

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

Espinas y Flores

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

XVIII, Number 2

February 12, 1983

FEBRUARY MEETING

Saturday February 12, 1983

1:30 PM

Casa Del Prado, Room 101, Balboa Park

PROGRAM

What and Why is the CSSA?

Dr. Ronald Monroe, President, CSSA

Our society is an affiliate member of the Cactus & Succulent Society of America, Inc., and many members of the San Diego Cactus & Succulent Society are also members of the CSSA. But what is the CSSA and why are we members? Dr. Ron Monroe, board member of the SDCSS, is President of the CSSA and will lead the program. He will undoubtedly be calling on other officers of the CSSA, many of whom are also members of our society, to help him explore the purposes, objectives and hopes of the members of the CSSA.

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DEADLINE FOR THE MARCH ISSUE ---FEBRUARY 28, 1983

News -- News -- News ---

Brapping Table Winners for January were --

1st Place	Rob Kent for his Uebelmannia nectinifera
2nd Place	Carl McLeod for his Senecio deflersii
3rd Place	Marsha Monroe for her Hoodia gordonii

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SHOW SCHEDULE FOR 1983

Feb. 20	Ikenobo School of Ikehana Show	Sun: 11am - 4:30 pm
Feb 26 & 27	San Diego Orchid Spring "mini" Show	Sat :12 pm - 4:30pm Sun: 10am-4:30

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

Susan Barker - Elizabeth R. Clover - Peggy Donovan - Trudy Hart -
 Mary Aubuchon - Dody Cauchen - Mr. and Mrs. Charles Clark - Beatriz C. Limer
 Marianne Thrombly - Janice Miller - Linda Erickson

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Welcome to all new members -

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REMINDER DUES ARE DUE -----

Make payments to Warren Buckner - Preferred way is by Personal Check with Current address, and phone number - Make check payable to San Diego Cactus and Succulent Society. Annual dues \$7.00 per family. If dues are not paid by this month, you will not receive the Espinas y Flores

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Warren Buckner has informed me that the Club has received 20 copies of AGAVES OF CONTINENTAL NORTH AMERICA by Howard Scott Centry, \$41 each - 1st come 1st served-- See Warren

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From the Editor: I do try to get the newsletter out in plenty of time before the meetings. Sometimes there are problems - But the meetings go on. Please check the schedule and if all else fails give me a call -- Mary

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The San Diego Botanical Garden foundation library needs interested people to help. Their help is needed on Saturdays or Sundays from 12:00 noon to 4:00 P.M. one time a month. The botanical reference library is in Room 104 at the Casa del Prado. Books are not checked out at the library, but only used while the library is open. Anyone interested? If so, contact Frank Thrombly at the regular meeting.

CALENDAR FOR 1983

<u>MEETING DATE</u>	<u>SUCCULENT OF THE MONTH</u>	<u>CACTUS OF THE MONTH</u>
January 8	Canary Is. Succulents Dorothy Dunn	Lobivia Dr. Mark Donnell
February 12	Larger Aloes Rick Latimer	Epiphytic Cactus Rick Latimer
March 12	Dudleya Dorothy Dunn	Thelocactus Joan Johnson
April 9	Bursera, Pachycormus & Fouquieria Phyllis Flechsig	Coryphantha Frank Thrombly
* May 7	Yucca, Calibanus Beaeuarnea (nolina dayslirion) Rick Latimer	Cleistocactus Frank Thrombly
June 4 & 5	ANNUAL SHOW & SALE	
June 11	Cissus & Cyphostemma	Espostoa Frank Thrombly
July 9	PICNIC	
August 13	Sempervivium & Jovibarba	Ferocactus Dorothy Dunn Frank Thrombly
September 10	Stapeliad (Pick a Genus)	Echino Fossolocactus Joan Johnson
October 8	Mesembryanthemum (Pick a Genus)	Neochilenia
November 12	Succulent Bromeliads	Monotypic Genera Dorothy Dunn
December 10	CHRISTMAS PARTY	

*PLEASE NOTE: THIS MEETING IS THE FIRST SATURDAY OF THE MONTH

This is the revised Calendar for 1983

SUCCULENT-OF-THE-MONTH

"NonMiniature Aloes"

by Rick Latimer



Jan Commelin's *Hortus Amstelodamensis*, I (1697)
A. succotrina Lam.

