

# Central Spine

June, 2011

## Newsletter of the Central Arizona Cactus & Succulent Society

*An Affiliate of the Cactus & Succulent Society of America*

On the Web at [www.centralarizonacactus.org](http://www.centralarizonacactus.org)

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### CACCS June meeting: Sunday, June 26

2 pm, Dorrance Hall,  
Desert Botanical Garden

**Presentation: Ferocacti**

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Schneberger, p. 5

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(See his photo below)



Mark Dimmitt 2007 (Jun) *Eulophia petersii* 1999-524-01

The common form of *Eulophia petersii* in cultivation has brown flowers.

Photo by Mark Dimmitt

**July Newsletter Deadline: July 16, 2011**

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**CACSS Plant of the Month  
is on hiatus.**

**Contact the *Central Spine* Editor**  
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## **June 26 Meeting Presentation**

**Ferocacti** Scott McMahon, long time CACSS member and Manager of the Cactus Collection at the Desert Botanical Garden, will share his knowledge of Ferocacti. Scott is one of the most knowledgeable members of our society and always makes his vast reservoir of information available to anyone who asks a question.

**BRING YOUR FEROCACTUS PLANT(S)** Scott has requested that members bring in their favorite Ferocactus plant(s) so that many of the almost 40 species and subspecies will be on display.

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## **2011 Meeting Schedule**

Note the change to our normal meeting schedule because of the Thanksgiving weekend. Barring any unexpected event, the schedule is:

June 26  
July 31  
August 28  
September 25  
October 30  
November 20 (in place of November 27th)

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## **President's Letter**

Wow, almost half way through the year! It's been a nice cool spring but I think summer is breathing down our necks as I write this. I was in Namibia for most of May on a botanizing adventure so I missed the cool weather here, but I think I'll take that trade. It is an awesome experience to see these magnificent plants that we love in habitat--huge, mature specimens. There were six of us from the States and two South African drivers. All of us were like-minded in our enthusiastic approach to field exploration. We saw just about all the plants we had on the agenda, and saw many wild animals along the way. We also came in contact with some of the many native cultures. I got to drive a car with the steering wheel on the right side for three days, driving on the left side of the road. That, however, was not as dangerous as stepping into the street. I never did get the hang of looking to the left first. It is good to be home, though. I always have a renewed appreciation for the species I have seen in my travels. While I was away, a couple of club members looked after my plants at my nursery at the Farm, so a shout out and thanks to them.

See you at the meeting, Steve



# Cool Things We Learned at Mountain States Nursery

By Tom Gatz

(Re-printed with permission from the DBG Volunteers newsletter, *Gatherings*.)

Last year, 37 Desert Botanical Garden (DBG) volunteers found out where many of those plants come from that we purchase at the DBG plant sale every spring and fall. We were taken on a behind-the-scenes tour by Jeff Grass of Mountain States Wholesale Nursery just west of the 101 on Northern Avenue. The nursery is so large that we needed to caravan in our cars and even in over two hours didn't see the whole place. At any one time they are raising about two million plants of between 400 and 600 varieties, depending upon the season. They had about one half million plants just in their enormous green house. And that is not counting those species in research and development. Mountain States is testing plant varieties for that may be more heat, drought or cold tolerant, that flower more or in different colors, and even some that don't grow as big as their cousins to better fit in those tight spots in our yards. One cultivar Jeff mentioned is called 'Apricot,' a small form of Tecoma that is expected to only get 3' x 4'. About 40 percent of the plant varieties they grow are Arizona natives.

Most of their plants are in one and five-gallon pots but some are being field grown in the ground and they have 24,000 boxed-trees as well. The plants are grown with well water pumped up from 700 feet into a storage lake and they do recycle the water. About 30 truckloads of plants leave the nursery every week, and that's just for local deliveries. They also ship as far as Oregon, Texas and occasionally to Florida, and do all of this with only about 85 employees. Using a mechanical canning machine to fill one-gallon pots with soil, eight people can pot up 20,000 plants in a day! To maintain plant uniformity, many of their plants, such as 'Valentine' bush, are raised from cuttings rather than seeds. They frown on selling ocotillo dug from the wild and instead grow them six feet-tall from seed in just 9 years.

Jeff was a fount of plant knowledge and freely shared it with us. Two of his favorite agaves are *Agave macroacantha* and *Agave ocahui*. They will soon have more 'Blue Glow,' a beautiful hybrid

between *Agave attenuata* and *Agave ocahui*, and more compact *Agave parvifolia* and *Agave toumeyana* are on the way. Recent or upcoming plant releases he was excited about included 'Blue Bells,' a small (2' x 2') emu bush that flowers much of the year and thrives on almost no water once established; 'Winter Blaze,' another emu bush that gets to 3' x 4' and blooms red from August to June; San Marcos hibiscus, *Agave parryi* 'Estrella', and a new, still to be patented hesperaloe. He recommended neem oil from India for many insect pests. They treat their agaves with Merit (active ingredient Imidacloprid) to prevent weevil damage in the spring, at the beginning of the monsoon season and again in the fall. They deal with rabbits by live trapping them with alfalfa and relocating them in the desert.



