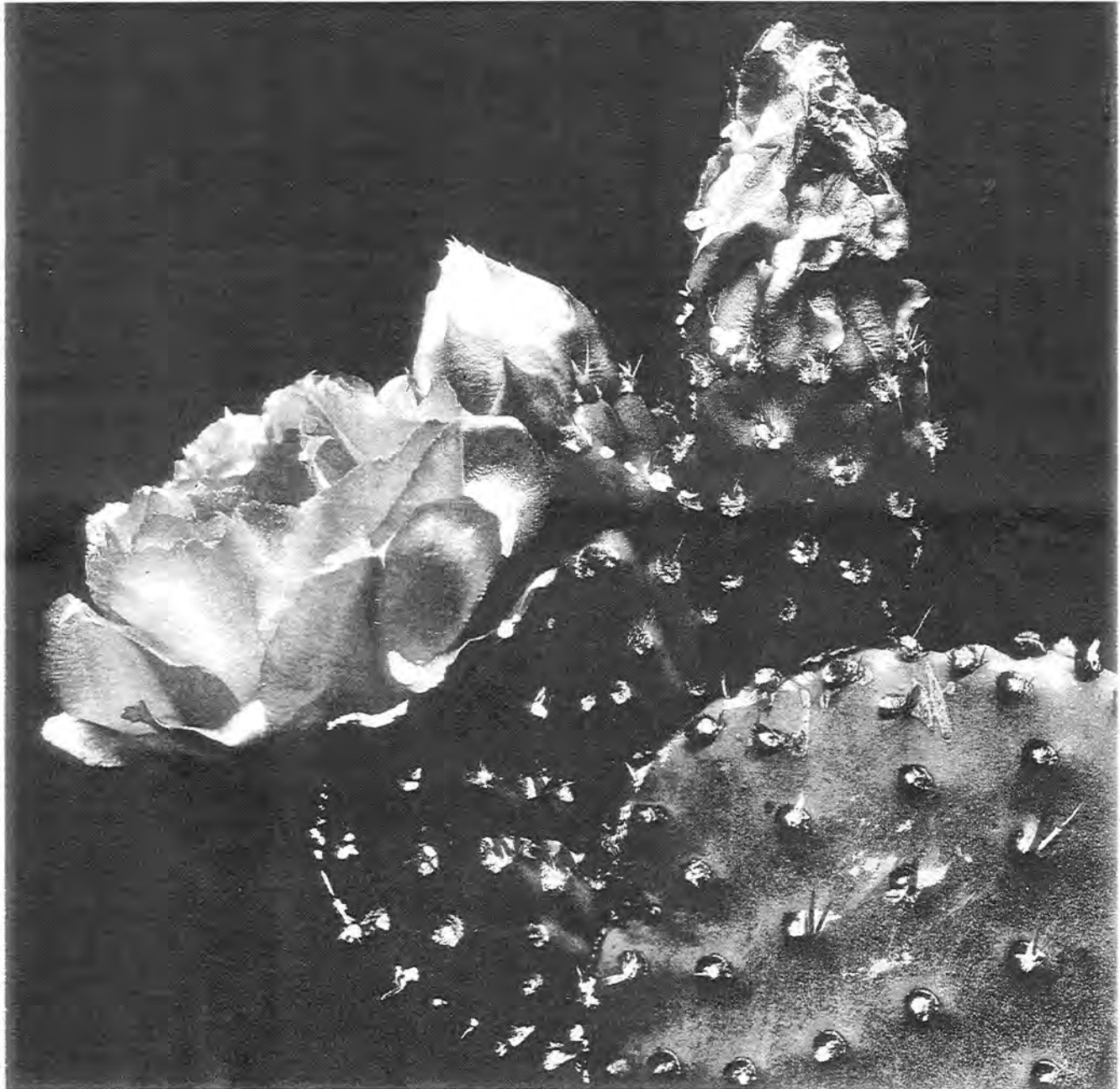


# Espinas y Flores

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

VOLUME XXIX NUMBER TEN, SATURDAY, OCTOBER 8, 1994 @ 1:00 PM



## **Bakersfield Cactus *Opuntia basilaris* var. *treleasei* - ENDANGERED:**

"This anomalous cactus occurs only in an area near Bakersfield receiving cold winter rains. Most cacti need warm desert ground to put forth shoots. A closely related species contains compounds that appear to be helpful in treating cancer. *Treleasei* has not yet been tested for this quality. Once blanketing the sandy plains around Bakersfield each spring with their stunning fuchsia flowers, these cacti now grow only in patches that shrink yearly, having been displaced by agriculture, residential development, and sand and gravel mining." **HERE TODAY PORTRAITS OF OUR VANISHING SPECIES**

by Susan Middleton & David Liittschwager, 1991, Chronicle Books, San Francisco

**OCTOBER PROGRAM:** Tim Metcalf, Staff Research Associate and Curator of the UC Davis Botany Conservatory will give a slide lecture on his travels to Southern Africa. Tim was in South Africa to attend the Succulenta '93 Conference last fall; he has been with the UC Davis Botany Conservatory for the last 23 years, the past fifteen as curator. With a master's degree in environmental horticulture, Tim was recently elected to Sigma Xi, the national scientific research society. He is especially well versed in drought resistant landscapes and is well known as an Aloe enthusiast.

The SUNSET SUCCULENT SOCIETY will be hosting their Annual "Fun-Raising" Auction & Picnic on Saturday, October 15th from 10:00 am to 3:00 @ Boyd and Mary Ev Walker's home, 15935 Alcima Avenue, Pacific Palisades. About fifty potted and garden specimen plants from Bob Carr's estate and several special books about succulents will be up for auction. Please bring your lunch, lawn chair, and a quality plant, pot, book or some succulent oriented donation for the auction. Plan to come early, the Walker's grounds will be open for touring at 10:00 am. Please call Rosalie @ (310) 822-1783 if you plan to attend, parking is a bit tricky.

Call (310) 454-1077 if you get lost.

It is not too early to pay your 1995 dues - such a deal one full year's membership is only \$10.00 for an individual plus \$5.00 for any additional members at the same address (one newsletter). If you plan to attend the SDC&SS Holiday banquet on December 10th, and receive a beautiful holiday gift plant your 1995 dues must be paid. If you joined during the middle of the year, a prorated membership @ a rate of \$1.00 per month will be available to you (50¢ per month for affiliated members). If you do not know when your present membership expires please check your address label on the back of this issue. The first line consists of a series of \*\* and numbers; the first number is my primitive attempt to count you all; the second number represents a year and a month. If your second number says 9501 it means your membership expires January of 1995. If you feel that the membership information is incorrect please let me (Joyce Buckner 222-3216), Laura DeMerritt, and /or Elizabeth Glover (hostess @ front reception desk) know. And please remember, we don't get paid to do this job, so be nice!!

### **More Notes on Thomas MacDougall -**

Thanks to Myron Kimnach for his note updating the plants named after Tom MacDougall. Also named for him are: *Nopalzochia macdougallii*, *Echeveria macdougallii*, *Sedum macdougallii*, *Graptopetalum macdougallii*, *Peniocereus macdougallii*, *Anthurium macdougallii*, *Viburnum macdougallii*, *Dahlia macdougallii*, *Callisia macdougallii* and *Cassia macdougallii*, quite an impressive list, indeed. It is probable that there are more binomials named for MacDougall than for any other individual in history as is underscored by a quote from Curator, vol. 18/4, 1975 on even a different field.

"Another friend and collaborator was Hobart M. Smith, a herpetologist whom MacDougall met casually in the Isthmus at the end of 1939. MacDougall had been collecting reptiles for The American Museum of Natural History for some time, but after World War II, Smith purchased the bulk of MacDougall's reptile specimens, first for the University of Illinois, where he taught for twenty years, and then for the University of Colorado, where he became chairman of the biology department in 1967. According to Smith, there were 10,000 - 15,000 specimens, with at least 100 undescribed species. Smith published descriptions of many of them, and eight bear MacDougall's name, including the lizard *Gaigeia dontomasi*, commemorating the name by which MacDougall was universally known in Mexico -- Don Tomás."

## Geophytes VOCABULARY FROM OUR MEETINGS - LISTEN, LEARN AND LISTEN

The word *geophyte* means "earth-plant". Geophytes are plants that shed their aboveground parts during the dry season. This is a strategy that is intermediate between drought-deciduous and ephemeral plants, but it accomplishes a similar end: the plants are dormant during the dry season. Dormancy is maintained by underground organs, modified roots or stems known variously as bulbs, tubers, corms, or rhizomes. Geophytes tend to occur in sandy, relatively stable soils where precipitation is predictable. If an inch (25mm) of precipitation occurs early in winter, these plants will have adequate moisture and time to produce aboveground leaves, stems, and flowers. Included among the desert geophytes are a variety of lilies, wild cucumbers, and the nonnative Jimson Weeds.

