

THE SOUTH COAST CACTUS & SUCCULENT SOCIETY

NEWSLETTER

April 1987

ANNIVERSARY FIELD TRIP

Sunday April 12, 1987

from 8 AM until 4:30

Meet in the parking lot of the
South Coast Botanic Gardens,
26300 Crenshaw Blvd., Palos
Verdes Peninsula at 8 AM SHARP!

Bring: Lunch and drinks,
comfortable clothes,
sweater or jacket,
sun block, camera,
money for those
irresistable plants.

VISITING

DESERT NURSERY IN
RIVERSIDE

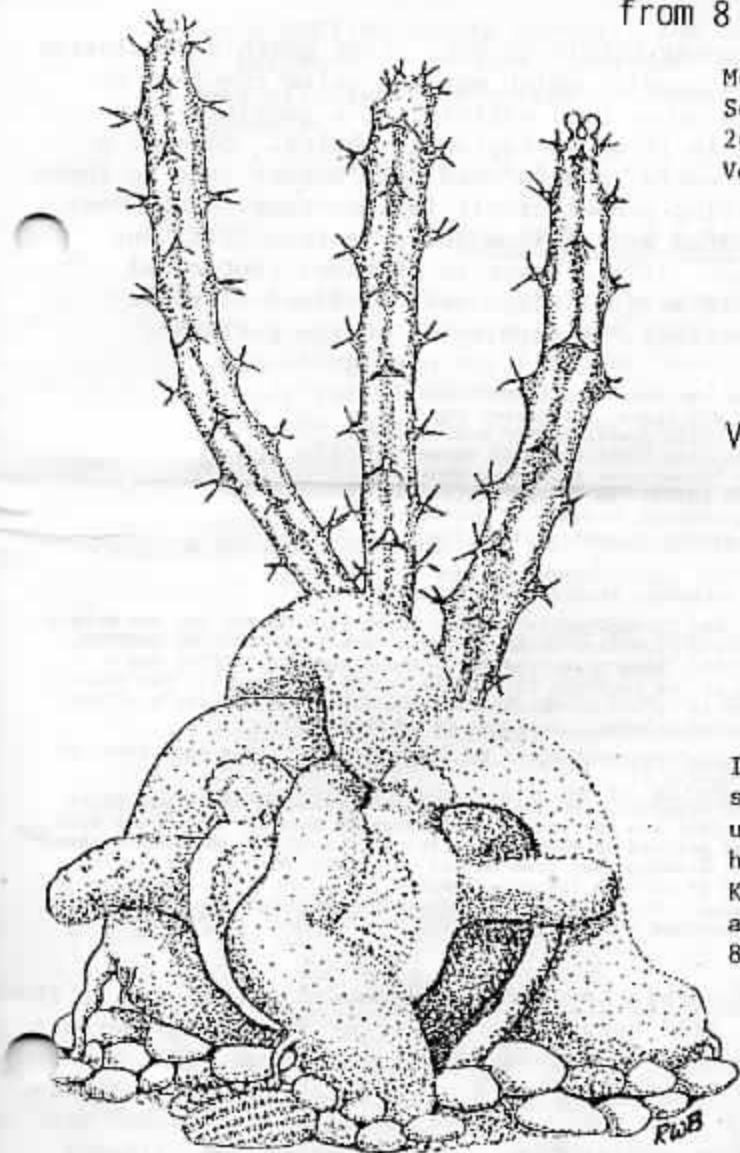
AND HOUSE OF CACTUS
IN STANTON.

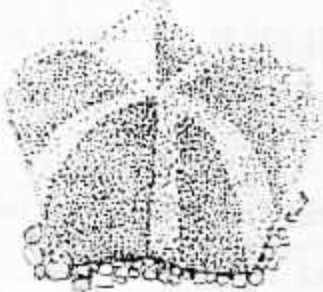
PICNIC LUNCH UNDER
THE ACACIA AT DESERT
NURSERY.

IMPORTANT: If you haven't yet
signed up, or if you did sign
up but now can't go, or if you
have a question, CALL CAROL
KENNEDY, OUR TRIP ORGANIZER,
at (213) 679-6021, between
8 & 9 PM preferably.

REMEMBER THE BUS LEAVES
AT 8 AM. DON'T BE LATE
FOR OUR FREE ANNIVERSARY
BUS TRIP. (The trip is
free, the plants you buy
won't be!)

Euphorbia knuthii





1987 OFFICERS: President Ed Hancock (375-3410), 1st VP (Publicity) Carol Kennedy (679-6021), 2nd VP (Programs) Jim Hanna (920-3046), Secretary Dorothy McArthur (547-5401), Treasurer Roz Hancock (375-3410). Show Chairmen are Norma Holley (also Membership, 212-6130) and Bob Causey & Carol Kennedy. N.L. Editor is Carol Wujcik, 10860 El Mar, Fountain Valley, 92708, (714-963-3166).

THE PROBLEM OF GIVING CREDIT WHERE CREDIT IS DUE: Last month's newsletter (n.l.) for March 1987 included credits which weren't quite complete or clear. Since we exchange with other n.l. editors, it's possible they might want to reproduce items in it as we reproduce theirs. Ours is a small non-profit limited-time world, and we need each other! And to those who labor on these things, giving proper credit is important. But sometimes a problem. The Astrophytum myriostigma above is from CSIE, but which one? I've used it often. It's a favorite of mine. (Botanical nomenclature by the way; should be italicized or underlined - a time-consuming procedure I often neglect. My apologies to the purists!)

The primary problem with trying to give adequate credit for items from other newsletters etc. is lack of time and space. Sometimes the attribution is longer than the item itself. Also drawings used over & over in one club's n.l. including our own tend to lose their original source data. Also the original attribution may be incomplete, or end up that way as items go from n.l. to n.l. to n.l. Those things the editor writes may be unsigned entirely. In my n.l. I like to combine drawings or doctor them up or add my own captions. Trying to give credit to each part of the resulting whole is a problem.

