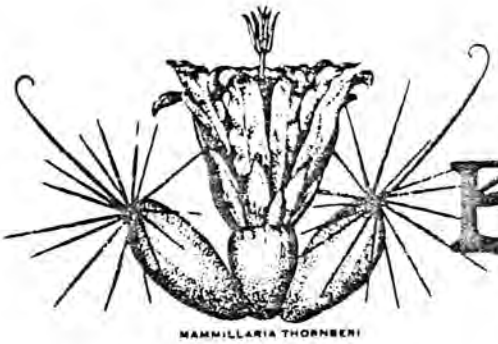

Espinas y Flores

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

Vol. XV, No. 1. January, 1980

January Meeting

Saturday, January 12, 1980
1:30 pm
Casa del Prado, Room 101, Balboa Park

Lotusland

by Jim Gibbons

Lotusland is a private estate of nearly 40 acres located in Montecito, California, near Santa Barbara. For nearly 40 years Mme. Ganna Walska has devoted all her energies to making Lotusland one of the unique botanical gardens of the world. The garden is maintained by 22 full-time gardeners and at the present time is open to visitors only by special invitation. This month's program is presented, appropriately, by the prize-winning horticultural manager of the San Diego Wild Animal Park — Jim Gibbons.

In This Issue . . . . . Page

Cylindropuntia — R. Monroe 2

CSSA Election 3

Sempervivoideae — R. Latimer 4

Member Interviews: Gerald and Eleanor Dice — M. Monroe . . . 6

Pests of Succulent Plants: Part XI — R. Monroe 7

SDC&SS Election 9

Regalement 9

New Members 9

Cactus-of-the-Month

Cylindropuntia

Dr. Ronald E. Monroe

The genus Opuntia (Theophrastes, in his writings, mentions a plant which "puts forth roots from its leaves", and which was reputedly found in the vicinity of the city of Opunte. Pliny called this plant "Opuntia". When the first prickly pear cacti were imported from America, the botanist Pietro Andrea Mattioli (1500-1577) took them to be the long-lost "Opuntia" of Pliny. This was, of course, a mistaken idea since the writers of antiquity could not possibly have known any plants from America; Barthlott, 1979) has been variously divided into smaller sections or sub-genera by different authors. Britton and Rose (1937) knew of only a few species; therefore, they lumped the whole into Opuntia as did Borg (1959). Backeberg (1977) split Opuntia into: Opuntia (with stems more or less flattened), Corynopuntia (a reduction of Cylindropuntia, the shoots mostly elongated or not elavate), Tephrocactus (somewhat spherical forms), Austrocylindropuntia (cylindrical forms from South America without spine-sheaths) and, finally, Cylindropuntia (mainly more northern cylindrical opuntias which do have noticeable or rudimentary spine-sheaths). Backeberg (1977) considered ca. 43 species as proper to this genus which range from the deserts of southern United States to central Mexico and Baja California; however, some authors have moved some of the Backeberg-acknowledged species to the other genera, thereby reducing the number slightly (Anon., 1974; ca. 36 species and 16 varieties as proper to the genus).

Cylindropuntia grow tree-like (C. fulgida), shrubby (C. echinocarpa), scrubby (C. brittonii) to ascending or prostrate (C. californica) and are often characterized by conspicuous spination with sheaths which are sometimes brightly colored. The spines are very sharp in some species, and even vicious and strongly barbed and difficult to remove from skin or flesh (C. bigelovii; Venning, 1974). The stems are jointed and possess wooly areoles. Besides the spines proper, the areoles also have glochids or bundles of short, stiff bristle-like spines, and these may even be found on the fruits (which may be edible). The flowers are found singly on the areoles and have a spreading, showy rotate corolla of various colors (C. acanthocarpa, red to yellow; C. bigolowii, violet-carmine, yellow or green-yellow with a purple spot; C. brittonii, greenish-white; C. cholla, deep purple; C. echinocarpa, yellowish, red-tipped outside and C. prolifera, red).

These cacti, although not popular as potted plants, make tremendous accent specimens in yards wherever a sunny location is available. They are not demanding and require little to no water (except that obtained naturally from rain), and very little plant food is required (too much added water or fertilizer will cause rapid etiolation).

Propagation is by either rooted cuttings or from seed; however, seed is difficult as it has a very tough outer coat and is hard to germinate (seed in habitat is either blown about by sand and abraded, or the fruits are eaten by animals or birds and the seed passed out with the faeces; thus, it is more prone to germinate under natural conditions).