A NATURAL HISTORY OF CALIFORNIA by Allan Schoenherr, 1992, University of California Press, Berkeley

☆ *The November 10th VA Bazaar is just around the corner. We are again asking for one or more plant donations for our annual sale. The funds from this sale enable us to purchase personal grooming items, books, and craft kits for disabled hospital-bound veterans. Time goes by slowly and craft kits give the Vets something to do. Anything you can donate is greatly appreciated. I will collect these donations at the October meeting. Or call me @ 281-9267 and we can make arrangements.*

*Thank you again,*

*Ruth Richardson, VAVS Deputy Disabled American Veterans*

## 1994 TACSS Fall Seminar

### GUEST SPEAKERS

DR. ALFRED LAU  
MARY JO GUSSETT  
DARVIN BREAKER  
JOE KUBAN  
HENRY PAINTER

#### Visit :

New Cactus Greenhouse  
Japanese Gardens  
Conservatory

#### Area Attractions:

Zoo, Western Art Collection &  
Museum

For More Information, contact:

D. Breaker (817) 283-6867

OCTOBER 1, 1994  
8:00 SATURDAY AM  
FORT WORTH  
BOTANICAL GARDENS  
3220 Botanic Garden Boulevard  
Fort Worth, Texas



NO REGISTRATION FEE

**PLANT SALES:  
RARE PLANT AUCTION:  
(PROCEEDS TO TACSS)**

DONATIONS OF PLANTS FOR THE  
AUCTION WOULD BE APPRECIATED

#### Host Hotel:

Clayton House Motel  
\$34 + tax—Double Room  
1551 S. University Dr.

#### Many Restaurants Close By Saturday Evening Banquet:

01 South Pancake House (Dutch)  
Business meeting to follow

**LUNCH WILL BE SERVED  
AT THE  
GARDEN CENTER**



# TUCSON

JUNE 18 - 23, 1995

DOUBLETREE HOTEL

445 SOUTH ALVERNON WAY, TUCSON, AZ 85711, VOICE: (800) 222-TREE FAX: (602) 323-5225

**Come join us in Tucson, Arizona, June 18-23, 1995, for the most wonderful CSSA convention yet!** The convention will be held in the beautiful, fully air-conditioned Doubletree Hotel. We have negotiated a special \$53.00 a day convention rate for up to four people per room. You are responsible for making your own room reservations directly with the Doubletree.

The slate of speakers is an impressive one, including speakers from Africa, Mexico, Madagascar, Europe and, of course, the US. The theme of our convention is the ethnobotany of succulent plants. Many of the speakers will talk on the uses native peoples around the world have made of the plants that we enjoy so much as a hobby. A look at the enclosed program should be enough to whet the dullest appetite!

We are offering exciting pre- and post convention trips. The pre-convention trip will be a 6 day tour of the "Sky Islands" of SE Arizona. The Sky Islands are large mountain ranges that rise up out of the desert like islands out of a sea. The participants will stay in Cave Creek in the Chiricahua Mountains and make day trips to look at the incredible flora and fauna. This is a must if your interest in cacti is coupled with an interest in rare birds, as this area is internationally known for its bird life.

The post-convention trip is one of the most exciting ever offered by CSSA. This 8 day trip will explore the famous Barranca del Cobre (Copper Canyon), the Grand Canyon of Mexico. Participants will travel from Topolobampo, on the Sea of Cortez, through the Barranca to Ciudad Chihuahua by first class train. There will be several over-night stops in the canyon and side trips to see the extraordinary plant and animal life of this rich area. This area is inhabited by the Tarahumara Indians, the famous runners of the Sierras. We will have ample time to see the Tarahumara and purchase some of their world renowned crafts.

If you are interested in either of these trips, contact Borderland Tours at 1 (800) 523-7753. Mention that you are inquiring about the CSSA tours.

In addition to the pre- and post-convention tours, we are offering two field trips during the convention. One trip will go to Phoenix to visit the Desert Botanical Garden and then on to Superior to visit the Boyce-Thompson Arboretum, both well-known for their wonderful displays of plants. This trip will take all day. Lunches will be provided.

The second field trip will be a visit to several of Tucson's cactus and succulent nurseries. This trip will also take most of the day. Lunches will be provided. Participants will be able to purchase from each of the nurseries visited.

The desert surrounding Tucson has some of the most picturesque landscape in the world: spectacular mountains, unlimited vistas, huge saguaros, and chamber-of-commerce sunsets. If you miss this convention, you'll be kicking yourself for years to come!

Looking forward to hosting you in Tucson! For more information call

CHUCK HANSON, CONVENTION HOST SOCIETY CHAIRMAN (602)883-9404

**Sunday, June 18**

- 9:00- 5:00pm Registration, book and plant sales.
- 6:30 - 9:00 "Welcome to Tucson" Party.
- 8:00 - Informal slide shows. See bulletin board for schedule, Dr. David Tufenkian, Chairperson.

**Monday, June 19**

- 6:15 - 9:00 Indian Saguaro Harvest - limited availability, see registration desk for details
- 8:00 - 5:00 Late registration, book and plant sales.
- 9:00 - 10:00 Round Robin meeting with CSSA Round Robin Director Braden Engelke - open to all
- 11:00-11:45 Dr. Gary Nabhan & Dr. Steve Buchmann(USA) "Pollination Ecology of Some Rare Sonoran Desert Succulents"
- 1:00 - 1:45 Dr. Rob Wallace (USA) "Sitters, Splitters, Lumpers, and Grumpers: Understanding Modern Plant Classification"
- 2:00 - 2:45 Dr. Richard Felger (USA) "Ancient and Future uses of Sonoran Desert Succulent Plants"
- 3:00 - 3:45 Dr. Len Newton (Kenya) "Len Newton's Africa - The Adventures of a Plant Enthusiast in Africa"
- 4:00 - 4:45 Mary Wilkins (Zimbabwe) "Succulent Cucurbits"
- 6:45 - Opening Banquet - Keynote Speaker, Susan Carter Holmes (UK) "Twenty Four years of Succulent Exploration in Northeast Africa"

**Tuesday, June 20**

- 6:15 - 9:00 Indian Saguaro Harvest - limited availability, see registration desk for details
- 8:00 - 5:00 Late registration, book and plant sales.
- 9:00 - 9:45 Gerhard Marx (South Africa) "Subglobose Medusoid Euphorbias of South Africa"
- 10:00-10:45 Alfred Razafindratsira (Madagascar) "Succulents of Madagascar Part 1"
- 11:00-11:45 Anthon Ellert (Zimbabwe) "The Aloes of Zimbabwe and their Culture"
- 1:30 - 2:15 Charles Glass, Elena Aguilar de Mendoza, and Humberto Fernandez(Mexico) "Cactus and Succulent Exploration in Mexico - The Next Generation"
- 2:30 - 3:15 Steve Hammer (USA) "New Mesembis of South Africa"
- 3:30 - 4:15 Dr. Joseph McAuliffe (USA) "The Saguaro Chronicles and the Prophets of Desert Doom"
- 7:00 - ? CSSA Rare Plant Auction, Dr. Gerald Barad, Auction Chairman and Auctioneer, George Charles, Auctioneer, and Steve Hammer, Chief Procuree

**Wednesday, June 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 Desert Botanical Gardens/Boyce-Thompson Arboretum #2 Nursery Tour and Sales
- 6:00 - 8:30 Affiliate Meeting, presentation by San Diego convention hosts, Rosalie Gorchoff, Affiliate Chairperson.
- 8:45 - ? Informal slide shows. See bulletin board and Dr. David Tufenkian.

**Thursday, June 22**

- 6:15 - 9:00 Indian Saguaro Harvest - limited availability, see registration desk for details
- 8:00 - 5:00 Book and plant sales.
- 9:00 - 9:45 Dr. Larry Mitich (USA) "Movers and Shakers in the Cactus World"
- 10:00 - 10:45 Alfred Razafindratsira (Madagascar) "Succulents of Madagascar Part 2"
- 11:00 - 11:45 Charles Glass and Elian Jimenez Perez (Mexico) "Propagation and Population Studies of Endangered Cacti in Mexico"
- 1:30 - 2:15 Dr. Len Newton (Kenya) "Succulent Plant Discoveries in East Africa - A Historical View of Ethnobotany"
- 2:30 - 4:15 Cultivation and Seed Growing Panel, John Trager Chairman
- 7:00 - Informal Slide Lectures - See bulletin board and Dr. David Tufenkian

**Friday, June 23**

- 8:00 - 5:00 Book and plant sales.
- 9:00 - 9:45 Mary Wilkins and Anthon Ellert (Zimbabwe) "The Succulents of Hwange, Zimbabwe"
- 10:00- 10:45 Gerhard Marx (South Africa) "New and Lesser Known Succulents of the Eastern Little Karoo, South Africa"
- 11:00 - 11:45 Dr. Rob Wallace (USA) "Cretaceous Park - Using DNA Molecules to Study Cactus Evolution"
- 1:30 - 2:15 Fred Katterman (USA) "Revision of the Genus Eriocyce"
- 2:30 - 3:15 Dr. David Tufenkian (USA) "Slide Shows of Members Collections"
- 3:30 - 4:15 Susan Carter Holmes (UK) "Some New Aloes and Euphorbias of Central and South Africa"
- 7:00 - ? Farewell Banquet.

