

◆ Desert Breeze ◆

ISSUE 2

MARCH 1996

MARCH MADNESS

Thank you so much for making the mini-show such a success!!! The winners were:

MAMMILLARIA

- 1ST MILES ANDERSON
M. Pseudoperbella crest
2ND CINDY BECKLEY
M. Supertexta
3RD (TIE) GENE JOSEPH
M. Lenta
3RD (TIE) GARY DAVIES
M. Perez de la Rosa
3RD (TIE) JUDI GASTON
M. Bombycina

ALOES

- 1ST (TIE) MILES ANDERSON
A. Humilis
1ST (TIE) SALLY WILLIAMS
A. Erinacea
1ST (TIE) NO NAME
A. Vanbalenii
2ND GENE JOSEPH
A. Vamosissima
3RD (TIE) JIM HOSACK
A. Eninaceii
3RD (TIE) MARY CHURCH
A. Echarlanii

Congratulations to all the winners!!!!

This month the cactus of the month is Ferocactus, the Succulent of the month is Euphorbia. Please bring your plants in to show off and you might win.

Jonathan has planned a different program. He has arranged for local growers to sit in and let us "pick their brains". In other words if you have and questions about growing your plants or if you have a specific problem, or if you



have a plant that you have no clue what it is, bring your plant in and get your questions answered.

Remember to bring your plants in for the mini-show, the brag table, and the propagation table.



Inside This Issue

- | | |
|----------------------------|--------|
| succulent of the month | page 2 |
| cactus of the month | page 3 |
| ... barrel just sits | page 3 |
| botany quiz | page 4 |
| plant of the month planner | page 5 |

A CURE FOR SOIL MEALYBUGS

Plant growers are currently experimenting with a potting soil additive that appears to kill soil mealybugs. Not a chemical, not an artificially-produced poison, it is a natural substance — diatomaceous earth. You have seen bags of this stuff in hardware stores, as it is used in swimming pool filters. Composed of the skeletal remains of diatoms, microscopic sea creatures, DE is lethal to insects because its tiny particles have razor-shape edges. They pierce the insect's epidermis, causing them to desiccate and die.

Dry up and die? Sounds too simple, doesn't it, especially in light of the expensive chemicals we have resorted to in the bug battles (only to have build up a tolerance to it). African violet growers who have used DE over several seasons have eliminated soil mealybugs from plant collections which were long plagued by them. Some have also found a reduction in the problem of thrips (these pests live in the soil during a part of their life cycle), as well as springtails and fungus gnats. Diatomaceous earth is effective against such household pests as cockroaches; can be spread around flower beds to discourage slugs and snails. . .

Vast deposits of DE exist in the Western U.S. The commercially processed product has been partially melted and baked, resulting in a white substance that feels almost silky to the touch. It should be used in a well-ventilated area, as it releases dust in the same way perlite does. The natural, unprocessed DE is preferred, if you can find it.

Taken from LACSS Chronicles

SUCCULENT OF THE MONTH: EUPHORBIA

The following advice is reprinted from the Fresno Cactus & Succulent Society Newsletter.

Tom Loehman on euphorbias: Tom grows a lot of gorgeous euphorbias in his nursery in Paramount, CA. These are some of his techniques:

SOIL: 1 part Supersoil; 1 part pumice. The growing mix should be porous and permeable. (He has found that the leaf succulents are less fussy about soil than are cacti.)

FERTILIZER: He uses Peters 20-20-20 several times a season. For bloom, he uses and 8-8-8 tomato food.

EUPHORBIA CUTTINGS: He takes cuttings with a serrated knife, spraying the blade with alcohol between cuts. Cold water will stop the flow of latex from the plants. He also uses tree seal. Not only does it seal the cut, it helps rooting as well. For rooting other cuttings he uses Rootone; Hormex #30 for woody cuttings. He has observed that the top and bottom cuts of *E. ingens* will root, but all the middle sections will die. Every piece of *E. amak* will root, however when you are propagating euphorbias, you have to try everything.

The following article on six subglobose euphorbias was written by David Tufenkian and printed in the San Gabriel Valley Cactus and Succulent Society Newsletter.