Pests, as a rule, are very fond of these cacti, but can be controlled easily with Cygon.2E.

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CSSA Election

Results of the Cactus and Succulent Society of America's recent election of officers and board members were announced following the Society's December board meeting. Officers for the upcoming year are:

President — Kitty Sabo
Vice-president — Dr. Leroy Phelps
Secretary — Henrietta Royce
Treasurer — Virginia Shambeau

In addition, the following three members were elected to four-year terms on the Board of Directors:

Joe Clements, Dr. Donald Monroe, and Sam Williams.

Succulent-of-the-Month

SEMPERVIVOIDEAE

by Rick Latimer

The Stonecrop or Orpine Family (Crassulaceae)is generally considered to be the easiest to grow of the "Big Four" of succulent families (the other three being Cacti, Mesembs, and Asclepiads). All members of this family have flowers of remarkable symmetry, with an equal number of sepals, petals, and pistils, and either as many or twice as many stamens. The number of petals commonly is five and sometimes four, but the subfamily starring this month may have six to fifteen or even as high as thirty-five petals. As with most members of this family, each branch is monocarpic.

The name for the genus Aeonium derives from the Greek word for 'everlasting'. The Canary Islands (like Madagascar and Baja California) are remarkable for a large number of endemic species of plants. Among the Canary Islands' species of Aeonium and its relatives there exists the greatest degree of endemism. Of some fifty-nine kinds occuring in the Canaries, only one has been found elsewhere, and that on the nearby Salvage Islands; and the ten others not found in the Canaries are mostly on neighboring islands. There are about thirty-nine species of Aeonium of which thirty-three are confined to the Canary Islands, two to Madeira, two to the Cape Verde Islands, and the last two to Morocco (A. arboreum) and Ethiopia and Arabia (A. leucoblepharum). The above mentioned relatives are the genera Aichryson, Greenovia, and Monanthes. The Greenovias were named after George Bellas Greenough and the genus Monanthes means having one flower (not flowering once?) which is a misnomer. Of the fifty-nine species of these four genera; forty of them occur only on one island, ten on only two islands, four on three islands, two on four islands, two on five islands, one on six islands, and no species occurs naturally on all seven of the main islands of the Canaries. Most plants of this section of the Sempervivoideae are frost tender.

Most of the Aeoniums grown in our area are generally considered easy to grow and common and left at that. When the Lambs were here last May, we found out that there were many plants that we had not seen or heard of before. Plants range from large fuzzy rosettes like A. canariense(Tenerife) to flat-as-a-pancake A. tabulaeforme(Tenerife), to dome-forming, smaller, bluish rosettes A. haworthii(Tenerife), or reddish rosettes as in A. decorum(Gomera), down to the sticky leafed, miniature A. sedifolium(Tenerife). Members should recall that this plant was judged as the best succulent as part of the September program and was owned by Amna Cornett. A choice species that is hard to grow is A. smithii(Tenerife) which has hairy stems and is deciduous. The black leafed A. "Zwartkop" is a mutant of A. arboreum atropurpureum that turned up in the Netherlands. A. lindleyi (Tenerife, La Palma) may be used as an antidote for Euphorbia juice in the eye. Most Aeonium flowers are yellow (A. arboreum's flower cone being an example), but some are whitish, pink (A. goochiae(La Palma)), or

red (A. nobile(La Palma)). Aichrysons have yellow flowers, the plants look similar to Aeonium lindleyi, and are often biannual. Members may remember Doctor Corliss's A. tortuosums(Lanzarote, Fuerteventura). Greenovias carry the common name of "Irish Rose". G. diplocyla never makes offsets and G. aurea(Ten., Gran Canaria, Gomera, Hierro, and La Palma) is the one usually seen in cultivation. Plants go dormant in the summer when they dieback up. The genus Monanthes seems to be represented in cultivation by tiny M. polyphylla(Gran Canaria, Ten., and La Palma) with its green flowers. Species of this genera have a ring of conspicuous nectar glands in each flower.

