as a member of the Mesembryanthemaceae. The flowers are generally yellowish, with a few species having shades of red or pink. Flowers are solitary with or without a pedicel. There are 5 to 6 sepals that usually have the same texture as the leaves. The petals are in one to two series. The flowers are flat with the stamens extending in a little cone from the center. The seed pods (capsules) form 5 to 6 and sometimes 10 locules or compartments.

*Aloinopsis* (Aloe like in appearance) are somewhat similar to the preceding group, but one of the sections should be within *Titanopsis*. *Aloinopsis* have tuberious roots systems, generally much thicker than *Titanopsis*. The leaf texture may be just as warty, though other many have velvety textures. The flowers may be borne 2 to 3 at a time. Other differences are manifest in seeds, capsule arrangement and size. Although there are differences, they are closely related.

## T. calcarea (Marloth) Schwantes

This was the first species discovered around 1907 by Prof. Marloth. It has a wide distribution in the northern Cape Province. Though it is common it has quite a range of leaf form and color. Leaf colors are grey-blue to tan, the warts vary greatly from population to population as well. Plants form clumps 2 - 3 inches in diameter. Flower color ranges from yellow to reddish.

## T. fulleri Tischer

Very similar to *T. calcarea* but the leaves are more erect and the warts are confined to a narrower zone on the upper leaf edge. Color ranges from a grayish tan to blue grey. This and the preceding species grow quite close to each other in Griquatown, Cape Province, and there are colonies that seem to be intermediate (hybrids). Taxonomically they may be the same species. Also in the 'trade' these two species hybridize quite frequently and many plants for sale are of hybrid origin.

## T. schwantesii (Dinter) Schwantes

These plants can form little round clumps up to 3 inches tall with as many as 100 heads. Though these light colored plants grow in red sand, they catch the sand and are well camouflaged. The leaf color is usually chalky with green to tan between the warts. The root usually looks like a carrot and is totally below ground and anchors the plant quite well.

## SUCCULENT OF THE MONTH: *TITANOPSIS/ALOINOPSIS*

by Joseph Betzler

### *T. primosii* L. Bolus

This species is very similar to the preceding taxon, but the mature plants do not form clumps, rather they are mat forming. The low growing plants also produce a thick root stock unlike the previous species. The flower color is typical yellow, though some populations do have pinkish flowers. A white flowered form is in the trade, developed by Ed Storms.

### *T. hugo-schlechteri* (Tischer) Dinter & Schwantes

According to Hammer this is one of the most attractive of all mesembs. The color is distinctive and the leaf shape is quite attractive. The tips of the leaves are flattened triangular in shape and covered with warts. The top of the leaf is smooth and contrasts with the leaf tips. The leaf color varies from light to dark green with a slight lavender throughout. The flowers are bicolored yellow with orange. Most of the plants in cultivation are from a farm on southern Namibia. The plants are small, 1 to 1.5 inches in diameter. These diminutive plants hug the ground and each rosette consists of about 8-12 leaves.

### *T. luderitzii* Tischer

This species has the smallest leaves and finest warts. The leaf color is highly variable, from yellow to brownish. The leaf shape is similar to *T. schwantesii*. Plants grow in the Sperrgebiet southeast of Luderitz. Finding these plants is difficult, they grow in coarse sands with just the leaf tips exposed.

*Titanopsis* forms a unique taxonomic unit, all the members seem to form a natural unit, with similar characters. Leaf shape, growth form, flowers and distribution is reasonable for a defined taxa. There are other genera that are not as clear cut and they should probably be included within this taxon. These other genera are *Aloinopsis* and *Nananthus*

*Aloinopsis* was divided into four groups by Bolus. One of these groups is undoubtedly *Titanopsis*. *T. luckhoffii* is one of these plants according to Hammer. This species has uniform tubercles with a row of larger warts on the keel (bottom of leaf) and leaf margins. The leaf color is grey to green. The plants can be found in Namaqualand and the northwest Cape.

Other *Aloinopsis* that have been listed as *Titanopsis* in the past are: *T. setifera* (L. Bolus) L. Bolus and *T. spathulata* (Thunberg) L. Bolus.

