

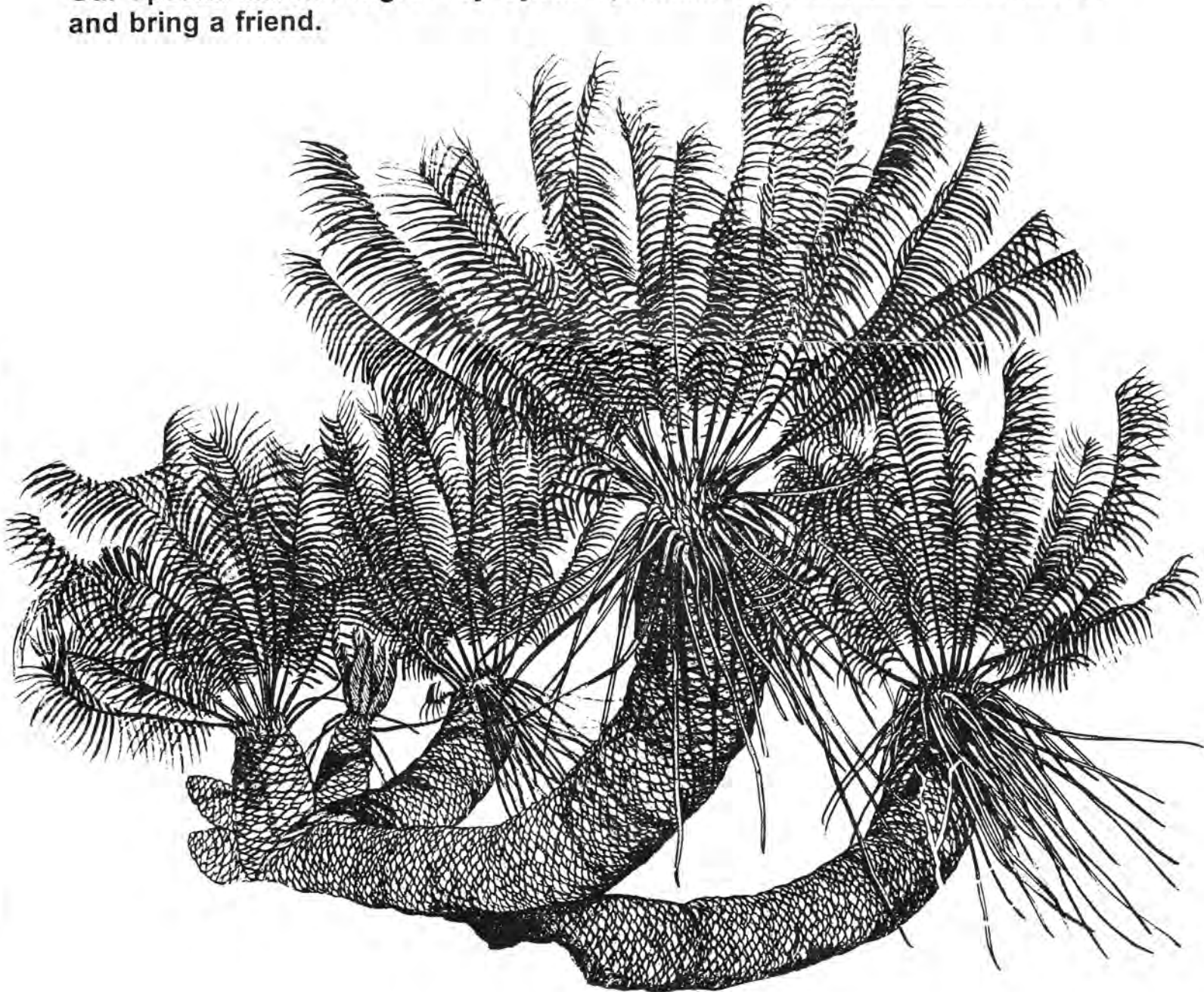
# Espinas y Flores

NEWSLETTER OF THE SAN DIEGO CACTUS & SUCCULENT SOCIETY, INC.  
Affiliate of the Cactus and Succulent Society of America, Inc.

VOLUME XXX NUMBER THREE, SATURDAY, MARCH 11, 1995 @ 1:00 PM

## CYCADS OF THE WORLD

Our Special March Program by Cycad specialist Guy Wrinkle. Don't miss it and bring a friend.



Our cover *Encephalartos inopinus* water color by Douglas Goode in his outstanding opus "CYCADS of AFRICA", c.1989. If you don't have this incredible book, buy it!!

## OUR MARCH PROGRAM: CYCADS OF THE WORLD

This exciting plant group of pan tropical /arid thorn forest Gymnosperms (Exotics which are not succulents or cacti, but can be found in every well-rounded cactus and succulent collection and show.) will be portrayed by Guy Wrinkle, professor of Biological Sciences at West Los Angeles College. Guy, an intrepid plant explorer, nurseryman, and Cycad specialist will present a slide show lecture featuring Cycads in nature with many undescribed new species. This is a first-time-seen-anywhere program. He will also offer for sale rare seedling cycads. Please come early for sales, socializing and remember to participate in providing delicious refreshments for our social break.

**MORE ABOUT OUR COVER:** *Encephalartos inopinus*, known as the Lydenburg Cycad was first discovered in 1955, but it was not until 1964 that it was identified as a new species and described by Dr. R.A.Dyer, so famous and important to us for his work on the South African flora - especially succulents. Douglas Goode writes, "This unusual species grows in the valleys of the Olifants and Steelpoort Rivers between the Penge and Kromellenboog Asbestos mine in the self-governing state of Lebowa. The habitat is extremely rugged with deep gorges cutting through the dolomite rock down to the rivers below. The Cycads are found in the thick bush covering the steep rocky slopes but only the occasional specimen has stems long enough to permit its foliage to emerge through the bush cover. Some fine old plants, with six to eight stems, can be found hanging from inaccessible narrow ledges high up in one of the gorges, fortunately well out of reach of the large number of baboons which forage in this area, as well as of would-be-collectors.

Most of the plants grow in shady situations, in company with a variety of species of Aloe and Euphorbia as well as Acacias and other interesting tree species.

Large troops of baboons in the area regularly inspect each Cycad; as soon as a cone appears it is quickly damaged or removed. Perhaps as a consequence of this predation, no seedlings have been recorded in recent years.

The Lydenburg Cycad is a seriously threatened species and may well be close to extinction in its natural habitat."

### BRAG TABLE WINNERS FOR FEBRUARY 1995: JUDGED BY SEYMOUR LINDEN

#### CACTUS:

- FIRST PLACE: Beverly Kirkegaard's *Neoporteria castanea v. tunensis*  
SECOND PLACE: Shirley Berry's *Mammillaria pilcayensis*  
THIRD PLACE: Sara Schell's *Neoporteria nidus*

#### SUCCULENT:

- FIRST PLACE: Joe Quijada's *Euphorbia supranans*  
SECOND PLACE: Tom DeMerritt's *Tylecodon paniculatum*  
THIRD PLACE: Shirley Berry's *Euphorbia misera*

## **MEET the SPEAKER: GUY WRINKLE** **by SDC&SS Members Joe & Carol Wujcik**

"I like anything about natural history," is the way this month's speaker, Guy Wrinkle, introduces himself. To the "plant world" Guy is known for his cycads and larger caudiciforms. However, he also propagates rare reptiles and is an expert on the larger beetles. (Guy's Masters Degree is in entomology).

Guy will speak to us on cycads, the type of plant he mentions first when pressed to name a favorite. In fact, Guy is in the process of completing a much-needed book on cycad cultivation and hopes it soon will be available.

He was introduced to succulents while a student at CAL State, LA, some 15 years ago. He had already become interested in orchids and bromeliads. While reading in the Botanical Dept. Library, he discovered the CSSA Journal. In it, Guy saw the fascinating plants Foster and Glass were introducing and was hooked. He obtained his first plant (a Testudinaria) at Abbey Gardens and credits Bob Foster with helping nurture his interest. Guy thanks Bob for providing a "starving student" (Guy) with plants when he couldn't afford them (much to Charlie's dismay).

