

Donated to the San Diego
Cactus & Succulent Society by
Perlo S. Lewis (Founding Member)

Espinas y Flores

BULLETIN OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY, INC.

AFFILIATE OF THE CACTUS AND SUCCULENT SOCIETY OF AMERICA
AND THE INTERNATIONAL ORGANIZATION FOR SUCCULENT PLANT STUDY

VOLUME XXVIII NUMBER ELEVEN, SATURDAY, NOVEMBER 13, 1993 @ 1:00PM



NOVEMBER PROGRAM: CONOGRAPH EXPOSE BY STEVEN HAMMER



PLEASE RENEW YOUR MEMBERSHIP EARLY!

AND PLEASE FILL OUT THE NEW 1994 MEMBERSHIP FORM. WE ARE IN THE PROCESS OF CREATING A NEW MEMBERSHIP /MAILING LIST; PLEASE HELP US BY UPDATING ANY MEMBERSHIP INFORMATION.

- ★ ARE WE SPELLING YOUR NAME CORRECTLY???
- ★ DO WE HAVE THE CORRECT ZIP CODE ON YOUR MAILING LABEL???
- ★ DO WE HAVE YOUR CURRENT PHONE NUMBER????

OUR PROGRAM: UNDER THE CARPETWEEDS! (*Aizoaceae*). Lithops, Conophytums, and other Mesems' (carpetweeds) of Southwestern Africa by Steven Hammer of Belen, New Mexico. Steven has just returned from another Namaqualand adventure where he found several more Lithops species which will be described and published in the near future. Come and enjoy this special program with its beautiful plant & habitat slides and knowledgeable entertaining speaker. We will have available for purchase ("Hot off the press and fresh off the slow boat") "CONOGRAPH, A Monograph of the Genus Conophytum". This fine book has more than 250 full-color photographs and Steven Hammer will be pleased to sign them for you. See you all there!

Our cover: A beautiful *Lithops lesliei* mimicking the colors, patterns and textures of actual rocks, thus the common name, Living Stones. Photo by John Trager of the Huntington Botanical Gardens.

A Special Thanks

to Chuck Everson of RAINBOW GARDENS for providing information on Steven Hammer and for supplying copies of his new book CONOGRAPH, A Monograph of the Genus Conophytum.

and a special Thank you to Bob Taylor for donating the beautiful multi-grafted plant for our doorprize last month. Please contribute what you can to make this a successful event

LOOK FOR LOTUS LAND BUS ADVENTURE INFORMATION AND SIGN UP IN THE DECEMBER ISSUE OF ESPINAS Y FLORES.

SEPTEMBER BRAG TABLE WINNERS

Judged by: Joseph Betzler

-
- FIRST: Elibet Marshall's *Kalenchoe thyrsiflora*
SECOND: Brent McCowen's *Ledebouria socialis, varigated*
THIRD: Shirley Berry's *Kalenchoe farinacea*

NOVEMBER BRAG TABLE WINNERS

Judged by: Michael Buckner

CACTI:

- FIRST: Beverly Kirkegaard's *Uebelmannia pectinifera*
SECOND: Tom Knapic's *Ariocarpus scapharostrus*
THIRD: Mily Williams' A sport like "Fred"???

SUCCULENTS:

- FIRST: Kelly Griff's *Lithops* Collection (new member!)
SECOND: Rudy Lime's magnificent *Pelargonium* bonsai
SECOND: Phyllis Flechsig's *Cyrtanthus Spiralis*
THIRD: Alan Weiss' *Pachypodium ambogense*
THIRD: Bob Taylor's *Agave "mixteca" species*

.....

It's not too early to be preparing your exchange plant for our gift exchange. This is always a tremendously fun event and the nicer your plant is staged (container, top dressing, trimming, pest-free, in-flower, etc.) the sooner you will have a chance to select from among your friend's lovely plants. I (Joyce) have thoroughly enjoyed Diane Crowley's *Notocactus magnificus* which I displayed proudly on my desk at work for many months with many compliments.

.....

DECEMBER HOLIDAY MEETING & DINNER PARTY STARTS AT NOON. WE WILL HAVE OUR HOLIDAY GIFT EXCHANGE - IF YOU HAVE NOT PARTICIPATED BEFORE, IT WORKS LIKE THIS:

ANY MEMBER OR GUEST MAY PARTICIPATE; ALL YOU DO IS BRING IN A CACTUS OR SUCCULENT PLANT WHICH IS DESIRABLE. IT SHOULD BE IN GOOD CONDITION AND NICELY POTTED. INCLUDE A LABEL THAT IDENTIFIES THE PLANT ON ONE SIDE AND HAS YOUR NAME ON THE OTHER SIDE. THE FIRST PLANT TO BE SELECTED WILL BE AUCTIONED OFF AT THE END OF MEETING. THE PERSON WHO BROUGHT IN THE FIRST SELECTION GETS FIRST CHOICE FROM ALL REMAINING PLANTS. WHENEVER A PLANT IS SELECTED, THE PERSON WHO BROUGHT IT GETS THE NEXT CHOICE, SO THE MORE APPEALING THE PLANT THAT YOU BRING IN THE EARLIER YOU WILL GET YOUR CHANCE AT THE "GEMS". PLEASE, ONE PLANT PER PERSON. WHAT A TERRIFIC WAY TO GIVE, RECEIVE, AND BROADEN YOUR PLANT COLLECTION ALL AT THE SAME TIME!!

