

# Espinas y Flores

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

Volume XXII, Number 2

February 7, 1987

FEBRUARY MEETING

Saturday, February 7, 1987  
1:30 p.m.

NOTE SPECIAL DATE

Room 101, Casa del Prado, Balboa Park

THE SUCCULENT EUPHORBIAS OF SOUTH AFRICA

by

Dr. Daryl Koutnik

Huntington Botanical Gardens

South Africa is home to more succulent species of Euphorbia than any other country in the world. There are at least three distinct groups of these species which can be identified by the origin of the spines. Dr. Koutnik will present an illustrated program showing examples of these groups and clarifying the diversity of plant forms found in the succulent Euphorbia species of South Africa. Dr. Koutnik is currently the Desert Garden Botanist at Huntington Botanical Gardens. Prior to taking that position, he worked for three years as botanist at the University of Capetown Herbarium in South Africa and has had many opportunities to study these plants in their natural habitats.

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Deadline for the March Issue February 28,

Thanks, Mary

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NEWS NEWS NEWS

WELCOME TO NEW MEMBERS - - - -

Paul & Anna Alley - San Diego  
Laretta West - El Cajon

Mark & Rae Ann St. Clair - Spring Valley  
Duane & Judy Guite - Dulzura

- - - - -

Those who have volunteered to bring refreshments for the February Meeting are:

Ellen Low	Susan Shepherd	Gerda Krypka
Marianne Thrombley	Jimmy Olerry	Brunhilde Scheffler
Joan Varga	Diane Crowley	Robyn Natwick
Susan Clements	Beverly Kent	Lois Zaranka
Reed Pierce	Virginia Natwick	Charles & Joanne Clark
Katherine Koch	Ernest Angus	Mike Cullen
Dana Adams	Beverly Kirkegaard	Sandy & Cathy Frost

- - - - -

A VERY BELATED BUT A MUCH APPRECIATIVE THANKS TO Harold and Millie Richter for making a bookcase for our library. This will make it possible to extend to more copies of our more popular books. They did this on their own initiative.

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HIGHLIGHTS FROM THE BOARD MEETING

Chuck Adams was appointed Director to fill the current vacancy on the Board.

Society plants from the June Sale will be discounted and sold at the monthly meetings.

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BRAGGING PLANT WINNERS

- 1st Place - Lit Phan for his Ficus microcarpa
- 2nd Place - Marilyn Harms for her strawberry jar planted with various succulent plants
- 3rd Place - Phyllis Flechsig for her Kalanchoe thyrsiflora

SAN DIEGO  
 CACTUS & SUCCULENT SOCIETY  
 TREASURER'S REPORT

	CREDITS	Dec 86 DEBITS	NET	BALANCE
Balance on hand 1 Dec 86				9,246.16
Dues	244.00		244.00	
Espinas y Flores		100.08	(100.08)	
Program				
Library				
Awards		25.00	(25.00)	
Plant Sales				
Regalement				
Activities	372.87	2,920.50	(2,547.63)	
Miscellaneous		20.00	(20.00)	
Interest	31.35		31.75	
<b>TOTAL</b>	<b>648.22</b>	<b>3,065.58</b>	<b>(2,417.36)</b>	
Balance on hand 31 Dec 86				6,828.80

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YEAR TO DATE

Balance on hand 1 Jan 86				6,362.24
Dues	2,354.00		2,354.00	
Espinas y Flores		1,362.85	(1,362.85)	
Program		809.51	(809.51)	
Library	12.00	1,030.73	(1,018.73)	
Awards	105.00	1,774.74	(1,669.74)	
Plant Sales	5,084.10	4,146.78	937.32	
Regalement	195.68	47.75	147.93	
Activities	12,197.55	10,281.13	1,916.42	
Miscellaneous	16.45	424.42	(407.97)	
Interest	379.69		379.69	
<b>TOTAL</b>	<b>20,344.47</b>	<b>19,877.91</b>	<b>466.56</b>	
Balance on hand 31 Dec 86				6,828.80

Treasurer

*Martin L. Mooney*  
 Martin L. Mooney  
 97 K St.  
 Chula Vista, Ca.

