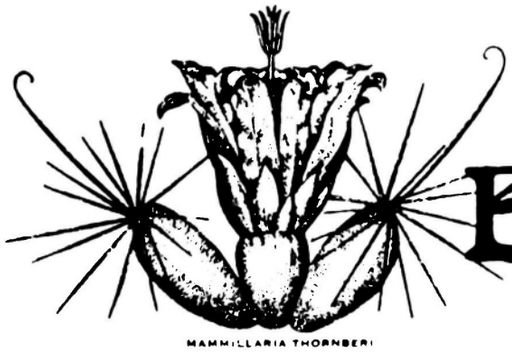

Espinas y Flores

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

Volume XX, Number 4 April 13, 1985

APRIL MEETING

Saturday April 13, 1985

1:30 P.M.

Casa Del Prado, Room 101, Balboa Park

PROGRAM

EUPHORBIA OF EAST AFRICA

Susan Carter-Holmes has prepared a taped slide program on the Euphorbias of East Africa. Ms. Carter-Holmes is a principle botonist at the Kew Garden in London, England. This garden is one of the oldest cactus garden in the world. All photos were taken in habitat. This is a technical program not a travelogue. Ms. Carter-Holmes will not present at the meeting.

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IN THIS ISSUE Page

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Some Changes

The picnic will be in June this year
On July 13, Saturday a 1:00 meeting with Speaker from CSSA Convention

x x x x x x x x

Deadline for the May Issue of the Espinas Y Flores is April 26. Thanks Mary

NEWS NEWS NEWS

Bragging Table winners for March were:

1st Place Rudy Lime for his Euphorbia Suboda

2nd Place Shirley Berry for her Mammillaria carmenae

3rd Place Lit Phan for his Iberbeillea tenuisecta

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Those who are to bring refreshments to the April Meeting are:

Gloria Alexanderson - Evelyn Chatham - Lois Zaranka - Herb & Vera Garrelts

Mildred M. Bradley - Virginia Buckner - Susan Clements - Jerry Clements

Alberta Widen - Amna Cornett - Frances Johnson - Ethel Standish - Ernest Angus
Thanks

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Welcome to New Members Karen Van de Mark and Sean Minogue

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Cactus Wren--Campylorhynchus brunneicapillus

CACTUS WREN

Some nesting desert birds have no dread for the Cylindropunti cacti, well-known for their persistant, clinging spines. In the branches of a large cholla clump, the Cactus Wren's nest is protected by prickley spines.

If one has the time, they should take a drive on one of the many desert roads to view this brown-bodied bird, with white tips on its tail, feeding and hopping on the ground near a sheltering cactus patch. Frequently a Cactus Wren can be seen perched at the apex of a yucca or cactus plant displaying the dark streaks that join to shape a sizeable band on its breast.

Distribution is as follows: Desert of Southern California, near San Diego, north in dry washes along the coast to Los Angeles County and east of the mountains to Owens Valley. (Range may be wider than the above)

Reference:

Robbins, C.S.; Bruun, B. & Herbert S. Zim. 1966. Birds of North America. Page 224.

Hoffmann, Ralph. 1927. Birds of the Pacific States. Pages 240-241.

THE SUCCULENT EUPHORBIAS

(Euphorbiaceae, or Spurge Family)

Dorothy Dunn

The Euphorbia family is one of the largest, most fascinating and diverse of all the families of flowering plants, distributed over the entire earth, and comprising about 250 genera and about 6,000 species of trees, shrubs, herbs, and weeds, all having an unpleasant milky sap called latex. Only those which are strikingly cactus-like and which are native to desert regions of Africa, Madagascar, India, the Canary Islands, and Mexico can be classed as truly succulent, and these 400 to 500 species are the ones which are of especial interest to us.

Euphorbias first gained recognition more than 2,500 years ago. The earliest reference to them is associated with Hippocrates, the Father of Medicine, and the few species known to the earliest botanists and physicians were of interest primarily for the purgative medicinal value of their latex. The popular name, Spurge, has been derived from this use of the plants. However, many native tribes, past and present, devised various other uses for the succulent Euphorbias, ranging from the practical to the amusing to the downright bizarre and even unmentionable!

