It was a great time for me and I hope it was for you also! ... I am talking about our annual Show & Sale which we held at Dorrance Hall and Boppart Courtyard on April 20-22. There were many interesting plants brought in by club members for the show and I heard from many of you that next year you, too, will enter plants. It isn't as intimidating as some thought. Many first-timers received ribbons and trophies!

We renewed our friendships with many talented vendors and met a few new ones. The weather cooperated and it was great to see so many of our members volunteering to be greeters, cash register operators, raffle table workers, etc. I enjoyed answering questions from such an inquisitive public.

Please come to the May meeting and hear a summary of the Show & Sale. This month the general meeting is not the last Sunday of the month due to Memorial Day. We will therefore meet on Sunday, May 20. Unfortunately I will have to miss that meeting - I will be in Namibia, photographing many of the plants we love. I have been trying to go back to Namibia since my last botanical trip there in July of 2003.

It is now time to be looking around our gardens and collections to see which plants need to be "summerized" due to the extreme heat coming up for the next 4 months. Many Dudleyas need to be brought inside and left dry for the summer. Most of my Lithops do ok in the summer here, but the popular *L. optica rubra* will have to be brought into the house or it will surely give up the ghost. Just like at the DBG, I will be placing some additional shade cloth on some of the plants I know would suffer if left alone. Most columnar cacti are getting thirsty and will want additional water, while some Mammillarias need to be kept fairly dry. It's all a bit confusing, so let's ask each other questions when we are unsure. The longer I belong to our club, the greater the circle of friends I have to draw on for advice. This is one of the important reasons to have regular attendance at our monthly meetings.

See you all in June when I return to the northern hemisphere!
**Local Calendar**

May 20th, Sunday, 2 pm (Not the last Sunday)
Regular club meeting
Dorrance Hall, Desert Botanical Garden
Guest speakers Laurence and Faith Garvie will take a closer look at the life cycle of cacti in the Sonoran Desert.

June 9th, Saturday, 8:30 am
Field trip to the Boyce-Thompson Arboretum
See page 3 for additional details.

June 24th, Sunday, 2 pm
Regular club meeting
Dorrance Hall, Desert Botanical Garden
Guest speaker Scott McMahon, Curator of the Cactus Collection at the Desert Botanical Garden, will give a presentation entitled *Cactus 101 - A Survey of the Family*.

July 29th, Sunday, 2 pm
Regular club meeting
Dorrance Hall, Desert Botanical Garden
Guest speaker, Norm Dennis, will be reviewing *The Genus Mammillaria*.

August 26th, Sunday, 2 pm
Regular club meeting
Dorrance Hall, Desert Botanical Garden
Guest speaker TBA.

September 30th, Sunday, 2 pm
Regular club meeting
Dorrance Hall, Desert Botanical Garden
Guest speaker will be David Yetman of the Tucson TV show “The Desert Speaks.

October ?, Friday - Sunday, All Day
Desert Botanical Garden Fall Plant Sale
Volunteers are needed to assist the DBG staff with answering cactus & succulent related questions, giving out CACSS & CSSA info, etc.

October 20th, Saturday, 10 am
Field trip to the Wallace Desert Garden
See page 3 for additional details.

October 28th, Sunday, Noon Setup, 2 pm Auction
Silent Auction of Member's Plants
Wildflower Pavilion, Desert Botanical Garden

**Regional Calendar**

May 25th - 30th, Friday - Wednesday, All Day
Cactus & Succulent Society of America's 32nd Biennial Convention
Doubletree Hotel Seattle Airport
Seattle, WA
Contact Cynthia Robinson or visit www.cssainc.org for more information.

June 29th - July 1st, Friday - 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
MAY 20 - We are in for a real treat this month as we take a closer look at the life cycle of cacti in the Sonoran Desert. The father and daughter team of Laurence and Faith Garvie will inform us about the early life of a cactus and its death.

Laurence will discuss, “What Happens When Cacti Die & Other Cactus Stories.” He is a Research Scientist at Arizona State University and long time member of our Society. Faith will look at “Cactus Nurse Plant Associations in the Sonoran Desert.” She is a freshman at Chandler High School.

JUNE 9 - Have you been to the Boyce-Thompson Arboretum lately? Whether you have or have not, you will want to plan to be on a special trip to the BTA on June 9th. We will go “Behind The Scenes at the Boyce-Thompson Arboretum.” That’s right; we will get to go where the general public does not. The BTA is much more than just a collection of plants in a pretty place. Much goes on there that, if you are not a member of the BTA, you probably don’t know. This is your chance to find out - first hand.

