

# CENTRAL SPINE

NEWSLETTER OF CENTRAL ARIZONA CACTUS & SUCCULENT SOCIETY

JULY 1999

## FROM THE PRESIDENT

Our June program brought us up to date on the Desert Botanical Garden's Capital Campaign and plans for the near future. The new entrance drive will be in by the end of August, with the new wildflower trail and pavilion slated for completion this fall. What an exciting time for the garden! And equally so for our society as we will benefit by having new digs in which to meet and hold our shows. We will also have the option of holding our annual shows out in the wildflower pavilion if we desire.

How are your plants holding up in the heat? Mine are doing fairly well – I have no greenhouse, just shade structures and trees, so they have to be tough. They are probably faring better than I am! I have no AC, only evaporative cooling and after working in the garden all day it's not always pleasant to come home. In late spring and early summer I spent considerable time putting everything into the ground I possibly could before the heat settled in. It is difficult to position plants in April & May so that they won't be cooked in July & August. And then, of course, drip irrigation had to be installed. So on weekends I get up early and work in the yard for about 3 hours. I have been planting, digging, and trenching all summer, or so it seems. However, I have been experimenting with some of the species I saw in habitat last summer under extremely arid conditions.

And...that reminds me -- our July program is me! I had a wonderful opportunity of visiting South Africa last summer (or was it winter?) for a conference and tour. Do you know where Bulawayo is? How about Antananarivo? Well come to the meeting on Sunday July 25<sup>th</sup> and join me for a botanical tour of the Eastern Cape Province, South Africa, Madagascar and Zimbabwe

I must go now...it is raining and the roof is leaking.

*Stay cool!*  
*Cathy Babcock*  
*President, CACSS*

**Next CACSS Meeting:  
Sunday July 25<sup>th</sup> 1999 @ 2:00 PM  
D.B.G's Webster Auditorium**

## HOW ARE PLANTS NAMED?

### Part One: Why two names?

When talking about something, people need to agree on what they are discussing. That's one reason we name things. So it is in the world of biology. Scientists need to be able to discuss living things no matter what language the scientists speak, and be sure everybody understands what organism is being discussed. For this reason rules have been set for how to name plants so everybody knows which plant is being discussed when botanists gather.

For example, suppose somebody asks you how to take care of a cactus. You might ask which one. The person says, "Well, it is green and has long spines." You won't be able to help as much as if you knew exactly which plant it is.

Or, suppose the question is "Where do I get a night-blooming Cereus?" There are dozens of cacti that have white flowers and bloom nocturnally. Which one is meant?

Botanists group plants mainly according to differences in reproductive structures, including flowers, fruits, and seeds. I'll go into why in the next article, but for now, these structures seem to be less variable among closely related species than do such things as color and size.

Seed-bearing plants are divided into two large groups, the gymnosperms (naked seeds), which includes conifers, cycads, Welwitschia, and Ephedra, and angiosperms (vascular seeds.) Angiosperms are plants with typical flowers and seeds clothed with some kind of fruit. Cacti are angiosperms. Angiosperms are divided into monocotyledons, having one leaf (cotyledon) emerging from the seed like grasses, palms, and aloes, and dicots, having two cotyledons, like beans, roses, and cacti. Cacti are distinguished by petals attaching above the ovaries, and the presence of the areole, a special structure containing two growth tissues which may form spines (modified leaves), flowers, or another shoot.

A species is the entire worldwide group of individual organisms that are substantially similar, almost identical, to each other, that are able to reproduce with each other. An example would be all the saguaros in the world; they are all one species. Other similar cacti (cardon) are not that species though they look somewhat similar.

*Continued on page 7*

# Central Arizona Cactus & Succulent Society

P.O.Box 8774  
Scottsdale, AZ 85252

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<b>Vice President</b>	Scott McMahon	657-7786
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<b>Librarian</b>	Karen Kravcov	780-2867
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## Central Spine

Deadline for articles and submissions for next newsletter:

**August 15<sup>th</sup> 1999**

*Send to:*

Nick Diomede

258

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# WELCOME

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Glendale AZ 85308

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1016 N. 59th Ave.  
Phoenix, AZ 85043

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8774 N. 6th Dr.  
Phoenix, AZ 85021

Tom Hanson  
RR 1 Box 495-B  
Laveen, AZ 85339

Tom & Barbara Danielsen  
328 W. Gardenia Dr.  
Phoenix, AZ 85021

## New Members

Since the seed of Euphorbias are forcibly ejected from the capsules, valuable seed can easily be lost unless one is prepared for the event. We have seen various means used to capture the ripened seeds, including: tying the branch tip in the foot of a woman's nylon hose; forming moist cotton around the nearly ripe capsules; building a cage from a piece of window screen or a plastic beverage cup; and enclosing the plant in an otherwise empty aquarium covered with window screen on the open side. Does anyone have other methods they would like to share?