The medicinal properties of certain species of Euphorbia have been well-known for centuries. Even today Euphorbias are still used in traditional native medicine. This seems contradictory in view of the fact that some of these same species are even better known for their exceedingly poisonous qualities; for example, E. tirucalli, one of the most poisonous, was supposedly used as a cure for gonnorhea. It was also commonly planted on graves! - (possibly after it had contributed to the demise of their occupants?). It was also experimented with as a source of low-grade rubber during World War II, and more recently as a source of fuel. E. ingens was used by the Zulus as a purgative, and by the Sutos to treat dipsomania and cancer. Synadenium grantii, a close relative of the Euphorbias, was used by the Barotse to cure leprosy. At the other end of the scale, some Euphorbias are smoked in pipes by the Zulus in order to commit suicide.

The caustic latex, or sap, of Euphorbias is a common phenomenon in the genus, and is distributed through the plants by a series of tubes. Some species cause blistering of the mouth, diarrhea, pericarditis, and dropsy. The previously-mentioned E. tirucalli causes severe dermatitus. Its latex is extremely irritating to the eyes, and can even cause temporary blindness. The branches of this species are bruised and thrown into the water to stun and poison fish. E. virosa is known as the "venemous Euphorbia"; the poisonous latex of this plant was used by African Bushmen and Hottentots as an ingredient for their arrow poison. E. matabelensis was used as a source of bird-lime to catch small birds (as well as large crickets) which were then roasted and eaten. Some species, notably E. cooperi, E. marginata, and E. tetragona, attract hordes of bees when in flower, but the resultant honey is of no value - it is dark in color, and is extremely unpleasant to eat, being either sour, bitter, or as

hot as pepper. At one time this honey was used for treating sore throats, but since the remedy was usually more painful than the ailment this practice has long since been discontinued. E. antisyphilitica is a source of candelilla wax, which is found as a coating on the surface of the plant. The wax is obtained by immersing the stems in boiling water; the wax melts and rises to the surface. The refined wax was used (at one time) in the manufacture of phonograph records, celluloid articles, varnish, shoe-polish, floor wax, as an insulating agent in electrical equipment, and as water-proofing for tents. It is still sometimes used in the making of lipstick.

The Zulus used Euphorbias as an ingredient in their fly exterminators (unfortunately this priceless secret formula as not been preserved!), and some species were used in shampoos to "de-louse" the hair. E. ingens and E. balsamifera were commonly used as hedge material and for boundary markers.

Even non-succulent Euphorbias contain the irritating milky sap, one of the most notable being the common and obnoxious weed E. maculata ("spotted spurge"), which is widespread and practically ineradicable throughout the southwest, and which causes severe itching, rash, and inflammation of the skin. Even insects will not touch it.

The "native" antidotes for the pain and irritation caused by Euphorbia sap are reputed to be the juices of Aeonium lindleyi and Senecio anteuphorbium.

The name Euphorbia was first applied to these plants by King Juba II of Mauritania who discovered a species (probably E. resinifera) growing on the slopes of Mt. Atlas and named it after his favorite physician Euphorbus. The word Euphorbus in Greek means "well-fed", and this probably seemed an appropriate name for these strange, thick succulents.

The succulent Euphorbias, which greatly resemble some cacti with their fierce spines and strange shapes, are actually far removed from that family, but the two have worked out water storage and heat resistance problems practically on the same principles. In the process of adaptation to drought and in almost every other way the succulent Euphorbias are to the Old World what cacti are to the New. This resemblance is one of the classic examples of parallel development in the plant world, and can be very confusing to the uninitiated. However, there are several important differences which will help in identifying the Euphorbias. First, all Euphorbias exude the milky sap, or latex, which has already been mentioned, while in the Cactus family this is a rarity, occurring only among certain species of Mammillaria. Second, the Euphorbias do not produce their spines from areoles as do cacti, but directly out of the stem itself. Third, the Euphorbias have a strange and complicated inflorescence, utterly unlike the simple and showy cactus bloom. Although Euphorbia flowers are usually small and insignificant, they are very intricately constructed. And finally, while the cactus fruit is a one-celled berry with the seeds simply scattered through it, the Euphorbia fruit is usually a three-lobed capsule, each lobe containing a single seed; it bursts explosively when ripe, sometimes hurling the seeds for several feet.