Today, Guy teaches Biology at LA College when he is not running his nursery in North Hollywood. Called Guy Wrinkle's Exotic Plants, the nursery specializes in caudiciforms, cycads, and other rare succulents. At one time Guy was especially interested in Haworthias but his interest has expanded to include many other succulents, including the South African bulbs. Guy now finds that growing some of the larger caudiciforms in-ground can be a satisfying experience. To visit Guy's nursery at 11610 Addison Street, North Hollywood, CA 91601, please call for an appointment, (310) 670-8637.

This LA native is a world traveler having been to South Africa seven times, to Baja and mainland Mexico as often, and to the Arizona desert many times. "I've seen a lot of sand" is the way he describes his travels. However, Guy has also visited non-desert areas including his most recent trip to Peru.

This month we anticipate learning more about the incredible survivors - Cycads. Most of you know that the cycad group was around during the age of the dinosaurs. But while dinosaurs may have become birds to survive, cycads were, and are able, to hang around - as Cycads! And they are still evolving. In a sense they are both relics and modern. We look forward to learning more about these successful, ancient plants from a fine speaker and superb photographer.

FOR YOUR INFORMATION FOR YOUR INFORMATION



FOR YOUR INFORMATION FOR YOUR INFORMATION

**For San Diego C&S members already subscribing to the Cactus & Succulent Journal (CSSA), the March/April issue will again feature the International Succulent Institute (ISI) plant offerings of new, rare and desirable species with complete data. If you are not already a CSSA member send \$30.00 to Mindy Fusaro, CSSA, P.O.Box 35034, Des Moines, IA 50315-0301. You will receive all back issues for this year. The January/February issue featured a beautiful Aloe watercolor front cover by SDC&SS member Dorothy Byer and tenet article by member Phil Favell. There was also an outstanding Haworthia article by San Diegan Bob Kent, and book reviews by SDC&SS members Dylan Hannon and Michael Buckner. The July /August issue will feature a 50+ page article on growing Mesembs by Steven Hammer of Belen, New Mexico. Don't wait, subscribe today!**

U. C. Irvine will have its Spring Open House on Saturday, March 4, from 10:00 am to 2:00 pm. Thousands of South African flowering bulbs are about to burst into bloom and the arboretum under the direction of Dr. Harold Koopowitz will showcase its bulb collection during peak bloom. The event features guided tours of the bulb collection and gardens, a rare plant and bulb sale, and complimentary refreshments. Admission fee \$5.00 for non-members; for more information call Brad Carter, assistant director @ (714) 824-5833.

Congratulations to SDC&SS member Kelly Griffin and wife Jackie on the birth of their new son Eric Collin Griffin. We're glad he is healthy and happy and we are thankful Kelly was able to finish his article in good time in spite of sleep deprivation and new-born baby side effects. We hope Eric will show as much interest in cacti & succulents as his brother Sean.

THE CYCAD SOCIETY (U.S.A.) is a nonprofit organization based in the United States. It is devoted to education and the conservation of cycads and publishes "The Cycad Newsletter" three times a year. This publication is newly revised and includes color pictures and some of the latest discoveries on cycads. Dues are only U.S. \$18.00 per year. For membership or information write to The Cycad Society, 1161 Phyllis Court, Mountain View, CA 91010.

CYCAD SOCIETY of SOUTH AFRICA: for information (in the U.S.A.) write to Willie Tang, Fairchild Tropical Garden, 11935 Old Cutler Road, Miami, Florida 33156; dues are \$26.50/airmail and \$16.50 for surface mail.

DESERT WILDFLOWERS: February usually brings the first wildflower display, but the peak bloom period occurs during March and April and is often less than two weeks long. Every year there are magnificent carpets of flowers awaiting discovery by those adventurous enough to make the time and effort. If you would like to be notified of the peak bloom period, enclose a stamped self-addressed postcard in an envelope and mail to: WILDFLOWERS, P.O.Box 299, Borrego Springs, CA 92004. The card will be mailed back two weeks prior to the expected peak bloom. Or for recorded message call WILDFLOWER HOTLINE (619) 767-4684.

*from the ANZA-BORREGO DESERT STATE PARK publication, 1995.*

QUAIL GARDENS: Identifying California Native Plants in the Coastal Chaparral - Two Wednesday evening classes, March 8 & 15, from 7pm to 9pm in the Ecke Building followed by a Saturday walk through the Native Plant Demonstration Garden on March 18. Don Miller, Curator of the Native Plant Demo Garden, will introduce you to common native plants, representing several plant families and their possible landscape uses. Fee: \$15/member, \$20 non-member. Call (619) 436-3036 to register.

We are pleased to see Joyce Buckner's Botany 101 Quiz reprinted in several society newsletters. Thank you Joe Casey, Editor of "Open Gates" the Gates Cactus & Succulent Society Newsletter for your kind comments.

OUR WEAKENING WEB - THE STORY OF EXTINCTION EXHIBITION opens March 4 @ the San Diego Natural History Museum. Don't miss this educational hands-on travelling exhibition which will run through May 22.

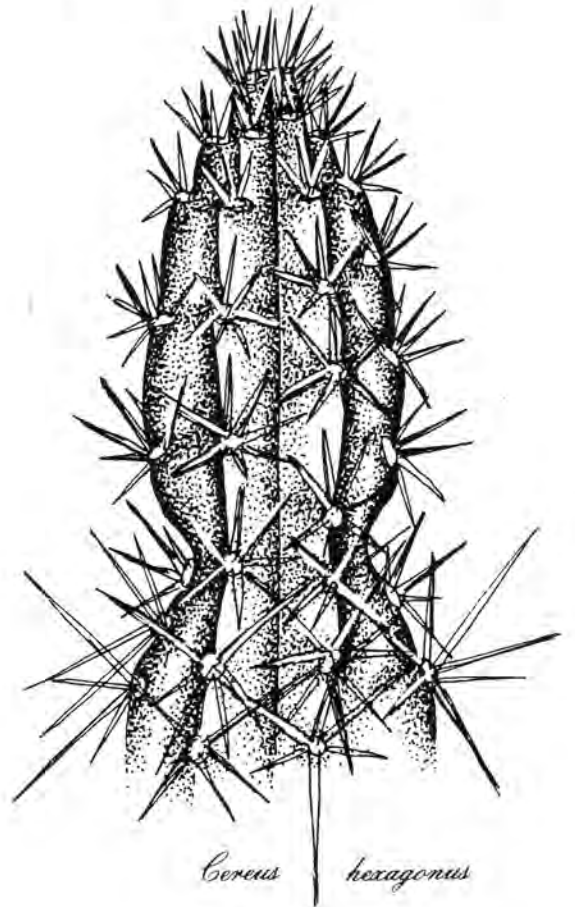
# CACTUS OF THE MONTH: *CEREUS*

## BY DYLAN P. HANNON

The genus *Cereus* is represented by upwards of 50 species which range from the West Indies south through eastern South America as far as northern Argentina. A large number of additional species formerly included in *Cereus* have been transferred to, or 'split-out', as segregate genera and over nine hundred names have been published under *Cereus* since Miller founded the genus in 1768. Though the taxonomy of the various genera and microgenera which make-up these segregates has still apparently some distance to go before a satisfactory scheme is arrived at (this involves problems of relationships as well as ranking the groups), the genus *Cereus* sensu stricto (in the strict sense) is today rather well-defined: plants are of compact, **shrubby** habit to large, **arborescent** forms, often with **heavy stems**. These stems are green to grayish or bluish in color and have mostly **4-8 prominent ribs** (the ribs make up the greater part of the diameter of the stems) and **stout, straight** radial and central spines 3-8cm long. The areoles usually have modest wool development but never any silky hairs. Flowers are **nocturnal** and up to 30 cm long, with a **long tube**, and are generally **white** and often tinged reddish or brownish on the exterior. The lower half of the flower, including the ovary, is naked or may bear a few reduced perianth segments ("scales") which have **no wool or spines** in their axils. An important character which unites all the species is the **persistent style**, which remains attached to the tip of the ovary after the perianth withers and is shed. The globular to oblong fruit is **fleshy** and red or orange when ripe, sometimes yellow or green, and consists of a firm '**husk**' which is separate from the generally **red pulp** containing many **large black seeds** which are dull or less often glossy. Fruit size ranges up to 13cm long and to 10cm in diameter, and the '**husk**' **splits open on one side** to reveal the brightly colored pulpy interior, a promising meal to birds and other creatures.