Euphorbia meloformis Alton

The "melon form" *Euphorbia* was described by William Alton in 1789. It may have been introduced into England as early as 1774. There are two main forms of this variable species. The coastal and inland forms occur in the Cape Province of S. Africa. It is unisexual (separate male and female plants) and closely related to *E. obesa*. This

dwarf succulent is up to 10 cm. tall (larger individuals have been reported). The stem has 8 to 12 ribs, and like *E. obesa*, *E. symmetrica*, they are marked with alternating light green and purple-brown or dark green transverse bands. The leaves are less than 3mm and quickly deciduous.

E. obesa Hooker F.

Obesa means corpulent or fleshy. I'd rather think the latter! It was discovered in 1897 and named by Hooker at the Royal Gardens, Kew. It is a worldwide favorite and is common now but 50 years ago was rare. Collectors carried away great numbers of the plants, but monkeys also ate them in times of drought, which added to their rarity. Luckily the plant is easy to grow from seed, which sets readily (as long as you have plants of both sexes). Laurie Dell wrote in the sixth volume of the *Euphorbia Journal* on how to determine the sex of seedlings. She noted a difference in the transition of the stem tissue into the taproot tissue of seedlings. The males seemed to have a sharp transition, while the females had a more gradual transition.

E. symmetrica White, Dyer and

Sloane

This was described in 1941 and there is always discussion regarding this species and *E. obesa*. The plant bodies are almost identical. *E. symmetrica* is usually more squat and can produce more than one peduncle per flowering eye. (A peduncle is the flowering stalk).

E. valida N.E. Brown

Brown described this species in 1915 and its name means "valid or true". It is similar to *E. meloformis*, but generally tends to be taller than it is wide. Unlike *E. meloformis*, which tends to be more squat than tall. The peduncles tends to be more persistent on *E. valida*.

E. turbiniformis Chiovenda

This rare and difficult-to-grow species was described in 1936. It was lost in cultivation, but was rediscovered in 1969 by John Lavranos in Somalia. These tiny plants were distributed by the ISI in 1976.

E. piscidermis Gilbert

This "fish skin" Ethiopian species was found in 1971. It was found in two small populations on one hillside and has a wonderful pattern formed by its unique tubercles.

TCSS LIBRARY HOURS & LOCATION

PLANTS FOR THE SOUTHWEST

9:00 TO 5:30

WEDNESDAY THROUGH SATURDAY

50 E. BLACKLIDGE DR.

TUCSON, ARIZONA

(520) 628-8773

LIBRARIAN

MYRTLE ETHINGTON

(520) 877-4507

The Desert Breeze is published monthly. Submit material by the 15 of the month preceding to Editor:

Jennifer Donald

4500 E. Sunrise Dr. Apt P-4

Tucson, Arizona 85718

(520) 577-6552

I appreciate feedback. Please help me to correct phone/address errors. Membership meetings (free and open to the public) are generally held at Tucson Botanical Gardens at 7:30 PM, first Thursday of each month. Dues are \$20 per family, or \$15 per individual, payable at meetings or send check to :

Myrtle Ethington

3490 N. Iroquois Ave

Tucson, AZ 85705

CACTUS OF THE MONTH: FEROCACTUS

Taken from Espinas y Flores January 1996 #1 By Paul Steward.

The Genus *Ferocactus* was proposed as a segregate of the Genus *Echinocactus* by Britton & Rose in 1922. This treatment included 25 species transferred from *Echinocactus* and 6 new species. Dr. George Lindsay undertook a study of the Genus and subsequently authored the monumental work "THE GENUS *FEROCACTUS*" as his doctoral thesis in 1955. This work has never been effectively published, although it is reproduced on demand through University Microfilms of Ann Arbor Michigan. Unfortunately none of the 129 plates or the 8 maps are legible. Dr. Lindsay accepted 16 of the original species as valid, excluded four, found four others to be synonyms, reduced two to varietal rank and adopted earlier names of three species and one variety had been proposed since Britton and Rose, two of which were retained as new species and the remaining three being reduced to varietal rank. Additionally nine species and three varieties had been added to the Genus. Of these two were retained as legitimate prior names and one was described as inadequately known.

The Genus as treated by Dr. Lindsay includes 25 species and 11 varieties; two species and three varieties were newly described. During the course of his studies Dr. Lindsay traveled 20,000 miles by car and truck and 5,000 miles by boat to observe plants in habitat and study their geographical distributions.