Euphorbias can be found growing anywhere from the very arid regions of southwest Africa to the tropics of the Belgian Congo, and at least one species has been found at an altitude of 6,000 feet. They range in size from tiny plants only an inch or two high to huge tree-like specimens which can attain a height of 60 or even 90 feet. For instance, E. ingens can easily reach a height of 30 feet or more; this plant is sometimes called the "cactus Euphorbia" and the specific name "ingens" means "huge" or "gigantic". Some Euphorbias have large tuberous roots such as E. squarrosa, E. ornithopus, E. knuthii, and E. tortirama, to name but a few, and can be made into interesting, almost bonsai-like specimens.

Most Euphorbias grow most vigorously during the hottest part of our summer, but many, once established, will continue to grow through the winter. They may be grown out-of-doors in almost any type of well-drained soil (the soil should be sandy and porous, yet nourishing). They need protection from frost and excessive rainfall. Good drainage is of vital importance. The species with leaves can be given plenty of water in the summer but the highly succulent species must be watered very carefully, especially in winter. Many species do better with at least partial shade, and most are frost-tender and prefer very warm conditions.

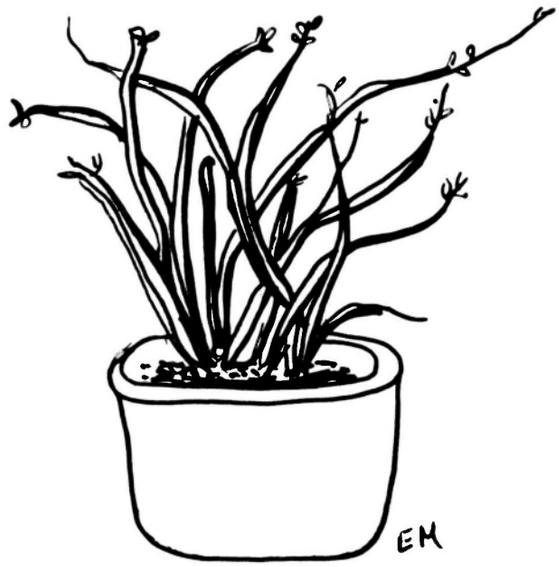
Pollination is usually by flies or small insects, or by the force of the wind, and propagation is by seed, cuttings, or grafting. The seeds are disseminated by ejection - a three-foot high plant of E. grandicornis has been known to expel its seeds a distance of twelve feet. All branched Euphorbias may be propagated by cuttings, and this should be done only in warm weather. The cuttings are often very slow to root; it is not unusual for a cutting to take a year or more to root. Also, cuttings of some species such as E. caput-medusae or E. bergeri may not at first assume the characteristic shape of the parent plant. Cuttings will bleed profusely, and should be dipped in dry clean sand or washed off with water to minimize this, then allowed to dry thoroughly. This can be a matter of days or even weeks in the case of larger-stemmed cuttings. The cuttings are then placed in very sandy soil or other porous rooting medium (I have had excellent results with pumice), which should be kept fairly dry until roots begin to appear. Whenever Euphorbias are grafted, the stock is usually E. mammillaris or E. cereiformis.

It is better to underpot these plants - the depth of the pot is more important than the diameter as many Euphorbias have large, long roots. Also, it's a good idea to re-pot about every other year with fresh soil in order to maintain good health and vigorous growth.

Euphorbias are remarkably free from pests, although some species seem particularly susceptible to a kind of mildew which generally attacks the new growth. I have found that plenty of fresh air can be a deterrent, and in some cases even a cure, for this problem. Also, root nematode may occasionally attack Euphorbias. Whereas this can be extremely detrimental to cultivated plants in your garden, according to one authority it can actually be beneficial to plants growing in the wild - "it causes the rootlets to swell out, and the bladder-like extensions thus formed act as reservoirs for water"!!!

A number of Euphorbias are native to Baja California, including E. misera (the most common, prolific, and wide-spread species), E. xanti, and E. tomentulosa.

Other closely-related genera include Pedilanthus, Synadenium, and Monadenium, which ALL CONTAIN THE SAME MILKY SAP.