Carol

Hence the following (semi?)clarifications:

1. The Cover - the "Bromelypics" runner is by Stan Oleson and was originally carrying a bromeliad torch. It was from the PINEAPPLE GAZETTE, #1, March, 1984, Stan Oleson editor. The PINEAPPLE GAZETTE was a publication of the Southern California Bromeliad Council. The Opuntia in the torch is by Elibet Marshall of the San Diego Society's ESPINAS Y FLORES, unknown issue. (unknown by me that is!)
2. The back cover "show cactus" is by Eleanor Barker for a past issue of the South Coast n.l.
3. The cartoons repeated from last year's show issue of the South Coast n.l. (June 1986) are devised from drawings by Anne Cleveland and Jean Anderson and arrived as photocopies from a friend. I understand that ^{that} delightful drawings are from an old college booklet. The captions were changed to go with the show issue n.l. A few were changed again for this issue. The captions are mine, but they were inspired by those by Cleveland and Anderson.

On the cover is a drawing of Euphorbia knuthii growing over a cow vertebrae by Bill Barnett from CSIE no. 9, 1980. This popular Euphorbia with raised roots is relatively easy and I've found it happy in part sun. Cut back the branches when they get too long - preferably at the start of the growing season. (Take all precautions re: Euphorbia sap.)

Haworthia truncata to the right is by Bill Barnett and is from CSIE, no. 1981. Grace Rollerson, we miss you! Grace was the editor of CSIE for many years.

NEW MEETING PLACE OR TIME? Unless there has been a reprieve, we won't be able to continue to meet at the Garden on Sunday afternoons, or weekends at all. We must either choose a weeknight, or find another place. Do you know of any churches, recreational centers, banks, etc. in the area where we might meet? As of July this year we will be locked out of the Garden on Sunday as a Club.

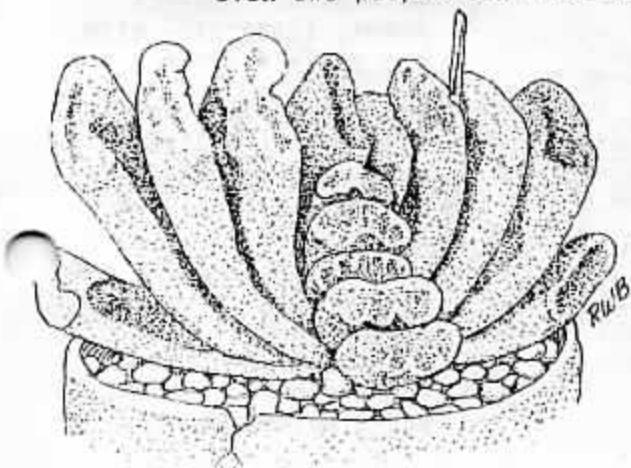
MARCH MEETING GARDEN REPORT: The cactus garden is reported to be gorgeous...the Aloes have been blooming. Only a few plants were affected by the frost - especially Aeoniums. Come see for yourself.

THE JUNE SHOW & SALE

- Start those plants you'll be donating to the club for the sale. Pick up your club pots and labels. When you do your spring repotting, you may find you have some spare offsets and divisions ready for their own pots. They'll want new homes, and our sale will be just the place for them to find those homes. Plus the club will have a little extra in the treasury for the benefits of membership, like the Anniversary Field Trip.
- We are renowned for our judges luncheon. When the call comes to sign up to bring something, say yes!
- Norma will be asking you to sign up for work times at the show. We need lots of coverage, and last year people were great at volunteering most of the time. But there are other times when help is badly needed, especially at the beginning of setup and also at takedown - both the show and the sales areas. One or even two people can't do it alone.

- Ed appointed a classification committee, so if you have questions, these are the people to ask: Jim, Eleanor, and Bob. They'll name that plant!
- Our library is also a good source when you want to figure out what to call your succulent. Usually you can at least figure out the genus or primary name.

continued...



MORE SHOW INFORMATION...

Norma went to a great deal of trouble figuring out how many entries each class had in last year's show. If you would like to know where the competition was (and wasn't) in last year's show, find your show schedule, and transfer the following entry numbers:

Div. I, Cactus, Section A, Individual Potted Specimens
Class 1 (had 3 entries), 2 (had 3 entries), 3 (1 entry), 4 (2), 5 (5), 6 (none), 7 (3), 8 (5), 9a. (3), 9b. (2), 10 (1), 11 (7), 12 (none), 13a (3), 13b. (1), 14 (3), 15 (1), 16 (9), 17 (3), 18 (none), 19 (5), 20 (9), 21 (6), 22 Melos (3) & Disco (3), 23a (4), 23b (2), 24 (3), 25 (5), 26 (3), 27 (4), 28 (5), 29 (1), 30 (2) 31 (3), 32 (none), 33 (3 Turbins & 2 Strombos), 34a (1), 34b (none), 35a (7), 35b (4).

Div. II, Other Succulents, Section A
Class 36 (6), 37 (3), 38 (3 Agave & 1 Yucca), 39 (5), 40 (2), 41a (6) 41b (2Hoya), 42 (1), 43 (none), 44a (4), 44b (3), 45a (2), 45b (5), 46 (4), 47a (4), 47b (10), 48 (3), 49 (6), 50 (10), 51 (6), 52 (3), 53 (1), 54 (1), 55 (3), 56 (1), 57 (5), 58 (6), 59a (2), 59b (none), 60 (6), 61 (6) 62 (9), 63 (none), 64 (3), 65 (2), 66 (2), 67 (none), 68 (2), 69 (8), 70a. (4), 70b (2), 71 (a), 71b (2).

