

# Espinas y Flores

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

Vol. XV, No. 2.

February, 1980

## February Meeting

Saturday, February 9, 1980

1:30 pm

Casa del Prado, Room 101, Balboa Park

"Down Oaxaca Way"

by Woody Minnich

The featured program for this month is a presentation, with slides, by Woody Minnich (a Mammillaria specialist) on the plants of the Oaxaca area, Mexico. Woody has taken extensive collecting trips into Mexico and his plants have been displayed at the National Cactus and Succulent Society of America's Annual Show winning Best Educational Exhibits. He is also well-known for his expertise in herpetology (lizards and snakes).

---

<u>In This Issue</u> . . . . .	<u>Page</u>
<u>Agave</u> - R. Latimer . . . . .	2
<u>Blossfeldia</u> - R. Monroe . . . . .	4
Pest of Succulent Plants: Part XII - R. Monroe . . . . .	6
Recent Cacti Additions to the U.S. List of Endangered and Threatened Species Part I - R. Monroe . . . . .	8
Member Interviews: Martin Mooney - M. Monroe . . . . .	9
CSSA Notes . . . . .	10
News of Interest . . . . .	10
An Editorial Comment . . . . .	11



*Agave victoriae-reginae* var. *compacta*

## AGAVE

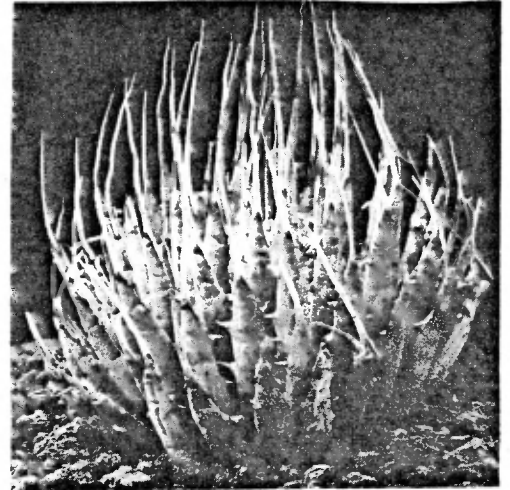
by Rick Latimer

The first species of Agave known to science is *A. americana*, described by Linnaeus in 1753. This plant is also probably the species best known to the general public (and is called a cactus by them). Aesthetically, the plant is quite appealing with its proud form, unique blue colored leaves with their intriguing gray markings (that are caused by adjacent leaves when they are all still bundled up together in the center), and the red-violet thorns. Besides the normal form, there are several variegated forms. First there is var. *striata* with the same plant shape as the regular form, but included in the leaves are many pin-stripe yellow streaks across the whole leaf. As common as the normal form is var. *marginata* with yellow stripes on the leaf edges. Sometimes the leaves are greener and usually the leaves droop in the middle, giving plants a tortured look. Rarely, this form will send up an albino plantlet. Since these have no chlorophyll, they cannot live without (separated from) the parent plant. The last form, var. *mediopicta*, has a wide variegated band in the middle of the leaf. The middle band may be either white or yellow and both make a beautiful sight. It is fun to watch the flower stalks go up. To me they look like a giant blue asparagus. After flowering, the whole rosette dies (like all Agaves except *A. parviflora*) leaving a big mess to clean up. When alive the plant is also a mess, because the juices cause a rash, the suckers come up everywhere, and the two kinds of spines are dangerous. The terminal spines are sharp and penetrate deeply and the edge spines rip up your skin (their shape is like that of some Bromeliads and some Palms (also Monocotyledons)). My personal name for these plants is not 'century plants', but is 'shark plants'.

*A. americana* is not the largest Agave. *A. atrovirens* and *A. franzosina* are more massive and *A. decipiens* and *A. angustifolia* are taller. Not all Agaves have the hooked spines (*A. stricta*), some do not have even the terminal spines (*A. bracteosa*), and then there is *A. attenuata* with soft, thin, and flexible leaves. Like some Yuccas (and some Palms), some Agaves have "hairy" leaves (*A. parviflora* (the smallest Agave) and *A. filifera*). Some of the best Agaves are the 'short' Agaves. They are more manageable, but do not step on them! Who could refuse any of these gems: *A. pumila* (a stunted form of *A. lophantha*), *A. univittata*, *A. horrida*, *A. patoni*, *A. utahensis*, *A. verschaffeltii*, *A. potatorum*, or *A. xylonacantha*? Perhaps the most beautiful of all is *A. victoria-reginae* (especially the two forms *compacta* and *ornata*).