The first cereoid cacti known to Europeans were placed in *Cereus*, whose name is derived from the Latin for 'wax candle'.

Nowadays, the casual cactus enthusiast may be tempted to label any cactus as "*Cereus*" which is shrubby or tree-like and has spiny, terete-ribbed stems, i.e., possesses the classic cereoid or columnar habit. Ignorance is certainly bliss for this person, who does not realize that cactus taxonomists have made short work of previously all-encompassing, broadly defined generic concepts as prolific new discoveries were made, particularly in the 1950's and 1960's. Now that the dust of these explorations has settled somewhat, the pendulum has been swinging back toward a classification of the cacti which is more cohesive and natural-- a kinder, gentler taxonomy, if you will. Even so, one wonders what is the point of some recent lumpings, such as *Notocactus* with *Parodia*, a rather loud way of saying that these two well-defined groups are closely allied.



*Cereus hexagonus*

# CEREUS

(sĕ-rĕ-ŭs)

The closest allies to *Cereus* are members of the genus *Monvillea*, which have more slender stems and a perianth which is persistent, remaining on the fruit after wilting.

The only species of *Cereus* occurring in the continental United States is *Cereus robinii*, endemic to the Florida Keys, where it is rare and endangered (see Feb'95 issue of *Espinasy Flores*). Species of *Cereus* most likely to be encountered in California include:

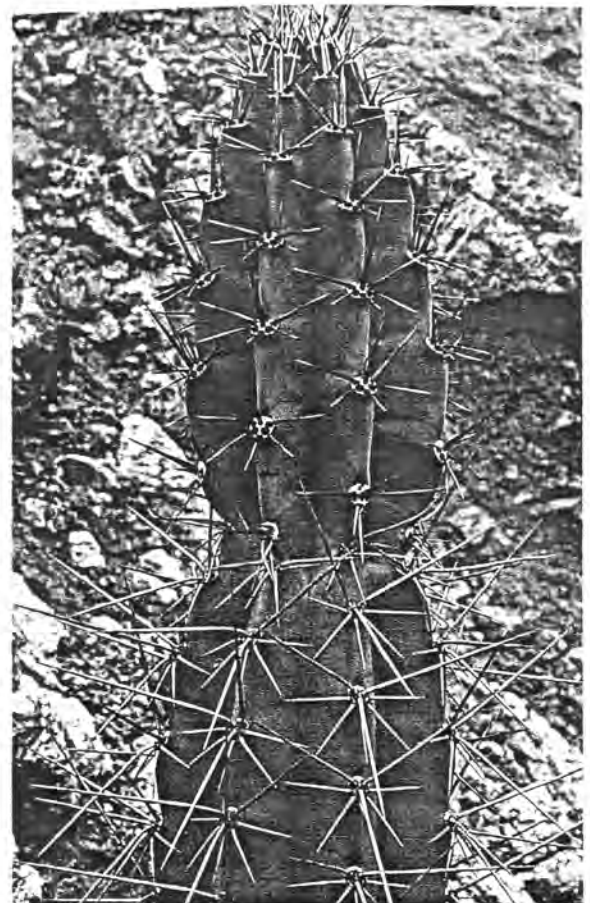
*Cereus peruvianus* (L.) Mill. The ubiquitous 'large, grayish, multi-stemmed cereus' seen so frequently in old gardens and still in demand as an undemanding, impressive landscape plant. It grows quickly with generous summer watering and is floriferous, with nocturnal flowers to 16cm long. Several botanical varieties have been named formally, and at least two popular monstrose forms are known: one small and with a yellow-green epidermis and weak reddish spines, best grown

in a container, the other robust and also used in landscaping where it flowers and fruits like the normal form. The large fruits have a thick 'rind' and the watermelon-textured pulp can be quite palatable; some clones are possibly selections made for just this purpose. According to Backeberg (*Cactus Lexicon*), the origin of this plant "remains unknown", but we may presume that Linnaeus had good reason to believe the plant was originally collected in Peru.

*Cereus aethiops* Haw. Argentina: Mendoza to Rio Negro. This species is most often seen in its handsome seedling stage, when it has an elongate, club-shaped body which is 8-ribbed, bluish green and beset with rather ferocious looking but beautiful jet black spines. The white to pinkish flowers are large (16-20cm long) and may be produced on plants only one or two feet tall.



*Cereus peruvianus*, southeastern areas of South America. **CACTI OF THE WORLD**, Brian Lamb.



*Cereus hexagonus*, Surinam to N. Venezuela. **CACTI OF THE WORLD**, Brian Lamb

*Cereus grenadensis*. West Indies. The stems of this large species range from a rather dull light green to bluish gray, with short to long dark brown spines and distinctive horizontal 'pleats' on the ribs.

Two further species in cultivation which are attractive and mentioned in 'the books' but are not commonly seen in California are: *Cereus chalybaeus* Otto, from Argentina, "one of the most strongly blue-colored cacti...very strongly recommended"; and *Cereus trigonodendron*, a species from Amazonian Peru (Loreto Department) with black-spined, 3-ribbed stems and red flowers, though it is possibly best placed in some other genus because of the anomalous flower color and other characters.

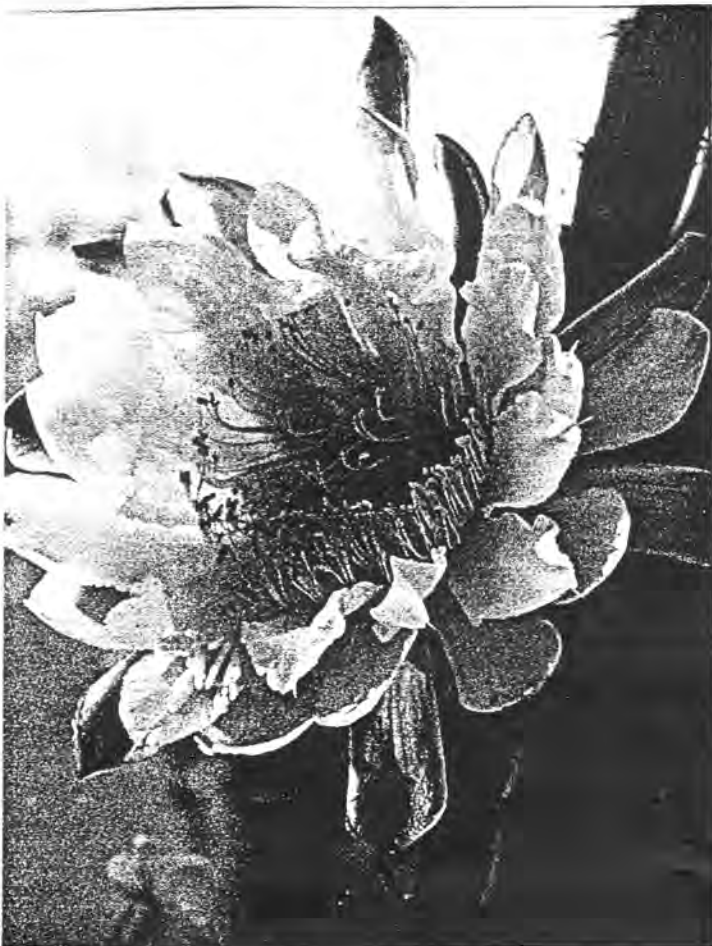
Horticulturally, most *Cereus* species present no special problems except for their size. In gardens, they will tolerate an occasional light frost, but moderate to heavy frost will damage the tips of even established plants. Even with colder nights (regular heavy frosts, for instance), most of the species will grow well under unheated protective cover, such as a solarium or sheltered patio. Such an arrangement lets the plants stay dry in winter, an important factor in caring for many succulent plants which must face a dormant season with colder temperatures than they would expect in their natural habitat. Members of this genus, as well as most other robust cereoids, need full sun or otherwise very bright light in order to successfully flower; they are remarkably tolerant of shade but will languish in the long run under such conditions. As with other succulents which are mostly grown outdoors, pests and diseases seldom bother these hardy, tough-skinned plants; indoors, one can expect the typical greenhouse pests such as mealybugs, scale, etc.