Div. III Arrangements, Section A (1)
Section B (14) Class 1 (4), 2 (10), 3 (none)

Div. IV Miniatures, Section A Cactus, Class 1 (9), class 2 (1)
Section B, Class 1 (10), class 2 (1)

Div. V, Section A (4 entries), and section B (5).

Div. VI Arts/Handicrafts, Section A (none), Section B (none).

If you look at the above you'll see where the competition was last year, and where it wasn't. On the other hand, every year is different - (which is good). Nevertheless, you may see patterns which will encourage you to enter plants you might not otherwise.

Is it the "year of the Peacock" as per a flyer for the Baldwin Bonanza? No, it's the "Year of the Cat" (but not the Tiger) for some Asian nations; and it's the "Year of the Hare" for Japan and China. Next year will be the "Year of the Dragon" for all.



NEED A SHOW SCHEDULE OR ROSTER? CONTACT NORMA, (213) 212- 6130.

Steve Reinhardt has written out a list of our library books. You can have a copy; see Steve.

This is a good time to repot. But watch the weather. It can still be changeable.

LETTER FROM VERNA

February 17, 1987

Dear Cactus Club Members,

Thank you for the cards, kind thoughts and the beautiful plant. I am enjoying them and hope to have the plant for a long time.

I am feeling much better and hope to get back into circulation before too long.

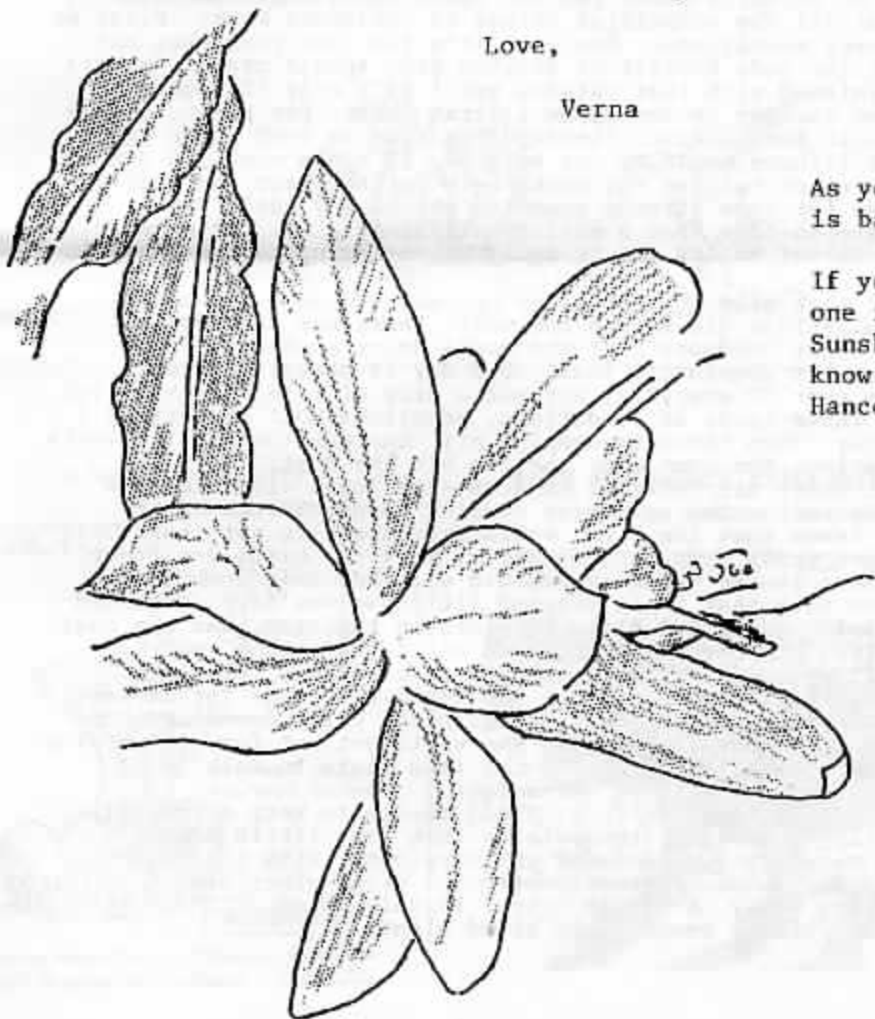
Love,

Verna

As you know, Verna is back!

If you know of anyone is ill, let our Sunshine Chairwoman know. She's Roz Hancock, 375-3410.

The Epi shown here is by Lad Cutak from THE CACTUS DIGEST for Jan. 1971, the St. Louis Henry Shaw Cactus Soc.





The following on the joys of growing from seed is from the CACTUS DIGEST, April, 1987, Henry Shaw Soc. (St. Louis) Betty Cordes, editor.

SEEDS! MORE SEEDS!! - Kathy Malon

Last year, I wrote an article about my first encounter with cactus seed catalogs. Of course, Parks and Jackson and Perkins and all the ones with the glossy photos of the perfect annuals and those fantastic unblemished vegetables had been coming for years, but the cactus seed catalogs were something new to me. No photos!! Actually, this is good. No pictures means you can spend HOURS AND HOURS looking up the names of all the unfamiliar things in reference books. First of all, this is very educational. Secondly it's fun. And last, but not least, you get the side benefit of driving your spouse crazy: "What!! You haven't finished with that catalog yet!! It's only 15 pages!!"

It took me forever to decide on a first order. Per packet prices are so reasonable that undisciplined buyers like me tend to go crazy. If 10 kinds of lithops would be fun to grow, 20 kinds would be even more fun. We are not talking big bucks here for the rare and exotic. A dollar or two for some strange sounding thing, why not?? Just because you have no idea what a *moringa stenopetala* is, for example, that's no reason not to try it. It could be really weird and unusual. (It is, too!)