The Liliiflorae(order) is subdivided into three suborders. One of these is the Iridineae, which includes, among other plants, the gladiolus, crocus, and of course the iris. The Liliaceae embraces several families, such as the Dioscoreaceae, Amaryllidaceae, Agavaceae, and Liliaceae. The Liliiflorae(or Liliales) is a key Order in the Monocotyledons. Its structurally simple flowers and fruits suggest that it stands near the start of the ancestral line from which more specialized Orders arose, e. g. the bromeliads, the grasses, and the orchids. The lily family itself contains around 250 different genera of 3,700 species. Some of the well known genera in this family are Lilium, Allium(onion), Asparagus, and Iulipa. The genera with succulent members are Bowiea, Bulbine, Haworthia, Gasteria, and Aloe.

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Of the 350 or so known species of Aloe, more than half are native to southern Africa. Excluding the Lydenburg and Pietersburg districts of the Transvaal, Africa's richest Aloe area in numbers of species in quantities of plants is from Eritrea through Ethiopia to N. Somalia. Other important habitats are Arabia, Socotra, and Madagascar. (All-in-all, a similar range to that of the Stapeliads.) Aloes may be found naturally growing from sea level up to altitudes of 9,000 feet. Nearly all species have leaves that are succulent. Also, nearly all species' leaves form rosettes. There are a few exceptions, such as A. suprafoliata or A. marlothii (or Gasteria batesiana) which as young plants have two opposite pairs of leaves, but later form rosettes; or those that retain their pairs like A. haemanthifolia or A. plicatilis. The flowers are typically tubular and are mostly reddish orange in color, but there are species with pink, yellow, white, green, brown, or color combinations of the above. A. tomentosa has fuzzy flowers and A. doei has hairy flowers (the first is native to Somalia and the second to S. Yemen.) The inflorescence arises from the side of the rosette (so the plants do not die after blooming like the American Agaves) and bloom from year to year. The fruit is a dry, three-celled capsule (except in the subgenus Lomatophyllum, which has fleshy berries) and the seeds are single and winged. The genus Aloe has species that range in size from the miniature A. saundersiae (of which type we exclude this month, having been covered last November) up to tree size, such as A. bainesii, which may attain a height over 60 feet tall (and be one of the largest of the Monocotyledons!).

Probably the most famous aloe to the general public is A. vera (barbadensis). It is commonly grown for its medicinal properties, although all aloes may well be just as effective. The worst affliction to aloes is what looks like monstrose growth, but is actually "aloe mite". Certain species seem more susceptible than others. The best remedy is to remove and destroy the affected plants.

A few more examples of the best aloe species are: A. dichotoma, A. suzanne, A. ortholopha, A. karasbergensis, A. polyphylla, A. melanacantha, A. deltoideodonta, A. dorothea, A. capitata, and A. peglerae. One aloe that no one has yet in their collection is A. mendesii. Its habitat is a remote part of Angola. Plants live (out of reach) on a very high and steep cliff. Also, the plants do not grow straight up, but are pendant!

REFERENCES:

Ed & Betty Gay, "Africa in California Gardens", California Gardens (66:3), pp. 74-77.

Barbara Jeppe, South African Aloes.

George H. M. Lawrence, Taxonomy of Vascular Plants.

Gilbert Westacott Reynolds, The Aloes of South Africa

&

The Aloes of Tropical Africa and Madagascar.

Gordon Rowley, The Illustrated Encyclopedia of Succulents.

