



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

January 2012

Thursday, January 5, 2012

"The Survival of Salvaged Saguaros"

Presented by Judy Mielke



The thousands of saguaros that ADOT (Arizona Department of Transportation) has salvaged and replanted in the course of highway construction provide a unique opportunity to study how well these giants of the Sonoran Desert survive the transplant process. Judy Mielke, Senior Landscape Architect with Logan Simpson Design, who was contracted by ADOT to conduct a research project on saguaro transplanting, will describe the project's methodology, results, conclusions, and recommendations. Judy also will discuss another research project conducted for ADOT, to evaluate a technique for improving survival rates of ironwood trees salvaged under "winter dig" conditions.

Judy Mielke is a senior landscape architect with Logan Simpson Design in Tempe. She is also a Certified Arborist and horticulturist, with a Bachelor of Science degree in horticulture from Washington State University and a Master of Environmental Planning degree from Arizona State University. Judy's interest in plants was apparent at a young age, as she helped tend the family's vegetable and flower gardens on their wheat farm and cattle ranch in eastern Washington State, and soon asked for her own garden plot. Judy's Dad supported her interest in plants by building a greenhouse, and before long it was filled with foliage plants, cacti and succulents. As a 4-H club member Judy gave demonstrations at the county and state fair; one of her favorites was titled "Get Stuck On Cacti And Succulents."

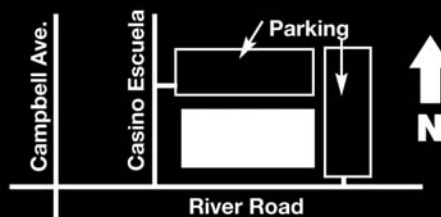
A summer internship at Longwood Gardens in Pennsylvania between Judy's junior and senior year of college introduced her to the field of public horticulture, and after graduation from WSU Judy combined her interest in cacti and succulents with the desire to work in a botanical garden by interning at

the Desert Botanical Garden in Phoenix. Fortunately for Judy, a horticulture position became available after the internship ended and she stayed on at the DBG for nine years.

Judy's current position at Logan Simpson Design, where she has worked for 14 years, enables her to straddle the fields of landscape architecture and botany. She has prepared landscape plans for a variety of projects ranging from schools to parks to freeways and her specialty is native plant salvage and restoration. Judy also has conducted numerous native plant inventories, rare plant surveys, and vegetation community mapping throughout Arizona, Nevada, and Utah. She is author of the award-winning book *Native Plants For Southwestern Landscapes* and has served as Associate Professor in ASU's College of Architecture and Environmental Design teaching Arizona Native Plants and Landscape Plant Materials.

Please welcome Judy as she tells us about the research on saguaro salvage and transplant survivability that she and Logan Simpson Design conducted for ADOT.

Meetings are held on the first Thursday of each month.



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



President's Message

Happy 2012!

2011 was another great year for our Society. The signing of a 15 year agreement with Pima County for the development of PIMA PRICKLY PARK was my highlight. I am so proud and grateful to be your president and represent over 1,000 members who do good things. Can you believe that since 1999 we have rescued from

destruction over 57,000 cacti and succulent plants, found them new homes and made some money to invest in education, conservation and research?

I want to thank each and every one of you for your donations of time and money to TCSS a success.

Mark Dimmitt is leaving the Board of Directors and his elected replacement is Rob Romero. Mark is world famous for his work with Trichocereus hybrids, Adenium hybrids, as an author, speaker and his tenure with the Arizona Sonora Desert Museum. He is also a Fellow of the Cactus and Succulent Society of America. Mark, thank you for your continued service to TCSS.

Our Treasurer, Joe Frannea is turning over the books to our newly elected Treasurer, David Newsom. This is just one of the

dozen or so hats Joe wears. He has done an amazing job as treasurer managing an expanding and diverse financial system, but it was just a part of all the amazing things he does for the Society. He will continue doing all the other activities but just needed to free up some time.

As we look forward to 2012 our major activities will be Sonoran IX on April 28th and 29th and in the fall a grand opening of Pima Prickly Park. Vonn Watkins will continue to bring you great programs at our monthly meetings which he has done for the past decade. We will have round table discussion in the spring and fall, home tours and our rescue program will continue to save plants whenever called upon.

Our outreach to education continues with our successful cactus model activity. This educational activity, developed by John Swarbrick, has reached almost 4,000 young students and given many of you the opportunity to be a part of inspiring the next generation.

This will be another great year for TCSS, so I encourage you to participate, learn and enjoy.

Thank you,

Dick Wiedhopf, President

Saving Cactus, a Priority for TCSS



Our Cactus Rescue Crew Program remains as strong as ever thanks to 144 TCSS members who participated in one or more of our 27 cactus rescues this year. Since the inception of this program in 1999, we have saved over 57,000 cacti that needed rescued from new development sites. These plants are over and above the plants the developer is required to save based on the Native Plant Protection Ordinances (NPPO) that Arizona cities and counties enforce before the clearing of land, a third of an acre or more. We get a lot of requests to remove cacti from residences, especially from newcomers who do not understand our ecosystem. We ask them to reconsider and contact a gardener or landscaper if needed.

The crew played an important role in providing cactus for the new Pima Prickly Park, a nine acre park being jointly developed by TCSS and Pima County Natural Resources, Parks and Recreation and several other partners. Several large saguaros were relocated to the parking lot area, many ocotillo, yuccas

and a special one of a kind crested barrel was installed by the park entrance. We were able to help the County add some protection to their maintenance yard on this site by planting 180 cholla along their fence line for extra security.

Our program is possible because the business and government communities allow TCSS to remove cacti from their project sites. Granite Construction, Vail and Sahuarita School Districts, and Pima County Department of Transportation were our major partners this year. While there is no out of pocket expense for their participation, it does take their time to provide maps, plant lists and to meet us on site to review details and planned rescues. Granite went the extra mile and provided a huge excavator and skilled operator to remove large ocotillo and yuccas that were beyond our digging ability. Pima County Parks was gracious enough to dig the huge holes to plant these at Pima Prickly Park.

One major benefit of the Cactus Rescue Crew program is that the profits allow TCSS to keep our dues at very low rates and helps to provide high quality programs and events. We earmark 25% of the sales profits from the program for our Educational Outreach Program which includes Science Fair cash awards, school grants for teachers, and our very successful cactus model building exercise reaching hundreds of students and printing educational materials. The amount for this year is \$2,862.

Crew members who participated in one or more rescues, sales or our Amphi holding site workday will be awarded a few cactus bucks to purchase rescued cacti at a rescue or a sale. These were inserted with Membership renewal cards mailed out at the end of December. We are proud of our Rescue Crew for their dedication, attention to detail, expert handling of the cacti, and hard physical work which keeps this initiative a stellar program that developers, community, and members value and support.

Joe and Patsy Frannea

AWARDS

The President's Award recognizes outstanding service to the society in the past year. This year there were 5 award winners. Special engraved trophies were given out at the Holiday Party. The award winners are...



Jesse Byrd for her leadership on Pima Prickly Park and participation in rescues, education and other activities.



John Durham for his regular participation in rescues and documenting our activities with great photos. He is always there to support the heavy lifting both literally and figuratively.



Linda Heisly is the volunteer coordinator for Pima Prickly Park activities plus doing volunteer watering chores at the park. She is involved in assembling kits and teaching with our cactus model educational programs.



Brenda & Dick Loffi are regular rescue crew members who go out of their way to help on the largest jobs, sales, and work days at the park. They are very much appreciated by fellow rescue crew members for always being available to help.



Angela and Larry Miller always have helped on rescues, sales, silent auction and other activities, but most recently have been a major part of Pima Prickly Park planning meetings and drafting grant proposals.

Thank you all for the many hours of service you donate to TCSS.



Holiday Party

Photos taken by John Durham



December Donors

The names below represent the Tucson Cactus & Succulent Society members and friends whose donations helped make this year a success. We extend our sincere thanks for your support.

General Fund

Dawn Hanby
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Pima Prickly Park

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Hans & Trudi Doerr
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Pat Sullivan & Lisa Lee
Margaret Pope
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Research

Linnea Gentry
Patricia Phelan

TCSS Events of 2011

The garden tour committee consists of Patsy Frannea, Ed Bartlett, Nancy Reid, Rim and Marija Tallet-Kelpsa, Robert Ellis, and Bill Salisbury, chairman.

In 2011 there were two very successful tours. The spring tour in April was at Robert and Donna Ellis's garden. The fall tour in Oct. consisted of 8 members gardens. Both tours had over 125 members and guests visit these gardens. The committee thanks all the garden owners and the many volunteers that made these tours such a success. The next tour has been scheduled for Sat. March 31, 2012. More information to follow.

Bill Salisbury

Article series "Growing in the Desert"

This was the second year of the newsletter article series "Growing in the Desert". The first year's articles were written mostly by Mark. 2011 was a 12-month series on ferocacti by Chris Monrad. Mark will resume authoring and cajoling contributions in 2012.

In April Mark was interviewed on KUAT's Arizona Illustrated about the big freeze and TCSS. The story is in the AZ Public Media archive at www.azpm.org/news/story/2011/4/13/1830-facing-the-freeze-facts/

Mark Dimmitt

Growing in the Desert Series

Coping with Wet Winters

by Mark Dimmitt

In early 2011 Southern Arizona gardens suffered from a hard freeze, the worst since 1978. Now we have to deal with another potential problem that we haven't seen for a couple of decades – a very wet winter. Weather statistics fail to capture the issue. 2011 will go down as a barely above average rainfall year. Even if you look at the totals for November and December, neither of these months was anywhere near setting a record. The problem was in the frequency of storms. It rained at least once a week for seven weeks. Biologically that is very wet, because the soil has been continuously moist for all that time.

Roots, like all plant tissues, require oxygen for respiration. When soil is saturated, all the air is displaced by water, so respiration becomes impossible. There is usually no problem for plants in the ground. Rainwater percolates downward, and in non-clay soils the root zone does not remain saturated for more than a couple of days. Potted plants, though, are in danger; water cannot percolate beyond the bottom of the pot. After a heavy rain or irrigation, the bottom few inches of the potting medium remain saturated until the water evaporates or the roots absorb it and the plant transpires it. But many of the cacti and other succulents we grow are winter-dormant; they have minimal metabolic activity during the cooler months. In addition, there isn't much evaporation when the weather is cool. After several days without air, roots suffocate, die, and then rot.

The best solution to drowned roots is prevention. Plants can be kept under a rain shelter while they're dormant. If grown in the open, make sure that the potting medium is very well drained. In my opinion, most collectors whom I've visited use dangerously tight potting media. Most commercial growers also use very tight media. They have valid reasons: 1. Many of their plants are under cover where rain is not a problem. 2. They can't afford the additional time and cost of irrigating hundreds of thousands of plants in coarse media. That's the only negative – the coarser the medium, the more frequently plants must be watered during the growing season. Collectors,

however, should be more concerned with the long-term survival of their cherished specimens than how often they have to water. Remember: succulents are better adapted to drought than to soggy roots.

An important side note: Placing a layer of coarse material such as rocks or plastic peanuts in the bottom few inches of a pot does NOT improve drainage; it makes it worse! This is a law of physics that cannot be broken. Water cannot move from a finer textured medium into a coarser medium until the bottom of the upper layer is saturated. So a layer of coarse material beneath a regular potting mix simply moves the saturated layer higher in the pot, closer to the base of the plant and thus increasing the danger of rot.

If you have a succulent that is rotting at the base, unpot it immediately, wash off the medium, and cut off dead tissue. Consider treating the cuts with a fungicide such as dusting sulfur. Store the plant upright in a dry place until its growing season begins. Then repot and hope for the best. And before you repot, consider changing your medium.

I couldn't find a rotting succulent among my several thousand potted outdoor plants to illustrate this article. Three years ago I changed my potting medium to one that is at least half coarse coir. (Coir is coconut husk. For succulents it must be nearly all fiber with no dust. The fine grade that looks like peat moss is deadly; it stays soggy for days after watering.) Drainage of fibrous coir is superb. It holds lots of moisture, but is impossible to saturate; the medium is well aerated immediately after watering. Since I began using it, I've had almost no root rot. In fact, the only plants I've lost in this mix are two *Caralluma socotrana*, which are notoriously sensitive to root rot.

A final note: Winter-growing plants like most *Crassulaceae* and aloes are prone to rot if they're too wet during their summer dormant season.

TCSS BOARD

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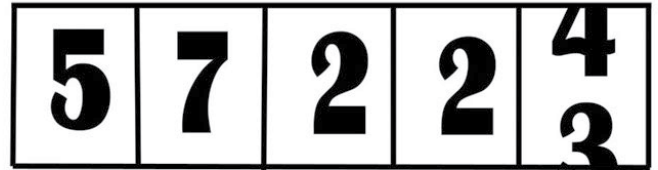
For additional information call: (520) 256-2447

Everyone is Welcome!

Bring your friends, join in the fun, and meet the cactus and succulent community.

January Refreshments

Those with family names beginning with O, P, Q, R, S, T, and U please bring your choice of refreshments to the meeting. Your generous sharing will be greatly appreciated and enjoyed!



Cacti Rescued 284 Rescues Accomplished

Please see our Website Calendar for the next rescued cactus sale. They are scheduled at various times during the year based on our inventory.

TCSS Club Members receive a 10% discount

January 2012

Thursday, January 5, 2012 7:00pm

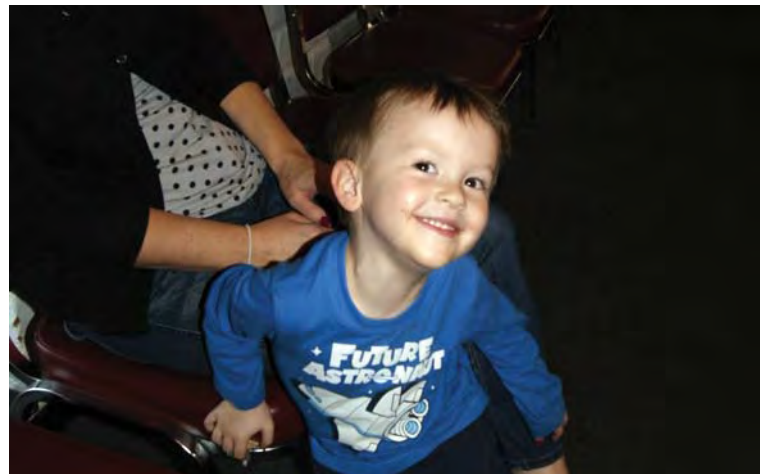
Monthly Meeting, "The Survival of Salvaged Saguaros"
Presented by Judy Mielke

Tuesday, January 10, 2012 7:00pm - 9:00pm

Board meeting at the U of A College of Pharmacy

Holiday Party

Photos taken by John Durham





Desert Breeze

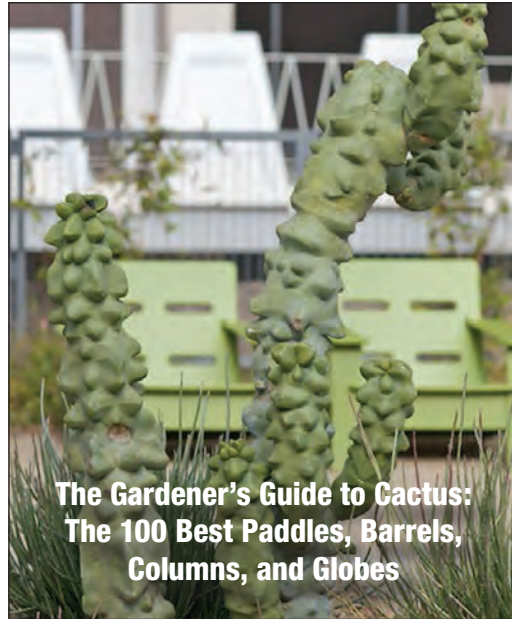
Newsletter of the Tucson Cactus and Succulent Society

February 2012

February 2, 2012 at 7:00 PM, 2012

“Beyond Ouch!: Integrating Cactus into Residential Garden Designs”

Presented by Scott Calhoun



**The Gardener's Guide to Cactus:
The 100 Best Paddles, Barrels,
Columns, and Globes**



Five years ago, while working on his book, *Designer Plant Combinations*, Tucson-based designer and author Scott Calhoun was shocked to learn that in most gardens in the United States, cactus were anything but standard issue. In fact, the bulk of home gardens he visited contained exactly zero species of cactus. It occurred to Calhoun that perversely, being thus overlooked made cactus one of the most enticing plant families for those hoping to veer from the mundane toward the sharp side of gardening. In his own design practice, he tantalized clients with visions of “cactus flowers heavily scented of honey and chocolate; hedgehog species with fruit that tastes like strawberries; and lime-green columns whose skin feels like melted wax.”

Calhoun's passion for including cactus in home landscapes resulted in his latest book, **The Gardener's Guide to Cactus: The 100 Best Paddles, Barrels, Columns, and Globes**, which he will be officially launching at the TCCS February meeting. Scott Calhoun is the author

of six gardening books that address the unique aspects of gardening in the arid Southwest. His first book, *Yard Full of Sun*, was awarded the 2006 American Horticultural Society Book Award; his second title, *Chasing Wildflowers*, won the Garden Writers Association 2008 Silver Book Award. Scott writes a monthly garden column for *Sunset* magazine and has written for nearly every national gardening magazine. He runs *Zona Gardens*, a design studio, writes, lectures across the United States. When he is at home, he can be found working in his garden, hiking, and reading a good book. Find out more about Scott at www.zonagardens.com.

Scott's new book will be available and you can have your copy signed just after he completes his program presentation. Make sure you join us for a fun night with an excellent program, great food, books, free plants and much more!

TCSS Program Presentation March 1, 2012

Tanya Quist,

Director of the University of Arizona Campus Arboretum
will present **The Joseph Wood Krutch Garden**

Publicity Chairperson Needed

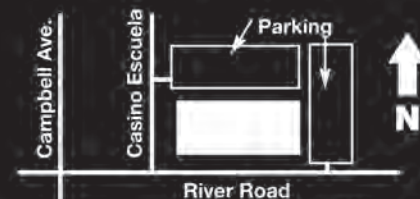
We are in desperate need for an individual(s) to manage the publicity for the many activities we are engaged in. We need to get the word out to Southern Arizona about meetings, sales, educational activities, Sonoran IX etc. If you want to be involved, this would be a great opportunity. Attendance at board meetings would be very useful. Contact me anytime.

Thanks, Dick Wiedhopf

Free Plants

Will be a surprise this month

**Meetings are held on the first
Thursday of each month.**



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



President's Message

Please read the Education Outreach article. John Swarbrick and his dedicated committee do so much to enrich this society in the eyes of the community that it is important when he asks for more volunteers, we step up. Contact John and see how you can help. Please!

In mid February you will receive in a separate mailing all the details and registration materials for Sonoran IX. This is a 2 day event that includes our only

plant show of the year, a multi-vendor sale of plants, pottery, books, art, a great silent auction, a special dinner and program presentation, plus a conference with great speakers and workshops of interest. The Conference has a registration fee and includes 5 speaker, 4 workshops of your choice, lunch and dinner on Saturday, April 28 and lunch on Sunday, April 29. The Saturday night dinner and speaker is specially priced for all members and guests not registered for the conference.

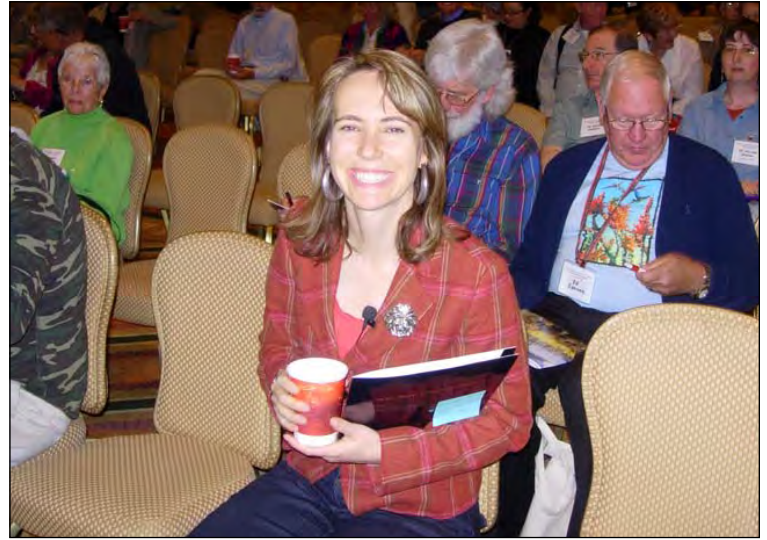
We all need to get our plants ready for the show and silent auction. We want Tucson to "Know What We Grow". I hope this will be the largest display of cacti and other succulent plants that we have presented. For large plants we will have 2 trucks to pick-up on Friday, April 27 and return them on Sunday, April 29. We will need volunteers as drivers and helpers. We will also need a bunch of volunteer for all aspects of the Sonoran Conference and these will be explained in the mid February mailing.

I am especially pleased that Arizona Illustrated featured Pima Prickly Park (PPP) on their Wednesday, January 18 program. A link to the program is on our website. In cooperation with our good friends at the Pima County Natural Resources, Parks and Recreation (NRPR)

more and more changes to this 9.4 acre parcel are happening. It is changing in front of our eyes. You are always welcome to join us at our PPP meetings on the 1st Tuesday of every month at 7pm at the College of Pharmacy, Drachman Hall Room A326. Visit PPP and let us know how we are doing.

Finally, a non-partisan thank you to Congresswomen Gabrielle Giffords for her support of our Society. I found a great picture of her from the CSSA 2009 convention as she was waiting to give the opening remarks.