After all that wild, unrestrained optimism, I hate to admit it, but my first plantings did not do too well. There are hazards in growing cacti seeds outdoors that the books never mention. First, the climate here is absolutely lousy. One day it pours; the next week, it stays over 90 everyday, without a drop of rain. In that kind of heat, with those kinds of conditions, seedlings MUST be watered 2 or 3 times a day. Then there is damping off. One day the little plants are up and growing, the next day, they've bit the dust.

And then, there are THE REAL MENACES--the local wildlife. You would think that after the apartment complex spent all that money reseeding the lawns that the birds would be content to eat that expensively sown grass seed, right? Wrong. What the birds don't eat, the fat squirrels in the neighborhood dig up. They need some place to bury all the nuts that their overfed little selves have scrounged from all the soft hearted wildlife fanciers in the area. And the bugs, you don't realize how plentiful they are until you garden. Not happy with eating all my strawberries, they had to check out the cacti. they could be edible, they could eat the cacti seedlings for dessert.

Last, but not least, the real animal pest. *Felis domesticus*, or Wendy O. Kitten, by name. As soon as she would get out for her morning stroll, she would immediately run to the seed flats to walk in. I swear, I could hear the lithops screaming!

In spite of all these horrors, I did manage to keep a few alive. The above mentioned *moringa stenopetalas* look like little brussel sprouts--from Mars. Tiny *dioscoreas* are very cute, with their single leaves and tiny caudexes. *Kedrostis africana* grows vines almost as fast as a morning glory. And just think, in only 20 or 30 years the little saguaros will be respectable sized plants!

Looking upon these few survivors as encouragement, I have since ordered more seeds, (A LOT MORE), from Christa's Cactus in Arizona and Southwest Seeds in England. The basement, equipped with grow lights, has proven itself to be a much more hospitable home for young cacti. The survival rate is quite high. I am also getting much better at correct labeling. Except for just a few little pots, I know what everything is, or at least what their names are. Would anybody know what a caudex plant is that sort of looks like an umbrella tree in pinstripes?

(Many thanks to Christa, of Christa's Cactus in Arizona, for all her good advice and help. She wrote: Don't give up too soon on seed flats, and she was certainly correct. Testudinaria seeds germinated more than six months after planting. Others have also surprised us by coming up.. in the most unexpected pots!)

One more--how about a mesemb that looks like a green, dew-covered spider?

* * * *



The Sunset Succulent Society

24th Annual

**CACTUS &
SUCCULENT
Show &
Sale**



Sat., May 2, 12-5pm.
Sun., May 3, 10-5pm.

FOR TICKETS VISIT WWW.SUNSETSUCCULENTSOCIETY.COM

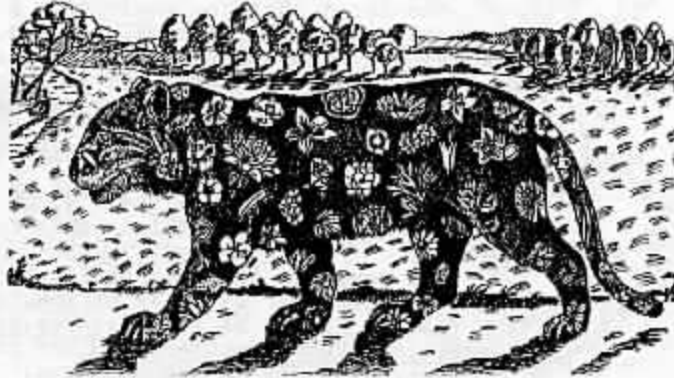
Garden Room, Veterans Memorial Auditorium
4177 Overland Ave. (at Calver) - Culver City

Los Angeles Zoo Annual Plant Sale

Saturday, April 25 & Sunday, April 26 10 am - 4 pm

Located in Griffith Park on Zoo Drive at the junction of the Ventura and the Golden State Freeways

Bromeliads	Euphyasias	Flower Plants	Ipomoeas	Palms	and other
Cacti	Fuchsias	Orchids	Original Cactuses	California	Flora, Shrub,
Candicans	Feroc	Roses	Fls.	Plants	& Trees



WHEN YOU LOOK AT THE PRICE TAGS AT YOUR FAVORITE NURSERY, do you wonder if it's highway robbery. No way. The following was written by a grower in Missouri, and his expenses are no doubt less for some things, more for others, but the idea is the same. The reprint is from the Henry Shaw Cactus Society's CACTUS DIGEST, St. Louis, Mo., March 1987, Betty Cordes, editor.

ABOUT PRICES - Bob Wagner, Columbia, MO.

"Oh my! Look at this!" The customer yells to the friend beside him so I can hear it 20 feet away. "I can grow this for nothing on my window sill, and they want 98¢!"

Or, the young lady cries, "Mother, how much did you pay for your Pony Tail?" (\$2 five years ago, I think.) "You should sell yours. They want \$15 for theirs and it isn't even as big."

Or, after looking all around for 45 minutes for a peanut cactus exactly the right size for that little statue at home, I am told by the customer, "You certainly make money on these; they multiply like rabbits!"

You get the idea.

When we calculate the retail price of an item, we must consider many things:

1. The cost of the item. In no way is it free.
2. Overhead: Utilities, taxes, wages, etc.
3. Space and time. Our bench space costs us about \$5 per square foot per year. (Shopping center space runs \$15 to \$25). When someone asks if I would rent space to them over winter I ask \$5 per square foot for 6 months. No one has accepted my offer yet.
4. Pilferage and shoplifting.
5. Items which do not sell well or not at all must be subsidized by those that do.
6. Desired profit. I must also eat, buy clothing, make car payments, mortgage payments, etc.

Then one jokingly asks, "Do you have to make it all on this one Haworthia koelmaniorum?" Actually expensive plants rarely pay their way; they stay around too long. But we want to offer a well rounded inventory.

And about that Koelmaniorum: I got it over 3 years ago from that guy in California. It had only 3 tiny leaves when it arrived and cost \$35 plus 15% postage and packing. (Ch'well, he has car payments too!) It took a year before a leaf was big enough to remove. It took two years for two leaves to produce 9 plants big enough to sell. Is \$10 each OK? Probably not--too low for my needs--too high for your budget.