Mountain States Nursery uses "Root-Maker" pots with ridges and holes designed to develop healthy tree root systems and to prevent circling roots.

Photo by Judy Bates

He even shared their soil mix with us: composted forest product, horse manure, field soil, sand and perlite for their potted plants and one third each of perlite, vermiculite and peat moss for seedlings and cuttings. They use a slow-release fertilizer a few

times a year that is high in nitrogen and low in phosphorous such as Osmocot 18-6-12 to push growth rather than flowering.

As the fighter jets from nearby Luke Air Force Base roared past, Jeff casually informed us that we were technically within the crash zone.

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## 2011 CACSS Show and Sale

By Gard Roper and Lois Schneberger  
Show Co-chairs

The Club can be justly proud of its 2011 Show and Sale. Volunteers, exhibitors, board members and others all pitched in to make it one of the best in recent memory. In all, 48 members of our society made a contribution to the show's success by working on committees prior to the event, by exhibiting their plants, and by participating in show week activities.

### Committees

The Show and Sale committee began planning in September 2010 for the April 2011 show. There are many details to work out for such an event to take place, and committee members showed great devotion in their work. For the first time, a separate Publicity Committee was appointed to get the word out to the community. Lin Leivian served as Chair and Beth Kirkpatrick and Sue Hakala were committee members. They did a tremendous job.

### Exhibiting Plants

The success of our show is dependent on the entry of quality plants that demonstrate the variety and beauty of succulent species from arid lands. Woody Minnich, a master grower, was very complementary of our efforts this year, calling it "the best show he had seen from our society." Particularly gratifying was the turnout of novice exhibitors. Of the 59 exhibitors entered, over half were listed in the novice level. Special praise is due to those first-time exhibitors who bravely stepped forward and brought their plants to be judged.

Approximately 670 individual entrees comprised our show and sale in 2011, including individual specimens, collections, non-judged plants, and educational exhibits

The Cacti Section was represented by 268 plants. A total of 214 were entered in Class A, Individual Specimens. Division 22 [North American Cacti:

Tour organizer, Garden volunteer, and retired Air Force General Larrie Bates answered our questions about pilot training and, as we strained to hear him, reminded us that the ear-splitting jet noise was the sound of freedom.

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Mammillaria and Allies – Solitary Stems in Pot Size less than 6 inches] had the greatest number of plants, 21.

This year the number of plants in the Succulent Section was larger than the Cacti Section. A total of 348 plants were entered in the Succulent Section, 326 in Class A, Individual Specimens. Division 29 [South African Astroloba, Haworthia and Poellnitzia in pots less than 6 inches] had the greatest number of representatives, 19.

A very special thanks goes out to the judges for our 2011 Show: Jim Elliott, Scott McMahon, Julie Plath, and Greg Starr. Please note that the first three are CACSS members.

### On-Site Volunteer efforts

Whether they put up tables, distributed ribbons, greeted the public, protected our plants, delivered water to vendors or did the 101 other jobs necessary during show week, our volunteers did a superb job of making our show run smoothly. For the first time, we had a show and sale table set up at the Garden entrance and staffed by society members who sacrificed a front row seat at the show itself to promote our event to visitors. Thank you!

### Recognition of The Desert Botanical Garden and Other Organizations

Additional recognition and appreciation also go to Desert Botanical Garden employees: John Sallot, Director of Marketing, and his staff, for their help with advertising the show and sale, Brian Kissinger, Director of Horticulture and his staff; Shelly Alam for equipment support; and the Visitor Services staff.

The Garden's Director of Marketing suggested that a photo bank be established where pictures taken of the show and sale can be deposited. We are developing a plan to accomplish this. Once that has been done, we encourage members who took photos at the show and sale to contribute images

to the data bank. These photos can be of educational importance for CACSS members as well as the public and can be used in marketing future show and sales. We also will put images of the award winning plants on our website, [www.centralarizonacactus.org](http://www.centralarizonacactus.org).

Fry's Market Place on McDowell in Scottsdale loaned CACSS grocery carts and Pima Nursery in Tucson donated the flats of plants for the kids who attended the show.

### And finally...

We once again want to acknowledge the work of the wonderful corps of volunteers and the board members who made the show and sale such a success. We hope the experience was a positive one for each of you and that even more of our society members will be inspired to volunteer for our 2012 show, which is already in the planning stages.

