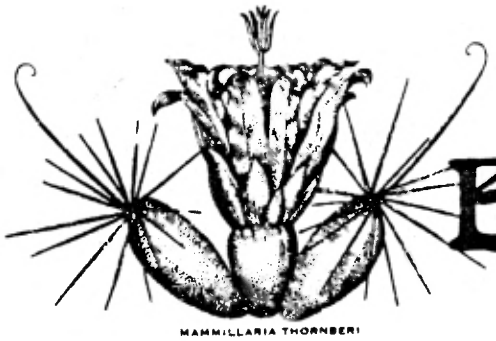


Espinas y Flores

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

Vol. XIV, No. 7. July, 1979

July Meeting

Saturday, July 14th, 1979
11:00 am

Taylor's Cactus Gardens
1051 Tres Lomas Drive
El Cajon, California

Annual Picnic

(See details and map on page 2.)

In This Issue . . . . . Page

ANNUAL JULY PICNIC — Sat. July 14th

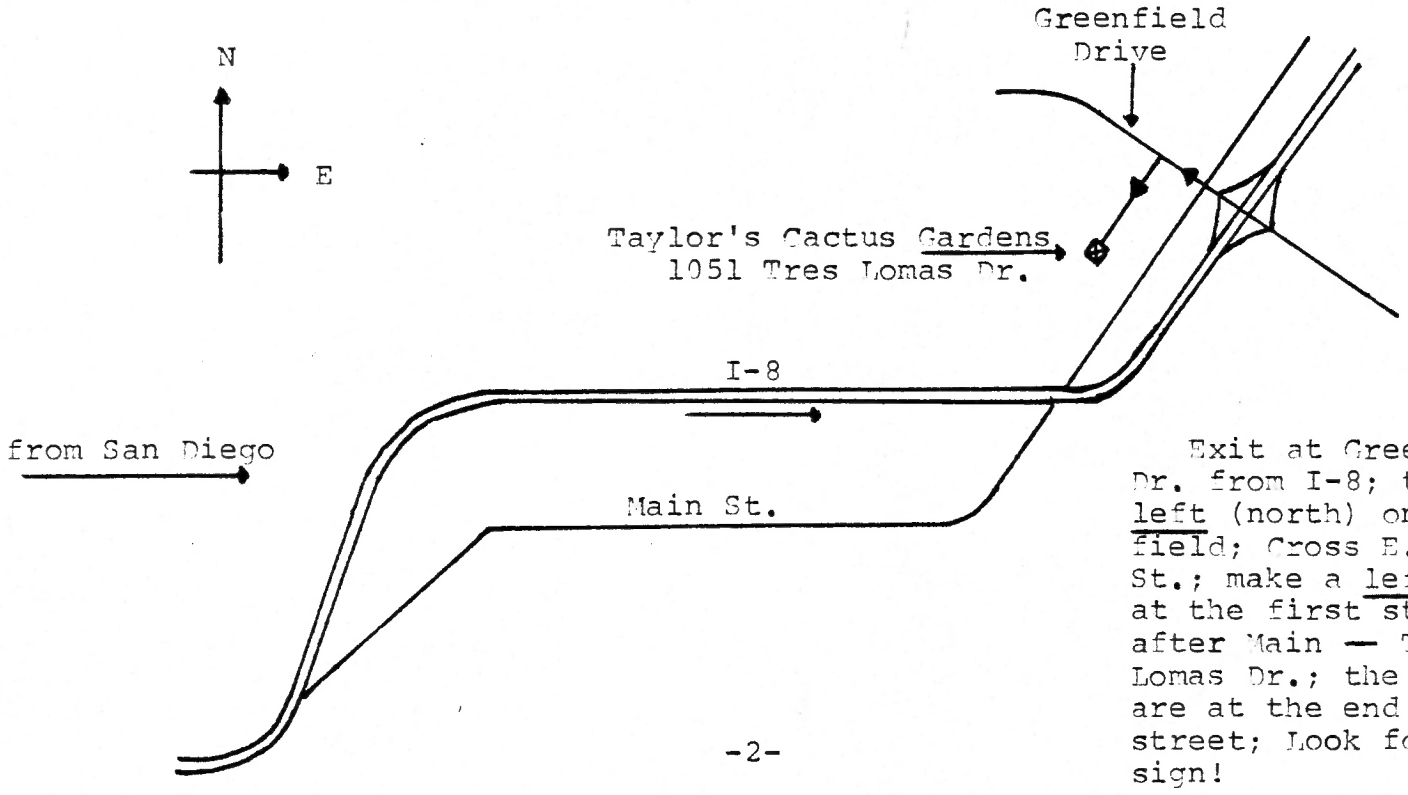
Once again this year, Bob and Suzanne Taylor will host our annual pot-luck picnic and its associated fun and festivities. Starting time is 11:00 am. This is a pot-luck affair, so bring a goodly portion of your favorite dish to share with others — as well as your own table, chairs, plates, silverware, and glasses or cups. Coffee will be served by the club.