Thank you,
Dick Wiedhopf, President



Education Outreach Continues to Grow

Our Education Outreach Program, with the Let's Build A Cactus Model exercise as the flagship, continues to snowball. In January TCSS participated in the Beyond Tucson event at Reid Park, participated in a school science night at Senita Valley Elementary School in Vail and provided model kits for a Plant Science Night at Wright School. In February we will participate in our big event of the year – the Math, Science and Technology Funfest at the TCC on Thursday and Friday 16 & 17 Feb. This will be our fourth year at Funfest. We have again been invited to the Cochise College "Experience Math and Science" event in April for the third year and the Pima County Parks and Natural Resources Earth Day Event at Agua Caliente Park also in April. This translates to approximately 1500 kids going through our model building exercise – and we are only one month into the year! We are also in discussions with the Arizona Sonora Desert Museum wherein TCSS will provide model kit materials and instructor training so that they can incorporate the cactus model in their Docent School Outreach Program. Our Cactus Model exercise has also been adapted by the U of A Extension as part of their Rainwater Harvesting teacher lesson plans website (see extension. arizona.edu/catchtherain/pgf/rainbarrelcactus/pdf). With the exception of the repeat events, all of these opportunities came up because the event organizers came to us, TCSS, not because we contacted them. What this means is that TCSS is becoming known and recognized as a significant community education resource. We can and should be proud of this but it does not come without a challenge. We need more volunteers to help assemble the model kits and to staff the booths at these events and lead the kids in the model building exercise. We have had a very dedicated cadre of model building volunteers to support the program in the past but as the number of events grows we can't always lean on this same group. So... if you believe that education outreach is a key part of the mission of TCSS, as the Board and many of us members do, please consider signing on to be part of the model building team. Our immediate need will be to staff the booth at Funfest. There will be 2 shifts (9am – 11am and 11am – 1pm) on both days. Please see me at the February monthly meeting or contact me at funfest@tucsoncactus.org.

John Swarbrick

Growing in the Desert Series Plant Agaves During Cool Weather

by Mark Dimmitt

Most agaves are not desert plants. The great majority of species grow in higher, cooler habitats (Figure 1). When planted in the hot desert, they grow mainly during the mild weather of spring and fall. They are quiescent during peak summer heat and during the cold of winter. The milder weather is also the best time to select and plant out agaves in desert climates. They need time to establish and be ready for the summer heat.

Mark Sitter of B and B Cactus Nursery learned this from some of his snowbird customers who have had problems. They bought and planted agaves in their landscapes in late April, just before leaving for the summer without intention to water them. Under these harsh conditions, even nearly indestructible agaves will fail to thrive, and may even die. Even with watering, summer-planted agaves tend to languish until fall.

Agaves in the landscape should be watered mainly during spring and fall. It is okay to withhold water during summer heat and winter cold, when most won't grow much anyway. Many species will fold their leaves



Figure 1. Huachuca agaves grow mostly in the oak-pine woodlands in the mountains of southeastern Arizona. Nonetheless, this species will adapt to full desert sun. Some agaves need afternoon shade in the desert to look their best.

vertically, reducing heat load and water loss (Figure 2). This is normal, not something to be concerned about.

Before the 1990s, few agaves were available except *Agave americana*. It gave the genus a bad reputation among gardeners; it's much too large for most residential landscapes. In the past couple of decades numerous smaller and more attractive agaves have become widely available in succulent nurseries. Standard nurseries carry several of the most popular types. Huachuca agave (Figure 1) is one of them. Its relative *A. parryi truncata* (artichoke agave) is even more beautiful (Figure 3). It is being mass-propagated by tissue cultured and is becoming common in Southwestern landscapes. The very compact rosettes grow to about two feet across, and slowly form large colonies. They rarely flower.

Agave victoriae-reginae (Queen Victoria agave, Figure 4) is a gorgeous plant with very rigid leaves marked with strong white lines. The regular form grows to about two feet across, and the compact form only one foot in about ten years.

Agave 'Blue Glow' is stunning when the red edges of the blue leaves are backlit by late afternoon sun (Figure 5). It was introduced by Edward Hummel, and is probably a hybrid between *Agave attenuata* and *A. ocahui*. The non-offsetting rosettes grow to about two feet across.



Figure 2. Left: Summer heat and drought causes the rosettes of *Agave deserti* to close up. The vertical orientation and tight clustering reduce heat load and water loss. Right: The rosettes of the same species open up during cooler, wetter weather. This is one of the few agaves native to desert habitat.



Figure 3. *Agave parryi* var. *truncata* is even more compact than Huachuca agave.



Figure 4. *Agave victoriae-reginae* has been in cultivation for several decades. This more compact form is a more recent introduction. It's slow-growing and offsets sparingly.



Figure 5. *Agave* 'Blue Glow' is especially beautiful when backlit. Also known as *Agave* 'Edward Hummel'.



Figure 6. *Agave ovatifolia* (whale-tongue agave) is a very attractive and fast-growing new introduction.



Figure 7. *Agave bovicornuta* is greener than any of the other agaves in this article. Photo: Greg Starr.



Figure 8. Left: *Agave pelona* flowering at age 20 years from seed. That was in cultivation with ample watering. It probably takes twice as long in its desert limestone habitat. Right: Huachuca agave inflorescence from a 15-year-old plant, with two woodpeckers and an oriole drinking the abundant nectar. After all this time to mature, the flowering period lasts only about a month.

The most recent agave introduction is *A. ovatifolia* (whale-tongue agave, Figure 6). Although it had been in cultivation decades earlier, Gregg Starr rediscovered it in habitat and named the species in 2002. The very broad leaves form a stiking rosette four to six feet across and less tall in only five years; it does not offset.

Agave bovicornuta (cowhorn agave, Figure 7) is a non-offsetting type with rich green leaves and yellow to cinnamon reddish, hooked marginal teeth that resemble the horns on a cow. Plants can get 2-3 feet tall by 3-4 feet across. Place it under filtered light for best appearance. It can be damaged in cold Tucson winters.

Don't plant agaves for their flowers. While those of some species are very showy (Figure 8), it takes 10 to 20 years in cultivation for a rosette to mature. Then it dies. Landscape architect Carol Shuler recommends planting penstemons with agaves, because they have the same watering needs. The penstemons provide splashes of color in the spring. The rest of the year the penstemons are inconspicuous, and the agaves beautifully fill the garden space. Greg Starr of Starr Nursery also recommends planting other perennials and small desert adapted shrubs along with agaves, including *Baileya multiradiata*, *Calliandra eriophylla*, *Chrysactinia mexicana*, *Ericameria laricifolia*, *Glandularia gooddingii*, *Salvia greggii*, and *Tetranneuris acaulis*.

Library

If you were at January's meeting you saw the new library area. With thanks to Joe Frannea we now have permanent library storage at the Junior League. In the next few meetings, the books that have been in storage will also be added to the library. They will be covered and bar-coded before going into circulation.

Jason Eslamieh left a copy of his book "**Cultivation of Boswellia**" after his talk in September. After a brief introduction, the book covers the care, cultivation and propagation of the genus. The second section covers the various species and their care, along with color photos. It is well written and organized.

TCSS BOARD

Officers

President: Richard Wiedhopf opuntia@comcast.net

Vice President: Vonn Watkins
cactusdude1@yahoo.com

Secretary: Dave Moyer
davidandsusan_1@msn.com

Treasurer: David Newsom
dnewsom42@yahoo.com

Board of Directors: (Ending Dec. 31, 2012)

Chris Monrad
Dale Johnson
Keimpe Bronkhorst

(Ending Dec. 31, 2013)

Linda Bartlett
Cyndi Garrison
William (Bill) Hicks
Thomas Staudt

(Ending Dec. 31, 2014)

Ed Bartlett
Rob Romero
Joie Giunta
Bill Salisbury

CSSA Affiliate Rep:
Bill Holcombe (2013)

Cactus Rescue
cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad/Joe Franea

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Free Plants: Chris Monrad ferowiz@comcast.net

Librarian: Joie Giunta joietgo@yahoo.com

Prickly Park: Jessie Byrd jessie_byrd@hotmail.com

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Editor: Karen Keller runbunny@cox.net

Deadline for copy: Monday, February 20, 2012

TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

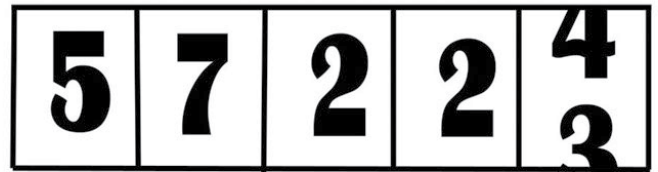
For additional information call: (520) 256-2447

Everyone is Welcome!

**Bring your friends, join in the fun, and meet
the cactus and succulent community.**

February Refreshments

Those with family names beginning with V, W, X, Y, Z, A,
and B please bring your choice of refreshments to
the meeting. Your generous sharing will be greatly
appreciated and enjoyed!



Cacti Rescued 284 Rescues Accomplished

Please see our Website Calendar for the next
rescued cactus sale. They are scheduled at various
times during the year based on our inventory.

TCSS Club Members receive a 10% discount

February 2012

Thursday, February 2, 2012 7:00pm

Monthly Meeting, "Beyond Ouch!: Integrating Cactus
into Residential Garden Designs"
Presented by Scott Calhoun

Tuesday, February 13, 2012 7:00pm - 9:00pm

Board meeting at the U of A College of Pharmacy

Thursday, February 16, 2012 7:00pm - 9:00pm

Round Table Discussion

Acknowledgement of Contributions

The names below represent the Tucson Cactus & Succulent
Society members and friends whose donations helped make this
year a success. We extend our sincere thanks for your support.

General

Edgar Rawl
Trina Trimble & Family
Barbara & David Kelly
Fred Frelinghuysen
David Yetman & Family

Prickly Park

Julie Goodman
Amy Oliver
Matts Myhrman
Patrick J. O'Connor
Aeyn Ricks

Conservation

Heather, Joseph & Andrew
Hatch
Martha Brumfield
Trina Trimble & Family
Gary Lyons
Robert & Vanessa Dearing
Saralaine Millet
Howard Grahn & Family

Beckman

Christyn Billinsky





Desert Breeze

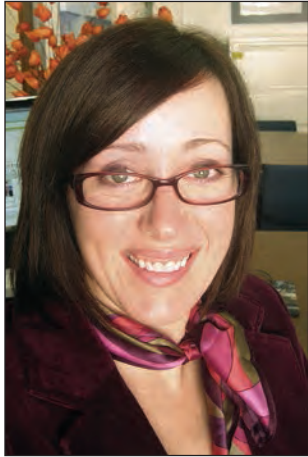
Newsletter of the Tucson Cactus and Succulent Society

March 2012

March 1, 2012 at 7:00 PM, 2012

“The Beautiful, Prickly History of The University of Arizona”

Presented by Tanya Quist



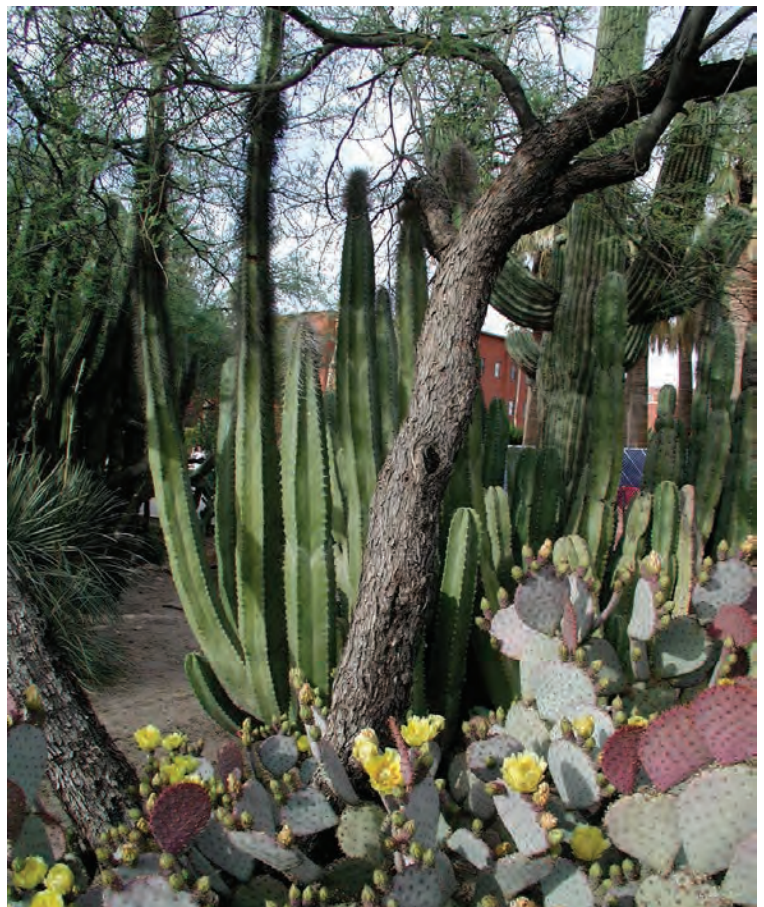
Dr. Tanya M. Quist, Assistant Professor in the School of Plant Sciences and Director of the UA Campus Arboretum

The University of Arizona is the oldest, continually-maintained, public green space in the state. It is home to almost 8000 trees and many shrubs, cacti and succulents from arid regions throughout the world. The collection has evolved through the combined efforts of researchers, instructors, staff and public contributions and advocacy over the UA's more than 125 year history. The landscape features a spectacular array of mature desert-adapted plants but also highlights the diversity of life possible in the desert through the many microclimates a campus provides. To preserve and enhance cultural and historical preservation, and to ensure continued ongoing sustainability research and education, the Campus Arboretum was established. In 2002, the campus was officially dedicated and accepted as a member of the American

Association of Botanical Gardens and Arboreta. Although few cactus are yet to be included in the inventory, the Campus Arboretum owes its beginnings to these prickly friends. These include the original cactus interpretive garden west of old main (ca 1900) and the centerpiece of the once expansive cactus garden east of Old Main, now known as the Joseph Wood Krutch garden. The UA Campus Arboretum continues to preserve historical and culturally significant specimens and is committed to research and educational programs promoting conservation and environmental sustainability.

Dr. Tanya M. Quist earned a PhD from Purdue University Dept. of Horticulture and Landscape Architecture in the Center for Environmental Stress Physiology and two additional degrees in Horticulture Science and Landscape Management. She teaches courses in Sustainable Landscape Management and Plant Propagation at the UA in the School of Plant Sciences and serves as the Director of the UA Campus Arboretum through Cooperative Extension in the College of Agriculture and Life Sciences.

Please join us for a historical and prickly view of the Joseph Wood Krutch Garden at the University of Arizona. Ask questions, visit with friends, enjoy some great food have a excellent evening and always stay to get a free plant.



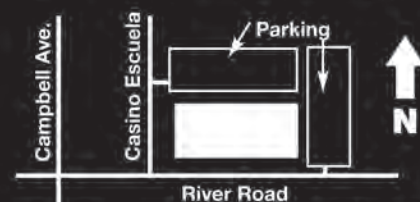
The Joseph Wood Krutch Garden at the University of Arizona, Tucson.

TCSS Program Presentation

April 1, 2012

presented by Chuck Hanson

Meetings are held on the first Thursday of each month.



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



President's Message

March should be the first month of the year. This is when I really get going. All that pent-up energy from winter dormancy explodes. Maybe I'm part plant, never really thought about that? Many of our favorite plants are sending out flower buds or new growth. Everyday there is something wonderful happening in the garden or the surrounding desert. I have an Agave murpheyi throwing up a bloom spike that grows several inches a day. Even after watching so many Agaves

bloom, I am still amazed by their growth. How lucky to live in this area and grow these wonderful succulent plants.

March also starts a very busy season for the Society. Planning is finished for the Sonoran IX conference and now the real work begins. We hope many of you will register for the conference and many others will volunteer to help out on April 27-29. You will receive all the information by mail. This is a major activity for the Society that must have your support.

Another wonderful garden tour is planned for Saturday, March 31. Six homes will be on display. More information is in this newsletter. Just enjoy and learn.

March 25 is our first joint effort with the Green Valley Gardeners for a Plant Expo. For over 40 years we have had a special relationship

with members and other folks living in Green Valley and nearby communities. They drive up for our meetings, come to our plant sales, advertise our events and participate in many of our activities and now we have a chance to start paying them back for all their support by having this Plant Expo in their community. This is a one day event in which we will have plant sales and speakers similar to our Expo last year. Read more about it in this newsletter and on our website. Even better, come on down for the day and meet some very nice people, buy some plants and visit a wonderful native garden that they have created. I know you will enjoy this day.

Things are happening at Pima Prickly Park. Check out the new website and watch the hoop house being erected. We are planning for a late September ribbon cutting-grand opening. Prickly Park meetings are the first Tuesday of the month. You are always welcome and your support and input are appreciated.

My good friend Dan Birt (TCSS honorary life member) reminds me of some simple and mostly reliable dates. Protect your plants from November 15 to April 15 as these are the typical frost dates. Use a super bloom (high phosphate, middle number) fertilizer on your tricho hybrids and hedgehogs on Valentines Day. Dose your Agaves for snout nose weevils on Valentines Day, Memorial Day and Labor Day. It doesn't get better then this.

Thanks as always for your support.
Dick Wiedhopf, President

Proposed By-Laws Amendment to be voted on at the April 5, 2012 meeting.

Article III. MEMBERSHIP

Current section

Sec. 5. Dues. Dues shall be on a one-year basis, beginning 1 January. Persons joining after 1 September shall be deemed to have paid for the following year.

Board proposed amendment

Sec. 5. Dues. Dues shall be on a yearly basis, beginning 1 January. Dues may also be paid for multiple years. Persons joining after 1 September shall be deemed to have paid for the following year.

Article XII. AMENDING THE BY-LAWS.

These by-laws may be amended by a three-quarter (3/4) vote of the members in good standing at a monthly or annual meeting following the issuance of a notice at least thirty (30) days prior to the meeting stating the purpose of the intended meeting.

Pima Prickly Park Update: Saguarohege Construction



Using Joe's Bobcat and soil and boulders salvaged by Pima County Natural Resources, Parks and Recreation, the garden at Saguarohege has started to take shape. Using Stonehenge as a model, seating boulders are placed alongside the existing saguaros and the largest boulder is standing upright in the center. These boulders will be etched with a message about the garden and memorials to Norma Beckman and Alice Pardee. The base layer for a new spiral pathway has been built and leveled. This approach will be a dramatic and accessible way to view Saguarohege.

Jessie Byrd

TCSS Round Table Discussion Thursday, March 15, 2012

Junior League of Tucson, 2099 E. River Road
Greenhouse Construction and Operation

Cashiers needed for Sonoran IX

Sonoran IX is coming and cashiers are needed for Saturday, April 28 and Sunday, April 29. I'm hoping to keep the cashiers to two-hour shifts. This can only be possible with volunteers. I will have a sign up sheet at the library table for cashiers and other Sonoran volunteers. If you would like to volunteer and are unable to come to the meeting, send an email to joietgo@yahoo.com and I will contact you.

Thank you, Joie

March 25th Expo in Green Valley

The Green Valley Gardeners and TCSS are having a joint Expo event at the Green Valley Continental Shopping Plaza on Sunday, March 25th from 9 AM to 4 PM. There will be about ten vendors from Tucson and GV selling plants and we will have four lectures at 10 AM, 11 AM, 1 PM and 2 PM in the upstairs Courtyard meeting room. Talks will be on Landscape Design by Jessie Byrd, Agaves by Greg Starr, Adeniums by Mark Dimmitt and Dave Palzkill, and Tricos by Mark Sitter. See our web site for more information.

Spring Garden Tour - see web for details



Photo Credits Ed Bartlett

Growing in the Desert Series

Cleistocactus strausii (Wooly Torch)

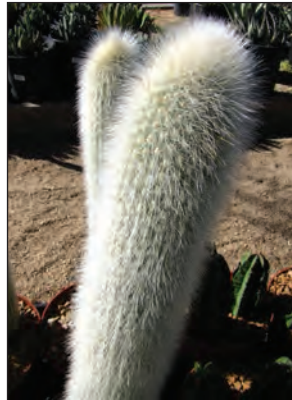
by Mark Dimmitt

Of the many white-spined cacti available in cultivation, *Cleistocactus strausii* is one of the best for southern Arizona. Known as silver torch or wooly torch cactus, this native of montane Bolivia and Argentina is well adapted to both the heat and cold of our desert valleys.

Several to many columnar stems arise from the ground and can grow to about eight feet tall. The dense bristly white spines nearly completely conceal the stems. The narrowly tubular, deep red flowers

are borne freely near the tops of the stems from February into May in our climate, and are visited by hummingbirds.

This species is large and vigorous enough to be used as a landscape subject, either in the ground or large pots. Light afternoon shade is best in the desert. Hardy to at least 20 F, and even lower when sheltered by a tree or other overhang. They appreciate regular irrigation in summer, and should be kept dry in winter to prevent root rot.



