

Espinas y Flores

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

AUGUST MEETING

Saturday August 14, 1982

1:30 PM

Casa del Prado, Room 101, Balboa Park

CEROPEGIA and SULCOREBUTIA

Phyllis Flechsig and Dr. Ronald Monroe will display and discuss the habitat and cultivation of these two genres, in that respective order. This of course is in addition to the "Plant-of-the-month" so there will be many plants which hopefully will bring many questions.

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IN THIS ISSUE	PAGE
News of Interest.	2
THE GENUS NOTOCACTUS - Dorothy Dunn.	3
HOODIA- Dr. Ronald E. Monroe.	5
MAMMILLARIA NIVOSA- Frank Thrombly.	7
News release from S.D. Zoo.	9

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Hope your summer has been great!!!

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Show Schedule for August- Casa Del Prado - Balboa Park

Aug 7 & 8	San Diego Dahlia Show	Sat: 2pm - 5:30 pm	Sun: 10am - 5 pm
Aug 21 & 22	San Diego Fern Show	Sat: 1pm - 5pm	Sun: 10am - 5 pm
Aug 28 & 29	San Diego Turtle & Tortoise Show	Sat: 10am- 5pm	Sun: 10am - 5 pm

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Those who will bring refreshments for August

Jan Miller, Marianne Thrombley, Dorothy Ronske, Sophie Layland, Brunhilde Groffi, Eveland Diamond, Margaret Blake, Ramona Huftill, Barbara Jolly Joan Fleer

Thank you in advance

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A special welcome to our New Members----

Robert and Mary Jane Hunter - San Diego	Harry Catalani - San Diego
Jo Helle - San Diego	Sandy and Cathy Frost - San Diego
Gloria Alexanderson - San Diego	Shogo Yamaguchi - Fallbrook
Maria Girvjack - San Diego	

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Just by chance we met the President of the Honolulu Cactus and Succulent Society on Maui. He was setting up a sale of plants and we got to talking to him. He wondered why we were looking at cactii there as most people go to the mainland for that. It was a good trip.

Mary

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Contributed by Floretta Warner-Thanks

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Deadline for the September Issue-- August 31--

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Please remember that if you would like to contribute to the Espinas y Flores Send them to me before the deadline-We would like to hear from all of you.

Cactus-of-the-Month

THE GENUS NOTOCACTUS

(Echinocactinae)

Dorothy Dunn

The beautiful and free-flowering Notocacti belong to the large and diverse Echinocactus group, which also includes such a variety of plants as Astrophytums, Ferocacti, Fraileas, Gymnocalyciums, Parodias, Echinofossulocacti, and the familiar 'Golden Barrel', to mention just a partial list. Whereas the genus was at one time included under Malacocarpus (now Wigginsia) by Britton and Rose, Backeberg segregated the two genera as well as keeping separate two other genera, Brasilicactus and Eriocactus, which are now usually included under Notocactus. It has also been suggested that a new genus - Brasiliparodia - be erected for the controversial group of so-called "Brazilian Parodias" (Notocactus rechensis, N. alacriportana, N. brevihamatus, and N. bueneckeri), based on their habitat, growth form, flower structure and seeds. Buxbaum and Krainz suggested the transfer of all the groups - Eriocactus, Brasilicactus, Wigginsia, and the "Brazilian Parodias" - into the single genus Notocactus, and this proposal has gained fairly wide acceptance.

There are at least thirty species of Notocactus, inclusive, all South American in origin (the generic name derives from the Greek, meaning, literally, "southern cactus"), with their distribution being predominantly from north to southern central and east Argentina, through Uruguay and Paraguay to southern Brazil. The largest number of species are found on the Uruguay-southern Brazil border. The older described species are found principally around the first settled areas near Buenos Aires, while more recent discoveries tend to come from the more remote regions in the interior of Brazil. Many of the early species described as coming from Uruguay can no longer be found in their original habitats, probably because of the inroads of "progress" and "civilization" created by man - construction, agriculture, grazing of domestic animals, etc. However, they generally can still be found further north, as they were usually the more widespread species and in Uruguay were at the extreme edge of their range. The most widely-distributed species such as Notocactus ottonis can be found over virtually the entire Notocactus range.