From the *Euphorbia Journal* Volume III, page 98.

I myself have read of another method, that of putting a small drop of white household glue on the top of the fruit capsule, preventing it from blowing completely apart, so the seeds remain in the exploded capsule.

Also from the same page: Cuttings of Euphorbias tend to "bleed" copious amounts of virulent white latex when first taken. This flow of latex may be slowed by immersing the cutting in water, or virtually stopped by spraying with an aerosol of isopropyl alcohol.

*Submitted by Scott McMahon*

# Bug of the Month

By Sue Hakala

## Fleas

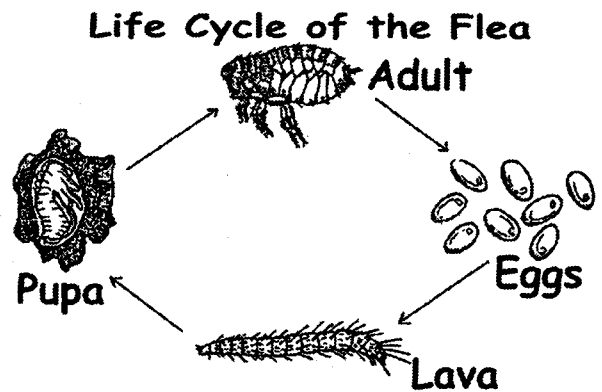
### Fun Facts:

If you could:

- \* jump like a flea you could leap two football fields high and three across in a single bound.
- \* keep jumping like a flea, you could jump once a second for as long as three days.
- \* pull like a flea, you could pull something 400 times your weight.
- \* lift like a flea, you could pick up anything 150 times heavier than yourself.
- \* wear a suit of armor that would protect you from being rolled over, stepped on, clawed or bitten you'd be as protected as a flea.
- \* be a flea you could take responsibility for the deaths of over 100 million people.

### Life Cycle:

Eggs are laid in dust balls or pieces of dirt, and look like small white dots. When numerous, the eggs can look like a sprinkling of salt. Once they hatch, they become squirming little white worms 1/8 to 1/2 inch in size. Their favorite food is the droppings of adult fleas, which consists of undigested human or animal blood. The larva then spins a cocoon from its saliva in a dark place. It can wait up to a year for a warm-blooded animal or human to come on the scene. They sense movement/vibrations coming suddenly to life and immediately jump to begin feeding.



### Symptoms:

If your pet is scratching itself, search through its fur. Look for adult fleas about 1/8 inch long with large back legs. Your ankles and legs may be covered with many small red bites that itch. The protein the flea injects to keep the blood flowing causes the itch.

### Control:

You must attack all life stages at the same time. Treat pets with powders or dips to kill adult fleas repeating weekly. Read directions carefully, and don't mix products. Some products are good for adult dogs, but harmful to puppies or cats. Check with your veterinarian. Wash pet bedding. Vacuum daily throwing contents of bag out to reduce flea numbers (vacuuming doesn't kill fleas). Use insecticides to control severe infestations indoors and out. Check to see what the currently used product is. Do not spray your pet, its food or water dishes. Don't spray where your pet or other wildlife will eat or drink. If you don't want to use pesticides, ask at your local garden supply store for nema-

## CACSS LIBRARY NEWS

### Tables of Contents

*Euphorbia Journal* Vol. 3 (1985: 154 pp.):