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### **Plant of the Month**

## ***Eulophia petersii*: A Desert Orchid**

by Mark Dimmit

(See Mark's photo on page 1 and his three photos with this article)

*(Article re-printed with permission from the January 2010 Desert Breeze, the newsletter of the Tucson Cactus and Succulent Society.)*

I was going to subtitle this article "A Succulent Orchid", but that doesn't say much. Of the 25,000 species of Orchidaceae worldwide, many thousands of them are succulent. But this is one of a relative few that grow in desert climates under the same culture as cacti or euphorbias. Dave Grigsby of Grigsby Cactus Gardens used to say, "Grow it like an aloe". That's pretty good advice, except that unlike most aloes, this orchid should be watered in summer and rested in winter..

*Eulophia petersii* is one of the most desert-adapted orchids. It grows in arid habitats from Namibia all the way to the southern Arabian Peninsula. An extreme succulent, it stores water in its large pseudobulbs, thick rigid leaves, and an ample system of fleshy roots. In spring 3- to 6-foot tall racemes bear hundreds of 1-inch brownish flowers with twisted petals.

This species was introduced to succulent nurseries in the early 1990s, when it was rare and expensive, selling for \$45 per bulb. It is now fairly easy to find.



The commonest variety of *Eulophia petersii* in cultivation is this robust form with large pseudobulbs and very thick leaves. Other clones have smaller pseudobulbs and longer, more slender leaves.

### **Culture**

*Eulophia petersii* will grow best in a deep pot that accommodates the big root system. Use a coarse, well-drained succulent mix. During the summer growing season, they can take quite a bit of water, but it's best to water only when the medium dries out, about every two weeks. They can go months without water, especially during the cool season. It is tolerant of temperatures from well over 100 F. to freezing. All-day sun is a bit too much in summer; the plant will look much better in very light shade. To ensure flowering, give the plant a cool, dry winter rest. While it can tolerate down to freezing or even a few degrees below under a cover, it



tends not to flower after a cold winter outdoors or in an unheated enclosure. I keep my plants in a cool greenhouse with night temperatures about 45-50 F. Watering during winter also seems to inhibit flowering. I don't water my plants at all from November until March.

Plants are vigorous and will grow into large clumps that bear a dozen or more inflorescences. Repot or divide as needed; the best time is in late spring after flowering and when new growths are several inches tall. Single-bulb divisions will establish well, but three-bulb divisions will make normal-sized new growth and usually flower the very next year.

**Note:** Verdins and goldfinches are fond of eating the flowers. If you have many of these birds, you may want to protect the plant when it's flowering.

### Other species

The genus *Eulophia* has about 300 species, many of which are xerophytic succulents with beautiful flowers. Most, unfortunately, are very difficult to

find. *Eulophia speciosa* has fleshy strap-shaped leaves from underground bulbs and 2-foot tall spikes of bright yellow flowers that look like flying birds. *E. orthoplectra* is similar in size and shape, but its flowers are purple on the front and yellow on the back. *E. keitii* and *E. leachii* have nonsucculent and succulent leaves, respectively, atop above-ground bulbs, and 1-foot spikes of small green flowers. Other species such as *E. guineensis* are herbaceous, bulbous perennials that grow in wet habitats, but also perform well outdoors in Tucson if kept well watered during the growing season.

*Mark Dimmitt, Ph.D., has been the Director of Natural History at the Arizona-Sonora Desert Museum since 1997. He earned his Ph.D. in biology from the University of California at Riverside, and then spent four years as a vertebrate ecologist in the California Desert District of the Bureau of Land Management. He moved to Tucson in 1979 to become Curator of Botany at the Arizona-Sonora Desert Museum.*



Eul. petersii 1999-506-03-02  
A green-flowered clone of *Eulophia petersii*. The plant is more gracile than the brown-flowered one (See photo, page 1).



*Eulophia speciosa* 1999-515-03, small clone  
A large specimen of *Eulophia petersii* in full bloom. This plant is about 6 years old from a 3-bulb division.

## **PLANT QUESTIONS??? WHOM TO CONTACT!!!**

Many CACSS members have experience with different kinds of succulent plants. I hope they will add their names to the following list (Just call or e-mail Bob Torrest—480-994-3868; [robertst9114@msn.com](mailto:robertst9114@msn.com)).

For now the list is simply alphabetical with principal interests. When more members add their information, the list will be cross-referenced by topic.

### **DOUG DAWSON**

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Specializations include Flora of Namibia, Growing from Seed, Lithops, other Mesembs, and Melocactus.

### **MIKE GALLAGHER**

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### **STEVE PLATH**

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Specializations include *Ariocarpus*, *Astrophytum*, *Cyphostemma*, *Echinocereus*, *Fouquieria*, *Thelocactus*,

General Propagation, and Desert Revegetation.

### **BOB TORREST**

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Specializations include Desert Landscaping, Unusual (including Rare Fruit) Trees and Shrubs, Aloes, Agaves, Columnar Cacti, *Trichocereus*, and *Opuntia*.

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