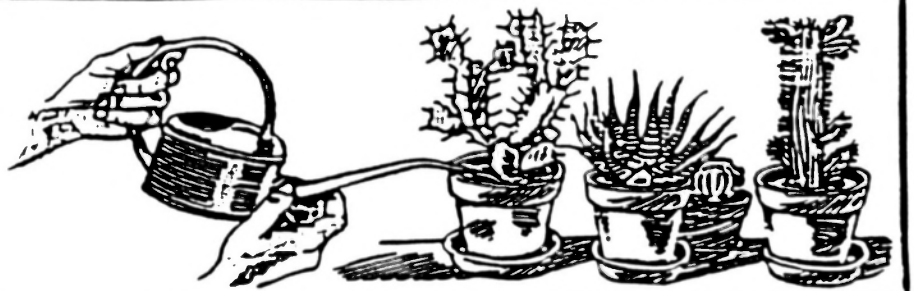
*Titanopsis* and its allies are quite easy to grow from seed. Sow seed in the summer and use a fungicide to prevent damp-off. Seedlings may flower in 6 to 14 months from germination. Many believe that these plants need lots of calcium or limestone, this is not true. All species need a coarse soil. I use equal parts of cactus mix, fine gravel and pumice. Plants can get leggy, than the tops can be cut and rerooted. Also these are winter growers from southern Africa and need a definite rest in the summer months.

### Bibliography

- Hammer, S., 1990. Aloe 27:1 Warts and Tubercles.  
Herre, H. 1971. The Genera Of The Mesembryanthemaceae  
Jacobsen, H. 1974. Lexicon Of Succulent Plants  
Schwantes, G., 1957. Flowering Stones and Mid-Day Flowers.  
Storms, E., 1976. Growing The Mesembs.

PLEASE BRING IN TITANOPSIS - ALOINOPSIS - NANANTHUS

FROM ALL CORNERS  
by Shirley Berry  
GIBBERELIC ACID



For those of you in this hobby who are younger, more optimistic, and have fewer experiences of failure----this article on seed raising is for you.

In the July 1976 African Succulent Plant Society Bulletin, Gerald Krulik gives us a new slant on seed germination. Basically, it concerns the effects of chemical called gibberellic acid (GA), which was discovered in Japan by workers studying a strange rice disease. It seems that rice seedlings infected with a certain fungus began to grow and elongate uncontrollably. The seedlings became thin and taller than normal.

Mr. Krulik's article states, "This chemical (GA) was isolated and it was soon found that very small amounts would make other plants grow too. GA is now commercially available as a spray or powder. The major problem in using GA on plants is that it makes them grow taller but does not cause cell division. Neither do the plants cells widen horizontally. The cells of the treated plants become long and thin. Not all plants respond to GA. In fact, the dwarf varieties show the greatest effect. Many scientists now believe that gibberellic acid is found in most normal plants, and that many dwarf varieties lack GA.

He goes on to say that rosette leaf succulents are especially sensitive and grow very tall. But GA has another effect which is less well known ..... very small amounts can cause dormant seeds to sprout!

Mr. Krulik continues, "I used GA to force two types of mesemb seeds to germinate. Usually the seeds sprout within a month, however there are some which take longer. Some seeds of *Lampranthus haworthii* took six months to sprout. I thought I would try GA on some other seed which had not sprouted for over 6 months. I prepared a solution of 200 parts per million of GA in water (0.200 grams per liter) and added 10 milliliters to each container of seeds. One week later *Dinteranthus microspermus* came up nearly 100%. I made up another GA solution at double the strength and used it on *Disphyma australe* with 100% germination."

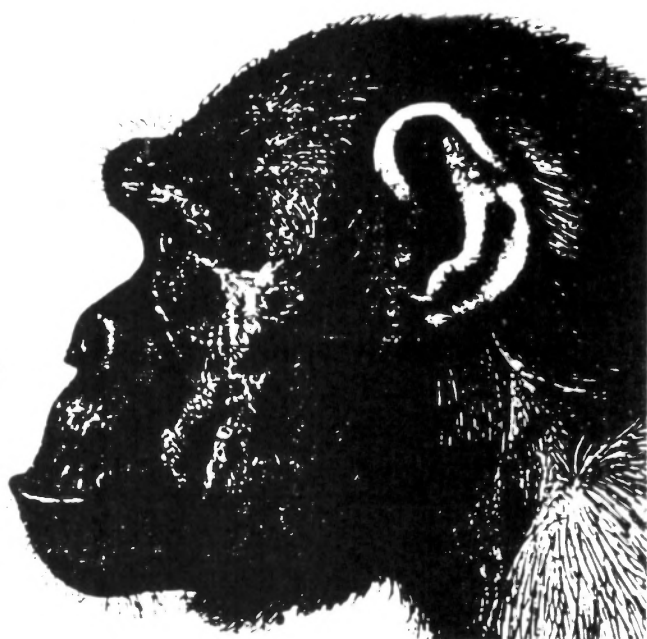
"All of the seedlings are growing normally without causing any elongation. I might add that once dissolved in water, the GA is rapidly broken down by bacteria so there is no danger of build up in the soil."