I had hoped to make the \$12,000 per year that I was making on the job before I went into this full time. I haven't.

And consider this: I seriously believe in the therapeutic value of hobbies. In spite of the tension you experience over the failing health of your Lithops pseudotruncatella var. dendritica (Pulmonuncula), you are probably saving on doctor and hospital bills in the long run.

So if you want it, buy it. It may cost you more, if you don't.

SOME NOTES FROM THE FEBRUARY STUDY GROUP OF THE SAN GABRIEL VALLEY C & S SOC. - meets the 3rd Wed. at 7:30 PM at the San Gab. Adult Center, 324 S. Mission Dr., San Gabriel, next door to the Civic Auditorium, Joe Clements, group leader.

THE CRASSULACEAE

o Rowley's ENCYCLOPEDIA is a good reference for this group.

o Propagate these plants in the winter to early spring. LIKE NOW.
Many are happy at this time of year.

o By their flowers ye shall know them:

"If you see stars, it's a Sedum!"

-Joe C.

Many of the Crassulaceae have twice as many stamens as other flower parts, but not the genus Crassula.

- Tubular 4 part flower - Kalenchoe.
- Tubular 5 part flower - Cotyledon & Tylecodon
- Also Tube-like, Adromischus
- Star flowers, lots of stamens - Sedums
- Five-part flower with five or less stamens - Crassula
- Double the petals (10 - 12) & as many or more stamens - Aeonium
- Star flowers with marks - Graptopetalum

o Many like part-shade depending on whether inland or near the coast.

o Echeveria, Dudleya & Pachyphytum are similar to each other.

Pachyphuytum is different from Graptopetalum. Tacitus bellus should probably be Graptopetalum bellus.

o The most used Crassula species for hybridizing is falcata.

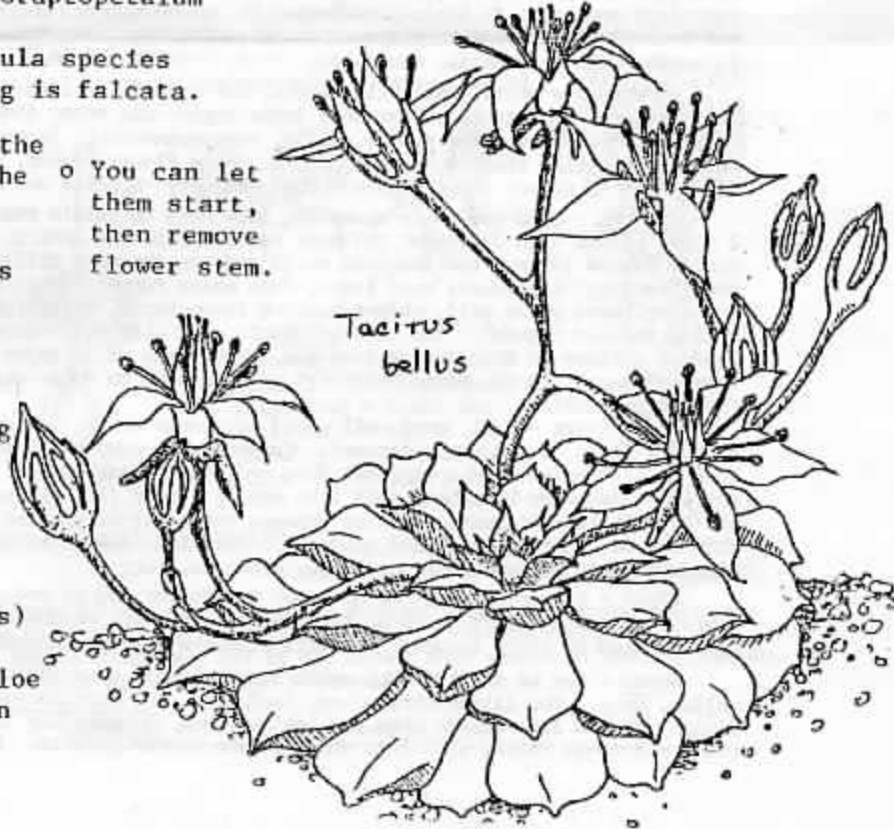
o Flowering depletes the energy of many of the Crassulaceae - like 'Campfire.'

o You can let them start, then remove flower stem.

o Dark spots on plants is a fungus, hard to control. Watch overhead watering.

o Many need restarting when woody. Take cuttings and plant. Don't let them sit.

o Pests: meallies, red spider, nematodes (cut off roots) and a gall mite like Aloe mite. (Aloe mite can also get on Haworthias!)



CRASSULA - COOL, COLORFUL

CRASSULA - Linnaeus 1753 (crassus = thick, succulent; ref. to leaves). Type is *C. perfoliata*. Family Crassulaceae; closest relative is Kalanchoe. A very large, diverse genus, the 3rd largest succulent genus; includes *Rochea* and several sections used as genus names, with 250 or so species (reduced by Tolken in 1977 to 144 species, 126 subspecies, etc.). Includes some annuals, water plants and non-succulents.

Crassulas are leaf/stem succulents with many growth forms: 10-12' shrubs, prostrate to mat-forming, some rhizomatous, to dwarf and "mimicry" plants with leaves in rosette or tightly packed on a short stem. Many have stems that become woody. Leaves are arranged in pairs alternating up stem, in many varied shapes and thicknesses, green to red or with designs, some papillose (frosted with tiny burps), some hairy, or naked, all with a waxy cuticle. Some are polymorphic (with several types growth; variable). A feature exclusive to the genus (in So. Africa) is hydathodes—leaf organs which secrete water, leaving mineral residues as silvery dots, very evident in *C. portulacae* (*argentea*), the "Jade Plant." Tolken found they are also capable of absorbing water through their leaves. Crassulas photosynthesize on the CAM Cycle (Crassulacean Acid Metabolism) which was so named because it was first observed in the Crassulaceae. Most Crassulas have shallow, thin, fibrous roots; a few have tuberous roots, including *C. nemorosa*, *capensis*, *saxifraga*, and are deciduous summer; a few have woody taproots; *C. corallina*, *mesembryanthemopsis*.