The habitats of most Notocacti are not really typical of xerophytic plants. Although they vary from the dry, well-drained hill-sides of Brazil to the grassy pampas of Argentina, the average rainfall is quite high - between twenty and forty inches per year, with the dry season being usually quite short. Average temperatures are relatively high, with occasional frosts in some areas, and they are often found growing beneath thin shrubs which protect them from the scorching sun. Their root systems are generally widespread and somewhat fibrous, and they seem to prefer a slightly acid soil.

Most Notocacti will flower when very young. The flowers are borne on top of the plants and are usually large and conspicuous. The majority of them are of a satiny-yellow hue, although they can also range from orange-reddish shades (N. haselbergii, N. horstii) through pink or purplish (N. rutilans, N. herteri, N. uebelmannianus) to lime-green (N. graessneri). The plants are often self-

fertile, notably in the case of N. rutilans, N. graessneri, N. leninghausii, and N. haselbergii. The plant bodies are generally globose or shortly columnar, and some species offset quite profusely from the base (particularly N. leninghausii, N. neobueneckeri, N. rechensis, N. magnificus and N. ottonis). A few species have the rather unfortunate tendency to offset haphazardly at various other places on the plant bodies, which somewhat spoils their symmetry.

The Brasilicactus species (N. graessneri and N. haselbergii) are self-fertile, as mentioned before, do not offset, and are differentiated from all other South American spherical cacti by the very short floral tube. They are among the earliest Notocacti to bloom in the spring.

The Eriocactus species (N. leninghausii, N. claviceps, N. magnificus, and N. schumannianus) are all characterized by their more columnar growth habit and relatively large flowers. Backeberg maintains that the greater body size, fruits and seeds, and the strong apical wool clearly differentiate these species from all other Notocacti.

Most species of Notocacti are easy and rewarding to grow. Many of them seem happier when grown in some degree of shade, but with strong indirect light. Notocactus scopa in particular is extremely beautiful when grown under quite low light conditions. Some species will tolerate temperatures down to 20 degrees F. They make ideal pot plants, but many species, given adequate drainage, can be grown right out in the open ground. They should be watered rather sparingly during the coldest, wettest winter months, and moderately during the growing season. They seem to have no specialized soil requirements other than the usual stipulation of good drainage.

Few pests attack a healthy Notocactus; the persistent mealy-bug appears to be the most serious, and occasionally red spider-mite.

Propagation is by seed, or by rooting the offsets of the clustering varieties. Although Notocacti grow extremely well on their own roots, they are sometimes grafted. N. neobueneckeri in particular seems to respond to grafting by offsetting more prolifically.

References used:

- | | |
|-------------------------|-----------------------------|
| Backeberg, C. | Cactus Lexicon |
| Borg, J. | Cacti |
| Mace, Tony | Notocactus |
| Martin, Auger, Chapman: | Cacti and their Cultivation |

Succulent-of-the-Month

Hoodia

Dr. Ronald E. Monroe

The genus Hoodia (Stapelieae: Asclepiadaceae) was erected by Robert Sweet in honor of a Mr. Hood (a cultivator of succulent plants) who apparently had nothing to do with discovering the type plant nor its cultivation (Sweet, 1830; White and Sloane, 1937). The type plant, however, was discovered by Col. R. J. Gordon (Hoodia gordonii) growing in the Great Namaqualand on the north side of the Orange River (South Africa). For a long time the genus was confused with Trichocaulon spp. (except when in bloom), but after considerable study, Hoodia which grows in arid regions of Angola, Namibia, Botswana, Rhodesia and the Cape Province of the Union of South Africa, was separable from Trichocaulon in that Hoodia is a stout succulent perennial, highly branched, leafless, cylindrical stems with many tuberculate angles and the tubercles have spines or are bristle-toothed. The flowers are extremely showy and large, usually concave, plate-like, with the margins somewhat pentagonal and often containing fine awn-like points. The corolla may be glabrous or covered with hairs or bristles or papillae and the colors range from salmon, yellow, brick-red, pink or purple depending upon the species discussed.