The visit is limited to 30 people. If you want to be one of the lucky ones, you need to contact Lee Brownson at 480-951-4945 or lsbrownson@cox.net, as soon as possible. Sign-up will close on June 1st.

The cost of the tour is $7.50 per person. Bring cash or a check made out to the CACSS. We will carpool from the Desert Botanical Garden East parking lot at 7 am. If you live on the east side of the Valley, you can drive there directly. The BTA tour starts promptly at 8:30 am!

JUNE 24 - Scott McMahon, the Curator of the Cactus Collection at the Desert Botanical Garden, will be our guest speaker in June. His topic is: “Cactus 101 - A Survey of the Family.”

And what a family it is!! Scott is extremely knowledgeable about cacti of all sizes, shapes, and natural habitats, and also knows how to grow many of them in the harsh climate of the Phoenix area. Because the Cactus Family is huge, he may or may not touch upon a genus or species of special interest to you. However, we will be taking questions, so come prepared. Long time members are urged to attend this meeting as Scott would like to have other cactus experts on hand to answer questions about unique cacti that are of special interest to them.

Newer members are advised that, if they seek to know more about these incredible plants, this should be a must attend meeting and place it on their schedules immediately - June 24th at 2 pm in Dorrance Hall.

JULY 29 - If you like small cacti, you will not want to miss the July meeting, as Norm Dennis from Tucson will be reviewing, “The Genus Mammillaria”.

ADVANCE NOTICE - One of the most amazing gardens in the State of Arizona (dare I say in the United States?) is the Wallace Desert Garden in North Scottsdale. Members of the CACSS are invited to the Wallace Garden on October 20th. A tour of the Garden will begin at 10 am and end at Noon.

Whether you are a new member or have been around for a while, if you have not seen the Wallace Desert Garden, this is an opportunity you will not want to miss. At the next General Meeting, find someone who has been there and hear what they have to say.

There is no limit on the number of people who can attend, but, as we get closer to the date, we will need to take reservations. The Garden staff has asked us to give them a head count before we come.

OPEN GARDENS - The summer time typically has not been a time for Open Gardens, what with the heat and all. However, Lee Brownson is considering having a Summer Open Garden some morning; say between 7 am and 10 am. Coffee, juice, fruit, sweet rolls and bagels would be available.

Lee’s garden was one of three gardens featured on a special garden tour during the Cactus and Succulent Society of America’s convention in 2005. The other two were the Wallace Desert Garden mentioned above and Rich Zeh’s amazing collection which we visited a few months ago.

His question is, would anyone come to a morning event? If there is interest, please let him know - 480-951-4945 or lsbrownson@cox.net.
HOW OLD IS THAT SAGUARO?  

SHORT ANSWER: Unless it was grown from seed, and someone kept tabs on it, no one knows for sure.

Tom Gatz

The much longer answer to one of the most commonly asked question by visitors to the Desert Botanical Garden is that on average and under natural conditions just west of Tucson with 10 inches of rainfall annually, a saguaro often weighs less than an aspirin at age 5 and it may take about 10 years to get just an inch and a half tall, about the size of your thumb! Under these natural conditions it may take 20 years to almost attain one foot in height and 30 years to reach 2 feet tall, but by age 40 it may be up to 4 feet tall, by age 50 up to 7 feet tall, by 75 up to 16 feet, and by age 100 almost 25 feet tall. Throughout its range and depending upon soil and rainfall, it first blooms between 40 and 75 (average 55) years old, usually starts to grow arms when it is between 50 to 100 years of age (average 70), and it may live for perhaps 200 years or more (again, no one knows for sure). Reportedly, the 1996 Guinness Book of World Records tallest saguaro grew to nearly 59 feet before falling southwest of Phoenix. The record for the tallest cacti in the world is not held by the saguaro, but by the cardon cactus in Mexico. Dr. Mark Dimmitt at the Arizona Sonora Desert Museum reports that some cardons appear to be nearly as tall as the nearby 80-foot champion boojums that are as high as a 7-story building, although no one has measured them as far as he knows.