## REGISTRATION FORM

TYPE OR PRINT CLEARLY

NAME \_\_\_\_\_  
 SPOUSE/COMPANION \_\_\_\_\_  
 STREET \_\_\_\_\_  
 APARTMENT # \_\_\_\_\_ CITY \_\_\_\_\_  
 STATE \_\_\_\_\_ ZIP \_\_\_\_\_ COUNTRY \_\_\_\_\_  
 PHONE # \_\_\_\_\_ FAX # \_\_\_\_\_  
 ARE YOU A CSSA AFFILIATE DELEGATE? PLEASE CIRCLE \_\_\_\_\_ YES / NO

TO WHICH LOCAL C & S SOCIETY DO YOU BELONG? \_\_\_\_\_

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

	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	_____	\$ 110.00
NON - CSSA MEMBERS	_____	\$ 180.00
CSSA MEMBERS LATE REGISTRATION AFTER 5/15/95	_____	\$ 155.00
CSSA MEMBERS LATE REGISTRATION AFTER 6/15/95	_____	\$ 180.00
DAILY REGISTRATION - DATES ATTENDING &	_____	\$ 35.00/DAY
<b>FIELD TRIPS WITH LUNCH INCLUDED - CHOOSE ONE ONLY</b>		
TRIP 1 - BOYCE THOMPSON/DESERT BOTANICAL GARDEN	_____	\$ 25.00
TRIP 2 - TUCSON NURSERY TOUR	_____	\$ 25.00
<b>FAREWELL BANQUET</b>	_____	\$ 25.00

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

VISA / MASTERCARD # only \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_ SIGNATURE \_\_\_\_\_  
 MAIL REGISTRATION FORMS TO:  
 MINDY FUSARO, TUCSON CONVENTION TREASURER, PO BOX 36034, DES MOINES, IA 50315-0301

CREDIT CARD USERS MAY FAX THEIR REGISTRATION FORM TO (515) 285-7760

**NOTE: IT IS YOUR RESPONSIBILITY TO MAKE CONVENTION ROOM RESERVATIONS AT THE DOUBLETREE HOTEL IN TUCSON, ARIZONA. THE CONVENTION DATES ARE JUNE 18-23, 1995. SCHEDULE YOUR ARRIVAL BY SUNDAY JUNE 18TH TO ATTEND THE OPENING PARTY TO MAKE RESERVATIONS AND RECEIVE THE SPECIAL \$53.00/DAY RATE. CONTACT THE DOUBLETREE HOTEL ASAP. PLEASE NOTIFY THE DOUBLETREE HOTEL THAT THE RESERVATIONS ARE FOR THE CSSA CONVENTION.**

DOUBLETREE HOTEL

445 SOUTH ALVERNON WAY, TUCSON, AZ 85711, VOICE: (800)222-TREE FAX: (602) 323-5225



# Kaiserin Elisabeth Institute

Vienna . Austria                      founded 1810 A.D.

Your April issue of Espinas y Flores somehow found its way to my desk. I loved its refreshing, literate, and informative style. The Tireless Termite visit to notable growers such as your Altmans and C & J sounded like fun. One minor correction to that otherwise worthy article. I would not call Calymmalthium a "primitive cactus". To the contrary, it is an example of exquisite xerophytic development, where that great energy and water squanderer, the flower, is engulfed by a solid green floral bud and must tear its way out of its sheath. I'm enclosing a photo of this double perianth copied from Rowley. Another masterful Xerophyte floral strategy is the closing of the flower within a few minutes after pollination, as practiced by the Peyote (*Lophophora williamsi*). Keep up the good work.

Sincerely

Buckley Spaulding, Ph.D.  
Kaiserin Elisabeth Institute  
Vienna, Austria



**WE  
NEED  
YOUR  
HELP!**

**PLEASE  
BRING  
IN  
GOODIES  
TO SHARE!**

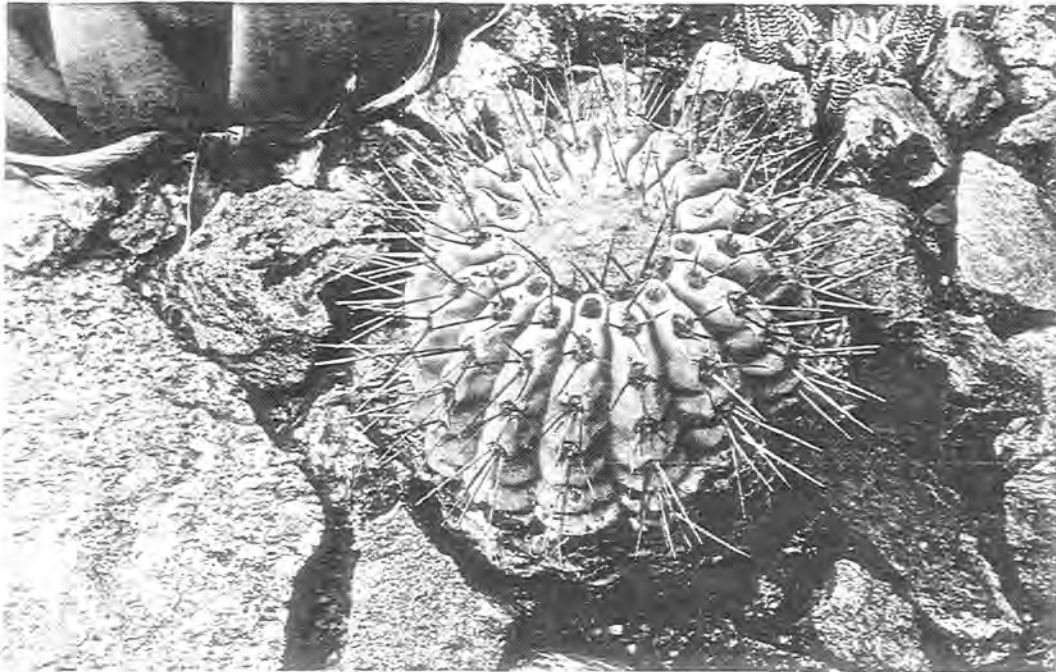
**COOKIES,  
CAKE, CRACKERS & CHEESE, FRESH  
FRUIT, HOMEMADE SPECIALTIES  
AND EVEN PEANUTS!  
THANK YOU! THANK YOU! THANK YOU!**



# CACTUS OF THE MONTH: COPIAPOA

## by Tom Knapik

Page 6



*Copiapoa haseltoniana*

This genus Copiapoa was erected in 1922 by Britton and Rose and contains some of the most distinctive plants in the Cactus family. Named after the province of Copiapo in Chile, these plants inhabit barren stony slopes and terraces of the western Andes along the Pacific coast, where temperatures range from 50°F in the winter to 105°F in the summer with high humidity. There are heavy fogs but little or no rain, sometimes for years, in most areas of the plant's habitat. Growth in these plants is slow but several heads will eventually cluster forming large mounds. Combine this trait with the dark spines and glaucous epidermis and visitors to Northern Chile are treated

to a very striking scene.

Copiapoas have relatively small, diurnal flowers that bloom throughout the summer. Cross pollination is usually necessary to produce fertile seed and germination is best during the winter. In cultivation, the soil mixture should drain well, and not be too rich. Otherwise unnatural growth characteristics can develop. Overwatering will inflate and split the plant. Light should be as intense as possible, however, the plants will burn if relocated too suddenly - be sure to acclimatize them.

When offsets do appear on mature or damaged plants they erupt from the areole fully spined. This makes propagation easy, although rooting

cuttings can take months - occasionally years.

Copiapoas do not seem to rot easily in cool damp weather which makes them an ideal plant for southern California growers.

Over 50 species have been named. There is still much debate over the separation of species, varieties, and forms. Two recent works that help sort out the dilemmas are: Cactaceas, En la flora Silvestre de Chile by Adrian E. Hoffman, 1989 (in Spanish) and in the Journal Piante Grasse: Genere Copiapoa by Massimo Meregalli, Carlo Doni 1991 Oct-Dec (in Italian).

The late Ed Gay, past president of the Cactus and Succulent Society of America, specialized in Copiapoas. He brought



back and propagated many different species, not readily available in the trade. This large collection was eventually dispersed by Grigsby Cactus Gardens who retained only a few outstanding specimens.

Ann Shein of Marina, California (near Monterey) is very successful at propagating Copiaeas. These plants thrive in cold frames at her nursery located within one mile from the Pacific Ocean. She offers the best selection of the species, for sale in the United States and all are seed grown.

The largest grower and distributor of Copiaeas is Karl Knize of Lima, Peru. He continues to locate new species and varieties on expeditions in northern Chile. His 1994 list had well over 50 species and varieties, many with collection numbers only. Listed below are those species names that have been published between 1950-1990. It was compiled by Urs Eggl and Nigel Taylor for the IOS Index of Names of Cactaceae.