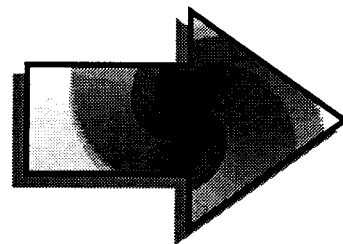
Propagating Your Euphorbias - The Two-step Cutting Method: Jay Dodson and the International Succulent Institute.....	Elisa Adler
The Succulent Spurges: A Literature Survey.....	Gordon Rowley
Famata of Malagasy: A Checklist of Madagascar Euphorbias.....	Manny Singer
Madagascan Euphorbias: Life & Growth Forms.....	Dr. Werner Rauh
An Introduction to the Genus <i>Pedilanthus</i> .....	Daryl L. Koutnik
<i>Euphorbia resinifera</i> BERG: From the Great Ridge of the Middle Atlas... John Natsoulas	
Goetze's Discoveries in Tanzania: Euphorbias from East Africa, Part 3.....	Susan Carter
An Introduction to the Succulent Euphorbias of the Transvaal, Part 1: Trees.....	S.P.Fourie
Identifying Features	
Cases of Convergence.....	John Trager
Chapman 312, What Are You?.....	Bruce Hargreaves
Chapman 312: A Mystery Solved.....	Susan Carter
Frank Horwood: Propagator Extraordinaire.....	Elisa Adler
Flowering Parts of the Caput-Medusae Group: An Identification Guide, Part 2	
<i>Euphorbia candelabrum</i> WELW and other Tree-like Species.....	L.C. Leach
<i>Euphorbia teke</i> SCHWEINF: A Rare Species from Zaire.....	Larry W. Mitich
The Succulent Euphorbiaceae: Photographic Collection and Descriptions	
Species Novae: The New Euphorbias	
<i>Nomina nuda</i> : Provisionally Named Euphorbias	

*Euphorbia Journal* Vol. 4 (1987: 168 pp.):

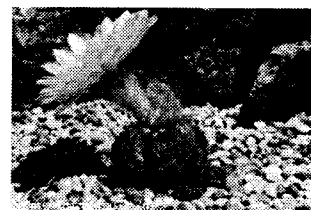
Werner Rauh: A Life in Botany by Dr. Herman Schwartz	
Madagascan Euphorbias: Life & Growth Forms, Part 2.....	Prof. Werner Rauh
Growing Madagascar Euphorbias from Cuttings.....	Scott Malcolm
The Holy Month of Ramadan: 10th June 1984.....	Gilfrid Powys
The Euphorbias of Gran Canaria, Canary Islands.....	Collin Walker & Marjorie Thorburn
Introduction to the Succulent Euphorbias of the Transvaal, Part 2: Shrubs.....	S.P.Fourie
A New Hybrid from the Transvaal? A Suspected Hybrid Between <i>Euphorbia excelsa</i> & <i>Euphorbia enormis</i> .....	Koos Venter
Cases of Convergence.....	John Trager
The Succulent Euphorbias of the Cape Peninsula of South Africa.....	Daryl Koutnik & Ernst van Jaarsveld
Pax's Species from German Collections: Euphorbias from East Africa, Part 4.....	Susan Carter
Spiny Euphorbias in Saudi Arabia.....	Sheila Collette
<i>Euphorbia sarcostemmoides</i> J.H. Willis: A Rare Australian Endemic.....	P.I. Forster
The Succulent Euphorbiaceae: Photographic Collection and Descriptions	
Species Novae: The New Euphorbias	

Please feel free to request these and any other CACSS books, *Cactus and Succulent Journals*, or other periodicals by calling or e-mailing me or seeing me at the meetings. Library lists were printed in the November 1998 Central Spine and copies also are available at each meeting, by e-mail or fax. Books are checked out for one month and are due back at the meeting the following month. We also gladly accept your book donations!

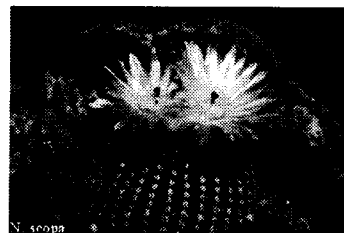
Happy reading,  
Karen Kravcov  
1999 CACSS Librarian  
780-2867



*Notocactus oxycostatus*



*Noto pseudoacutus*



*Notocactus scopa*

Throughout this issue of the Central Spine are various photographs. These photographs were taken on a recent (rare rainy) spring day on a journey through our Desert Botanical Gardens. They were taken by Scott Jacobs, my best friend. Scott lives back east in New Jersey but shares our love of the Sonoran Desert. He even has several cactus and succulents growing on his back patio beneath shade trees!! Scott has given me copies of his pictures and allow me to use them in our newsletter.