In addition to good food and the chance to visit with old friends and meet new ones, this year's picnic will offer a plant photography clinic — to be conducted by Martin Mooney; a grafting demonstration by Bob Taylor; presentation of trophies and plaques to winners of the June show; the traditional plant auction by that master auctioneer, Dr. Leroy Phelps; and the opportunity to tour and purchase plants from the Taylors' garden. PLEASE NOTE: the garden will be open before and during the picnic for browsing only — Bob will be conducting sales only after the conclusion of the picnic.

There will be no Plants of the Month, Brag Table, V.I.P. Table, Plant Exchange Table, or Library check-out this month. Library books checked out in June will be due at the regular August meeting.

You might also note that hard hats may be appropriate apparel for the occasion, as the latest NASA reports indicate that Skylab is now scheduled to fall sometime around July 13th.

To get there: All major north-south freeways (I-5, 163, I-805, I-15, and 67) cross Interstate 8. From any of the above interchanges, go East on I-8 to the Greenfield Drive off-ramp. Then follow the directions below.



Exit at Greenfield Dr. from I-8; turn left (north) on Greenfield; Cross E. Main St.; make a left turn at the first street after Main — Tres Lomas Dr.; the Taylors are at the end of the street; Look for Bob's sign!

LIFE MEMBERS: BOB and SUZANNE TAYLOR

Bob and Suzanne Taylor are charter members of the San Diego Cactus and Succulent Society, and two of the nicest people you will ever meet. For over twenty years they have been proprietors of Taylor's Cactus Gardens in El Cajon, where Bob grows some of the choicest specimens of cacti and succulents to be found anywhere.

Suzanne, a native of Luxembourg, was a German teacher in Florida when she met Bob. During the depression they came to California where Bob took over the care of an orchard on an El Cajon estate. Bob was permitted one acre of ground there on which to pursue his interest in growing cacti and succulents. Encouraged by many of the big cactus nurserymen of that era, Bob's collection continued to grow. He became greatly interested in grafting and was soon an expert at it. Bob's grafting abilities have become so well-known that, at our June meeting, the Board of Directors of the San Diego Cactus and Succulent Society voted to sponsor a trophy, named in Bob's honor, for the best grafted plant at the Annual CSSA Show. The trophy was awarded, for the first time, at this year's show, held June 29 - July 1 at the Los Angeles State and County Arboretum in Arcadia.

In addition to growing cacti and succulents, the Taylors have traveled extensively in Baja California and Mexico, visiting many of these plants in their natural habitat. Over the years they have become very knowledgeable regarding cactus habitats in these regions. In 1975 Charles Glass and Robert Foster, editors of the *Cactus and Succulent Journal*, in recognition of the Taylors' "knowledge of cactus habitats and in thanks for their willingness to share this knowledge," honored their friends by naming a new species of *Mammillaria* from San Pedro Nolasco Island, Sonora for them -- *Mammillaria tayloriorum*.

Besides their nursery business, travels, and activities with our Society, Bob and Suzanne are also charter members of the Palomar Cactus & Succulent Society and have been active in the El Centro club and the California Cactus Growers Association.

Bob has been described by Glass and Foster (1975a) as "a quiet man, humble and warm, and generous to a fault" -- a description which no one who knows him would dispute. Several years ago, the two Journal editors approached Bob about writing an article

on the cultivation of cacti and other succulents. Bob's article, written in his own inimitable style, was the shortest on record, and is reproduced below in its entirety:

> If I had a formula, or knew anything about growing cactus I would be glad to write something, but two or three words would be about all I could say: plant it, and let it grow.

This year, according to my sources, our annual picnic coincides with Bob's birthday -- so we would like to take this opportunity, on behalf of the Society, to extend to him our best wishes for a very happy birthday.

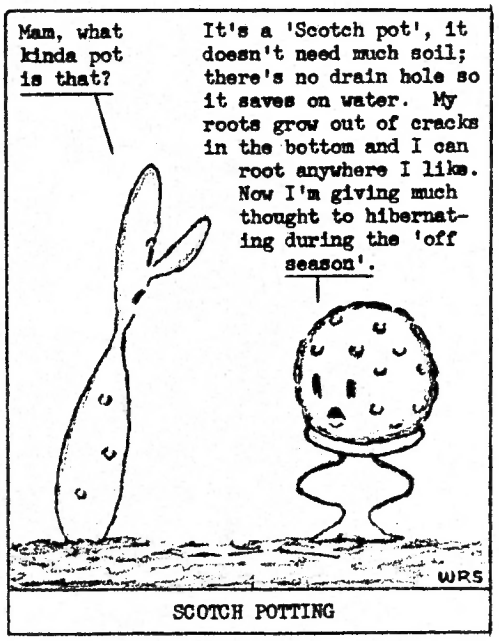
References

Glass, C. and R. Foster. 1975a. Cactus and succulent nurseries: Taylor's Cactus Gardens. Cactus and Succulent Journal (U.S.) 47(1): 3-4.