Please bear in mind that there are exceptions and qualifications to almost everything stated above. For example, regardless of age, saguaros mature and flower for the first time when about 8 feet tall. In wetter areas with about 16 inches of rain (like in the Rincon Mountains east of Tucson) they reach this size and flower in only 40 years. Further west in Organ Pipe National Monument (with only 9 inches of rain annually) it takes almost twice as long (an average of 75 years) to reach this size and flower. While arms can begin to grow when the saguaro is about 12 feet tall, with some eventually growing as many as 50 arms, others in very dry areas may never grow any arms at all. Water-retentive clay soil appears to result in bigger saguaros with more arms.

Under the exceptional horticultural conditions in Dan Bach’s greenhouse nursery in Tucson, he produces 6-inch-tall saguaro seedlings in only 3 years. Planted in sand, watered twice a week and fertilized monthly from spring through fall, Dr. Mark Dimmitt pushed some of these seedlings to reach 8 feet tall and bloom in only 15 to 20 years! It’s a good bet that our pampered saguaros in the areas of the Desert Botanical Garden (and in our front yards) with lots of supplemental water also grow considerably faster than their desert cousins. Conversely, the 1.5 inch-tall display saguaros confined to their tiny pots on the kitchen sink in the Botanical Garden’s Education Building may never grow much at all! So, when I show visitors these tiny saguaros, I explain that if these cacti were growing in the wild, they might be approximately 10 years old rather than taking a wild guess at their actual age in cultivation.

Nature amazes us and sometimes frustrates us when we want a definitive answer by always providing exceptions to the hard and fast rules that we come up with. This is because successful species survive by having enough genetic diversity to be able to adapt and respond to gradually changing environmental conditions. Unfortunately, genetic diversity is sometimes curtailed by the human-caused loss of some populations that may possess the needed adaptive genes; these populations often occur on the periphery of a species range where conditions are often more harsh. For example, saguaros found in the higher elevations (up to 5100 feet) of the species range in central Arizona have larger stem diameters and a greater density of spines on their growing tips than those from lower elevations, which is thought to be an adaptation to cold temperatures. At night, the growing tips of large stems are 4 degrees warmer than those of small stems. A good analogy would be the likelihood of your little toes getting frostbite before your big toes do!

However, humans often accelerate changes in environmental conditions faster than species can adapt, leading to endangerment or extinction. While saguaros are not endangered, fatalities are increasing in recent years as fire is spread by non-native grasses such as buffelgrass and red brome (introduced for cattle forage). These contiguous areas of dry grass provide fuel for catastrophic fires in our desert uplands, a hazard to which our native saguaros are not adapted to survive, having evolved with scattered, native bunch grasses that didn’t spread fires as extensively as do the non-native species. The next time you pause to admire one of these giant sentinels in the desert, wish it luck for a long life; it may need it. Thanks to Dr. Joe McAuliffe, Dr. Mark Dimmitt, Judi Irons, Tina Wilson, Beth Brand and Scott McMahon for helping me with this article which is modified and reprinted from The Gathering, the newsletter for the volunteers at the Desert Botanical Garden.
Whewww... It’s finally over… are the thoughts that are probably going through many members minds as they return their plants to their green/shadehouse benches and if like me, discover that the quantity of plants brought home do not fit in the spaces left by plants brought to the show (a perennial issue when you live in a condo or apartment). In an effort to remedy the problem, as well as maximize my available room, I’ve discovered that 4 or more 3” pots fit nicely around the bases of various succulent trees in 2-3 gallon pots, plus the foliage helps to protect the plants while they become accustomed to their new home…

I would like to extend a HUGE thank you to all of the members who either participated in the Show & Sale committee meetings, entered plants in the Show, volunteered their time to help out at the Show & Sale or simply took a handful of postcards to distribute. It is due to your efforts that this year’s Show & Sale was a success! There were nearly 375 plants entered in the Show & there was more than $45,000 worth of plants, pottery, books and garden art sold at this year’s Sale. There was a conscious effort made to curtail unnecessary expenses, so hopefully the club will see a small profit once all of the bills have been paid…

It’s never too early to start thinking about next year’s Show & Sale, especially while the last one is still fresh in your mind. Is there anything that you would have done differently, had you been the Show Chair? Maybe you know of someone who would like to be a vendor or have ideas on how to encourage more members to enter their plants in the Show. Whether it be positive or negative, the Board would like to know, so feel free to give us your suggestions… My door (Inbox) is always open…

Cynthia Robinson
2007 Show Chair
### CACSS 2007 Show & Sale Recap ...continued from page 5