He suggests trying gibberellic acid if your seeds don't germinate in a reasonable time. Being extremely potent, very little is needed. Too much can kill the seeds, so start with a small amount and gradually increase concentration. Any excess solution should be stored within a refrigerator and discarded after a month. The best thing to do would be to buy a commercial preparation and start experimenting.

Good luck to the young at heart! Let us hear about your results.

editors note: GA is available at full service nurseries under the commercial label "Wonder Brel" or Progibb 4% spray.

*"Nobody but a fool  
trips on what's behind him."  
Old Yiddish Proverb*



---

## WISE AND OTHERWISE

**by Michael Buckner**

- PAGE 15 -

---

"Twenty-five percent of the U.S. endangered and threatened plants and birds, or those suggested as candidates for listing as such, are found in Hawaii. As the "Extinction Capital of the Nation," Hawaii presents a chilling argument in support of the Endangered Species Act, which comes before Congress for reauthorization this spring. The act's supporters face the toughest battle yet for the nearly 20-year old law as timber, mining, commercial fishing, development, and ranching interests combine in an effort to gut one of the most far-reaching conservation measures ever adopted. The act was approved in its current form in 1973 and amended in 1988.

Scientists estimate that the Earth is nearing an extinction of species unequalled since that of the age of the dinosaurs. We may lose as much as 15 percent of the world's organisms over the next 30 years. The Endangered Species Act is one of the most effective tools for combating this decline."

from SAVING THE ENDANGERED SPECIES ACT by Linda Rancourt, National Parks, vol.66,#3-4, 1992

---

"The human body comprises a skeleton of 208 bones, with a total weight of about 20 pounds; more than 600 muscles, which make up roughly 35-45 percent of the total body weight; a blood system containing between 9 and 12 pints of blood, operated by a heart which during a lifetime does enough work to have lifted a ton weight 150 miles up into the air; a nervous system dominated by a brain which makes the biggest computer look like a child's toy - and which programmes itself; a pair of lungs which handle 500 cubic feet of air a day; a cooling system involving between two and three million sweat glands; a feeding system which boasts a 25-foot-long alimentary canal and which deals with the conversion of 50 tons of food in an average lifetime; a reproductive system that has all too successfully populated today's world with more than 4,000 million human beings; an excretory system with kidneys capable of filtering 45 gallons of fluid a day; and 17 square feet of skin to cover everything and, as one doctor put it, "to keep the blood in and the rain out'.

This is the pulsating, complex and yet vulnerable organism that we have taken to the depths of the ocean and up to the moon. It is the animal which has invented language, art, science, sport, architecture, politics, and religion. It has conquered the world and may yet destroy it through a surfeit of success."

from BODYWATCHING, A Field Guide to Human Behavior by Desmond Morris, Abrahms, 1977.

# WISE AND OTHERWISE

## AFRICAN CACTUS? HENSTOOTH!

*Rhipsalis cassutha*, an epiphytic cactus, is the one exception to the rule: All cactus are endemic to the new world. This species is found in both Madagascar and Africa. Surprisingly, the Bromeliads, or pineapples, are also exclusively American with only one exception, *Pitcairnia fellicinana*, a terrestrial - again from west Africa, which because of its extreme isolation has caused much speculation.