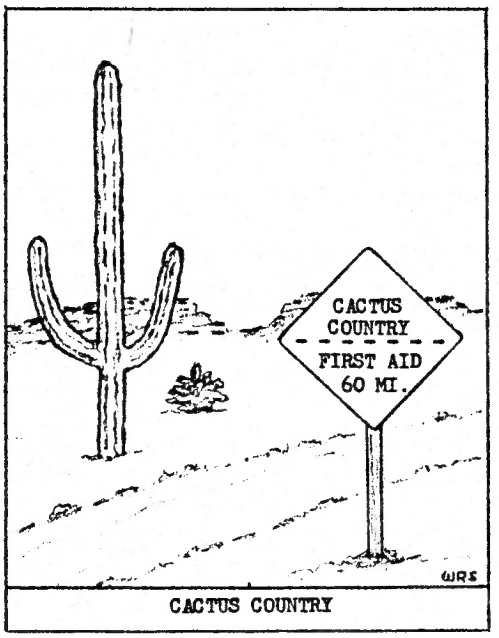
_____. 1975b. *Mammillaria tayloriorum*, a new species from San Pedro Nolasco Island. Cactus and Succulent Journal (U.S.) 47 (4): 173-176.

Taylor, B. 1968. Cactus growers' guidelines. Cactus and Succulent Journal (U.S.) 40(4): 131.

Photograph by Pat Itatani, used by permission of the Cactus and Succulent Journal.



SCOTCH POTTING



CACTUS COUNTRY

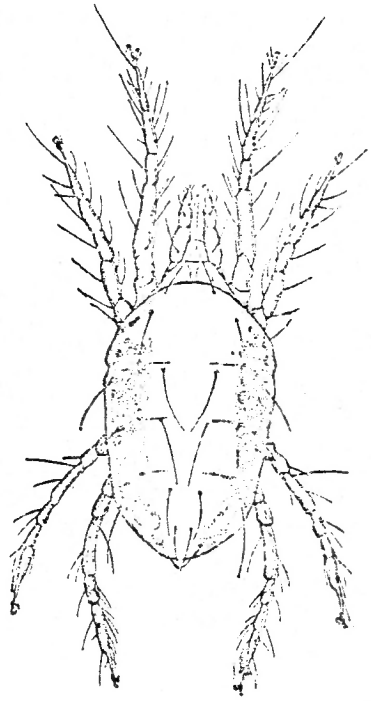
Pests of Succulent Plants

Part V. Mites

Dr. Ronald E. Monroe

This common pest is so small that huge populations can build up on succulents before they can be detected. Even during the winter months these eight-legged arthropods can inflict considerable damage and although the infestation may appear to explode in the first warm weeks of spring, their increase in numbers was a continual process not noticed until nearly too late.

Systematics—Several species of mites of the genus Tetranychus (Acarina:Tetranychidae) have been identified as being a pest of succulent plants. The two-spotted spider mite (Tetranychus bimaculatus) is very common on greenhouse plants (Metcalf et al., 1951) as well as plants grown in the garden, and is without doubt the most frequent species found. Another spider mite, Tetranychus opuntiae, has been found on several species of Opuntia in the United States and Mexico (O. lindheimeri, O. cantabrigiensis, O. robusta and O. durangensis). Also attacked were Cylindropuntia leptocaulis and C. imbricata (Mann, 1969). This mite also was reported to have damaged Opuntia tomentosa in Mexico, O. dillenii in Haiti and O. inermis and O. stricta in Australia (Mann, 1969). Another mite, Eriophyes aloinis (Acarina:Eriophyidae), was found to cause galls to form on aloes (Hardy, 1968) and Eriophyes sp. was reported to infest joints of Opuntia inermis (Mann, 1969).



—The two-spotted spider mite *Tetranychus bimaculatus* Harvey, adult female, highly magnified.

Plant damage—Mites feed upon the sap of the plant which is drawn by piercing the stem or leaf with two sharp, slender stylets attached to the mouth. Besides the loss of sap, there is considerable damage to the plant from salivary secretions and the latter type of damage often appears to be the most devastating. Cactus stems become chlorotic or possess chlorotic spots and leaves shrivel and finally fall; plants become stunted and misshappen and many die or succumb to secondary invasion.