Sempervivium is the genus that gives this subfamily its name and means in Latin 'live forever'. There are about thirty-five species (and many hybrids, natural and otherwise) that are native to the mountains of Europe, Asia Minor, and northwestern Africa as high as 13,000 feet. Plants therefore are not frost tender and are popular in the rest of this country. Those species with bell-shaped flowers with parts in sixes or sevens have been split by some authorities into the separate genus Jovibarba meaning 'Beard of Jupiter'. Common names for the genus Sempervivium are "Living Tapestry","Houseleeks", and "Hen and Chicks". Rosettes may range from pale chartreuse (S. allionii(Alps), to dark purple (S. atropurpureum(Jura Mts.)). Two special species are S. arachnoideum (Pyrenees, Alps, Apennines, and Carpathians) with its spider web hairs and S. ciliosum(Bulgaria) covered with hairs. An unusual plant is S. "Oddity" which must be monstrose. Flowers range from white (S. Kindingeri), to yellow (S. ciliosum), to pink (S. borissovae), to red (S. arachnoideum), to purple (S. montanum). Sempervivums usually go dormant in the Fall and Winter.

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David & Zoë Bramwell, Wild Flowers of the Canary Islands.

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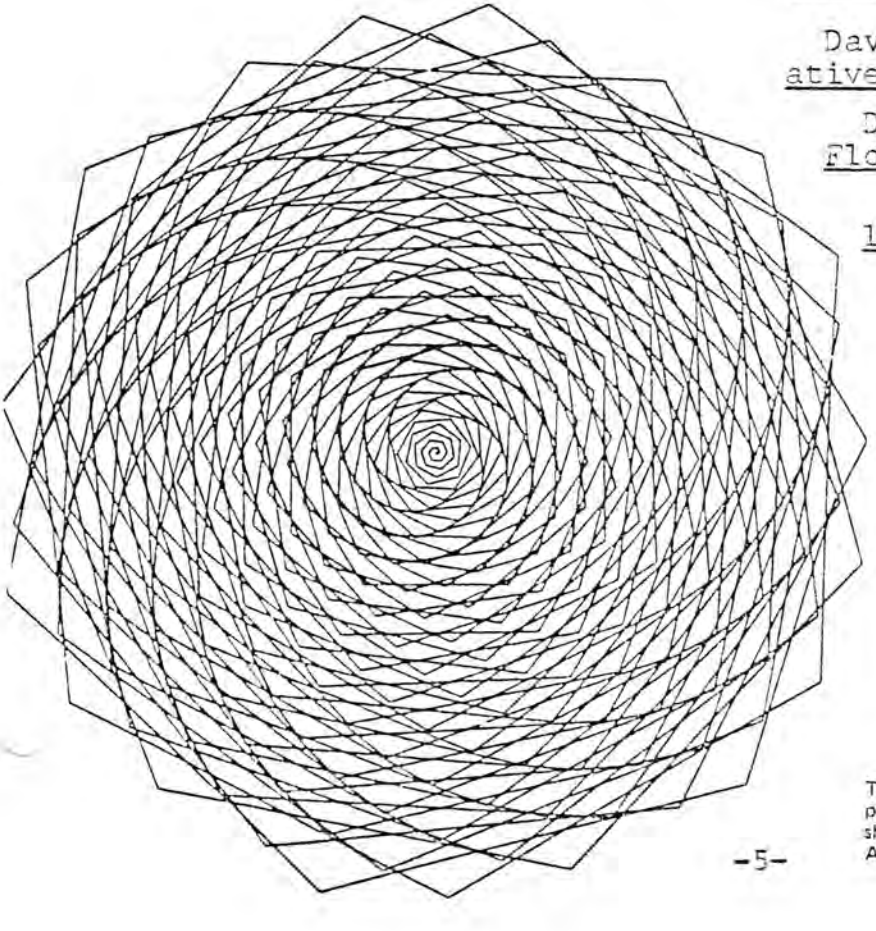
Reid Moran, "Aeonium undulatum", California Gardens, (68:4), p. 116-117.

Helen E. Payne, Plant Jewels of the High Country.

Gordon Rowley, The Illustrated Encyclopedia of Succulents.



This design is a plot of the equation, r = sin (1.25) * θ. The 360 points generated were connected by vectors to produce the spiral shown. The design is by Steve Rogowski, Computing Center, SUNY, Albany, N. Y.

Member Interviews: Gerald and Eleanor Dice

by Marcia Monroe

The Dices have resided in San Diego (the Clairemont area) since 1956, when they moved here from Cameron, Missouri. During the late '50's and early '60's, Gerald was employed as an aircraft assembler at Solar, Rohr, and General Dynamics/Convair. Since 1962 he has worked for Solar Turbines International (formerly Solar) where he presently is a turbine-packaging mechanic. In her spare time Eleanor enjoys cooking and sewing. They have one daughter and their son, Jim, is a former editor of *Espinas y Flores*.