J. Riba & R. Subik, The Illustrated Encyclopedia of Cacti & other Succulents.

CACTUS-OF-THE-MONTH

"Epiphytes"

by Rick Latimer

The cactus family is a most unusual one. There are few other plant families that even begin to approach the wide diversity of forms as its species do. Although its



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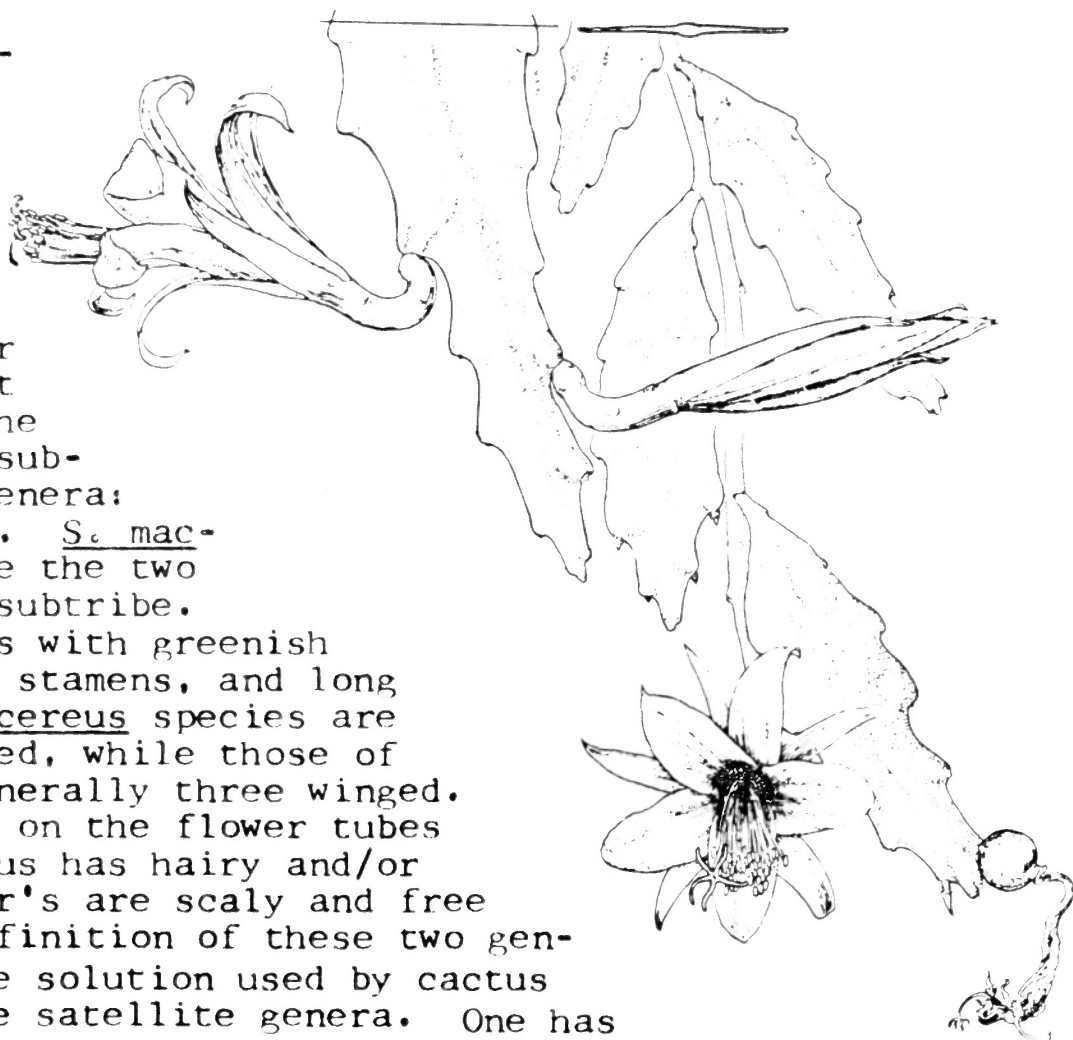
THE QUEEN OF NIGHT.