Biology—The adult female is eight-legged and pale yellow or greenish in color and about 1/60 inch in length; the male is similar, but smaller. Two dark spots (in Tetranychus bimaculatus), composed of the food contents, show through the transparent body. After mating, the females lay from 2 to 6 eggs per day until a total of about 70 have been layed. The eggs are spherical and shiny and are deposited on the plant per se or on the web which the mites spin wherever they go over the plant. The eggs hatch in 4 to 5 days into

small, crawling young which closely resemble the adults except that they are hexapod (with 6 legs). These young mites feed on the plants and often migrate to adjoining plants; during their growth, the females moult three times while the males moult only twice. A complete generation is from 20 to 40 days, but generations overlap; therefore, all stages of development may be found on a single plant.

Control—The damage inflicted by mites is impressive and immediate control is essential. One type of control is to spray the plants vigorously with cold water which knocks off the animals and eggs and disrupts the webs; however, such action may also be damaging to succulent plants and such a possibility must be assessed before implemented. There is also a natural control in the form of predatory mites (often seen on the infested plants, moving about rapidly in search of prey and often much darker colored). Unfortunately, the predator's populations usually lag behind the host's populations and some damage can usually be expected unless other measures are used. Chemical controls are usually necessary and Cygon .2E or Malathion (some resistance has been noted with the latter pesticide) may be used as directed. A true acaricide, Kelthane, is not only effective, but is more residual and one application is usually sufficient to do the job. It must be pointed out that the entire collection must be treated even though a preliminary examination shows only a few of the plants infested. A few mites on the other plants and an initial select spraying will prove to be a waste of time in the long run.

References Cited

Hardy, D. S. 1968. The spiral aloe from the Maluti mountains. Cact. and Succ. J. 40:49-51.

Mann, John 1969. Cactus-feeding insects and mites. Smithsonian Institution Press, Washington, D.C., 158 pp.

Metcalf, C. L., W. P. Flint, and R. L. Metcalf. 1951. Destructive and useful insects. Their habits and control. McGraw-Hill Book Co., Inc., New York. 1071 pp.

GREEN THUMB SHOW

The San Diego Wild Animal Park will host the following Green Thumb Show this month:

July 14-15: Rare and Unusual Plants

ADAPTATION

by Martin L. Mooney

Succulent plants are usually regarded by collectors as rare gems to be cherished — prized possesions to be gazed at in wonder and jealously guarded. The chief appeal for some enthusiasts lies in the often bizarre and strange shapes of these plants. Others are fascinated by the knowledge that these plants represent a form of life that flourishes under specialized conditions in the remote corners of our world.

Succulent plant life is represented by what many botanists consider to be very primitive groups of plants, which still occur today, with a much more advanced form of adaptation. Certain shrubby Euphorbias and the so-called Grass Aloes are considered to be very primitive. They occur where the incidence of rainfall has, over time, been high and the region has not been subjected to prolonged periods of drought. The more advanced forms occur in deserts, semi-deserts, and areas that lay largely in the rain shadow of mountains. Some of the most advanced forms of succulent plants are the Euphorbias and Aloes from these regions of prolonged drought.

Over millions of years the evolution of plants which store moisture in their leaves, stems, or root systems, as a safeguard against inadequate rainfall, has produced a large variety of truly astonishing forms. Some of the stem succulents (ie. Pachypodiums, Cyphostemmas, Adenias, and Adeniums) have large water-storing stems that have developed while the leaves are only slightly succulent, if at all. In others, such as many Euphorbias, Stapeliads, and the Trichocaulons, the stems and branches contain chlorophyll and have taken over the role of the leaves, while also acting as water-storage reservoirs. However, in others, such as Aloes, Crassulas, Mesembs, and several other genera, it is specifically the leaves that function as water-storage reservoirs.

Among the Mesembs, the Lithops may be the most advanced form known. In their natural habitat the whole plant grows underground, with only the leaf tips visible (see Fig. 1). They mimic their surroundings in that they are the same size, shape, and color as the surrounding stones. They are extremely well-disguised, particularly in summer when the old, dry leaves become bleached and reflect the sun. This form of adaptation is most probably of a protective nature, as these small succulents would make tender morsels, were they not camouflaged, for birds and other small inhabitants of these arid lands.

It is this diversity of forms which makes the pleasures of studying, growing, and photographing succulent plant life a most baffling and rewarding experience.

