

Espinas y Flores

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

Volume XXIII, Number 5

May 7, 1988

MAY MEETING

Saturday May 7, 1988
1:30 P.M.

Casa Del Prado, Room 101, Balboa Park

Please note that this is
the first week of month

PROGRAM

SHOWTIME

WITH DR. LEROY PHELPS

Dr. Phelps will present the fine art of preparing and staging cacti and succulents for our annual show (June 4 & 5, 1988). Members of the Board of Directors are requested to bring in examples of both well prepared and poorly prepared specimens (that is deliberately bad examples). There will be ample opportunity for questions.

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DEADLINE FOR THE JUNE ISSUE - - - MAY 28, 1988 - I will be needing someone who would be willing to prepare and mail the August Issue of the Espinas y Flores. Please get in touch with me. Thanks Mary

FROM THE BOARD

Our Bylaws, ARTICLE IX - AMENDMENTS, states; "These Bylaws may be amended at any regular meeting of the Society by a two-thirds vote of the members present, provided that the amendment has been submitted in writing at the previous regular meeting; that an opinion of the Executive Board is submitted, and that there is a quorum present." After some three years of work the following revised Bylaws are submitted to you the membership of our Society. At the 9 April 1988 Board meeting, all Board members were present, and the revised Bylaws was unanimously approved. We will not have a regular meeting in June, so the Board will ask for your approval of the revised Bylaws at our regular July meeting.

NOTE

NOTE

NOTE

ALL TROPHIES MUST BE RETURNED AT THE MAY MEETING!!!

M. J. ...

Welcome to New Members - - -

Robert and Janet Lay - San Diego

Grace M. Cheng - San Diego

Those who have signed up to bring refreshments for the May Meeting - - -

Avelina Gaerlan
Gerda Krypka
Mary Ann Alexanderson
Doris Rake

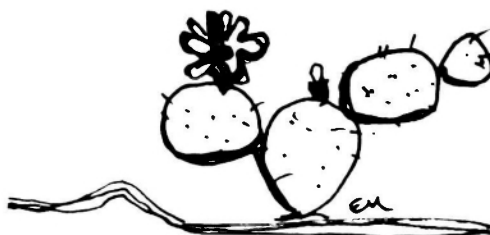
Bonifacio Gaerlan
Dana Adams
Mary E. Holman
Russel Evans

Joan E. Fleer
G.S. Bajwa
Sarah Jervey
Charles & Joanne Clark

APRIL BRAGGING PLANT WINNERS.....

- 1st Place - Phyllis Flechsig for her *Neochilenia chilensis*
- 2nd Place - Teresita Lime for her *Euphorbia milii v. roseana*
- 3rd Place - Phyllis Flechsig for her *Echinocereus durangensis*

ANOTHER REMINDER TO BRING BACK ALL TROPHIES FROM LAST YEARS SHOW



Cactus-of-the-Month

EPIPHYLLUM

by Rick Latimer

The word "epiphyllum" means upon the leaf in Greek. This genus was given that name, because the flowers appear to "spring directly from the leaves. Actually, of course, the "leaves" are ~~really~~ really the branches as the plants only have leaves as seedlings (the dicotyledons). The flowers open at night and are all white (that is the petals, the sepals are usually one pastel color or another. In general the fruits are spineless. Most plants are epiphytic and are native to jungle habitats from Mexico down into South America from near the coast in Ecuador to Peru, Bolivia (very far from the coast!!!), Paraguay, and Brazil and in the West Indies on Trinidad and Tobago.

My favorite species is E. chrysocardium. The first time I saw one I thought it was a fern or a cycad. The stems are highly serrated, having 5" long by 1½" wide lobes on its erect stems. However, the bud that grew from between the lobes (and therefore from an areole) revealed this plant to be a cactus. (If the stems were unlobed, would this plant be confused with a bird's nest fern?) The flowers have a very long tube (typical of this genus) which opens up into a huge white flower with many golden anthers (hence 'chrysocardium' = heart-of-gold). These anthers darken (especially on flowers that have been picked and stored in the refrigerator, giving the effect of a bowl of milk with pepper sprinkled on top. The fruit is a problem for classifiers, because it is very spiny (looks like that of Eccremocactus imitans or a Selenicereus species fruit). The flower has the odor of sour cream.

