

# Espinas y Flores

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

Volume XXV, Number 11

November 10, 1990

## NOVEMBER MEETING

Saturday November 10, 1990

1:30 pm

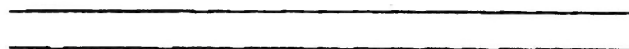
Rainbow Gardens (See Map)

## PROGRAM

Walking tour of the Gardens -- Book Store and retail sales will be available.  
Be sure and notice that a bus will be available for the trip up--see next page.



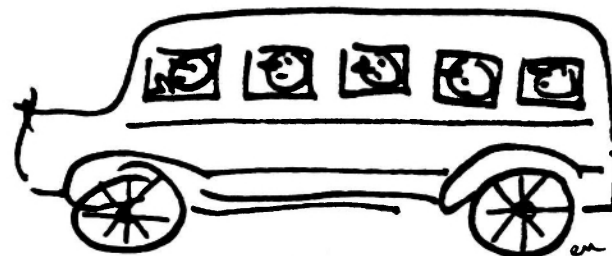
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\*\*\*\*\* Important to note the early date for the December meeting. December 1, 1990

DEADLINE for the December E y F -----November 17, 1990                      Thanks                      Mary

SPECIAL NEWS



NOVEMBER MEETING NOTES

We have contracted with Sundance Stage Lines to provide transportation from Balboa Park to Rainbow Gardens. The parking lot is well marked, and it is located just to the south of the Organ Pavilion. The bus will be at the Organ Pavilion parking lot at 11:30. The bus will leave for Rainbow Gardens at 12:15. After the meeting the bus will leave Rainbow Gardens at 4:00, and should arrive back at the Organ Pavilion parking lot around 5:00.

We will be serving refreshments at the meeting. If you signed up to bring refreshments this month, or would like to pitch in, please do so.

CHRISTMAS ON THE PRADO

We have been contacted by the San Diego Floral Society to see if we are interested in supporting Christmas on the Prado this year. The theme this year is California Christmas. There is an eight foot tall mission bell tower that will be made available as a setting for a cactus and succulent display if anyone in society is interested. The display will be located inside Room 101. Setup dates are December 6th and 7th. The display will be open to the public on the 8th. Take down is December 9th. If anyone is interested please contact Marie Walsh at 298-5182.

# SHOW SCHEDULE

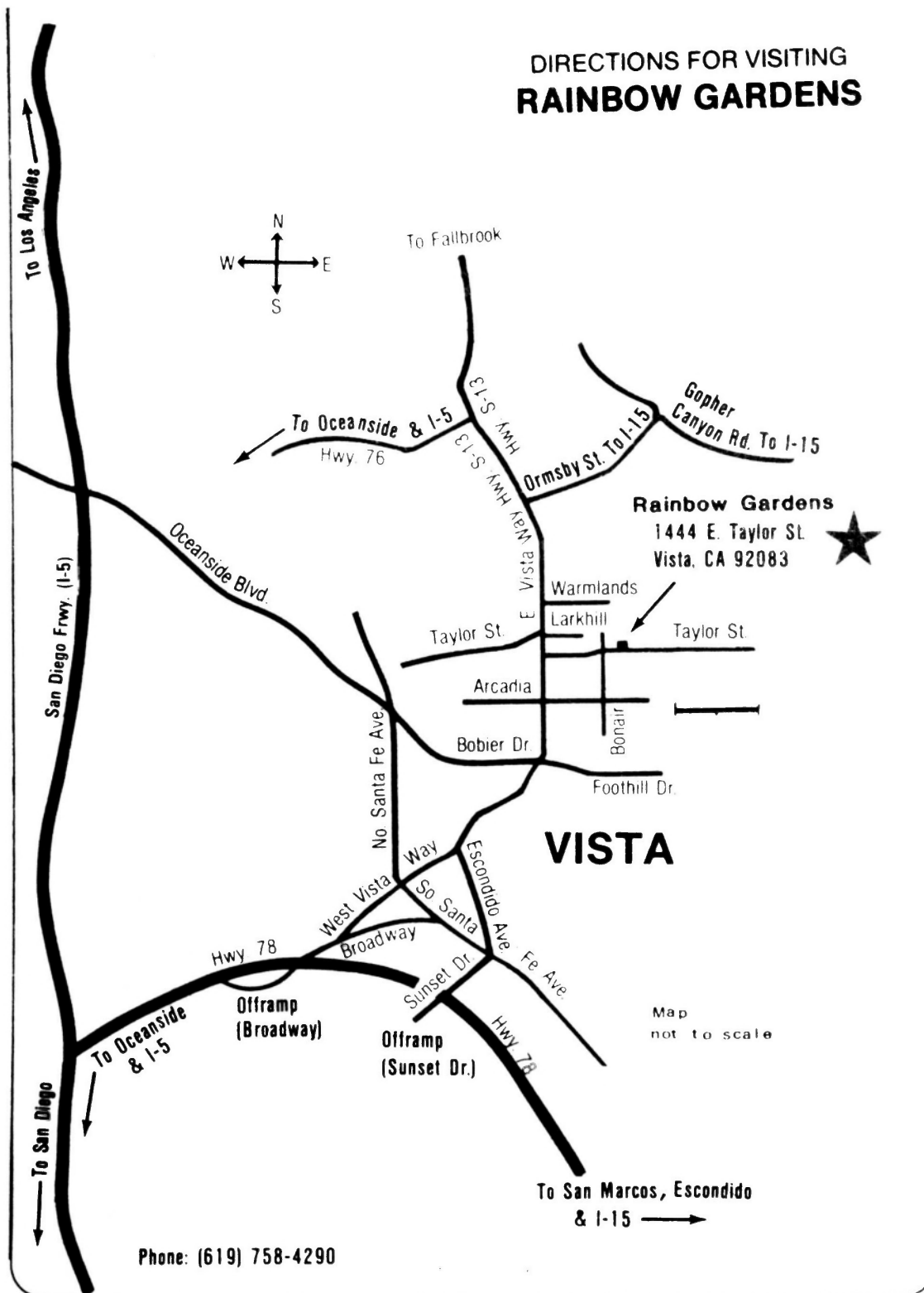
Nov. 3 & 4	San Diego Tropical Fish Soc. 33rd Show	Sat:12pm-6:00pm	Sun: 9am-4:30pm
Nov. 18	Suni-e Painting & Ikebana 15th Annual Show		Sun:11am-4:00pm
Nov. 30 & Dec.1	San Diego Floral Assoc. Christmas Show	Fri: 5pm-9:00pm	
	(Christmas on the Prado)	Sat:11am-9:00pm	