Thank You Scott  
Nick Diomedea  
Editor, Central Spine

# Plant of the Month

July 1999

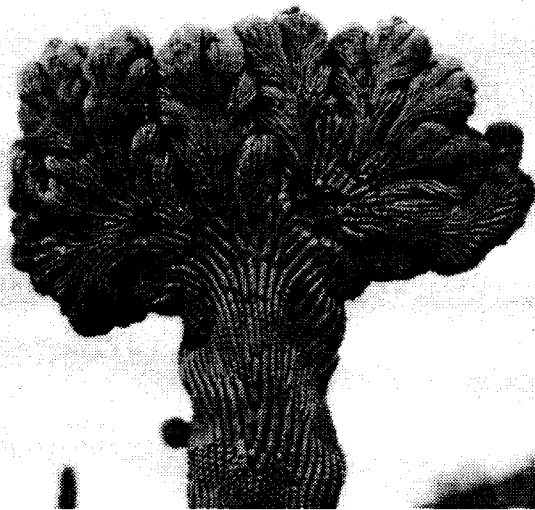
## Notocactus and its allies

From central-southern South America come members of genus *Notocactus*. In Greek, *noto-* means back or (bony) spine; the tubercled ribs may resemble the spine in your back. They are globular to low columnar with characteristically depressed centers, usually many ribs, and usually many fine spines. The flowers tend to be yellow, in profusion, with red stigma lobes, and are borne on the upper "shoulders" of the plants in spring. Seed capsules retain the dried flower and are dry and papery when ripe. The seeds frequently fall next to the mother plant and germinate there.

Genus *Notocactus* comes mostly from grasslands with substantial summer and some winter rain. Like many grassland plants they don't do well in full sun in Phoenix, appreciate non-porous pots with some humus in the soil, and extra water. They also seem to appreciate more fertilizer than some cacti. They bloom young, prolifically, and easily if not kept dry in the winter. They set seed readily.

Once separate genera but now included in *Notocactus* were *Brasilicactus*, *Eriocactus*, *Malacocarpus*, and *Wigginsia*. Closely related is *Parodia*, which comes from somewhat higher and dryer locales than *Notocactus*.

Classes: Pot size under 4"; 4" to under 8"; 8" and over.



## Desert Landscaper Certification

Three years ago, based upon the increasing demand for desert landscaping and the hundreds of requests the Desert Botanical Garden receives from the public each year for qualified gardeners and landscapers, the Garden's horticulture department developed a unique school to accredit graduating students as Certified Desert Landscapers. Through this school program, Desert Landscaper Certification Program, the Garden's highly trained staff shares its knowledge with the students, and helps companies who hire the students, or send their own employees to the school, save both time and money by investing in increased employee knowledge and professionalism.

The school program consists of a thirty-week series of workshops offered during the seasons most appropriate to the topics being discussed. Both English and Spanish versions are held. The school year is divided into three sessions with ten workshops: (1) students learn how to care for all the major groups of desert plants; (2) students master important landscaping skills such as pruning, irrigation, troubleshooting, and wildflower care; and (3) students integrate the concepts and skills learned in sessions one & two in a comprehensive landscape installation project.

The Garden's Desert Landscaper Certification Program focuses on skill development rather than extensive classroom training to ensure graduates are job-ready once they are certified. No previous landscaping experience or training is necessary to enter the program. The only essential requirement is that a person has the physical ability to do landscaping work, and is interested in learning.

Once the student is certified by the Garden, he/she is placed on a referral list along with the business affiliation, if applicable. Requests for referrals from the public are directed to companies which employ Desert Botanical Garden certified landscapers.

Since the Desert Landscaper Certification Program's inception, the Garden has certified more than 100 English and Spanish-speaking students. Former graduates include students with doctorate degrees, homeowners & gardeners, municipal workers, commercial landscapers, resort workers, casino workers, arborists and a student from the Sultan Qabos University in Oman.

The Garden is currently accepting registrations for classes beginning on August 16, 1999. English classes are offered on Monday, Tuesday, Wednesday and Fridays; Spanish classes are held on Thursdays. The classes are held once a week, from 8 a.m.-12 noon. Scholarships are available on a limited basis until July 15. For further information, please contact the Desert Landscaper School at (480) 481-8161 or 481-8169; call the Garden directly at (480) 941-1225; or visit the Garden's website at [www.dbg.org](http://www.dbg.org) for information and registration forms.