- Copiaea alticostata* Ritter, *Taxon* 12(1): 29, 1963. [RPS 14]
- Copiaea applanata* Backeberg, *Die Cact.* 3: 1913, 1959. *Nom. inval.* (Art. 37.1). [Erroneously included as valid in RPS 10.] [RPS 10]
- Copiaea atacamensis* Middleitch, *Chileans* 11(37): 20-21, 1980. Based on *Rose* 19410. Incorrect name (Art. 57.1). [Chile] [RPS 31]
- Copiaea atacamensis* var. *calderana* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 98-99, ill., 1989. Basionym: *Copiaea calderana*. [RPS 40]
- Copiaea barquitenis* Ritter, *Cactus* (Paris) 15(66): 19, 1960. *Nom. inval.* (Art. 36.1, 37.1). [RPS -]
- Copiaea boliviana* (Pfeiffer) Ritter, *Kakt. Südamer.* 3: 1089-1090, 1980. Basionym: *Echinocactus bolivianus*. [RPS 31]
- Copiaea bridgesii* (Pfeiffer) Backeberg, *Die Cact.* 3: 1909, 1959. Basionym: *Echinocactus bridgesii*. [RPS 10]
- Copiaea brunnescens* Backeberg, *Die Cact.* 3: 1901, 1959. *Nom. inval.* (Art. 36.1). [Published as provisional name.] [RPS 10]
- Copiaea calderana* Ritter, *Cactus* (Paris) No. 65: 197, 1959. [RPS 10]
- Copiaea calderana* var. *spiniosior* Ritter, *Kakt. Südamer.* 3: 1082, 1980. [RPS 31]
- Copiaea carrizalensis* Ritter, *Cactus* (Paris) No. 63: 139, 1959. [RPS 10]
- Copiaea carrizalensis* var. *gigantea* Ritter, *Taxon* 12(1): 29, 1963. [RPS 14]
- Copiaea castanea* Ritter, in Backeberg, *Die Cact.* 6: 3820, 1962. *Nom. inval.* (Art. 36.1/37.1). [RPS 13]
- Copiaea chanaralensis* Ritter, in Backeberg, *Die Cact.* 6: 3820, 1962. *Nom. inval.* (Art. 36.1, 37.1). [Later validly described by Ritter as *C. chanaralensis*.] [RPS 13]
- Copiaea chanaralensis* Ritter, *Kakt. Südamer.* 3: 1063-1064, 1980. [First mentioned as *C. chanaralensis* (*nom. nud.*) in Backeberg, *Die Cact.* 6: 3820, 1962. Probably correctable to 'chanaralensis' under Art. 73.6.] [RPS 31]
- Copiaea cinerascens* var. *grandiflora* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 100-101, ill., 1989. Basionym: *Copiaea grandiflora*. [RPS 40]
- Copiaea cinerascens* var. *intermedia* Ritter, *Kakt. Südamer.* 3: 1084, 1980. *Typus: Ritter* 216 (ZSS [status ?]). [Published as a new name for *Copiaea applanata* Backeberg.] [Chile] [RPS 31]
- Copiaea cinerea* var. *albispina* Ritter, *Taxon* 12: 30, 1963. [RPS 14]
- Copiaea cinerea* var. *columna-alba* (Ritter) Backeberg, *Die Cact.* 6: 3820, 1962. Basionym: *Copiaea columna-alba*. [RPS 13]
- Copiaea cinerea* var. *dealbata* (Ritter) Backeberg, *Die Cact.* 6: 3823, 1962. Basionym: *Copiaea dealbata*. [RPS 13]
- Copiaea cinerea* var. *eremophila* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 106, 1989. Basionym: *Copiaea eremophila*. [RPS 40]
- Copiaea cinerea* var. *gigantea* (Backeberg) N. P. Taylor, *Bradleya* 5: 92, 1987. Basionym: *Copiaea gigantea*. [RPS 38]
- Copiaea cinerea* var. *haseltoniana* (Backeberg) N. P. Taylor, *Cact. Succ. J. Gr. Brit.* 43(2-3): 53, 1981. Basionym: *Copiaea haseltoniana*. [RPS 32]
- Copiaea cinerea* var. *tenebrosa* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 106, ill. (p. 107), 1989. Basionym: *Copiaea tenebrosa*. [RPS 40]
- Copiaea columna-alba* Ritter, *Cactus* (Paris) No. 65: 199, 1959. [RPS 10]
- Copiaea columna-alba* var. *nuda* Ritter, *Kakt. Südamer.* 3: 1095, 1980. [RPS 31]
- Copiaea conglomerata* (Philippi) Lembeck, *Kakt. and. Sukk.* 17: 29-31, 1966. Basionym: *Echinocactus conglomeratus*. [RPS 17]
- Copiaea coquimbana* var. *alticostata* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 108, 1989. Basionym: *Copiaea alticostata*. [RPS 40]
- Copiaea coquimbana* var. *armata* Ritter, *Kakt. Südamer.* 3: 1075, 1980. [RPS 31]
- Copiaea coquimbana* var. *fedleriana* (Schumann) A. E. Hoffmann, *Cact. Fl. Chil.*, 108, ill. (p. 109), 1989. Basionym: *Echinocactus fedlerianus*. [RPS 40]
- Copiaea coquimbana* var. *pendulina* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 108, 1989. Basionym: *Copiaea pendulina*. [RPS 40]
- Copiaea coquimbana* var. *pseudocoquimbana* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 108, 1989. Basionym: *Copiaea pseudocoquimbana*. [RPS 40]
- Copiaea coquimbana* var. *vallenarensis* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 108, ill. (p. 111), 1989. Basionym: *Copiaea vallenarensis*. [RPS 40]
- Copiaea coquimbana* var. *wagenknechtii* Ritter, *Taxon* 12(1): 30, 1963. *Typus: Ritter* 718 (i). [Chile] [RPS 14]
- Copiaea cuprea* Ritter, *Cactus* (Paris) No. 63: 136, 1959. [RPS 10]
- Copiaea cupreata* (Bowlger) Backeberg, *Die Cact.* 3: 1920, 1959. Basionym: *Echinocactus cupreatus*. [RPS 10]
- Copiaea dealbata* Ritter, *Cactus* (Paris) 14(63): 137-139, ill., 1959. *Typus: Ritter* 509 (ZSS, U, ZSS). [No herbarium has been cited for the holotype, and it is unclear, which specimen is the actual holotype.] [Chile] [RPS 10]
- Copiaea dealbata* fa. *gigantea* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 112, ill. (p. 113), 1989. Basionym: *Copiaea carrizalensis* var. *gigantea*. [RPS 40]
- Copiaea dealbata* var. *carrizalensis* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 112, 1989. Basionym: *Copiaea carrizalensis*. [RPS 40]
- Copiaea desertorum* Ritter, *Kakt. Südamer.* 3: 1060, 1980. [First mentioned (*as nom. nud.*) in Backeberg, *Die Cact.* 6: 3826, 1962.] [RPS 31]
- Copiaea desertorum* var. *hornilloensis* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 114, 1989. Basionym: *Copiaea hornilloensis*. [RPS 40]
- Copiaea desertorum* var. *rubriflora* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 114, 1989. Basionym: *Copiaea rubriflora*. [RPS 40]
- Copiaea desertorum* var. *rupestris* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 114, ill. (p. 115), 1989. Incorrect name (Art. 57), based on *Copiaea rupestris*. [RPS 40]
- Copiaea dura* Ritter, *Taxon* 12(1): 31, 1963. *Typus: Ritter* 546 (U, ZSS [seeds only]). [Holotype cited for U. l.c. p. 28.] [First mentioned in Backeberg, *Die Cact.* 6: 3827, 1962 (*as nom. nud.*).] [Chile] [RPS 14]
- Copiaea echinata* Ritter, *Cactus* (Paris) 14(63): 133-134, 1959. *Typus: Ritter* 506 (ZSS [not found], ZSS [seeds only]). [Chile] [RPS 10]
- Copiaea echinata* fa. *pulla* Ritter, *Kakt. Südamer.* 3: 1081, 1980. [RPS 31]
- Copiaea echinata* var. *borealis* Ritter, *Cactus* (Paris) 14(63): 133-134, ill., 1959. *Typus: Ritter* 506a (ZSS [not found], ZSS [seeds only]). [Chile] [RPS -]
- Copiaea echinoides* var. *cuprea* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 116, ill. (p. 117), 1989. Basionym: *Copiaea cuprea*. [RPS 40]
- Copiaea eremophila* Ritter, *Kakt. Südamer.* 3: 1104-1105, 1980. *Typus: Ritter* 476 (U, ZSS [seeds only]). [Holotype cited for U. l.c. 1: ii, 1979.] [First mentioned in Backeberg, *Die Cact.* 6: 3828, 1962 (*as nom. inval.*).] [Chile] [RPS 31]
- Copiaea esmeraldana* Ritter, *Kakt. Südamer.* 3: 1064-1065, 1980. [RPS 31]
- Copiaea ferox* Lembeck & Backeberg, in Backeberg, *Die Cact.* 3: 1922, 1959. *Nom. inval.* (Art. 37.1). [Erroneously included as valid in RPS 10.] [RPS 10]
- Copiaea gigantea* var. *haseltoniana* (Backeberg) Ritter, *Kakt. Südamer.* 3: 1101-1102, 1980. Basionym: *Copiaea haseltoniana*. [RPS 31]
- Copiaea grandiflora* Ritter, *Taxon* 12(1): 30, 1963. *Typus: Ritter* 523 (U, ZSS [seeds only]). [First mentioned in Backeberg, *Die Cact.* 6: 3828, 1962 (*as nom. nud.*).] [Chile] [RPS 14]
- Copiaea haseltoniana* Backeberg, *Descr. Cact.* Nov. [1]: 33, 1957. [RPS 7]
- Copiaea hornilloensis* Ritter, *Kakt. Südamer.* 3: 1060, 1980. [RPS 31]
- Copiaea humilis* (Philippi) P. C. Hutchison, *Cact. Succ. J. (US)* 25: 34, 1953. Basionym: *Echinocactus humilis*. [RPS 4]
- Copiaea humilis* var. *esmeraldana* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 118, ill. (p. 119), 1989. Basionym: *Copiaea esmeraldana*. [RPS 40]