F

members are thought of (by the general public) as solely desert dwellers, heavily armoured (often with malicious spines), and existing in a range of succulent shapes from miniature spheres up to tall cylinders; there are other forms and other environments that they live in. The cactus (like the bromeliad) family is almost exclusively native to the Americas: from southwestern Canada in the north, and all the way down to Patagonia in the south. Among the diverse environments inbetween, cacti may grow near the sea shore (for example, in this county) or up in the mountains (even above 2½ miles in altitude in the Andes). Most people would be surprised to discover that there is quite a number of species native to the rainforests of the Americas as we shall see (, indeed there are large tracts of the American deserts that are not habitats of cactus species).

The Cactaceae is divided into three unequal subfamilies. The first (Pereskioideae) consists of the primitive leafy cacti that are either vines or trees in habit. Many of these are native to jungle areas, but they will have to wait a while longer to be Cactus-of-the-Month. The second and larger (Opuntioideae) include the notorious chollas, the prickly pears, and the Tephrocacti. The third and by far the largest (as far as the number of species go) is the Cereoideae (or Cactoideae). It in turn is divided into two tribes: the Cereae and the Hylocereae. The first tribe includes those species and genera that this column is usually devoted to. It is by far the largest. This month we devote ourselves to the entire Hylocereae, even though some of them are not "epiphytic".

The Hylocereae is divided into four subtribes. The first is the Hylocerinae and includes those genera that are generally not epiphytic, but are often found climbing up trees or over rocks in a vinelike manner with the aid of their aerial roots (generating not from the areole, but from the center of the stem). This subtribe is dominated by two genera: Selenicereus and Hylocereus. S. macdonaldiae and H. undatus are the two best known species in this subtribe. Both have huge white flowers with greenish sepals, thick pistils, many stamens, and long tubes. The stems of Selenicereus species are roundish and sometimes ribbed, while those of the genus Hylocereus are generally three winged. The great contrast is found on the flower tubes and ovaries. The first genus has hairy and/or spiny tubes, while the other's are scaly and free of hair and spines. The definition of these two genera gets a bit sticky. The solution used by cactus analysts has been to create satellite genera. One has



to ask such questions (which are not really answerable) such as: Is Wilmattea minutiflora really just the smallest Hylocereus (tubeless) flower? Does the genus Mediocactus consist of plants that are also really members of the genus Hylocereus (the only difference being that the flower tubes have spines under the scales)? Although there are several huge flowered Selenicereus species, there are species with smaller flowers. When does a plant become a member of another genus? Should Werckleocereus and Weberocereus and Eccremocactus be included in this genus? If Cryptocereus anthonyanus has a flower not too different from S. macdonaldiae (just somewhat shorter and with purplish sepals), is its very unusual fish bone growth enough to put it in a separate genus? Deamia testudo and Strophocactus wittii both have the peculiar habit of clinging tightly to the tree or rock that they grow on. This makes them hard to collect, as the stems are usually damaged unless they happen to hang free. The spines are the same, but the first species has stems that are three to eight winged, while the other has flat stems. The catch is, the flower of each is very different. The first has flowers like the two dominant genera, but the flowers of the second has been compared to those of Setiechinopsis mirabilis!

The second subtribe is the Phyllocactinae and it has regular border skirmishes with the last and next subtribe. Its dominant genus is Epiphyllum. This genus is usually compared to Selenicereus and Hylocereus, since it too has night blooming flowers that are largely white and are relatively large. However, the flower tubes are mostly smooth with only small and scattered scales on the long tubes. The stems are flat. Most species are epiphytic and hang down (such as E. phyllanthus (a superspecies?)), but some are erect like the popular E. oxypetalum. Like C. anthonyanus, there are "ric rac" species, e. g. E. anguliger. E. chrysocardium would seem to be a close relative of E. oxypetalum. It too has erect stems and long tubed flowers. Its stems are highly serrated like a fern or palm, but we have encountered such a variation in the last paragraph. The catch is, the fruit is highly spiny like that of another "ric rac", Eccremocactus imitans! Again we are in trouble, because the flower of this plant looks more like a Nopalxochia! So where does E. chrysocardium belong - in Hylocereinae? Since many Epiphyllum hybrids exist and some are hybrids with the genera Helicocereus and Aporocactus, it has been suggested that these two genera are related to Epiphyllum. Both have colorful flowers and spiny fruits, suggesting a place in Hylocereinae (latter attribute). The flowers of Aporocactus are zygomorphic, an attribute we will encounter again later. As we head towards the next subtribe, the flower tubes get shorter, as do the flowers. We pass through Nopalxochia and Disocactus, the latter of which now includes such former genera as Chiapasiasia, Pseudorhipsalis, and Wittia. This last former genus is unique in the cactus family, since it has blue flowers!