References:

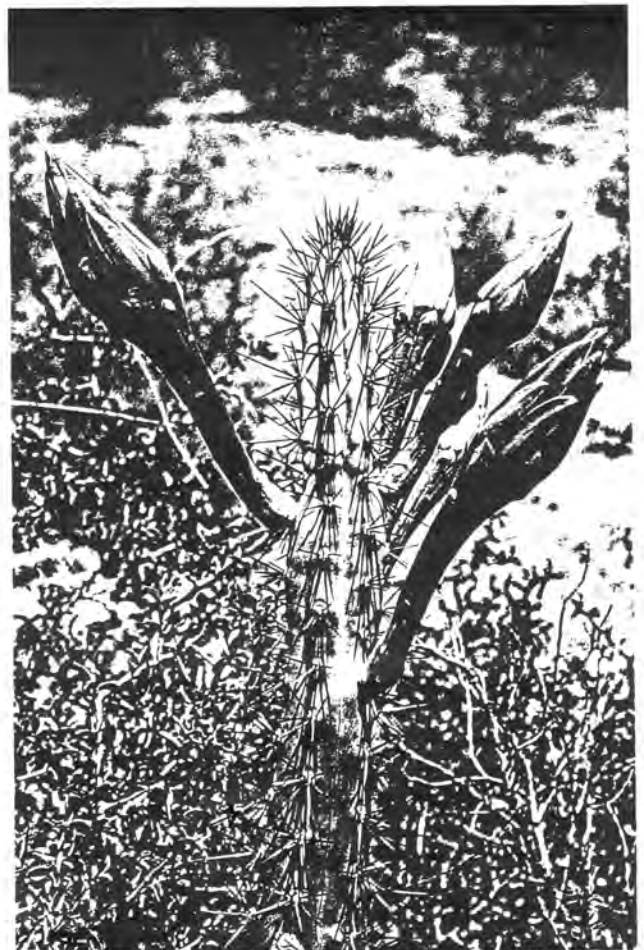
C. Innes & C. Glass, *CACTI*, Portland House, NY c.1991

Backeberg, *CACTUS LEXICON*

Cullman, Götz, & Gröener, *ENCYCLOPEDIA OF CACTI*, Alphabooks Sherborne, England c.1986



*Cereus chalybaeus*, Brazil & Argentina.  
From *CACTI*, Innes & Glass.



*Cereus aethiops*, Argentina. Illustration from  
*CACTI*, Innes & Glass.

# 1995 CACTUS & SUCCULENT CALIFORNIA AREA SHOW & EVENT SCHEDULE

*Note: The following is to the best of our knowledge. There may & no doubt will be changes, errors or omissions..... An "open show" is one in which all interested may enter in competition whether or not they are a member of the group sponsoring the show..... Some locations (such as LA County Arboretum) charge an admissions fee, except for exhibitors and workers.*

**April 2, Sun. morning, DAYLIGHT SAVINGS BEGINS.** (Yea! Spring ahead!)

**April 8 & 9, Sat. & Sun., SOUTH COAST C & S SOC. SHOW & SALE** at the South Coast Botanic Gardens on Crenshaw on Palos Verdes Peninsula. Setup Friday the 7th, noon; bring plants 3pm til early evening. Show starts noon - 4:30 on Sat., 9am - 4pm Sun. Sale starts 9am both days. Contact Show Co-Chairmen Dick Hulett, 310-832-2262 or Gil Schwerdtfeger, 310-374-8326.

**April 22 & 23 Sat.& Sun., CACTUS & SUCCULENT SOC. OF SOUTHERN NEVADA SHOW & SALE** at the Las Vegas Desert Demo Gardens. Contact Denni Plath, 702-367-6063 or Stan Korabell, 702-255-1744.

**April 22 & 23, ANNUAL L.A. ZOO SALE** in Griffith Park. All kinds of plants (also plant pots) for sale, including succulents. There is a holding area, and delivery service to the parking lot (the zoo is hilly). For info call the zoo or Jim Hanna, 310-920-3046.

**April 22 & 23, GREEN SCENE PLANT SALE** at the CSU Fullerton Arboretum. For info. you may call ?? (Ralph Barton, 714-529-3517).

**April 22, Sun., SOUTH BAY EPIPHYLLUM SOC. SHOW & SALE,** at S. Coast Botanic Gardens on Crenshaw, Palos Verdes Peninsula, 10 to 4pm. Contact Dick Kohlschreiber, 310-833-6823.  
The Above Is UNCONFIRMED.

**April 29 & 30, SUNSET SUCCULENT SOC. SHOW & SALE** at the Culver City Veterans Auditorium Bldg -- Garden Room. Setup Friday. (You get two shows in one place -- the Brom. Soc. also holds its show in this bldg). Contact Prez Rosalie Gorchoff, 310-822-1783. ( Closed show).

**April 29 & 30, MONTEREY BAY C & S SHOW & SALE.** San Juan Bautista, CA. For info call possibly Naomi & Frank Bloss, 408-722-1446.

**April 29 & 30, BALDWIN BONANZA PLANT SALE,** at the L.A. Arboretum, 301 N. Baldwin Ave., Arcadia, CA, just south of the 210 Fwy. For info call 818-821-3222.  
The Above is UNCONFIRMED.

**May 6 & 7, SACRAMENTO C & S SOC. SHOW & SALE,** Shepard Gardehn & Arts Center in McKinley Park, 3330 McKinley Blvd., Sacramento. For info. contact Guenther Laudi 916-421-4041. Also Dorothy Williams, 916-967-7988.

**May 7, Sun., SAN DIEGO EPI SOC. SHOW & SALE,** at the Casa del Prado, Balboa Park, San Diego. (Sale only on the 6th). Call ?? (Chuck Spencer 619-271-4085).  
The Above Is UNCONFIRMED.

**May 13 & 14, Sat. & Sun., SAN JOSE C & S SHOW & SALE.** Closed show. Prusch Park, 647 S. King Road, San Jose. For info call the Keetons 408-258-9444.

**May 13 & 14, FIESTA DES FLORES** at S. Coast Botanic Garden on Crenshaw. For info call 310-544-6815.  
UNCONFIRMED



# 1995 CACTUS & SUCCULENT

**May 20 & 21, Sat. & Sun., HUNTINGTON BOTANICAL GARDEN PLANT SALE**, The Huntington, 1151 Oxford Rd., San Marino, CA 91108 -- always a good selection of succulents as well as other exotics. Sun. open to all, 9am to 4pm. Friends of the Huntington may go to the pre-sale on Sat. from 5 to 7pm. Info: 818-405-2160. Times unconfirmed.

**May 19, 20, & 21, DESERT SYMPOSIUM**, San Bernardino Museum, Redlands. No other info yet.

**May 20, Sat., CARMICHAEL C & S SHOW & SALE**. Carmichael Park Clubhouse, 5750 Grant Ave., Carmichael, CA, 10 - 4pm. For info contact Dorothy & Sam Williams, 916-967-7988.

**May 20 & 21, Sat. & Sun., FRESNO C & S SHOW & SALE**, at the Manchester Center Mall. Contact Sue Haffner, 209-292-5624. (Dates are tentative)

**May 21, Sun., EPIPHYLLUM SOC. OF AMERICA (ESA) SHOW & SALE**, at the L.A. Arboretum on Baldwin Ave., Arcadia, CA. Contact Peggy Oberg, 310-645-7946.  
UNCONFIRMED

**May 27 & 28, Sat. & Sun., GATES C & S SOC. SHOW & SALE**, San Bernardino County Museum, Orange Tree Lane, Redlands. Setup Friday. Diane Park Show Chairman, 909-880-6725 or 909-735-0677, and Joe Bandzak, Sales Chairman, 909-883-2893.

