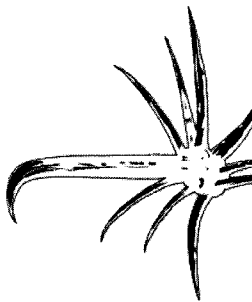


# CENTRAL SPINE



NEWSLETTER OF THE CENTRAL ARIZONA CACTUS & SUCCULENT SOCIETY  
ON THE WEB AT <http://www.centralarizonacactus.org/>

OCTOBER, 2006



Hello Club Members,

Ah, autumn... what a great time to live in Arizona! Heading into some of our best weather conditions of the year. Why do these days have to be so short? So much to do, so little time.

Our events calendar is overflowing! We had another great seed growing seminar (Red Cup Society) hosted by Ingrid and moderated by Doug. Several members brought seed to share. My Aloe dichotoma X ramossissima hybrids and Fockea edulis are up and growing... it is fun to watch their progress day by day.

Thanks to all the club members for your help at the Desert Botanical Garden sale this past weekend. Sharing your growing experiences with others is fun and hearing what you all have to say is always an experience for me - I learn something new each time I go! Your assistance is very much appreciated by Cathy Babcock and the DBG.

COMING UP... Our club is participating for the first time in The University of Arizona Master Gardeners and Metro Tech Vocational School of Phoenix '2006 Fall Garden Festival' on October 21st from 8 am - 2 pm at Metro Tech High School on the NW corner of Thomas Rd and 19th Ave. Please come out and join us as we promote our club and the Cactus Rescue. We will be selling some small plants, rescued barrels and dish gardens.

The month ends with one of the most exciting events of the year - The Silent Auction! Members can bring plants that they have grown, whether it be from seed, offsets, or just a duplicate plant. We also accept any plant related items, pots, books or seed.

We ask that you bring a card that lists the Latin name of the plant if you know it and any special care instructions along with the donor's name so the new owner can ask questions about plant care (1/4 of an 8 1/2" X 11" paper works great). See [www.centralarizonacactus.org/AuctCard.pdf](http://www.centralarizonacactus.org/AuctCard.pdf) for a printable auction card. Also please include a plastic pot tag or attach the tag to cuttings. We will also have another live auction this year... the most special plants will be chosen for this segment of the auction. We guarantee you will have fun, and if you don't have plants to bring, come out and bid on some!! Please come early and help us set up.

Our November speaker is Steven Hammer and you won't want to miss it! Steven said he might be persuaded to bring some plants too! His specialties are bulbs, conophytums and haworthia. Check his website [www.sphaeroid.cactus-mall.com](http://www.sphaeroid.cactus-mall.com).

Also coming up are our December Holiday Party and elections for next year's officers and board members. The only requirement is that you be a club member for a year. This year's nomination committee is Doug Dawson and Jo Davis. Please contact them if you would like to nominate someone or would like to run for an office or board position yourself.

Looking forward to great things...

Celeste Gornick, serving on your Board of Directors

## Officers

**President—Kathy Butler**  
602-840-9612  
butlergrin@aol.com

**Vice President—Leo Martin**  
602-852-9714  
leo@possi.org

**Secretary—Sue Daley**  
623-876-0060  
daleyspudbud4250@msn.com

**Treasurer—Tom Ballen**  
480-502-8639  
tballen@aol.com

## Directors

**Lee Brownson** 480-951-4945  
lsbrownson@cox.net

**Ray Daley** 623-876-0060  
daleyspudbud4250@msn.com

**Denise Diederich** 520-424-3464  
rainbowvalleyensy@aol.com

**Laurence Garvie** 480-855-3850  
lgarvie@cox.net

**Celeste Gornick** 602-548-8106  
hheaven77@aol.com

**Dana Hiser** 480-368-8606  
dana2garden@aol.com

**Cynthia Robinson** 602-615-2261  
crobin500@msn.com

**Lois Schneberger** 480-946-8373  
lschneberger@cox.net

**Ingrid Swenson** 602-957-9865  
iswenson@cox.net

**Robert Torrest** 480-994-3868  
robertst9114@msn.com

**Librarian—Erik Anderson**  
480-967-3984  
woodcraftman@earthlink.net

**Newsletter Editor & CSSA Affiliate Rep**

**Cynthia Robinson** 602-615-2261  
crobin500@msn.com

### The Cover Photo:

A large bowl of lithops blooming at Plants for the Southwest nursery in Tucson, Arizona, 11/19/2005. Gene & Jane's mesemb collection is quite a sight to see when all in bloom! Photo taken by the editor.