Of local interest are the two San Diego County native Agaves: *A. shawii* and *A. deserti*. Both of these species have their own complexes. The *shawii* complex is distinguished primarily by perennial plants that flower repeatedly, according to the development of axillary branches. Plants are truly arborescent, developing elongate trunks, but the trunk cannot support the heavy succulent weight. When they lie down on the ground, new roots form with soil

contact as the older leaves die off and rot away (organic gardening?). Numerous individuals have been observed that mature and die without leaving any branched rosettes to follow. These forms are generally more 'southern' and are assigned to the subspecies shaw goldmaniana. A. shawii's native habitat runs from this county, down the coast to Punta Prieta, Baja. The native habitat of A. deserti is more easterly. In this county the plants live in the east side of our east county mountains. The range, of course, extends into Baja, but not as far south as A. shawii. The subspecies A. deserti simplex lives in Arizona and a small part of Sonora. The subspecies A. deserti pringlei intermingles with A. deserti deserti only in Baja California.



*Agave utahensis* v. *nevadensis*

The genus Agave is indigenous to North America from Utah to Central America and the West Indies, with the center of population in Central Mexico. The genus is split in two subgenera by flower stalk types. The first (Littaea) has elongated, bracted racemes (e. g. A. vilmoriniana), while the other (Euagave) has candelabrum-like panicles (e. g. A. ferox). Flower colors are most often yellow or white, but most of the color is due to the stamens and pistils, since the petals are reduced. Flower bracts may be red and remind me of those of bananas.

A few closely related genera to Agave are Furcraea (with bulbils forming on the flower stalks), Beschoneria (with a red flowering species), and Doryanthes (from Australia). Not as closely related is the genus Manfreda. More distantly related are such things as Yuccas, Beaucarneas, Dracaenas, etc. AVE AGAVE!

#### REFERENCES:

- August J. Breitung, The Agaves.
- Howard Scott Gentry, The Agave Family in Sonora.
- Howard Scott Gentry, The Agaves of Baja California.
- Charles Glass & Robert Foster, Cacti and Succulents for the Amateur.
- William Hertrich, "Australian Counterpart of the American Agave and Furcraea", CSSA Journal, (27:4), July-August 1955, p. 125-6.
- Eizi Matuda & Ignacio Pina Lujan, "Consideraciones Sobre La Taxonomia Del Género Yucca Y Plantas Afines", Cactaceas Y Succulentas Mexicanas, (22:3), Julio- Septiembre 1977, p. 60-4.

## Cactus-of-the-Month

### Blossfeldia

Dr. Ronald E. Monroe

The genus Blossfeldia (named by E. Werdermann for H. Blossfeld who collected the type plant in 1936) has the distinction and fascination of being the smallest of all the cacti. Originally, this tiny plant was thought to be found only from Jujuy to Catamarca, Argentina, but F. Ritter later found plants in the departments of Cochabamba and Chuquisaca, Bolivia, growing on mountainous slopes at ca. 1500 to 2000 m. The exact number of species in the genus is not known. Backeberg (1977) considered six species and one variety as proper to the genus; however, Barthlott (1979) considered that H. Krainz was correct in stating that all species discovered since the original type are best regarded as varieties of B. liliputana. Thus, there is one species and six varieties (Barthlott, 1979). Still, there are others who claim that such a wide dispersion of the plant must include more than one species, and they have included three species and two varieties and two to three forms as proper to the genus (Anon., 1974).

Blossfeldia are spineless and lack ribs; areoles are minute and spiraled. The plants are 5 - 15 mm diameter and are greyish-green to deep green in color. They possess a small taproot and are caespitose with age. The flowers are whitish (or tinged with yellow) and ca. 10 mm long and open only in bright, sunny weather. The seed is like that of Frailea in being finely hairy.

In habitat, Blossfeldia may possess flowers that are often incompletely developed and tend to give one the impression that they are degenerate (Barthlott, 1979). However, this may be due to ecological specialization in that the plants dry out so much that they become mere paper-thin discs; yet they plump up when the rains fall, but are incapable of producing well-developed flowers except after several "good" years.