A. Root system

B. Shortened stem

C. New bud

D. Vascular system

E. Protecting skin

F. Chlorophyll area for photosynthesis

G. Water-storage area and diffusing lens

H. Leaf-tip "window" which acts as light filter

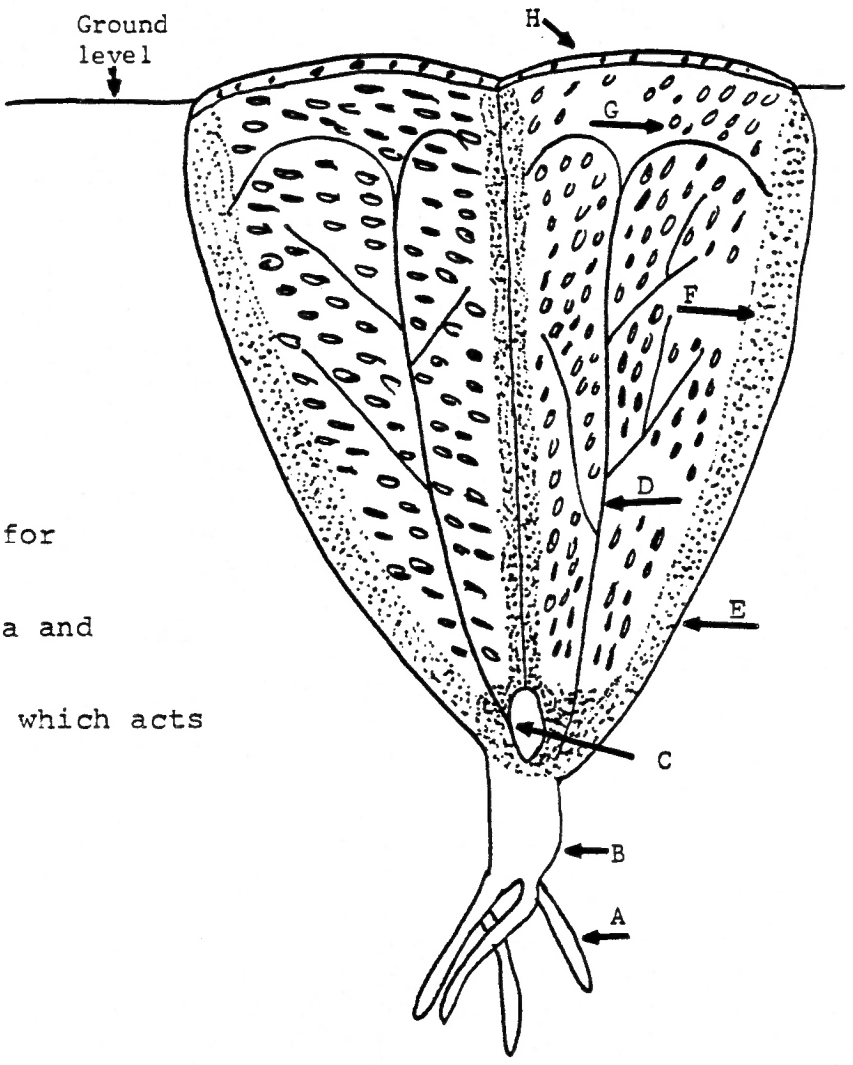


Figure 1. LITHOPS

SAN DIEGO BOTANICAL GARDEN FOUNDATION SHOW SCHEDULE

The San Diego Botanical Garden Foundation announces the following shows which are to be held in the Casa del Prado during the upcoming weeks:

July 15 — San Diego Co. Dahlia Society Specimen Show
July 22 — Convair Garden Club Dahlia Show
July 28-29 — San Diego Gesneriad Society 3rd Annual Show
August 4-5 — San Diego Co. Dahlia Society Annual Show

THE "FAMILY TREE" OF THE FLOWERING PLANTS

by Rick Latimer

As promised last month, we are including in this issue a family tree (shrub?) of the flowering plants. Such diagrams are never alike from one authority to another and are therefore a study in themselves. The diagram on the following page is taken from Gordon Rowley's *The Illustrated Encyclopedia of Succulents* and is attributed to Takhtajan (1966). This two-dimensional shrub includes seventy-three orders of Dicotyledons and twenty-one orders of Monocotyledons. Those orders containing families that themselves contain succulent species are starred (*), and the families written out. Approximately three to four percent of all known species of flowering plants are succulent. The orders are arranged so as to show the increasing levels of structural complexity as we go from bottom to top. The Magnolias are generally considered to be the most primitive, whereas the Daisies are the most advanced. The Cactus Family falls in between. Although we consider this family "advanced", as far as "succulence" is concerned — it is evidently one that is not highly "advanced" in terms of flower structure, but one which has made an astounding development in another, and perhaps more important, direction — highly drought resistant stems.