Pima Prickly Park Shade Structure Goes Up

A group of 13 TCSS volunteers showed up early Sunday morning a couple of weeks ago to erect our hoop house shade structure. The twelve all metal tubular hoops span thirty feet arching up about fifteen feet in the air and stretching out sixty-six feet. The structure will have a 30% blockage shade cloth placed over the hoops to allow cactus and succulents to be protected prior to planting in the park. The dirt floor will be covered with a weed cloth barrier and then three

inches of pea gravel on top of that. This will also be a good facility to let cuttings grow and mature before planting in the park landscape. We have a fast moving slide show on our web with more construction photos, just click on the Pima Prickly Park link on the left side of the TCSS home page or click on this link to go straight to the Pima Prickly Park hoop house construction photos. http://www.tucsoncactus.org/html/pimapricklypark/hoop_house_construction.html



Acknowledgement of Contributions

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Pima Prickly Park

Robert Pittman
Cirrus Logic

Educational Fund

Michael Burnett
Nanette Burnett

General Fund

John Rivers
Jocelyne Rivers
Shirley Johannesma (plants)

TCSS BOARD

Officers

President: Richard Wiedhopf opuntia@comcast.net

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cactusdude1@yahoo.com

Secretary: Dave Moyer
davidandsusan_1@msn.com

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Bill Salisbury

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cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad/Joe Franea

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John Swarbrick swarbrick@earthlink.net

Free Plants: Chris Monrad ferowiz@comcast.net

Librarian: Joie Giunta joietgo@yahoo.com

Prickly Park: Jessie Byrd jessie_byrd@hotmail.com

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Refreshments: Patsy Franea frannea@earthlink.net

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Editor: Karen Keller runbunny@cox.net

Deadline for copy: Thursday, March 23, 2012

TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

For additional information call: (520) 256-2447

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February Refreshments

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March 2012

Thursday, March 1, 2012 7:00pm

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Tuesday, March 13, 2012 7:00pm - 9:00pm

Board meeting at the U of A College of Pharmacy

Thursday, March 15, 2012 7:00pm - 9:00pm

Round Table Discussion

Sunday, March 25, 2012 9:00am - 5:00pm

Green Valley EXPO

Saturday, March 31, 2012 9:00am - 3:00pm

TCSS Garden Tour

Tucson Cactus and Succulent Society

Financial Summary - Year 2011

Total Income	\$69,801
Total Expenses	\$64,484
NET	\$5,317

Discretionary Funds	\$32,969
----------------------------	-----------------

Earmarked Funds

Cactus Rescue Crew Reserve	\$10,000
Education Outreach Fund**	\$18,905
Research Grant Fund	\$14,957
Conservation Grant Fund	\$1,975
Florilegium Fund	\$836
Pima Prickly Park Fund	\$4,853
Memorial Fund	\$2,213

Total Earmarked Funds **\$53,739**

Total Funds **\$86,708**



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

April 2012

April 5, 2012 at 7:00 PM, 2012

“Travels through Ecuador and Northern Peru, the Natal Area of the Family Cactaceae”

Presented by Chuck Hanson



Chuck Hanson

This program will focus on the cactus and succulents of Ecuador and Northern Peru. It is surmised that the family Cactaceae arose in northern Peru and one species shown is presumed to be the most ancestrally basal member of the subfamily cactoideae. The cacti of Ecuador are poorly known and some of the taxonomic problems will be shown.

Chuck lived in Tucson for thirty years and founded Arid Lands Greenhouses in 1978. He moved to Iowa in 1995 and soon after, founded Orchid Renaissance, specializing in lithophytic and terrestrial orchids. He moved to the upper Amazon valley of southern Ecuador in 2008 with his wife Karen and 11 dachshunds, and has been studying and photographing the cactus and succulents of the area.



Espostoa frutescens, a native species found in Ecuador.

TCSS Program Presentation

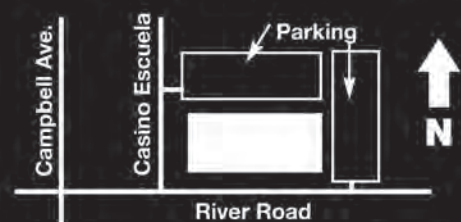
May 3, 2012

presented by Bob Schmalzel

Free Plants Hedgehog Heaven

This month's free plants, door prizes and raffle plants include several *Echinocereus* species, including *E. engelmannii*, *E. viridiflorus*, *E. dasyacanthus*, and *E. viereckii* ssp. *morricallii*. Known for showy flowers, these species are cold hardy and their blossoms are an indicator that winter is over!

Meetings are held on the first
Thursday of each month.



Junior League of Tucson, Kiva Bldg.
2099 E. River Road



President's Message

I want to thank our volunteers and vendors who helped with our successful first Green Valley Expo. I have already thanked our Green Valley Gardeners counterparts for the wonderful job they did. It was a real pleasure to work with them. We are looking forward to making this an annual event.

Our Spring Home Tour will have taken place by the time the newsletter has been published but I want to thank in advance

the homeowners and the tour committee for this outstanding event.

Sonoran IX is April 27 (set-up) and April 28 and 29 for the event. Vonn Watkins our Vice President and program chair has again put together a group of outstanding speakers and workshops. I can't thank him enough for the work he does. You have all received the registration information but let me emphasize the opportunities that this conference affords you. The speakers and workshops are always a great learning experience that will expand our knowledge. There will be 2 days of plant, pottery and art related sales including saguaros and other rescued plants. Saguaro will be available both days so there will be an equal opportunity to acquire a plant.

We will be having a special book sale thanks to Rainbow Gardens Bookstore with 20% off for current TCSS members. All the proceeds from the book sales are being donated to TCSS. This is a great opportunity to expand your library and assist the Society.

Two new books by member authors will also be available to order and/or purchase. You will want to see and hear more about them. The new *Opuntia* Book written by David Ferguson will be available to order at a special price and Greg Starr's book on Agaves will be available in very limited quantity (first early copies).

Remember, you can sign up for single workshops (limited) and for lunch and a speaker. The Saturday evening dinner features a talk by Jon Rebman. Please take advantage of these special activities. Don't forget that the silent auction concludes just before the evening dinner. So you can get to the hotel a little early and participate in the silent auction. (donation to the auction are requested)

There will be an outstanding plant show that is dependent on your participation. Show off your plants to the public. They always appreciate your efforts.

There is a lot going on at Sonoran IX and your help and participation is need and appreciated.

Dick Wiedhopf, President

MANZANITA MUSTANGS DON'T CRY!



Manzanita Elementary School hosted a Family Science Night on March 8 and invited TCSS to participate. The students found out that Tucson is the Cholla Capital of the World, learned about the asexual reproduction strategies of Cholla cactus, examined some rooted cuttings, and sounded out

and spelled "CYLINDROPUNTIA." Then, the students used tongs to plant a cholla joint to take home, with the instructions to plant it outside when it has made new roots. The Manzanita Mustangs were a curious and brave bunch of kids, and 99 chollas went home with Tucson schoolchildren! A big thank you to TCSS member Beth McCulloch for donating Cholla cuttings from her garden and to Desert Survivors Nursery for providing pots! Also, thank you to the parents who encouraged their children to participate in this activity. Their participation in this project will help foster respect and appreciation for the Sonoran Desert. Congratulations to the Manzanita Mustangs for planting 99 cholla joints without crying! The only sad faces were on the kids whose parents wouldn't let them plant a cholla to take home.

Jessie Byrd

Pima Prickly Park Progress Box

- A special web section has been developed just for the park, see www.PimaPricklyPark.org
- Detail Designs are in progress for the Parking lot islands and Saguarohege.
- Hoop House shade structure installed and waiting for shade cloth covering to be delivered for installation.
- Pima County installing water lines for 5 hose bibs for spot watering of new plants.
- Cactus Rescue Crew acquiring special plants when available from various sites.
- Details being defined for an information collection and management system for plants in the park.
- An email distribution list has been created for those who would like to be notified of committee meetings and park work in progress. Please send an email to us to be added to the list: Park@TucsonCactus.org

Acknowledgement of Contributions

The names below represent the Tucson Cactus & Succulent Society members and friends whose donations helped make this year a success. We extend our sincere thanks for your support.

General Fund
Romaine Ahlstrom
Dan Strehl
Bill Kuhn
Lalita Kuhn
E. J. Cockcroft
Douglas Ripley
Arlene Ripley

Pima Prickly Park
Romaine Ahlstrom
Dan Strehl
Vernon L. Kliever
Diane R. Kliever
Mary Jane Magee
Mary A. Miller

Florilegium Project
Cherie Gossett
Gillian Rice

Conservation Fund
Elizabeth Upham

Sonoran IX Event Schedule

April 27, 28 & 29, 2012

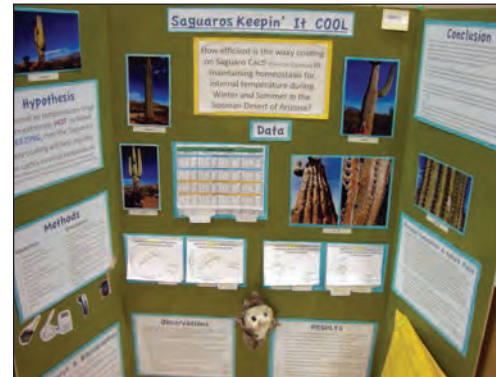
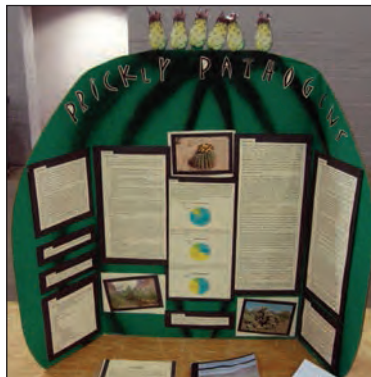
Hotel Tucson City Center Inn Suites Resort • 475 N. Granada Avenue, Tucson, Arizona

Day and Time	Event	Location
Friday, April 27		
8:00 am to 8:00 pm	Set-up Registration	Front Lobby
	Set-up All Signage	All Areas
	Set-up Book Sales, Art Sales, Art displays	Gold Room
	Set-up Plant and Pottery Sales	Outdoor Sales Area
	Set-up Plant Show	Silver Room
	Set-up Speakers and Meals	Copper Room
	Set-up Silent Auction and Plant Raffel	Front Lobby
	Set-up Workshops	Assigned Rooms*
	Set-up Displays	Silver Room
6:00 PM	Dinner for Volunteers	Hospitality Room
Saturday, April 28		
8:00 am - 5:00 pm	Registration	Front Lobby
8:00 am - 5:00 pm	Books, Plants, Pottery and All Other Sales	Gold Room and Outdoor Sales Area
8:00 am - 6:00 pm	Plant Show	Silver Room
8:00 am - 6:00 pm	Silent Auction Bidding	Front Lobby
9:00 am - 10:30 am	Guest Speaker - Lucas Majure - "The Opuntias in the Eastern United States"	Copper Room
10:45 am - 12:15 pm	Workshops Session 1	Assigned Rooms*
12:15 pm - 2:15 pm	Lunch and Guest Speaker - Cheryl Green & David Ferguson - "Pricklypears Commonly Found in the United States and Northern Mexico"	Copper Room
2:30 pm - 4:00 pm	Workshops Session 2	Assigned Rooms*
5:45 pm	Silent Auction Ends	Front Lobby
6:15 pm - 9:00 pm	Dinner and Guest Speaker - Jon Rebman - "The Diversity of Baja California with an Emphasis on the Opuntoids"	Copper Room
Sunday, April 29		
8:00 am - 12:00 noon	Registration	Front Lobby
8:00 am - 1:30 pm	Books, Plants, Pottery and All Other Sales	Gold Room and Outdoor Sales Area
8:00 am - 3:30 pm	Plant Show	Silver Room
9:00 am - 10:15 am	Guest Speaker - To Be Determined	Copper Room
10:20 am - 11:50 am	Workshops Session 3	Assigned Rooms*
12:00 pm - 1:30 pm	Workshops Session 4	Assigned Rooms*
1:30 pm - 3:30 pm	Lunch and Guest Speaker - Raul Puente - "Spiny Giants: Arborescent Prickly Pears of Mexico and Guatemala"	Copper Room
3:30 PM	All Conference Events End	All Areas
*Assigned Workshop Rooms: Buckley, El Conquistador, El Dorado, MacArthur and St Augustine		

Sonoran IX Workshop Schedule

Date	Time	SESSION	ROOMS	NAME	TITLE
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	Buckley	Mark Dimmitt	Growing Non-Cactaceous Succulents: Potting, Watering, Feeding, Pruning, and Reviving
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	El Conquistador	Barry McCormick	Finding the Greenhouse in Your Yard
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	El Dorado	Norm Dennis	Cactus and Succulent Seed Planting Techniques
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	St. Augustine	Greg Starr	Growing Agaves in Containers
Saturday, April 28, 2012	2:30-4:00PM	Session 2	Buckley	Jim Hastings	Cooking with the Natives (plants), These are Not Your Mama's Nopalitos
Saturday, April 28, 2012	2:30-4:00PM	Session 2	El Conquistador	Barry McCormick	Finding the Greenhouse in Your Yard
Saturday, April 28, 2012	2:30-4:00PM	Session 2	El Dorado	Gene Joseph	Rocks, Pots and Plants; Decoratively Potted Succulents and Cacti
Saturday, April 28, 2012	2:30-4:00PM	Session 2	St. Augustine	Scott Calhoun	Cactus and Succulent Garden Design and Implimentation
Sunday, April 29, 2012	10:20-11:50AM	Session 3	Buckley	Jim Hastings	Cooking with the Natives (plants), These are Not Your Mama's Nopalitos
Sunday, April 29, 2012	10:20-11:50AM	Session 3	El Dorado	Norm Dennis	Cactus and Succulent Seed Planting Techniques
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	Available Rooms:				Workshop titles may change slightly but this schedule will remain
	Buckley				constant until updates are provided.
	El Conquistador				
	El Dorado				
	MacArthur				
	St. Augustine				

Science Fair Students Shine Again



TCSS was once again treated to some great experiments related to cactus and succulents. Over 1,600 projects were exhibited at the Tucson Convention Center for judging. These are the top ten projects from many schools across Southern Arizona. We have been judging the Southern Arizona Regional Science and Engineering Fair (SARSEF) for our special awards category of cactus and succulents for the past nine years. Our mission is to recognize and encourage students to pursue science, especially areas related to cactus and succulents. We gave cash awards, certificates, and one year honorary TCSS Family Memberships to seven students.

We had two great projects that were both given First Place awards, \$100 cash. Wes MacDonald and Alexia Avey's project was on "Prickly Pathogens". This was an expanded project from last year with much more depth and a lot more science. Cactus spines often have pathogenic microbial species on them that are injected when you get

stuck and can cause serious injury. Some of our Cactus Rescue Crew members can attest to this. Our other First Place winner was Lilyann Dean on "Saguaros Keepin' It Cool". She was curious about the internal temperatures of saguaros with varying outside temperatures. Great work and interesting results.

Second Place, \$75 cash, was awarded to Bryce Harris for his "Saguaro Arm Directions" project. Third Place, \$50 cash, to William Rockwell for his "Does Prickly Pear Juice Lower The Need For Insulin In Humans?" Honorable mentions, \$25 cash, were awarded to Olivia Nanni for "Crassulacean Acid Metabolism And Stomata Area", Meena Ravishankar for her "From What Age Will Saguaro Cacti Have Bird Holes?" and Alejandra Jose and Craig Thomas for their "Famous Cacti Syrup And Their Sugar Concentration" project. Thanks to our judges Ed and Linda Bartlett, Wendell Niemann and Marty Harow.

Growing in the Desert Series: Waking up Adeniums

by Mark Dimmitt

Adeniums are succulents related to pachypodiums, plumerias, and oleanders (Figure 1). They are the newest ornamental plant to be domesticated (the process began only 20 years ago), and their popularity is growing rapidly. They are easy to grow if their cultural needs are understood and provided for. Spring is one of the critical times during which many adeniums and other winter-dormant tropical plants are lost.

Whether they have leaves or not, adeniums are dormant over the cooler winter months, meaning that their growth – and therefore water use – has been minimal to zero (Figure 2). Even if they have been blooming throughout the winter, they have still been dormant. The warm weather of April in the desert Southwest causes them to wake up and resume growth. Adeniums need heat to grow, so they should be moved outdoors into the sun this month.

Although spring days may be warm, nights are usually still in the 40s and 50s F, which is still in the danger zone for adeniums. Moreover, spring brings several cold fronts with cold days and may drop nights to near freezing. Adeniums HATE cold, wet roots. The awakening proceeds slowly, and watering properly is critical at this time. The plants don't use much water until nights are above 60, and if the potting medium stays wet for several days, the roots are likely to rot. As long as nights are below 50, water only to wet the upper couple of inches of medium (many of the roots are near the surface). Water thoroughly only if several warm days are forecast, and withhold water if a cold front is approaching. Wait until the medium is fairly dry before watering again.

Once the days are hot, nights are consistently balmy, and the plants have lots of mature leaves, you can increase watering frequency and depth. By mid to late May, adeniums with roots filling their pots can be watered heavily every couple of days. They love water when it's hot.

It is normal for some branches to die over the winter. Spring is a good time to groom the plants. Pull off dead, dried branches (Figure 3) and prune any leggy growth to produce a more compact, more branched plant (Figures 4a-4c).



Figure 1. Adenium 'Starfish', one of many striped cultivars to be created since 2003.

Figure 2. This Adenium arabicum X obesum hybrid is just beginning to leaf out after winter dormancy. It is using very little water and should be watered sparingly until days are hot and it has a full canopy of foliage.



Figure 3. Left: A branch has died and dried, forming an abscission layer. Right: The dried branch can be pulled off; it will break cleanly between the dead and live tissue.

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For additional information call: (520) 256-2447

Everyone is Welcome!

**Bring your friends, join in the fun, and meet
the cactus and succulent community.**

April Refreshments

Those with family names beginning with J, K, L, M, N, O,
and P please bring your choice of refreshments to
the meeting. Your generous sharing will be greatly
appreciated and enjoyed!

5 7 0 2 4
3

**Cacti Rescued
280 Rescues Accomplished**

Please see our Website Calendar for the next
rescued cactus sale. They are scheduled at various
times during the year based on our inventory.

TCSS Club Members receive a 10% discount

April 2012

Thursday, April 5, 2012 7:00pm

Monthly Meeting, "Travels through Ecuador and Northern
Peru, the Natel Area of the Family Cactaceae Presented by
Chuck Hanson

Tuesday, April 10, 2012 7:00pm - 9:00pm

Board meeting at the U of A College of Pharmacy

Saturday and Sunday April 28 and 29

Sonoran IX at the Hotel Tucson City Center

**Growing in the Desert Series
Waking up Adeniums by Mark Dimmitt**



Figure 4a. This old 'Crimson Star' has many crowded, overlapping, and droopy branches. It looks messy.



Figure 4b. After pruning, the plant's attractive branching structure is more visible. New growth will be vigorous and will flower better.



Figure 4c. The same plant flowering the summer after it was pruned.



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

May 2012

May 3, 2012 at 7:00 PM 2012

“Natural History Observations of *Coryphantha robustispina*, a jackrabbit cactus”

Presented by Bob Schmalzel



Bob will cover pollination by the cactus bees, fruit dispersal by jackrabbits and cottontails, seed burial by termites, and several other interactions with insects and mammals in southern Arizona.

Robert spent the early part of his career studying the seasonality and harvest of pollen by honey bee colonies in southern Arizona (USDA Honey Bee Research Center, Tucson) and western Panamá (Smithsonian Tropical Research Institute, Balboa). Upon returning to Arizona in 1993, he soon discovered that for most species of cacti, even those listed by the state and federal governments, very little – or nothing – was known about

their natural history, including pollination, seed dispersal, seedling growth, causes of mortality, life span, and fecundity. Even today, the population sizes of most rare cacti have not been estimated. With small grants from Fish and Wildlife Service in the late 1990s, he set up a number of permanent plots to monitor growth and survival of Turks Head Cactus in the Waterman Mountains and on the Tohono O’odham Reservation. Since 1997 and as opportunity permitted, he has set up a number of plots to monitor Pima pineapple cactus in the Santa Cruz and Altar valleys. With the assistance of AmeriCorps, he set up about 15 80-acre Pima pineapple cactus plots in the Altar Valley in 2001-2003. He is wrapping up a study in the summer of 2012 on how the seeds of Pima pineapple cactus are dispersed. He continues to be interested in the spatial distribution of this plant, its pollinators, and herbivores.

Be sure to mark your calendar and come enjoy a fun evening with an excellent program, good food, free plants and more!



Photos by John Durham

TCSS Program Presentation

June 8, 2012

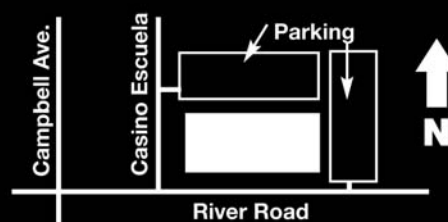
To be determined

Free Plants

Thelocactus bicolor

Suitable for full sun or lightly filtered light, this species is noted for stunning showy flowers all summer long with regular watering.

Meetings are held on the first Thursday of each month.



Junior League of Tucson, Kiva Bldg.
2099 E. River Road

President's Message

Sonoran IX Sonoran IX Sonoran IX
Sonoran IX Sonoran IX

There is not much more I can say. This has been the predominant activity and thought process for the last couple of weeks. Now it's here and now let enjoy this special week-end. I hope you have signed up for some activity or at least be sure to come and help out at the show or sale.

We have a great selection of vendors that the rest of the country would die for. They are all here right in our backyard. You need to support these folks who do so much for our hobby. We will also have our best selection of rescued plants in quite a while. The wonderful people at The Silverbell Mine really care about the environment and have allowed us to have two special rescues in an area that will be mined in the near future. If you want saguaros we have them. We also have the golden spined, *Echinocereus nicholii*. This is a beautiful plant.

This is also your opportunity to acquire books at a very special price. Don't miss this opportunity, it will only happen this one time. We also have these authors introducing 3 new books which are not part of the sale but you will have the opportunity to purchase or order these. "Pricklypears Commonly Found in the United States and Northern Mexico" by Cheryl Green (TCSS Life Member) with Dave Ferguson and text edited by Matt Johnson will be available to order at a special price. Jon Rebman our Saturday evening speaker has a new book "Baja California Plant Field Guide". Greg Starr workshop leader and vendor will have a few copies of his new Agave book before the big release in May. These are three must have volumes.

There is a great line up of speakers and workshops. Check at the Sonoran reservation desk for last minute availability to take advantage of this weekend opportunity. We have made it possible for you to sign up for one workshop or lunch and a speaker at a reasonable price. We will also have tickets available for Saturday and Sunday morning speaker events.

If you are a member of TCSS, I hope you don't miss out on the Saturday evening dinner and our speaker Jon Rebman. The cost for this is only \$10.00.