**"He who enjoys doing and enjoys what he has done is happy."**

**Goethe**

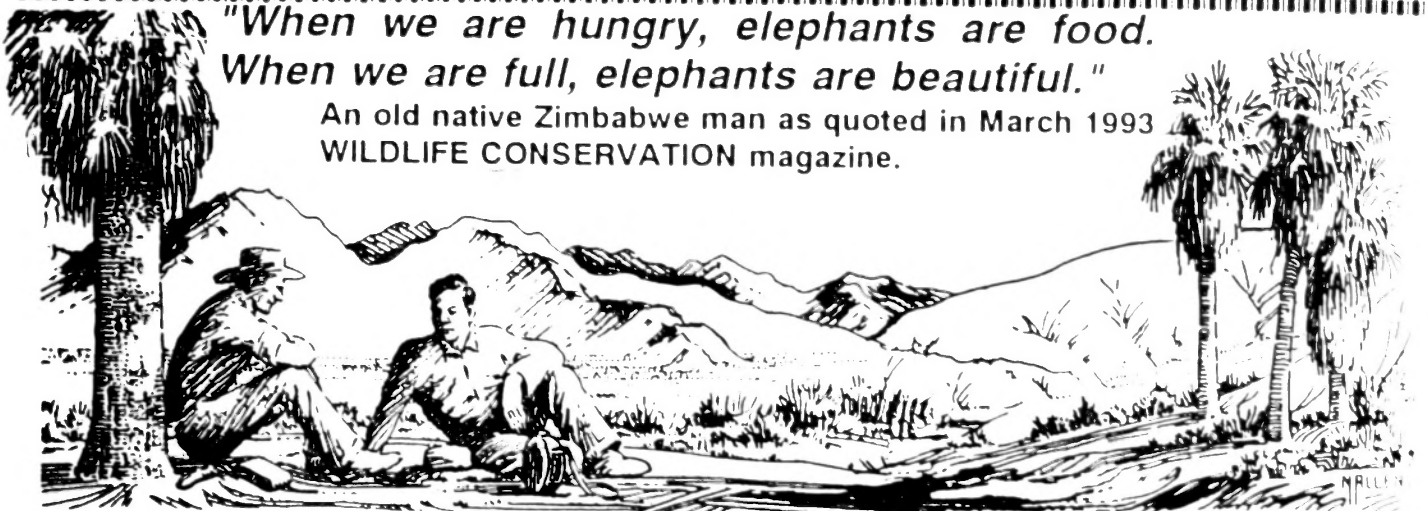
"If a black jackrabbit (ed. *Lepus insularis*, of Espiritu Santo Island, Baja California) should turn up here and there from time to time that would be no great surprise. "Melanistic sports" as they are called are perhaps not as common in the animal kingdom as their opposite numbers, the albinos, which latter are, as a matter of fact, quite common so that, for instance, the Arizona Sonora Desert Museum at Tucson has a living albino opossum, albino pack rat, albino gopher snake, and even an albino English sparrow, which latter looks very much like a rather dingy canary. But though melanism as well as albinism is hereditary in accord with certain laws, neither is ever very common in the wild because the unfortunate individuals are easily picked off by their enemies and even, sometimes, persecuted by their normal fellows. Of course, if an abnormal strain is artificially protected and thus not exposed to competition, many color variations can be perpetuated - which is why domestic animals often exhibit many color patterns unknown among their wild ancestors: cows and cats, for example, coming in a bewildering number of color patterns while in every species of wild cattle and every species of wild cat every individual is almost precisely like every other. Moreover, it is this fact which probably gives a clue to the mystery of the Black Jackrabbit of Espiritu Santo."

- THE FORGOTTEN PENINSULA, A Naturalist in Baja California - by Joseph Wood Krutch, U of AZ, c.1961

**"When we are hungry, elephants are food.**

**When we are full, elephants are beautiful."**

An old native Zimbabwe man as quoted in March 1993  
WILDLIFE CONSERVATION magazine.





# 1993 CONVENTION NEWS

JULY 18-22 SAN FRANCISCO

**Reservations are pouring in and we are recommending that attendees get their forms in to the registrar ASAP to reserve their place. It looks like this is going to be a big convention so make your plans early!** For those who love to purchase plants from our terrific plants sales area, special arrangements have been made with a shipper to be on site the last two days of the convention to conveniently pack and send your plants home for you. The last speaker's slot has been filled by **Eckhard Meier** (Germany) who will show pictures of his magnificent collection of **epiphytic cacti** and their flowers. A **round robin meeting** will be held Thursday night, July 22 and will be chaired by **Braden Engelke**. Registration Refund Policy: If your request is received by 5/20/93 - 100% refund, by 6/20/93 - 75% refund, and after 6/20/93 - 50% refund. Below is additional data on our field trips to help you make a decision on which one to choose. Both are super trips, but you must choose one. Remember, lunch will be included on each trip.