.....

BACK COVER PUZZLE: "We are often unaware of the precise form of our actions. Every time you interlock your fingers the same thumb is uppermost. But which thumb is it? Are you right-thumbed or left-thumbed? (ed. note: or green-thumbed?) Most people cannot confidently describe their own interlock-posture before acting it out.

taken from MANWATCHING, A Field Guide to Human Behavior by Desmond Morris, Abrams, NY c.1977

HOLIDAY PARTY RESERVATIONS!

YES!! WE HAVE DECIDED TO SEND OUT A DECEMBER ISSUE OF ESPINAS y FLORES. PLEASE SEND IN YOUR 1994 DUES AND RESERVATIONS FOR OUR CATERED HOLIDAY PARTY EARLY. THANKS! DEADLINE FOR DECEMBER ISSUE IS: MONDAY NOVEMBER 29th -- PLEASE SEND US YOUR CARTOONS, DRAWINGS, LETTERS, POETRY, AND ARTICLES! WE WOULD REALLY LIKE TO SEE SOME CONTRIBUTIONS FROM YOU MEMBERS WHO HAVE NEVER CONTRIBUTED BEFORE PLEASE CONSIDER SHARING SOME OF YOU CACTUS & SUCCULENT EXPERIENCES AND KNOWLEDGE WITH FRIENDS.

In our library we have copies of "The Sansevieria Journal" an excellent Herculean effort by Juan Chahinian, editor, Sansevieria specialist and promoter. The latest issue of this journal has articles of tremendous interest: John LaVranos' "A Few Sansevieria Habitats; "A Sansevieria Safari" by Juan Chahinian; "Leaf Anatomy in Sansevieria" by Alan Kolly, and others. This excellent publication can be ordered for only \$10.00 from Trans Terra, 18618 Erwin Street, Reseda, CA 91335, or phone directly (818) 344-4096. Mr. Juan Chahinian will be one of guest speakers in early 1994. We look forward to his enlightened and charming enthusiasm of the subject matter.

San Diego and the Hanalei Hotel in Mission Valley, will be the Host to the World Bromeliad Conference, "Bromeliads in Paradise", next June 15 - 19, 1994. For additional information please call: (714) 858-3714.

In November, Michael Buckner gave a lecture presentation to the Palomar District of the National Council of State Garden Clubs Southwestern Judges Council about the intricacies of judging cacti and succulents. All who attended agreed that cacti & succulents are some of the most difficult subjects to judge in Garden shows.

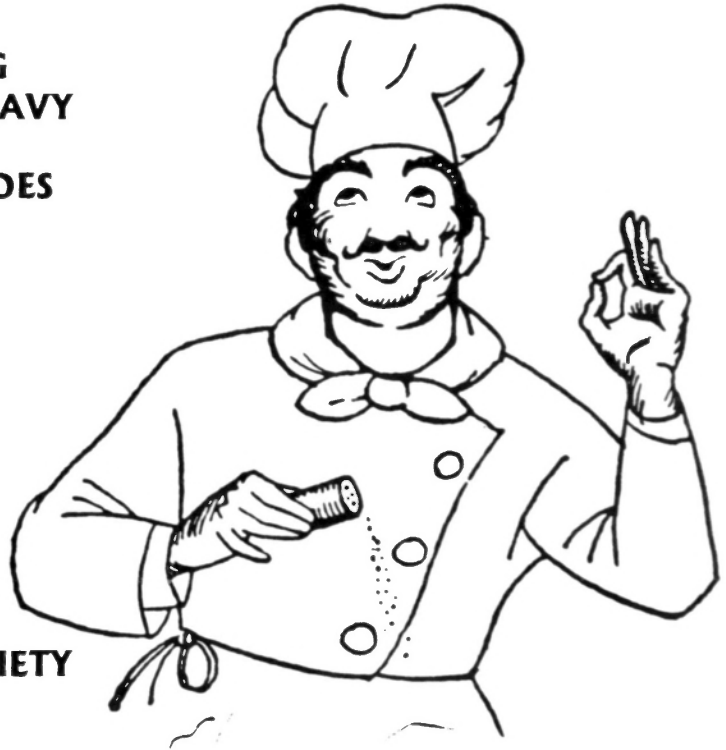
- PAGE 4 -



**PROGRAM FOR DECEMBER: HAPPY HOLIDAYS
ELECTION OF BOARD OF DIRECTORS
DINNER PROMPTLY @ 1:00 PM
SPECIAL PLANT EXCHANGE
SIGN UP OF VOLUNTEERS FOR EDUCATION & REFRESHMENTS
DISTRIBUTION OF GIFT PLANTS TO MEMBERS
MINI-AUCTION
NO LIBRARY AND NO PLANT SALES**

HOLIDAY BUFFET MENU:

**ROAST TURKEY WITH SAGE DRESSING
MASHED POTATOES WITH GIBLET GRAVY
HOT BUTTERED CORN
TOSSED GREEN SALAD WITH TOMATOES
TWO CHOICES OF SALAD DRESSING
RELISH TRAY OF FRESH VEGETABLES
CRANBERRY SAUCE
ROLLS AND BUTTER
COFFEE, TEA, SODAS OR WINE
APPLE OR PUMPKIN PIE**



PLEASE MAKE CHECKS PAYABLE TO:

**S.D.C.& S.S.
MRS. LAURA DE MERRITT
C/O S.D. CACTUS & SUCCULENT SOCIETY
P.O. BOX 33181
SAN DIEGO, CA 92163-3181**

**DEAR LAURA,
YES! PLEASE RESERVE HOLIDAY DINNERS FOR MEMBERS @ \$10.00 PER MEMBER:**

MEMBER NAME _____

MEMBER NAME _____

PLEASE RESERVE HOLIDAY DINNER FOR GUESTS @ \$10.00 (SORRY, NO GIFT PLANT FOR NON-MEMBERS).