Gerald's collection of cacti and succulents began 15 years ago when a friendly neighbor gave him several cuttings, and has developed into a full time habit. The Dices are members of the Cactus and Succulent Society of America, as well as its Affiliate Societies of San Diego and Palomar. They have been members of our club for four years. Gerald served as our 2nd Vice-president during 1977-1978. During those two years Gerald and Eleanor had the tedious task of running the plants and supplies table, and they continued to help Carl McLeod with that task throughout the past year.

Gerald has a special interest in pachypodiums and his collection includes such species as *Pachypodium baroni* var. *windsori*, *P. brevicaule*, *P. horombense*, and *P. geayi*. He is also interested in cycads and has ten different species which were purchased from Cynthia Giddy of South Africa. His collection also contains numerous unlike species of cacti, such as mammillarias, rebutias, sulcorebutias, and notocactus. Last June, at the San Diego Cactus and Succulent Society's Annual Show, Gerald won first place in Division IA (individual potted cactus) with his *Cephalocleistocactus ritteri*, receiving the Phillip Corliss Perpetual Plaque. In addition, he was awarded a second place in Division IB (individual potted succulent) for his *Adenium obesum*.

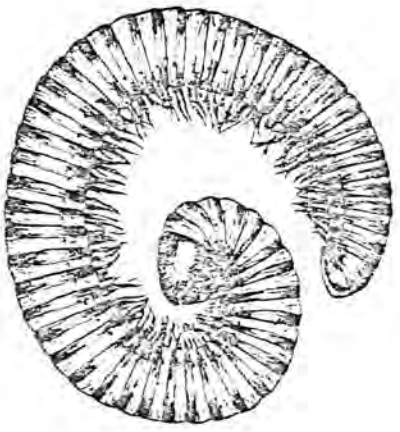
With regard to the culture of his plants, Gerald makes a large hole in the bottom of each pot, and then covers it with loose gravel to ensure good drainage. He then adds a porous potting mixture of Supersoil®, sand, and agricultural pumice. He advises anyone, with or without respiratory problems, to use extreme caution in the use of Cygon 2-e®, or any other insectiside. He suggests that you wear protective clothing, gloves, and a mask during spraying and that you shower thoroughly and wash your clothes after each spraying.

Pests of Succulent Plants

Part XI. Pill bugs, centipedes and millipedes.

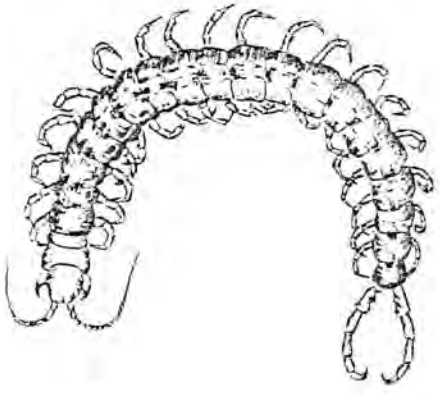
Dr. Ronald E. Monroe

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.



A common millipede

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 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



A southwestern centipede

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 marsuqium 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.

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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.

SDC&SS Election

Voting for members of the Board of Directors was conducted at our December meeting and resulted in the election of the following six members to two-year terms on the Board:

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

Regalement

A reminder that the following members have signed up to provide refreshments at the January meeting:

Angela Burdis, John Myers, Nan Kelsch, Melba Batchelor, Evelyn Chatham, Lydia Evans, Verna Pasek, and Estelle Wiertel.

New Members

We welcome this month the following new members:

Roselyn R. Bracken, San Diego
Douglas Diener, Solana Beach
Catherine Engel, Encinitas
Mrs. Elsie Graydon, Maungatapu,
Tavranga, New Zealand
Seymour Linden, Pacific Palisades, CA
The Family Cactus & Succulent Club,
Des Moines, Iowa (exchange)

Deadline for the February issue is January 19th.

Marcia Monroe
5635 Severin Drive
La Mesa, CA 92041

Address Correction Requested

San Diego Cactus & Succulent Society

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

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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 Marcia Monroe
Membership: Joan Johnson
Open House:
Plant Exchange Table: Ethel Standish and Doris Dake
Plants & Supplies Table: Carl McLeod
Programs: Richard Latimer
Publication: Marcia Monroe (ph. 461-8444)
Reception: Perlso Lewis and Veryl Snowhill
Regalement: Nancy Poth
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¢.