HABITAT - All species originated below the Equator, mainly in South Africa, especially SW Africa; a few in Madagascar, Asia, Australia. Most succulent species are from Africa; large shrubby ones from tropical eastern So. Africa, the most succulent ones from SW Africa, including the Namib Desert, where they live on fog and dew. Habitat conditions are more varied for Crassulas than any other genus of flowering plants—deserts, mountains, lakes, marshes. A few receive frost.

FLOWERS are small, resembling *Sedum*, but many in a cluster (compact or on a leafy stalk), from axils or terminal (monocarpic—die after flowering); long-lasting, white or pink; a few red or yellow, some scented; *C. lycopodioides* (*muscosa* v.) has smelly yellow flowers along the stem. Some flower summer, some winter; may flower out of season under lights. Most "mimicry" species are monocarpic.

CULTURE - Slow growth is sturdier; grow hard to retain character. Basically 2 types plants with different cultural needs; minis and others. Minis are mostly desert plants (except the tuberous ones) and are the most difficult. They need more "cactusy" treatment; more light, less water (drier summer as they're winter growers), more porous soil, warmer minimum temperature, with high day/night differential (cooler nights). They tend to deteriorate with age. Others are mostly underground culture as *Sedum*, with less sun. Prune the weedy types severely to keep them in shape. (Note: Mini, "mimicry" species tend to deteriorate summer in Iowa—the hot nights??)

Temperature - Cool, cool—all year! Coolness brings out color, makes them sturdier (true of all Crassulaceae). Crassulas go completely dormant when temperature is high—plant and roots shut down and can't absorb water. Above 100° they may lose leaves or branches. All like cooler nights (10° difference). Most tolerate 40-100° (45-85° best). Winter growers and tropical species need 50° minimum so they can be watered. All need good air circulation, low to medium humidity; stale air encourages mildew and other fungus diseases, rot.

Light - Sun lovers, but no hot sun; all suffer and it weakens them—full sun winter, or tubes. Dark green or thin-leaved Crassulas need less light than those with frosted or hairy leaves. All will etiolate without enough light when growing.

Water - Can be tricky: Too much= leaves bloat, then shrivel when dry; may yellow, drop. Too little=shriveling, leaf drop. *C. portulacae* seems to have a finicky period late summer when you can't please it—possibly the heat?? Most require average water, with less winter, even winter growers. Minis take less, of

course. Water more when budded, less after flowering. Try to keep water off plants with densely packed leaves to prevent rot; however, light misting is recommended; do it early in the day. If you mist, water less often.

Soil - Crassulas aren't picky; best in rich, loamy, porous, with 1/3 grit (more for minis, mimicry). Easy on the peatmoss to prevent sappy growth.

Pot, Potting - Pot according to size of plant—large species need a proportionately large pot; small need as small as possible. Repot any time; beginning of growing season best. Repot those in small pots often; their roots don't like accumulated salts. Topdress to keep stem and lower leaves dry.

Dormancy - Tropical species grow summer; others, especially from SW Africa, grow winter; some adaptable; mimicry species not. Some lose roots when dormant.

Feeding - Feed Crassulas regularly, but lightly; don't overfeed.

Propagation - Seed, stem or leaf cuttings. Seed best August-September. Cuttings root easily; leaves take forever to make new plants of any size. Some produce adventitious pups on flower stalks, which can be rooted. Some mat-forming types die out in the center as they grow—restart from cuttings.

Problems - Crassulas are damaged by many insecticides, including Malathion. Fungus diseases; rust, black spot, are usually due to poor culture; keep leaves dry winter, increase light and air circulation; treat with a fungicide to cure. Root rot—see Watering, Potting, Dormancy. Old plants are hard to re-root. Mealy can be a problem on tight-leaves species, where they can hide easily; scale finds them suitable hosts.

Comments - Take your pick—you can have just about any size or type of Crassula you want—large floor plants to hanging baskets to tiny weirdos—even Bonsai.

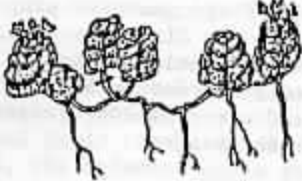
- REFERENCES - Cacti & Succulents - G. Gilbert Green
 Crassulas - Dorothy Dunn in Espinas y Flores, San Diego C&S 11-85
 Crassulas in Cultivation - Vera Higgins
 Succulent Flora of Southern Africa - Doreen Court



C. quadrangularis



C. saxifraga

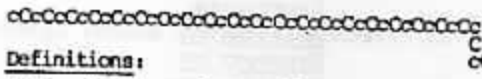


C. daphnifolia

- Crassula:
 Raggedy = Frayed Jade
 Scared = 'Fraid Jade
 Dignified = Staid Jade
 Satisfied = Stayed Jade
 Late = Delayed Jade
 Late = Daid Jade



C. corallina



Definitions:

Duff - The upper layer of accumulated, partly decayed leaves and other debris on a forest floor (aka detritus, more accurately applied to rock debris).
Duff - What some people should get off of and become more active in their societies.
 (Of course, this doesn't apply to anyone WE know!!)