These tiny cacti are not very popular as potted plants and may be considered as difficult by many who have tried to grow them. In habitat they grow pressed close to the rocky soil which contains very little humus or moisture. Few try to grow these plants on their own roots and most will resort to grafted plants which soon lose their natural growth form. However, grafting is recommended unless the propagator is sparse with water and allows the plants to rest (sans water) for long periods of time.

Plants occasionally found in cultivation are B. liliputana and its varieties: v. campaniflora, v. caineana, v. fechseri, v. pedicellata, v. atroviridis and v. minima.

Pests of these plants are not documented and it can only be guessed that various fungi and the Sciara sp. fly would be the worst enemy of plants on their own roots while stem rot is serious on grafted plants.

References cited

- Anonymous. 1974. Species Catalogue for the Cactaceae. Ashingtonia.
- Backeberg, Curt. 1977. Cactus Lexicon. Blandford Press, England. 828 pp.
- Barthlott, Wilhelm. 1979. Cacti, Botanical Aspects, Descriptions and Cultivation. Stanley Thomas, Ltd., Cheltenham, England. 249 pp.



Special Announcements

Dr. Len E. Newton, the well-known lecturer, collector and botanist from Ghana, may be paying us a visit April 5, 1980. If he is able to be here, the meeting will be a week earlier at the Casa del Prado, Room 101, at 1:30 pm. Be sure and mark your calendar for that date and time. The Espinas y Flores will notify members in the April issue if that date still stands.



It has been brought to our attention that Nancy Roth, regalement (refreshment) chairwoman, needs a new chairperson (man or woman) and three or four people to help serve refreshments.

Betty Athy could use an extra hand in the library each month.

Please contact Nancy and Betty by phone or at the beginning of the meeting.



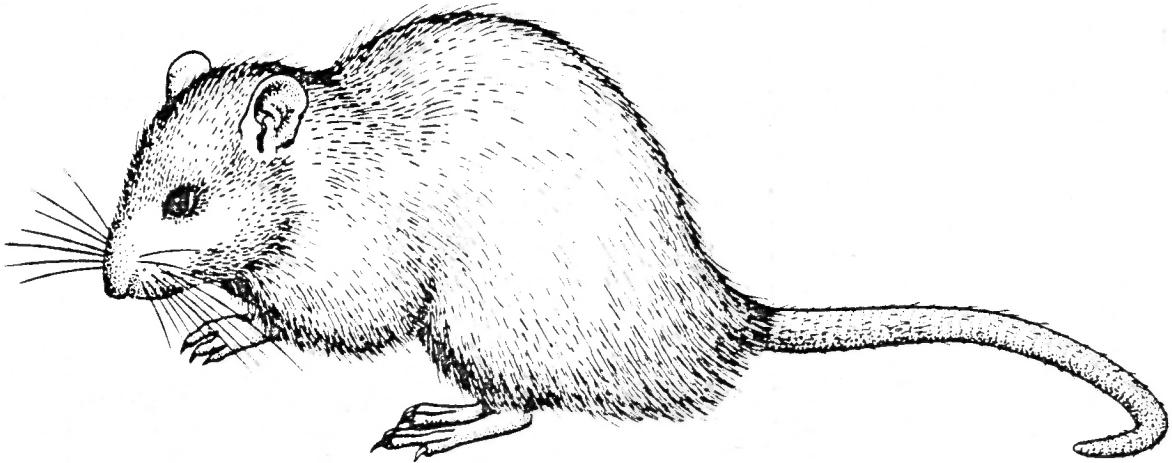
A Sad Note

We are sorry to announce that Nellie Kennett's father recently passed away.

## Pests of Succulent Plants

### Part XII. Rodents and lagomorphs.

Dr. Ronald E. Monroe



Norway Rat

Rodents are seldom considered as pests of succulent plants; however, it is all too common for a rat or mouse to take residence either in or near a greenhouse (or shade-house or any other succulent staging area) and become either a general nuisance or inflict direct irreparable damage to cacti and other succulent plants.