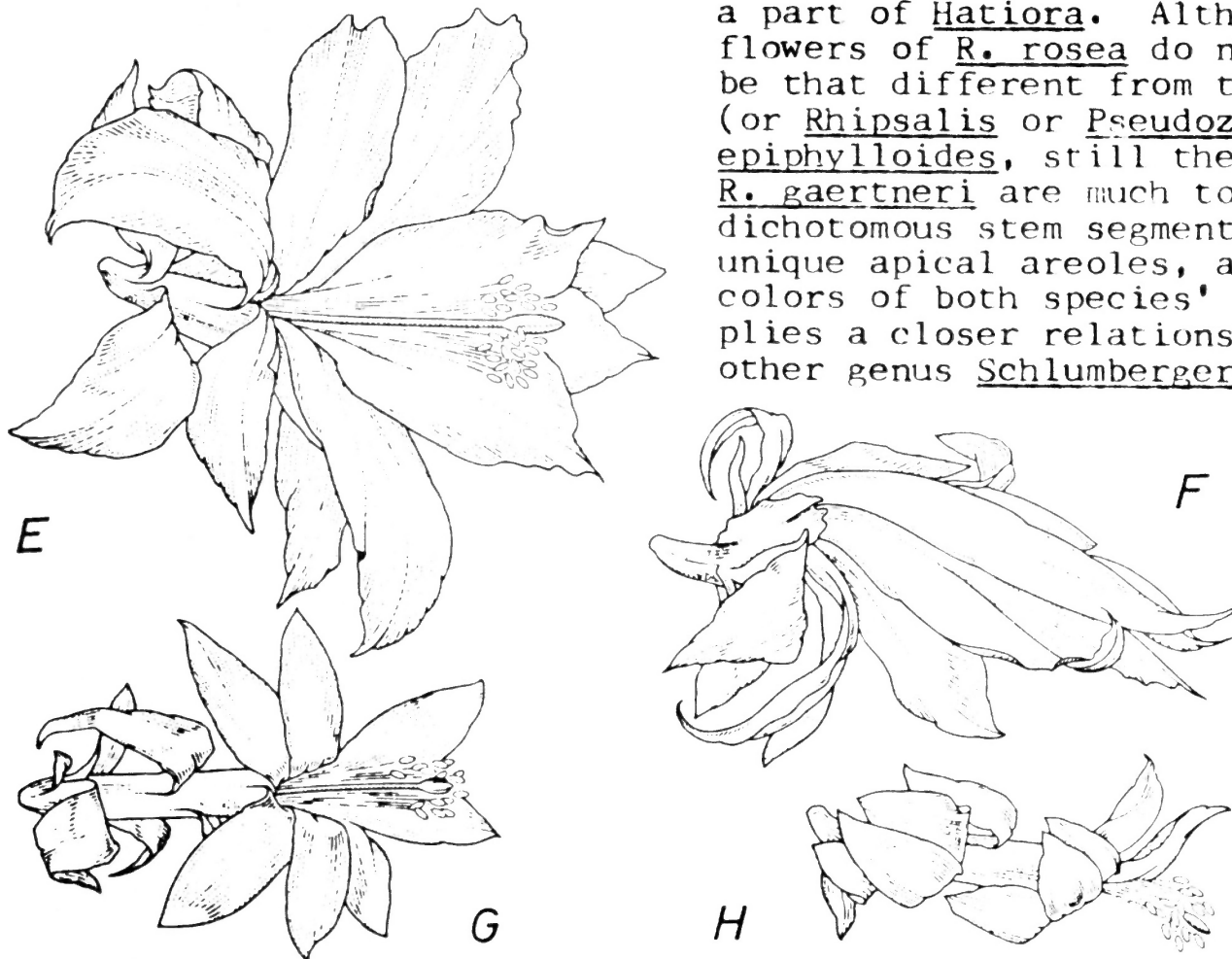


Acanthorhipsalis monacantha Griseb.