Nigel Taylor published in 1844 and 1987 in the *Journal of the British Cactus and Succulent Society*. I will not deal with his treatment at this time. Lyman Benson also did excellent work on the species which occur within the Continental United States. Presently research is being conducted at Iowa State University by Hugo Cota under Dr. Rob Wallace with the principal investigational tools being DNA, PCR comparison.

The Genus as a whole is rapidly evolving, with intermediaries and extremely variable spination common. Identification is often difficult, flower color which has character here. The Genus is best described as:

Stems: depressed globose to cylindrical often tall.

Ribs: thick prominent and sometimes tuberculate.

Aeroles: large, tomentose spiniferous area.

Spines: Large and strong, straight to hooked, produced in the lower part of the areole, dwarf spines persist in the upper areole as nectiferous glands.

Flower: broadly funnel form and cam-

Dr. Lindsay traveled 20,000 miles by car and truck and 5,000 miles by boat to observe plants in habitat and study their.....

panulate, scales occurring on the tube and ovary integrating with the inner and outer perianth segments, stamens numerous, inserted in the short tube, style thick, divided at the tip into many

stigma lobes.

Fruit: single, semi-fleshy, oblong in shape, persistent withered perianth section attached above, usually but not always dehiscent through vasil pore.

Seeds: thin, pitted or sculptured testa, curved embryo with a large hypocotyl.

Type Species: *Echinocactus wislizenii*, Engelm.

Distribution and habitat

Ferocactus inhabit the arid and semi arid regions of the Southwestern United States and Mexico. Most but not all, are desert plants. *Ferocactus viridescens* which occurs in coastal San Diego County and south into northern Baja California. It inhabits areas of coastal chaparral. *Ferocactus herrerae* is found in areas of Sinaloa associated with the Thorn forests where the average summer rainfall is 20 to 30 inches. Low temperature limit the Northern migration of the genus, whereas excessive rainfall limit its southern migration.

Ferocactus grow in well drained soils and have developed a specialized root system which consists of a few short vertical tap roots that anchor the

continued on page 6

WHAT TO DO WHEN YOUR BARREL JUST SITS THERE

The rotting away of roots can leave a barrel cactus simply sitting atop the ground waiting to be thrown away. When Cesar Mazier, superintendent of horticulture, discovered the roots of this *Echinocactus grusonii* had rotted, he decided to try re-rooting the plant. He upended the cactus, cleaned it out, applied fungicide and sulfur, and packed the cavity with sand. Then he replanted the specimen in a sandy medium and mounded sand around the base. He watered the cactus once a week and found that it had regenerated roots in three weeks (as evident in the photo). *Ferocactus* and *Echinocactus* species are particularly prone to root rot, Cesar said. "Try re-rooting before tossing your plant into the garbage."

Courtesy of The SONORAN QUARTERLY, Vol. 49, NO. 4, Desert Botanical Garden, Phoenix, AZ

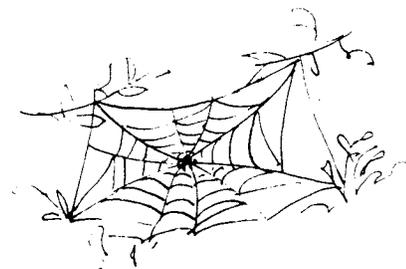
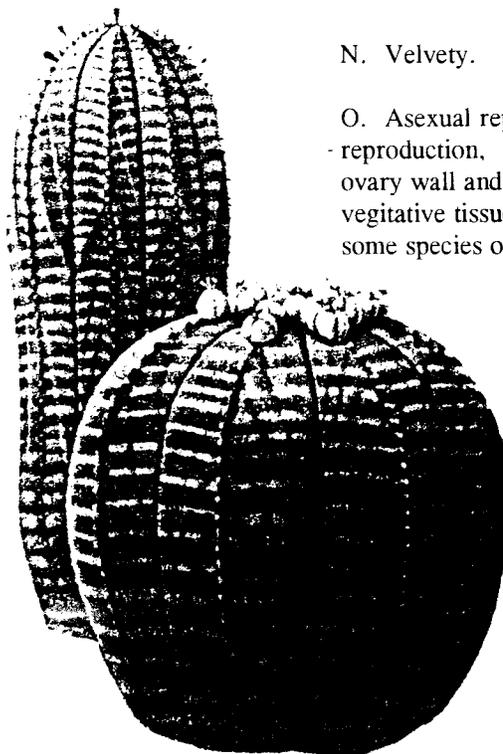
Photo by Carol Schatt