## **Trip 1: The Ruth Bancroft Garden and U. C. Botanical Gardens**

The Ruth Bancroft Gardens, Walnut Creek, California

Recognized internationally as one of the finest private gardens in North America, Ruth Bancroft's dramatic dry garden is testimony to its creator's eye for the unusual and unexpected. Her training as an architect is evidenced in the scale and composition of her plantings of massive arid climate plants.

Mrs. Bancroft has created a colorful dry garden of cacti, bold succulents, and distinctive trees and shrubs, all within a framework of mounded beds and meandering paths. The garden presents over two thousand specimens from around the world that thrive in water parched conditions. Notable for both its plant collection and design, the garden has been featured in numerous garden magazines. Your host for the tour will be well known horticulturist Brian Kemble.

University of California Botanical Gardens at Berkeley

Established 102 years ago, the U. C. Botanical Gardens now contains collections of more than 13,000 different species on 34 hillside areas, making it one of the largest and most diverse collections of living plants in North America.

Most of the plants known in the U. C. Botanical Gardens come from the wild. Their significance for research is enhanced because of their geographic origin. One of the first botanical gardens to arrange its collection by region, the garden recreates such disparate habitats as mountain ridges, arid deserts, marshes, and tropical rain forests.

Over the years, the Garden has conducted many field expeditions to South American and North American arid areas to collect specimens, many of which are still growing in the garden today. Garden staff members have included prominent succulent botanists such as Paul Hutchison and Myron Kimnach. Our host for the tour of this famous garden will be U. C. Horticulturist, Sean Hogan.

## **Trip 2: The Euphorbia Reference Collection, Bolinas, California**

The collection, owned by Dr. Herman Schwartz, is probably the largest collection of Euphorbias in the world. Here you will find several large greenhouses brimming with most of the named Euphorbias as well as about 40 unnamed. There are also major collections of Aloes, Mesembs, Caudiciforms, and Madagascar succulents. All are being used as basic material for Dr. Schwartz's Euphorbia Journals and succulent books, of which 9 have been published, 9 more are in preparation, and 6 to 8 are being planned.

In the meadows around the greenhouses are experimental beds for propagating Aloes and many other genera in an effort to determine their adaptability to the wet/cold Northern California climate. Dr. Schwartz will be there to personally show us around.

Along the spectacular scenic coast are native succulents including *Dudleya farinosa*, *Dudleya caespitosa*, plus a highly localized possibly new *Dudleya*, and *Sedum spathulifolium*, all of which are quite abundant in areas. We will stop at one or more of these sites.

# REGISTRATION FORM

## 1993 CSSA CONVENTION - SAN FRANCISCO - JULY 18 THRU 23

PLEASE PRINT YOUR NAME AND SOCIETY AS YOU WISH THEM TO APPEAR ON YOUR BADGE

NAME \_\_\_\_\_  
SPOUSE/  
ROOMMATE NAME

SOCIETY OR CITY \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE ( \_\_\_\_\_ ) \_\_\_\_\_

SECOND BEDROOM ASSIGNMENT - PLEASE CHECK ONE

\_\_\_\_\_ REQUEST PREFERRED OCCUPANT(S) FOR SECOND BEDROOM

\_\_\_\_\_ CSSA TO ASSIGN SECOND BEDROOM OCCUPANT

PREFERRED OCCUPANT(S) FOR SECOND BEDROOM

NAME(S) \_\_\_\_\_

**NOTE TO NON -CSSA APPLICANTS**

A REGISTRATION APPLICANT CAN JOIN THE CSSA AND SAVE ON THE REGISTRATION FEES AT THE TIME HE/SHE SENDS IN THE APPLICATION. AN APPLICANT CAN ALSO REGISTER THEIR SPOUSE AT THE CSSA MEMBER RATE IF THEY ENROLL THEM AS A CSSA ASSOCIATE MEMBER.