*Publication of the material in the Central Spine does not imply agreement with the ideas expressed therein by any portion of the membership of the CACSS, nor does it constitute an endorsement or support for any portion of such material by the CACSS, or the Central Spine, regardless of any position or office held by the author. All such material represents a comment and/or personal opinion of the author.*

## Local Calendar

**October 21st, Saturday, 8 am - 2 pm**  
Maricopa County Master Gardener's Fall Festival  
Metro Tech High School, 19th Ave & Thomas, Phoenix  
Volunteers are needed to staff the CACSS club table. For more info, contact Celeste Gornick or Ingrid Swenson.

**October 29th, Sunday, Noon Setup, 2 pm Auction**  
Silent Auction of Member's Plants  
Wildflower Pavilion, Desert Botanical Garden  
The Annual Silent Auction is the perfect way to part with some of your propagations and/or expand your collection without spending a lot of money. Review your collection today to see if you have any plants that you could part with to help make this annual event a success!

**November 4th, Saturday, Noon to 5 pm**  
Open garden at the home of Daniel Sumberg  
See flyer in the October *Central Spine*.

**November 19th, Sunday, 2 pm (Not the last Sunday)**  
Regular club meeting  
Dorrance Hall, Desert Botanical Garden  
Guest speaker will be Steve Hammer, topic to be determined.

**December 10th, Sunday, Noon (Not the last Sunday)**  
Holiday Party, Elections  
Webster Auditorium, Desert Botanical Garden

**January 28th, 2007, Sunday, 2 pm**  
Regular club meeting  
Dorrance Hall, Desert Botanical Garden  
Guest speaker will be Mark Muradian, topic to be determined.

**February 25th, 2007, Sunday, 2 pm**  
Regular club meeting  
Dorrance Hall, Desert Botanical Garden

**March 25th, 2007, Sunday, 2 pm**  
Regular club meeting  
Dorrance Hall, Desert Botanical Garden

**April 20th - 22nd, Friday - Sunday, 9 am - 5 pm**  
Annual Show & Sale  
Desert Botanical Garden  
Dorrance Hall & Boppart Courtyard

## Regional Calendar

**May 25th - 30th, Friday - Wednesday, All Day**  
Cactus & Succulent Society of America's 32nd Biennial Convention  
Doubletree Hotel Seattle Airport  
Seattle, Washington  
For more information, visit [www.cssainc.org](http://www.cssainc.org).

**July 5th - 8th, Thursday - Sunday, All Day**  
Annual Show & Sale of the Cactus & Succulent Society of America  
Huntington Botanical Gardens  
Los Angeles, CA

**September 1st, Saturday, All Day**  
24th Annual Huntington Succulent Symposium  
Join the Huntington in celebrating the centennial of the desert garden!  
Huntington Botanical Gardens  
Los Angeles, CA

## ***CACSS Board Meeting Minutes for September 24, 2006***

The Nominating Committee, consisting of Jo Davis and Doug Dawson, reported that they have tentative candidates for the board but none of the officer positions other than Treasurer. Jo has made many calls to members, but no one has called her offering to serve.

Tom Ballen gave the treasurer's report. We now have 270 members thanks to some late registrations in connection with the rescues. As of September 24, there was \$9,274.69 in the checking account \$3,085.25 of that amount is in the Plant Rescue Account. A motion was made and passed that Tom began the process of obtaining a wireless credit card machine for the Club's transactions. The price will be \$1095 plus a \$50 set-up fee. Our transaction fees will decrease with this new type of machine.

The DBG Annual Fall Plant Sale is October 13 through 15. Volunteers are needed for our Plant Rescue booth as well as the sale in general. The CACSS Silent Auction will take place on October 29 in the Wildflower Pavilion. Set-up begins at noon and the auction begins at 2pm. Daniel Sumberg's open garden will be held on November 4. Make time in your schedules for these fun events!

Lee Brownson reported that the process of obtaining our non-profit status is in the hands of the proper agencies. It will be several months before the process is completed.

The Veterans Hospital is interested in obtaining planting material for a xeriscape garden. Lee will get more information and report back to the Board.

Watch for earlier deadlines for the November and December newsletter as the November and December general meetings will not be held on the usual fourth Sundays due to the holidays.