GUEST NAME _____

GUEST NAME _____

SATURDAY, DECEMBER 11TH MEETING BEGINS AT 12:00 NOON - HOLIDAY DINNER TO BE SERVED AT 1:00 - PLANT EXCHANGE DURING DINNER, GIFTS PLANTS WILL BE DISTRIBUTED DURING DESSERT.

About our November speaker

- PAGE 6 -

The "Foreword" verbatim from Steven Hammer's new book The Conograph by Myron Kimnach, curator emeritus, Huntington Botanical Gardens and editor of The Cactus & Succulent Society of America Journal.

In 1981 Steven Hammer visited the greenhouse at my home on the grounds of the Huntington Botanical Gardens. He was then a musician living in Santa Cruz, California, where he played and taught piano and, as a diversion, raised mesembs in a small greenhouse. Later he lived in San Francisco where he maintained a mesemb collection on his windowsills.

Although *Lithops* was then his particular passion, he was visiting me because he had heard about my collection of conophytums. Accustomed to seeing smallish plants in cultivation, he was deeply impressed by some of my 30-year-old specimens that had a hundred or more heads. In fact, he now says this visit seriously deepened the "conophytomania" that now occupies so much of his time and talents.

Steven was born in 1951, although he considers another date almost as important: 1962. During that year he saw his first conophytum at Johnson Cactus Garden (it was *C. friedrichiae*, whose windowed leaves fascinated him). Two years later he was growing almost all the mesembs then available from nurseries.

In the ensuing years, Steven has gone many times to the ultimate source of *Conophytum*: southern Africa. His first trip was in 1980, with Steven Brack and Harry Hall. Others were in 1982 (with Brack and Anthony Mitchell), 1985 (with Bryan Makin), 1986 (twice with Brack and M. Bayer), 1987 (with Peter Bruyns and Heidi Hartmann) and in 1989, 1990, 1991 and 1992 with others including Graham Williamson.

Like N.E. Brown, his illustrious predecessor in the field of mesembs, Steven had no formal training in botany. His enquiring mind and love for the plants have nevertheless much advanced our knowledge of mesembs. He is gifted with a discerning eye, not only in observing anatomical details overlooked by others, but in discovering minute new species in the African deserts. His nose is equally as discerning - who else would have noticed that the leaves of *C. khamiesbergense* smell like raspberries? He also is blessed with a highly readable and fluent writing style that has focused on many plants. His articles for the journals of the American, British, and South African succulent societies and, especially, for the Mesemb Study Group Bulletin, are eagerly awaited by many readers.

When not writing or exploring, Steven maintains, studies and propagates a comprehensive mesemb collection at Mesa Garden, near Albuquerque, New Mexico. His cultural skills are well demonstrated

by the photographs in this book. His expertise in the setting and raising of seeds has not only furthered the popularity of these plants but has also removed much of the threat of over-collecting in habitat.

Although none of us would deny the charm of lithops, there have been no less than five works devoted to them. No one has written a book on conophytums, which exhibit far more variety in growth form and leaves, as well as in the flowers, which can be nocturnal or diurnal, showy or nearly microscopic. A book has been long delayed, primarily because of the intimidating prospect of studying several hundred published species, a task made difficult by a scarcity of herbarium specimens and the often inadequate original descriptions. After publishing a detailed critique of *Conophytum* species in four numbers of *Bradleya*, the yearbook of the British Cactus and Succulent Society, Steven has now completed a further step, a book devoted solely to the genus.

What is the appeal of these unique little plants? I can only say why they appeal to me. First, they are tiny, an attractive character for the plant-grower with limited space. The leaves are often beautifully dotted, streaked or tuberculate, qualities best appreciated with the use of a hand-lens. The flowers are usually showy, particularly in the large bilobes and the diminutive members of section *Minuscula*. Other flowers, though modest in appearance, may be deliciously fragrant at night. Although many succulent fanciers object to the moribund appearance of "conos" during the summer dormant period, there are such compensations as the ease of care taken during that time and the pleasure of the first thorough watering in late summer. Although this watering takes only a few moments, there are delightful consequences: first, after several days (or even hours), the emergence of new, colourfully marked or fresh green leaves, followed by the flowers in their diverse forms and colours.

Conophiles, delighted by their plants, but long frustrated by the lack of accessible, useful literature, have now been well-provided. Steven Hammer's lively book will give us all a new appreciation of our plants.

**SEND IN YOUR HOLIDAY RESERVATIONS
EARLY!!**

President's Message

Well my second year as president of the San Diego Cactus and Succulent Society begins in January. We have accomplished a few noteworthy things. Firstly, this instrument (the newsletter) has been quite good thanks to the devotion of our editors and the contributors. The circulation has grown to over 300. Our Annual plant show and sale was good this year and we broke in a new show chairman as well. At the Del Mar Fair we won just about all of the possible awards and prize money for our division (thanks to the guidance of Michael Buckner and a healthy list of volunteers). We took these winnings and purchased a computer and printer for the production of the newsletter and other club business.