SLATE OF OFFICERS  
ELECTION AT THE DECEMBER PARTY

The nominating committee had received the acceptance of the following candidates:

- President ..... Mike Buckner
- Vice President ..... Mitch Bahr
- Secretary ..... Joyce Buckner
- Treasurer ..... Laura Demeritt

Additional nominations may be made from the floor, but the person nominated must be willing to serve.



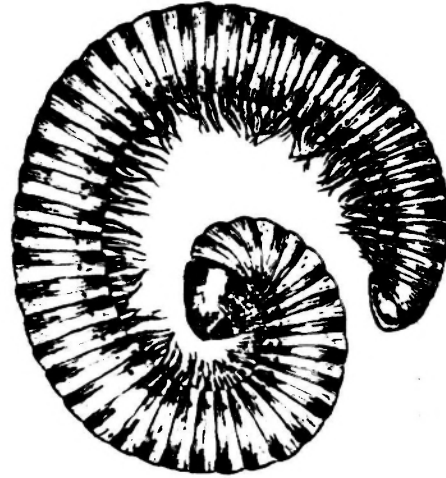
## Pests of Succulent Plants

## Part XI. Pill bugs, centipedes and millipedes.

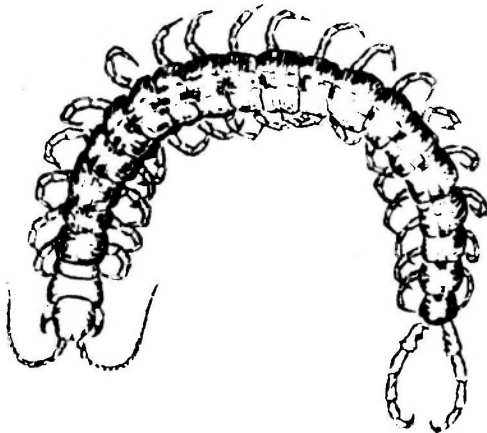
Dr. Ronald E. Monroe

The arthropods other than insects that can cause damage to greenhouse-grown plants are often seen, but seldom understood. Normally, they do not reproduce in sufficient numbers to be a problem, but from time their populations literally explode under favorable conditions, and, at that time, they can inflict moderate to severe damage.

Systematics — Pill bugs or sow bugs belong to the class Crustacea, and the most common terrestrial one is Armadillidium vulgare (Isopoda: Armadillididae). The animals are light-gray to slate-colored, very convex dorsally and flattened ventrally (when under stress, they "double up" into a near-perfect ball or pill), distinctly segmented with seven pairs of legs and ca. 1/2 inch long (Metcalf et al., 1951). Millipedes or "thousand leggers" belong to the class Diplopoda; one common species is Orthomorpha gracilis, and the genus Julus also has several species which can be found somewhat commonly. In most species, the body is cylindrical, and the legs (one



A common millipede.