**May 27 & 28, Sat. & Sun., SANTA BARBARA EXHIBIT & SALE**. At the Lewis Lowry Center on Victoria. Not a judged show. For info. contact ?? (Cory Wells, 805-965-1875).  
TOTALLY UNCONFIRMED

**June 3 & 4, Sat. & Sun., SAN DIEGO C&S SOC. SHOW & SALE**. Open show. Setup Fri. Casa del Prado, Balboa Park. Show: Sat. 1 - 5pm & Sun. 10 - 5pm. Sales 10 - 5pm both days. Contact Joey Betzler 619-239-0804 or Michael Buckner 619-222-3216.

**June 10 & 11, Sat. & Sun., ORANGE COUNTY C & S SOC. SHOW & SALE**. Open show. At the Buena Park Mall, 1 block EAST of Knotts Berry Farm. Sat. 10am-6pm & Sun. noon-5pm. Contact Lloyd Garretson, 714-539-8773 or Gene Schroader. Setup Friday.

**June 10 & 11, Sat. & Sun., SAN FRANCISCO C & S SOC. SHOW & SALE**, SF County Fair Blvd., Golden Gate Park, SF. Contact Richard Bernard, 415-665-8101.

**June 17 & 18, STOCKTON C & S SOC. SHOW & SALE**, at the Sherwood Mall in Stockton. Mall hours (about 10-6 on Sat. & 11-5 on Sun.) Contact ?? (Larry Martin, 209-464-4117).  
UNCONFIRMED - Usually Father's Day, but CSSA Conv.?

**June 18 - 23, CSSA WORLD CONVENTION IN TUCSON** -- Info in your newsletter, Journal, or at meetings. A one-day drive away -- to the Sonoran Desert and Saguaro country.

**July 1 & 2, Sat. & Sun., CSSA NATIONAL SHOW & SALE**, at NEW LOCATION as of '94: Huntington Botanical Gardens, at the south end of Allen St., San Marino, CA. Setup Thurs. & Friday. Pre-sale on Friday from 1 - 4 pm. Show and sale is Sat. & Sun., 10:30 - 4:30. Contact Show Chairmen Joe Clements (310) 696-4154 or Duke Benadom (805) 526-8620. Open to all interested if they are affiliated with CSSA or an affiliated society. HBG # is 818-405-2160. (CSSA Board Mtg. & Annual Mtg. on July 1).

**July 22 & 23, Sat. & Sun., NORTHERN CALIF. (NORCAL) C & S SHOW & SALE (Big, but not as big as InterCity, Richard!)** at the San Francisco County Fair Bldg. in Golden Gate Park, San Francisco County Fair Blvd., San Francisco. For info call Richard Bernard at 415-665-8101.

# CALIFORNIA AREA SHOW & EVENT SCHEDULE

**Aug. 19 & 20, Sat. & Sun., SOUTHERN CALIFORNIA INTER-CITY SHOW & SALE**, sponsored by the Long Beach Cactus Club, the Los Angeles C&S Soc., & the San Gabriel Valley C&S Soc., at the L.A. Arboretum on Baldwin in Arcadia, with setup late Wed., also all day Thurs. & Fri. Open show. Contact Show Chairs Larry Grammer (310) 599-1146, Woody Minnich (805) 944-2784, or Charles Spotts (818) 341-7613. This may be the largest cactus & succulent show in the world.

**Sept. 9, Sat., HUNTINGTON SUCCULENT SYMPOSIUM** at Huntington Botanical Gardens, 1151 Oxford Road, San Marino, CA 91108, at the south end of Allen St., 818-405-2160. Talks, Sales, Rare Plant Auction, Tours. More info. to come through your national or local society. (Also CSSA board mtg. Sept. 10 scheduled in conjunction with the Symposium).

**Sept. 9, Sat., SAN DIEGO PLANT AUCTION & PICNIC.**

**Sept. 11 - 17, IOS InterCongress** in San Miguel de Allende, Guanajuato, Mexico -- meetings taking place in the offices of CANTE. Info: IOS InterCongress, c/o CANTE, Mesones 71, San Miguel de Allende, 37700, Gto., Mexico. Phone 415/22990 & FAX 415/24015. Watch for more info. There will be meetings on conservation, Cactaceae, Agavaceae and others. Also field trips will be available.

**Sept. 16 & 17, Sat. & Sun., C & S SOC. OF CALIF. SHOW & SALE (the Oakland Club)**, Lakeside Garden Center, Oakland. Contact Henry Wagner, 510-471-4076.

**Sept. 24, Sun., 11 AM, LONG BEACH CACTUS CLUB FABULOUS PLANT AUCTION**, at the historic Dominguez Adobe, home of the Long Beach Cactus Garden, 18127 S. Alameda St., Compton, CA 90221. All are invited, but you must be a member to auction plants. Auctioneers Minnich, Turecek & Hagblom. BYO sack lunch. Coffee/water/sodas provided. Contact Dick Hulett, 310-832-2262.

**Oct. 28 & 29, SAN GABRIEL VALLEY C & S SOC. SHOW & SALE**, at the Huntington Botanical Gardens, south end of Allen St., San Marino, CA 91108 (1151 Oxford Rd.), with setup on Friday the 27th. Closed Show. Show/Sale hours are 10 - 4:30. Contact Dave Tufenkian, 818-794-3082.

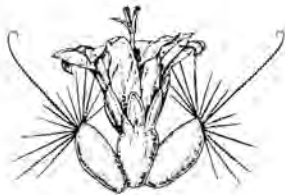
**Oct. 29, Sun., DAYLIGHT SAVINGS ENDS** (Alas. Fall back.)

**Nov. 1, Wed. Evening, GATES SOC. ANNUAL PLANT AUCTION, 7:30 PM**, San Bernardino County Museum in Redlands. Contact Diane Park 909-880-6725 or 735-0677.  
UNCONFIRMED

**Nov. 2, 3, 4, & 5, HUNTINGTON FALL PLANT FESTIVAL**, Huntington Botanical Gardens, 1151 Oxford Rd., San Marino, CA, with programs at 2:30 & plant sales 1 - 4 pm. Programs by author/speakers. Call 818-405-2160 for info.

**And in 1997, SAN DIEGO CSSA CONVENTION.** Contact Michael Buckner 619-222-3216.

*The above information has been compiled and distributed by Carol & Joe Wujcik (Roadrunner News - Long Beach Cactus Club) with the following disclaimer: "Events may change, enter time warps, shift to other dimensions, be swallowed by black holes, enter uncharted singularities, or otherwise be incorrect, incomplete, etc. Please call (714)963-3146 with corrections."*



*Mammillaria thornberi*

## San Diego Cactus and Succulent Society

P.O. Box 33181, San Diego, California, 92163-3181

### President's message for March 1995

I understand Tom DeMerritt did a good job while I was away in Tucson in January. I had obligations to the Cactus and Succulent Society of America, where I am a Director. While in Tucson some of my associates and I, went to Kitt Peak Observatory to view the facility. If you are interested in astronomy this is one of the highest concentrations of large telescopes. If it is warm during the CSSA convention in June this would be a cooler place to escape to for part of a day, it is in the mountains about an hour from the convention site.

Speaking of the convention, I hope to see some of you in Tucson. For SDCSS members that plan on attending and want to share rides or rooms give me a call and I will make announcements at the March meeting. If you have other questions about the Tucson convention call Chuck Hanson, he is the Host Society Chairman:

- Address - 3560 West Bilby Road, Tucson, AZ, 85746
- Telephone - 602 883-9404 or Fax - 602 883-8874 or e-mail - whay60a@prodigy.com

I have asked Martin Mooney to be our Host Society Chairman for the San Diego Convention in 1997. Martin has been the CSSA Convention Chairman for four previous conventions (one in San Diego) and has graciously consented to help again. I hope that many members from our society will assist Martin with our convention and make it an event worth remembering.

I apologize for all the confusion over the committee listings on the back page of Espinas y Flores. This issue should straighten out the committee memberships. Generally the first name to appear for each committee is the Chairman for that committee. I have written or spoken to most of these people. If I missed anyone or you do not want to be on that committee please let me know. Also, much thanks are due to all the committee members for their volunteer effort. They help make the San Diego Cactus and Succulent Society the best!