## Succulents-of-the-Month

### THE AGAVES AND YUCCAS OF BAJA CALIFORNIA

By Dorothy Dunn

The peninsula of Baja California, with its arid conditions and geological isolation, supports an amazing number of endemic plants in many different families and genera. The family Agavaceae is no exception. Huge populations of both Agaves and Yuccas form a distinctive and characteristic part of the total landscape over enormous areas of the peninsula, as well as most of the off-shore islands. Almost all of these species are endemic to Baja.

Two major complexes, the Agave deserti complex and the A. cerulata complex, make up a large proportion of these populations. However, the A. cerulata group inhabits primarily what is known as the "upland maritime environment", where the desert climate is tempered by frequent fogs and ocean breezes, whereas the A. deserti complex belongs to the hot, arid continental desert. The geographic distribution of these two species is not known to overlap.

Another significant species in northern Baja California is Agave shawii. This is the first Agave, and perhaps the first succulent plant, to be encountered after crossing the border at Tijuana. Its bright green, compact, symmetrical rosettes with brilliant yellow-gold inflorescences dominate many hillsides and coastal bluffs in northern Baja. Its range extends to well south of El Rosario, where it is gradually replaced by its subspecies goldmaniana. This is a more massive plant in every way than A. shawii. It also occurs further south and more inland; its type locality is at the historic Tinaja Yubay, one of the few sources of sweet water in this arid central part of the peninsula.

In southern Baja California, the Sierra de la Giganta is home to three handsome and rather uncommon species. Here Agave gigantensis occupies a small, very rugged and relatively inaccessible habitat, ranging in elevation from 2,000 to 5,000 feet. A. aurea forms scattered and often massive populations on the lava fields of the western Sierra de la Giganta, mostly at elevations of 1,000 to 3,500 feet. Although it ranges south into the Cape Region, it occurs only rarely on the sandy Magdalena Plain. A. sobria is a variable species which occurs southward from Calmallí, with the type locality being the mesas above Comodú. It grows near Mission San Javier in the Sierra de la Giganta. It has two subspecies, ssp. roseana and ssp. frailensis.

On the Magdalena Plain, home of the elusive "Creeping Devil" (Machaerocereus eruca), large colonies of Agave datylio var. vexans are found. In appearance, this Agave is unique on the peninsula.

It is one of the smallest of the Baja Agaves; it is a bright chartreuse-green in color, and the plants have such widely-spaced offsets that they often appear to be solitary specimens rather than clusters.

Possibly the rarest of the Baja California Agaves is Agave margaritae, a small, compact, caespitose plant which occurs only on Magdalena Island off the Pacific coast in southern Baja. Another island endemic is A. sebastiana from Cedros Island, where it grows in association with several other rare endemics including Ferocactus chrysacanthus, Cochemia pondii, and the recently-discovered Dudleya pachyphytum.

Agave promontorii and A. capensis are endemic to the mountains of the Cape Region. A. promontorii is a massive plant - probably the largest of the Baja Agaves - and seems to grow best at higher elevations of about 3,000 to 6,000 feet where better moisture conditions prevail. Since it does not offset, it has remained somewhat rare. A. capensis is a smaller, clustering species which usually grows on granitic slopes from sea level up to about 1,000 feet. It was originally known as A. brandegeei.

Agave moranii, from the eastern slopes of the Sierra San Pedro Mártir in northern Baja, is named for its discoverer, Reid Moran, and closely resembles A. deserti ssp. pringlei from the San Matias Pass region. These two Agaves occasionally hybridize.

While there are about 20 species, subspecies, and varieties of Agave in Baja California, most of them are not well-known botanically, nor are they very common in cultivation. The best, most complete and detailed reference to date is Howard Scott Gentry's The Agaves of Baja California (1978), which was later incorporated into his monograph The Agaves of Continental North America (1982). The genus is divided into two natural subgenera, Littaea and Agave, and in these two works Dr. Gentry further divided it into 20 groups. Only four of these groups - Deserticolae, Campaniflorae, Umbelliflorae, and Datyliones - are represented in Baja California.

Throughout history, the most important and widespread native uses of Agaves have been for food, drink, and fiber. Many other lesser but equally interesting and ingenious uses have been enumerated by Dr. Gentry in his works on Agave.