THE CONVENTION WILL BE OFFERING FURNISHED APARTMENTS WITH TWO BEDROOMS. EACH BEDROOM IN AN APARTMENT HAS 2 SINGLE BEDS. IF ONE PERSON STAYS IN A BEDROOM, HE/SHE WILL PAY THE SINGLE OCCUPANCY RATE. IF TWO PEOPLE STAY IN THE BEDROOM THEY WILL PAY THE DOUBLE OCCUPANCY RATE. WE RECOMMEND THAT YOU FIND FRIENDS YOU WOULD LIKE TO SHARE AN APARTMENT WITH. IF YOU DON'T EXPRESS A PREFERENCE, WE WILL ASSIGN AN OCCUPANT FOR THE SECOND BEDROOM IN YOUR UNIT. IF A COUPLE DOES NOT WANT AN OCCUPANT ASSIGNED TO THE SECOND BEDROOM, THEY CAN BOTH PAY THE SINGLE OCCUPANCY RATE. IF A GROUP OF FRIENDS WANTS THEIR ROOMS CLUSTERED TOGETHER ON THE SAME FLOOR, WRITE A NOTE EXPLAINING YOUR REQUEST AND SEND IT IN WITH THE REGISTRATION FORM. \*\*\*Note: THE ROOMS ARE ONLY AVAILABLE FOR THE ENTIRE CONVENTION WITH FULL BOARD.\*\*\*

	NUMBER	COST
<b>NEW CSSA MEMBERSHIPS</b>		
CSSA MEMBERSHIP - DOMESTIC	_____	Ⓢ \$ 30.00
CSSA MEMBERSHIP FOREIGN incl MEXICO & CANADA	_____	Ⓢ \$ 35.00
CSSA MEMBERSHIP FOREIGN - AIRMAIL	_____	Ⓢ \$ 55.00
CSSA ASSOCIATE MEMBERSHIP FOR SPOUSE / PARTNER	_____	Ⓢ \$ 6.00
<b>REGISTRATION</b>		
CSSA MEMBERS	_____	Ⓢ \$ 90.00
NON - CSSA MEMBERS	_____	Ⓢ \$125.00
LATE REGISTRATION AFTER 5/15/93	_____	Ⓢ \$135.00
LATE REGISTRATION AFTER 6/15/93	_____	Ⓢ \$145.00
DAILY REGISTRATION - DATES ATTENDING 7/ _____	_____	Ⓢ \$ 30.00 /DAY
<b>ROOM AND BOARD FOR 7/18-23/1992</b>		
DOUBLE OCCUPANCY - PER PERSON	_____	Ⓢ \$190.00
SINGLE OCCUPANCY - PER PERSON	_____	Ⓢ \$274.00
<b>FIELD TRIPS WITH LUNCH INCLUDED - CHOOSE ONE ONLY</b>		
TRIP 1 - RUTH BANCROFT GARDENS/ UC BERKELEY BOTANICAL GARDENS	_____	Ⓢ \$ 25.00
TRIP 2 - DUDLEYA HABITAT / DR SCHWARTZ AND THE EUPHORBIA REFERENCE COLLECTION	_____	Ⓢ \$ 25.00
FAREWELL BANQUET	_____	Ⓢ \$ 25.00
PARKING PERMIT FOR 7/18 - 24/92	_____	Ⓢ \$ 12.00

SUBTOTAL \_\_\_\_\_

THE CONVENTION WILL ACCEPT VISA, AND MASTERCARD CREDIT CARDS  
 ADD 5% CARD PROCESSING FEE BASED ON THE SUBTOTAL \_\_\_\_\_

**TOTAL DUE** ..... \_\_\_\_\_  
 MAKE CHECKS PAYABLE TO THE CSSA. CREDIT CARD USERS, FILL OUT THE INFORMATION BELOW

VISA / MASTERCARD # \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

MAIL THE REGISTRATION FORMS TO : DR DAVID DUPRE, CONVENTION REGISTRAR  
 220 MONTGOMERY STREET  
 BOX 3441  
 SAN FRANCISCO, CA 94104

CREDIT CARD USERS MAY DIRECTLY FAX THEIR REGISTRATION FORMS TO (415) 759 - 1701.