Volunteers at the Wild Animal Park's Baja Collection are thinking of the San Diego convention already. There are plans in the garden to work on an Arroyo which will act as a transition between the new Aloe Hill and the Baja Hill. The plantings in the arroyo will help reduce erosion and showcase some trees and shrubs that grow in Baja and Southern California. If you have not seen the Baja Hill recently come by for a visit, the rains have invigorated the plants and there are lots of specimens coming into bloom or nearly so.

Also, if you want to come out and help with a Baja Hill work day planned for March 19, 1995 please give me a call. We will work from 8 a.m. to noon; moving plants, weeding and a bit of transplanting.

Thanks,

Sincerely,

*Joey Betelver*

# 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 Tarahumaras 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 Mesemb 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 Procure

**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	_____	@ \$160.00
CSSA MEMBERS LATE REGISTRATION AFTER 5/15/95	_____	@ \$155.00
CSSA MEMBERS LATE REGISTRATION AFTER 6/15/95	_____	@ \$160.00
DAILY REGISTRATION - DATES ATTENDING 6/	_____	@ \$ 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 35034, DES MOINES, IA 60315-0301

CREDIT CARD USERS MAY FAX THEIR REGISTRATION FORM TO: (515) 285-7700

**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.**

# SUCCULENT OF THE MONTH: THE GENUS DUDLEYA

## BY KELLY GRIFFIN

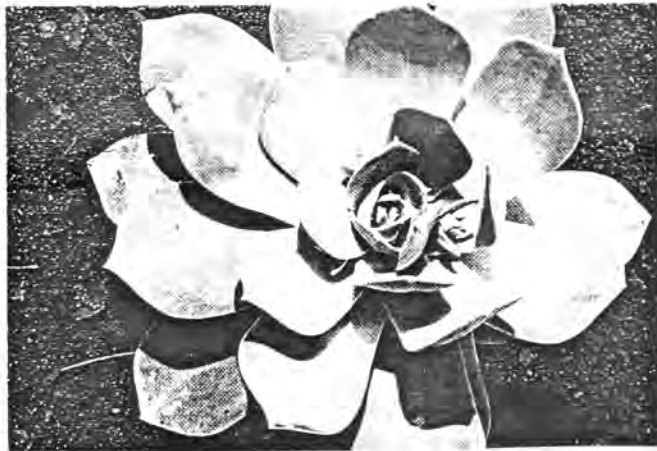
Okay! Okay! I'll do it. I'll tell you about Dudleyas, but I'm not telling the rattlesnake story. My fascination with this genus lies in the fact that they are for the most part commercially neglected, generally somewhat local and in my humble opinion, quite beautiful.

Dudleyas vary in size from the diminutive and endangered *Dudleya blochmaniae* ssp. *brevifolia* which is scarcely two centimeters across to the behemoth *Dudleya brittonii* that can attain a diameter of fifty-five centimeters. The flowers in shades of yellow, orange, red and white usually bloom in May and on into June. Although I have never seen it mentioned in print anywhere, *Dudleya edulis* has white star-shaped flowers with a very sweet fragrance. Another fragrant Dudleya is *Dudleya viscida*, but it is not the flowers that are odoriferous rather the foliage exudes a herby pine odor.

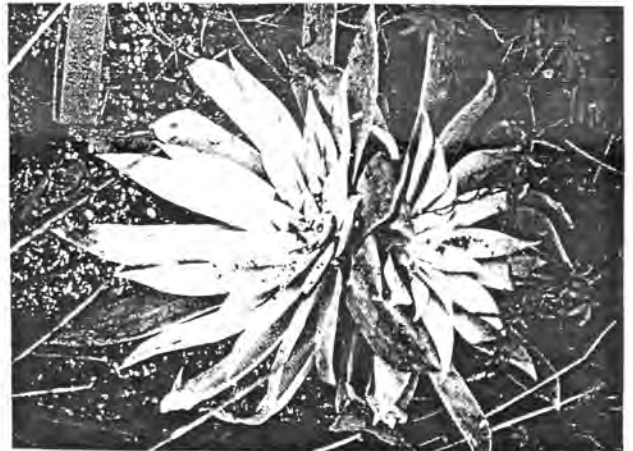
This genus ranges from north of San Francisco to the tip of Baja and they tend to be coastal, surviving on the fog mist and winter rains, although this isn't always the case. *Dudleya pulverulenta* ssp. *arizonica* occurs as far east as Arizona.

At the moment the genus Dudleya contains some 26 California species (with thirteen additional subspecies) and another 20 or so Mexican species. When I say "at the moment" my implication is that more species will probably be found. *Dudleya cymosa* ssp. *costafolia* was described in 1990 and it is highly likely that some existing forms will be raised to species status.

Illustrations from DUDLEYA & HASSEANTHUS HANDBOOK by Paul H. Thomson.



*Dudleya anthonyi*, broad-leaved form,  
Socorro Canyon, BC, Mexico.



*Dudleya anthonyi*, San Quintin Bay, BC.



*Dudleya arizonica*, Julian, SD County.



*Dudleya brittonii* with variegated leaves,  
La Mission, Baja California, Mexico.

An interesting aspect of growth habit is that *Dudleyas* favor cliff areas. In any other country this would probably enhance their ability to survive. Unfortunately in California, coastal cliff areas are often developed. Even if the actual cliffs are not built upon, the encroaching development above the habitat has adverse effects. Garden chemical runoff and waste product from residential and industrial areas find their way down — gravity is law. Also, especially noted in the Laguna Beach area, where the endangered *Dudleya stolonifera* resides, is the "garden escapees" aggressive non-native plants that can take over. In one area I saw rather pesky *Aeonium* completely covering the cliffs accompanied by an Ivy-leaved *Senecio michenoides* and a *Euphorbia* species not native to California. These visitors move in and take up residence; they are faster growing and rapidly adapt the conditions preferred by *Dudleyas*. Since all are competing for the same niche in the rocks, it is likely that the *Dudleyas* being more habitat predisposed and environmentally sensitive will eventually lose out. Invading weeds, bulldozers, chemical runoffs, plant collectors — it sure is tough being a *Dudleya*.

Another interesting feature of *Dudleyas* is that their livelihood seems to be linked to rock formations. For example: In Camarillo, *Dudleya verityi* resides on red volcanic rock; in Sequoia, *Dudleya cymosa* ssp. *costafolia* is found on gray limestone; in Baja, *Dudleya brittonii* is found on black volcanic rock. No doubt rock formations provide good drainage and rule out competition from surrounding grass and chaparral.

In my travels, I have come across some natural hybrids of *Dudleyas*. I have found several plants which appear intermediate between two species in an area where different species of *Dudleya* coexist. However, not all *Dudleyas* hybridize naturally. In areas where some species overlap, the flowering times coincide as least to some degree. An occasional plant appears that does not match any species in the area, but is an intermediate between the two. There are many areas where two or three different *Dudleyas* growing side by side hybridize, most do not. Main barriers to hybridization are contrasting flowering times and different chromosome numbers resulting in genetic incompatibility.

There are three species growing in close proximity in the San Marcos creek/Carlsbad area: *Dudleya pulverulenta*, *Dudleya edulis*, and *Dudleya viscida*. *Dudleya edulis* flowers first and finishes its reproductive cycle well before *Dudleya viscida* and *Dudleya pulverulenta* come into flower. The hybrid observed here appears to be "*pulverulenta* X *viscida*". Both plants have a chromosome  $n=17$ . This is an attractive plant, displaying features of both parents: solitary rosette like *Dudleya pulverulenta* with bright green leaves similar to *Dudleya viscida*. The leaf is not terete like *Dudleya viscida*, nor is it broad and flat like *Dudleya pulverulenta*, rather it is somewhere in between.

Just a point of clarification: often people refer to the *Dudleya* that occurs in San Diego county as *Dudleya brittonii*. *Dudleya brittonii* inhabits the rocky cliff area near Rio Guadalupe in Baja and puts on a magnificent display of stark white rosettes against a dark, craggy volcanic background. The large white *Dudleya* that resides in San Diego is *Dudleya pulverulenta*. Although they both are similar in appearance, botanically they are distinctly different in flower and leaf. *Dudleya brittonii* leaves taper to the tip, whereas, *Dudleya pulverulenta* has an cuspidate leaf tip, and the leaf is thinner.