**Central Arizona Cactus & Succulent Society**  
2007 Plant Show Award Winners

<table>
<thead>
<tr>
<th>Category</th>
<th>Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Total Points</td>
<td>Cliff Fielding (146)</td>
</tr>
<tr>
<td>Most Blue Ribbons</td>
<td>Cliff Fielding (19)</td>
</tr>
<tr>
<td>Most Cactus Blue Ribbons</td>
<td>Scott McMahon (10)</td>
</tr>
<tr>
<td>Best Cactus of Show</td>
<td>Stan &amp; Joan Skirvin - <em>Aztekium ritteri</em></td>
</tr>
<tr>
<td>Best Succulent of Show</td>
<td>Steve &amp; Julie Plath - <em>Euphorbia abdelkuri</em></td>
</tr>
<tr>
<td>Best Cactus Section I</td>
<td>Steve &amp; Julie Plath - <em>Mammillaria morganiana</em></td>
</tr>
<tr>
<td>Best Succulent Section II</td>
<td>Cliff Fielding - <em>Ornithogalum sp.</em></td>
</tr>
<tr>
<td>Best Cactus Collection</td>
<td>Cliff Fielding - <em>Gymnocalycium Collection</em></td>
</tr>
<tr>
<td>Best Succulent Collection</td>
<td>Gard Roper - <em>Gasteria batesiana Collection</em></td>
</tr>
<tr>
<td>Best Aizoaceae</td>
<td>Cliff Fielding - <em>Faucaria tigrina</em></td>
</tr>
<tr>
<td>Best Aloe</td>
<td>Cynthia Robinson - <em>Aloe dorotheae</em></td>
</tr>
<tr>
<td>Best Ariocarpus</td>
<td>Steve &amp; Julie Plath - <em>Ariocarpus kotschoubeyanus v. albiflorus</em></td>
</tr>
<tr>
<td>Best Euphorbia</td>
<td>Scott McMahon - <em>Euphorbia gymnocalycioides</em></td>
</tr>
<tr>
<td>Best Ferocactus</td>
<td>Steve &amp; Julie Plath - <em>Ferocactus chrysacanthus</em></td>
</tr>
<tr>
<td>Best Arizona Native</td>
<td>Steve &amp; Julie Plath - <em>Echinocactus polycanthus</em></td>
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<tr>
<td>Best Crest or Monstrose</td>
<td>Dorothea Brown - <em>Opuntia mammillata crest</em></td>
</tr>
<tr>
<td>Best Seedling</td>
<td>Laurence Garvie - <em>Trichocaulon cactiforme</em></td>
</tr>
<tr>
<td>Best Decorative Planter</td>
<td>Tom Steuber - <em>Operculicarya decaryi</em></td>
</tr>
<tr>
<td>Best Specimen Planter</td>
<td>Gard Roper - <em>Euphorbia horrida</em></td>
</tr>
<tr>
<td>Most Creative</td>
<td>Denis Menard - <em>Echinopsis silvestrii</em></td>
</tr>
<tr>
<td>People’s Choice Award</td>
<td>Cliff Fielding - <em>Avonia quinaria</em></td>
</tr>
<tr>
<td>Judge’s Choice Awards</td>
<td>Steve &amp; Julie Plath - <em>A gage filifera</em></td>
</tr>
<tr>
<td></td>
<td>Denis Menard - <em>Echinopsis silvestrii</em></td>
</tr>
<tr>
<td></td>
<td>Celeste Gornick - <em>Aloe tenon</em></td>
</tr>
<tr>
<td></td>
<td>Paul Schueneman - <em>Astrophytum capricorne</em></td>
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### Novice Awards

<table>
<thead>
<tr>
<th>Category</th>
<th>Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Total Points</td>
<td>Tom Zaworski (43)</td>
</tr>
<tr>
<td>Best Novice Cactus</td>
<td>Beverly Schueneman - <em>Gymnocalycium horstii</em></td>
</tr>
<tr>
<td>Best Novice Succulent</td>
<td>Tom Zaworski - <em>Pachypodium bispinosum</em></td>
</tr>
</tbody>
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### Junior Novice Awards

<table>
<thead>
<tr>
<th>Category</th>
<th>Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Total Points</td>
<td>Phoebe Garvie (11)</td>
</tr>
<tr>
<td>Best Jr. Novice Cactus</td>
<td>Phoebe Garvie - <em>Echinocereus rigidissimus</em></td>
</tr>
<tr>
<td>Best Jr. Novice Succulent</td>
<td>No Entry</td>
</tr>
</tbody>
</table>

The “free repotting” promotion was a success again this year, thanks to donations of potting soil from Black Gold, pumice from Baker’s Nursery and volunteers willing to get their hands dirty. CACSS Past President, Kathy Butler, is artistically displaying 3 adeniums and some euphorbias in one of Mike Cone’s pots. Photo taken by Cynthia Robinson.