# Copiapoa by Tom Knapik continued . . .

- Copiapoa humilis* var. *longispina* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 118, ill. (p. 119), 1989. Basionym: *Copiapoa longispina*. [RPS 40]
- Copiapoa humilis* var. *papoensis* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 118, 1989. *Nom. inval.*, based on *Copiapoa papoensis*, *nom. inval.* (Art. 37). [RPS 40]
- Copiapoa humilis* var. *taltalensis* (Werdermann) A. E. Hoffmann, *Cact. Fl. Chil.*, 118, ill. (p. 119), 1989. Basionym: *Echinocactus taltalensis*. [RPS 40]
- Copiapoa hypogaea* Ritter, *Cactus* (Paris) 15(66): 19-20, 1960. Typus: *Ritter* 261 (ZSS). [Type cited for Z, later corrected to ZSS.] [Chile: Chañaral] [RPS 11]
- Copiapoa hypogaea* var. *barquiltensis* Ritter, *Kakt. Südamer.* 3: 1086, 1980. Typus: *Ritter* 654 (L, ZSS [seeds only]). [Holotype cited for U. L. 1: iii, 1979.] [Chile] [RPS 31]
- Copiapoa hypogaea* var. *laui* (Diers) A. E. Hoffmann, *Cact. Fl. Chil.*, 120, ill. (p. 121), 1989. Basionym: *Copiapoa laui*. [Sphalm. 'laui'] [RPS 40]
- Copiapoa intermedia* Ritter, in Backeberg, *Die Cact.* 6: 3832, 1962. *Nom. inval.* (Art. 36.1/37.1). [RPS 13]
- Copiapoa krainziana* Ritter, *Taxon* 12(1): 30-31, 1963. Typus: *Ritter* 210 (ZSS, ZSS). [First mentioned in Backeberg, *Die Cact.* 6: 3834, 1962 (as *nom. nud.*)] [Chile: Taltal] [RPS 14]
- Copiapoa krainziana* var. *scopulina* Ritter, *Taxon* 12(1): 30-31, 1963. Typus: *Ritter* 209 (U, L, ZSS). [Chile: Taltal] [RPS 14]
- Copiapoa laui* Diers, *Kakt. and. Sukk.* 31(12): 362-365, ill., 1980. Typus: *Lau* 891 (KOELN [Succulentarium], ZSS [type number]). [Sphalm. 'laui'] [Chile: Antofagasta] [RPS 31]
- Copiapoa lembckeii* Backeberg, *Die Cact.* 3: 1922, 1959. *Nom. inval.* (Art. 37.1) [Erroneously included as valid in RPS 10.] [RPS 10]
- Copiapoa longispina* Ritter, *Taxon* 12(1): 31, 1963. [RPS 14]
- Copiapoa longistaminea* Ritter, *Taxon* 12(1): 31-32, 1963. Typus: *Ritter* 531 (U, ZSS [seeds only]). [Chile] [RPS 14]

- Copiapoa marginata* var. *bridgesii* (Pfeiffer) A. E. Hoffmann, *Cact. Fl. Chil.*, 124, ill. (p. 125), 1989. Basionym: *Echinocactus bridgesii*. [RPS 40]
- Copiapoa megarhiza* var. *echinata* (Ritter) A. E. Hoffmann, *Cact. Fl. Chil.*, 126, ill. (p. 127), 1989. Basionym: *Copiapoa echinata*. [RPS 40]
- Copiapoa megarhiza* var. *microrhiza* Ritter, *Kakt. Südamer.* 3: 1081, 1980. [RPS 31]
- Copiapoa metanohystrix* Ritter, *Kakt. Südamer.* 3: 1096-1097, 1980. [RPS 31]
- Copiapoa microsperma* Ritter, *Cactus* (Paris) 15(66): 23, 1959. *Nom. inval.* (Art. 36.1, 37.1). [RPS -]
- Copiapoa mollicula* Ritter, *Taxon* 12(1): 30, 1963. Typus: *Ritter* 525 (L, ZSS [seeds only]). [Chile] [RPS 14]
- Copiapoa montana* Ritter, *Cactus* (Paris) 15(66): 21-22, 1960. Typus: *Ritter* 211a (?). [Appears to be based on 2 syntypes, *Ritter* 211a and *Ritter* 522, but '522' is a re-numbering for '211a' (cf. *Kakt. Südamer.* 3: 1088).] [Chile] [RPS 11]
- Copiapoa olivana* Ritter, *Kakt. Südamer.* 3: 1088, 1980. [RPS 31]
- Copiapoa papoensis* Ritter, *Kakt. Südamer.* 3: 1068, 1980. *Nom. inval.* (Art. 37). [RPS 31]
- Copiapoa pendulina* Ritter, *Cactus* (Paris) 14(63): 134-135, ill., 1959. Typus: *Ritter* 504 (ZSS [not found], ZSS [seeds only]). [Chile] [RPS 10]
- Copiapoa pepiniana* var. *fiedleriana* (Schumann) Backeberg, *Die Cact.* 3: 1919, 1959. Basionym: *Echinocactus fiedlerianus*. [RPS 10]
- Copiapoa pseudocoquimbana* Ritter, *Taxon* 12(1): 30, 1963. Typus: *Ritter* 1086 (?). [Chile: Dept. La Serena] [RPS 14]
- Copiapoa pseudocoquimbana* var. *chaniarensis* Ritter, *Kakt. Südamer.* 3: 1077, 1980. [RPS 31]
- Copiapoa pseudocoquimbana* var. *domeykoensis* Ritter, *Kakt. Südamer.* 3: 1077, 1980. [RPS 31]
- Copiapoa pseudocoquimbana* var. *vulgata* Ritter, *Taxon* 12(1): 30, 1963. Typus: *Ritter* 230 (L 145 255B, ZSS) [Chile] [RPS 14]

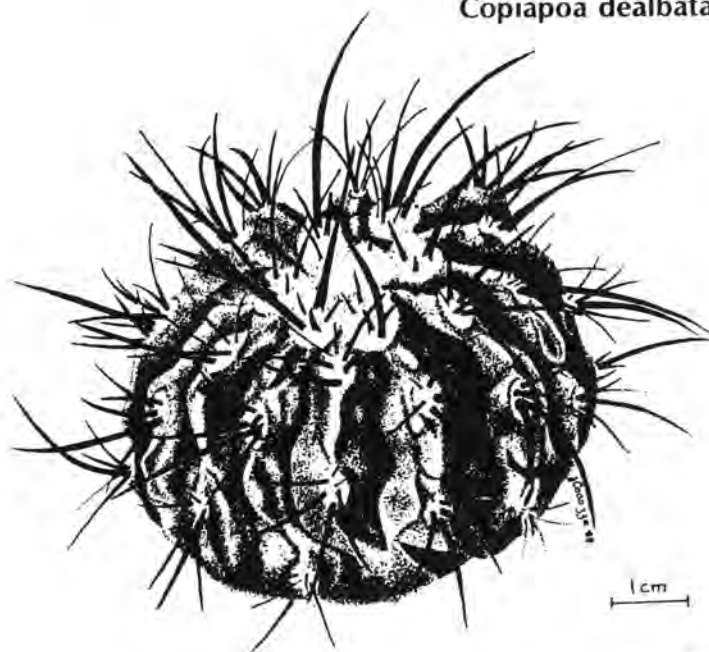


*Copiapoa hypogaea*  
(from Brian Lamb)