The one most commonly grown as a house plant throughout the world is probably E. oxypetalum. The previous species' branches are erect, but become mostly horizontal. The stems of this species are more perpendicular and consist of long round canes at the bottom which flatten out into the well known wavy leaf like structures that one would not think of as belonging to a member of the cactus family. Of plants that have been seen growing in Oaxaca, Mexico some were epiphytic, but most grew in the local limestone. Branches get up to nine feet long. The flower buds grow down and then up ("Dutchman's Pipe Cactus") and picked flowers are impossible to display in vases. Another common name is "The Night Blooming Cereus", but we know better, since we know there are many of the Cereoideae that could be given this name. The sepals are pinkish red.

Closely related to the last species is E. thomasianum. The flower is similar, but is flatter with the anthers tighter together and reminds me of a Matilla Poppy and the flower has the scent of old potato chips. The stems are not long or ever very erect. The "leafy" parts are flat and elongate with shallow lobes and remind me of the pads on the two long tentacles on squids.

The species with the most varieties is E. phyllanthus. This was first species named in this genus back in 1753. The stems are flat and leathery and the epiphytic plants can get quite huge in the wild. The

flowers are all wheel-shaped and have narrow petals. The flower size distinguishes the varieties. Flowers range from E. p. columbiense with 1" long petals on 3-4" long flowers (the size of some of the next ~~Species~~) to E. p. phyllanthus with ½" to 2" long sepals on 8" long flowers (from Panama, Cuba, Antigua, Guiana, and Colombia to Argentina) to E. p. guatemalense with 3" long petals on 6" long flowers (and has light green sepals). Another interesting variety is E. p. rubrocoronatum with orange to purple filaments. Two commonly grown varieties are "strictum" and "stenopetalum" which Myron Kimmach considers to be minor forms of E. p. hookeri. Kathie van Arum has grown some of the latter from seed. They have rather large cotyledons for a member of the Cereoidae about ½" long.

E. crenatum does not have an overly pretty flower, but because it stays open in the daytime it has been extensively hybridized. It has several varieties including E. c. "Chichicastenango", which has stems that forget to put out all the lobes at times. Varieties of E. crenatum have from green to brown sepals. E. grandilobum is considered to be closely related, but has huge flowers like the first species listed and along with Selenicereus macdonaldiae, Mediocactus megalanthus, and Hylocereus calcaratus are the largest in the cactus family.

The remaining species in this genus in general have smaller flowers being only 3 to 4" long and 1 to 3" across. Worth mentioning is E. cartagense with a red floral tube and red sepals and the "little rick racks" which are all varieties of on another: E. anguliger, E. darrahii, and E. gertrudianus. The first one has highly rounded serrated lobes on its stems (although nowhere near the first species listed) and brown sepals, the second one has triangular serrated lobes and yellow green sepals, and the last is somewhere inbetween. The fruits remain a green color.

Since these plants are from the jungles, they do not care for full sun, but prefer filtered sunlight. The potting mix should consist of humus and pumice. The flowering season starts in the Spring and some species have several blooming periods until November.

REFERENCES:

Curt Backeberg, Cactus Lexicon

Scott Haselton, Epiphyllum Handbook

from the Cactus and Succulent Society of America's Journals:

- E. J. Alexander, "Epiphyllum chrysocardium - A New Species", (28:1)
- Myron Kimmach, "Epiphyllum phyllanthus", (36:4)
- Myron Kimmach, "Epiphyllum thomasianum" (37:6)
- Myron Kimmach, "Epiphyllum grandilobum" (37:1)

The North-West Cape

Little Namaqualand forms the north-west corner of South Africa and appears to be a desolate and barren land to all but the succulent enthusiast, for those entering these areas, treasures abound.