Sue Daley

### ***Keep the Birds Out***

***Leo A. Martin***

I have sown many seed pots only to find pots overturned, soil and seedlings scattered everywhere. Not only is there a mess to clean; such seedlings seldom survive. Curve-billed thrashers are the main culprits, but doves, quail, and ground squirrels also wreak havoc.

In fact, for the last two winters I haven't planted any mesemb seeds, since I don't have reliable protection against critters. This year will be different.

The Lamborghini of bird protection is, of course, a secure greenhouse. Properly constructed and locked, it keeps out not only birds and rodents but also two-legged varmints and their larvae. Greenhouses generally require plans, permits from the city, solid construction techniques, and plenty of money. There tend to be regulations limiting their size and height. If you have the space and means, by all means build one.

\*\*\*

If you only want to protect a few pots of sprouting seedlings, I might suggest... a birdcage! Used ones show up at yard sales. How appropriate! They can be covered with a small piece of shade cloth or frost cloth if desired.

\*\*\*

Moving up the addiction scale, simple growing frames don't take long to construct and are inexpensive. Often materials can be found second-hand at metal salvage yards.

Continued on Page 4...

Such frames consist of a low wooden box - sides often made of 2 x 12 boards, or plywood over a 2 x 2 frame - just covered by a screen door or a pair of sideways-sliding screen windows. The door hinges on the side away from where the gardener stands, and can be propped up with a stick during work periods. If sliding screens are used, the gardener can reach half the frame at any time. The frame should be deeper than the deepest pots to be used, plus some room for plants to grow. For mesemb seedlings this is not very deep. The frame should not be too large, or there will be spots the gardener cannot reach.

In some climates such boxes have not only screens, but outer glass doors, to be closed on frosty nights. Mesemb seedlings seldom mind our mild frosts, and if the gardener forgets to run out and remove the glass early on a sunny morning, there may be steamed seedling salad.

The box can rest on the ground. In this case, there is the risk of tunneling rodents entering. Or, it can have a bottom and be placed up on legs, the better to reach in without stooping. Boxes with bottoms require some path for water's egress. Fitted with casters or wheels on the legs, the frame becomes portable.

Often a layer of sand or gravel will be placed on the bottom of the box for drainage, as well as frosty-night heat storage. A heating cable can be buried in the sand to extend the growing season for warm-growing seedlings such as cacti. Winter-growing mesemb seedlings don't need this in our climate.

\*\*\*

A "temporary" screen structure provides even more room. In many jurisdictions, a structure not firmly attached to the ground is treated more leniently by the building department than would be a permanent structure with foundations.

I visited California recently and saw Steven Hammer's screenhouses featuring shade cloth sides and top over frames of metal pipe. The DBG uses similar frames to hold up the canopies at the Plant Sale Festival, and these frames are sold at various places here in the Valley. These frames typically feature a rectangular footprint, with legs spaced about every 8 feet, and a peaked roof. Most tent canopies have legs that are free at the bottoms, but Steven's frames are complete boxes of pipe, top, bottom, and sides, for added resistance to twisting in the wind.

The pipes slip-fit into corner fittings welded of pipe and are held tight by winged screws at the joints. The frames can be assembled and disassembled quickly (by at least two people) and stored in a small space. We have windy storms here, and the frames would need to be anchored securely. For this some people attach 5-gallon buckets filled with concrete to the vertical legs.

The floor is covered with mulch fabric, which extends past the perimeter of the frame. The frame is wrapped with shade cloth to keep out pollinating insects, chewing rodents, digging birds and too much sun. The shade cloth is stitched together at the seams. The top is covered with 3-mil thick clear plastic for rain and frost protection.

One end of the structure has a screen door fitted into the space.

\*\*\*

His benches well-suit his plants: Steven's plants are mostly in square pots smaller than 6"; none of his plants is very tall. Bench tops are open rectangular frames made of 2 x 4s. They are supported with 2 x 4 legs spaced about every 6'. On the mulch fabric under each leg rest one or more concrete blocks or fragments, used to distribute the weight of the bench legs on the mulch cloth, and to keep the wooden legs off damp earth. On top of the frame are set--not fastened--pairs of 2 x 2 pieces that span the frame, and are positioned at the proper distance to support standard black plastic nursery flats. The pots are set into the flats. The height of the benches can be varied by changing the number and orientation of the concrete blocks, the lengths of the legs, and the size of the wooden crosspieces. This setup might be precarious for heavy pots and large plants, but it works very well for smaller ones, and is simple to construct.