# Good Growing



For folks just starting in cactus and succulent (C&S) horticulture, here's a primer. For the "mature" grower, sometimes it's a good thing to review the basics.

## Water



Unlike regular houseplants, potted C&Ss require a cyclical watering schedule. The cycles are based on the seasons.

This is the formula I use:

- Oct-Feb > once/month
- March-Sept > twice/month\*
- When temps exceed 105, water weekly.

\*When watering, be thorough and give the plant a good drink. Let excess water drain out the pot's drainage hole.

## Light

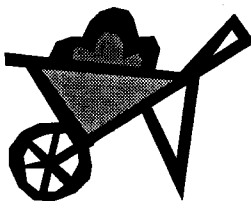


Most outdoor, potted C&Ss can handle at least dappled Arizona sunshine. Many can use a lot more. Very few thrive indoors in dark places.

*Etiolation* is a condition that occurs in plants that receive too little light over a long period of time. Spindly, limp, yellow-green growth is characteristic. The opposite condition is *sunburn*. It occurs from overexposure to radiant light in a short period of time. Sunburn looks like papery, yellow or tan burn spots on the skin of the plant facing the sun.

Acclimate plants to a new home by gradually moving them to sunnier spots until an optimum level is reached. This process can be an adventure as some plants thrive in +6 hrs/day of full sun and others need just a little morning light.

## Soil



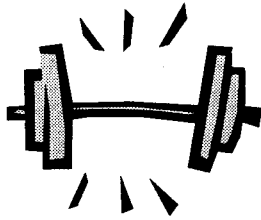
Most growers have their own recipes for creating a C&S soil mix. Some commonalities are:

- Quick draining
- Little or no peat
- More than just sand

For a generic C&S soil recipe, try-- 1 part builder's sand, 1 part pumice (or perlite or gravel), and 1 part commercial potting soil.

Talk to others who grow the same kind of plants as you. Some interesting secret ingredients will appear. As for me, I add a little garden lime in soils intended for Sonoran and Chihuahuan cactus to promote robust spination.

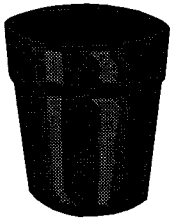
## Fertilizer



Cactus, in particular, tend to do well with a low nitrogen, high phosphorus and potassium brew. When looking for a fertilizer, examine the N-P-K ratio (that's Nitrogen-Phosphorus-Potassium). Look for lower N and higher P and K, like 3-6-6 or 5-10-10.

This means no manure! Manure is too rich in nitrogen. Rather, try generic tomato food at regular strength a couple of times during the warm weather months. But, if in doubt-- don't feed.

## Containers



The #1 thing to remember-- be sure the pot has a drainage hole! Excess water needs to drain away from the plant's roots to avoid deadly rot.

Next, place a plant in a pot that's neither too big or too small for comfortable growth. A little plant in a big pot looks overly optimistic, whereas a big plant in a small pot feels like wearing too small a shoe.

Now, the secrets to successful C&S culture are not so secret. Pass'em along...

Bursting with blossoms,  
Debra Korobkin

*Continued from page 1*

Species that are clearly similar to each other are grouped into genera (singular genus.) All members of a genus will be substantially similar to each other, though substantial differences will exist. The first part of a plant name is the genus; for example, *Ferocactus*. It is always capitalized and italicized when printed. Think of the genus name as the plant's last name.

Each species (species is singular and plural; specie is precious metal money) in a genus will have its own name as well. This name is written second, and is always italicized and never capitalized. Think of this as the plant's first name; and example would be two Arizona barrel cacti, *Ferocactus cylindraceus* (found in the Phoenix area) and *Ferocactus wislizenii* (found in the Tucson area.)

Knowing the correct names of plants allows us to be specific. It is easier to say *Ferocactus cylindraceus* than it is to say "the thin, short reddish-spined barrel cactus that grows around Phoenix."

Botany books contain chapters on various genera. They usually start by describing the genus and how it differs from related genera. Then there will be a key which shows the differences between the species in that genus. Having a specimen at hand, especially the flower, one can use the key to identify the species of the plant. Then will follow more detailed descriptions of the species.