White and Sloane (1937) recognized 16 species and Jacobsen (1970) listed 17 species and one variety as proper to the genus; recent work by Plowes (1977) indicated that about 20 species exist, but many of these were either in doubt or in direct synonymy with others; therefore, much more taxonomic work is required before a definitive statement can be made in regards to the total number of species extant.

Most plants found in collections are H. macrantha, H. currori, H. bainii and H. pillansii (and probably a good many hybrids!). Newer species made somewhat available are H. lugardi, H. juttae, H. parviflora and H. dregei (for good black and white and color pictures of these plants, the reader is referred to: White and Sloane, 1937; Jacobsen, 1970; Court, 1981; and Monroe, 1978).

Besides the unusual flowers, these plants also have equally remarkable fruits (seed pods) which are called follicles. These are either single or double and 10-12 cm long, terete-fusiform, glabrous and tapering to a beak. Each follicle contains ca. 150+ brown, flattened seeds that are rather typical of milkweed plants; the attached silky hairs aid in the seeds' aerial dispersal.

While these very desirable plants have been known for a long time they are still rare in collections and most people think them difficult to grow and to flower--perhaps one of the grossest myths of the succulent world! There are no secrets to their cultivation and there are numerous other asclepiads (and other types of succulents) which are much harder to grow. The plants can be grown in nearly any type of porous soil (sand-supersoil 1:1, for example) and they do require hot, full, non-filtered sun; a winter minimum temperature of no less than 5°C should be observed and all water should be withheld from October to April. When the plants begin to grow in the spring, water freely (to suit local individual damp or dry environments) and feed occasionally with a balanced, low nitrogen fertilizer. One must remember that

stem growth, flower size, growth rate, etc., is directly related to environmental or cultural care.

Propagation is by rooted cuttings (some with difficulty) or, more popularly, by seed which germinates within 24-36 hours. Of interest is the fact that the plants are thought to be self-fertile but must be pollinated by certain flies (usually blow flies; Diptera: Calliphoridae) that are attracted to the flowers by an odor resembling decaying flesh (but milder in some such as H. curreri).

The plants are very tolerant to most insecticides and Cygon·2E controls mealybugs as well as other harmful pests.

References Cited

- Court, Doreen. 1981. Succulent flora of southern Africa. A. A. Balkema, Rotterdam. 224 pp.
- Jacobsen, Hermann. 1970. Lexicon of succulent plants. Blanford Press, London. 664 pp.
- Monroe, Ronald E. 1978. Hoodia pillansii Brown. *Ashingtonia* 3: 84.
- Plowes, Darrel C. 1977. Stapeliad checklist. *Excelsa* No. 7: 66-86.
- Sweet, Robert. 1830. *Hort. Brit.*, 2nd Ed. p. 359.
- White, Alain and Boyd L. Sloane. 1937. The stapelieae, Vol. 3: 1050-1090. Abbey San Encino Press, Pasadena.

Ex Presidnet "Doc" Vaughan passes on at age 96

Reubon Vance Vaughan was the 4th president of our society, from 1966 to 1969. He was a unique, versatile man. He held 3 degrees, was an assayer, pharmacist and started the first drug store chain in Southern California.

He and his family left the San Francisco earthquake to make their home in Catalina Island. During World War II he was the "Night Owl" an all night talk show in L.A. Later he had a science program on KFI and more recently, a Sunday evening radio show on KFMB.

He wrote two autobiographies "Catalina Diary" and "Print of Remembrance ". We who were fortunate to know him feel he really left a "print of remembrance".

Perlso Lewis

I had a lot more to write as he was a wonderful 'El Presidente' as we called him.

Perlso

Mammillaria Nivosa

Frank C. Thrombley

Mammillaria nivosa is one of the few species endemic to the islands of the West Indies. They are found in the tiny country of Turks and Caicos Islands through the islands of Desecheo, Puerto Rico, Culebra, St. Thomas, Buck Island and Antigua Island, which is the furthest south, in that chain.