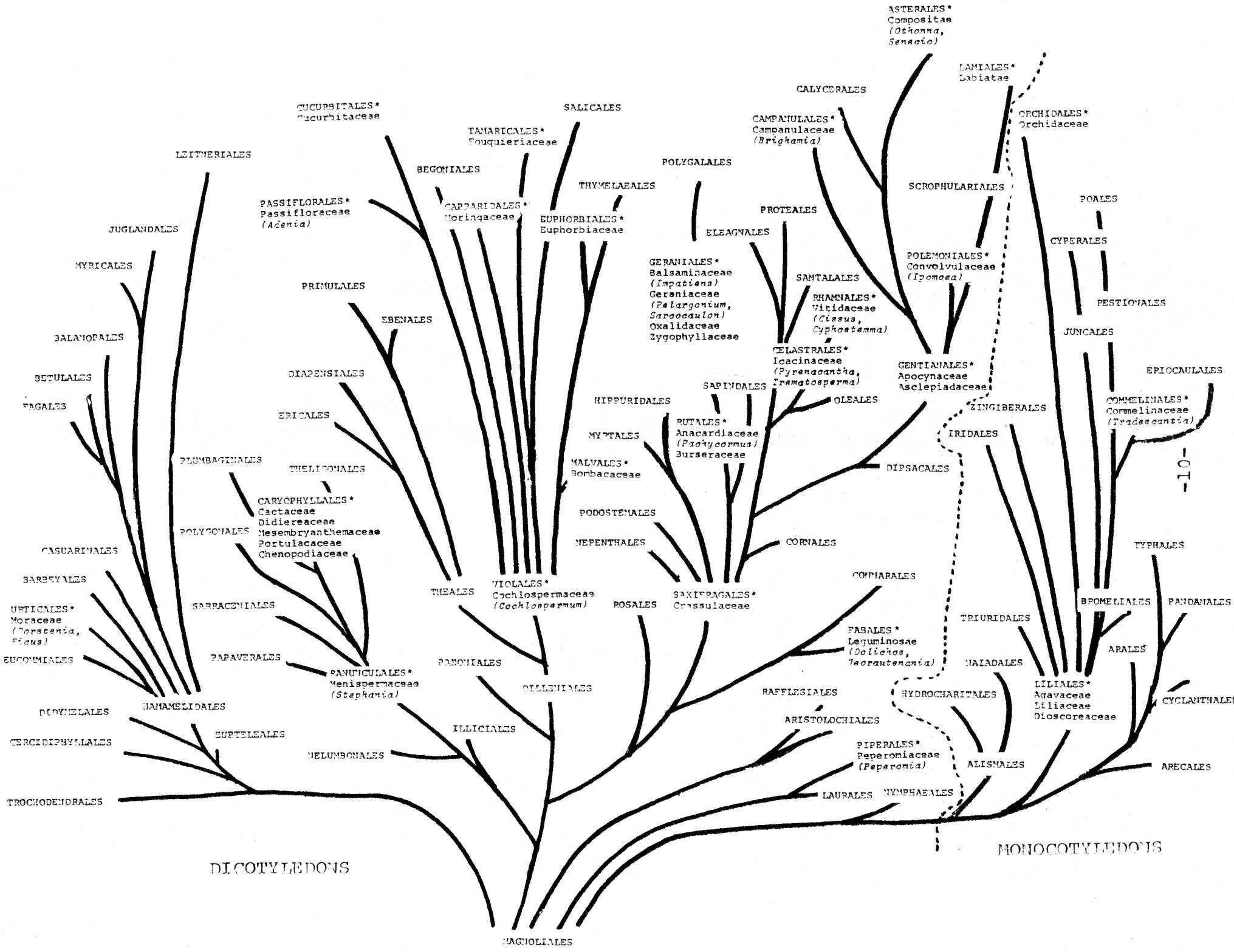
REPORTER WANTED

Many of the responses we received in the recent "Interest Finder" questionnaire mentioned that they would like to see more articles and information on our members. Along this line, we are searching for a volunteer to write a personality column for *Espinas y Flores*. We need someone to report on events, gardens, personalities, interests, hobbies, travels, etc., of any of our members. Contacts could be made by phone, in person, or by conversation at our meetings. Articles would not have to be typewritten, nor would you have to be a good speller or grammarian -- the editor will help with those parts. What we need is someone to get the information. If interested, please contact Jim Dice at 278-0326.