References cited

Cactus and Succulent Journal of America, various issues

Chidamian, Calude: The Book of Cacti and Other Succulents

Hasleton, Scott: Succulents for the Amateur

Jacobsen, H. Handbook of Succulent Plants

Rowley, Gordon: The Illustrated Encyclopedia of Succulents

White, Dyer, Sloane: The Succulent Euphorbieae

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SHOW SCHEDULE FOR MARCH AND APRIL

April 7	Convair Garden Club Rose Show	Sun: 1:00 - 5:00 p.m.
Apr. 13 & 14	San Diego Rose Show (Balboa Park Club - Balboa Park	Sat:2-7pm Sun:10am-6pm $1.00
Apr. 20 & 21	San Diego Bonsai Show	Sat & Sun. 10:00am -5:00pm
Apr. 27 & 28	San Diego Imperial Co. Iris Show	Sat:12:30-5pm Sun: 11am-5:00pm
May 4 & 5	Balboa Park African Violet Show (La Jolla Village Square, La Jolla	Sat:10am-6pm Sun:10am-4pm
May 4 & 5	Exotic Plant Society Show	Sat & Sun: 11:am - 5:00pm
May 12	San Diego Epiphyllum Show	Sun: 11:00am - 5:00pm

Cactus-of-the-Month

Gymnocalycium Pfeiffer

F. C. Thrombley

Gymnocalycium (jĭm ′ -nō-kă-lĭs ′ -ĭ-ŭm)

Group: Echinocactus

In South America, Glocular cacti evolved which are distinctly different from those which evolved in North America. One group of these gave rise to the present-day Lobivias, Rebutias, Notocacti, Gymnocalyciums, as well as others. With the exception of Opuntia and Rhipsalis, Gymnocalycium is the most wide-spread cactus genus in South America. They range from Southern Patagonia through Argentina, Uruguay, Paraguay, Brazil and Southern Bolivia. The natural habitats of these plants also vary greatly. Some species are found among grasses and shrubs on low ground, others occur in rocky locations on mountain sides. A few species survive in the salt-caked soil of the arid waste lands of South Eastern Bolivia.

The first Gymnocalycium described was in 1828 by Link and Otto under the name Echinocactus denudatus. Karl Pfeiffer, a German Physician, in 1845, proposed that all known South American cacti with similar features to Echinocactus denudatus whould be grouped in a new genus Gymnocalycium. It was not until 1920, when Britton and Rose accepted Pfeiffers proposal and published the new genus in their great work, that it was given any credibility. Britton and Rose also established Gymnocalycium denudatus as the type species.

The species vary greatly in size, some being minute, others quite large-up to 20" diameter for Gymnocalycium pflanzii. Flower size is equally variable, ranging from 3/4" (G. bruchi) to 3" (G. mulitflorum). The flowers are simple in structure, from bell shaped to funnel from, and have smooth scaly tubes. The color can be white, yellow, pink, red or purple-red. They are long lasting, from five to twelve days. Very hot bright weather shortens the life of individual flowers and pollination leads to early wilting. The fruits are colorful and scaly, most are elongated, and they ripen fairly quickly, splitting to reveal the seeds.

All of the species are spherical cacti, with prominent ribs that are mostly tuberculate. As a result of the ribs being "formed" or "made-up" of blunt tubercles, and they being very distinct, this genus is referred to as the "chin" cactus. A horizontal cleft is plainly seen below the tubercles in most species, which mades them appear as chins. The spines are generally small and non-descript, although in a few species they can grow to 3 inches long. A description for over a hundred named species could then read as follows: a genus of spherical cacti, having tuberculate ribs ranging in size from 2 inches to 20 inches in diameter.

As can be seen by that simplified description, the identification of these plants can be, and indeed is, very difficult. To further complicate identification, they hybridize very easily in cultivation and many nurseries have sold species with invented names, or identified as Gymnocalycium species. Moreover, nature does not grow plants to rigid specifications. In locations where species will overlap in habitat, there are many variables. Curt Backeberg, in describing Gymnocalycium damsii, stated that this specie was very variable, and then listed four varieties describing the wide variations. He further stated that the varieties represented the clear variants, but there are many

intermediate forms. Backeberg described 97 species in his publication, Cactus Lexicon, and 58 varieties. For the layman, like myself, who enjoys growing these plants, it is best to purchase them from a well known reputable grower, and do not mix or lose the labels on your plants.