Please bring in your favorite *Dudleya* to share with the rest of us for the March meeting. I would especially enjoy seeing some species that I have not yet acquired: *Dudleya anthonyi*, *Dudleya traskiae*, *Dudleya rubens*, and *Dudleya gatesii*. See I talked about *Dudleyas*, but I did not tell the snake story, Catherine!

References consulted:

Jepson Manual

Moran, Reid. Revision of the Genus *Dudleya*

Thomson, Paul. *Dudleya* and *Hasseanthus* Handbook.

A Key to Dudleyas of San Diego County courtesy to Mitchell Beauchamp,  
 "A FLORA OF SAN DIEGO COUNTY, CALIFORNIA", c.1986, Sweetwater River Press.

Dudleya Britt. & Rose

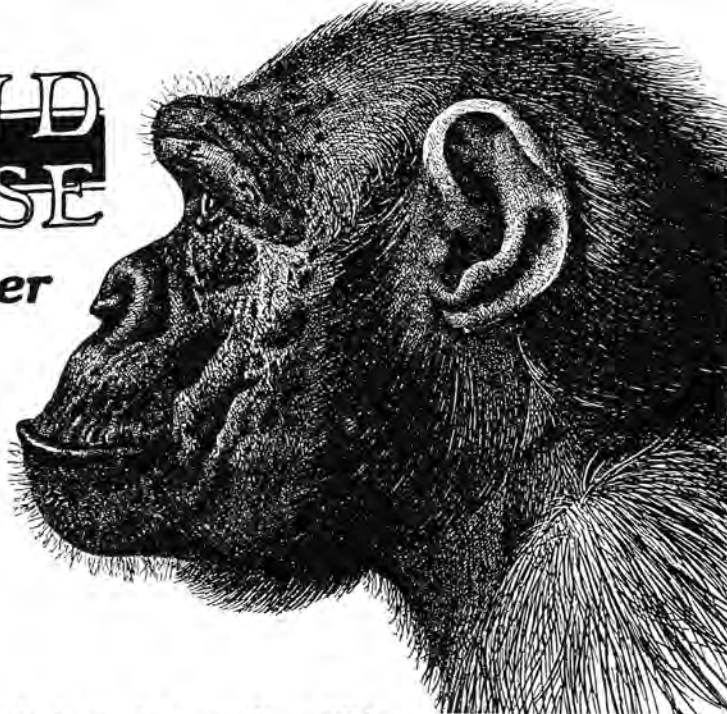
- Primary stem a somewhat elongating epigeaeous caudex; rosette leaves mostly persistent
- Corolla tubular, the petals erect, with only the tips slightly spreading
- Petals united for 1/3 or more of their length
- Flowers spreading to pendant at anthesis, erect in fruit by a sharp bending of the pedicel; corolla red, the lobes about as long as the tube; plant densely white-pulverulent
- Caudex 4-9cm thick; rosette-leaves 8-25cm long; pedicels 5-30mm long ..... *D. pulverulenta*
- Caudex 1-4cm thick; rosette-leaves 5-15cm long; pedicels 5-15mm long ..... *D. arizonica*
- Flowers erect or somewhat spreading, the pedicels not sharply bent ..... *D. abramsii*
- Petals united for less than 1/3 of their length
- Pedicels 0.5-8mm long
- Petals thin, often erose, 8-13mm long, 2-3mm wide, pale yellow and with red lines, connate for 1.5-4.5mm; rosette-leaves 1.5-6 (-11)cm long, 0.5-2cm wide ..... *D. abramsii*
- Petals thick, entire
- Petals 10-16mm long, orange or yellow-tipped to red; inflorescence with flowers loosely arranged on long cincinni, 5-12cm long ..... *D. lanceolata*
- Petals 8-12mm long; inflorescence dense, crowded, umbel-like; flowers bright yellow ..... *D. alatae*
- Pedicels 1-2cm long
- Rosette-leaves 5-30cm long, 1-4cm wide; flower stems 1.5-7.5dm tall; petals orange or yellow-tipped to red, connate for 1-2mm ..... *D. lanceolata*
- Rosette-leaves 3-15cm long, 0.5-2.5cm wide; flower stems 0.5-4dm tall; petals yellow-green, connate for 1-4mm ..... *D. saxosa*
- Corolla with segments widely spreading from near the middle ..... *D. viscida*
- Leaves somewhat flattened, viscid.
- Leaves terete or nearly so, except at very base
- Branches of inflorescence usually 2 or 3, simple; caudex mostly less than 1cm thick; mature carpels ascending, slightly gibbous ..... *D. attenuata*
- Branches of inflorescence several, once or twice bifurcate; caudex mostly more than 1cm thick; mature carpels abruptly divergent, strongly gibbous ..... *D. edulis*
- Primary stems hyogaeous, usually cormlike; rosette-leaves vernal
- Flowers white, with a sweet odor
- Rosette-leaves 0.7-1.5cm long, subglobular ..... *D. brevifolia*
- Rosette-leaves 2-7cm long, linear-oblanccolate ..... *D. blochmanae*
- Flowers yellow, odorless
- Rosette-leaves oblanceolate, strongly narrowed below, 1-7cm long; petals connate for 0.5-1mm ..... *D. variegata*
- Rosette-leaves linear-lanceolate, not narrowed at base, 4-15cm long; petals connate for 1-2mm ..... *D. multicaulis*
- D. abramsii** Rose. [*Echeveria a.* (Rose)Berger] Abram's Dudleya. Infrequent, in crevices of granitic rocks; foothill and montane, above 700m: Cuyamaca Mountains; Monument Peak; Jacumba; Descanso Junction; Campo. Apr.-June. Type from "wet crevices of rocks west of Jacumba". *n*=17.
- D. alatae** Reiser. Reiser's Live-forever. Endemic to San Diego County. Rare, on Woodland and Chaparral slopes; transmontane, 800-1200m: Banner; Chariot Canyon. Mar.-May. The type from Banner.
- D. arizonica** Rose. [*Echeveria a.* (Rose)Kearney & Peebles; *E. lagunensis* Munz, the type from "dry, stony slopes, Campbell Ranch, Vallecito Valley".] Desert Chalk-Lettuce. Infrequent, on dry rocky slopes; desert, 200-300m: Borrego Palm Canyon; Vallecito Stage Station; Shaw Canyon; Dubber; Jacumba. May-July. *n*=17.
- D. attenuata** (Wats.)Britt & Rose ssp. **orcuttii** (Rose)Moran. [*Echeveria a.* auct. non Berger; *Stylophyllum parishii* Britt. = *Echeveria palensis* Berger, the type supposedly from Pala.] Orcutt's Stylophyllum. Uncommon, sea bluffs about Boundary Monument No. 258, 10m. Records for Pala and Pala Canyon are doubtful. May-July. Type from the "Initial Mexican boundary monument". *n*=17.
- D. blochmanae** (Eastw.)Moran. [*Sedum b.* Eastw.] Blochman's Hasseanthus. Rare, atop coastal and sea bluffs; coastal, below 100m: Stuart Mesa, Camp Pendleton; Las Flores; La Costa; La Jolla; Pacific Beach. May-June. *n*=17.
- D. brevifolia** Moran. [*D. blochmaniae* ssp. *b.* (Moran)Moran] Del Mar Hasseanthus. Endemic to San Diego County. Local, on bare sandstone terraces; coastal, below 120m: Del Mar; Del Mar Heights; North City West; McGonigle Canyon; Mesa south of Sorrento Valley; Torrey Pines State Reserve. Apr.-June. Type from open area in chaparral near edge of mesa, Torrey Pines Park. *n*=17.
- D. edulis** (Nutt.)Moran. [*Echeveria e.* (Nutt.)Berger] Ladies-Fingers. Frequent, on dry slopes and rocky ledges; cismontane, below 1300m: e.g. Pala; Oceanside; Pine Hills; Viejas; southwest slope of Cuyamaca Peak; Otay Mountain; Imperial Beach. May-June. Type from "edges of rocks and ravines, St. Diego". *n*=17.
- D. lanceolata** (Nutt.)Britt. & Rose. [*Echeveria l.* Nutt.] Coastal Dudleya. Frequent, shaded slopes and open areas; coastal and foothill, below 500m: e.g. Camp Pendleton; San Marcos Villas; Del Mar; Point Loma. May-July. Type from "St. Diego". *n*=34.
- D. multicaulis** (Rose)Moran. Many-stemmed Hasseanthus. Local, known in the county only on the seaward slope of San Onofre Mountain, 60m. May-June. *n*=17.
- D. pulverulenta** (Nutt.)Britt. & Rose. [*Echeveria p.* Nutt.] Chalk-Lettuce. Frequent, on dry slopes; cismontane, below 1500m: e.g. Warner Hot Springs; Palomar Mountain; Camp Pendleton; Laguna Mountains; Cuyamaca Peak; Point Loma; Otay Mountain; National City; Bonita; Boundary Monument No. 258. May-July. Type from "St. Diego". *n*=17.
- D. saxosa** (Jones)Britt. & Rose ssp. **aloides** (Rose)Moran. [*Echeveria lanceolata* var. *a.* (Rose)Munz; *D. delicata* Rose, the type from Spencer Valley] Desert Savior. Uncommon, on rocky slopes; desert, 250-1500m: Banner; San Felipe; Yaqui Wells. Also Coleman Creek, Julian. Apr.-June. Type from San Felipe. *n*=17.
- D. variegata** (Wats.)Moran. [*Sedum v.* Wats.; *S. oblongorbizum* auct. non Berger] San Diego Hasseanthus. Local, on dry hillsides and mesas; foothill and coastal, below 300m: La Jolla Canyon; Santa Maria Mountain; Kearny Mesa; Dictionary Hill; San Miguel Mountain; El Cajon; La Mesa; Fletcher Hills; Paradise Hills; Rice Canyon; Dehesa; Otay Mountain; Imperial Beach; Otay Border Crossing. May-June. Type from San Diego. *n*=17.
- D. viscida** (Wats.)Moran. [*Echeveria v.* (Wats.)Berger] San Juan Stylophyllum. Uncommon, on bluffs and rocky cliffs; north coastal, below 100m: Oceanside; bluffs at mouth of Santa Margarita River; Escondido Creek at Olivenhain; San Marcos Creek, east of La Costa. May-June. *n*=17.