Backeberg reduces M. nivosa to a variety of M. flavescens. Notwithstanding that flavescens is the older name used by at least two other botanists. Hunt claims that flavescens is insufficiently described and equates it "probably" to M. nivosa. Borg reduces M. flavescens to a variety of M. simplex. Mammillaria simplex grows wild on the coast of Venezuela and on the Islands of Curacoa, Margarita and Patos. There are many islands between Antigua and Patos, a distance of approximately 1100 miles, but neither M. nivosa or M. simplex grow on any of them. It is sufficient to say that Mammillaria nivosa is a valid name, at least for this article.

Its more tropical origins suggest somewhat higher temperatures are required for successful cultivation. The Turks and Caicos Islands experience a typical tropical maritime climate. East-southeast tradewinds predominate and the annual air temperature fluctuates very little. The average daily minimum temperature ranges from 72°F in January to 80°F in August. The average daily maximum temperature ranges from 80°F in January to 88°F in August. The coldest recorded air temperature between 1900 and 1968 was 60°F. The humidity rarely drops below 65%. The average rainfall is between 23 inches and 30 inches among the Turk Islands. The cacti and other plants of these islands must then be well-adapted to the drying conditions of abundant sun, warm temperatures, constant wind, and little rainfall, while coping with high humidity.

John B. Iverson, Department of Biology at Earlham College, spent 27 weeks in the Turks and Caicos Islands between 1973 and 1978. He wrote an article published in the C.S.S.A. Journal, Vol. 52, January-February, 1980 issue, in which he described the habitat of M. nivosa. He found them to be very abundant where they occur, but on the rocky northeastern half of Middelton Cay, he wrote: "There they were so common that it was impossible to walk across the limestone in many areas without crushing specimens and/or perforating your shoes. Clumps of 10 to 15 individuals were not unusual." He wrote that it was amazing to see full-grown plants growing in shallow saucer-like depressions in the smooth limestone. No tools are necessary to extricate many of them. One simply lifts the cactus off the rock, the shallow diffuse roots tightly holding its ounce or two of soil -- like a pot bound plant. In March this soil is bone dry, and these cacti are flowering and fruiting profusely. Iverson said that he found none except in direct association with limestone. They simply did not occur on sandy soils, even a meter from the rock.

Rene Zahra, horticulturist and a prolific writer from Malta, wrote an article for the National Cactus and Succulent Journal, Vol. 36, September 1981 issue, titled Mammillaria nivosa link. She wrote: "In its native habitat M. nivosa grows on flat outcrops of limestone. Other situations might be too damp and humid for Mammillarias, and therefore these limestone outcrops provide the best drained places on these islands."

On these outcrops, M. nivosa grows in every crack and in every shallow depression. Once the seedlings start to grow, wind-blown soil and dry vegetable particles are collected around them. This material is held in place by the rather long spines of this species, and therefore as the plants grow larger more and more material is collected around them. It follows from all this, that on these limestone outcrops there is very little vegetation other than the Mammillarias, and thus these plants are exposed to sun and wind.

It would certainly be prudent to cultivate these plants in shallow pots, well drained soil, no stagnant water, warm temperatures, and a sunny location. Finally, for those who like wooly plants, Mammillaria nivosa has taken its name from the abundant white wool which is produced in the axils between the tubercules when the plant reaches flowering age.

References used:

- Iverson, J. B. The Cacti of Turks and Caicos Islands,
Cactus and Succulent Journal America, Vol. 52,
Jan./Feb. 1980, No. 1
- Zahra, Rene, Mammillaria nivosa Lk.,
The National Cactus and Succulent Journal
Great Britain, Vol. 36, Sept. 1981, No. 3

The inspiration to write the article on Mammillaria nivosa derived from the 'Kents' 16" diameter Mammillaria which won "Best Cactus in Show" in June. It is certainly a well grown specimen. A credit to Bob and Beverly.