Only four species and subspecies of Yucca occur in Baja California. Two of these - Yucca whipplei and Y. schidigera - are also native to San Diego County. The other two - Y. whipplei ssp. eremica (formerly Y. peninsularis) and Y. valida - are Baja endemics. However, the range of these four plants encompasses the entire peninsula and many of the off-shore islands.

Yucca whipplei is primarily a northern Baja species, but is occasionally seen at higher elevations almost as far south as San Ignacio. In the Sierra de San Francisco, northwest of San Ignacio, there is a spectacular form which takes on a wine-red to purple

coloration; whether this is due to something in the soil or to the fact that the area had not experienced any rainfall for a very long time is a matter for speculation. This is a solitary stemless plant which, like all Agave species, dies after flowering. Its subspecies eremica is a very attractive, clustering plant which occurs further south - dense populations can be seen from south of El Rosario to the vicinity of San Borja.

Yucca schidigera (formerly Y. mohavensis) is another Southern California native which occurs in northern and central Baja, usually below 5,000 feet. The native Indians had many usages for this plant, including food, fiber, soap, and laxatives. It is a medium-sized shrub (to about 10 feet) with a woody trunk and curling fibers along the leaf edges.

Yucca valida ("Datilillo") is a tree; it bears a superficial resemblance to Y. brevifolia, the "Joshua Tree" of the southwestern United States. However, it is a Baja endemic and probably has the widest geographical range of any of the peninsular Yuccas. According to Edmund Jaeger "It flourishes from the northern parts of the mid-peninsula desert to the Cape Region, growing in greatest abundance in the deep-soiled valleys of the Vizcaíno plains, where it may form extensive forests. It often constitutes impressive features of the landscape, especially when growing in thickset stands or "jungles" with the 'cirio' and long-stemmed organ-pipe cactus", etc. In the vast, bleak expanse of the Vizcaíno Desert surrounding Guerrero Negro it is the dominant plant over a huge area; here the plants can reach a height of 10 meters, and they all have a decidedly eastward slant due to constant buffeting by the salt-laden winds off the Pacific Ocean. In some places they are completely shrouded by the trailing lichen Ramalina reticulata and masses of Tillandsia recurvata. The rootstock is called Amóle and is used by the natives for making soap. The trunks are frequently used for fencing, and often take root and start to grow again. The creamy white flowers have an odor of dill.

The Agaves and Yuccas of Baja California comprise such an integral and characteristic part of the total flora that it would be hard to imagine the peninsula without them. The natural and intrinsic harmony which exists between these plants and all other life forms on the peninsula would be impossible to duplicate in any artificial or contrived manner. The end result is a total landscape, unique in every way, whose beauty is delicate, finite, and irreplaceable.

#### Literature consulted:

- Coyle, J., and Roberts, N.C.    A Field Guide to the Common and Interesting Plants of Baja California
- Gentry, Howard S.            The Agave Family in Sonora  
                                  The Agaves of Baja California  
                                  The Agaves of Continental North America
- Jaeger, Edmund:              The North American Deserts
- Wiggins, Ira:                 Flora of Baja California

## CACTUS OF THE MONTH

### GYMNOCACTUS

by Phyllis Flechsig

To begin with, I may be misleading you into thinking that Gymnocactus is really a valid, separate genus, though some authorities do consider it so. But if, as other authorities claim, Gymnocactus is really a subgenus of the better known genus Thelocactus, it still deserves to be considered in its own right. (Please don't confuse the name with Gymnocalycium, the popular South American genus.)

The name Gymnocactus means "naked cactus," for its fruits, which bear no scales, bristles, or wool. It was first proposed by Curt Backeberg for certain species that were similar to Thelocacti but much smaller, with finer spination, slim tubercles rather than ribs, and areoles elongated into a groove; but the principal difference from Thelocactus is the naked fruits (those of Thelocactus have scales). Flowers are smallish, purple, pink, or white. There is often much wool on top of the plant. Gymnocacti are all native to the Chihuahuan desert of northeast Mexico. There is considerable overlap of characteristics not only with Thelocactus but with Neolloydia and Escobaria as well, and much more field work is needed to straighten out the taxonomy of this group.