## Repertorium Plantarum Succulentarum

- Copiapoa rarissima* Ritter, *Kakt. Südamer.* 3: 1088-1089, 1980. [RPS 31]
- Copiapoa rubriflora* Ritter, *Taxon* 12(1): 31, 1963. Typus: *Ritter* 211 (? ZSS) [Chile] [RPS 14]
- Copiapoa rupestris* Ritter, *Taxon* 12(1): 31, 1963. Typus: *Ritter* 528 (L, ZSS) [Chile] [RPS 14]
- Copiapoa scopulina* Ritter, in Kai H. Winter, [unpaged], 1957. *Nom. inval.* (Art. 36.1, 37.1). [Published as provisional name; year of first usage not established.] [RPS -]
- Copiapoa serpentisulcata* Ritter, *Cactus* (Paris) 15(66): 22-23, 1960. Typus: *Ritter* 246 (ZSS, ZSS). [Type cited for Z, later corrected to ZSS.] [Chile] [RPS 11]
- Copiapoa serpentisulcata* var. *castanea* Ritter, *Kakt. Südamer.* 3: 1093-1094, 1980. [RPS 31]
- Copiapoa solaris* (Ritter) Ritter, *Kakt. Südamer.* 3: 1047, 1980. Basionym: *Pilocopiapoa solaris*. [RPS 31]
- Copiapoa streptocaulon* (Hooker) Ritter, *Kakt. and. Sukk.* 12: 4, 1961. Basionym: *Echinocactus streptocaulon*. [RPS 12]
- Copiapoa subnuda* Ritter, in Backeberg, *Die Cact.* 6: 3827, 1962. *Nom. inval.* (Art. 36.1/37.1). [RPS 13]
- Copiapoa tenebrosa* Ritter, *Kakt. Südamer.* 3: 1098-1099, 1980. [RPS 31]
- Copiapoa tenuissima* Ritter, *Taxon* 12(1): 31, 1963. *Nom. inval.* (Art. 37.1) [First mentioned in Backeberg, *Die Cact.* 6: 3840, 1962 (as *nom. nud.*). Based on 2 syntypes, *Ritter* 539 (U ?) and *Ritter* 540. Erroneously included as valid in RPS 14.] [RPS 14]
- Copiapoa tocopillana* Ritter, *Kakt. Südamer.* 3: 1072-1073, 1980. [RPS 31]
- Copiapoa totoralensis* Ritter, *Cactus* (Paris) 15(66): 23-24, ill., 1960. Typus: *Ritter* 512 (ZSS). [Type erroneously cited for Z instead of ZSS.] [Chile] [RPS 11]
- Copiapoa vallenarensis* Ritter, *Kakt. Südamer.* 3: 1077-1078, 1980. [RPS 31]
- Copiapoa varispinata* Ritter, *Kakt. Südamer.* 3: 1070, 1980. [Sphalm. 'varispinata'] [RPS 31]
- Copiapoa wagenknechtii* Ritter, in Backeberg, *Die Cact.* 6: 3841, 1962. *Nom. inval.* (Art. 36.1/37.1). [RPS 13]

## *Copiapoa dealbata*





# Succulent of the Month: CUSSONIA

## THE CABBAGE TREE FAMILY - ARALIACEAE

by Michael Buckner

Aralias of the Schefflera and Ivy potted plant fame, are a remarkable family occurring in all tropical regions of the world but few are pertinent to the succulent enthusiast. The family *Cussonia* "the Cabbage Trees" occur endemically only in Africa. This is one of two tree generas of the Aralia family native to South Africa; the other being an obscure monotypic genus, *Seemannaralia gerrardii*, which is indigenous to Madagascar and the Mascarene Islands.

The Cussonia family is a genus of handsome palm-like trees and semi-arborescent shrubs characterized by candelabra shaped inflorescences and large compound leaves which grow crowded at the branch ends. Named for a French professor of Botany at the University of Montpellier in the mid 1700's, Pierre Cusson, the Cussonia is often called the "Parasol Tree" or the "Umbrella Tree" due to its unique resemblance to those artifices. Often one hears these uncommon plants referred to as "Cabbage Trees" in reference to the leaves that often have the same blue-green color and texture of a cabbage leaf.

Rarely available to the serious collector are some real "gems" which the avid grower should grow hard and pot-bound to facilitate the desirable bonsai effected show specimen. The most commonly distributed is *Cussonia spicata*, one of the digitately compound snowflake leaved trees. If grown slow and hard it can become extremely sarcocaulent and semi-succulent. If treated as a wet tropical and planted in the ground it becomes a large tree quickly if not exposed to low temperatures. The trick is to keep the plants wanting and hungry. I allow my specimens to deciduate fully every winter and I've had some for over twenty years – now less than two feet high when they would be in the twelve to twenty foot range if they were planted in the ground.

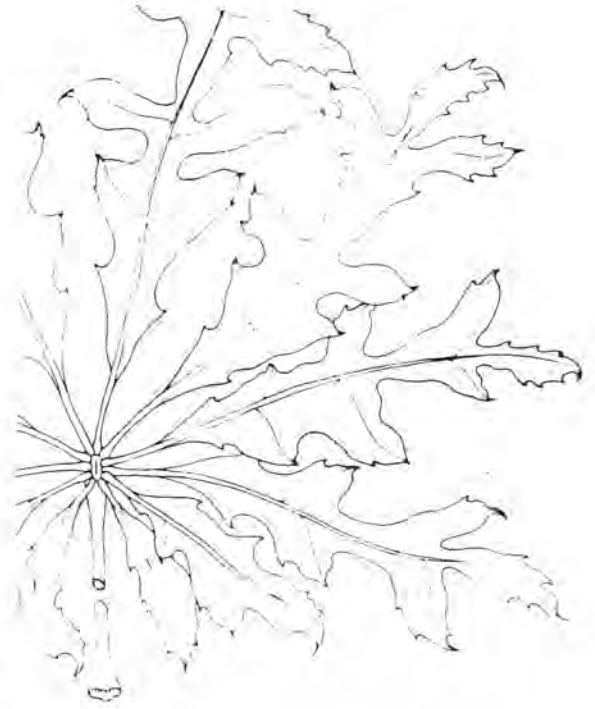
In southern California another Cussonia which is occasionally obtainable is *Cussonia paniculata*; this is a blue beauty also with a remarkable snowflake and glaucous leaves. If you see one available grab it, then wash away the soil from the subterrestrial enlarged roots to expose the character of the swollen caudex.

I have one Cussonia which I treasure because it was a gift in 1974 from a remarkable horticulturist and friend David Barry of California Jungle Gardens in Los Angeles. The dubious name *Cussonia holstii* that he gave to me along with the plant is well illustrated by the picture of the mother tree in Alfred Graf's *Exotica*. I never asked this astute gentleman if this gift was a seedling or a cutting, but now it is a knarred two-foot bonsai. After twenty years one can easily count the close annual growth rings.

The most extraordinary Cussonia, a true dwarf and phenomenally rare is *Cussonia kraussii*. This Cabbage Aralia will simulate a full size tree both flowering and blooming at twelve inches tall. Hopefully some of these very desirable and wonderful sarcocaulent plants will become accessible to us in the near future.



The parasol-appearance of *Cussonia* in inflorescence.



Leaf form of *Cussonia paniculata*.

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## Calendar of Coming Events

☉ October 8th, Saturday, San Diego Cactus & Succulent Society meeting with Aloe Specialist Brian Kemble. Plants of the month are *Cussonia* & other succulent *Aralias* by Michael Buckner, and the cactus is *Copiapoa* by Thomas Knapik. The Nomination Committee for SDC&SS 95-96 officers will be forming at this meeting, if you would like to volunteer for this committee or run for an office – please inform a present SDC&SS Board Member or Officer. The board meets at 11:30 in kitchen next to room 101 before general meeting.

☉ October 15, Saturday, California Native Plant Society Plant Sale, 10:00 am to 2:00 pm, Joan Stewart @ 277-9485.

☉ October 22 & 23, Saturday & Sunday: The 23rd Quail Botanical Gardens Plant Sale and Fund Raiser. Info (619) 436-9236, Barbara Weiler.

☉ November 3-4-5-6 Huntington Botanical Gardens Fall Plant Festival. Call (818) 405-2160 for more information.

☉ November 12, Saturday, Catherine & Mike McCammon of Santa Barbara will present a slide show presentation of their recent trip to South Africa. Plants of the month: Canary Island succulents by Phyllis Flechsig and the cactus is *Arrojadoa* by Joe Clements.

★ December 10th, Noon, the Annual San Diego Cactus & Succulent Society Holiday Banquet and Plant gift exchange. Election of 1995-96 officers. Please pay you 1995 dues in advance to receive your plant gift at this event.

# MY FIRST TRIP TO THE HUNTINGTON

## BY ED DELOLLIS



### THE THREE AFRICAN PLANT HUNTERS

*Len Newton of Nairobi, Kenya, Darrel Plowes of N'Djamena, Chad, and John Lavranos, Johannesburg, South Africa.*

It was 5:00 AM, September 10th, already I've been awake for an hour - waiting for my ride to the Huntington Botanical Gardens to attend the Eleventh Annual Succulent Symposium. Didn't sleep that much, felt a bit queasy from all that coffee in an empty stomach - Warren Buckner arrived with son Michael and Kelly Griffin to complete our ride share group. Having joined the SDC&SS in 1993, I hardly knew what to expect, but Michael assured me this trip would be well worth the effort and expense. During the ride Kelly spoke of local populations of *Dudleya* that he has hiked to. We all thumbed through the most recent Euphorbia Journal, astounded by the pictures.