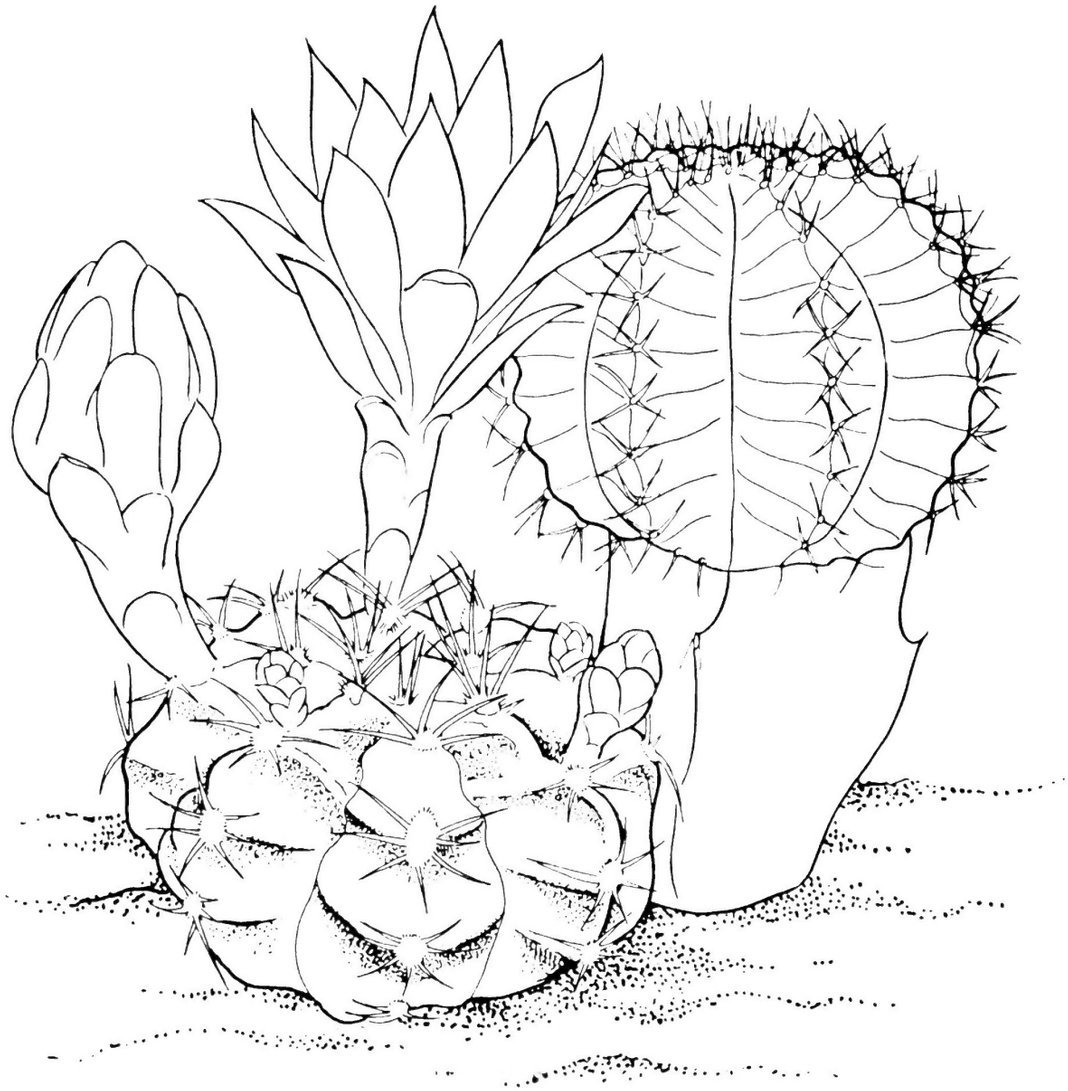
Cultivation of these plants is trouble free with little or no problems. In spite of the wide geographical range, they all do well in the soil used for your cacti. Different growers have different preferences, but all the various soil mixtures seem to produce equally good results. All Gymnocalyciums need good lighting and fresh air circulating. All species from Paraguay, such as G. mihanovichii, and G. damsii, require partial shade and a warm location. Further, they are not frost resistant, these then require care in the frost areas. Gymnocalyciums have relatively thick, tough skins, which are not easily damaged by the sun or by insect pests. A hazard can arise with dead flowers or fruiting remnants left on the plants. Under damp conditions, these can be nurseries for various moulds which can bring on rotting of the plant body.