Modified for our local predators, a 2" band of sheet copper on each bench leg would keep snails and slugs from climbing to the plants, and a 12" band would keep rodents from climbing the legs to feast on our gems.

Soon your only problem will be what to do with all the extra seedlings.

## ***Around My (Or Your?) Desert Garden***

**Bob Torrest**

September 30 - The month ended with 100F days and we have had almost no rain while others have been more fortunate. But shrubs and perennials are flowering again or continuing from last month. They include San Carlos and Coulter's hibiscus, Desert senna (*S. covesii*), Baja ruellia, Red bird and Yellow bells. Acacia aneura and Leatherleaf acacia are from Australia and both have rod shaped yellow flowers. Even the Willow acacia (*A. salicina*), also from Australia, managed a few flowers. Favorites include Desert willow with purple flowers and the dark green leafy *Jatropha cinerea* (leafy limberbush). Finally, Desert asters keep spreading and look very good now. We found a pink flowered Ruellia (*R. brittoniana rosea*) at Tohono Chul Park in northwest Tucson. Their plant shop usually has a good variety of desert adapted shrubs and flowers as well as aloes and agaves (and it is open on Sunday unlike the cactus and succulent dealers).

The same mostly small aloes that flowered last month were still at it. At least there were no further losses in September. Of course, more aloes will be flowering in October and through the cooler days to come. Cacti that flowered as the month progressed included copiapoas, notocacti, several varieties of large cereus and several barrels including *Ferocactus pilosus* and *F. cylindraceus*. By mid-month there was *Trichocereus huascha* (again!), thelocacti, the Aztec column, *Stenocereus gummosus* and several pilosocereus. At month's end there was *Leuchtenbergia principis*, coryphanthas, the large cereus again and *Echinocactus grusonii* (Golden barrel) and *E. ingens*.

The only *Ferocactus* flowering at the end of the month was *F. peninsulae*. A very nice book on the plants of Baja ("*A Field Guide to the Common and Interesting Plants of Baja California*" by J. Coyle and N.C. Roberts) describes *F. peninsulae* in part with "the showy, funnellform flower is golden yellow with red stripes and orange stamens". This plant grows from Bahia de los Angeles on through the southern end, as does *S. gummosus* (*Machaerocereus* in older books like this one). This Pitaya agria is an elegant plant, far less sprawling than *S. alamosensis* (*Rathbunia*), that should be used much more here. The flowers are large unlike those of the common *Stenocereus* varieties grown here (Arizona and Mexican organ pipes, and Senitas). The fruit is described as "fleshy... with an acid but pleasant taste". We have yet to see the fruit although flowering has been since June. *Ferocactus* flowers began with *F. latispinus* in December and *F. glaucescens* in January and continued with different varieties ending with *F. peninsulae* at the end of September and into October. That is, you can have *Ferocactus* flowers almost all year and the plants are very easy to care for.

After surviving a couple of years in a 3 gallon pot, *Yucca harrimaniae* is in the ground in a mostly shaded spot. This high country "miniature" grows at 8000 feet and has an attractive rosette form. It makes a nice pot plant. Other more common plants to try include *Yucca rigida* (Blue yucca) and *Yucca elata* (Soaptree yucca) which is a high desert plant that develops into attractive large plants. *Y. elata* has been a very slow grower for us. These yuccas and many others are described in the book by M. & G. Irish, "*Agaves, Yuccas and Related Plants - A Gardener's Guide*" and a book you will like.

## ***Cactus Rescue Program Report***

**Lee Brownson**

Are you ready for this?? We sold 340 rescued cacti during the semi-annual Desert Botanical Garden's Landscape Sale!!! 340 plants found a home. For me, it makes all the effort and work worthwhile. Thanks to all who have participated in a cactus rescue, especially those who helped in the last two rescues when we got the inventory to sell at the DBG.

A HUGE and special thank you to the people who helped sell the plants at the CACSS Cactus Rescue Program booth at the sale. Thanks, too, to all club members who helped out in other areas of the sale area. Cathy Babcock told me several times how much the Garden appreciates our club's support during their semi-annual plant sales.

As to future rescues, nothing is scheduled in the immediate future. I will be visiting with the Verrado people soon to see how we can fit into their plans. I am looking for other opportunities and got a couple of leads from people who stopped at our booth.

Next week, I will be at the CACSS booth at the Metro Tech Plant Exhibition put on by the Extension Service and the Master Gardeners group. We will be talking about our Society, the plants we love and the Rescue Program. If you would be interested in telling people why you like cacti and succulents, contact Celeste Gornick.