AMATEUR SUCCULENT BOTANY 101 QUIZ

1. EROSE
2. SULCATE
3. RENIFORM
4. HAMATE
5. CRENATE
6. APOMIXIS
7. VISCID
8. SCARIOUS
9. ALATE
10. RUGOSE
11. SPINIFEROUS
12. PYRIFORM
13. VELUTINOUS
14. TERATOLOGY
15. FLOERIFORM

- A. Bearing spines.
- B. Having a terminal hook.
- C. Wrinkled.
- D. The study of biological monstrosities (or fasciation).
- E. Sticky.
- F. Pear-shaped.
- G. In the shape of a kidney bean.
- H. With an irregular *margin* that appears to have been gnawed.
- I. Grooved.
- J. Winged.
- K. Having rounded, marginal teeth.
- L. Thin, membranous, and translucent, in the manner of parchment.
- M. Thread like, very slender.
- N. Velvety.
- O. Asexual reproduction that simulates but bypasses sexual reproduction. For example, fruits may develop roots from the ovary wall and grow into new plants; or, without fertilization, vegetative tissues in the seed may produce false embryos, as in some species of Citrus.



ANSWERS

- | | | |
|-----|------|------|
| 1=H | | 11=A |
| 2=I | 8=E | 12=F |
| 3=G | 8=L | 13=N |
| 4=B | 9=J | 14=D |
| 5=K | 10=C | 15=M |

BASKETBALL EUPHORBIA
Euphorbia obesa

PLANTS OF THE MONTH FOR 1996

MARCH	FEROCACTUS	EUPHORBIA
APRIL	COPIAPOA	CAUDICIFORMS
MAY	ASTROPHYTUM	AGAVE
JUNE	CORYPHANTHA/ ESCOBARIA	HAWORTHIA
JULY	PARODIA	ECHIVERIA
AUGUST	NO MEETING	NO MEETING
SEPTEMBER	TEPHOROCACTUS	LITHOPS
OCTOBER	ARIOCARPUS	STAPELIADS
	CEPHALIUM CACTUS	KALANCHOE
	CHRISTMAS PARTY	CHRISTMAS PARTY

MEMBERS

Dixon
1425 E. Adams
Tucson, AZ 85719

Jocelyn Rhode
5681 W. El Camino del Cerro
Tucson, AZ 85745

John Pasek
Dorothy Pasek
6175 N. Noel Ln.
Tucson, AZ 85743

Alex Rosinstock
4480 N. Osage Dr
Tucson, AZ 85718



OFFICERS AND BOARD OF DIRECTORS

OFFICERS

PRESIDENT:	Richard Wiedhopf	(520) 885-6367
VICE-PRESIDENT:	Jonathan Donald	(520) 577-6552
SECRETARY:	Jennifer Donald	(520) 577-6552
TREASURER:	Myrtle Ethington	(520) 887-4507

BOARD OF DIRECTORS

Dan Birt	(520) 325-4967
Gary Davis	(520) 795-6029
Sally Williams	(520) 886-2119
Miles Anderson	(520) 682-7272
Sara Perper	(520) 743-3162
Linda Ryan	(520) 299-2338
Gene Joseph	(520) 628-8773
Mary Church	(520) 624-7976
Jim Hosack	(520) 825-2822

FEROCACTUS CONTINUED

FROM PAGE 3

and a series of fine radiating lateral roots which are the principal absorptive organs. These lateral roots may effectively cover an area of 2 to 3 meters from the base of the plant, while not being any deeper than 10 cm. So effective is the Ferocactus in its ability to control transpiration and to absorb and store large quantities of water quickly that it can transpire and to absorb and store large quantities of water quickly that it can transpire and to absorb and store large quantities of water quickly that it can transpire and to absorb and store large quantities of water quickly that it can endure periods as long as 6 years without appreciable rainfall and sustain no damage.