Our club is a sponsor of the Baja Collection at the San Diego Wild Animal Park. Now that the cooler weather is upon us we need help with maintenance. Also, Michael Buckner has volunteered to design a permanent display, similar to the one at the fair. This display will be for the stream bed that runs on the west boundary of the Baja Hill. Volunteers are needed for this project and the maintenance of the collection.

Elections of board members will take place in December. If you want to run for a position contact any club officer. Please do not forget that our board meetings are open to any member, you may observe us in action. The board meets 90 minutes before the general meeting. Also, we need volunteers to help with refreshments, plant sales, plant of the month articles and people for the plant show and sales committee. And, last but not least, we have a 1997 Cactus and Succulent Society of America Convention to plan for, we will need help with this and will start the plan in earnest in 1994.

Thanks for your support,

Sincerely, Joey Betzler



CACTUS OF THE MONTH: FEROCACTUS ACANTHODES

by Frank Thrombley

The species Ferocactus acanthodes*, with its varieties, has a range from the southwest corner of Utah, in the north, to the Calamajue mission site, Baja California Norte, to the south. A straight line distance of approximately 525 miles. They are most prominent in the Mojave and Sonoran deserts but are probably found in the extreme boundaries of the Great Basin and Chihuahuan deserts as well.

There are four varieties of this species of Ferocactus and possibly a fifth one, yet to be determined in the author's opinion. They are: Ferocactus acanthodes varieties acanthodes, lecontei, eastwoodiae, tortulospinus, and a form from Calamajue Canyon. The taxon Ferocactus rostii which was considered to be a distinct species, has been combined with F. acanthodes var. acanthodes and could possibly be called the "rostii" form. All of the plants have yellow flowers with a little red along the basal portions of the veins. Their size is atypical in that full grown plants can be from two feet to nine feet tall. The majority of them being columnar or barrel-shaped solitary stems. It is their very variable spination however, that hold your fascination for these plants. The spine colors vary from white, grey, yellow, to orange and brilliant red. Further the spines come in lengths up to seven inches long and can be all shapes from oval to elliptical, flat to twisting, stiff to flexible and in some cases with a hook on one or more of the centrals. Some of the plants are indeed ferocious (which is derivative from the Latin word "Ferox" meaning bold or fierce) hence its name Ferocactus.

The greatest concentration of these barrel cacti are in Riverside and San Diego Counties of California. This very large population consists of the varieties F. acanthodes var. acanthodes (about 80%) and F. acanthodes var. lecontei (about 20%).

Ferocactus acanthodes var. lecontei has the greatest distribution and is found in all areas of this vast range with the exception of the Laguna Chapal Seca and Calamajue site in Baja California. This plant grow to between six and seven feet tall with a columnar stem completely covered with red or dull-red spines. The stem can grow two feet in diameter. The stem, however, is usually covered completely with its broad, curving but not twisting central spines and the narrow, flexible, undulating radial spines. An impressive sight standing as a sentinel in its habitat.

Ferocactus acanthodes var. eastwoodiae has a distribution over a very limited range, growing in small areas of Organ Pipe National Monument and the Dripping Springs and Mescal Mountains of Arizona. This plant grows to six feet tall and the spine color is a straw-yellow to a bright yellow. The spines are also comparatively short (not covering the plant body), stout centrals with stiff radial which are a little shorter than the centrals. This, too, is an impressive plant to see growing on rocky cliff faces in habitat.

Ferocactus acanthodes var. tortulospinus is found in a very local area near Laguna Chapala Seca, Baja California. Approximately 200 miles south of its closest relatives in northern Baja California. The colony seems to be located on two rocky hillsides and relatively small in population. The paved road, Mexican Highway # 1, passes through the lower range of these plants. The plant grows to two feet tall and about sixteen inches in diameter (although this is not common).

CACTUS OF THE MONTH: *Ferocactus* continued by Frank Thrombley

The spines are its most outstanding feature. The radial spines are greyish-red in color, yellow tipped, approximately eleven in number and spreading. The lower central is usually very contorted, hooked and up to six inches in length. A very fierce looking plant. They also seem to "blend in" with their surroundings of a reddish rocky hillside. The colony of *Ferocactus* growing at the Calamajue site is between eight and ten miles (straight line) southeast of Laguna Chapal Seca. These *Ferocactus* have been assigned to var. *tortulospinus* by Nigel Taylor, Botanist and Taxonomist, Royal Botanic Gardens, Kew, England. Nigel Taylor wrote that this disjunct variety is very similar to var. *acanthodes* and is maintained here more for reasons of geography than morphological difference. This colony however is very variable in all aspects. The plants on the mesa can grow in excess of six feet tall. The author measured a plant six foot six inches tall with a diameter of twelve inches with all yellow spines and no contorted central spines. In the same location there is a *Ferocactus* three foot ten inches tall with yellow spines and contorted central spines about four & a half to five inches long. All plants were photographed with yellow flowers and were growing at an elevation of about 1800 feet. When travelling down into the canyon the *Ferocactus* are much smaller (up to three foot high) with spination colors of orange, yellow, red and dull greyish-red. The spines also vary in length and description from short straight to hooked and of course many contorted centrals. This is a much larger colony than the one at Laguna Chapala Seca and certainly deserves to be studied further.