A southwestern centipede.

pair per body segment; however, the segments may appear to be fused and give one the illusion that each "segment" has two pair of legs) and antennae are relatively short and inconspicuous. Millipedes are well-known for their pungent odors and defense secretions of hydrogen cyanide, benzoquinones and its derivatives, etc. (James and Harwood, 1969). Centipedes or "hundred leggers" belong to the class Chilopoda and are not pests of plants, but rather, are predators of other arthropods. The body of centipedes are somewhat flattened dorsoventrally, and each body segment typically bears one pair of legs. A pair of poison claws, located on the first segment behind the head, is used

to paralyze insects and other small animals which constitute the principal source of food (Little, 1972). Scutigera cleopatra (smaller house centipede) and several species of the genus (Scolopendra are commonly seen.

Plant damage — As previously stated, centipedes do not eat plants, but they are included because many people do confuse them with millipedes which can cause plant damage; therefore, the centipedes will not be considered further. The millipedes possess chewing mouth parts, and normally they feed on decaying organic matter, but sometimes they do feed upon plants and can cause economic damage (Little, 1972). Damage is usually confined to greenhouses where plants are grown close together. There, unsuspected, populations build up and damage inflicted is nearly unnoticed even to a trained eye. Pill bugs also have chewing mouth parts, and they will feed on the roots and tender growth of nearly all greenhouse plants (Metcalf et al., 1951). Millipedes and pill bugs enjoy damp conditions; therefore, they will be noticed more often after watering or during the evening when humidity is high.

Biology — Millipedes lay eggs either on the surface of or beneath damp soil. Usually, clusters of 20-100 are laid, and each female can lay a total of ca. 300 eggs. The eggs are covered with a somewhat sticky material and are nearly translucent when first laid. They hatch in ca. 3 weeks, giving rise to young which differ from the adults only in size, in number of body segments, and in having at first only three pair of legs (Metcalf et al., 1951). Pill bugs reproduce by means of eggs which are retained in the marsupium of the female for ca. 2 months. Twenty-five to seventy-five constitute a brood, and the young differ from the adults only in size.

Control — Although several pesticide sprays could be used against millipedes and pill bugs, they must come into direct contact with the material or else it will not be effective. That fact, plus the knowledge that they are mainly nocturnal, lends most modern sprays as nearly ineffective. Therefore, the best means of control is still the poison - bran mash bait which can be made as follows:

Dry bran .....	1 lb.
Paris green (copper acetoarsenite) .....	1/4 lb.
Molasses .....	1 qt.
Water .....	4 qt.

The ingredients are mixed thoroughly and placed in small piles on the benches or on 4 X 4 wooden bait stations throughout the greenhouse.

## REFERENCES CITED

- James, Maurice T. and Robert F. Harwood. 1969. *Herm's Medical Entomology*. The Macmillan Co., New York. 484 pp.
- Little, V.A. 1972. *General and Applied Entomology*. Harper and Row, Publishers, Inc., New York. 527 pp.
- Metcalf, C.L., W.P. Flint and P.L. Metcalf. 1951. *Destructive and Useful Insects, Their Habits and Control*. McGraw-Hill Book Co., Inc., New York. 1071 pp.



Safer Agro-Chem's Insecticidal Soap --  
A New Product

From May '80 E y F

Dr. R.E. Monroe

Although soaps have been used as surfactants with organic insecticides or used as an insecticide per se, most were not really too effective nor were they scientifically developed. Recently, however, Canadian scientists have developed and thoroughly researched a new soap product which has insecticidal activity and yet is perfectly safe to use (you may wash your hands with it!) and is environmentally safe because it is completely biodegradable. The material contains the potassium salts of ca. three fatty acids which are the most bioactive against insect pests; quality control during production assures a continuous, safe effective material which kills aphids, mealybugs, whitefly, soft scale, earwigs and spider mite.

This material has been tested on cacti of several species, asclepiads, Pachapodium, Echeveria, Greenovia, Sedum, Agave, Aloe and several other genera and species of succulent plants and after several weeks no ill effects could be found.

The positive aspects of this material is that it is non-polluting, is safe to use, cleans the plant, will not kill lady beetles, parasitic wasps or honeybees and it leaves no odor or telltale residue except normal water spots (minor).

The negative aspects of this material is that it is a direct contact insecticide and leaves no residue (will kill only when sprayed directly on the pest insect), has no systemic action (root mealybugs will not be affected, but a soil drench will kill these as well), is expensive to use and the high concentration required (two tablespoons per quart of water) uses up the material rather quickly.

Regardless, the positive aspects outweigh the negative by far and I endorse this new insecticidal soap without reservation.