Remember seating is limited and you must have a ticket for speakers, meals and workshops.

Enjoy the plant show, participate in the silent auction, buy plants from our vendors and spend some time helping out. Enjoy!!!!

Thanks as always for your support.

Dick Wiedhopf, President

A Successful March Garden Tour

TCSS had a very successful garden tour March 31. 148 members and guests toured the 5 gardens of Lee and Wendy Goldberg, Dick and Sue Hildreth, Rowena and Larry Matthews, Chris and Cliff Mann and Caryl Jones and Barry McCormick.

A big thank you to the garden owners and all the volunteers that made this possible.

Watch for the details about our Fall tour.

Library Update

Epithelantha 2011 by Davide Dwonati Carlo Zanovello
Describes the various species of the genus.

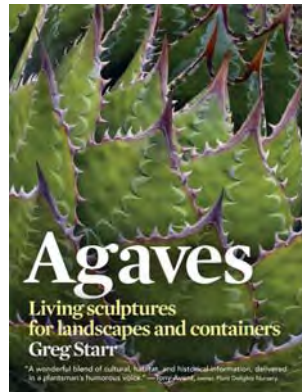
Arizona Gardener's Guide by Mary Irish

Covers various plants that can be used in Arizona landscapes, with graphical pics that informs not only the culture, but if the plant is

Agaves: Living Sculptures for Landscapes and Containers

By Greg Starr

Gardeners and garden designers are having a love affair with agaves. It's easy to see why—they're low maintenance, drought-tolerant, and strikingly sculptural, with an astounding range of form and color. Many species are strikingly variegated, and some have contrasting ornamental spines on the edges of their leaves. Fabulous for container gardening or in-the-ground culture, they combine versatility with easy growability.



In "Agaves", plant expert Greg Starr profiles 75 species, with additional cultivars and hybrids, best suited to gardens and landscapes. Each plant entry includes a detailed description of the plant, along with its cultural requirements, including hardiness, sun exposure, water needs, soil requirements, and methods of propagation. Agaves can change dramatically as they age and this comprehensive guide includes photos showing each species from youth to maturity—a valuable feature unique to this book.

April Pima Prickly Park Progress Box

- The Desert Garden Club has awarded us a second grant, this one is for a huge Palo Verde nurse tree for Saguarohege. This will provide cover for a couple of dozen small to medium saguaros.
- Pima County installed water lines and 5 hose bibs for spot watering of new plants.
- The Hoop House shade structure covering has been installed and the potting of small plants and cuttings has begun. A mother Gambel's Quail has occupied the enclosure and is sitting on a dozen eggs.
- The first berm in the Agave Garden has been planted with 35 Agave palmeri of various sizes.
- About 130 Cactus Rescue Crew plants including 4 clumps of Bear Grass, *Nolina microcarpa*, 4 large Sotol, *Dasylirion wheeleri*, 7 *Yucca schottii* and one huge Hedgehog, *Echinocereus nicholii*, with 50 plus stems have been added to the park.
- Detail Designs are being finalized for the Parking lot islands and Saguarohege.
- Details being defined for an information collection and management system for plants in the park.
- A special web section has been developed just for the park, see www.PimaPricklyPark.org
- An email distribution list has been created for those who would like to be notified of committee meetings and park work in progress. Please send an email to us to be added to the list: Park@TucsonCactus.org and park work in progress.

Sonoran IX Conference Event Schedule

April 27, 28 & 29, 2012

Hotel Tucson City Center InnSuites Conference Suite Resort • 475 N. Granada Avenue, Tucson, Arizona

Day and Time	Event	Location
Friday, April 27		
8:00 am to 8:00 pm	Set-up Registration	Front Lobby
	Set-up All Signage	All Areas
	Set-up Book Sales, Art Sales, Art displays	Gold Room
	Set-up Plant and Pottery Sales	Outdoor Sales Area
	Set-up Plant Show	Silver Room
	Set-up Speakers and Meals	Copper Room
	Set-up Silent Auction and Plant Raffel	Front Lobby
	Set-up Workshops	Assigned Rooms*
	Set-up Displays	Silver Room
6:00 PM	Dinner for Volunteers	Hospitality Room
Saturday, April 28		
8:00 am - 5:00 pm	Registration	Front Lobby
8:00 am - 5:00 pm	Books, Plants, Pottery and All Other Sales	Gold Room and Outdoor Sales Area
8:00 am - 6:00 pm	Plant Show	Silver Room
8:00 am - 5:45 pm	Silent Auction Bidding	Front Lobby
9:00 am - 10:30 am	Guest Speaker - Lucas Majure - "The Opuntias in the Eastern United States"	Copper Room
10:45 am - 12:15 pm	Workshops Session 1	Assigned Rooms*
12:15 pm - 2:15 pm	Lunch and Guest Speaker - Cheryl Green & David Ferguson - "Pricklypears Commonly Found in the United States and Northern Mexico"	Copper Room
2:30 pm - 4:00 pm	Workshops Session 2	Assigned Rooms*
5:45 pm	Silent Auction Ends - Bid winners plant collection 5:45 to 6:15 PM	Front Lobby
6:15 pm - 9:00 pm	Dinner and Guest Speaker - Jon Rebman - "The Diversity of Baja California with an Emphasis on the Opuntoids"	Copper Room
Sunday, April 29		
8:00 am - 12:00 noon	Registration	Front Lobby
8:00 am - 1:30 pm	Books, Plants, Pottery and All Other Sales	Gold Room and Outdoor Sales Area
8:00 am - 3:30 pm	Plant Show	Silver Room
9:00 am - 10:15 am	Guest Speaker - Peter Felker - "Opuntia Hybridization and Selection for Choice Fruit Production"	Copper Room
10:20 am - 11:50 am	Workshops Session 3	Assigned Rooms*
12:00 pm - 1:30 pm	Workshops Session 4	Assigned Rooms*
1:30 pm - 3:30 pm	Lunch and Guest Speaker - Raul Puente - "Spiny Giants: Arborescent Prickly Pears of Mexico and Guatemala"	Copper Room
3:30 PM	All Conference Events End	All Areas
*Assigned Workshop Rooms: Buckley, El Conquistador, El Dorado, MacArthur and St Augustine		

Sonoran IX Workshop Schedule

Date	Time	SESSION	ROOMS	NAME	TITLE
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	Buckley	Mark Dimmitt	Growing Non-Cactaceous Succulents: Potting, Watering, Feeding, Pruning, and Reviving
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	El Conquistador	Barry McCormick	Finding the Greenhouse in Your Yard
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	El Dorado	Norm Dennis	Cactus and Succulent Seed Planting Techniques
Saturday, April 28, 2012	10:45AM-12:15PM	Session 1	St. Augustine	Greg Starr	Growing Agaves in Containers
Saturday, April 28, 2012	2:30-4:00PM	Session 2	Buckley	Jim Hastings	Cooking with the Natives (plants), These are Not Your Mama's Nopalitos
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Growing in the Desert Series:

Caralluma russelliana: The King of Stapeliads

by Mark Dimmitt

Of the many species of stapeliads in cultivation, *Caralluma russelliana* is the most massive (Figure 1). The four-angled, blue-green stems are up to three inches thick and two feet tall. Plants branch freely and form a rather large shrub, creating a sculptural marvel that looks more like a sea creature than a land plant. Tennis ball-sized globes of small reddish-black flowers appear sporadically on stem tips throughout the warm season (Figures 2, 3). Like most stapeliads, the flowers stink of carrion, but the odor does not waft more than a few inches. The species is widespread in the arid lands of East Africa and the Sahel. Synonyms include *Caralluma retrospicens*, *Desmidorchis acutangula*, and other combinations of these names.

This species loves heat and sun. However, stems will sunburn in our desert in full summer afternoon sun. They are intolerant of cold. While they can survive near-freezing temperatures, the stems are prone to develop unsightly brown blotches when nights are below 50-55 F. Keep the plants dry in winter to avoid root rot.

Seedlings grow very fast. They can attain full size in two or three years if planted in large pots and watered and fed generously. This is safe if the medium is fast-draining. The roots are prone to rot if the medium stays wet for a few days. Plants seem to be short-lived. Growth slows greatly after the first few years, and few plants survive 10 years in good condition.

The massive stems are heavy and rather brittle, especially where the thin base merges with the roots. Plants can be supported by planting them deep, or using several inches of rock top dressing. Even so, it is best to avoid moving them once they become large.

Considering how ornamental this species is, there is very little information about it on the web except for numerous articles about its chemistry. The stems contain pregnane glycosides that are being investigated for possible medicinal properties.



Figure 1. These three *Caralluma russelliana* plants are just two years old, and one is beginning to flower.



Figure 2, 3. The capitate inflorescence of *Caralluma russelliana* bears over 100 small flowers. They last about a week. Plants bloom several months a year.



Hotel Tucson City Center InnSuites Conference Suite Resort, located at 475 North Granada Avenue, Tucson, Arizona. This hotel is just off of Interstate 10 near St. Mary's Road in downtown Tucson, Arizona.

The Sonoran IX conference program presentations will focus on the family Opuntioideae. The Tucson area is blessed with a great climate and also has a number of native *Cylindropuntia* (cholla) and *Opuntia* (prickly pear). The number of *Opuntia* species grown within

Tucson and the surrounding areas would astound you! The TCSS has gained a great asset to growing and protecting these fantastic and amazing plants with an agreement with Pima County, Arizona to establish, manage and maintain a 9.4 acre garden in Tucson that we have named "Pima Prickly Park"! This park will be dedicated to the Opuntioideae but will also include many other varieties of cacti and other succulents.

The Opuntioideae subject will feature 5 excellent program presentations from some very well known professionals. Professionals for this conference will be, **Peter Felker**, presenting "Opuntia Hybridization and Selection for Choice Fruit Production," **Cheryl Green** and **David Ferguson**, who will be introducing the new *Opuntia* book with a special program presentation, "The Pricklypears of the United States and Northern Mexico," Lucas Majure from the University of Florida who will present his research and findings about "The Opuntias in the Eastern United States," **Raul Puente** from the Desert Botanical Garden in Phoenix, Arizona who will give us an exceptional look at the "Spiny Giants: Arborescent Prickly Pears of Mexico and Guatemala," and **Jon Rebman** from the San Diego Natural History Museum who will share his expertise on "The Diversity of Baja California with an Emphasis on the Opuntioideae." If you register for the conference you will get to attend all the speaker presentations as well as 4 workshops of your choosing from 8 excellent workshop selections. Our 8 workshop program leaders will be **Scott Calhoun**, **Norm Dennis**, **Mark Dimmitt**, **David Ferguson**, **Jim Hastings**, **Gene Joseph**, **Barry McCormick** and **Greg Starr**. Please visit our web site for more details about the workshops.

All registrants will also receive 2 buffet lunches and the banquet dinner on Saturday evening. Please see the event schedule on our web site for further details on the conference.

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Prickly Park: Jessie Byrd jessie_byrd@hotmail.com

Programs: Vonn Watkins cactusdude1@yahoo.com

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Board meeting at the U of A College of Pharmacy



Acknowledgement of Contributions

The names below represent the Tucson Cactus & Succulent
Society members and friends whose donations helped make
this year a success. We extend our sincere thanks for your
support.

General Fund

Joyce Walsh
Douglas C. Jones
Alene Hall

Education

Bill Vicky Hall

Prickly Park

Desert Garden Club



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

June 2012

June 7, 2012 at 7:00 PM

“Searching for New Populations of Nichol’s Turks’ Head Cactus, *Echinocactus horizonthalonius* in Sonora, Mexico”

Presented by Thomas R. Van Devender and Ana Lilia Reina-Guerrero



Sign and church in Mazatán. Foothills thornscrub and view of Sierra de Mazatán from west of town.



In June 2011, we found two *Echinocactus horizonthalonius* in a planter in Mazatán, Sonora. Mazatán is in central Sonora, 80 km east of Hermosillo, and 258 km south of the Arizona border. The Tucson Cactus and Succulent Society provided funds to learn the provenance of these cultivated plants and discover populations in nature.

The nominate subspecies of the Turk’s Head Cactus *Echinocactus horizonthalonius* is widespread in limestone areas in the Chihuahuan Desert from southern New Mexico and western Texas south on the Mexican Plateau to San Luis Potosí. In his 1969 book *The Cacti of Arizona*, Lyman Benson described the western populations as *Echinocactus horizonthalonius* var. *nicholii*. In 1976, the variety was listed as an Endangered Species (USDI, Fish and Wildlife Service, 1976). Populations are known in Arizona from the limestone Koht Kohl Hills and Waterman and Vekol Mountains in the Arizona Upland subdivision of the Sonoran Desert. Another population is in Sonora in the Sierra del Viejo about 45 km SSE of Caborca, and 150 km S of the Arizona border in the Lower Colorado River Valley subdivision (Yatskievych and Fischer 1983, Paredes-A et al. 2000). It is not protected in Mexico primarily because the NOM-059-SEMARNAT-2010 legislation does not consider varieties or subspecies. The Mazatán area is distant from the known populations of *Echinocactus horizonthalonius* var. *nicholii*. The program will focus on the journey to investigate, follow information, and try to find the species in a new location.

Thomas R. Van Devender is the Manager of the Madrean Archipelago Biodiversity Assessment program at Sky Island Alliance. He was the Senior Research Scientist at the Arizona-Sonora Desert Museum from 1983 to 2009 where he conducted research on a broad range of natural history activities. He has published well over a hundred research publications including journal articles, book chapters, and books on the cacti of Sonora, desert grassland, packrat middens and the paleoecology of the southwestern deserts, and the Sonoran desert tortoise. He is coeditor with Francisco Molina on a book

entitled *Diversidad Biológica del Estado de Sonora* published by the Universidad Nacional Autónoma de México in Hermosillo, Sonora in 2010. He has a long-term interest in the flora of the Sonoran Desert Region, and has collected over 25,000 herbarium specimens, which are deposited into the herbaria at the University of Arizona (Tucson), Universidad de Sonora (Hermosillo), and many others. In recent years, he has provided photovouchers of cacti to ten herbaria in the United States, Mexico, and Europe. He has surveyed plants in many vegetation types in Sonora. He and his wife Ana Lilia Reina-Guerrero have a special interest in the plants of La Frontera, the 100 kilometer zone in northern Sonora just south of the Arizona border, and in the Yécora area in the Sierra Madre Occidental in eastern Sonora. They have studied the ecology of the Chihuahuan Desert night-blooming cereus *Peniocereus greggii* var. *greggii*, the Cochise foxtail cactus *Coryphantha robbinsorum*, the false rainbow cactus *Echinocereus pseudopectinatus*, the El Trigo hedgehog *Echinocereus lauii*, and the choyita *Mammillaria saboae* var. *haudeana*.

Please make sure you have marked your calendar for this special program. Also, bring a friend or relative who would like to learn more about cacti.

TCSS Program Presentation July 5th, 2012

Travels in Africa and Arabia 8:
The Hunt for *Sansevieria* in East Africa
Presented by Bob Webb

Free Plants
Assorted agave and yucca from
Plants for the Southwest.



President's Message

The Sonoran IX Conference was a great success due to the effort put forth by all the volunteers, vendors, speakers and workshop leaders. Thank you. I am so pleased that close to 200 participated in one or more events during the conference and that's not counting the support of the vendor sales which grossed more than \$27,000. Thank you to all who brought a plant for the show. It was a spectacular display of our hobby. Based on your evaluations and comments we are

planning Sonoran X on April 26 & 27, 2014. Save the date.

Another date you must save is the official beginning ceremony and activities of Pima Prickly Park. On Saturday, September 22, 2012 from 9:00am till 2:00pm we will kick-off activities including a ribbon cutting with County Officials, educational activities, food, music, sales, tours and more. This will be a "Good Time".

Speaking about good times, our "Good Time Silent Auction" will be held on Sunday, September 16, 2012. This has been a tradition for more than 50 years and your opportunity to donate your excess plant

and acquire some very special new ones. And, we will have Ice Cream and all the toppings as a special treat. This is another date to save.

There will be more information about these events in future issues of the Desert Breeze and on our web site.

We have been asked and agreed to participate in a landscape project for the Pima County Indigent Cemetery. It is in the final stages of design and will be ready for planting in the very near future. I know I can count on many of you to donate a couple of hours to this project. I feel this is part of my civic responsibility and respect for those individuals who have been interned there and I know that you feel the same.

We will be voting on a change to the By-Laws which was originally in the March Desert Breeze and reprinted in this issue for your convenience.

My favorite words are "THANK YOU". I try to say them as often as possible and always mean them.

Thank you for your support of this society.

Dick Wiedhopf, President

Information originally printed in March, 2012

Proposed By-Laws Amendment to be voted on at the June 7, 2012 meeting.

Article III. MEMBERSHIP

Current section

Sec. 5. Dues. Dues shall be on a one-year basis, beginning 1 January.

Persons joining after 1 September shall be deemed to have paid for the following year.

Board proposed amendment

Sec. 5. Dues. Dues shall be on a yearly basis, beginning 1 January.

Dues may also be paid for multiple years. Persons joining after 1 September shall be deemed to have paid for the following year.

Article XII. AMENDING THE BY-LAWS.

These by-laws may be amended by a three-quarter (3/4) vote of the members in good standing at a monthly or annual meeting following the issuance of a notice at least thirty (30) days prior to the meeting stating the purpose of the intended meeting.

June Pima Prickly Park Update

- The Blue Palo Verde nurse tree for Saguahenge has been purchased thanks to a grant from the Desert Garden Club. And, thanks to Pima County Natural Resources for their planting assistance.
- Sahuarita High School had 60 mature barrel cacti located in a area destined for a new building that were made available to the park. They have been relocated to the park laydown area and are now waiting for deployment.
- A Weather Station, including temperature and rain measurements, has been installed in the Hoop House area. Readings are recorded every 15 minutes.
- Hoop House designs are underway for work tables and plant holding/watering benches.
- The Plant Database design is progressing well and a prototype program has been developed. Plants that TCSS has planted in the park are being entered to test out the program.
- A Grid Map has been developed and 21 sections staked out to identify general areas for plant locations in the database. The grid map is on the PimaPricklyPark.org web site.
- Parking Lot Islands and Saguahenge designs are complete. Three large saguaros will be relocated from a Pima County road widening project for the parking lot islands then smaller plants can move in.
- Entrance Garden and the Agave Garden designs are progressing. Ideas welcomed
- Two Concrete Benches are being designed for the large ramada for a place to relax your feet, enjoy the views and keep a lookout for the the butterflies and humming birds.
- The "Grand Opening" date for the park is set for Saturday, September 22, 2012 from 9:00 AM to 2:00 PM. Lots of events being planned. Ideas welcomed.
- You Can Help! Park Supporters are being encouraged to plant special cactus cuttings in one gallon containers, especially purple prickly pear, for eventual donation to the park. Please do not bring them until they are well established.
- Want to participate and help with park decisions? Please send an email to us (Park@TucsonCactus.org) to be added to our committee list to be notified of meetings, decisions to be made, work in progress, etc.



Signature Series Cactus Pears

Presented by Peter Felker

For more than 25 years Andyboy scientists have been scouring the world to find the sweetest and most flavorful cactus pears. As no existing plants possessed all of the most important traits, they combined the best fruit characters through controlled hybridization. After tens of thousands of fruit analyses from thousands of plants, they selected 4 plants with the sweetest, firmest, juiciest and most flavorful fruits. Some of these plants do not produce as high a yield as the commercial variety, and some of the fruits are smaller and/or have thicker peels than the standard varieties. However when it comes to having the sweetest, juiciest, firmest and most flavorful fruits, these plants are far superior to anything else. These are the fruits our scientists take home to their families for special occasions. AndyBoy has decided to offer these exceptional, Patented fruits to our loyal customers.