Gymnocacti deserve to be better known, as they are interesting and attractive little plants that do not take up much space. Two species, G. subterraneus and G. mandragora, fall into the "weird but lovable" category: they have a large underground taproot connected to the upper plant by a very long, thin neck. Botanists who discovered G. subterraneus growing in the wild must have been much surprised when the tiny plant they were trying to dig up went on and on underground; the neck connecting the top to the root could be four times as long as either top or root! These plants have been found growing on vertical gypsum cliffs; this should give you some idea of their need for good drainage.

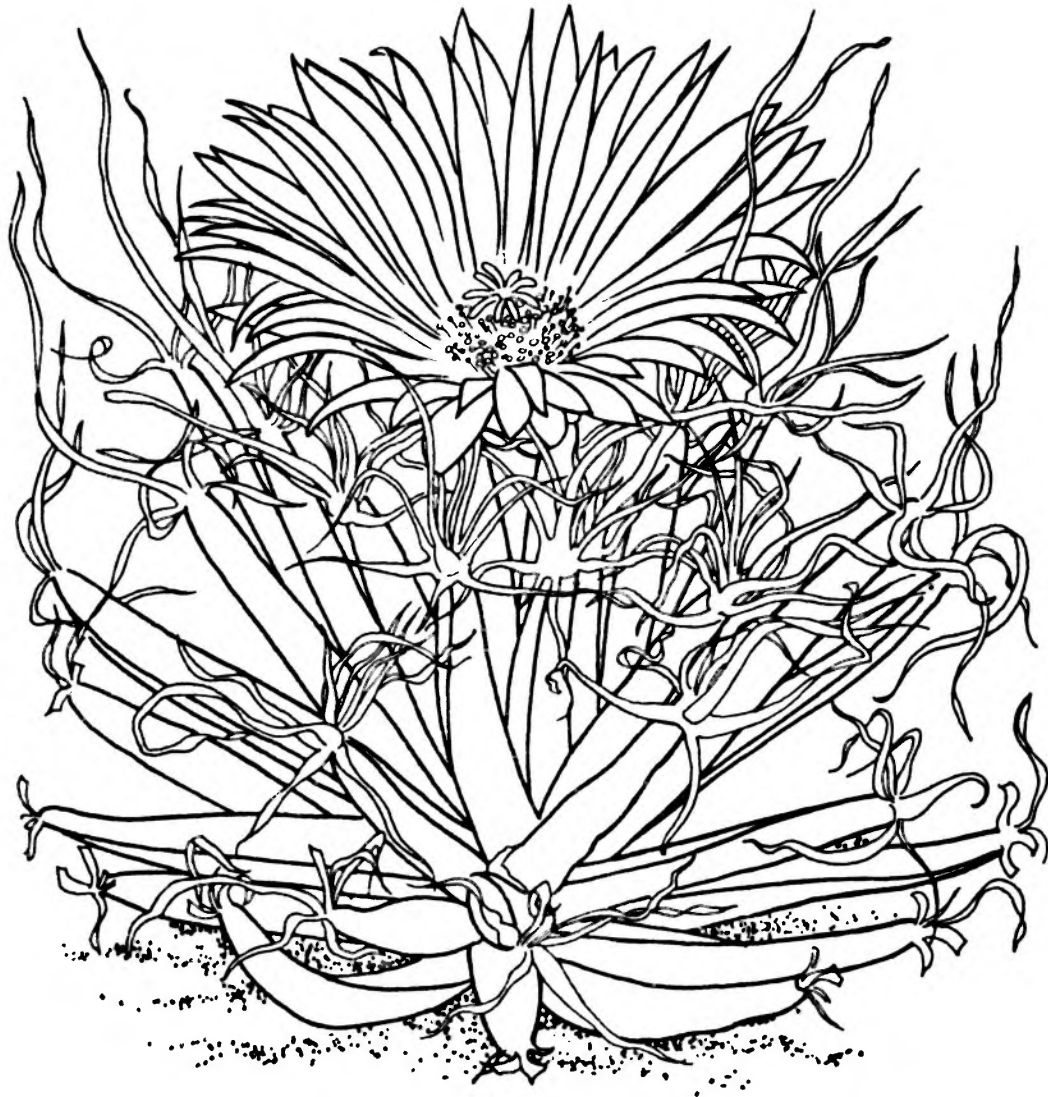
One easy species of Gymnocactus to grow is G. roseanus, a small clustering plant covered with gold spines; flowers are pinkish. (This plant, formerly placed successively in Echinocactus, Neolloydia, Coryphantha, and Thelocactus, was reclassified by Glass and Foster in 1970.) Other good ones are G. viereckii with black and white spines, violet-pink flowers; G. horripilus, a little round plant with purple flowers; and G. bequini v. senilis, with black and white spines and violet flowers.