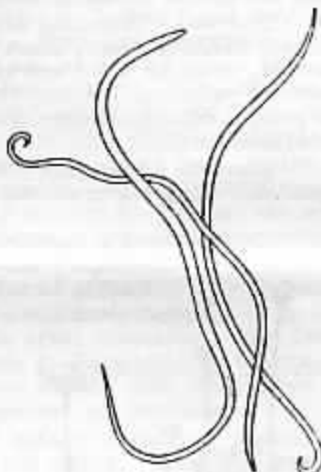
Pests of Succulent Plants

Part XIII. Nematodes

Dr. Ronald E. Monroe

Nematodes or eelworms are very common animals in most soils, regardless of composition, and several plant parasitic species have been the direct or indirect cause of plant damage or mortality in both nurseries and collections. Still, they are seldom implicated because of their microscopic size and the symptom(s) of disease may not be obvious to the untrained eye.

Systematics -- Nematodes, for the most part, are too small to see with the naked eye. Commonly called roundworms, they live in soil and water and most are free-living; however, many species are parasitic on plants (Norton, 1978) or animals (Cheng, 1973). Superficially, they resemble a whitish worm with a smooth cuticle and with few gross morphological distinguishing characters. Only by microscopic examination can any real morphological differences be found, and often a family, genus or species may be determined by behavioral damage or by anatomical differences in the males. Therefore, there are thousands of species belonging to numerous genera of the Class Nematoda, and new discoveries and revisions are occurring at a prodigious rate. Some of the common names and corresponding genera of plant parasitic forms are:



Nematodes

- Spiral nematodes Helicotylenchus
Rotylenchus
Scutellonema
Peltanigratus
Acarolaimus
- Lesion nematodes Pratylenchus
- Cyst nematodes Heterodera
- Root-knot nematodes Meloidogyne
Hypsoperine
Meloidodera
- Bulb and stem nematodes Ditylenchus
- Seed nematodes Anguina
- Stubby-root nematodes Trichodorus
- plus dozens of others too numerous to mention (Jenkins and Taylor, 1967).

Two genera identified as causing diseases in succulents are the cactus cyst nematode (Heterodera cacti) and a root-knot nematode (Meloidogyne sp.) reported by Gilbert (1956) and Hague (1972).

Plant damage -- Nematodes are both endoparasites (causing internal injury) and ectoparasites (causing surface injury); Jenkins and Taylor, 1967. Damage is commonly attributed to disruption of flow of water and nutrients in the xylem system, formation of root galls or "knots", death of epidermal cells and the outermost layers of cortical cells, stunted growth and as vectors of plant disease such as fungi, bacteria and viruses (Metcalf et al., 1951; Jenkins and Taylor, 1967; Ware, 1978). Damage in succulent plants has been described by Gilbert (1956) for Meloidogyne sp. (the worm enters the roots near the growing point and feeds on the interior tissue causing a typical root gall) and for Heterodera cacti (enters the root zone and causes only slight swelling with formation of sand-sized cysts). Hague (1972) indicated that several genera of succulents are attacked and that Zygocactus truncatus was especially vulnerable (wilt symptoms and stem tops turning reddish in color). Although wilting, decreased growth or stunting is the most common symptom of nematode damage, it must be emphasized that considerable mortality is caused by secondary invasion: fungus, bacterial or virus infections.

Biology -- The biology of nematodes is extremely variable depending upon the species studied. Suffice it to say, however, that after mating, the females lay several hundred eggs which hatch into immature worms that closely resemble the adult. These juvenile worms may then penetrate the plant tissue and become free-living in soil before becoming parasitic themselves or, as in some species, they merely stay within the plant gall, etc. and mature in situ. The larvae normally moult (shed their outer cuticles) two or more times before becoming adults.

Control -- The best nematode control is prophylaxis (or prevention). By using only soil/sand mixtures that have been steam-sterilized, the worms seldom cause anyone a single problem or worry. Too, plants purchased should be repotted and their roots examined for damage (if galls or root-knot is observed, the infected parts should be cut off and destroyed). Soils used in nurseries or field growing areas may be treated with a good nematocide such as 1, 3-dichloropropene and 1, 2-dichloropropene or ethylenedibromide (soil fumigants) or by spraying the plants directly with a good systemic organophosphorus insecticide such as Disyston^R or Thimet^R (Ware, 1978).

→ (very dangerous? ed) *not for hobbyists - ed.
References cited

- Cheng, Thomas C. 1973. General Parasitology. Academic Press, New York. 965 pp.
- Gilbert, C.E.L. 1956. A new cactus pest in England. Cact. and Succ. J. 28: 12-13
- Hague, N.C.M. 1972. Nematode diseases of flower bulbs, glasshouse crops and ornamentals. In: Economic Nematology, ed. by J.M. Webster. Academic Press, New York. p. 409-434.

LOVE'S LABOR LOST

I rinse my pots in alcohol,
The soil I use is sterile,
If any bugs should venture near,
They do so at their peril.

With pesticide, insecticide,
And other banes, systemic,
I spray and dust and disinfect
Against all ills endemic.

'Mid proper light and T L C
My plants grow healthy, lush -
Then overnight a fungus rot
Reduces them to mush.

At times like this, I'm half suspecting,
I should have stuck to rock collecting.

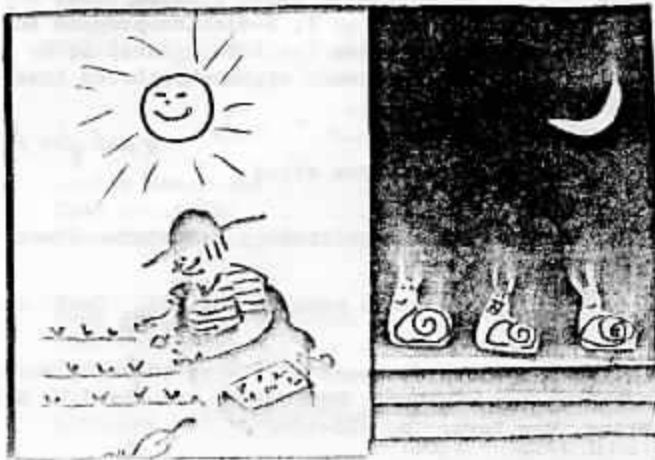
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A.B.G. in "The Succulent Journal" - C & S Society of N.J.
via the March 1987 CACTUS DIGEST.