# CONVENTION PROGRAM

' Pacific Rim vs. Africa '

(tentative)

- PAGE 19 -

## Sunday, July 18

- 2:30 - 6:00pm Registration, book and plant sales.  
6:30 - 9:00 \* Welcome to San Francisco Party\*.  
8:00 - ? Informal slide shows. See bulletin board for schedule. Dr. David Tufenkian, Chairperson.

## Monday, July 19

- 8:00 - 5:00 Late registration, book and plant sales.  
1:00 - 1:45 Professor Ihlenfeldt, Professor of Botany, Hamburg University, "Pedaliaceae, a little known African plant family with some interesting succulents."  
2:00 - 2:45 Sean Hogan, University of California Botanical Gardens, "From penguins to monkey puzzles and the cacti in between—the cacti of Patagonia".  
3:00 - 3:45 Ted Green, horticulturist, Kaaawa, Hawaii, "The world of hoyas and dieldias".  
4:00 - 4:45 Seiichi Osada, horticulturist and nurseryman, Japan, "Cacti and succulents in nature".  
6:45 - ? Opening Banquet - Lecture by John Lavranos, renowned plant explorer, "Thirty years of succulent discoveries in Kenya."  
post banquet Dr. David Tufenkian, Chairperson, Informal, non-scheduled slide lectures — see bulletin board.

## Tuesday, July 20

- 8:00 - 5:00 Late registration, book and plant sales.  
9:00 - 9:45 Miguel Chazaro, botanist, University of Guadalajara, "Crassulaceae and some lesser known succulents of Mexico."  
10:00 - 10:45 Dr. Burl Mostul, PhD, psychologist and horticulturist, Milwaukie, Oregon, "Some new caudiciforms of the Pacific Rim."  
11:00 - 11:45 Gary Lyons, succulent horticulturist, Chairperson, Conservation Panel, "Don't dig up that cactus.....or should I? a discussion of bioethics, collecting and the law".  
1:30 - 2:15 Dr. Colin Walker, Dept of Botany, Open University, England, "Moroccan memories".  
2:30 - 3:15 Chuck Hanson, owner of Arid Lands Greenhouses, "Commercial nurseries as succulent life-savers."  
3:30 - 4:15 Dr. Carlos Ostolaza, MD, botanist, Lima, Peru, "The geographic distribution of cacti in Peru".  
7:00 - ? Rare Plant Auction, Steve Hammer, Chief Procurer and Dr. Gerald Barad, Chief Auctioneer.

## Wednesday, July 21 - Free time and BUS TOURS

- 8:00 - 5:00 Book and plant sales.  
8:30 - 3:00 Bus Tours: Choice of 1 only. Lunch will be provided on each tour. Time of return is variable.  
#1 Ruth Bancroft Gardens, Walnut Creek and the University of California Botanical Gardens, Berkeley.  
#2 Coastal dudleyas, Dr. Herman Schwartz and the Euphorbia Reference Collection, Bolinas.  
7:00 - 8:30 Affiliate Meeting, presentation by next convention hosts, Mary Jo Gusset, Vice President CSSA, Chairperson.  
8:45 - ? Informal slide shows. See bulletin board and Dr. David Tufenkian.

## Thursday, July 22

- 8:00 - 5:00 Book and plant sales.  
9:00 - 9:45 Prof. Ihlenfeldt, "Mesembryanthemaceae — masters of adaptation".  
10:00 - 10:45 John Lavranos, "Explorations in northern Somalia and Djibouti".  
11:00 - 11:45 Hans Britsch, "Western Cactus Growers and the Britsch family".  
1:30 - 2:15 Dr. Gerald Barad, MD, President of the CSSA, "Wild flowers and succulents of Namaqualand".  
2:30 - 3:15 Dr. David Tufenkian, MD, hobbyist, "Collectors and their collections".  
3:30 - 4:15 Sam Williams, nurseryman and hobbyist, Carmichael, CA, Culture and Propagation Panel, "Propagation or how to increase your collection and have fun at no cost".  
7:00 - 8:00 Meeting of the newsletter editors, chaired by Mac Clark, Tennessee, member of the CSSA Board of Directors.  
7:00 - 8:00 Informal and non-scheduled slide programs, see bulletin board and Dr. David Tufenkian.