Culture for these plants is about the same as for the closely related Turbinicarpus: very fast drainage and careful watering, and little watering in winter. The two species with long roots mentioned above can be tricky to grow; some have

recommended grafting them, but then of course they would lose the character that makes them so interesting. These plants do not seem to be especially prone to have pests. Although not very many kinds are commercially available, seeds can be bought from commercial seed dealers.

#### LITERATURE CONSULTED

- Backeberg, C. 1976. *Cactus lexicon*. Blandford: London.
- Anderson, E.F., and M. E. Ralston. 1978. A study of *Thelocactus* (Cactaceae) I. The status of the proposed genus *Gymnocactus*. *Cactus & Succulent Journal* 50: 216-224.
- Glass, C., and R. Foster. 1978. Two new varieties of *Gymnocactus* from northeastern Mexico. *Ibid.*, 281-285.
- \_\_\_\_\_. 1970. Mexico logbook. *Ibid.*, 42: 229-234.
- \_\_\_\_\_. 1984. Cacti & succulents for the amateur. *Ibid.*, 56: 246.
- Sabo, K., and B. Greenberg. 1981. Cacti & succulents for the amateur. *Ibid.*, 53: 12.



**LEUCHTENBERGIA PRINCIPIS** (Agave cactus). Mexico. A slow-growing atypical cactus with greatly elongated gray-green tubercles and papery spines. This species has a long tap root which requires a deep container and well-drained

soil. Provide less than average water in summer. Keep dry and cold in winter. It produces fragrant yellow flowers in full sunshine.



### THREE ELEGANT HAWORTHIAS

He (or she) who looks down his nose at the Haworthias glories in his own ignorance. But if elegance is your interest, there are a number of Haworthias to be admired and enjoyed. Foremost are three (some would say five) members of the *retusae* (recurved leaf) group: *Haw. magnifica* var. *major*, *Haw. emelyae*, and *Haw. retusa* var. *dekenahii*. Within each of these species there is unlimited variation in leaf markings and coloring and lesser variation in leaf size and shape. Mature rosettes are about three inches across, and offsetting, if it exists at all, is usually extremely slow.

*Haw. magnifica* var. *major*: The most beautiful of the genus, its colors range from shades of grey (the most desirable), to dark green to dark red, with lighter lines of the same colors running along the upper leaf surface toward the tip. Numerous small tubercles, from which short bristles arise, cover the upper leaf surface. Leaves are long and slender, and a mature rosette may be no more than 3/4" high. The lighter colored plants, when grown under glass and in good light, will in winter often become a breath-taking whitish grey.

Before you buy this beauty -- and look for the form with the greys in it -- be sure that it is correctly identified. Plants offered under this name have often been what appears to be an unusual form of *Haw. magnifica* var. *magnifica* or even hybrids. The color pictures in Bayer's and Pilbeam's *Haworthia* handbooks are helpful. You will not find the species in Col. Scott's taxonomic revision. In a unrestrained orgy of lumping, he has grouped it with six other distinct species and/or varieties and calls it *Haw. asperula*.

*Haw. emelyae*: A rose by any other name... Bayer, on the basis of field studies, uses this name also to include *Haw. picta*, *Haw. correctata*, and a quite differently appearing form with the collector's name of *Haw. uniondalensis*. (I cannot find any evidence in current literature that the latter name has ever been used in any "proper" description, and it also suffers the embarrassment of labeling a plant which grows in other areas than just Uniondale.) Scott drops the name "*emelyae*," dividing it into two species and reviving "*picta*" for one form while using "*correctata*," a previously discarded name, for the plants referred to as "*uniondalensis*." Plants previously known as "*correctata*" were of uncertain origin but at times have closely resembled *Haw. turgida* forms. Why am I boring you with this confusing history? Well, if you plan to order this species sight unseen and want a particular form, you can now see the advisability of you and the dealer thinking on identical wave lengths.