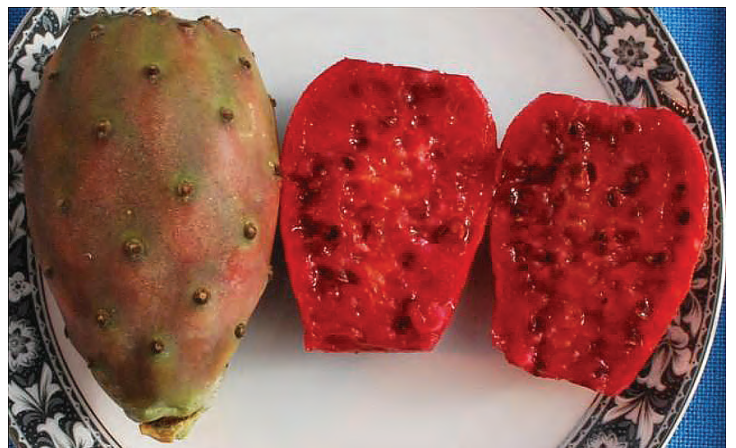
Sweet Sunset
US PP22,077 P3



Sweet Purple
US PP21, 834 P2



Sweet Emerald
US PP21, 964 P3



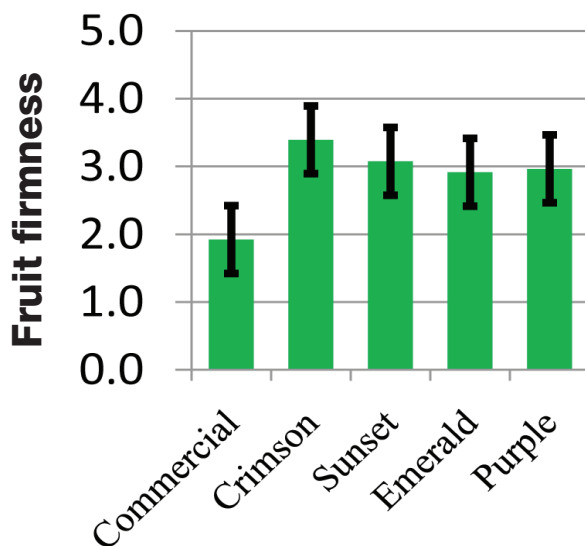
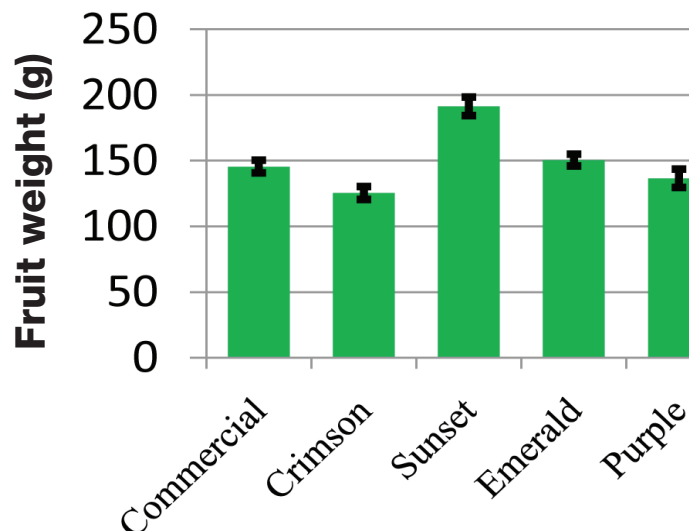
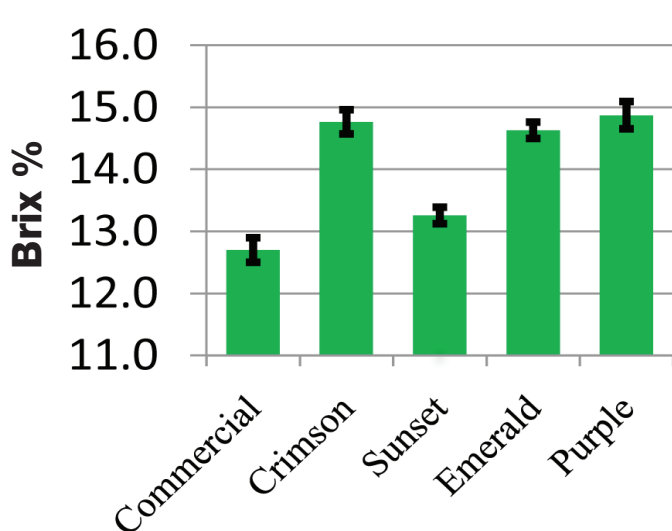
Sweet Crimson
US PP21,760P2

For those interested in “scientific data” on these fruits, below are 3 graphs that compare some of the most important characteristics affecting fruit quality, i.e. brix, fruit weight and firmness. These graphs are the result of more than 100 fruit analyses at monthly intervals over a 2 year period. The I shaped lines on the bars in the graph would contain 95% of all values.

The Brix represents the amount of sugar in the fruits. The sweetest variety is the Crimson, followed very closely by the Purple and Emerald. From November through March the new varieties are still greater than 14% Brix while the commercial variety may drop as low as 11%. The greater the fruit firmness, the greater is the juiciness and crunchiness of the fruits. The Crimson has the highest firmness followed by the Sunset, Emerald and Purple.

Unfortunately the Crimson which is the sweetest and juiciest fruit, has the smallest fruit size. The Sunset which has the largest fruit, has the lowest Brix or sweetness. In spite of the lower Brix the Sunset has a special, unique flavor that makes it the favorite of many. The purple which has much greater Brix and firmness than the commercial, has as its detracting characteristic a much thicker peel.

For those who value fruit quality above all else, we invite you to give these new AndyBoy Patented Signature Cactus Pears a try. For more information contact Claudia Pizarro-Villalobos at **831.455.4315** or contact her at **cvillalobos@darrigo.com**.



Growing in the Desert Series:

Selenicereus macdonaldiae : The Champion Cactus Flower

by Mark Dimmitt

Selenicereus macdonaldiae is one of scores of cactus species with the common name “night-blooming cereus” and “queen of the night”. This species is reputed to have the largest flowers in the cactus family; they spread 13 inches across and a foot and a half long. The huge flower is doubly stunning because it emerges from such scrawny stems.

The stems are only about a half inch in diameter, and are studded with sparse spines that are just strong enough to be annoying to handle. The weak stems grow up to four feet a year, branching occasionally. In nature the stems climb trees, clinging by adventitious roots. In cultivation stems need to be tied up to keep the plant manageable. In several years a large tangle of stems will form.

The huge flowers appear in several waves over a period of three to four weeks in late May and June. They are rather sparse; even a large plant will produce only two or three in a night. Many delicate white petals

are surrounded by a crown of thin yellow sepals. The flowers open at dusk and begin to wilt as soon as the sun hits them the following morning.

This species should be grown in filtered sun and protected from frost. Training it against a north- or east-facing house wall under the eaves should be sufficient protection in most years in Tucson. Cuttings root easily and will begin to flower in two or three years.

There are several other species of *Selenicereus*, with flowers ranging from as large as those of *S. macdonaldiae* to only a few inches wide. *Selenicereus grandiflorus* flowers are reputed to reach 15 inches across, but mine have not been that large. A couple of the small-flowered species are frost-hardy. *Selenicereus* (*Cryptocereus*) *anthonyanus* has *ric-rac* stems and the flowers have dark purplish-red sepals that starkly contrast with the white petals.



TCSS BOARD

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TCSS Web Page:
www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

For additional information call: (520) 256-2447

Everyone is Welcome!

**Bring your friends, join in the fun, and meet
the cactus and succulent community.**

June Refreshments

Those with family names beginning with X, Y, Z, A, B, C,
and D please bring your choice of refreshments to
the meeting. Your generous sharing will be greatly
appreciated and enjoyed!



Please see our Website Calendar for the next
rescued cactus sale. They are scheduled at various
times during the year based on our inventory.

TCSS Club Members receive a 10% discount

June 2012

Thursday, June 7, 2012 7:00pm

Monthly Meeting, "Searching for new populations of Nichol's
Turks' Head Cactus, *Echinocactus horizonthalonius* in Sonora
Mexico" presented by Thomas R. Van Devender and Ana Lilia
Reina-Guerrero

Tuesday, June 12, 2012 7:00pm - 9:00pm

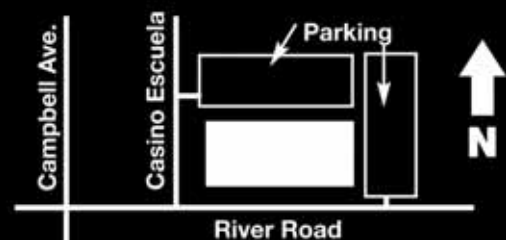
Board meeting at the U of A College of Pharmacy

Acknowledgement of Contributions

The names below represent the Tucson Cactus & Succulent
Society members and friends whose donations helped make
this year a success. We extend our sincere thanks for your
support.

General Fund
Marlin Hostettler

**Meetings are held on the first
Thursday of each month.**



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

July 2012

July 5, 2012 at 7:00 PM

"Travels in Africa and Arabia 8: The Hunt for Sansevieria in East Africa"

Presented by Bob Webb



Sansevieria bhitatae,
"A home run awaits"

Traveling in East Africa is an interesting experience, to say the least. Most Americans seem to believe it is too dangerous to go there, but in our travels, we find it mostly to be filled with inconveniences, bribes, friendship, treachery, wild animals, and non-stop entertainment. Our recent trip, dedicated to hunting down species of *Sansevieria*, is representative of our travels in Africa and Arabia. We met three dedicated *Sansevieria* hunters with vastly different agendas, but all three are fascinated -- even consumed -- by this outstanding genus, which is far more than that Mother-in-Law's Tongue you see everywhere.

Taxonomically, the genus *Sansevieria* is a mess. This morphologically diverse genus spans the region from South Africa to southeast Asia, but the biodiversity hotspot is Kenya and Tanzania. We are working with Professor Len Newton of Kenyatta University in Nairobi to try and unravel the Gordian knot. We also are working with a molecular chemist to see if DNA can help solve some of the riddles this genus offers, but molecular data, while compelling, offers few answers and many more questions. Exciting new species are part of the norm with this genus as we travel into some of the most interesting parts of East Africa.

Bob has worked on land-use issues, landscape ecology and conservation concerns of the southwestern United States and Baja California for more than 35 years. For the past 17 years, he has worked with Mexican government

scientists on plant conservation issues in Baja California centering on cirio, cardon, and other charismatic species that are iconic to the peninsula. He has a Ph.D from the University of Arizona in Geosciences (1985) and has worked for the National Research Program of the U.S. Geological Survey for nearly 25 years.

Bob Webb has collected succulent plants for over 29 years. For his day job, he is a hydrologist with the U.S. Geological Survey in Tucson; however, he has worked as a plant ecologist in the southwestern United States and Baja, California for nearly 35 years. He's been traveling to the Arabian Peninsula and Africa since the mid-1990s and has visited Oman, Kenya, Socotra, Yemen and South Africa in search of succulent plants.

Bob has produced around 200 publications, including 12 books, with many more on the way. Several of these books are benchmark volumes on environmental change in the Mojave and Sonoran Deserts. Bob Webb and Toni Yocum are owners of Arid Lands Greenhouses at 3560 W. Bilby Road Tucson AZ 85746 Phone: (520) 883-9404.

Bob's programs are always a must see for everyone. Please bring your friends and anyone interested in an inside look at these amazing plants that are seldom given the attention they deserve.

We're looking for a new Education Outreach Chairperson

Are you interested in the education outreach aspect of the TCSS activities? Then we have an opportunity for you! John is running out of steam and it's time for some new ideas to fill out the TCSS education outreach efforts. The Education Outreach Chair doesn't do all of the education activities; they just function as a central point of contact and a coordinator. Also, we have scaled back our education activities particularly the Cactus Model workshop exercise to a "Teach the Teacher" approach wherein we provide the model kits and training support for the teachers so that they conduct the actual workshop exercise with their students. If you are interested, or know someone who may be interested please e-mail me at funfest@tucsoncactus.org or talk to me at the monthly meeting.

John Swarbrick
Education Outreach Chair

TCSS Program Presentation August 2, 2012

"A Survey of the Genus *Mammillaria*"

Presented by Scott McMahon, Cactaceae Collections Manager
Desert Botanical Garden



Larry Miller passed away on June 22, 2012. He was born in 1942 and received his MFA at the University of South Florida concentrating on sculpture and photography. Larry taught fine arts at the high school and college levels in Florida for many years before he and Angela moved to Tucson about six years ago. They became very active in TCSS helping wherever needed, including cactus rescues, sales, and Pima Prickly Park activities. They were awarded the President's Award last December. There will not be a memorial service in Tucson. Angela asked that friends who wish to give a memorial direct them to TCSS for Pima Prickly Park.



President's Message

I have embarked on a new project. "The Cactus Capital Chatter" was the first newsletter produced by the then Tucson Cactus and Botanical Society. Our name officially changed in the mid 1990's to the Tucson Cactus and Succulent Society. There were 14 years of quarterly issues produced from 1965 to 1978. Each page is being scanned and every issue will be available on our website. These were the days of typed newsletters and black and

white photos. On occasion there were some color photos pasted into each copy of the newsletter. I thought that it would be appropriate to have our history and some very interesting stories and ideas preserved and available for everyone to read. I want to give you a taste of just two items that I think are interesting.

From Volume I 4th Quarter 1965 No. 4, Hugh Copenhaver, President wrote about "CONSERVATION". With an organization our size, field trips are getting harder and harder to plan in confirmation with the rules and regulations of the state of Arizona. Only through the cooperation of a few land owners have we been able to legally gather plants of the desert and take all we want to add to our collections.

I know that many of us have collected in the past with rather a dim view of boundaries and regulations, including myself. Let's all turn over a new leaf and live by the rules. I am sure we all know what they are. It really makes me feel rather bad when I hear some member say 'I found 50 of this or that all in one area and collected most of them.' Of course, if it's in an area where a rancher wants them removed or they will be destroyed because of new subdivisions, then

I think anything we remove could surely come under the heading of 'Conservation'."

About 59,000 plants have been legally rescued since 1999 which tells you how much we have learned and embraced conservation.

Pima Prickly Park is not the first garden TCSS has been involved with. In 1965 the Haag Memorial Cactus Garden was established at the Arizona-Sonora Desert Museum. The 1st issue of 1966 addresses this.

"The Tucson Cactus and Botanical Society created and sponsors a cactus garden in memory of its founder 'Cactus John Haag.' The Haag Memorial Cactus Garden overlooks the desert valley. This Garden is not ours. We gave it to the Museum on May 8 1965, for the enjoyment of all who visit there. Our Society as a whole will always be greatly interested in its future, and in materially advancing the goal of the Garden: constantly extending it."

We are similarly motivated but have a 15 year agreement with Pima County for planning and development of Pima Prickly Park. We hope we will also be able to provide a garden for the enjoyment of all who visit.

I hope to be able to scan 2 or 3 issues a week until all are on our website.

A final note:

We are all saddened by the loss of Larry Miller. Larry along with his wife Angela were enthusiastic supporters of Pima Prickly Park. Our heart felt condolences go out to the Miller family.

Dick Wiedhopf, President

Cholla Rescue

by Jessie Byrd

The TCSS Rescue Crew got a good workout moving cacti from a future LA Fitness site to Pima Prickly Park. The crew met near Oracle Road and Hardy Road in Oro Valley on Saturday, June 23 early enough to still be in the shadow of Pusch Ridge. We dug mostly larger-sized chollas to test Joe's new cholla-hanging rack on the trailer. We also rescued *Opuntia engelmannii* (Prickly Pear), *Echinocereus engelmannii* (Hedgehog), *Mammillaria grahamii* (Pincushion) and *Jatropha cardiophylla* (Limberbush). The trailer filled up as the sun heated up.

Sunday morning, many of the same crew met at Pima Prickly Park to exercise our planting muscles on the new rescues. Three species of cholla are now planted in the future Cholla Forest Maze area. These species are *Cylindropuntia fulgida* (Chainfruit Cholla), *Cylindropuntia leptocaulis* (Christmas Cholla) and *Cylindropuntia versicolor* (Staghorn Cholla), including a couple of very interesting, green-colored individuals. Even though it was hot for the crew, the cactus love this time of year with increased temperatures and humidity, so our transplant success rate should be high! Thanks to everyone who participated for your sweaty work!



Cholla clothesline to transport them without breaking canes.



Planting one of the larger chollas in the Pima Prickly Park Cholla Forest.



Jessie Byrd compares a large barrel that was seen at the Rescue location.

Growing in the Desert Series:

Thelocactus bicolor: Again and Again and Again

by Mark Dimmitt

The majority of cactus species have distinct and rather short flowering seasons, usually less than a month per year. *Thelocactus bicolor* (glory of Texas, Texas pride, Figure 1) is a sterling exception. The three-inch wide brilliant pink-with-red-center flowers appear in response to watering, as often as every ten days or so throughout the hot season. In southern Arizona that's April through October. Each flower lasts two or three days. That adds up to a lot of bloom time.

The plants are quite attractive too, and there is considerable variation in body size and spine color and density (Figures 2, 3). Add to that the

variation in flower shade (Figures 4, 5) and one could easily fill a bench with a collection of different forms.

The solitary to sparsely-branched plants are small enough to fit several in a 12-inch pot, or 20 or more in a larger pot. If they're watered well after a couple of dry weeks, they will flower synchronously (Figure 6), often with three to five flowers per stem (Figures 1, 4).

Glory of Texas can be adapted to full sun in Tucson, in which case the stems will be compact with very dense spines. They are also fully winter hardy here.



Figure 1. *Thelocactus bicolor*, glory of Texas. This is the most common stem and spine form.



Figure 2. *Thelocactus bicolor*, a tall-stemmed form with long, bristly spines.



Figure 3. *Thelocactus bicolor*, a thick-stemmed form with comparatively few, stout spines.



Figure 4. *Thelocactus bicolor* with flowers of a lighter pink than average.



Figure 5. *Thelocactus bicolor* with large, dark flowers.



Figure 6. Several plants of *Thelocactus bicolor* in a community pot flowering simultaneously.

June Pima Prickly Park Update

- Hoop House plant benches design completed and 12 benches are being constructed, each 4 ft. by 8 ft. surface and 20 inches off the ground. Construction is cement block bases and wood frames with a wire grid covering for the tops. Cost is \$32 each.
- The concrete bench design has been completed. Plans are to construct three of the 44 inch long, 18 inches high and 16 inches deep benches under the large ramada. They will be a light earth tone color, formed and poured in place. Cost is \$55 each.
- Three to five large saguaros to be relocated from a Pima County road widening project for the parking lot islands then smaller plants can move in.
- Entrance Garden and the Agave Garden designs are progressing. Ideas welcomed.
- The first forty chollas were planted in the Cholla Forest area of the park.
- A watering crew has been organized and regular watering schedules have been implemented for both propagation plants in the hoop house and newcomers planted in the park.
- Plans continue for the "Grand Opening" event for the park, Saturday, September 22, 2012 from 9:00 AM to 2:00 PM. Lots of events being planned. Ideas welcomed.
- You Can Help! Park Supporters are being encouraged to plant special cactus cuttings in one gallon containers, especially purple prickly pear, for eventual donation to the park. Please do not bring them until they are well established.
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Board meeting at the U of A College of Pharmacy

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this year a success. We extend our sincere thanks for your support.

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Jane & Chris Harris

Florilegium Program

Linda & Perry Burbach • Jan Bell

Pima Prickly Park

Lorenzo Zavala

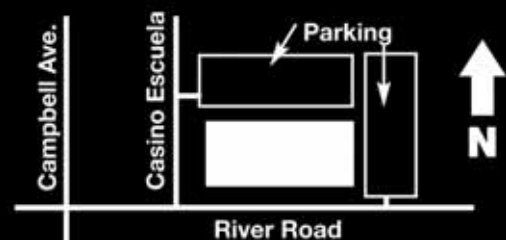
In Memory of Larry Miller

Pat & Dick Wiedhopf • Perry & Lisa Everett

Free Plants

**A selection of Ferocactus pilosus
and Ferocactus latispinus.**

**Meetings are held on the first
Thursday of each month.**



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

August 2012

Thursday, August 2, 2012

"Survey of the Genus Mammillaria"

Presented by Scott McMahon

Cactaceae Collections Manager, Desert Botanical Garden, Phoenix, Arizona

Scott will present a survey the Genus Mammillaria that will include a brief history of the genus, descriptions of various plants and also add some of the details about classification. Scott will show lots of pictures and offer questions after his program presentation.

Scott received his Masters degree in Plant Protection from the U of A in 1977 and worked for 5 years in the agrichemical industry in Arizona and Southern California. Scott's father was a commercial landscaper, and Scott gained valuable experience in landscape design, installation, and maintenance working for him on and off over the years. Scott has also worked in the electronics industry as a technician and has held a K-8 elementary teaching certificate. Scott is a member of the Cactus and Succulent Society of America and also of the local affiliate, the Central Arizona Cactus and Succulent Society, where he served

two terms as President. Scott started with the DBG as their arborist and became a Certified Arborist a year later. Scott's current duties include caring for the Garden's extensive cactus collection, including numerous succulents from other families. Scott is an instructor in the Desert Landscaper School, teaching classes in both English and Spanish on desert trees, the Cactus Family, and on other succulents. Scott's ability to speak Spanish has also enabled him to participate in workshops on desert landscaping in Mexico.

Please join us in welcoming Scott back to the Tucson. He has always presented us with excellent programs and information so please bring a friend and enjoy an excellent program, great food, free plants and much more!



Mammillaria pilensis



Mammillaria ernstii



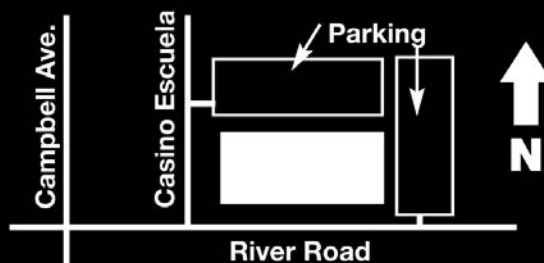
Mammillaria fraileana

Scott would like anyone that may have special Mammillaria questions to bring in a plant or supply a photograph

TCSS Program Presentation
Thursday, September 6, 2012
"Agaves"
 Presented by Greg Starr

Free Plants
 Various species of Mammillaria.

**Meetings are held on the first
 Thursday of each month.**



Junior League of Tucson, Kiva Bldg.
2099 E. River Road



President's Message

There is something special about this time of year. The monsoon rains and the rise in humidity that many people are uncomfortable with has just the opposite effect on our plants. I love this time of year. This week the native *Mammillaria grahamii* were spectacular with their ring of bright colored flowers. Every native bee for miles around stopped by to scatter some pollen.

Many other cacti and succulents are stimulated by this weather change. All of the sudden the native barrels are showing flower buds. Mine are safe from the Blooming Barrel Sale but we rescued a lot of them for the August 19th event that will find them new homes.

Seedlings from last year are doubling in size and being fat is a common theme among the cacti. It is a struggle most of the year to keep favorite succulent plants happy. They have made it through the winter cold and that long hot drought period and now its time to really enjoy them.

It's also a happy time for mosquitoes. They greet me at the door and follow me around the yard hoping that I will wash off the "OFF" so they can have breakfast, lunch and dinner. I am careful not to be their meal ticket. They can certainly make working in the garden unpleasant.

Enjoy your plants and all the activities that we have planned.

August and September are going to be fun. Our regular meetings on August 2 and September 6 will feature 2 more outstanding presentations. On Sunday, August 19 is the Blooming Barrel Sale. This is the best opportunity to acquire a barrel with your favorite flower color. Already, some of the rescued barrels are blooming, but they all have a lot of flower buds and the timing should be perfect. We also have a lot of *Mammillaria grahamii* and recently rescued hedgehogs (*Echinocereus*) for sale.