A total of 369 plants were entered in this year’s Show. The above photo shows part of the Succulent Collection & Crassulaceae classes. Photo taken by Cynthia Robinson.

This *Pereskia sp.* seemed to draw people into Sticky Situation’s booth like a magnet. For those of you not getting the color e-mailed edition of the Central Spine, the flower is a deep lilac with a white center. Photo taken 4/22/07 at the Show & Sale by Cynthia Robinson.
April 30 - There are still lots of reminders of the very hard freeze, but with all the color this past month, let's focus on flowering cacti and trees. There were a few kinds of cacti that suffered from the freeze (e.g., some pilosocereus) but most are fine and many have flowered better than ever. The flowering sequence for opuntias from the start of April was *O. acicularis*, *O. basilaris* (beavertail… continuing), *O. microdasys* (bunny ears), *O. macrocentra* (yellow with red centers), *O. nudica* (continuing), *O. paraguayense* (golden), *O. bigelowii* (teddy bear cholla), *O. violacea* (Santa Rita), *O. versicolor* (that is right - purple, yellow red and a burnt orange), *O. lindheimeri* (from Texas… with big orange flowers), *O. stenopetala* (unusual small orange flowers), and several other chollas. You need some of these in your yard.

The flowering sequence for stenocereus was *S. schottii* (Senita), *S. alamosensis* (rathbunia), *S. griseus*, *S. marginatus* and *S. thurberi* (Arizona organ-pipes). Of these, only some *S. griseus* and rathbunia had freeze damage but they have either grown through tip damage or made new growth just below it. Barrel cacti continue to be colorful surprise. *Ferocactus glaucescens* continued to flower through the start of the month (small yellow flowers even on small plants). The red spined barrel mentioned last time with unusual small cup shaped red flowers was *F. pilosus*, and it continued for a while (I've misidentified this variety in the past as do several popular books). *F. schwarzii*, a small elegant barrel, has flowered for most of the month. By month end most of the California barrels (*F. cylindraceus*) had started with their bright yellow flowers. Other cacti flowering prolifically were many notocacti, gymnocalyciums, cleistocacti, borzicacti, and several varieties of pilosocereus. *Echinocereus triglochidiatus* had a second flowering...never seen before.

April may be the best month for flowering trees. The sequence was *Eucalyptus torquata* (coral gum), Chinaberry, *Grevillea robusta* (silk oak), Palo Verde, *Acacia aneura*, *Cordia boissieri* (a large Lysiloma tree with white flowers), *Cercidium microphyllum* (Littleleaf palo verde), Desert willow, *Tipuana tipu*, Palo Brea and Sonoran palo verde (which is more frost tender). A Cat-claw acacia (*A. greggii*) finally looks healthy and is covered in flowers after the removal of a nearby large Indian fig prickly pear, which had put its heavy invasive roots into the acacia berm.

Aloe flowering was winding down but the sequence was *A. camperi*, *A. gariepensis*, *A. eru* and four others still unidentified but very nice. There are good picture books for South African aloes but many of the others haven't been easy to identify. At month's end there was a large spike on *A. pirottae*. The new plants are brightly spotted, but that disappears as they age and they look like different plants. Die back has continued on some aloes months after the hard freeze and, in some cases, the plants were lost months later.

Most of the consequences of the hard freeze were described in the two previous articles. Now some others are clear. Only about 25% of a large *Chorisia speciosa* has come back in clusters scattered about the high branches. Several Cascalotes had substantial damage. The succulent tree, *Jatropha cinerea*, has come back in the interior of a large tree, but an 8 ft seedling is only coming back from the base. Yellow oleander (*Thevetia peruviana*) has come back in the interior after lots of damage. Small *Bombax ellipticum* plants are gone as is an 8 ft potted Moringa. An 8 ft Synadenium is coming back slowly from the base, while a large Pachypodium in a shaded protected spot froze to the ground. It was fun to grow some of these plants in the landscape, but for now the space made available by their misfortune will be used for less tender material.
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.

**PLANT QUESTIONS???</strong>**

**WHOM TO CONTACT!!!**

**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.