Systematics -- Rabbits and hares are usually thought of as rodents, but they really are members of the order Lagomorpha. In the West, hares encountered are jack rabbits (Lepus sp.); as a rule, rabbits throughout the U.S. are brush rabbits or cottontails (Sylvilagus sp.). The true rodents belong to the order Rodentia, and it is this group that is most apt to cause problems. Rodents commonly causing plant damage are: beechey ground squirrel (Spermophilus beecheyi), pocket mice (Perognathus sp.), brush or cactus mice (Peromyscus sp.), house mouse (Mus musculus), woodrats (Neotoma sp.), Norway rat (Rattus norvegicus) and the black or roof rat (Rattus rattus). Occasionally, the pocket gopher (Thomomys sp.) is a pest of field-grown plants. To describe the individual species is difficult because skull, etc. morphology is all-important in rodent keys. Most of these animals are nocturnal and will seldom be seen; their faecal droppings and plant damage are most commonly noted by growers and hobbyists and this is sufficient to alert one to their presence.

Plant damage -- Although rabbits and hares seldom cause damage, there have been moments of real despair and concern when these lagomorphs harm plants by digging burrows beneath them, knocking over potted plants or eating "leafy" succulents. Rats, squirrels and mice are the most common rodent pests (rats and squirrels being the most important of all)

to be found anywhere. Squirrels are diurnal, burrow into the nursery or collection area and are easily seen. However, rats are nocturnal, wary and except for their droppings are seldom ever seen. All of these animals not only gnaw on potted plants per se, but relish the fruits, and seed is so prized that it is often a real contest as to whom will harvest first -- man or rodent (the latter usually wins!). Too, pots are knocked over, plants uprooted and seed beds may be completely dug up in a single evening. Mice of all species can be a real disaster toward propagation because they eat or foul stored succulent seeds.

Biology -- Hares do not make a nest for their young. Rather, the mother hare gives birth to open-eyed young with teeth (quite ready to care for themselves within a short time) and there are infrequent broods per year (usually spring and early summer with three to five young per brood). Rabbits do make nests (in burrows in the soil, brush, fence rows, etc.) and their young are born blind, naked and quite helpless and must be cared for by the mother for several weeks. There are several generations per year in the spring and early summer with four to six young per brood. Ground squirrels build nests in burrows and give birth to helpless young (three to six) only in the spring. Rats and mice build nests (between building walls, in burrows and in thick vegetation of all types including palm trees, ice plant and ivy). They give birth in continuous year-long cycles (the females commonly become pregnant while they are still nursing young) with three to six young per brood.

Control -- Rabbits and hares are best not controlled by poisons. Rather, the concept of "exclusion" is best considered (fences, roaming dogs, etc.). Ground squirrels can be controlled by placing grain coated with strychnine within their burrows, but care must be exercised that none can be seen from above because seed-eating birds will seek out and eat the bait as well. The best means of rat/mouse control is the bait station containing grain coated with some anticoagulant such as Warfarin<sup>(R)</sup>. One such product which is readily available is d-Con<sup>(R)</sup>. Warfarin<sup>(R)</sup> is a coumarin which requires repeated ingestion over a period of several days, leaving the unsuspecting rodents growing weaker daily. The compounds are thus considered relatively safe, since repeated accidental ingestion would be required to produce serious illness. Too, such baits are extremely effective because wise rats do not develop "bait shyness" (Ware, 1978). Such bait stations should be generally distributed throughout the greenhouse or collection area.

#### References cited

Ware, George W. 1978. The Pesticide Book. W.H. Freeman and Co., San Francisco. 197 pp.

Recent Cacti Additions to the U.S.  
List of Endangered and Threatened Species

Part I

Dr. Ronald E. Monroe

The U.S. Fish and Wildlife Service recently acted to protect some of the world's rarest plant species by adding thirty native and two foreign plants to the U.S. List of Endangered and Threatened Species. Twenty-one of these plants are cacti (Endanger. Sp. Tech. Bull. IV: 1, 5-8; 1979).

The cacti listed, the Federal Register publication date, their habitat location, their listed status and the reason(s) for their listing is as follows for Part I:

Ancistrocactus tobuschii. F.R. 11/7/79; on escarpments of the Edwards Plateau on the banks of streams and gravel bars in the hill country of central Texas; endangered because of flooding and stream bank erosion.

Corypantha minima. F.R. 11/7/79; from a single ranch in northern Brewster County, Texas; Endangered because of over-collecting and possible alteration of its habitat through range management or mining.

Corypantha ramillosa. F.R. 11/6/79; on dry desert lands in two Texas counties overlapping into Mexico; threatened because further development could modify their habitat and make plants more available to collectors.

Corypantha sneedii v. leei. F.R. 10/25/79; in Carlsbad Caverns National Park, southeastern New Mexico; threatened because of illegal collecting.