NEW MEMBERS

We welcome this month the following new members:

Mike Dorsey, San Diego
Mr. and Mrs. Richard E. Fogg, El Cajon
Betty Townsend, Borrego Springs, CA
Henry Varney, Santa Monica, CA


ASTERALES*
Compositae
(Othonna, Senecio)
LAMIALES*
Labiatae
CALYCERALES
CAMPANULALES*
Campanulaceae
(Brighamia)
ORCHIDALES*
Orchidaceae
SCROPHULARIALES
POALES
CYPERALES
PESTIONALES
JUNCALES
ERIOCAULALES
COMMELINALES*
Commelinaceae
(Tradescantia)
ZINGIBERALES
IRIDALES
TYPHALES
BROMELIALES
PANDANALES
ARALES
TRIURIDALES
DIOSCOREALES
LILIALES*
Agavaceae
Liliaceae
Dioscoreaceae
HYDROCHARITALES
CYCLANTHALES
ARECALES
ALISMALES
NYMPHAEALES
LAURALES
PIPERALES*
Peperomiaceae
(Peperomia)
ARISTOLOCHIALES
RAFFLESIALES
POLEMONIALES*
Convolvulaceae
(Ipomoea)
GENTIANALES*
Apocynaceae
Asclepiadaceae
POLYGALALES
PROTEALES
ELEAGNALES
GERANIALES*
Balsaminaceae
(Impatiens)
Geraniaceae
(Pelargonium, Sarcocaulon)
Oxalidaceae
Zygophyllaceae
SANTALALES
RHAMNALES*
Vitidaceae
(Cissus, Cyphostemma)
CELASTRALES*
Icacinaceae
(Pyrenacantha, Trematosperma)
SAPINDALES
OLEALES
DIPSACALES
CORNALES
CORNARALES
RUTALES*
Anacardiaceae
(Pachycormus)
Burseraceae
HIPPURIDALES
MYRTALES
PODOSTEMALES
NEPENTHALES
SAXIFRAGALES*
Crassulaceae
ROSALES
FABALES*
Leguminosae
(Dolichos, Teorautencania)
MALVALES*
Bombacaceae
THEALES
VIOLALES*
Cochlospermaceae
(Cochlospermum)
CUCURBITALES*
Cucurbitaceae
TAMARICALES*
Fouquieriaceae
SALICALES
BEGONIALES
CAPPARIDALES*
Moringaceae
EUPHORBIALES*
Euphorbiaceae
THYMELAEALES
PASSIFLORALES*
Passifloraceae
(Adenia)
LEITNERIALES
JUGLANDALES
MYRICALES
BALANOPALES
BETULALES
FAGALES
PRIMULALES
EBENALES
DIAPENSIALES
ERICALES
THELIGONIALES
PLUMBAGINALES
CARYOPHYLLALES*
Cactaceae
Didiereaceae
Mesembryanthemaceae
Portulacaceae
Chenopodiaceae
POLYGONALES
CASUARINALES
BARBEYALES
URTICALES*
Moraceae
(Dorstenia, Ficus)
EUCOMMIALES
SARRACENIALES
PAPAVERALES
PANURCULALES*
Menispermaceae
(Stephania)
PAEONIALES
DILLENIALES
ILLICIALES
MELUMBONALES
HAMAMELIDALES
DIDYMELALES
EUPTELEALES
CERCIDIPHYLLALES
TROCHODENDRALES
MAGNOLIALES
DICOTYLEDONS
MONOCOTYLEDONS
-10-

1979 SDCSS Show Winners

Div. IA — Indiv. Potted Cactus (Phillip Corliss Perpetual Plaque)

1st: *Cephalocleistocactus ritteri* — Gerald Dice
2nd: *Copiapoa krainziana* — Tom Hamecher
3rd: *Setiereus icosagonus* — Frank Thrombley
Hon. Men.: *Espostoa nana* — Tom Hamecher
Hon. Men.: *Opuntia ramosissima* — Clinton Crowe

Div. IB — Indiv. Potted Succulent (Ruby Falk Perpetual Plaque)

1st: *Hoodia burkei* — Marcia Monroe
2nd: *Adenium obesum* — Gerald Dice
3rd: *Ficus brandegeei* — Lee Phelps
Hon. Men.: *Fockea edulis* — Mike Buckner

Div. II — Indiv. Grafted Plant

1st: *Rebutia albopectinata* — Floyd Gable
2nd: *Notocactus scopa* — Nellie Kennett
3rd: *Euphorbia ingens* — Floyd Gable

Div. III — Indiv. Crested or Monstrose Plant

1st: *Pachypodium lamerei* — Mike Buckner
2nd: *Opuntia vestita* — Floyd Gable
3rd: *Euphorbia flanaganii* — Nellie Kennett

Div. IV — Indiv. Crested or Monstrose Plant (Grafted)

1st: *Euphorbia suzanne* — Floyd Gable
2nd: *Parodia aureispina* — Floyd Gable
3rd: *Cephalocereus senilis* — Floyd Gable
Hon. Men.: *Rebutia senilis* — Floyd Gable
Hon. Men.: *Hildewinteria aureispina* — Ruth Richardson