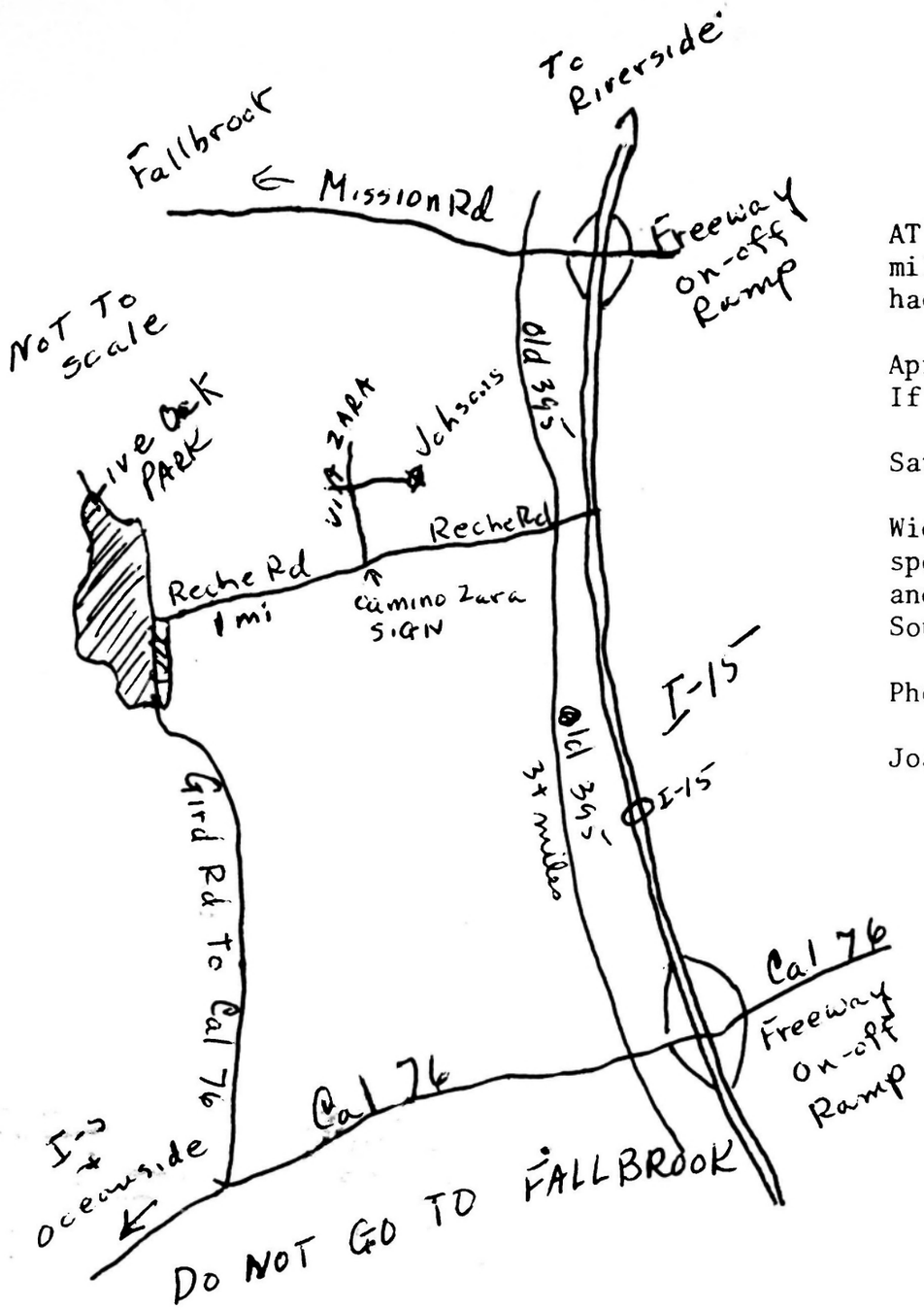
Why do I grow them? Because of the long lasting flowers that start in early spring in some species, and does not stop until December, in other species. Because of the clean plump bodies in most species, and because they are easily grown.

References used:

Backeberg, Curt 1977, Cactus Lexicon Blandford Press, England

Putman, E. W. 1978 Gymnocalyciums National Cactus & Succulent Society Handbook No. 5





CACTUS AND SUCCULENT
PLANT SALE

AT 5599 Via Zara, Fallbrook, (one mile east of Liveoak Park where we had two SDCSS picnics) on Sunday,

April 14th from 10 to 5.
If it should rain, the sale will be

Saturday, April 20 also 10 to 5.