Leo A. Martin  
leo1010@ibm.net



## Nursery Review

Richard Zeh

### Desert Scapes Inc.

Landscape Design and Installation

P.O. Box 8125

Cave Creek, AZ 85327

Tel. 602-488-1830 Fax. 602-488-0880

Inventory: 5.0

Availability: 9.0

Personality: 9.0

Plants: 8.0

John Schnetzer has a large assortment of both plants and animals for the visitor. Winding paths take you though about an acre of densely planted cacti and ponds. A zoology major, John has a knack for raising everything from tortoises to agaves. He has brought in a large number of *Agave neomexicana* from his property up north. His inventory ranges from small potted agaves to columnar cactus (some of specimen size), which his staff can bare-root. If you are looking to landscape your yard, you must stop in and visit John before going to any local nursery. Please call first for directions to the yard.

### B&B Cactus Farm

Bob and Bev White

11550 E. Speedway

Tucson AZ 85748 520-721-4687 (Closed Sundays)

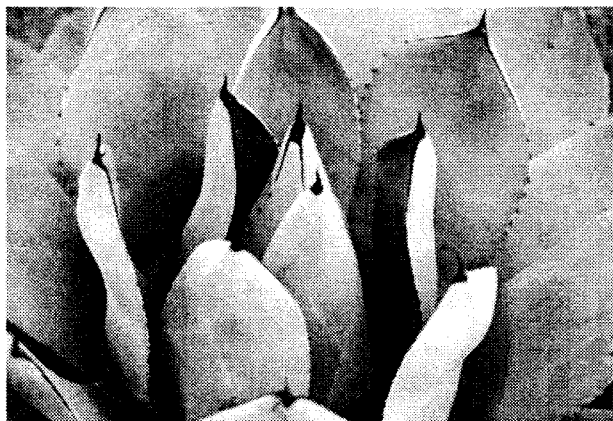
Inventory: 8.5

Availability: 8.5

Personality: 7.0

Plants: 8.0

Let's cut to the chase here. They have stuff. Lots of landscape cacti, especially columnar and big agaves. The succulent greenhouses are well stocked with a variety close to that of Bachs. They even have some larger specimens for sale in the first greenhouse. The staff on hand was new and barely able to handle a single person at a time. It will be interesting to see how they handle a crowd. A new (within the last two years) outside garden area has been installed along the north and east side of the property. The garden really showcases the whole idea of specimen size landscape cactus. I thought it was better done than H. B. Wallace's place. B&B is a great place to look around. I'll have to try to get out there more often.

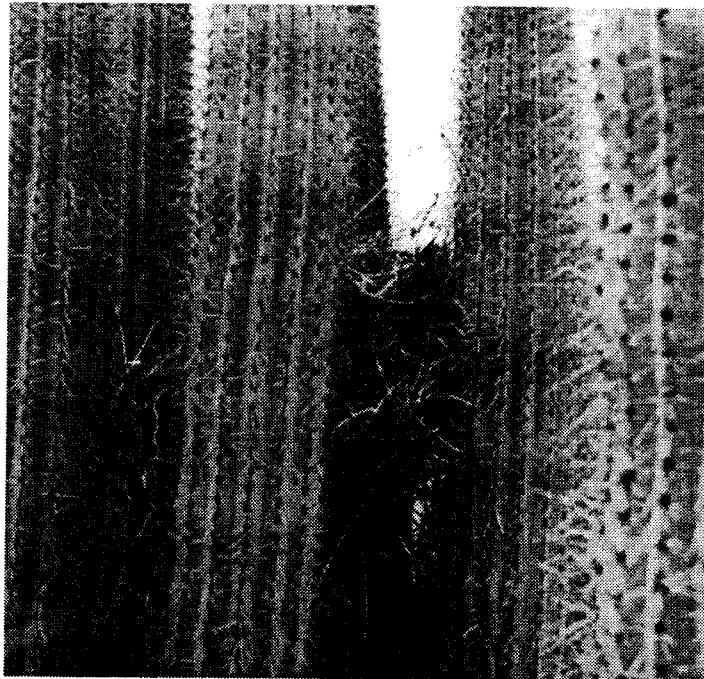




It's that time again for another bus trip to Tucson. Mark your calendar for Saturday October 16th. The cost is \$20 per person, that's round trip. The first 40 members that sign up and pay are on their way to:

Arid Lands  
Plants of the Southwest  
Miles To Go  
Plantas Del Sol

Please give Jo Davis a call and let her know you are interested. Make checks payable to CACSS. This is a great time to add to your collection you already have.