Bordered by Vanrhynsdorp on the south, Kendhardt and Calvivia districts on the east, The Orange River on the north and the cold Atlantic on the west. This area is an extension of the Bushmanland Plateau with an average elevation between 2,000 to 4,000 feet descending to the coast in the west. Near the coast there are granitic ranges, mainly the Kamiesberg, which harbor some very interesting succulents. The Richtersveld lies at the extreme northern corner of Little Namaqualand, occupying the great northern bend of the Orange River. The Northeast part of Little Namaqualand is known as Little Bushmanland.

The landscape in Little Namaqualand is characteristic, presenting endless succession of rounded granitic hills interspersed with sand flats. Rainfall is between 2 and 6 inches a year, and much less in Little Bushmanland! The Richtersveld gets most of its moisture from mists that come in from the coast. These landscapes present an arid picture but have some of the most fascinating plants; Conophytum, Lithops, Aloe, Welwitschia, and Stapeliads to name a few.

Research Proposal

I am planning a trip to the north-western cape in September-October or February-March (1988 or 1989, respectively) depending on the flowering times. I plan on observing the pollination of stapeliads in the field. This is virtually an unknown area of research, not many investigators have taken the time nor had the inclination to make such a study. One reason for this may be that stapeliads are not easy to find, they do not form colonies, and grow mainly under bushes. Also, flowering times are not well recorded and related to the sporadic rain of these areas. All in all this is a difficult subject that has not been discussed much until this time.

The Stapelieae Genera

The Stapelieae are succulent members of the family Asclepiadaceae (the milkweeds). This family is very closely related to the Apocynaceae (Adenium and Pachypodium) and some authors consider them as part of the Apocynaceae. In this discussion the terms Stapelieae and stapeliad will refer to the approximately 32 genera (listed below) of succulent stemmed milkweeds, Ceropegia and Brachystelma will be excluded for this discussion. The flower colors range from yellows to complicated purple and white patterns with much variation. Hairs and papillae further accent the weird floral structures. Though the majority of the species are odorless, some

are quite foul smelling, hence the name, carrion flower. A few have a sweet smell (Stapelia flavopurpurea, S. arenosa) There are five corolla lobes (petals) united and fleshy which resembles a starfish, hence another common name, starfish flower. The anthers and stigma unite at the center of the flower to form the very specialized coron
a. The pollen is not free as in the Cactaceae, but bound in special sacks referred to as pollinia.

For pollination to occur the pollinia must be moved from their top position on the corona to a lower position, wedged between two hand-rail like structures. This is described as a lock and key mechanism by some authors. The plants rely on entomophily which means they are dependent on flies and perhaps other insects for pollination. Pollination techniques have only recently been worked out, so propagation has mainly been via rooted cuttings and field collected seed. Pollination experiments are difficult and require a dissecting microscope. Patience is also required, as the twin seed pods or follicles do not form immediately. Twelve months is not unusual for seed production! The seeds are small (2-6 mm) brown ovals with a tuft of fine white hairs at one end. The seeds float quite easily on a slight breeze which may account for the distribution pattern of these plants which corresponds with the wind patterns of Asia and Africa.

Stapeliads can be found in India, Pakistan, Bangladesh, Burma, Spain, the Middle East and most of Africa. The Stapeliaceae include about 32 genera: Caralluma, Duvalia, Duvaliandra, Echidnopsis, Edithcolea, Frerea, Hoodia, Hoodiopsis, Huernia, Huerniopsis, Lavrania, Luckhoffia, Ophionella, Orbea, Orbeanthus, Orbeopsis, Pachycymbium, Pectinaria, Piaranthus, Pseudolithos, Pseudopectinaria, Quaqua, Rhytidocaulon, Stapelia, Stapelianthus, Stapeliopsis, Stultitia, Tavaresia, Trichocaulon, Tridentea, Tromotriche, and Whiteslonea. There are about 40 different species from the north-west corner of Cape Province. The genera are: Duvalia, Hoodia, Huernia, Pectinaria, Piaranthus, Quaqua (formally Caralluma), Stapelia, Stapeliopsis (some formally Pectinaria), Tavaresia and Trichocaulon. All of these genera have species in other geographic locations, though some species are endemic to this area. Stapelia garipensis and Tridentea umdausensis are endemic species to the Richtersveld.