The third subtribe is the Rhipsalidinae and consists of plants with small flowers with no tubes and, like the Phyllocactinae, the ovaries are smooth (well, except for Pfeiffera and Erythrorhipsalis!). Its dominant genus is Rhipsalis which has the most species in the tribe. Some species have stems that look like dwarf Epiphyllums, while others form a cascade of cylindrical stems - surely the most uncactus-like of this family. One of the most unusual species is R. paradoxa which has stems with alternating segments. The flowers of Rhipsalis are probably the most uninteresting in the family (indeed, the flower of R. megalantha is much much smaller than that of Wilmattea minutiflora!) This genus has the distinction of being the exception to the rule that this family is exclusively native to the Americas. R. bacifera is native to rain forests in Africa and is also found in Madagascar, the Seychelles, Mauritius, Ceylon, and the tip of India! R. horrida and R. fasciculata are native to Madagascar, but not to the Americas! (The Bromeliad family too has its exception - from western Africa comes a species of the genus Pitcairnia!) Also in this subtribe, are other genera, such as Acanthorhipsalis (which may belong in Pfeiffera) and Hatiora. A familiar plant in the latter genus, H. salicornioides, is commonly known as "Drunkard's Dream"!

The Epiphyllinae includes only two genera, but they are among the most interesting in the whole family. The first is Rhipsalidopsis, which includes those plants that are commonly called the "Easter Cacti". Since the flowers are tubeless and "small", it has been suggested that this genus really belongs as a part of Hatiora. Although the flowers of R. rosea do not appear to be that different from those of H. (or Rhipsalis or Pseudozygocactus) epiphylloides, still the flowers of R. gaertneri are much too large, the dichotomous stem segments with their unique apical areoles, and the strong colors of both species' flowers implies a closer relationship to the other genus Schlumbergera. This genus em-

braces the 'Thanksgiving and Christmas Cacti' and some other interesting species as well. The subgenus Epiphyllanthus (not to be confused with Epithelantha!)



Schlumbergera orssichiana: E.) Flower in ventral view. F.) Flower in lateral view.

Schlumbergera truncata: G.) Flower in ventral view. H.) Flower in lateral view.
Drawing by F. Rückert.

includes a few species that look like miniature "Prickly Pears"! Unfortunately, this group has the reputation of being hard to grow. These and the rest of the genus (including the former genus Zygocactus), still have tubeless flowers, however they look like they do have tubed flowers. An explanation given, is that what we see is actually a false tube - the petals have just managed to unite again. Except for S. russelliana, the other species (including the Epiphyllanthus type) have zygomorphic flowers.

REFERENCES:

Curt Backeberg, Cactus Lexicon.

Wilhelm Barthlott, Cacti.

W. Barthlott & A. J. S. McMillan, "A New Species of Schlumbergera", Cactus and Succulent Society of America's Journal (50:1), p. 31-4.

John Borg, Cacti.

N. L. Britton & J. N. Rose, The Cactaceae.

Franz Buxbaum, Morphology of Cacti.

Ladislaus Cutak, Cactus Guide.

Scott E. Haselton, Epiphyllum Handbook.

P. C. Hutchison, "The Identity and Status of *Rhipsalis monacantha* Grisebach", CSSA Journal (24:&), p. 176-9.

Myron Kinnach, "*Disocactus nelsonii* (B et R) Lindinger", CSSA Journal (30:3), p. 80-3.

Larry W. Mitich, "The World of A. Blanc, Part I", CSSA Journal (45:4), pp. 145, 158-70.

F. R. McQuown, Fine-Flowered Cacti.

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Orientation:

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 pm in Room 101, Casa del Prado, Balboa Park, Board of Directors meetings are held after the general meetings. Annual dues are \$7.00 per family. Single copies of Espinas y Flores are 60 cents.

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