Two major event will take place in September. Mark your calendars. September 16 is the Good Time Silent Auction. More information about this event is in this issue.

The other major events will be the Pima Prickly Park ribbon cutting. This will be the official kick off of the development on Saturday, September 22 from 9am till 2pm. See what we have been doing and what we have planned for the future. Activities will include the opening ceremony, rescued plant sale (lots of saguaros) music, food, tours, exhibits and more.

Everyone will be there so mark your calendar for this important event.

Thank you for your support and participation in these activities.

Dick Wiedhopf, President

Proposed By-Law Changes

Below are changes to the By-Laws approved by the Board of Directors to be voted on at the September 6, 2012 monthly meeting. This is the issuance of the required 30 day notification.

Current:

Article V. BOARD OF DIRECTORS.

Sec. 1. Membership and Terms of Office. The Board of Directors shall consist of immediate past President, President, Vice-President, Secretary, Treasurer, Affiliate Representative, and no less than three (3) or more than eleven (11) Directors. Each individual shall have one vote. Vacancies on the Board shall be filled each year in accordance with need and Directors shall hold office for three (3) years.

Proposed:

Article V. BOARD OF DIRECTORS.

Sec. 1. Membership and Terms of Office. The Board of Directors shall consist of immediate past President, President, Vice-President, Secretary, Treasurer, Affiliate Representative, and no less than three (3) or more than twelve (12) Directors. Each individual shall have one vote. Vacancies on the Board shall be filled each year in accordance with need and Directors shall hold office for three (3) years.

Current:

Article VII. MEETINGS.

Sec. 2. Board of Directors. The Board of Directors shall meet quarterly at the call of the President. Other meetings of the Board of Directors may be called by the President or a majority of the Directors.

Proposed:

Sec. 2. Board of Directors. The Board of Directors shall meet monthly at the call of the President. Other meetings of the Board of Directors may be called by the President or a majority of the Directors.

Current:

Article III. MEMBERSHIP

Sec. 3. Categories. There shall be the following membership categories: life, general and student.

Proposed:

Article III. MEMBERSHIP

Sec. 3. Categories. There shall be the following membership categories: life, family, general and student.

Article XII. AMENDING THE BY-LAWS.

These by-laws may be amended by a three-quarter (3/4) vote of the members in good standing at a monthly or annual meeting following the issuance of a notice at least thirty (30) days prior to the meeting stating the purpose of the intended

Cylindropuntia fulgida

Photo by Vonn Watkins



Growing in the Desert Series:

Echinocereus brandegeei: Another Exception to the Rule

by Mark Dimmitt

In the natural world there are almost no absolute rules. No matter how consistent traits may be within a group, there is almost always at least one exception. That's why biology is filled with modifiers like almost all, most, typically, and usually. (See how many qualifiers you can find in this article.) The genus *Echinocereus* provides examples. Its 70-some species – most of which are called hedgehog cacti – can be recognized by certain diagnostic characteristics. Most species grow as dense clusters of upright stems, but some have sprawling or solitary stems. Most but not all are densely spined. Most have brilliant pink or purple flowers with green stigmas in spring. In most species the buds don't emerge from the areoles; they rupture through the stem above the areoles.

What's different about *E. brandegeei* (Figure 1)? It doesn't follow the usual habit of the genus of flowering in spring. It blooms from late July into September. The species is common throughout the southern half of the Baja California Peninsula. The summer rains there typically

begin in August, later than in the rest of the Sonoran Desert Region. The flowers are fairly consistent throughout the range: about three inches across, bright pink with deep red petal bases (Figures 2, 3). And oh, yeah; the stigmas are yellow, not green.

The stems are highly variable in different populations on the peninsula. They range from short and erect to long and sprawling (Figures 4, 5). The spines are even more variable, ranging from long and thin to short and stout, and yellow, reddish, brown, or whitish. Where the plants occur with *Grusonia invicta* (= *Opuntia invicta*, Figure 6), the spines tend to be the shortest and stoutest. This may be a case of convergent evolution.

This hedgehog is easy to grow in the desert. It tolerates full sun and does well on southern Arizona rainfall, which is higher than in most of its natural range. It will be damaged in the open by temperatures below 20 degrees F. Unfortunately, it is difficult to find in nurseries.



Figure 1. A larger than average specimen of *Echinocereus brandegeei* near El Arco, Baja California. Its succulent companions in this frame include *Euphorbia lomelii* (formerly *Pedilanthus macrocarpus*), *Bursera microphylla*, *Stenocereus gummosus*, *Pachycereus pringlei*, and *Yucca valida*.



Figures 2 and 3. The summer flowers of *Echinocereus brandegeei*.



Figure 4. A specimen of *Echinocereus brandegeei* with long, yellow spines at Bahía Concepción, Baja California Sur.



Figure 5. A specimen of *Echinocereus brandegeei* with very stout spines near San Ignacio, Baja California Sur. At this location it grows intermingled with *Grusonia invicta* (Figure 6).



Figure 6. *Grusonia invicta* (shown here at San Ignacio, BCS) and *E. brandegeei* look remarkably alike where the two species co-occur.

Big Sky Rescue

Photos by John Durham



Good Time Silent Auction

Sunday, September 16, 2012 • Junior League Building • 2099 E. River Rd • 3:00pm to 5pm

Good bye to the summer heat and great monsoon and hello to a wonderful fall planting time. This event has been a Tucson Cactus & Succulent Society tradition for more than 50 years. All proceeds will help our Pima Prickly Park development.

This is a celebration: silent auctions, Free Plants, \$2, \$5, \$10 sale tables and Ice Cream with all the toppings. Bring your excess plants for the free plant table. All we ask is that your plants are free of disease and insects. Better plants will go on the \$2.00, \$5.00 and \$10.00 tables and special plants for the silent auctions.

Bid sheets and price stickers will be available at the September meeting, at the event and on our website for your convenience. The Board has adopted the same policy as we had at Sonoran IX with a high value special silent auction plants. These items will have an opening minimum bid of \$20.00 or more set by the donor. If the item sells for at least the opening bid the donor receives the opening bid price and any amount above that goes to the society. We will have a number of special plants and books from friends and past members of the Society. Some are large, some are old and some are rare. Be sure you don't miss out.

We will have at least 3 separate silent auctions during the afternoon. Pots, plants, special cuttings, books, tools etc are welcome donations for these silent auctions. Free Plants will be available starting a 3:30pm in order to give everyone an opportunity to take some home. We will start the set-up at 1:00pm and the party will start at 3:00pm with the first silent auction ending at about 3:15pm and then about every 25 minutes there after. All you have to do is sign-in, get a bid number and then keep bidding until you hear "PENCILS DOWN".

We need volunteers for set-up, sales, and clean-up. Come help and have fun, ask questions, talk with friends, etc., etc., Please feel free to bring your family and friends to this event. You don't have to be a member or bring plants or buy them, just come and enjoy the event. More information will be available at www.tucsoncactus.org or call (520) 256-2447.



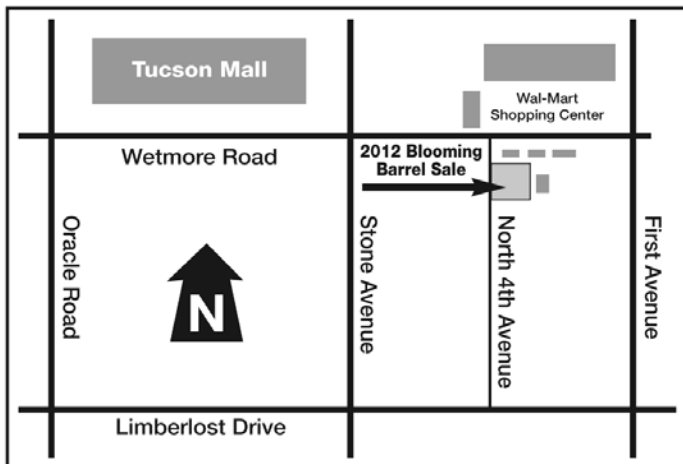
2012 Blooming Barrel Sale

Sunday,
August 19th
7:30am to 11am

Gates open at 7:00am- Vendor Sales start at 7:30am
Rescued Cactus Sales start at 8:00am. Entry numbers will be handed out initially limiting access to rescued sales area. Barrels and Hedgehogs limited to 3 each for the 1st 30 minutes. Mammillarias and misc. plants available.

WE WILL HAVE OVER 250 BARRELS IN BLOOM

4342 North 4th Avenue



The TCSS is a non-profit 501(c)(3) organization.
Visit us on the web at: www.tucsoncactus.org or call 520-256-2447



Planting Mammillaria at the 4342 N. 4th Ave location



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TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

For additional information call: (520) 256-2447

Everyone is Welcome!

**Bring your friends, join in the fun, and meet
the cactus and succulent community.**

August Refreshments

Those with family names beginning with L, M, N, O, P, Q,
and R please bring your choice of refreshments to
the meeting. Your generous sharing will be greatly
appreciated and enjoyed!



Cacti Rescued 290 Rescues Accomplished

Please see our Website Calendar for the next
rescued cactus sale. They are scheduled at various
times during the year based on our inventory.

TCSS Club Members receive a 10% discount

August 2012

Thursday, August 2, 2012 7:00pm

Monthly Meeting, "Survey of the Genius Mammillaria"
presented by Scott McMahon, Cactaceae Collection
Manager, Desert Botanical Garden, Phoenix, Arizona

Tuesday, August 7, 2012 7:00pm - 9:00pm

Board meeting at the U of A College of Pharmacy

Sunday, August 19, 2012 7:30pm - 11:00pm

Blooming Barrel Sale

Acknowledgement of Contributions

The names below represent the Tucson Cactus & Succulent
Society members and friends whose donations helped make
this year a success. We extend our sincere thanks for your support.

General Fund

Brian Hurd
Jeff & Connie Woodman

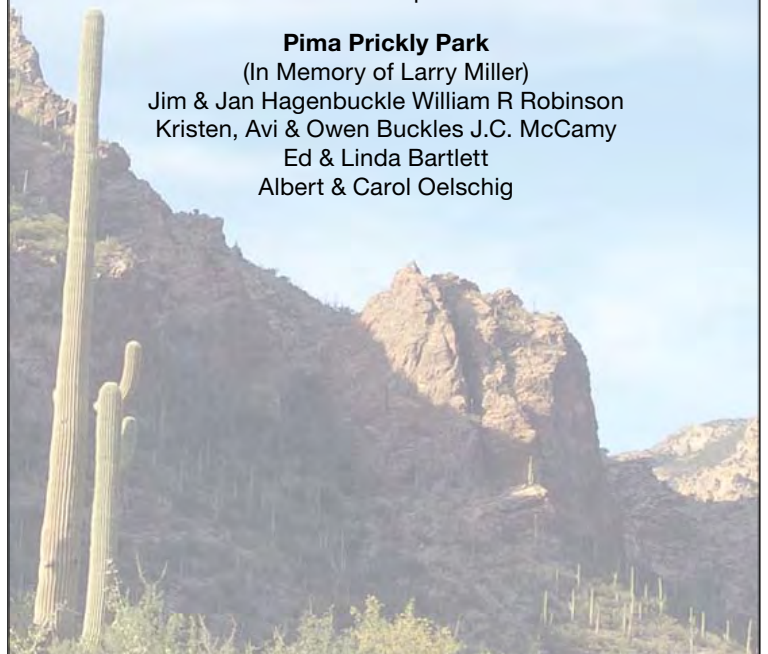
Florilegium Program

Ed Hamilton
Patricia Squires

Pima Prickly Park

(In Memory of Larry Miller)

Jim & Jan Hagenbuckle William R Robinson
Kristen, Avi & Owen Buckles J.C. McCamy
Ed & Linda Bartlett
Albert & Carol Oelschig





Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

September 2012

Thursday, September 6, 2012 at 7:00pm

"Agaves"

Presented by Greg Starr

Author of: "Agaves: Living sculptures for landscapes and containers"



Agave shawii 8 miles north of Colonet



Agave ovatifolia



Agave bovicornuta near KM 254 east of Hermosillo

Greg will discuss the history, interesting tidbits and show some of his favorite plants from his new book which is titled "Agaves: Living Sculptures for Landscapes and Containers."

Greg was born and raised in Tucson, Arizona, has grown to love the desert and its flora and fauna. He graduated from the University of Arizona in 1979 with a Bachelor of Science in Horticulture, and after working in the landscape industry he went back to the University to study Botany and further his education in horticulture. Greg worked for Warren Jones (co-author of Plants for Dry Climates and Landscape Plants for Dry Regions) and Dr. Charles Mason at the University of Arizona herbarium. Greg made his first foray into the world of collecting in 1979 when he traveled with Warren and Bill Kinneson to Texas where he saw firsthand, in habitat, the many plants he had only experienced in the nursery or landscapes. He emerged from the University in 1985 with a Master of Science in Horticulture with a special emphasis on botany.

He opened Starr Nursery in the summer of 1985, and has specialized in low water use plants for landscaping in southern Arizona. Greg has traveled extensively in Mexico and the southwestern United States to study the plants for their potential landscape use in desert regions of the world. He has also traveled to South Africa in search of potential landscape plants for southern Arizona.

Greg has written several horticultural articles for the journal Desert Plants. Topics have covered various groups of plants as well as botanizing in South Africa. He has also described a new species of Agave, two new species and a subspecies of Hesperaloe, and revised the genus Hesperaloe in a monograph published in the journal Madroño. Greg worked with Dr. Jose Angel Villarreal in describing Agave ovatifolia which has been dubbed Whale's Tongue Agave, a reflection of the incredibly wide leaves that sometimes double as

water harvesting vessels. Greg's book, Cool Plants for Hot Gardens, was released at the end of April 2009. His second book, titled Agaves: Living Sculptures for Landscapes and Containers, was released in early May of 2012. He has taught Plant Biology and Plant Materials classes at The Art Center Design College in Tucson for their program on Landscape Architecture.

Greg spends most of his days tapping at the computer hoping another book will take shape, preparing PowerPoint presentations and tending to Starr Nursery, specializing in Agaves and related plants as well as other succulents and new introductions of perennials, flowering shrubs, and small trees from arid and semi-arid regions around the world. He and his four legged pal Nikki spend many hours in the nursery potting up Agaves and other cool plants, chasing rabbits, and napping on the soil pile.

Please join us and invite your friends to this excellent program. Enjoy some great food, free plants, and join the multitude of others who love to talk about cactus and succulents.

TCSS Program Presentation
Thursday, October 4, 2012
"Peru – Land of the Inca, Land of Cacti"
Presented by Mark Muradian

Free Plants

This month we will have an assortment of various agaves and the raffle & door prize table will include an expanded selection of excellent agave specimens.



President's Message

We have officially past the 1,000 member mark again this year. Congratulations! It is your work, attitude, interests and accomplishments that keep attracting new members and friends to our society. Thank you. On a personal note my daughter and son-in-law, Jen and Dale Whitt have added another member, Abigail Sagan Whitt on August 23.

The Good Time Silent Auction is September 16 and as always we need volunteers from set-up to clean-up. This is the perfect event since you can get rid of extra plants, acquire new ones, eat ice cream and all the toppings, visit with friends and make new friends, support the society (profits are going to Pima Prickly Park this year) and just have a "Good Time". You can read more details about this in this newsletter.

On September 22, along with Pima County, we will officially open Pima Prickly Park (PPP). We have 9.4 acres to develop and landscape with our favorite plants and already you can see the wonderful potential

for this Park. Our member Jesse Byrd, both professionally and as a volunteer, deserves our thanks for the huge number of hours she has dedicated to this project. There is a large group of volunteers who regularly contribute to the development of PPP along with wonderful cooperation from Pima County Natural Resources Parks and Recreation (PCNRPR). I want to thank Joe Frannea (PPP Operations Manager) who has put this September event together, Linda Heisley (Volunteer Coordinator) and Ed Bartlett our "Park Steward". On a day to day basis they really have made a difference. There are many more members to thank and over the next few months they will be recognized for their contribution to PPP. The event will be an opportunity for me to publicly thank the County Administrator, Chuck Huckleberry, the Director of PCNRPR, Rafael Payan and their staffs for making this Public/Private partnership a success.

Throw in a couple of rescues, our regular meeting on September 6, Board and committee meetings and September is a busy month. I know you will participate in as many events as you can and it's appreciated.

Thank you for your support

Dick Wiedhopf, President

Annual Blooming Barrel Sale - Fun As Always



Although we did not have a cloud cover to sell under early Sunday morning on August 19th. to help cut the heat, all else went very smoothly for our 11th Annual Blooming Barrel Sale where customers can pick barrel cacti with flower colors of their choice. The sale, held at our cactus holding site near First Ave. and Wetmore, was attended by about 150 customers and managed by 36 dedicated volunteers. We also had five of our member businesses selling some great cactus and other plants under the mesquite trees, a nice compliment to the rescued cactus.

We sold 145 Barrels, 65 Hedgehogs, 35 potted Ocotillo, about 400 Mammalaria and a few other cacti. This brought in \$4,300 and after expenses for the Native Plant tags, advertising expenses and a few other expenses, we netted \$2,450 in profit. Twenty-five percent of this is earmarked for our Education Outreach program for grants to K-12

Arizona schools and other educational activities such as supplies to build cactus models. A big thanks to our customers for supporting our Cactus Rescue Program and to all the TCSS volunteers who rescue the plants and those who sell them.

Our next sale will be at Pima Prickly Park, 3500 W. River Road, Saturday, September 22, 2012 at the Grand Opening of the park event. The event is from 9 AM to 2 PM and the cactus sale part is from 10 AM to Noon. We will have Saguaros up to 40 inches tall, large Ocotillo, Golden Hedgehogs, some Barrels and Mammalaria. Come early to get an entrance number for best selections. More details will be emailed to members and to our customer email list about a week before the event.

Joe Frannea (photo by John Durham)

Sonoran Desert Florilegium Happenings

EH Estill Watercolors Preserved

Ella Howard Estill (1860-1941), a floral and botanic painter, from Columbus, Ohio created numerous paintings of cacti and desert flowers during her eighteen years residence in Oracle and Tucson, Arizona. Over 500 of these paintings came to be at the U of A Herbarium. These painting are not 'scientific illustrations,' but because they have historical value and give accurate representations of the plants the Steering Committee and Herbarium staff decided to include them in the Herbarium collection. Over the past several months the watercolors were archived by James Thomas. Nancy Reid and Connie Engard are nearly finished accessioning them into the Herbarium collection.

Legumes of Arizona Project

In the past year pen and ink illustrations created by Arizona botanical artists for the Legumes of Arizona: An Illustrated Flora and Reference have been exhibited at the Boyce Thompson Arboretum, U of A Science and Engineering Library and U of A Student Union. These exhibits were the joint effort of the Legumes of Arizona Project and the Sonoran Desert Florilegium Program. Publication of the book is projected to be at the end of 2013.

Other News

The Florilegium Program and the Arizona Sonora Desert Museum Art Institute are jointly sponsoring the exhibit, Botanical Art of the Sonoran Desert: Past and Present, September 14 through October 27, 2013. Botanical artists in the Desert Museum Art Institute class, Drawing Plants for a Florilegium, are working on plant drawings and paintings to submit to the exhibit. Look for more about this exhibit in future editions of The Desert Breeze. To assist in raising funds for the exhibit there is a matching donation of up to \$500. Contributions of any amount will be matched and very much appreciated.

We have a new website domain name, sonorandesertflorilegium.org. Our webmaster, Cindy Hartwell, has been very busy putting up information and photos of exhibits and herbarium work. Particularly interesting is information on 'How to Create a Botanical Plate.' The website is also linked through the TCCS website. Please visit the site to see more of what we have been doing.

Margaret Pope



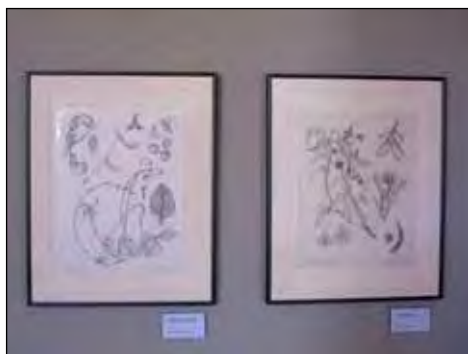
Nancy Reid and Connie Engard at the U of A Herbarium accessioning the EH Estill paintings



Opuntia versicolor, watercolor by EH Estill



Opuntia tetracantha, watercolor by EH Estill



Boyce Thompson Arboretum Legume Exhibit March 2012



Boyce Thompson Arboretum Legume Exhibit March 2012



Kim Ratelle-Collins working on legume illustration



Kim Ratelle-Collins discussing illustration with visitors to Boyce Thompson Arboretum Legume Exhibit May 2011



Cindy Hartwell observing plant specimen under microscope before beginning to draw



Anna Hewings working on preliminary drawings of the Desert Milkweed

Growing in the Desert Series: Time to pay attention to winter-growing bulbs.

by Mark Dimmitt

Whether or not bulbs are true succulents, people who collect succulent plants tend to be attracted to bulbs too. If you have a collection of winter-growing bulbs, you probably put the barren pots away at the end of spring, out of sight and sheltered from summer rains. September is the time to remember where you stashed them and prepare them for their coming growing season. It's also time to order any new ones you want to try. Most winter bulbs are activated by cooling nights and soil moisture. They may not show above ground until late October or November, but the roots began to grow a month before you see green. The following task list applies to the great majority of winter bulbs:

1. If the bulbs have multiplied and become crowded, future flower spikes will be stunted. Unpot and divide the clusters, replanting the largest bulbs. Space them to allow two or three years of growth before they become crowded again.

2. Because cooling temperature is necessary to break dormancy, bulbs in clay pots or pots located in the shade will sprout before those in plastic pots in the sun. Plastic pots can be wrapped in aluminum foil or painted white with spray paint to keep them cooler. (You may notice that the bulbs on the south side of the pot will sprout last, and are often smaller than those on the north side. Many winter bulbs are marginally adapted to the desert's warm winters.)