Corypantha sneedii v. sneedii. F.R. 11/7/79; in the northern Chihuahuan Desert in the mountains east of Las Cruces, New Mexico and north of El Paso, Texas; endangered because of collectors, road construction, urban expansion and military use of the land.

Echinocactus horizontalonius v. nicholii. F.R. 10/26/79; two counties of Arizona; endangered because of collecting, mining, urban development and ORV use.

Echinocereus engelmannii v. purpureus. F.R. 10/11/79; in arid, sandy soil of the Mojave Desert in southwestern Utah; endangered because of collecting, urban development and ORV use.



Member Interviews: Martin Mooney

by Marcia Monroe

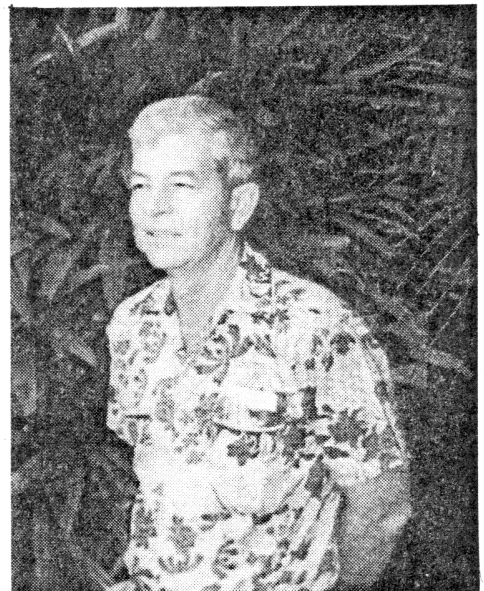
Originally from Kirkland, Texas, Martin served with the Air Force for four years during the Korean conflict. He resides in San Diego (the Chula Vista area), California, with his wife, Pat, and they have three grown daughters. Martin is an electrical-mechanical engineering technician for the Naval Calibration Laboratory at North Island.

He began seriously collecting plants in 1969 and, soon thereafter, became a member of the San Diego Cactus and Succulent Society; he is also an active member of the Cactus and Succulent Society of America. In our Club he has held the office of treasure, vice-president and president, and he is a past member of the board for the Cactus and Succulent Society of America. Presently, he is the show chairman and a member of the board for our Society. Martin has written two excellent articles for *Espinas y Flores*--one on the National Botanic Garden of South Africa and one on the adaptation of plants. His wife, Pat, has helped with regalement, and she has worked in the library for four years.

In 1978, Martin attended the Succulenta Convention in South Africa with Larry Mitich. While they were there, a three day collecting trip was taken with Teddy and Cynthia Giddy to Durbin, where they viewed Fockea crispa and Aloe spectabilis in habitat. Barbara Jeppe took Martin and Larry on an eight day field trip into the Little Karoo where they observed conophytums, sarcocaulons, othonnas, and Euphorbia suzannae in their native environment. At two of our meetings, Martin presented a slide show on his trip to South Africa.

Cacti were Martin's first interest, but later he took a liking to pachypodiums and euphorbias (of the cacti, he now prefers copiapos and melocactus). He has lovely mature specimens of Pachypodium namaquanum, Pachypodium brevicaulis, Euphorbia stellata, crested forms of Euphorbia obesa and Euphorbia suzannae. Two of his favorite succulents are Euphorbia decidua and Fockea crispa.

Martin's special method for growing plants begins by placing fiberglass screening over a large hole at the bottom of his pots. His soil mix includes: one part Supersoil®, two parts builders sand, four parts planter mix (Hawaiian Magic®) and eight parts pumice. He uses half the recommended amount of fertilizer, feeding his plants two or three times in a year with Watch-Us-Grow® or with a low nitrogen liquid fish fertilizer. Demonstrating his ability for growing cactus and succulents, Martin has won numerous awards and he has displayed his outstanding plants on the V.I.P. table on several occasions.



## CSSA Notes

The President of the Cactus and Succulent Society of America, Kitty Sabo, announced the following appointments at the January board meeting:

Board of Directors - Henry Varney(Sunset Succulent Society, Santa Monica, Ca.)(SDCSS)

National Show Chairpersons - Ellen Low and Jean Pruitt  
National Show Dates - July 4,5 and 6, 1980

Convention Chairpersons - 1981 - Martin and Pat Mooney

CSSA Research Committee Chairperson - Ronald Monroe

Paul Johnson, Charles Glass, Gary Lyons, and Lee Phelps will work on changes in CSSA Bylaws.