Ferocactus acanthodes var. *acanthodes* is being described last, for it certainly is the most variable and colorful of this series. The Anza-Borrego State Park of California in the County of San Diego is an ideal location to study this variety. Some colonies, of thousands of these plants grow to three foot tall and appear to be at their maximum height. Other colonies, in different habitat within the park, grow to six feet tall with occasional plants growing to eight feet. The author measured a plant at seven foot 1 inch tall. They are primarily growing on the rocky hillsides at elevations between 500 and 2500 feet and into every canyon or arroyo. Within this Park's 500,000 plus acres there must be 50,000 to 100,000 *Ferocactus*. The spine colors include all colors previously described with some plants having yellow, orange, and red on its own spines. The spination will vary from the symmetrical form on var. *eastwoodiae* to the long twisted spines on var. *tortulospinus* and more, some central spines will grow to a length of seven inches. The shapes of these plants are barrel type to columnar with some clumpings, occasional pups or offsets on older stems. And a few plants dividing dichotomously. I believe that I have found both varieties of *lecontei* and *eastwoodiae* growing in the park, but without having studied these plants in other habitats one should not be so bold. The *Ferocactus* growing at the Calamajue site however are indeed very much the same as those in Anza-Borrego, and I believe should be assigned to variety *acanthodes*.

* The species *F. acanthodes* is the name used by the nurseries and a majority of botanists. However, a few taxonomist use the name *Ferocactus cylindraceus* for this species.

References used:

- BRADLEY Yearbook of the British Cactus & Succulent Society, Volume 2/84; A
Review of *Ferocactus* by Nigel Taylor
The Cacti of the United States and Canada by Lyman Benson

SUCCULENT OF THE MONTH: DWARF ALOES

by Phyllis Flechsig

Aloes, in the lily family, are among the most popular plants grown by collectors of succulents. All aloes are native to Africa, Madagascar, or the Arabian peninsula, and range in size from tiny tufts to large trees. The larger species are fine landscape plants, but many of us have no space for them. The solution? Grow only the permanently dwarf kinds, which are plentiful and varied. In fact, many of the dwarf kinds do better in containers than in the landscape in our climate, as they may get too hot out in the sun in summer and too cold or wet in winter. Many species produce multiple rosettes like a cushion; when one of these gets too crowded in its pot, the outer rosettes are easily removed if the grower wants to keep the plant in the same size pot.

Among the small aloes are the so-called "grass aloes," whose foliage is thin and grasslike. An example of this type is Aloe myriacantha from the eastern Cape region of South Africa. A size up from this are such species as A. howmanii, A. ballii, and A. inyangensis, all of Zimbabwe. They have very narrow leaves and relatively short inflorescences.

The choicest of the small aloes are all native to Madagascar. Some with tiny rosettes and small but pretty flowers are: A. calcairophila, with white flowers (it is rather difficult in cultivation, unfortunately); A. descoingsii, possibly the smallest of all aloes, and relatively easy to grow; and A. haworthioides, a charming little plant that does indeed resemble some haworthias, as the name implies; it has tiny orange flowers that are pleasantly fragrant.

More Madagascar natives are such plants as A. bellatula, with dark green narrow leaves and orange flowers, and A. albiflora, similar looking but with white bell-shaped flowers. A. rauhii is a pretty little plant that has a decorative form called 'Snowflake'; John Trager of the Huntington Gardens has produced several named hybrids of A. rauhii that have handsome markings on the leaves. One of these has the alluring name of 'Lizard Lips.' Another pretty little aloe, not so easy to grow but worth some effort, is the pinkish-grey A. parvula. Aloe bakeri has small, spidery rosettes, and unlike most of these others, prefers a sunny situation. Its flowers are orange, and it will exist happily in a six-inch pot for a long time. A. jucunda has very small, shiny, dark green rosettes that multiply fast, but it never gets more than a few inches high.

Most of these plants are easy to grow, needing light shade, protection from frost, and average water. (The exception is A. haworthioides, which needs a lot less than average watering.) Propagation is generally done by separating rosettes, a very satisfying process that should result in instant new plants.

LITERATURE CONSULTED

Reynolds, G. W. 1966. The Aloes of Tropical Africa and Madagascar. The Aloes Book Fund: Swaziland.

The Tireless Termites Attend Huntington's 10th Annual Succulent Plant Symposium

By Stan Yalof

The theme was "Hybrids, Cultivars, and Mutants. Michael Buckner, Rick Latimer, and I, Stan Yalof arrived at 8:30 AM, in time for coffee, juices, and crumpets. After a few words of introduction by Jim Folsom, Huntington Botanical Gardens Director, and by John Trager, Desert Collections Curator, what proved to be some fascinating talks began.

Jack Catlin of La Canada spoke on *Aeonium* hybridization, letting us in on what's happening beyond the familiar.

Mark Dimmitt of the Arizona Desert Museum in Tucson gave a humorous exciting talk of particular interest to hybrid enthusiasts. I have a small colony of Harry Johnson hybrids that my wife and neighbors have enjoyed for many years. For *Adeniums*, Mark developed deeper flower coloration, away from pastels and toward saturated colors. Working with an *Echinopsis* cross of *Heliocereus* and certain Johnson hybrids, he was able to increase flower color, and extend the number of flowering days from 16 to 35 days per year. And those colors!! Oh Wow!! (an actual name of a 35 day flowering cross). At the plant sale I bought four of his best: "June Noon", "Apricot Bloom", "Volcanic Sunset", and "First Light" (I purchased an extra set, if anyone is interested). One that got away was the fluorescently gorgeous "Neon Dawn", which sold for over \$110 at the silent auction.... Just as well!