Wide selection of large field-grown specimen cacti and some succulents, and several varieties of agave and South American cactus seedlings.

Phone No. (619) 728-7317

Joan and Paul Johnson

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IT'S NOT TOO EARLY

to start preparing your plants for the big show in June. Time to start repotting and grooming to look their best. It would be great if every member would have at least one plant in the show.
SHOW DATE: JUNE 1 and 2

x x x x x x x x

Thanks to Elibet Marshall for her drawings of Euphorbia and Gymnocalycium

SAN DIEGO CACTUS & SUCCULENT SOCIETY

OFFICERS

President - Dr. Leroy Phelps
4094 - 36th Street, San Diego 92104 280-9690
Vice President - James Dice
6066 Portobelo Court, San Diego 92124 278-0326
Secretary - Susan Clements
42251 Sixth Street, Temecula 92390 676-6126
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16333 Roca Drive, San Diego 92128 487-5544

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Dorothy Dunn, Phyllis Flechsig, Madelyn Lee
Joe Clements, Bud Aubuchon, Verna Pasek

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Education: Cacti - Frank Thrombley
Succulents - Rick Latimer
Historian: Rick Latimer
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Plants & Supplies Table: Joey Betzler
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Regalement: Warren Larberg and Doc Lemrow
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Balboa Park Desert Garden - John Parek
Quail Botanical Garden - Phyllis Flechsig
S.D. Botanical Garden Foundation - Elizabeth Glover
S.D. Floral Association - Verna Pasek
Liaison & Publicity: Kathy & Sandy Frost

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 $8.00 per single member per year, $2.00 for each additional member of a household within a family. Single copies of Espinas y Flores are 60 cents.

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

FIRST CLASS FIRST CLASS FIRST CLASS

TENTATIVE CONVENTION SCHEDULE
SAN DIEGO 85

7 July Sunday

9:00 AM CSSA show and sale in Arcadia bus departs SDSU returning 5:00 PM

10:00 AM - 6:00 PM
Registration Tenochca Residence Hall

1:00 PM - 3:00 PM
Buffet Lunch

5:00 PM - 6:00 PM
Dinner

8 July Monday

7:00 AM - 8:00 AM
Breakfast

8:00 AM - 12:00 AM
Registration Tenochca Residence Hall

12:30 PM - 1:30 PM
Lunch

2:00 PM - 2:50 PM Casa Real
Steven Brach "Cacti of the southwest; Carlsbad Caverns, Guadalupe Mountains and White Sands"

2:00 PM - 2:50 PM The Backdoor
Henry Varney "Introducing Adromischus"

3:00 PM - 3:50 PM Casa Real
James Dice "The Genus Dudleya"

3:00 PM - 3:50 PM The Backdoor
Paul Thoma "The Netherland Antilles; Land, People and Plants"

4:00 PM - 4:50 PM Casa Real
Dorothy Dunn "The Baja Barrels; The Ferocacti of Baja California"

4:00 PM - 4:50 PM The Backdoor
Richard W. May "The Ecology of Sclerocactus Polyancistrus"

7:00 PM - ? Montezuma Hall
Opening Banquet
Susan Carter Holmes "East African Safari"

9 July Tuesday

7:00 AM - 8:00 AM
Breakfast

All Programs Will Be In Montezuma Hall Today

8:00 AM - 8:50 AM
Dr. Michael W. Hawkes "Succulents of the Pacific Northwest"

9:00 AM - 9:50 AM
Dr. Carlos N. Ostolaza "Cacti and the Ancient Peruvians"

9:50 AM - 10:30 AM
Break

10:30 AM - 11:20 AM
Dr. Warner Rauh "Peru and its Cacti"

11:30 AM - 12:20 PM
Dr. Roberto Kiesling "The Cacti of Argentina"

12:30 PM - 1:30 PM
Lunch

1:45 PM - 2:35 PM
Faith Campbell "Conservation of Endangered Species, An Update"

2:45 PM - 3:35 PM
Hernando Sanchez-Mejorada "Status of Conservation of Mexican Cacti"

3:35PM - 4:00 PM
Break

4:00 PM - 4:50 PM
Dave Grigsby "Round Table Discussion...."