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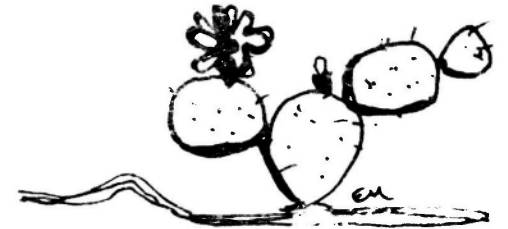
NEWS NEWS NEWS -----

WELCOME TO NEW MEMBERS ---

Fermin & Milagros Geniza - Poway                      Marshall & Dorothy Byer - Vista  
Edna Smith - Bonita

BRAGGIN PLANT WINNERS FOR OCTOBER ----

- 1st Place Joey Betzler - Stapeliopsis Saxatius
- 2nd Place - Sandy Frost - Sedium Oxtapedilum
- 3rd Place - Marilyn Henderson - Echiveria Lola



Those who have volunteered to bring refreshments for November -----

Cathy & Sandy Frost	Sue & Bob Mardee	Susan Barker
Joan E. Fleer	Virginia Innis	Mark St. Clair
Reed C. Pieri	Rose Robilotti	Susan Clements
Ted Nelson		

Wine will be served at the Gardens --

Please when bringing baked goods, make sure they are fresh and not past expiration date.  
Thanks Mary

ANOTHER REMINDER OF -----



CHRISTMAS PLANT EXCHANGE

Every year at our December meeting we have a Christmas Plant Exchange. Any member may participate; all you do is bring a cactus or other succulent plant. It should be in good condition and nicely potted. Include a label that identifies the plant on one side, with your name on the other side. The best plant is selected to be auctioned off at the end of the meeting. The person who brought that plant gets the first choice of all the remaining plants. Whenever a plant is selected, the person who brought it gets the next choice, so the better the plant you bring the earlier you will get your chance. Sorry, only one plant per person. The Christmas Plant Exchange is in addition to the distribution of gift plants.

# SAN DIEGO CACTUS & SUCCULENT SOCIETY

## OFFICERS

President - Chuck Adams  
7305 Rock Canyon Drive, San Diego 92126 530-2551  
Vice President - Mitch Bahr  
4945 Diane Court, San Diego 92117 571-0912  
Secretary - Jeanette Dutton  
1330 31st Street, San Diego 92102 239-8476  
Treasurer - Dana Adams  
7305 Rock Canyon Drive, San Diego 92126 530-2551  
Immediate Past President - Dr. Leroy Phelps  
4094 36th Street, San Diego 92104 280-9690

## BOARD OF DIRECTORS

Joey Betzler, Dorothy Dunn, Beverly Kirkegaard  
Madelyn Lee, Rudy Lime, Mark St. Clair

## COMMITTEES

Bragging Table - Madelyn Lee  
CSSA Affiliate Rep - Cathy & Sandy Frost  
Education: Cacti - Phyllis Flechsig  
Succulents - Dorothy Dunn  
Historian - Rick Latimer  
Membership - Dana Adams  
Plant Exchange Table - Mmes. Lemrow & Larburg  
Plants & Supplies Table - John Pasek  
Show - Rick Latimer

Publications - Mary Aubuchon 427-3388  
Reception - Ethel Standish  
Regalement - Diane & Bill Crowley  
Representatives:  
Balboa Park Desert Garden - John Pasek  
Quail Botanical Garden - Phyllis Flechsig  
S.D. Botanical Garden Foundation - Kathy Van Arum  
S.D. Floral Association - Elizabeth Glover  
Program - Joe Clements

The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti or other succulent 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, and \$2.00 for each additional member of a household within the family. Single copies of Espinas y Flores are 60c.

Editor  
Mary Aubuchon  
1058 5th Avenue  
Chula Vista, CA 92011



FIRST CLASS

FIRST CLASS

FIRST CLASS



PLEASE NOTE: EVERYONE's dues are due by the end of the year. These are annual dues that come from January to January.

SAN DIEGO CACTUS & SUCCULENT SOCIETY  
MEMBERSHIP APPLICATION

\$8.00 - Single member per calendar year

\$2.00 - Each additional member of the same household

\*\* PLEASE PRINT \*\*

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

Additional members;

name: \_\_\_\_\_ name: \_\_\_\_\_

PLEASE CHECK IF:

\_\_\_\_\_ You are a new member                      \_\_\_\_\_ You subscribe to the Cactus &  
Succulent Journal

\*\* COMPLETE AND MAIL TO \*\*

DANA ADAMS: Treasurer, 7305 Rock Canyon Drive, San Diego, CA 92126

AMOUNT ENCLOSED \$ \_\_\_\_\_

There are no back issues of the Espinas y Flores available for late payment.  
Have copies made of this if you do not want to tear up the paper.