Affiliates must apply yearly for each Educational Trophy and they must have two or three exhibits for competition.

The CSSA library is located in Whittier College and all material is on reserve.

CSSA Meetings: 1980

March 8

July 5

December 6



### News of Interest

Winners of the "Bragging Plant" competition for January were:

- 1st: Martin Mooney - Euphorbia decidua
- 2nd: John Pasek - Euphorbia decaryi
- 3rd: Rick Latimer - Cotyledon dinteri

-----

The following members have signed up to furnish refreshments at the February meeting:

Rose D'Attilio, Helen Bowen, Peg Bryant, Mr. & Mrs. Charles Clark, Anna Cornett, Peg Foret, Judy Hannula, Trudy Hart, Frances Johnson, and Bob and Suzanne Taylor.

-----

The librarian, Betty Athy, reports the following new books will be available for members use in February:

Fifty Year Journal Index (CSSA) - compiled by Madelyn Lee  
Succulents of South Africa - Barkhuizen  
Cacti - Barthlott

-----

Welcome this month the following new members:

Maria Brunt - San Diego  
Fred Cover - San Diego  
Chris Keith - San Diego  
Richard & Nancy Fogg - El Cajon  
Carolyn C. Miller - Spring Valley  
Marilyn "Nicky" Barker - La Mesa  
Ken Lipovssky - La Mesa



An Editorial Comment

On behalf of the San Diego Cactus and Succulent Society I want to thank the following members for their hard work:

Ethel Standish for her assistance at the Plant Exchange table.  
Jim Dice for his superior editing of the Espinal y Flores and for his two excellent articles---one on Wilcoxia and one on A Visit by Dr. George Engleman to San Diego.  
Perlso Lewis for her dedicated performance on the Board these many years, for her assistance on the reception committee and for her invaluable aid last year at the SDCSS Annual Show.

I hope we can call on the above members for their continued support.



-----  
-----Deadline for the March issue is February 18-----  
-----

San Diego Cactus & Succulent Society

Officers

President - Tom Hamocher 440-6245  
996 Terrace Crest, El Cajon, Ca. 92020  
1st V. Pres. - Richard Latimer 463-1655  
5990 Lake Murray Blvd., La Mesa, Ca. 92041  
2nd V. Pres. - Carl McLeod 279-2817  
3516 Mt. Everest, San Diego, Ca. 92111  
Recording Secretary - Beverly Kirkegaard 463-2801  
10009 Bonnie Vista, La Mesa, Ca. 92041  
Treasurer - Joan Johnson 728-7317  
3560 Lake Garden Dr., Fallbrook, Ca. 92028  
Corresponding Secretary - Anna Cornett 291-6426  
3905 Ibis St., San Diego, Ca. 92103  
Immediate Past Pres. - H. Warren Buckner 469-1391  
1744 Englewood Dr., Lemon Grove, Ca. 92045

Board of Directors

Elizabeth Athy, Shirley Berry, Dr. Ronald Monroe,  
Martin Mooney, John Pasek, Dr. Leroy Phelps

Committees

Activities: H. Warren Buckner  
Audit: James Berry  
Conservation: Dr. Ronald Monroe  
Education:  
Cacti - Frank Thrombley and Dr. Ronald Monroe  
Succulents - Richard Latimer and Dr. Leroy Phelps  
Exhibits:  
Bragging Table - Shirley Berry  
V.I.P. (Very Important Plants) Table - Martin Mooney  
Historian: Richard Latimer  
Library: Elizabeth Athy and Ruth Nelson  
Membership: Joan Johnson  
Open House:  
Plant Exchange Table: Doris Rake and John Roth  
Plants & Supplies Table: Carl McLeod  
Programs: Richard Latimer  
Publication: Marcia Monroe (ph. 461-8444)  
Reception: Rose D'Attilio and Veryl Snowhill  
Regalment: Nancy Roth  
Representatives:  
Balboa Park Desert Garden - John Pasek  
Quail Botanical Gardens - Audrey Johnson  
S.D. Botanical Garden Foundation -  
S.D. Floral Association - Verna Pasek

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¢.

Marcia Monroe  
5635 Severin Drive  
La Mesa, CA 92041  
Address Correction Requested