We arrived at 7:30 AM, greeting Steven Hammer and Bob Kent, two of the speakers, who had driven together. Picking up our name badges in the giant open-air rotunda of Friends Hall we were welcomed by Betty Athy and Rick Latimer. Rick graciously showed me around . . . the desert garden and conservatory - a short distance that-a-way the auditorium, the silent auction rooms, the foyer, the plant sales area, and breakfast: orange juice, coffee, tea, and sticky pastries. Paul Hutchinson was readying his many plant donations for the auction: Agaves, *Furcraea*, a crested white *Euphorbia*, *Cereus* cacti, *Mammillarias* and three very fine *Pereskias* in bloom.

Nearly 200 attendees gathered in the auditorium greeted by desert collections curator, John Trager; Jim Folsom introduced the first speaker: Steven Hammer's *Mesembrianthemum* masterpiece on newly collected material and the accompanying complications was delivered in his laser-like voice - a rapid narrative of his descriptive slides was characterized by slick diction and a voluminous vocabulary . . . we learned a lot and applauded heartily.

John Lavranos' program encompassed 40 years of plant hunting. The audience was oohing and ahing with each new discovery that his slide show revealed. I found his manner warm and engaging and waited to ask some questions regarding the *Dracaena cinnabarrri* from Socotra. He informed me that although all *Dracaena*'s are dioecious, the tree in the slide had born copious seed and I should speak to Seymour Linden about the possibility of acquiring some. During our short chat, John Lavranos treated me as though I were a longtime friend - what a treasure he is to succulentdom - a gentleman of class and distinction. Immediately I tracked down Seymour, we shared information on various *Dracaenas*, and he assured me that I would get some seed of *Dracaena cinnabarrri*.



The most impressive slide show of the symposium utilized dual projectors: Bob Kent repeatedly showed images of two different looking *Haworthias* side by side. Although they were often quite different - they were always from the same species and sometimes from the same seed batch. These slides stimulated the many *Haworthiaphile* in attendance as well as creating a few new converts. Later, in the parking lot, I complimented Bob. I said his presentation had been thorough and comprehensive - he disagreed, saying he had barely touched the subject. Still I found his program to be perfect for the 45 minutes allotted.

Lunch afforded new opportunities to communicate; I sat between Dr. Ed Nolan and B. Juan Chahinian. I chided Juan, as not a single *Sansevieria* had presented itself during any of the morning African slide shows. He laughed. Then Ed Nolan and I ran down to the desert garden, viewing cacti and succulents too numerous to mention. There was a beautiful *Agave* - six feet tall and six feet wide - her curved leaves exposed wonderful blue hues. Ed informed me that there were two 4" pots of this *Agave vilmoriniana* available in the sales area; we rushed there and purchased them both for \$3.00 each. Our young dark-haired cashier told me that she had planted this same *Agave* in her yard and it had grown considerably over the past six months. Later, I noticed Dylan Hannon conversing with this same beauty during one of our breaks, showing he has the gift of gab, etc. when it comes to talking plants.

Throughout the morning breaks and lunch the silent auction continued. Each plant had a ledger card, bidders wrote their name and a dollar amount, each supplanting the last. A wide array of plants were available: *Bombax ellipticum*, *Nova Agaves*, *Furcraea foetida variegata*, *Sedums*, *Crassulas*, *Euphorbias*, *Dracaena ellenbeckii*, cacti from *Pereskia* to *Mammillarias* and *Mesembs* identifiable only by the scent of their blooms, *Aloes*, *Aeoniums*, and a rare *Bursera*. There was a specimen *Adenium* with rose colored blooms that Madelyn Lee took home for a \$100 bid. At each break hopeful new owners buzzed around the plants that interested them, adding their names and \$ amounts wherever they could afford. Repeatedly I bid on the *Dracaena ellenbeckii*, Michael Buckner always the opposing bidder. Thought I had shaken him at \$30, left the room with several minutes to go - several subsequent bids followed with Michael netting the rare catch.

Dorothy Byer presented the first afternoon program - her education in art and botany has led her down a unique path in horticulture. An excellent propagator and seedswoman, Dorothy's paintings of plant life may be her finest achievements. Two recent paintings of *Aloes* were on display - wonderful, Dorothy. Her slides explained techniques and her astute integrity at depicting reality; Dorothy stated she that spends six hours a day for five to six weeks on each painting. The results are impressive - a perfection rarely accomplished in botanical art.

Darrel Plowes, the elder statesman of the *Stapeliad* world, showed some exceptional slides. Every word was hotly sought by the covey of *Caraluma* trekkies, many who attended largely to see Darrel. He proposed a solution to

the jumble of *Stapeliad* nomenclature: expand to sixteen genera. Some aficionados were uncomfortable with this proposal!

Next Jim Folsom, curator of Botanical Gardens, made an appeal to all: Take good care of your wonderful rare plants, and consider their future should you no longer be able to care for them. Make plans to pass these living specimens on to a good home where they can be propagated - the Huntington Botanical Gardens, for instance!

At some point before the final talk by Len Newton, Len, John Lavranos, and Darrel Plowes were sitting together exchanging slides and discussing their respective talks. I moved in with the camera and had no trouble getting these hams to smile. After the flash, Joey Betzler requested an 8"x10". Then and there, I decided to go into business selling these photos of "The Three African Plant Hunters".

The final talk by Len Newton featured plant habitats. Africa has the three main climatic types: rain forest, desert, and grassland in-betweens - savannahs or steppes. *Welwitshia* survives in a coastal band where it can be drenched nightly by dew. Showing slides of *Euphorbias*, *Aloes*, *Mesembs*, *Ceropegias*, etc. hiding in the grass and rocks, he covered the difficulties in making discoveries. Len referred to a hiding *Sansevieria* as a weed - a weed that some people traveled thousands of miles to view! Then he showed a slide of B. Juan Chahinian to tumultuous laughter. He spoke of cooperation and information exchange among botanists, plant hunters, and hobbyists. He really brought back Africa for those of us who may never get the opportunity to travel there.

Then we had about an hour to view the Conservatory and Desert Garden. A trio of *Astrophytum ornatum* standing four feet tall blew my mind; it had been collected from Queretero some forty years ago. Mature specimens of every cactus, including a *Pereskia* 15' tall, presented themselves. *Yuccas* I've never heard of ascended fifty feet in the air. The largest tree *Aloes* I have ever seen. Astounding *Agaves*! And a recently named silver-green *Yucca* to mention just a few! Although we ran - we could not see it all!

The Symposium's elegant finish - a barbecue at Jim Folsom's home on the grounds, followed by an impromptu reminiscence by curator emeritus of the Huntington Botanical Gardens, Myron Kimmach. He spoke of early recollections, calling himself "Cactus Bill", his job as curator at Berkeley, and his ultimate ascendance to the Huntington. Mentioning the Hummel's and other pioneer cactus luminaries, he remarked on expeditions funded by the Huntington, revealing many humorous incidents. Myron lauded John Trager and Jim Folsom for the great job they are doing. While the crowd applauded Myron slipped off the stage thus avoiding applause for himself - so typical of his modest and unimposing leadership.

I hope that by reading this, others may also be interested in attending this inspirational event. I certainly plan to attend next year's Symposium.

# MEMORABLE MOMENTS

## BY FRANK THROMBLEY

Memorable, an adjective, is defined as worthy of being remembered or notable. It therefore allows one to couple the past with the present and possible to the future. This article is written for the purpose of reminding the SDC&SS members of two low key members who consistently help the society: a brother and sister team who can be seen each June "babysitting" the purchased plants while their new owners are viewing the show. They are a good security team that keeps the honest people honest.

**WILBUR & ELIZABETH GLOVER** were born in New Jersey, the Garden State. Their family were farmers in the southern area of this state, where they went to school and matured to adults.

Wilbur continued farming on the family farm until his retirement; he then moved to Lake Wales, Florida. In 1978, when visiting his sister, he joined the San Diego Cactus & Succulent Society. Yes, Wilbur still resides in Florida spending about six months of each year at Lake Wales and the other six months here in San Diego.

Elizabeth Glover went from high school to Glassboro State College, in New Jersey, and then joined the Navy in 1945. Elizabeth retired from the Navy in 1975 with the impressive Rank of Commander that was attained in the professional field of Communications. Her last tour of duty in the military certainly showed her mettle, i.e. high quality of character, spirit, courage, fortitude, tenacity, and ardor. Elizabeth was assigned the Executive Officer for the Southern Command of NATO in Europe. Too, she was the only woman who reported to the Commander in Chief, for the Southern Command.

After retirement Elizabeth settled in the San Diego area and volunteered her time to the various Floral Societies. She is a member of eight Botanical-Floral societies and she is a Life Member of the Begonia Society, the Epiphyllum Society and the San Diego Floral Association. She was the Editor of the California Garden Magazine from 1985 to 1990.

The mother of this proficient brother and sister team graduated from the Philadelphia School of Music, taught piano, and of course, taught Elizabeth too. Elizabeth purchased an Electronic Organ when she retired and then taught Wilbur to play. Today they both have new full keyboard organs. Wilbur is also an excellent amateur photographer - he has chronicled many of our field trips and June shows. Talent is certainly not a deficiency in this family.