Rudi Dorsch talked on Epicactus taxonomic mysteries: *Selenicereus*, *Hylocereus*, *Schlumbergera* ... pretty pictures. We tireless termites were grateful for a rest after the previous adrenalizing talk. Then it came: Rudi called *Rhipsalis* "uninteresting flowers" - followed by much background grumbling. Do all plants have to have five inch saturated flowers to be interesting? I think not!

Dave Ferguson of Mesa Gardens in New Mexico talked about nature's hybrids, many of which he has found during wanderings from Big Bend to Canada, and to the mid-West, collecting, observing, and photographing *Opuntias* and *Cereus* species and their borderline wilderness hybrids. Modifications to Lyman Benson's pioneering geotaxonomy of North American cactus were commented on.

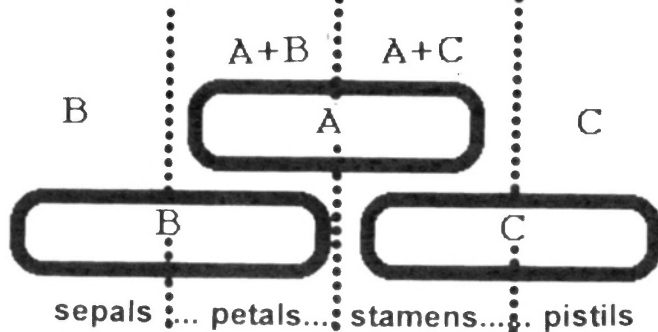
The meeting then shifted to the patio where Paul Hutchinson of Tropic World Nursery in Escondido showed off about twenty of his favorite hybrids, several of which were hotly sought in the auction. Paul talked about several horticultural pioneer hybridizers: Ed Hummel, Dick Wright, and Harry Butterfield. He spoke of their influence on his collection and also discoursed briefly on uncomplicated plant naming and the *Euphorbia* drawings watermarked onto his stationery!

Time for lunch, followed by a meander through the Huntington's twelve acres of cacti and succulents. Drenched from all the excitement, we needed respite. Lunch was magnificent!! An entree' of chicken roll with core of saucy mushroomed vegetables sliced thin and highlighted with a sprig of tarragon; and for dessert a chocolate cake with raspberries & raspberry sauce, covered with chocolate mint leaves. May I encounter it again in Heaven!

After lunch, Elliot Meyerwitz of CAL-Tech gave an astounding talk, entitled "Crested Plants and Monstrose Flowers: Notes from the Laboratory". The title doesn't describe the exciting insights that his team of thirty had learned regarding the instruction code for flower cell specialization. His first slides showed scanning electron micrographs (SEM) of a few cells on a flower-to-be meristem. Later slides showed cell multiplication and gradual development into sepals, petals, stamens, and pistils. Using a small, insignificant

HUNTINGTON SUCCULENT SYMPOSIUM by Stan Yalof continued.....

plant called *Rhaphisopsis* (no relation to *Rhipsalis*), grown by the millions in a modest space, they discovered the flower instruction code. This surprisingly simple code specified the order of flower parts, controlled creasing, and could produce dioecious flowers. All of these marvels are based upon a three gene set. Call them A, B, and C.



As shown in the sketch, if instructions to a particular cell are B, sepals are produced; if A & B, a petal set; if A & C, stamens; and for C alone, pistil(s). With genetic engineering magic, the Cal-Tech team could modify the flower gene code sent to the *Rhaphisopsis* through the intermediary of a bacteria carrier. BC alone plants produced pistil, stamen, stamen, pistil flowers; AC for sepal, sepal, pistil, pistil flowers; A alone for sepal, sepal, sepal flowers; and finally ABC for undifferentiated growth, but still with the number and position of floral organs. Hard to imagine without viewing it. Although most of this work utilized the tiny *Rhaphisopsis* (which Michael Buckner, that wag, referred to as "the *Drosophila* (Fruitfly of the plant world)"). Corroboration with other plants had shown the ABC code to be universal.

Bob Schick, an entomologist turned Echinopsis hybridist gave a wonderful talk on his efforts to produce bigger and better Echinopsis hybrids. While I am partial to this subject, Bob's work had many dimensions. His workshop is a large shadehouse, home to his genetic crosses, supported by an impressive recordkeeping system. Records included subjective evaluations by the team of wife (Aiko), mother-in-law, and Bob. Evaluators occasionally disagreed, but who said hybridizing plants was rational? Bob's slides showed several years of dedicated and intelligent work. I wouldn't throw his plants out of my flowerbed for eating crackers!

Jim Folsom gave an informative and enjoyable lecture on "Naming and Registering Hybrids and Cultivars", discussing the pitfalls and political financial complications that trip the unwary. He laid out a path to follow; very simple, if it isn't allowed to get out of hand. For details regarding this plant name registration maze Jim may be contacted at the Huntington.

John Trager spoke briefly about the relationship between the Huntington and the ISI (International Succulent Institute) and its plant distribution taken over by the Huntington. This was followed by a plant auction. I was interested in bidding on an *Echeveria* that was half green and half rose in color, however, a woman with bared teeth would not let me near the bidding sheet. ... As previously mentioned, "Neon Dawn" was bid beyond budget. Michael Buckner bid and obtained a couple of very interesting *Sansevierias*, for his co-editor spouse's office.