5:00 PM - 6:00 PM
Dinner

7:00 PM - 7:50 PM
Dr. Karl A Johnson "Growing Succulents in the Land of the Kiwi"

8:00 PM - 8:50 PM
John Lavaranos "Botanizing on the Socotra Archipelago"

9:00 PM - ?
Rare Plant Auction

10 July Wednesday

7:00 AM - 8:00 AM
Breakfast

7:30 AM
(1) North County Growers (box lunch). Bus departs. Returning SDSU 5:00 PM.

7:30 AM
(2) North County Growers (box lunch) & Wild Animal Park with Dinner. Bus departs. Returning SDSU 10:30 PM.

7:30 AM
(3) Huntington Botanical Gardens (box lunch). Bus departs. Returning to SDSU 5:00 PM.

7:30 AM
(4) Huntington Botanical Gardens (box lunch) & Wild Animal Park with dinner. Bus departs. Returns SDSU 10:30 PM.

12:30 PM - 1:30 PM
Lunch

4:30 PM
(5) Wild Animal Park with dinner. Bus departs. Returning SDSU 10:30 PM.

5:00 PM - 6:00 PM
Dinner

7:00 PM - 7:50 PM
Dr. Leroy N. Phelps "Succulents as Bonzai"

11 July Thursday

7:00 AM - 8:00 AM
Breakfast

All programs in Montezuma Hall unless otherwise noted.

8:00 AM - 8:50 AM
Dr. Kenneth D. Heil "The Cacti of Big Bend National Park

9:00 AM - 9:50 AM
Dr. Roberto Kiesling "Carlos Spegazzini, Pioneer Argentine Cactophile"

9:50 AM - 10:30 AM
Break

10:30 AM - 11:20 AM
David Hardy Title not yet confirmed

11:30 AM - 12:20 PM
Dr. Dave Bramell "Origin & Evolution of Canarian Succulent Flora"

12:30 PM - 1:30 PM
Lunch

1:45 PM - 2:35 PM
Dr. Charles E. Russell "The Versatile Prickly Pears; Plants With Great Economic Potential"

2:45 PM - 3:35 PM
Dr. Charles H. Uhl "Some Species & Hybrids in the American Crassulaceae"

2:45 PM - 3:35 PM Casa Real
Joseph Clements "Show Judging"

3:35 PM - 4:00 PM
Break

4:00 PM - 4:50 PM
Dr. Charles H. Uhl "Chromosome Hybrids & Evolution in the American Crassulaceae

4:00 PM - 4:50 PM Casa Real
Joseph Clements "Show Judging"

5:00 PM - 6:00 PM
Dinner

7:00 PM - 7:50 PM
Dr. Warner Rauh "The Cactus & Succulent Vegetation of Brazil"

8:00 PM - 8:50 PM
Dr. Yair Elber "Succulent Plants & Halo-Succulents of Israel & Their Cultivation"

9:00 PM - ?
Delegates' Meeting

12 July Friday

7:00 AM - 8:00 AM
Breakfast

8:00 AM - 8:50 AM
Faith Campbell "Evaluation of Rules & Regulations Affecting Cacti & Succulents: The First Ten Years"

9:00 AM - 9:50 AM
Dr. Allan Taylor "A Hardy Desert Garden One Mile High"

9:50 AM - 10:30 AM
Break

10:30 AM - 11:20 AM
Dr. Carlos N. Ostolaza "In Search of the Lost Cacti"

11:30 AM - 12:20 PM
Dave Hardy Title not yet confirmed

12:30 PM - 1:30 PM
Lunch

1:45 PM - 2:35 PM
Dr. Dave Bramell "Habitat, Ecology, & Cultivation of Canarian Succulent Flora"

2:45 PM - 3:35 PM
Susan Carter Holmes "New Euphorbias From East Africa"

3:35 PM - 4:00 PM
Break

4:00 PM - 4:50 PM
John Lavranos "Botanizing in Southern Yemen"

7:00 PM - ?
Farewell Mexican Fiesta

13 July Saturday

7:00 AM - 9:00 AM
Continental Breakfast served in Tenochca Residence Hall

11:00 AM
At this time you must be checked out of SDSU unless you have made other arrangements with SDSU.

Bye-Bye--see you in '87 at Phoenix.