FOR IMMEDIATE RELEASE

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news release

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PHONE: (714) 231-1515

SAN DIEGO ZOO DISHES UP THREE-COURSE 'BOTANY FOR BREAKFAST' THIS FALL

Home gardeners and amateur botanists hungry for insider's information about the care and cultivation of specialized exotic plant groups in Southern California will find a feast in a fall lecture and tour series led by Ernest Chew, horticulturist at the San Diego Zoo.

Chew's popular "Botany for Breakfast" is back with three unique plant groups highlighted in Saturday morning meetings at the Zoo. Each one-hour talk is preceded by a continental breakfast and followed by a self-guided plant tour, all designed to closer acquaint the early-rising plant lover with the famous zoological garden's more than 5,000 exotic plant species.

Chew himself holds class first with a Sept. 18 look at the "Bananas, Heliconias and Gingers of the San Diego Zoo." On Oct. 30, Zoo plant propagator Bill Knerr introduces "Succulent Trees, Shrubs and Vines of the San Diego Zoo." Specialty grower and collector Jeff Kent wraps up the fall Botany for Breakfast series with a Nov. 20 program on "Bromeliads of the San Diego Zoo." Classes start at 8 a.m. and 10 a.m.

Growth characteristics, landscape uses, cultivation requirements and sources for these exotic species which are uncommon in commercial nurseries will be discussed. Zoo horticulturists plan time each meeting to answer questions of individual gardeners.

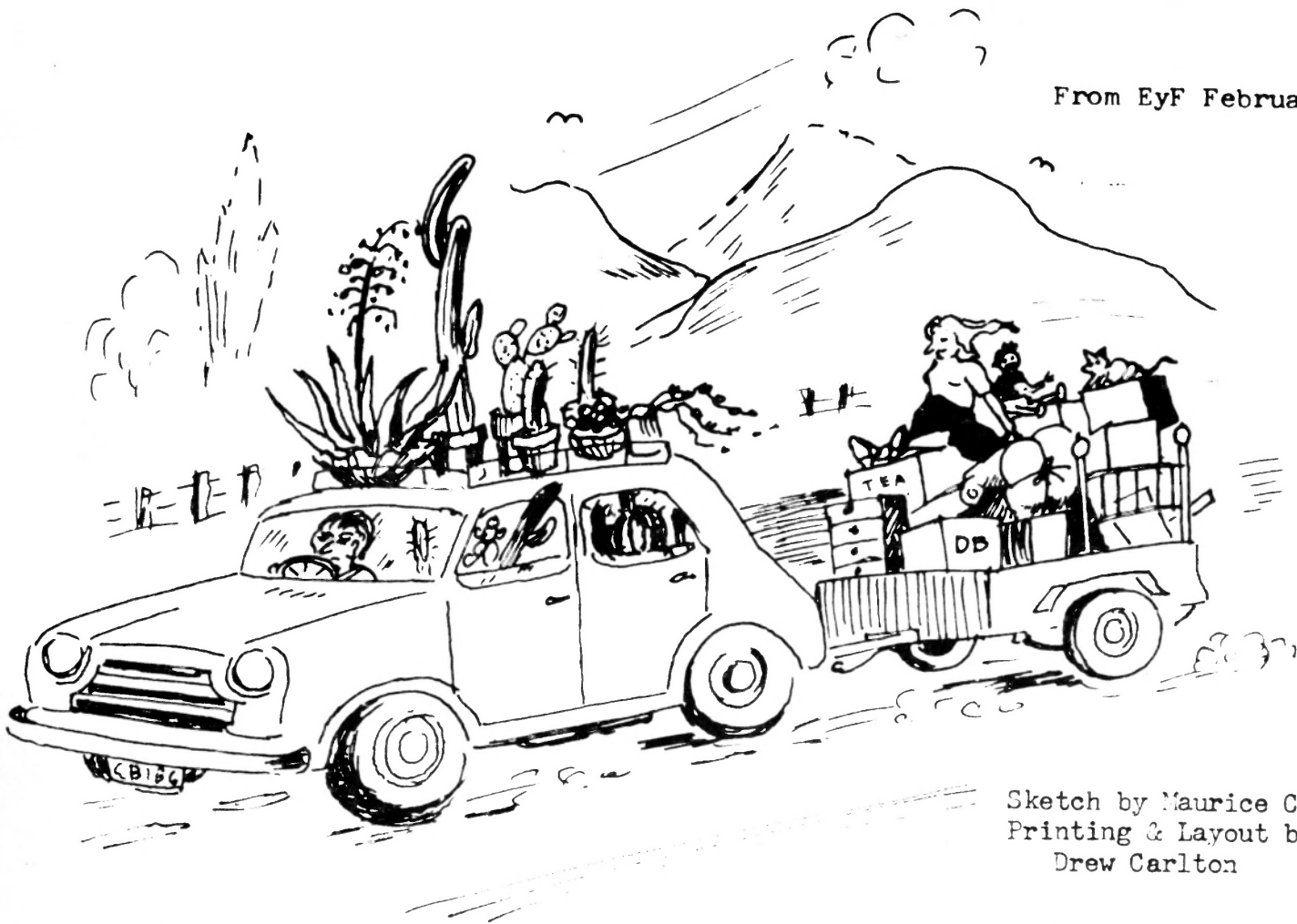
Fee for Botany for Breakfast is \$6 (in addition to \$4.75 Zoo admission) and includes a continental breakfast. Advance registration is required and early sign-up advised as several Botany for Breakfast classes in last spring's series were sold out well in advance. To register, contact the San Diego Zoo Education Department at (714) 231-1515, extension 412.