## Waiting to Exhale

Tom Gatz

Modified and reprinted from "The Gathering", the volunteer newsletter of the Desert Botanical Garden

"Let's get this over with" lamented a 10-year old boy as he and his parents waited in the Desert Botanical Garden's tour gathering area for my tour to begin on an otherwise perfect Sunday morning last winter. Thinking to myself that this could be a long 40 minutes, I reached back to my volunteer training and remembered: try to find something about the desert with which this young city-dweller can relate. While the tour group gathered, I learned that he really liked to swim so I asked, "How long can you hold your breath underwater?" "For almost a full minute!" he proudly boasted. "That's pretty darn good," I replied, "but see that saguaro cactus over there? It can hold its breath all day long." When he asked me why it does that, I sensed that his curiosity about our desert plants was perhaps growing. By now the tour group had gathered around, and I explained that plants respire or "breathe" through tiny holes or pores (by taking in carbon dioxide and releasing oxygen through stomata). Doing so during the scorching heat of a summer day, however, would result in so much loss of moisture that cacti and most other succulent plants would eventually shrivel up and die. So, unlike most other plants, many cacti and succulents close their pores all day long and only "breathe" at night when things cool down. Concerned I might lose my audience if I added too much more detail, I avoided mentioning that the technical term for this water-efficient type of photosynthesis is Crassulacean Acid Metabolism (CAM); I suspected that jaw-breaker would likely even cause the parents' eyes to glaze over. For those of you not prone to eye-glazing, please read on.

CAM photosynthesis also has practical applications for those of us who enjoy growing cacti and other succulents. Their need to "breathe" at night helps explain why some of our prize succulent specimens, usually the ones native to regions with summer nights cooler than ours, suddenly and seemingly inexplicably collapse and rot during our hot, humid monsoon season. It is likely that they are not dying from the heat of the day, but rather from the fact that nighttime temperatures no longer cool down enough for the plants to ever "wake up" to breathe and absorb carbon dioxide, especially here in the heat island of Phoenix. For CAM photosynthesis to work, a significant shift in temperature from day to night is required for the carbon dioxide to be stored (that's why CAM is rarely found in tropical succulents). Combine this state of semi-dormancy with monsoon rains for several days and you have a recipe for rotting plants. According to our Central Arizona Cactus and Succulent Society webpage, some of the plants most susceptible are many of the smaller cacti (hold off on watering them when the nights are above 90 degrees) as well as *Aeonium*, *Crassula*, *Dudleya*, *Echevaria*, *Sedum* and *Sempervivum*. Our website recommends bringing these rosette succulents into the house and keeping them dry all summer, resuming watering when night temperatures dip into the low 70's, usually right about now. Of course, an easier route is to stick with species native to the Sonoran Desert and let Mother Nature do most of the watering on her schedule.

Some cactus horticulturalists delay summer watering until late in the day believing that cacti and succulents are better able to utilize water in the evening after their stomata open. However, Dr. Mark Dimmitt commented that, while evening watering is a good way to minimize water evaporation, active CAM plants can take up water whenever available, regardless of the time of day.

Interestingly, these night-breathing succulents store enough carbon dioxide as an acid during the night that they actually taste sour in the morning. By the afternoon, most of the acid has been used for photosynthesis and the plants taste bland. But be careful; many succulents are toxic. *Alluaudia* is a safe one to try if you want to conduct a "taste test" at home.

Continued on Page 7...



*Dudleya brittonii*

Huntington Botanical Garden, 07/02/06  
Photo taken by Cynthia Robinson

## Waiting to Exhale ...Continued from Page 6

Some species (eg sedums, mesembs, and kalanchoes for example) use "normal" photosynthesis (absorbing carbon dioxide during the day) to maximize growth during the winter, but switch to the less energy efficient CAM during summer to survive, giving them a huge growth advantage over their non-switching neighbors. Some plants have normal photosynthesis in their leaves and CAM on the stems (some *Euphorbia* species). Still others (mesembs, some agaves) start out as seedlings with normal photosynthesis than switch to CAM later in life when they first encounter water stress. Some agaves can switch back and forth between normal photosynthesis and CAM depending on water abundance.

When water-stressed, cacti and other succulents can "idle" by sloughing off fine roots and limiting respiration to moist internal tissues. Just like an idling engine, however, they can quickly rev up and resume full growth (if nighttime temperatures drop enough), often within 24 hours after a rain, giving them an advantage over dormant non-CAM leafy plants.