The "*uniondalensis*" form is a plant of great elegance. Its color is a deep green, sometimes with a hint of blue,

sometimes suffused with pink, depending in large part on the light. A myriad of tiny tubercles glisten with the light, and delicate tracteries, white, pinkish-white or greenish-white, run just under the leaf surface toward the tip, usually breaking to the side and sometimes combining to create a beautiful tessellation. Every clone is at least a little different, and a collector could make a hobby of this form alone.

"Picta" means painted, and it is a shame to lose such a descriptive name for the other *Haw. emelyae* form. Its charm and beauty lie in the variety of leaf color from plant to plant -- green at its plainest but running to flecked white through pink, red, and brownish red, with strong light bringing out the best coloration.

*Haw. retusa* var. *dekenahii*: This is another beautiful species with two distinct but unacknowledged and/or unexplained (in the current literature) forms. Among some collectors, these are imaginatively called the "white" and the "brown" forms. The poor cousin of the two, the "white" form, has a fairly smooth green leaf surface with broad and weakly or strongly white flecked lines running toward the leaf end. Rarely, the upper leaf surface may be completely covered with white flecks. The "brown" form, which could be called the "red" form, also has the same white flecked lines, but less strongly so, for they run in furrows and are almost obscured by a reddish brown flush over the surface of the leaf. The "brown" form has stubbier leaves than the "white" one, is not opaque as is the "white" form, offsets faster (although still slowly), and has a later blooming period. Both forms come true from seed.

-H.A.W. Nutte



SHOW SCHEDULE FOR FEBRUARY AND MARCH FROM THE SAN DIEGO BOTANICAL GARDEN FOUNDATIONS INC.  
 CASA DEL PRADO BALBOA PARK SAN DIEGO, CA

Feb. 21 & 22 San Diego Co. Orchid Soc. "Mini" Show Sat: Noon-4:30pm Sun: 11am-4:30pm  
 Feb 28-Mar. 1 Ohara Chapter of San Diego 10th Show Sat: 11am-4:30pm Sun: 10am-4:30pm  
 Mar. 7 & 8 San Diego Daytime African Violet 6th Show Sat: 1pm-5:00pm Sun: 10am-4:00pm  
 Mar. 13, 14, 15 San Diego Co. Orchid Soc. 41st Spring Show  
 (Scottish Rites Mem. Bldg. -Mission Valley) Preview: Fri: 7pm-10:00pm  
 Admission: \$3.00 Sat: 9am-9:00pm Sun: 9am-5:00pm  
 Mar. 21 & 22 Ikebana International 19th Exhibit/Show Sat: 11am-4:30pm Sun: 11am-4:30pm  
 Mar. 28 & 29 Balboa Park African Violet Club 12 Show Sat: Noon-5:00pm Sun: 10am-4:00pm



FROM THE WILD ANIMAL PARK

Each year we offer the floral and plant societies the opportunity to have a display ~~along our~~ covered walkway. We have already received some dates, we will have more ~~scheduled soon~~ I'm sure. I was hoping that it might be possible for this list of ~~scheduled events to be printed in you Society's Newsletter.~~ Here's what we have.....

March 7 & 8	Arbor Day
May 2 & 3	9-5PM Epiphyllum & Fuchsia Show by the S.D. Epiphyllum Society & the S.D. Co. Branch of the National Fuchsia Society
July 12	11-5PM Hibiscus Show by the American Hibiscus Society Ross Gast Chapter
August 9	11-5PM Hibiscus Show by the American Hibiscus Society Ross Gast Chapter
Oct. 10 & 11	Beauty & the Beast and Annual Plant Sale

Teri Basta  
 Horticulture Dept.

# SAN DIEGO CACTUS & SUCCULENT SOCIETY

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The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti, other succulents and exotic plants. Meetings are held the second Saturday of each month at 1:30 p.m. in Room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held after the general meetings. Annual dues are \$8.00 per single member per year, \$2.00 for each additional member of a household within a family. Single copies of Espinas y Flores are 60¢.

Editor  
Mary Aubuchon  
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Chula Vista, CA 92011



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