3. In late September or October when nights begin to drop into the 60s F, soak the pots once. Then keep the medium barely moist until you see green sprouts. Some bulbs such as *Ferraria* will sprout at much higher temperatures. Move the pots of sprouted plants into a sunny location if they aren't there already. Full desert sun is a bit too much for most species, especially in spring. So most potted bulbs should be shielded from full afternoon sun. High temperatures can trigger premature dormancy. This is a major reason why those from the coolest habitats do not perform well here.

4. When growth is well under way, water and fertilize generously. Be prepared to cover the tender species on frosty nights. Most species will tolerate nights in the upper 20s in partial shade, while mid to low 20s will damage many if they're exposed to the night sky.

Some of the winter bulbs that do well in Tucson include:

-*Boophane species* (Figure 1): Fan-shaped foliage tops large above-ground bulbs that are covered with papery layers, but have succulent interiors and fleshy roots. Hardy to at least the low 20s under a cover. Dull flowers appear in fall before leaves. (*B. disticha* is summer-active and bears red flowers.)



Figure 1. Most *Boophane species* flower in late summer, then produce a fan of leaves in fall and winter.



Figure 2. *Ferraria crispa*: curls, spots, and a honey-sweet fragrance. What else could you wish for?



Figure 3. A collection of Cape hyacinths. Clockwise from upper left: *Lachenalia aloides quadricolor*, same, *L. aloides*, *L. viridiflora*, *L. bulbifera*, same, *L. unknown lavender*



Figure 4. *Ornithogalum dubium* is one of the few species of this genus with nonwhite flowers.



Figure 5. Hurricane lilies flowering in August. The bloom season lasts less than two weeks, but what a show!



Figure 6. A collection of *Sparaxis* hybrids.

- *Ferraria crispa* (Figure 2): The flowers are star-shaped with very undulate petal margins, weirdly spotted on a greenish background, and deliciously fragrant. Hardy to the mid 20s.

- *Freesia*: Very easy to grow. Bell-shaped flowers in several colors are lightly fragrant. Hardy to at least the low 20s.

- *Ipheion uniflorum*: A tiny plant no taller than 6 inches. One-inch flowers in shades of blue are borne one at a time in spring. Seems to be completely hardy in Tucson.

- *Lachenalia* (Cape hyacinth, Figure 3): Numerous species, some of which have attractively spotted foliage. Flowers range from inconspicuous to large and colorful.

- *Leucocoryne*: Grasslike foliage and inch-wide star flowers of lavender to purple on tall stems; lightly fragrant. Likes lots of water; hardy to mid 20s.

- *Moraea polystachya*: A small iris with two-inch bluish flowers over a two-month period, usually in spring. Will sprout as early as August with good rains and be in flower by late September. Very easy to grow. In fact, it will volunteer freely in any watered site; keep it away from other bulb pots or you will soon have nothing but moraea. Other species have more beautiful flowers, but most are difficult to grow in the desert. Completely hardy in most of Tucson.

- *Ornithogalum dubium* (Figure 4): Most species in this genus have white flowers with black eyes. But this one has bright orange flowers, or sometimes lemon yellow. Easy to grow; hardy to mid 20s under cover.

Oxalis species

- *Rhodophiala bifida* (hurricane lily, Figure 5): This bulb flowers in August while dormant after a heavy rain, hence the name. Leaves sprout in the fall and die in spring. Bulbs multiply freely, but never set seed. This species needs to be in the ground; for reasons I don't understand, it rarely flowers in pots. Hardy to at least 20. There is also a pink-flowered form.

- *Sparaxis* (Figure 6): These miniature irises bear several one-inch flowers in a wide range of bright color combinations. The flowering season is very short in the desert, only about a week for each bulb, spread over a two-week period. Hardy to mid 20s.

Good Time Silent Auction

Sunday, September 16, 2012 • Junior League Building • 2099 E. River Rd • 3:00pm to 5pm

Good bye to the summer heat and great monsoon and hello to a wonderful fall planting time. This event has been a Tucson Cactus & Succulent Society tradition for more than 50 years. All proceeds will help our Pima Prickly Park development.

This is a celebration: silent auctions, Free Plants, \$2, \$5, \$10 sale tables and Ice Cream with all the toppings. Bring your excess plants for the free plant table. All we ask is that your plants are free of disease and insects. Better plants will go on the \$2.00, \$5.00 and \$10.00 tables and special plants for the silent auctions.

Bid sheets and price stickers will be available at the September meeting, at the event and on our website for your convenience. The Board has adopted the same policy as we had at Sonoran IX with a high value special silent auction plants. These items will have an opening minimum bid of \$20.00 or more set by the donor. If the item sells for at least the opening bid the donor receives the opening bid price and any amount above that goes to the society. We will have a number of special plants and books from friends and past members

of the Society. Some are large, some are old and some are rare. Be sure you don't miss out.

We will have at least 3 separate silent auctions during the afternoon. Pots, plants, special cuttings, books, tools etc are welcome donations for these silent auctions. Free Plants will be available starting at 3:30pm in order to give everyone an opportunity to take some home. We will start the set-up at 1:00pm and the party will start at 3:00pm with the first silent auction ending at about 3:15pm and then about every 25 minutes thereafter. All you have to do is sign-in, get a bid number and then keep bidding until you hear "PENCILS DOWN".

We need volunteers for set-up, sales, and clean-up. Come help and have fun, ask questions, talk with friends, etc., etc., Please feel free to bring your family and friends to this event. You don't have to be a member or bring plants or buy them, just come and enjoy the event. More information will be available at www.tucsoncactus.org or call (520) 256-2447.

September Pima Prickly Park Update

- Grand Opening Event plans, September 22nd, 9 AM to 2 PM, being finalized which include a ribbon cutting ceremony, live music, about 15 exhibitors, a few hands on activities for children, a few live animals, a rescued cactus sale. A park brochure is being developed and will be available on the 22nd. Plant ID signs have been designed and many will be in place for the opening event.
- A concrete picnic table has been placed under the large ramada to see how this will work in place of installing the concrete benches, thanks to parks and recreation.
- Cactus Rescue Crew members dug lots of cactus from a new development site in Marana and planted many of them at PPP. This included 7 Prickly Pear, 17 Cholla, 87 Hedgehogs, and over 200 Mammillaria. A three headed crested barrel cactus is being relocated from our holding site to the park.
- Six large mounds of dirt were placed in the Agave garden this past week, about 100 tons of dirt. Over 100 Agaves from 6 to 30 inches of various types were planted on the mounds and surrounding areas. We will make a list of Agaves that we could use to complement what we have to see if members have some of these to contribute.
- Agave Garden design pretty much complete and work progressing in the Cholla Forest area. Inner loop paths are being designed for many of the park areas and some will be installed prior to the Grand Opening. The compacted gravel surface on these will be more wheelchair and walker friendly.
- Rain gauge and temperature data was dumped from the weather station (5/16/12 to 8/4/14). The rain data is available on the www.rainlog.org web site (you can also find hundreds of other weather station data from citizens for southern Arizona on this site). The monsoon has delivered over 4.5 inches of rain to the park. The raw temperature and rain pulses (0.01 increments) data will be put on the PPP web site for use by anyone that wants to access the history of these readings taken every 15 minutes

Pima Prickly Park Logo Ideas?

Got an Idea? You don't have to be an artist, just creative.

We are soliciting ideas for a logo, needs to be unique, simple and represent a cactus and succulent plant garden.

You have until November 15th to submit your idea, design etc.

**Email to Park@TucsonCactus.org or mail it to our
PO Box 64759, Tucson AZ 85728-4759.**

Pima Prickly Park Grand Opening

Saturday, September 22, 2012

9:00 AM to 2:00 PM • Open to the Public • Free

Come join us for a Grand Opening Celebration to inaugurate Pima Prickly Park. Cactus gardens and features have been developed over the past few years and will continue for many more. Walk the paths, look for wildlife and enjoy the initial plantings that will be expanded and mature in the years to come. Visit the many exhibitors and hands on activities and educational opportunities set up, all related to the Sonoran Desert plants, wildlife and preservation efforts.

Events Schedule

- | | |
|--------------------------------------|--|
| 9:00-2:00 | Park Opens, self-guided tours Exhibits and hands on activities open and available to guests. |
| 9:00-9:25 | Ribbon Cutting Ceremony held at park entrance
Song by Ted Ramirez, Pledge of Allegiance, Boy Scouts
Dick Wiedhopf, President, Tucson Cactus and Succulent Society
Rafael Payan, Director, Pima County Natural Resources, Parks and Recreation
Chuck Huckelberry, Pima County Administrator
Hand out of native seed mix for guests to sow in Pima Prickly Park |
| 9:30-10:00 | Closing Song by Ted Ramirez
Music and songs by Ted Ramirez at office complex entrance area. |
| 10:00-12:00 | Cactus Sale by the TCSS Cactus Rescue Crew in the Visitor Parking Lot. Cactus includes Saguaro, Ocotillo and Golden Hedgehogs |
| 11:00 AM, Noon, & 1:00 PM | Brief Presentation about Pima Prickly Park in Conference Room
Guided Park tour by TCSS member after each Presentation |
| 2:00 PM | Event Closes |

TCSS BOARD

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cactusdude1@yahoo.com

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davidandsusan_1@msn.com

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Chris Monrad
Dale Johnson
Keimpe Bronkhorst

(Ending Dec. 31, 2013)

Linda Bartlett
Cyndi Garrison
William (Bill) Hicks
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Editor: Karen Keller runbunny@cox.net

Deadline for copy: Thursday, September 20, 2012

TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

For additional information call: (520) 256-2447

Everyone is Welcome!

**Bring your friends, join in the fun, and meet
the cactus and succulent community.**

September Refreshments

Those with family names beginning with S, T, U, V, W, X,
and Y please bring your choice of refreshments to
the meeting. Your generous sharing will be greatly
appreciated and enjoyed!



Cacti Rescued 291 Rescues Accomplished

Please see our Website Calendar for the next
rescued cactus sale. They are scheduled at various
times during the year based on our inventory.

TCSS Club Members receive a 10% discount

September 2012

Thursday, September 6, 2012 7:00pm

Monthly Meeting, "Agaves" presented by Greg Starr, Author
of: "Agaves: Living sculptures for landscapes and containers"

Tuesday, September 11, 2012 7:00pm

Board meeting at the U of A College of Pharmacy

Sunday, September 16, 2012 3:00pm to 5:00pm

Good Time Silent Auction, Junior League Building
2099 E. River Rd Tucson, AZ. Set-up at 1pm

Saturday, September 22, 2012 9:00am to 2:00pm

Pima Prickly Park Grand Opening, 3500 W. River Road.

Acknowledgement of Contributions

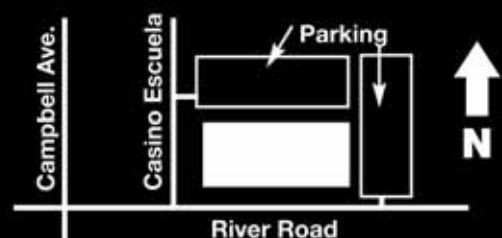
The names below represent the Tucson Cactus & Succulent
Society members and friends whose donations helped make
this year a success. We extend our sincere thanks for your support.

Pima Prickly Park

(In Memory of Larry Miller)
Melinda & John Patterson III

(In honor of Angela Miller)
J.C. McCamy

**Meetings are held on the first
Thursday of each month.**



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

October 2012

Thursday, October 4, 2012 at 7:00pm

“Peru, Land of the Inca, Land of Cacti”

Presented by Mark Muradian



This program, titled “Peru, land of the Inca, Land of cacti” was taken in September of 2010. Starting in Chiclayo, and ending in Cuzco, we travelled by bus to many habitats, sometimes on roads no bus should ever attempt to drive! This program is a video presentation, with all the sounds and motion to help the viewer feel as if they are there. With the optional fly over of the Nazca lines and the mandatory visit to Machu Picchu, this was an exciting trip to be on. I have been in the cactus hobby close to 30 years and have been making

pottery for some 17 years, and am a third-generation family farmer in the central valley, California and farming some acreage since 1915.

Mark will be bringing his special pottery and will have it presented for sale (cash and checks accepted). This will be a video program presentation and should be a really special event that is quite different from all others. Be sure to come and view this special program, enjoy excellent food, win some choice plants and also stay and get your **FREE** plant at the ending bell.



TCSS Program Presentation

Thursday, November 1, 2012

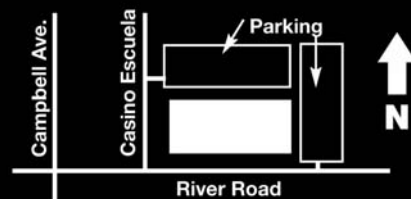
“Cacti & Succulents the Rocky Mountain Way”

Presented by Marcia Tatroe

Free Plants

A variety of cacti native to Peru and South America will be offered this month.

Meetings are held on the first Thursday of each month.



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



President's Message

Everyone agrees that the opening events at Pima Prickly Park was a great success. It was the hard work and super planning by many of our members, by Pima County Natural Resources, Parks and Recreation administration and staff that made it work. You are an extraordinary group of volunteers. I can't praise all of you enough.

I do want to give special thanks to Maxine Goodman who we engaged to do our publicity this year. In the last couple of weeks she has arranged for more TV, Newspaper and other periodicals about TCSS and the Pima Prickly Park event. The most publicity we've had in our 52 year history.

Of course there is still a lot of day to day work at the Park. There will be new gardens to design and plant, plus the acquisition of lots more plants. We have planted almost 2,000 cacti and succulents so far and with 9.4 acres that's only a drop in the bucket. We are developing a plant wish list and know that you will help us acquire them.

Everyone is welcome to be a part of the PPP committee and we will start creating sub-committees of special interests for you to

participate in. These will be committees where you can work and learn about your favorite plants or interests.

Three important events are coming up. Nominations and Elections of Board Members and Officers, Plus the Membership Renewal and the Holiday Party on December 2, 2012. Please contact the Nominations Committee if you are interested in running for any office or have a suggestion for a nominee. The Nominations Committee members are:

Bill Hicks (Chair) adellabill_hicks@q.com
Linda Bartlett linda.bartlett27@gmail.com
Dale Johnson AANDDJ@gmail.com
Cyndi Garrison cactusrustler@cox.net

The Board, at the September meeting, voted to maintain the same dues structure for the next year. Membership renewal, Ballots and Holiday Party reservations will be sent out to everyone after the November regular meeting. At the November meeting, the nominees will be presented and nominations from the floor will be accepted but only if the nominee is in attendance or has given written permission to place their name in nomination.

Thank you for your support,

Dick Wiedhopf, President

Library Update

"Agaves:

Living Sculptures for Landscapes and Containers"

by Greg Starr

Greg Starr donated a copy of his book to the library at last month's meeting. The book is arranged alphabetically with plenty of photos. Each plant has a section on field notes, descriptions, culture and landscape value. In some cases there are taxonomic notes. Sprinkled with Greg's sense of humor, the book is informative and easy to read.

Each month I've been adding books to the library that were previously in storage. This month I'm adding a few that will be for reference only and will only be available during the meeting and not for taking out.

Pima Prickly Park Logo Ideas?

Got an Idea? You don't have to be an artist, just creative.

We are soliciting ideas for a logo, needs to be unique, simple and represent a cactus and succulent plant garden.

You have until November 15th to submit your idea, design etc.

**Email to Park@TucsonCactus.org or mail it to our
PO Box 64759, Tucson AZ 85728-4759.**

Grand Opening of Pima Prickly Park – "A Fantastic Event"



About 300 people partook in the Pima Prickly Park Celebration and Dedication Event held on Saturday, September 22, 2012. The Dedication and Ribbon cutting Ceremony kicked off the day at 9 AM. We were treated to music and song by Ted Ramirez, an "Arizona Culture Keeper" and 8th generation Arizonan. Dignitaries made brief comments on the importance of the new park and the great partnership that has been developed between Pima County Natural Resources, Parks and Recreation and TCSS. A wildflower seed mix

was available for our guest to sow their own spot in the park and small saguaros were also given out to plant in the park or to take home for their landscapes.

We had 22 exhibits set up for guests to visit and learn about native food products, wildlife, plant life, conservation, botanical art, cactus anatomy, how to plant small cactus and other exhibits. The warm afternoon was soothed a bit by Freddy's providing free samples of their frozen custard served at their steakburger restaurant located just around the corner from the park. TCSS had a sales table with books, tee shirts, caps, totes, and a few other items for sale. We had many TCSS member volunteers making all this happen and showcasing our society to the public. Thank you volunteers!

The Cactus Rescue Crew had a Saguaro and Barrel sale from 10 AM to Noon. We had about 65 customers purchasing over 160 cacti and a few pair of cactus gloves. We took in \$2,900 and netted about \$2,100 after expenses, most of it being the cactus transport tag costs for each plant. Per our operating agreement with Pima County, the profits are to be used by TCSS for park improvements, and we do have a long list of new gardens and features we want to implement over the next year. The atmosphere and setting for this event couldn't have been better, just cooler weather would have been nicer.

Joe Frannea

Grand Opening of Pima Prickly Park

Photos by John Durham



Good Times Silent Auction. Always a Great Event

While the number of plants to bid on and the number of attendees were down from last years event, the deals were as good as ever. About 100 attended with 60 people bidding on 103 quality cactus and succulents and a few huge pots. Then there were the two, five and ten dollar tables with hundreds of plants not to mention the patio full of free plants. If you couldn't find something you didn't have or really wanted, you're probably in the wrong society. The free ice cream is always a big hit, especially with a variety of topping to add, served over 160 cups. The prickly pear sorbet is a delight for those not so keen on the ice cream or want something special.

We brought in about \$2,300 in sales and after expenses we netted about \$1,400. The Board had voted that proceeds will be earmarked for our Pima Prickly Park. Thanks to all who attended and especially those who donated plants and our volunteers for another fun annual event.

Joe Frannea

Photos by John Durham



Growing in the Desert Series:

Coryphantha elephantidens: A fine fall-flowering cactus

by Mark Dimmitt

Coryphantha elephantidens (Figure 1) is one of the most distinctive of the several dozen species in this genus. The stems are three to four inches in diameter, and offset to form clusters of up to a dozen or more heads (Figure 2). (In *The Cactus Family* Anderson says the stems can be nearly 8 inches in diameter, but I have never seen any even close to this.) As the specific epithet describes, the stems have very large tubercles. The few short stout spines don't conceal the shiny green cuticle.

The two-inch pink flowers are not borne in masses as in many cacti. They appear one or two at a time per stem, every few days for about three months from September to November (Figure 3). The subspecies *C. e. greenwoodii* and *C. e. bumamma* have yellow flowers.

The species occurs in Michoacan and Morelos, Mexico. It's winter hardy anywhere in southern Arizona. Grow it in any well-drained succulent medium, in light shade. Water little in winter, and also keep it on the dry side during extremely hot weather to avoid rot.

An important note; please read: I write about what I know, and I am about to exhaust my ideas and images for articles in this series. (My collection is heavily focused on a few kinds of plants; I don't have hundreds of species of cacti, euphorbias, aloes, etc.) The original intent was to encourage other members to write about their favorite succulents. If that doesn't happen, this series will be featuring a whole lot of articles about adeniums. Please send me ideas, a few cultural notes, and especially photos of plants in your collections that perform well for you.



TCSS BOARD

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cactusdude1@yahoo.com

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(Ending Dec. 31, 2012)

Chris Monrad
Dale Johnson
Keimpe Bronkhorst

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Linda Bartlett
Cyndi Garrison
William (Bill) Hicks
Thomas Staudt

(Ending Dec. 31, 2014)

Ed Bartlett
Rob Romero
Joie Giunta
Bill Salisbury

CSSA Affiliate Rep:
Bill Holcombe (2013)

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Editor: Karen Keller runbunny@cox.net

Deadline for copy: Thursday, October 19, 2012

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www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

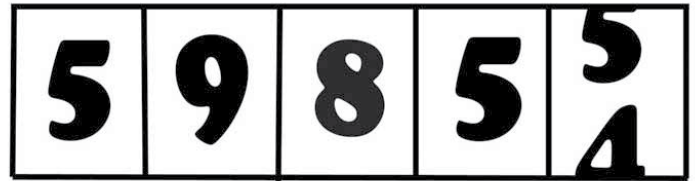
For additional information call: (520) 256-2447

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October Refreshments

Those with family names beginning with Z, A, B, C, D, E,
and F please bring your choice of refreshments to
the meeting. Your generous sharing will be greatly
appreciated and enjoyed!



Cacti Rescued 291 Rescues Accomplished

Please see our Website Calendar for the next
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October 2012

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Monthly Meeting, "Peru, Land of the Inca, Land of cacti"
presented by Mark Muradian,

Tuesday, October 9, 2012 7:00pm

Board meeting at the U of A College of Pharmacy

Smiley Barrel

Photo by John Durham





Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

November 2012

Thursday, November 1, 2012 at 7:00pm

“Cacti & Succulents the Rocky Mountain Way”

Presented by Marcia Tatroe



Coloradoans grow many of the same cacti and succulents familiar to Tucson gardeners. But frost eight months of the year, hot summers and dry winters have fostered an entirely new garden paradigm. In Denver a trunked yucca grows alongside a fernleaf peony, or in another garden across town, next to a dwarf peach and a tall garden phlox. The Colorado gardener's willingness to incorporate new ideas without discarding the old has created a synergism

between traditional garden design and the amazing diversity of plants that thrive in a high plains environment. The resulting gardens do not resemble anything heretofore—a style found only in the Mountain West.

Author of best-selling *Perennials for Dummies*, Marcia Tatroe writes the monthly “Mountain Garden Checklist” for *Sunset Magazine*, a weekly gardening column in *The Denver Post*, and is a frequent contributor to *Colorado Gardener* and other gardening publications. She has been gardening in Centennial CO for 25 years. Her garden has been featured in numerous books, magazines and nationally televised gardening shows. She lectures throughout the West focusing on garden design, perennials, xeriscape, and incorporating native plants into gardens and landscapes. In her most recent book, *Cutting Edge Gardening in the Intermountain West*, she advocates using drought-tolerant and native plants and indigenous materials to create a gardening aesthetic unique to this region.