We then repaired to Jim Folsom's villa for a barbecue, socializing, pontificating, and meeting new friends ... hard-core succulentics. I won a fine stainless steel trowel. Thank you Huntington for a terrific day - we'll see you next year! Two suggestions: Don't lose the address of that lunch caterer! Secondly, find out how that massively surplus *Rhaphisopsis* tastes in salads.

PHOTOS FROM THE 1993 INTER-CITY SHOW

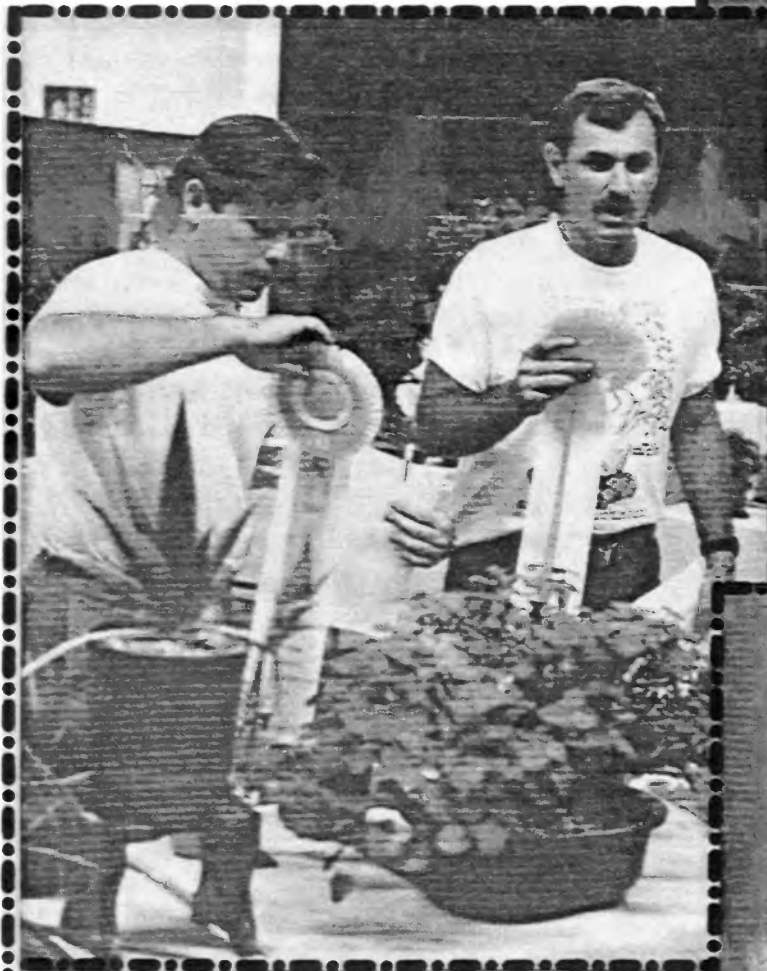
Once again the Inter-city Cactus & Succulent Show and Plant Sale held at the Los Angeles Arboretum was a smashing success, thanks to their many dedicated and hard-working members.

This year the show also included educational walks & talks by Michael Buckner, Joe Clements, Chuck Hanson, David Tufenkian and Brigitte Williams.

Pictured below show judges Sean Hogan and Michael Buckner frantically hand out Rosettes as judging came to a close Friday night.

And shown here directly below is the Inter-city Show Photo Committee of Ed Nolan and Carol Wujcik.

A big THANK YOU to Editors of the Post-Show Newsletter Carol & Joe Wujcik for allowing us to reproduce these terrific shots.



THE SWEET SMILE OF SUCCESS

SDC&SS member, Marylyn Henderson of Oceanside brought three plants to Inter-City. Her *Ipomoea platense* (which she is holding) won a trophy as did her *Echeveria "Alta Mae"*. Her third entry took home a Rosette. Way to go!

FROM ALL CORNERS
by Shirley Berry
De-Grafting



There is a plethora of information on how to graft plants not only in most books on succulent plants, but also in the various journals (British, American, and others), as well as from our "in house expert", club member Bob Taylor.

But how do you get the plump round lump (scion) off its benefactor, known as the stock, and onto its own roots?

Gordon Rowley in the September 1974 National Cactus and Succulent Journal complained about the poor results of re-establishing degrafted plants on their own roots.

Mr. Rowley's difficulties prompted a response from a Dr. Merrett of Cheltenham, England in the NCSS Journal of December 1974. Dr. Merrett agrees with Gordon Rowley that degrafting is an extremely chancy business and he has lost many plants in this attempt.

Therefore Dr. Merrett questions the reason for grafting and deduces them down to three: 1) aesthetic, 2) rotting of the stock, and/or, 3) shrivelling or exhaustion of the stock. He is not concerned with the first reason since he simply wants to study the plants. As for the second, the rotting of stock, one has little choice, either re-graft or try to establish the plant on its own roots.

As for the third reason, Dr. Merrett feels that the term "exhaustion" assumes the graft is actually living on the tissues of the stock. He feels this may be true when the scion is first grafted, but after a period of time the stock should not be regarded as a source of nourishment but rather as a means by which the scion can obtain nutrients on its own account. He feels that in the shrinking stock the scion is making the fullest use of its roots which the stock has provided.