Div. V — Bonsai or Caudiciform Plant

1st: *Ficus brandegeei* — Lee Phelps
2nd: *Operculacaryia decaryi* — Lee Phelps
3rd: *Trichodiadema bulbosa* — Lee Phelps
Hon. Men.: *Plumeria mexicana* — Mike Buckner

Div. VIA — Planters (Rooted Material): Dish Garden

1st: Sedums — Doris Rake
2nd: Aloe — Oliver & Sophie Loyland
3rd: Haworthias — Floyd Gable
Hon. Men.: Mesemb (*Oscularia*) — Oliver & Sophie Loyland

Div. VIB — Planters (Rooted Material): Interesting Container

1st: Burro — Doris Rake
2nd: Echeveria — Doris Rake
3rd: Succulents — Floyd Gable
Hon. Men.: Euphorbia — Oliver & Sophie Loyland

Div. VII — Hanging Plants

1st: *Rhipsalis werklei* — Bill & Ruth Nelson
2nd: Epiphyllum — Estelle Viertel

Div. VIII — Display of Miniature Plants

1st: Lee Phelps

Best Educational Exhibit (CSSA Award)

1st: *Rebutia* — Ron Monroe
2nd: *Melocactus* — Tom Hamecher
3rd: Peru-Chile — Tom Hamecher
Hon. Men.: *Euphorbia* — John Pasek

Most Artistic Exhibit (Walter and Hazel Scott Perpetual Plaque)

Walter Scott

Best Exhibit (Reuben Vaughan Perpetual Plaque)

Mike Buckner

SHOW NOTES

This year's Annual Show and Plant Sale, held June 2-3 in the Casa del Prado, was once again a tremendous success. As with any event of its size and caliber, there were many people whose talent and hard work combined to make it all possible. We would like to take this opportunity to express our thanks to those individuals, starting with Floyd Gable, who not only did a superb job in organizing the whole affair, but once again walked off with the lion's share of ribbons.

Thanks are also due to Carl McLeod, Gerald and Eleanor Dice, Warren and Virginia Buckner, Doris Rake, Perlso Lewis, John and Verna Pasek, Rose and Tony D' Attilio, Donna Dixon, Ron Monroe, Ruth and Bill Nelson, Betty Athy, Angela and Mal Burdis, Amna Cornett, Oliver and Sophie Loyland, Lee Phelps, Frank Thrombley, Tom Hamecher, John Blackmer, George and Nan Kelsch, Judy Hannula, Mike Blood, and Rob Skillin — all of whom helped either with plant sales, greeting visitors, answering questions, setting-up or taking down exhibits, or keeping an eye on displays. Our thanks go also to Peter Sharp and Kitty Sabo, who served as judges. Some names have undoubtedly been left out of this list — but we would like all concerned to know that their time and efforts were truly appreciated.

NOTES & NEWS

In the recent Interest Finder questionnaire, members requested an opportunity for a question and answer session. As a result, beginning with next month's meeting, the Board of Directors will wear designated badges at each meeting and the members are invited to consult with them any time before the meeting, during the break, or after the meeting, with any questions they may have pertaining to our hobby.

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

1st: Joan Johnson — *Tacitus bellus*
2nd: Mike Burkhardt — *Ariocarpus agavoides*
3rd: Nellie Kennett — miniature Rebutia

Librarian Betty Athy has a new assistant in Marcia Monroe.

Doris Rake put in an excellent display of plants for the V.I.P. Table at the June meeting. Martin Mooney is still in need of volunteers to put in displays at the August meeting and for future meetings. If interested, please contact Martin at 427-6796.

Deadline for the August issue is July 26th.

Jim Dice
6066 Portobelo Court
San Diego, CA 92124

Address Correction Requested

San Diego Cactus & Succulent Society

Officers

President - Tom Hamecher 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 - Amna 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

Shirley Berry, Perlso Lewis, Dr. Ronald Monroe,
Martin Mooney, John Pasek, Dr. Leroy Phelps

Committees

Activities: H. Warren Buckner
Audit:
Conservation: Dr. Ronald Monroe
Education:
Cacti - 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
Membership: Joan Johnson
Open House: Floyd Gable
Plant Exchange Table: Ethel Standish and Doris Rake
Plants & Supplies Table: Carl McLeod
Programs: Richard Latimer
Publication: Jim Dice (ph. 278-0326 or 276-2589)
Reception: Perlso Lewis and Veryl Snowhill
Regalement: Nancy Roth
Representatives:
Balboa Park Desert Garden -
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 $6.00 per family. Single copies of *Espinas y Flores* are 50¢.