Pretty amazing, these desert plants. Even a 10-year old boy might agree.

### Acknowledgements

I would like to thank DBG staff, Dr. Charlie Butterworth, Chad Davis, Kirti Mathura, and Scott McMahon, as well as CACSS members, Jim Elliot and Dr. Leo Martin, Dr. Mark Dimmitt at the Arizona Sonora Desert Museum, and DBG volunteer Dana Hiser for helping me with this article. A special thanks to Cynthia Robinson for the use of her photo.

CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY



JO  
DAVIS

Interested in one of the name badges you see other members wearing? You can have one of your very own! Talk to Jo Davis at the meeting or send her a check for \$7.50, made out to "Jo Davis," to her home address:

2714 W. Monte Ave.  
Mesa, AZ 85202

## CACSS News & Updates

### What Do You Want to Hear?

January's speaker will be Mark Muradian of California. Mark is a farmer in the Central Valley of California.

Mark spoke at the 2005 CSSA Convention in Scottsdale. He was one of the highest-rated speakers among Convention attendees. He is also a ceramic artist, and he sold his plant containers at the Convention. He will be bringing some of his works here, as well.

At the Convention, he gave one talk on his trip to Socotra--in costume, with Yemeni music in the background. He showed not only the plants, but also the island's people and how they live. Mark's other Convention talk was on building his cactus garden with earthmoving equipment. Mark has a big cactus garden!

He has also been to Chile, photographing Copiapoa, one of his favorite cactus genera. He will travel in November 2006 to Bolivia and Argentina.

Mark asked me what you wanted to hear; I told him I'd ask you. He is not certain he would have enough time to get the Bolivian pictures sorted in time for January. So, please let me know: Socotra, Earthmoving Equipment, or Copiapoa. My contact information can be found in the list of club officers.

Leo A. Martin

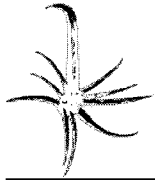
### Elections are just around the corner!

Currently the nominating committee is asking members of our club to step forward and volunteer to be on the Board of Directors for next year. If you are a member who attends our general monthly meetings regularly, please call Jo Davis at (480)839-3792 or Doug Dawson at (480)893-1207 for information on what the duties of being a Board member entail. Then consider running for the Board or for one of the offices (President, Vice-President, Secretary, or Treasurer). This is a great opportunity to be of service, have some fun, and develop your leadership skills.

Make a difference!

Doug Dawson  
Nominating Committee Member

Editor's note - The slate of nominees will be finalized on November 1st, so don't hesitate to call Jo or Doug today if you are interested in becoming an integral part of the CACSS Board!



CENTRAL ARIZONA  
CACTUS & SUCCULENT SOCIETY  
PO BOX 63572  
PHOENIX, AZ 85082-3572  
WWW.CENTRALARIZONACACTUS.ORG

---

ARTICLE SUBMISSION DEADLINE FOR NEXT  
CENTRAL SPINE ISSUE IS: OCTOBER 30, 2006  
EMAIL TO CROBIN500@MSN.COM

## ***Plant Questions???***

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

**DOUG DAWSON**  
480-893-1207  
doug.dawson@gcmail.maricopa.edu

Specialization includes Flora of Namibia, Growing from Seed, Lithops, other Mesembs & Melocactus.

**MIKE GALLAGHER**  
602-942-8580  
mgallagher26@cox.net

Specialization includes Aloes, Haworthias, Columnar Cacti & Turbinicarpus.

**STEVE PLATH**  
623-915-7615  
revegdude1@juno.com

Specialization includes Ariocarpus, Astrophytum, Cyphostemma, Echinocereus, Fouquieria, Thelocactus, General Propagation & Desert Revegetation.

**CYNTHIA ROBINSON**  
602-615-2261  
crobin500@msn.com

Specialization includes Flora of Madagascar, Growing from Seed, Caudiciform & Pachycaul Succulents, Aloes, Apocynaceae, Burseraceae, Euphorbiaceae, Fouquieriaceae, & Succulent Bonsai.

**BOB TORREST**  
480-994-3868  
robertst9114@msn.com

Specialization includes Desert Landscaping, Unusual (including Rare Fruit) Trees & Shrubs, Aloes, Agaves, Columnar Cacti, Trichocereus & Opuntia.