What is one to do with such plants? Dr. Merrett repots in such a way that the stock is buried out of sight so that the shrivelling process can continue and that new roots often spring from the overhanging edges of the

scion, ending up with a well rooted plant growing on its own roots. This supposes of course that your stock is not much more than two inches high.

Another response to Gordon Rowley was published at a later date in the NCSS Journal of June 1975. Advice on the degrafting problem was offered by Mr. Bourdoux, the editor of the Belgian cactus and succulent journal.

Mr. Bourdoux tells us that in degrafting rare species, he cuts the scion off of the stock fairly high up which leaves part of the scion still grafted in hopes of getting offsets. He trims the scion as if for grafting (a semi-cone shape) ensuring that the central vessels remain on the lowest part. The cutting is at a steeper angle than for grafting.

He goes on to say, "Using strands of wool, I hang up the degrafted plant for two or three weeks. Then I pot it up in 1/4" to 1/2" deep gravel over a very open compost, with more gravel and sand for bottom drainage. The plant is now watered normally like a growing plant. In from two to four weeks roots push through the gravel to reach the moist compost. This method never fails."

As to the proper time, he does the degrafting in mid-summer or just before winter. He thinks the latter is the best time because by the next spring the self rooted cutting is ready to grow on. He also believes in mist spraying the cuttings to accelerate root development by keeping the tissues turgid and healthier.

Of course one of the great advantages of grafting other than saving a plant which is difficult to grow, is that you achieve a more mature plant in a shorter time.

I would venture to say that the time of the year closest to the plant's active growing period would give the maximum success in degrafting.

San Diego Cactus & Succulent Society Membership

The San Diego Cactus & Succulent Society is a non-profit, hobby organization created to stimulate interest in succulent plants. This society brings together people (and plants) with a common interest for the purpose of educating the public about the beauty and uniqueness of these remarkable plants, encouraging proper collecting and maintenance of the plants through preservation of native habitats and horticultural propagation, and to foster good fellowship. You are invited to join our society, whether you are an expert, amateur, or beginner, who loves unusual plants and flowers. VISITORS ARE ALWAYS WELCOME. BRING AN INTERESTED FRIEND.

Regular meetings are held on the second Saturday of each month in Room 101, Casa del Prado, Balboa Park at 1:00 p.m. (One may come as early as noon just to socialize or obtain a parking space easily.) Annual dues are \$10.00 for a single membership with an additional \$5.00 for each additional member at the same mailing address. The dues are payable at time of joining, and January of each succeeding year. Members receive our monthly publication Espinas y Flores, are entitled to library check-out privileges, and may partake in our many field trips and other activities. We offer knowledgeable speakers at our programs; many are world renowned scholars, botanists, explorers and authorities. We have a number of shows each year, especially our Annual Show and Plant Sale in June. We have a wide range of plants and supplies for purchase as favorable costs at most meetings. We also have a plant exchange table and monthly door prizes. All members will be consistently encouraged to contribute and participate in our many functions. Please join us and help us grow.

For more information, call Laura De Merritt, Treasurer: 270-5544.

- Yes, I (we) wish to become a 1994 member(s) of the San Diego Cactus & Succulent Society.:
- Yes, I (we) wish to renew our San Diego Cactus & Succulent Society membership through 1994.

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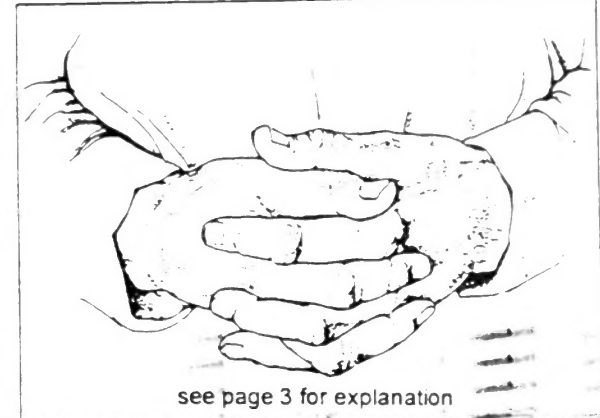
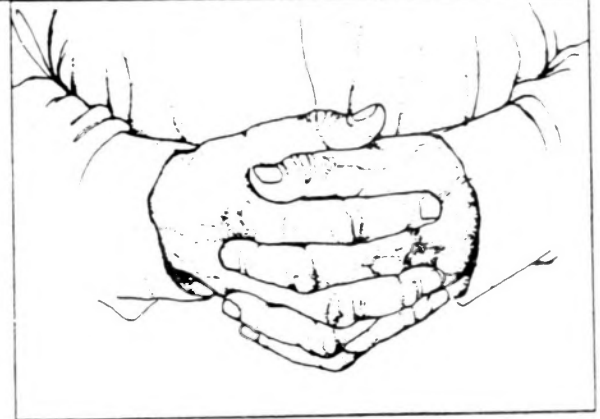
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see page 3 for explanation

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Editors - Joyce & Michael Buckner
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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 1:00 PM in room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held at 11:30 AM prior to general meetings. Annual dues are \$10.00 per single member per year, and \$5.00 for each additional member within the same household. Single copies of Espinas y Flores are \$1.00 per copy sent within the U.S.A. Affiliated with the Cactus and Succulent Society of America, Incorporated. Fax available - please call editor @ (619) 222-3216

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