Stapeliad Cultivation

My collection is kept in a small greenhouse which protects plants from the sun (45-65% shade cloth) and our winter rains. I fertilize at 1/3 the recommended rate every other watering. Some plants have more specific requirements and I always try to grow these difficult ones with more care. In the winter I water about once a month, depending on plant growth, and when I do water it is not very much, not enough to run out of the pot. When they start to grow in the late winter I start to water more.

I observe my plants closely for the dreaded mealy bug. Plants are repotted every year. If there is a problem I use Cygon 2E plus Safer Agro-Chem's Insecticidal Soap as a drench in the early morning and rinse any off any residue from the plant body. It is good practice to alternate with Malathion or other insecticides.

The plants are grown in a very loose mixture of 'Unigrow potting soil', 'Lomex', 'Supersoil', pumice and charcoal in a ratio of 2:2:2:4:1/2 respectively. With space limitations as they are I use 2", 2 3/4", and 4" square plastic pots. I have been growing Stapeliads for about 17 years in all sorts of conditions and locations, and each year more plants flower.

Next year I will be able to share my photography and experiences in the Cape Province with the society.

References

Bruyns, P.V. 1981. Review of Pectinaria Haw., Stapeliopsis Pillans and a new genus, Ophonella (Asclepiadaceae). C&S Journ. of G.B. 43:61-83
Bruyns, P.V. 1983. Resurrection of the genus Quaqua. Bradleya 1:33-78
Leach, L.C. 1980. Excelsa, Taxonomic Series No. 2
Leach, L.C. 1985. Excelsa, Taxonomic Series No. 3
White, A., and Sloane, B.L. 1937. The Stapelieae

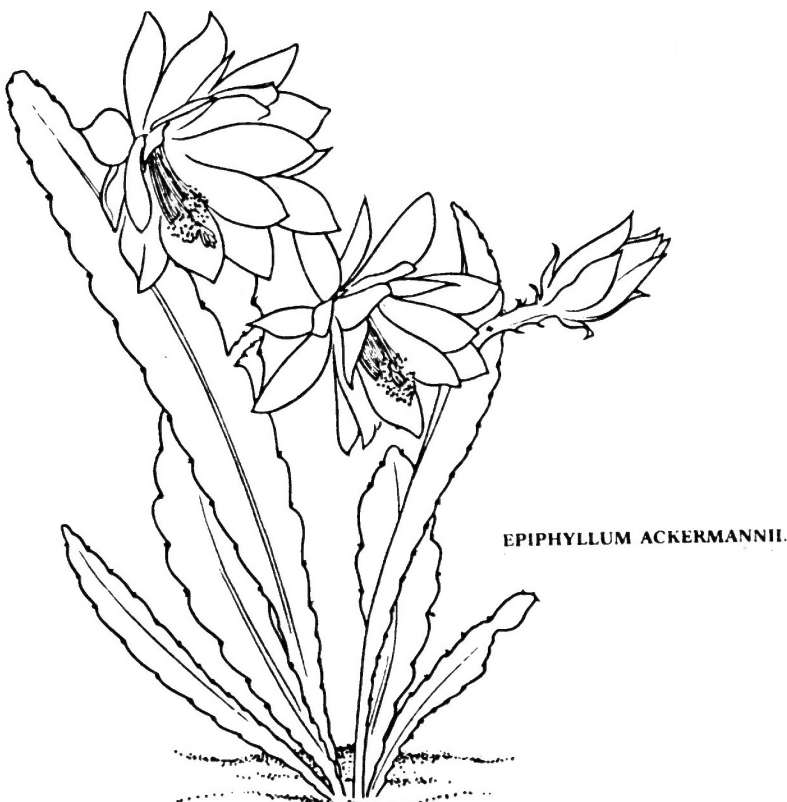
And - Miscellaneous notes and letters

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Please Bring Plants

Bring any stapeliads that you would like, especially if they are from the above mentioned area. I would also be pleased to see other non-stapeliad plants that are from this area. I may not be able to talk about them much but they would help with the display.