# WISE AND OTHERWISE

by Michael Buckner

*The frog does not drink up the pond in which he lives.*

Indian Proverb



"A lion has been seen several times last week.... This would be an excellent opportunity for some of the boys to go out some night and kill him."

*Arizona Weekly Star, May 27, 1886*

"I was walking along Aravaipa Creek one afternoon when I noticed fresh mountain lion tracks leading ahead of me. Big tracks, the biggest lion tracks I've seen anywhere. Now I've lived most of my life in the Southwest, but I am sorry to admit that I had never seen a mountain lion in the wild. Naturally I was eager to get a glimpse of this one.

It was getting late in the day, the sun already down beyond the canyon wall, so I hurried along, hoping I might catch up to the lion and get one good look at him before I had to turn back and head home. But no matter how fast I walked and then jogged along, I couldn't seem to get any closer; those big tracks kept leading ahead of me, looking not five minutes old, but always disappearing around the next turn in the canyon.

Twilight settled in, visibility getting poor. I realized I'd have to call it quits. I stopped for a while, staring upstream into the gloom of the canyon. I could see the buzzards settling down for the evening in their favorite dead cottonwood. I heard the poor-wills and the spotted toads beginning to sing, but of that mountain lion I could neither hear or see any living trace.

I turned around and started home. I'd walked maybe a mile when I thought I heard something odd behind me. I stopped and looked back — nothing; nothing but the canyon, the running water, the trees, the rocks, the willow thickets. I went on and soon I heard that noise again — the sound of footsteps.

I stopped. The noise stopped. Feeling a bit uncomfortable now — it was getting dark — with all the ancient superstitions of the night starting to crawl from the crannies of my soul, I looked back again.

And this time I saw him. About fifty yards behind me, poised on a sand bar, one front paw still lifted and waiting, stood this big cat, looking straight at me. I could see the gleam of the twilight in his eyes. I was startled as always by how small a cougar's head seems but how long and lean and powerful the body really is. To me, at that moment, he looked like the biggest cat in the world. He looked dangerous. Now I know very well that mountain lions are supposed almost never to attack human beings. I knew there was nothing to fear — but I couldn't help thinking maybe this lion is different from the others. Maybe he knows we're in a wildlife preserve, where lions can get away with anything. I was not unarmed; I had my Swiss army knife in my pocket with the built-in can opener, the corkscrew, the two-inch folding blade, the screwdriver. Rationally there was nothing to fear; all the same I felt fear.



# WISE AND OTHERWISE



And something else too: I felt what I always feel when I meet a large animal face to face in the wild: I felt a kind of affection and the crazy desire to communicate, to make some kind of emotional, even physical contact with the animal. After we'd stared at each other for maybe five seconds — it seemed at the time like five minutes — I held out one hand and took a step toward the big cat and said something ridiculous like, "Here, kitty, kitty." The cat paused there on three legs, one paw up as if he wanted to shake hands. But he didn't respond to my advance.

I took a second step toward the lion. Again the lion remained still, not moving a muscle, not blinking an eye. And I stopped and thought again and this time I understood that however the big cat might secretly feel, I myself was not quite ready to shake hands with a mountain lion. Maybe someday. But not yet. I retreated.

I turned and walked homeward again, pausing every few steps to look back over my shoulder. The cat had lowered his front paw but did not follow me. The last I saw of him, from the next bend of the canyon, he was still in the same place, watching me go. I hurried on through the evening, stopping now and then to look and listen, but if that cat followed me any further I could detect no sight or sound of it.

I haven't seen a mountain lion since that evening, but the experience remains shining in my memory. I want my children to have the opportunity for that kind of experience. I want my friends to have it. I want even our enemies to have it — they need it most. And someday, possibly, one of our children's children will discover how to get close enough to that mountain lion to shake paws with it, to embrace and caress it, maybe even teach it something, and to learn what the lion has to teach us."

from *The Journey Home* by Edward Abbey, *THE EARTH SPEAKS — AN ACCLIMATIZATION JOURNAL* edited by Steve Van Matre & Bill Weiler, The Institute for Earth Education Cedar Cove, Greenville, WV, c.1992

"Let us perform a wild thought-experiment. What if the founding fathers by democratic resolution had resolved to set aside as natural wonders all major springs and caves, all natural lakes, summits, passes gorges, water gaps, cascades, waterfalls, all headlands, capes, spits and half the shorelines and offshore islands? What if they had preserved a natural beltway along each river and major stream? What if the Bill of Rights had included all rare ecosystems and ample representatives of the prevailing habitats? America would have formed a saner, more sensitive culture. It would be a different kind of country.

Let us put beside the practices from which we are only now recovering. For most of our national life we used bison and passenger pigeons for target practice. For almost a century, the Park Service at Yosemite would build an enormous fire on the lip of Glacier Point at dusk. "Indian Love Call" was played, and the fire pushed over the cliff to the ahs! of spectators. In the early 1960s I visited Yosemite to find the firefall stopped as an inappropriate activity. I had moral sense enough to agree, but a day later thought nothing of driving through a giant sequoia, stopping to let my wife take a photograph. I now see something of a Yahoo in myself for such zany comedy. There should be no more drive-through sequoias; they mutilate for whimsy a majestic living thing. We can learn why sequoias attain such age and size, or why this relict species has survived geological changes that destroyed its relatives."

*PHILOSOPHY GONE WILD* Essays in Environmental Ethics, Holmes Rolston III, Prometheus Books, NY, c.1986



ADDRESS CORRECTION REQUESTED

The San Diego Cactus & Succulent Society, Inc.  
P.O. Box 33181, San Diego, CA 92163-3181

## *Espinas y Flores*

Editors: Michael & Joyce Buckner - (619) 222-3216  
4822 Santa Monica Avenue #103, San Diego, CA 92107

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