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ALL SPRING...The Planting...The "Harvesting..."?!

cartoon by Elibet Marshall of the
San Diego Soc., ESPINAS Y FLORES,
April 1987.



CALENDAR continued from back cover.

- May 3, Sunday, BALDWIN BONANZA ANNUAL PLANT SALE, 9 AM - 4 PM at the L A State & County Arboretum, 301 N. Baldwin Ave., Arcadia. Plants of all kinds for sale, including succulents. There will be an admission fee to the Arboretum.
- May 10, Sunday, OUR REGULAR MEETING at 1:30 PM preceded by our BOARD MEETING at 12:30. Everyone invited! at S. Coast Bot. Garden.
- May 16 & 17, Sat. & Sun., the ORANGE COUNTY C & S SOC. SHOW & SALE at the Yorba Linda Library, 18262 Lemon Dr., in Yorba Linda. On Sat. the sale starts at 9AM & the show at 12 PM; on Sun., show & sale are from 9 AM - 4 PM. Showing of plants is open to anyone wishing to enter. See Show Chairman C.W. Elliott. Setup is Fri. from 1 PM - 9 PM, & Sat. from 7 AM - 8 AM.
- May 17, Sunday, the EPIPHYLLUM SOCIETY OF AMERICA SHOW & SALE at the L A Arboretum on Baldwin Ave. in Arcadia. Ask Dick Kohlschreiber for times.
- May 17, Sun. the HUNTINGTON INVITATIONAL PLANT SALE for members (contact the Hunt. 818-405-2100 in San Marino for more info.)
- May 16 & 17, FIESTA DE FLORES at S. Coast Botanic Gardens, general plant sale. More information in the May newsletter.
- May 24, the SOUTH BAY EPIPHYLLUM SOC. FIRST SHOW & SALE at S. Coast Botanic Gardens.
- June 6 & 7, the SAN DIEGO C & S SOC. SHOW & SALE, Majorca Room, #101, Casa Del Prado, Balboa Park, San Diego.
- June 13 & 14, OUR S. COAST C & S SOC. SHOW & SALE at the Gardens. Setup on Friday. If you don't yet have a show schedule, contact Norma. More show info. in this newsletter.
- June 20 - 26, CSSA CONVENTION IN TEMPE, ARIZONA. See enclosure in last month's newsletter.
- July 3 - 5 CSSA SHOW & SALE, at the LA Arboretum in Arcadia. 9 - 4:30.
- Aug. 22 & 23, SECOND INTER-CITY C & S SHOW & SALE at the LA Arboretum in Arcadia (Long Beach Cactus Club, San Gabriel Valley C & S Soc., & the L.A. C & S Soc.). This is an open show to all wishing to enter. See Show Chairmen Larry Grammar, Woody Minnich, & Fred Hutflesz.

QUOTE: "...remember, you can't amount to mulch without a sense of humus."

- Natty (Lawless) Bumpee
BUMPEE GARDENING CATALOG, Signet. '82

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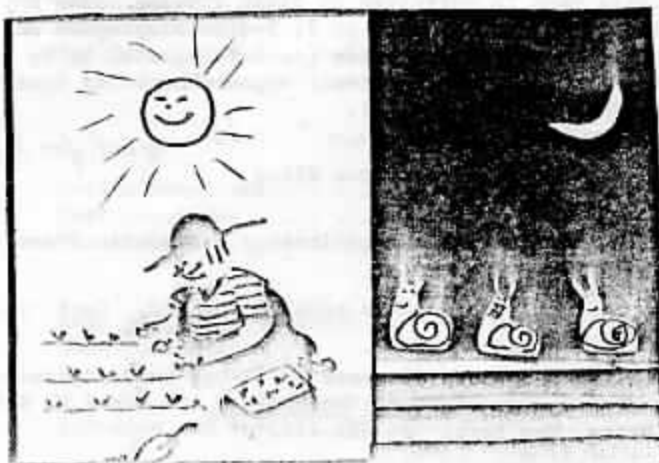
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BUMPEE GARDENING CATALOG, Signet. '83

CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALETC.

April 12, SOUTH COAST BUS TRIP to Desert Nursery in Riverside and House of Cactus in Stanton. 8 AM Departure at the Garden. See inside for more info. This is our ANNIVERSARY free trip.

April 25 & 26, Sat. & Sun. L A ZOO ANNUAL PLANT SALE, 10 AM - 4PM, in Griffith Park on Zoo Drive at the junction of the Ventura and the Golden State Freeways. All kinds of plants will be for sale, including cacti and epi's, bromeliads & orchids, pots & house plants. For your convenience, there will be delivery of plants purchased to the Zoo parking lot from the holding area. There will be an entrance fee to the zoo. Also there are the zoo animals to see, and you can see the work of landscaper Gary Lyons, our Feb. speaker. Please see Jim Hanna for more information.

May 2 & 3, Sat. & Sun., SUNSET SUCCULENT SOCIETY SHOW & SALE, Sat. 12 - 5 & Sun. 10 - 5, in the Garden Room, Veterans' Memorial Auditorium, 4117 Overland Ave. at Culver Blvd., Culver City. For further information call 826-4017 or 467-8319, or talk to Ellen Low or Duke Benadom. In another part of the facility, a bromeliad show & sale will provide even more for you to see & spend money on.

More calendar continued on inside back cover.

SOUTH COAST CACTUS & SUCCULENT SOCIETY
10860 El Mar Avenue
Fountain Valley, CA 92708



FIRST CLASS

Norma Holley
2971 Toledo Street #220
Torrance, CA 90503-7340



DON'T MISS OUR ANNIVERSARY FIELD TRIP
THIS SUNDAY - 8 AM SHARP!