## Central Arizona Cactus & Succulent Society

Meetings held last Sunday of the month

Time: 2:00-4:00 PM

Location: Webster Auditorium, DBG

Next Meeting: Sunday, June 25<sup>th</sup> 1999

Board Meeting: 1:00-2:00 PM Location: Archer House

July 24<sup>th</sup> & 25<sup>th</sup> 1999

NCCS Show & Sale

San Francisco County Fair Building in Golden Gate Park, San Francisco.

July 25<sup>th</sup> 1999

2:00 PM

CACSS Cathy Babcock: A Tour of South Africa

Come listen to Cathy talk about her recent visit to South Africa. She will talk about visiting places such as Zimbabwe, Madagascar & Eastern Cape Province.

July 28<sup>th</sup> 1999

7:00 PM

TBG / Arizona Native Plant Society Rare Plants of Arizona

Forest ecologist Mima Falk will present case studies on two of Arizona's rare plant species – the Huachuca water umbel and the Pima pineapple cactus. She will enumerate the threats. She will enumerate the threats to the survival of these plants, explain conservation measures currently underway to protect them, and discuss the long term outlook for their survival. For more information on this program, please call TBG on 520-326-9686, extension 23.

August 12<sup>th</sup> 1999

7:00 PM

TBG / Arizona Native Plant Society *HABITAT DESTRUCTION AND THE GUARIJIO PEOPLE OF SONORA*

The Guarijio people live in the tropical deciduous forest of Sonora raising crops and making much of what they use. Dave Yetman, UA Southwest Center, will describe their culture and discuss pressures to eliminate the forest, and why they feel it's important to maintain it. For more information on this program, please call TBG on 520-326-9686, extension 23.

August 14<sup>th</sup> & 15<sup>th</sup> 1999

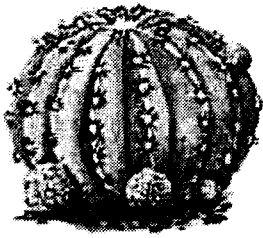
LBCSS & SBVCSS 14th Annual Intercity Show and Sale.

LA County Arboretum, 301 No. Baldwin Ave., Arcadia, Ca. Info. (805) 944-2784 Woody Minnich or Dick Hulett (310) 832-226 Airobatic@Aol.Com

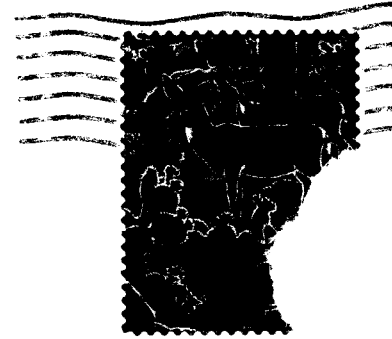
September 4<sup>th</sup> 1999

Huntington Symposium Huntington Botanical Gardens

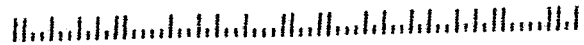
For information call 626-405-2160



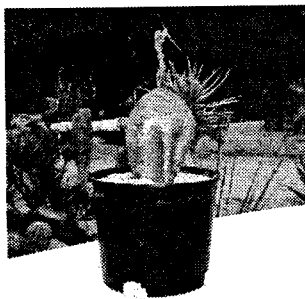
Central Arizona  
Cactus & Succulent Society  
P.O.Box 8774  
Scottsdale, AZ 85252



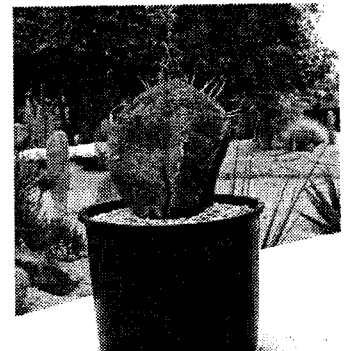
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\*\*\*\*\*  
**CACSS Presents its first  
 RARE PLANT AUCTION**  
 \*\*\*\*\*



*Each month the CACSS will present a rare and exotic plant for auction to its membership. This month's offering recently in from (literally) Kenya is Fockea comaru. Presently with no roots, sitting in pumice; 16" from the base of tuber to vine protrusion and 17" in circumference.*



\*\*\*\*\*