Thanks, JB



Killing Cactus and Other Succulents

How to Knock 'em Dead at the Cactus Show: Abstract of Niccolo Machiavelli's The Cactus Grower

The Cactus and Succulent Show is only a month away. The expert advice found in this abstract may be of only limited help to you this year, but it is not too soon to start your preparations for other shows. Winning a plant award is not a casual thing. It requires devoted and determined care and work. It is serious business.

1. The first step is adopting the correct attitude of mind. Do not plan on having fun. Prize winning is an end in itself, and in plant shows as well as athletic contests winning is everything. This is a campaign, not a hobby, on which you are embarking.

2. Next, you must acquire plants. Never add a plant to your collection just because you like it. Look for lists of recommended plants. Research the type of plants that have won in previous shows, and, to lend a scientific bent to your endeavors, look for the plants that make people say "ooh" and "ah." Choices are cactus that have strong or unusual spination or heavy wool. Among succulents favorites are plants with striking caudexes, pleasing leaf or stem patterns, or attractive colors. Consider yourself several steps ahead if you can find plants that have grown to a size that in itself is to be admired.

3. Keep your plants modest in number. Do not acquire more than you can give close, daily attention to if each one is to be a prize winner. Do not go too deeply into any one genus but stick to the most attractive of any one group. You must diversify your collection, not only to be able to meet all kinds of competition but also not to have to compete with yourself by entering many plants in one grouping.

4. As you select plants, keep in mind that, some opinions to the contrary, the best grower is still Mother Nature. Her endeavors are particularly important if you do not feel that you have the time to wait fifty to one hundred years for a certain cauduciform or slow growing cactus. Also keep in mind that the legal impediments to field collecting are such that even the Creator could not get his products across state and national lines. Nonetheless from time to time, certain plants will appear, perhaps from disbanded collections(?), and notable specimens may be acquired.

5. If your pocketbook or principles (misguided, some would say) does not encourage the acquisition of collected plants, then you must haunt the nurseries. Do not purchase the first plant you see. In every seed batch, there will be a few plants that are stronger and more attractive than the others, and these are the plants you must find. Obviously the best

source is the original grower, but if this course is closed to you, you must find a retailer who has been able to skim off the cream for his own nursery. An alternative, of course, is to grow plants from seed yourself, but time given to propagation is time away from preparation for competition. Do not, by the way, acquire a show plant from a dealer immediately prior to the competition. It is against the rules, but, more important, someone may tell, and one of our rules is never get caught.

6. If you are going to show plants, some time must necessarily be spent on their cultivation. The usual twaddle prevails: good drainage and ventilation, neither too much nor too little water and fertilizer, and (often overlooked by neophytes) all the light the plant will tolerate without showing stress or burning. You should have a greenhouse for plants which scar easily or need protection from local winters and a more open or entirely open area for plants which grow as nature intended. Some white-spined mammillarias, for example, could even be grown in the ground and potted just before the competition. Pest control is an important part of cultivation. Timely applications of banrot, cygon, sevin, diazinon, kelthane, snail bait, and a rodent control of your choice will provide your plants a modest degree of protection if they do not kill them, or you. There is some risk that your neighbors may charge you with operating a toxic waste dump. With discretion this may be turned to advantage, however, by quietly informing your competitors' neighbors of their pest control practices.

7. As the show grows close, pots, clean top dressing, cleanliness of plants, the proportions of the plant to the pot, and the positioning of the plant within the pot all take on great importance. Pots can be a most difficult problem. Some judges state that they do not consider pots in their judging, but such consideration is often ordained in their formal instructions, and you may rest assured that pots become crucial when the quality of plants is equal. Keep in mind that plastic pots are declassé; terra cotta pots are gauche; but used oil cans are suitable if it can be whispered in the judges' ears beforehand that they represent nouveaux arts. The best, however, are artfully done ceramic pots, the more expensive, the better. And pots must be clean, never with any indication that they have spent time in the dirt of a plant house or collected salts from the liquids which have been administered them. A sharp knife edge, an electric sander, vinegar (for its acidity), and a great deal of perspiration will remove most of the scum (a spouse and a whip are also helpful). If your pots are terra cotta, an application of mineral oil rubbed into the pot and then rubbed off will give the pot some luster for a day or two. Much of this work may be avoided by slipping the plant into a new pot just before the show, but this runs the occasional risk of having a loose plant in the pot or upsetting the desired proportions of the plant to the pot.