When you attend your next meeting, say hello to Elizabeth - she is the co-host at the entrance.

*Joyce & Michael,*

*I believe that my antidote articles have come to an end. Thought I would try a few concerning members of the SDC&SS. If you approve of these for the Espinas y Flores, I will try a few more. As you know, the SDC&SS Board approved a Bronze Plaque in Memory of Bud Aubuchon to be mounted at the Wild Animal Park, Baja Hill. When it is complete I would like to take a picture of it for the Espinas y Flores with an article on Bud in the same issue.*

*Thanks you two,  
Frank*

*Dear Frank, We absolutely adore your articles filled with antidotes, incidents, historic and educational information and lots of personality. Look forward to typing them every month - please continue! M & J Buckner*

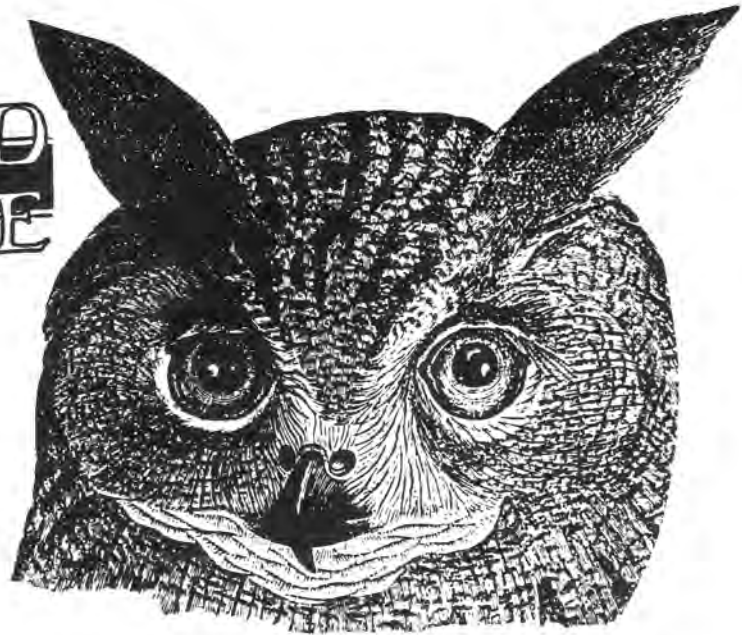
(Editor's note: Elizabeth faithfully attends every SDC&SS meeting, fulfilling her duties at the reception desk, greeting and registering members, changing addresses, distributing information, and signing up new members. Elizabeth's (and Wilbur's) help with the bulk mailing of the Espinas y Flores has been a godsend! Thank you, we don't know how we did it without you!! Elizabeth sprained (or broke?) her ankle last month - we certainly hope she is doing much better. We really missed you at the picnic, Elizabeth!)

# WISE AND OTHERWISE

**Michael Buckner**

"I only went out for a walk,  
And finally concluded to stay out  
till sundown, for going out, I  
found, was really going in."

*John Muir, Journal, 1913*



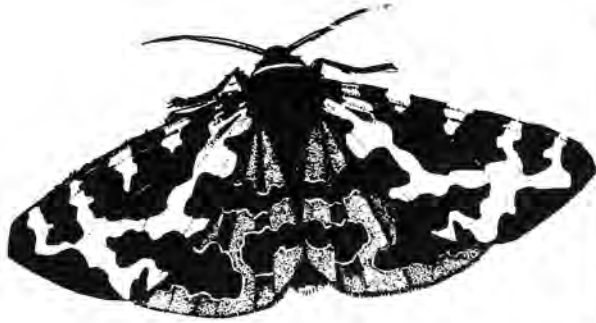
"In southern California, numbers of Coast Horned Lizards are declining rapidly. In California, the San Diego subspecies, *P. coronatum blainvillii*, occupies essentially the same range as the Orange-throated Whiptail and, along with some other species of Coastal Sage Scrub, is up for consideration as rare or endangered. The problem is related to habitat destruction associated with development, pastures, and agriculture. The situation has been complicated by the practice of fire suppression, which has allowed existing brushland to overgrow, reducing the amount of open space. The open spaces that remain, such as dirt roads, flood plains, and stream banks, are trampled by humans and off-road vehicles. In an effort to control flooding, stream courses have been channelized and lined with concrete. Also, children love to collect and play with horned lizards. It remains to be seen whether horned lizards and humans can coexist."

A NATURAL HISTORY OF CALIFORNIA by Allan Schoenherr, 1992, University of CA Press, Berkeley

"The leaf chemistry of agaves is complex and only a few of the leaf constituents have been identified. The substance in the leaves which causes dermatitis is not known, for instance, nor is the pain-causing exudate on the surface of the spines. The Indians used the leaves as poultices for itches, sores, bruises, and wounds. Pennington (1958) and Bye et al. (1975) reported that several agaves are employed by the Tarahumara Indians as fish poisons. The juice of *Agave lechuguilla* was used to poison arrow tips. The leaves of several species, or the leaf juice, is still widely used in Mexico as soap. We do know the leaves contain sapogenins, sterols, terpenes, and vitamins. Hecogenin, one of the sapogenins, occurs in the plantation fiber agaves. As a byproduct of fiber operations in Mexico and East Africa, it has been extracted and used in the manufacture of steroid drugs. Because sapogenins are suitable starting compounds, from which cortisone and the chemically related sex hormones can be synthesized, many agaves were quantitatively assayed during the early 1950s by several drug companies and especially by the U. S. Department of Agriculture (USDA)."

AGAVES OF CONTINENTAL NORTH AMERICA by Howard Scott Gentry, 1982, University of AZ Press, Tucson





"When Daniel Boone goes by, at night,  
The Phantom deer arise  
And all lost, wild America  
Is burning in their eyes."

*Stephen Vincent Benét*

"[Edward] Abbey's love of wildness led him to his true home, the Great American Desert. Where most people see only bleak, lifeless, and ugly terrain, Abbey saw mystery and beauty. In his writing there is sensual delight in the names of shrubs, trees, animals, insects, rocks, dry gullies, and washes. What he loved was the very emptiness, the vast desolate nothingness of the deserts he trekked.

Despite obvious danger and doubt about what lay beyond the next horizon, that was where Abbey wanted to be. "Out there is a different world," he wrote in *Desert Solitaire*, "older and greater and deeper by far than ours, a world which surrounds and sustains the little world of man as sea and sky surround and sustain a ship. The shock of the real. For a little while we are again able to see, as the child sees, a world of marvels.

He made a point never to tell anyone but his family exactly where he was headed. No more "Californicating" of the last good country, was his motto. And besides, he'd say, no one should go out into the desert anyway, because it is a dangerous place. Everything in the desert either stings, stabs, stinks, or sticks, a hell-hole alive with rattlesnakes, Gila monsters, conenose kissing bugs, scorpions, centipedes, and javelinas.

In those surrounding he wrote about the desert: "In my case it was love at first sight. The desert, all deserts, any desert. No matter where my head and feet may go, my heart and my entrails stay behind, here on the clean, true, comfortable rock, under the black sun of God's forsaken country.

#### Epitaph for a Desert Anarchist - the Life and Legacy of Edward Abbey

by James Bishop Jr., 1994, Antheneum, New York

## WISE AND OTHERWISE

*"They raise beef. The hands have a finger tip missing here or there, the necks are creased, the shirts all snaps, boots real leather, levis faded. We sit around the cool formica table in the cafe and talk ranch talk, Mogollon Rim ranch talk.*

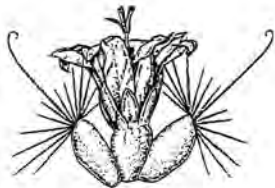
*This is lion country and the big cats eat calves, the ranchers hunt and kill the big cats and over the decades this dance of death had wrapped them together with hoops of myth. The ranchers hate lions and base their sense of self on lions.*

*One rancher tells how once he found two lions copulating, a moment normally denied even the most ardent student of the secretive cats. The biologist listening in comes alive with interest. In seventeen years of lion study in the field, he has never observed a cat that did not sense his presence. And now he is talking to a man who has caught lions in the act of love.*

*"Yep'" grins the rancher, "And I want you to know that I'm enough of a cowman that I shot the female first."*

BLUE DESERT by Charles Bowden, 1988, University of Arizona Press

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## *The San Diego Cactus and Succulent Society*

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The San Diego Cactus and Succulent Society, Incorporated [a non-profit tax-exempt organization] is open to all persons interested in growing cacti or other succulent plants. Meetings are held the second Saturday of each month (except September and December) at 1:00 PM in room 101, Casa del Prado, Balboa Park. Board meetings are held at 11:30 AM prior to general meetings. Annual dues are \$10.00 per single member per year, \$5.00 for each additional member within the same household. Single copies of *Espinas y Flores* are \$1.00 per copy sent within the USA; foreign subscriptions are \$20.00 - three mailings per year. Affiliated with the Cactus and Succulent Society of America, Incorporated. Fax available - call