(more)

Few know more than Chew when it comes to growing exotic tropical plants. Prior to his 11 years as head of horticulture at the Zoo, Chew was a plant practitioner for 25 years in Hawaii and for San Diego City Parks. His "Bananas, Heliconias and Gingers" talk on Sept. 18 will introduce three very similar yet very different plant forms. Included will be several unique ornamental banana species; heliconias, which are similar to bird-of-paradise plants; and the cane-like gingers with their showy and frequently sweet smelling flowers.

Bill Knerr has become an authority on the special horticultural needs of succulent plant forms in his work as plant propagator at the Zoo. He also maintains his own exotic nursery collection of mostly succulent and arid plants. Knerr has spent the last eight years at the Zoo raising plants of the world from seeds and cuttings and nurturing these collections in containers until hardy enough to replant. In his Botany for Breakfast offering, Knerr looks beyond such common succulents as the cactus and the aloe to the variety of "Succulent Trees, Shrubs and Vines." As he'll point out in the Oct. 30 presentation, Knerr knows that while they are well-adapted to dry climates, cultivation requirements for succulents may be more specific than non-succulent species.

Jeff Kent combines both a thorough botanical as well as a horticultural knowledge of cultivation bromeliad species. He has been collecting and propagating bromeliad species for eight years. Jeff operates Kent's Bromeliad Nursery, started by his father some 25 years ago in Los Angeles. More than 1,400 species of bromeliads grow in the American tropics and nowhere else. Most familiar of the bromeliad species is the pineapple. Bromeliads grow both on the ground and epiphytically in trees. Most combine a colorful rosette of overlapping leaves with unusual flower forms to produce a highly ornamental effect. Kent will feature some of the showiest and most easily cultivated in his Nov. 20 talk on "Bromeliads of the San Diego Zoo."



Sketch by Maurice Creed
Printing & Layout by
Drew Carlton

MOVING HOUSE
CACTUS FIRST, THEN THE SPOUSE

With the Compliments of :-

Hamilton Branch of Cactus & Succulent
Society of New Zealand.

1974

MAY						
Sun.	Mon.	Tue.	Wed.	Thur.	Fri.	Sat.
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

May 4th. Branch Birthday.

JUNE						
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June 8th. Unusual Container with Plant.

1974

JULY						
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July 6th. Sulcorebutia.

AUGUST						
Sun.	Mon.	Tue.	Wed.	Thur.	Fri.	Sat.
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18	19	20	21	22	23	24
25	26	27	28	29	30	31

August 3rd. Gold Spined Mammillaria.

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The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti, other succulents and exotic plants. Meeting 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 Cents.

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