8. While your plants are growing to competitive size and beauty, leave nothing to chance. Study the judges. There are not a large number of people whom clubs are willing to use as judges, and as a result they come around often. Keep a record of them: learn what plants they grow at home and whether they have a habit of choosing a particular kind of plant as the best. Judges may endeavor to be fair, but the pressures of time may prevent an intelligent and informed decision while some judges may lack both the capacity and inclination to make that kind of decision. Know who they are. Do not attempt to bribe judges or to keep one or more on retainer; it is too expensive and eats up the money needed to buy pots.

9. When the moment comes to place your plants on the judging table, be at your competitive best. Do not bring plants in wet soil and leave at home the weeds and bugs which usually grace your prizes. Have the plant correctly named, if that is possible in a day when a rite of passage for any new taxonomist is to discredit the work of all who preceded him. Arrive at the hall late in the day so that you can help arrange your and other plants in their categories, casually placing your plants toward the front where they may be best seen. Also examine the plants of the competition, slowly turning them so that any flaws in the pots or plants are toward the front. Competitor pots are appropriate depositories for the cob webs which you have brushed off your own plants. Cigarette stubs in the top dressing, however, is in bad taste (and too noticeable). Placing insects in competitor plants is also not recommended, since their mobility usually cannot be controlled. Dead insects, however, are a possibility, and a properly trained snail with a proven slime-track record can leave the opposition in complete disorder.

11. If none of the above works for you, all that is left is to be lucky. At a good show, there are many good plants, and at times the difference between winning and losing is only a mental or physical flip of the coin.

- translated by Bob "sour-grapes" Kent
from the recently discovered latin text

MORE NEWS ---

Show Schedule for May and June

May 8	San Diego Epiphyllum Society 18th Mothers's	Day Show	Sun:11am-5:00pm
May 14 & 15	San Diego Geranium Society 16th Show	Sat:Noon-5:00pm	Sun:10am-5:00pm
May 21 & 22	Heartland African Violet Society 7th Show	Sat: 1pm-5:00pm	Sun:11am-5:00pm
May 28 & 29	Balboa Park Bromeliad Study Group Show	Sat:11am-4:30pm	Sun:11am-4:30pm
May 28 & 29	San Diego Botanical Garden Fdn. Plant Sale	Sat:10am-5:00pm	Sun:10am-5:00pm
JUNE 4 & 5	SAN DIEGO CACTUS & SUCCULENT SHOW	Sat:1pm-5:00pm	Sun:10am-5:00pm
June 12	Southwest Hemerocallis Society 15th Show		Sun:Noon-5:00pm
June 18 & 19	San Diego Fuchsia & Shade Plant Show	Sat:Noon-5:00	Sun:10am-5:00pm

Listing Protection Proposed

During July 1987, seven plant and four animal taxa were proposed for addition to the Federal lists of Endangered and Threatened wildlife and plants. If the listings become final, Endangered Species Act protection will be extended to the following:

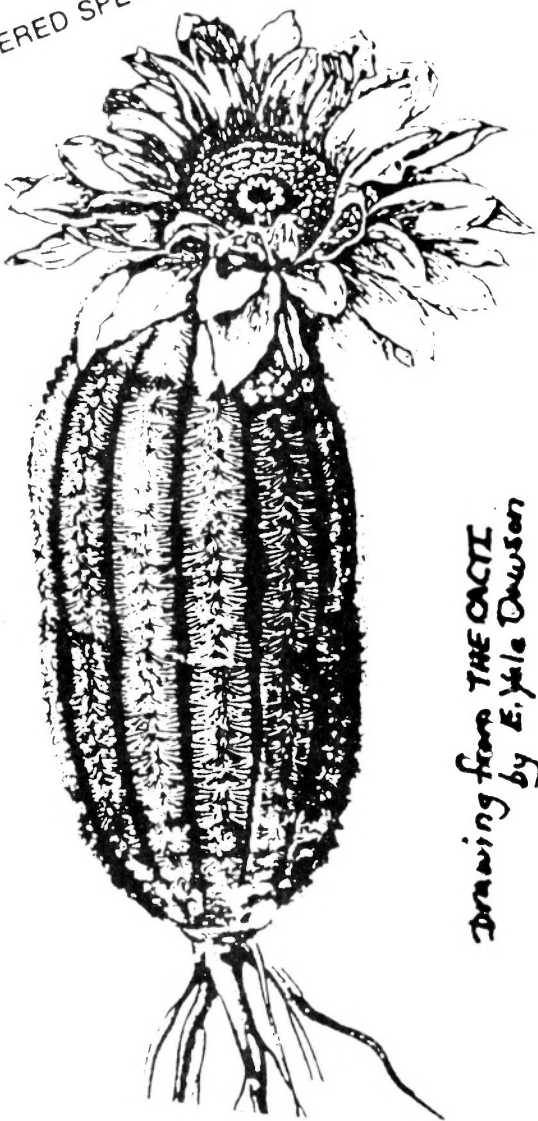
ENDANGERED SPECIES TECHNICAL BULLETIN

Chisos Mountain Hedgehog Cactus (*Echinocereus reichenbachii* var. *chisoensis*)

Native to the southwestern United States, the Chisos Mountain hedgehog cactus is very restricted in numbers and distribution. Its entire population of approximately 1,000 plants is known from only a few places in southern Brewster County, Texas. Fortunately, these sites are protected as part of Big Bend National Park. The species' low numbers and localized occurrence nevertheless make it vulnerable to extinction from collecting or habitat disruption. To help increase its protection, the Service has proposed to list the Chisos Mountain hedgehog cactus as Threatened (F.R. 7/6/87).

This cactus grows amid sparse Chihuahuan Desert vegetation on alluvial flats near the Chisos Mountains, the local range from which the cactus takes its name. Between World War I and World War II, before the park was established, this area was heavily overgrazed by livestock. Removal of the native short grass cover may have altered the preferred habitat conditions for establishment of Chisos Mountain hedgehog cactus seedlings. The return of native grasses may create an environment more favorable to the cactus seedlings; however, recovery of overgrazed desert rangelands is a slow process and some desert plant communities never return to their former composition.

Because the Chisos Mountain hedgehog cactus is so rare and has such attractive flowers, some private and commercial collectors find it desirable. Although collecting any cacti in the park without a permit is prohibited, taking of the Chisos Mountain hedgehog cactus probably has occurred in recent years, and any illegal collecting is detrimental to such small populations. They also are potentially vulner-



Drawing from THE CACTI
by E. J. Dawson

The Chisos Mountain hedgehog cactus is a small, barrel-shaped variety with deep green to bluish-green stems up to 6 inches (15 centimeters) tall. Its attractive flowers have petals that are red at the base, white at mid-length, and fuschia at the tips.

able to harm from road maintenance and trail building unless these activities take the species' presence into account. No Federal activities that might adversely affect the cactus are known or expected

Thanks to the Fresno C & S Society for this article

Nomenclatural Notes

Dr. H. F. Glen in the South Afri. Journal of Botany, 53 (6): 489-492, 1987 has reduced the following Aloes to a variety status plus two subspecies.

- A. chortolirioides Berger var. woolliana (Pole Evans) Glen & Hardy, comb. et stat. nov.
- A. greatheadii Schonl. var. davyana (Schonl.) Glen & Hardy, comb. et stat. nov.
- A. striata Haw. subsp. komagagasensis (Kritzing & Van Jaarsveld) Glen & Hardy, comb. et stat. nov.
- A. striata Haw. subsp. karasbergensis (Pillans) Glen & Hardy, comb. et stat. nov.

G. Stanley

Mr. Stanley is a member from San Francisco

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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 p.m. 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¢.

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