## Friday, July 23

- 8:00 - 5:00 Book and plant sales.  
9:00 - 9:45 Miguel Chazaro, University of Guadalajara, "Some interesting cacti and agaves of Mexico".  
10:00 - 10:45 David Naylor, hobbyist from Toronto, "Cold-hardy succulents in the Great White North".  
11:00 - 11:45 Dr. Colin Walker, "Asclepiads through the ages".  
1:30 - 2:15 To be determined.  
2:30 - 3:15 Dr. Carlos Ostolaza, Lima, Peru, "Cacti and succulents in art".  
3:30 - 4:15 Seiichi Osada, "Cactus and succulent collections in Japan".  
7:00 - ? Farewell Banquet.

# SAN DIEGO CACTUS & SUCCULENT SOCIETY, INC.

## OFFICERS

President - Joey Betzler  
239-0804  
Vice President - Michael Buckner  
222-3216  
Secretary - Anna Cornett  
291-6426  
Treasurer - Laura DeMerritt  
571-5127

## BOARD OF DIRECTORS

Helen Barkdoll  
Shirley Berry  
Bill Crowley  
Tom DeMerritt  
Marylyn Henderson  
Kay Quijada

## COMMITTEE CHAIRPERSONS

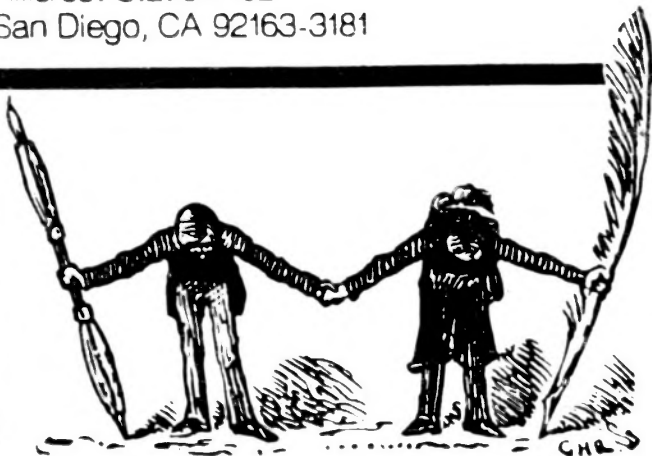
Audit - Warren Buckner  
CSSA Affiliate Rep. - Michael Buckner  
Education Committee - Shirley Berry,  
Joey Betzler, Joe Clements,  
Phyllis Flechsig, Dylan Hannon  
Beverly Kirkegaard, Rick Latimer  
Historian - Rick Latimer  
Librarian - Rick Latimer, Betty Athy  
Membership - Laura DeMerritt  
Plant Exchange Table -  
Marilyn Lemrow, Dorothy Larberg  
Plant & Supplies Table - Michael Cullen  
George Plaisted, Bob & Sue Marder  
Program - Joe Clements,  
Michael Buckner  
Picnic Chairman - Tom DeMerritt

Reception - Ethel Standish,  
Elizabeth Glover  
Regalement - Gail & Donald Bamber,  
Lois Zaranka  
Representatives:  
Balboa Park Desert Garden -  
Lit Phan  
Quail Botanical Garden -  
Phyllis Flechsig  
S.D. Botanical Garden Foundation -  
Rick Latimer  
S.D. Floral Association -  
Elizabeth Glover  
Wild Animal Park Baja Hill -  
Joey Betzler  
Show - Joey Betzler, Chuck Adams  
Show Sales - Michael Buckner



# VISITORS WELCOME

San Diego Cactus and Succulent Society, Inc.  
P.O. Box 33181  
Hillcrest Station 102  
San Diego, CA 92163-3181



Editors - Joyce & Michael Buckner  
1958 Sunset Cliffs #103, San Diego CA 92107

The San Diego Cactus and Succulent Society, Incorporated is open to all persons interested in growing cacti or other succulent and exotic plants. Meetings are held the second Saturday of each month at 1:30 P.M. in Room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held at 12:00 P.M. prior to general meetings. Annual dues are \$10 per single member per year, and \$5 for each additional member of same household. Single copies of Espinas y Flores are \$1 per copy sent within USA. Affiliated with the Cactus and Succulent Society of America, Incorporated

A NON-PROFIT,  
TAX-EXEMPT  
ORGANIZATION