This is our final speaker program for 2012 so please join in and welcome Marcia Tatroe as our guest on November 1. We will surely enjoy an excellent program, great foods, FREE plants and much more.



Free Plants

**An exciting assortment of winter-flowering
mesembs from South Africa will be
available for free plants, raffle and door prizes.**



President's Message

The final events are taking shape for the close of another great year. November will be our last speaker this year. The programs have been great and Vonn Watkins deserves all of our thanks for another great year of speakers. There are not enough superlatives about the job he does and has been doing for the last decade or so plus the Sonoran Conferences and 2009 CSSA Convention. I just want all of you to know what a special member and friend he is.

This newsletter is put together by Karen Keller. This is another member of our team who every month produces a quality newsletter. Just go online and see how great she makes us look. Thank you Karen!

We are planning a bus tour to the Desert Botanical Gardens and Arizona Cactus Sales on November 18, 2012. The information is

in this newsletter and most of you will receive additional reminders online or in the mail. I hope that many of you who have wanted to view the Gardens will take advantage of this opportunity.

Our year will end early on December 2, with our Holiday Party. There is no regular meeting in December but we will be back on schedule on January 3, 2013 with our regular monthly meeting.

Everyone will receive a mailing about membership renewal, an election ballot and a reservation form for the Holiday Party. Please return them by the date indicated.

Again this year we have well over 1,000 members. There are many reasons for our success. Actually there are over 1,000 reasons and they are you.

Thank you for your support,

Dick Wiedhopf, President

Bus Tour: Desert Botanical Gardens

When: Sunday, November 18, 2012

Time: 7:30am to 5:30pm

Cost: \$40.00 per person

(travel, snacks, lunch and admission to gardens)

For more than 70 years, the Desert Botanical Garden has been teaching and inspiring visitors from the local community and around the world, providing research, exhibits and more designed to help us understand, protect and preserve the desert's natural beauty. Today, the Garden features:

- 145 acres
- 65 acres under cultivation
- 50,000+ plant displays showcased in beautiful outdoor exhibits

"The Garden's vision is to be the premier center in the world for the display, study and understanding of desert plants and their environments. The Garden strives to be an indispensable resource in the Southwestern United States for helping individuals learn about Sonoran Desert Plants as well as desert plants of the world, so that they will conserve and protect the natural world for the benefit of future generations. Every element of the Garden will reflect excellence, beauty and inspiration to transform the visitor experience into one of discovery and meaning about deserts and desert plants."

A visit to Arizona Cactus Sales

This nursery opened Easter weekend of 1968 in Phoenix on 27th Avenue north of Camelback Road. It soon became known as the best source of native plants in the state under the leadership of Scotty Farmer. Almost immediately, he began adding propagated plants of many species with a continual emphasis on careful handling and the best value to the customer.

In May of 1977 the retail portion of Arizona Cactus Sales was sold to Jim and Electra Elliott (TCSS Members). The new owners maintained the high standards and expanded the selection of plants and services offered. Within a few years they became a primary supplier of plants to botanical gardens nationwide as well as local sales. Their reputation for honest dealing and premium quality plants continues to attract these institutions which need careful documentation of their purchases.

Jim and his staff have been long time supporters of TCSS and great friends to the hobby.

We will need at least 40 paid participant by **November 7, 2012**

Please send your Payment to:

TCSS Bus Tour, PO Box 64759, Tucson, AZ 85728-4759

Tucson Cactus and Succulent Society Holiday Party and Gift Exchange

Sunday, December 2, 2012

Junior League Facility, 2099 East River Road

Setup: 1pm - 3pm • Dinner: 3pm - 5pm

The Society will provide Turkey, Ham, Shrimp, Condiments, tableware and Drinks (coffee, punch and water). You will provide your favorite recipe (enough for 10 or more servings) Hot or Cold Salads - Starches - Vegetables - Desserts (please bring serving dish and serving utensils). For the last decade or so we have been collecting money and/or food for the Community Food Bank. This year the need is even greater, so let's make it special for others. Please bring donations (for a cash donation that is preferred, they can get 10 times the food) for the Tucson Community Food Bank.

Gift Exchange:

Everyone can participate by wrapping (cleverly) a plant or plant related gift of at least \$10.00 value. If you bring a gift you get a gift and the fun is in the way we will distribute them.

Meeting:

Additionally there will be a short Annual Meeting, Election Results, Awards and Table Prizes. Please vote and/or RSVP on the notice you will be receiving in the mail.

TCSS Apparel Program

The Board of Directors is pleased to announce the availability of a new, ongoing, service for our members – the TCSS Apparel Program. Partnering with a local company, Aztec Embroidery, members can order a plethora of items, ranging from polo shirts to golf bags to sweatshirts, all marked with the colorful embroidered TCSS logo! These items are offered at our cost (plus tax). You can order one at the current meeting night and pick it up at the next meeting! To give you an idea of prices (which include the TCSS logo), men's and women's Polo/Golf shirts start at \$14.98 with an extra \$1.50 charge for 2XL or larger. Women's sleeveless Polo/Golf shirts start at \$15.98. You can also order the shirts with pockets (additional \$3.00 per shirt) or with your name embroidered on the right side (additional \$3.50). At the next meeting, just stop by our table and review the catalog!

Growing in the Desert Series:

Putting Adeniums and other Tropicals to Sleep for the Winter

by Mark Dimmitt

Adeniums are succulents related to pachypodiums, plumerias, and oleanders (Figure 1). They are the newest ornamental plant to be domesticated (the process began only 20 years ago), and their popularity is growing rapidly. They are easy to grow if their cultural needs are understood and provided for. Spring is one of the critical times during which many adeniums and other winter-dormant tropical plants are lost (see article April 2012).

The other critical skill is to recognize when to let them go dormant for the winter. Remember this crucial fact: Adeniums hate cold, wet roots. These plants are nearly indestructible during the hot summer. But only a few days of cold nights can kill the most sensitive clones if the medium is wet. The critical night temperature is about 50 degrees, but it is influenced by the daytime highs, as will be discussed later in this article.

What is dormancy?

Dormancy in plants means a cessation or great slowdown of active growth. The main evidence is that the plant produces few or no new leaves (Figure 2). Below ground, root growth and water absorption greatly diminish, so the potting medium dries out more slowly than it did in summer. A dormant plant may retain leaves, or either shed them all at once or slowly over the winter; don't be fooled by that. A dormant plant may also flower, either with or without leaves. What's important is that it has slowed down and is using much less water than during its growing season. Therefore you must give it much less water, or even none for weeks or months at a time.

This discussion recognizes two horticultural groups of adeniums:

1. Most adeniums in cultivation are *A. obesum* and its hybrids. Almost all of the plants in this group are potentially evergreen if they are kept in tropical conditions (sunny, hot days, warm nights) through the winter (Figure 3). A sunny greenhouse is best; a sunny window in the house is good. If you can't provide such conditions, the plants will go dormant during the cool season. Depending on the temperatures, light, and the particular plant, they may retain most or all of their leaves.

2. All of the other species, except some *A. arabicum*, have an obligate winter dormancy, even if the conditions are sunny and hot. Most species will shed their leaves in fall or early winter, often suddenly (Figures 4 and 5). *Adenium swazicum* may sleep for only a month or two; *A. multiflorum* and *A. crispum* sleep for three or four months. *Adenium boehmianum* and *A. socotranum* often remain dormant for six months. *Adenium arabicum* is extremely variable over its large natural range; you need to learn the individual plant's habits. Some become spontaneously dormant in fall and shed their leaves (Figure 6). Most become dormant but retain most of their leaves well into winter if kept warm (Figure 7). Some clones are potentially evergreen and even grow through winter if kept under hot conditions (Figure 8).

Overwintering Tips

If most of your plant's leaves suddenly turn yellow and fall off, this is a clear signal to greatly reduce or cease watering (Figure 9). This may happen as early as the fall equinox, or more likely after the first cool nights later in the fall. A more common response is that the plant's water consumption greatly diminishes. It often happens quite suddenly. One week you need to water three times, and the next week only once or not at all. Monitor the moisture in the potting mix of each plant carefully in autumn in order to catch this change and respond accordingly.

If your adeniums are overwintered in a hot greenhouse, almost all of them will still use much less water even if they keep growing. My Adenium house gets up to 100 degrees F on sunny days, and is heated to 45 at night. Most of my plants stay in leaf and often flower well into winter. Those with obligate dormancy enter it at different times; some keep growing slowly until January, when the short days finally stop them. *Adenium obesum* and its hybrids keep growing under these conditions, taking only a brief rest about March, just before they begin growing again. As long as my plants have leaves, I water and lightly feed them every week or two.

Gene Joseph has an unheated greenhouse that also gets to 100 F or more on sunny days, but drops to near freezing on the coldest nights. The hot days seem to average out the cold nights, and his adeniums stay active well into winter.

If you store your adeniums in cooler conditions, you must keep the potting medium very dry to avoid root rot. Plants in 8-inch pots or larger can be left unwatered for the three to five months of cold weather. Smaller plants will probably need a light watering every couple of weeks, just enough to keep the stems from shriveling. Most species and cultivars will survive near-freezing temperatures if the medium is bone dry. (*Adenium swazicum* can take a few degrees of frost, even with moist medium. *Adenium crispum* and *somalense* are the most susceptible to rot in cold weather.)

Most Adenium growers in climates with cool or cold winters recommend culture similar to that in this article. But those who have a warm greenhouse (or live in the tropics) can have the pleasure of seeing adeniums at their best. Under warm conditions, most modern cultivars flower from September through May, while summer is spent on vegetative growth. Forcing dormancy of *obesum* and its hybrids that would prefer to stay active causes a deep shutdown and a slow awakening in spring. This may cause the plants to miss the spring flowering season, replaced by a more meager summer bloom.

Another advantage of keeping evergreen or late-dormant adeniums warm into fall and winter is caudex growth. Leafy adeniums that are not growing new stems need something to do with all the solar energy being captured. That energy goes into fattening the caudex. The evidence of this is that most of my pots split during fall and winter.

See the article in this series from April 2012 for how to wake up adeniums in spring.

Other succulents with similar winter needs

Many tropical succulents are native to semiarid tropical habitats with sparse to ample summer rain and dry winters. These plants must also be overwintered as described above. They vary greatly in how susceptible they are to rot if overwatered while dormant. Examples include

Pachypodium
Plumeria
Cyphostemma
Alluaudia
Bursera
Commiphora
Boswellia
Cacti (many tropical species)

Scadoxus
Dorstenia
Sansevieria
Euphorbia (summer growers)
Caralluma & many other stapeliads
Uncarina



Figure 1. *Adenium* 'Beautiful Mule' is a nearly perfect example of what adeniums are: It has a massive caudex and bold stem architecture (sculptural elegance) and showy flowers borne in abundance over a long season (floral extravagance).

Growing in the Desert Series: Putting Adeniums and other Tropicals to Sleep for the Winter

Photos by Mark Dimmitt



Figure 2. The *Adenium arabicum* X *obesum* hybrid on the right is active – it's growing new leaves. The one on the left is not, and is in the process of going dormant. Both can be watered whenever the potting medium becomes dry, which will be less often as the weather cools. The *A. socotranum* (inset) is also not growing new leaves and is semidormant.



Figure 4. This *Adenium multiflorum* was a mass of green foliage only a week earlier. In mid October the foliage suddenly turned yellow as nights cooled. The message being broadcast is that it needs no more water until it leafs out in spring. The hybrid 'Beautiful Mule' in the right corner is still in leaf, is especially sensitive to rot if the roots are cold and wet. For that reason, watering was stopped October 1, and it will soon shed its leaves.



Figure 7. This clone of *Adenium arabicum* keeps leaves almost all winter, even if not watered for four months. It also flowers year round.



Figure 3. *Adenium obesum* (left) is growing new leaves in December, so it is still active. If days are hot and nights are above 50 F, it can be watered regularly. *Adenium obesum* complex hybrids with other species, such as the crispum hybrid 'Starfish' (right) are also active year round under tropical growing conditions.



Figure 5. The same *A. multiflorum* as in Figure 4, in flower in January. Don't be fooled by the flowers; it's still dormant and needs little or no water.

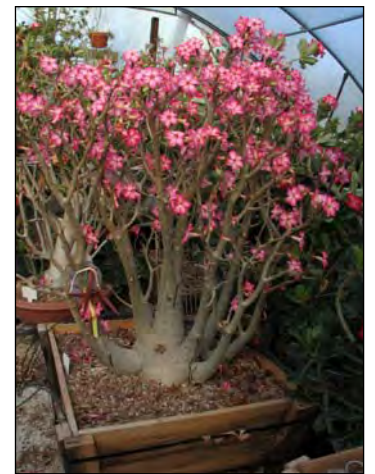


Figure 6. This clone of *Adenium arabicum* 'Ram Gandhi' sheds its leaves in fall, and flowers while still leafless in spring. The photo was taken in March. It needs no water until it begins to leaf out in April.

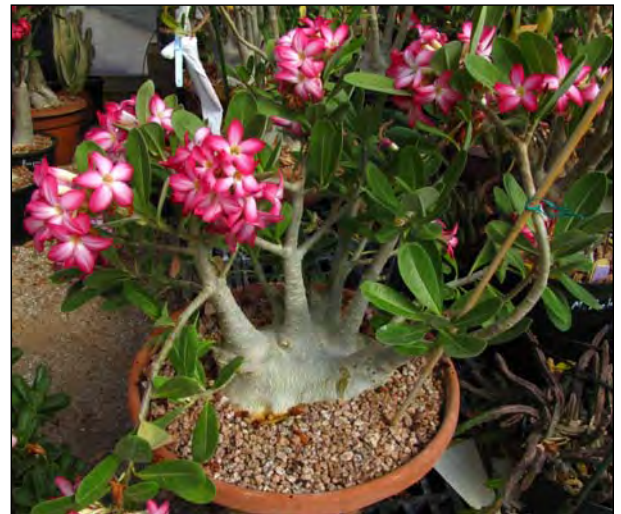


Figure 8. This dwarf *Adenium arabicum* is not only evergreen, it grows as well as flowers year round under tropical conditions. I water it regularly even in winter. Drought will force it into a leafless dormancy.

**Growing in the Desert Series:
Putting Adeniums and other Tropicals to
Sleep for the Winter**
Photos by Mark Dimmitt



Figure 9. *Adenium boehmianum* (left) and *A. sp. nov. Oman* both have a long winter dormancy. When the leaves yellow and fall, don't water them until they awaken, which might be as late as early summer. Again, ignore the flowers; both plants are dormant and using very little water.

Book Review

by Gene Murphy, Tucson Landscaper (retired)

**"Intermountain Flora
Vascular Plants of the Intermountain West, U.S.A.
Volume Two, Part A
Subclasses Magnoliidae-Caryophyllidae"**

By Noel H. Holmgren, Patricia K. Holmgren
and James L. Reveal and Collaborators

New York Botanical Garden Press

The scope of this book is phenomenal! It starts off with water lilies and some 634 pages later ends with cactus. In between it described probably the most diverse flora ever set in type. Family after family, page after page: no treatise could be more eclectic. Some families are so little known as to be from another planet.

Maps on the back of the front cover and duplicated on the back cover includes a vast area of the interior of the Western States and a small portion the Northwest corner of Arizona.

Being volume two, Part A one might expect there is a volume two, Part B. Such is the case, this being the latest in a series of 8 books that were left to last, because of the eccentricities of the plants involved. After reading this volume, I doubt if one plant has been omitted. Scientifically, this volume with its companion volumes are without a doubt definitive.

Naturally, the Tucson Society's interest is the cactus family, pages 634-698. Cholla, prickly pear, hedgehog, barrel etc, abound in their various forms, such as eagle claw, fishhook, pin cushion, etc. I like common names and thank the authors for their use of them throughout the book. A great deal of small print is incorporated and the notes, which are at the end of the species description, are what I've found to be the greatest interest. The particulars and details found there are tidbits not listed probably not found in any other publication.

I would be remiss if I did not mention the illustrations which appear on every other page. To most, the meticulous line drawings are considerably more than adequate. However, the tantalizing colored photo at the beginning of the book makes one want more.

Apparel Program table

Need a unique gift for the holiday season? How about a warmer shirt or sweatshirt for those cool weather Cactus Rescues? Stop by the Apparel Program table to review the catalog and order a TCSS Denim Shirt (starting at \$19.98), Sweatshirt (starting at \$14.98), Hoodie (starting at \$29.98), Windbreaker (\$30 and up) or many other items. These are only available here! Any questions, don't hesitate to contact us at tcss_apparel@centurylink.net.



There's a New Park in Town

by Reporter Odalys Catalan, AZVA

**Note: This great story was written by a fourth grader,
originally published in the October issue of
"Bear Essential News for Kids"**



Like the mystical Phoenix rising from the ashes this park has risen from the depths of an old gravel pit. On Sept. 22, I attended a much anticipated park dedication and opening. The park is called Pima Prickly Park and it is built on an old abandoned gravel pit. Awesome!!

It has so many trees, cactus, birds singing and butterflies gliding through the air. "1, 2, 3!" the people said as they cut the green silky ribbon. As seven or eight pieces of the ribbon floated to the ground many camera shutters went off at a single moment.

Fortunately, I was able to interview Rafael Payan, the director of Pima County Natural Resources, Parks and Recreation. He has been with PCNR for 33 years!

"This dedication was about opening this amazing park and ...the restoration of a gravel pit," Payan states. "This park should teach the community to protect and love the desert, as well as care for it. We...started restoring about 7-8 years ago and also installed the trails about one year ago!" Payan credits the hard work of numerous volunteers and the Tucson Cactus and Succulent Society. "Without their help and cooperation this park would not have been possible."

Payan feels that with over a mile of trails on this nine and half acre oasis visitors will get an education and some exercise as well. Moving on to the trail, there is some eye-catching stuff. We saw, my favorite, the unforgettable Saguarohege.

Saguarohege is a group of saguaros growing in a circular pattern sitting majestically on high ground overlooking the park. This memorial will "provide a sacred place for reflection and pondering the ancient relationships between people and the Sonoran Desert." This monument pinpoints the beauty of the desert and also is the soul of the park.

I had the opportunity to plant a baby Saguaro cactus, took home my own cactus, met some artists and conservationists and so much more!

Inside the PCNR building nestled in the park, visitors were met by some really cool creepy crawlies. There was a bark scorpion, horse lubber grasshopper (that was outrageously humongous), beetles (not the vehicle), and a team of praying mantis. It was pretty cool.

Other features of the park include Cristates, an Agave Garden, the Cholla Forest Maze and Cholla Rose Garden, and a Hummingbird Garden. The Pima Prickly Park is located at 3500 W. River Rd.

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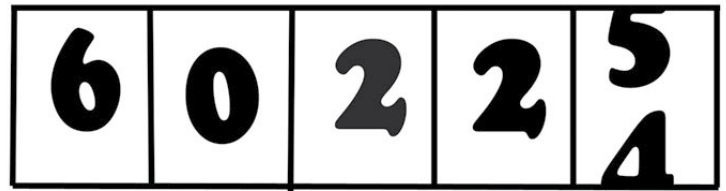
For additional information call: (520) 256-2447

Everyone is Welcome!

Bring your friends, join in the fun and meet
the cactus and succulent community.

November Refreshments

Those with family names beginning with G, H, I, J, K, L,
and M please bring your choice of refreshments to
the meeting. Your generous sharing will be greatly
appreciated and enjoyed!



Cacti Rescued 293 Rescues Accomplished

Please see our Website Calendar for the next
rescued cactus sale. They are scheduled at various
times during the year based on our inventory.

TCSS Club Members receive a 10% discount

November 2012

Thursday, November 1, 2012 7:00pm

Monthly Meeting, "Cacti & Succulents the Rocky Mountain
Way" presented by Marcia Tatroe

Tuesday, November 13, 2012 7:00pm

Board meeting at the U of A College of Pharmacy

Acknowledgement of Contributions

The names below represent the Tucson Cactus & Succulent
Society members and friends whose donations helped make
this year a success. We extend our sincere thanks for your support.

Pima Prickly Park

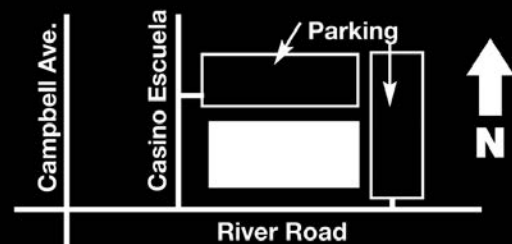
(In Memory of Larry Miller)

Emily Miller Varkala
Patsy & Joe Frannea
Joyce Walker

Pima Prickly Park

Patsy & Joe Frannea
Pat & Dick Wiedhopf

Meetings are held on the first Thursday of each month.



**Junior League of Tucson, Kiva Bldg.
2099 E. River Road**



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

December 2012

Sunday, December 2, 2012 • 3-5PM

Tucson Cactus and Succulent Society Holiday Party and Gift Exchange

Junior League Facility, 2099 East River Road

Setup: 1 - 3PM • Dinner: 3 -5PM

Please bring you food by 2:30pm

The Society will provide Turkey, Ham, Shrimp,
Condiments, Tableware and Drinks

(coffee, punch and water). You will provide your favorite recipe (enough for 10 or more servings) Hot or Cold Salads - Starches - Vegetables - Desserts (please bring serving dish and serving utensils). For the last decade or so we have been collecting money and/or food for the Community Food Bank. This year the need is even greater, so let's make it special for others. Please bring donations for the Tucson Community Food Bank. A cash donation is preferred, as they can get 10 times the food, but any other food donation will be appreciated as well.

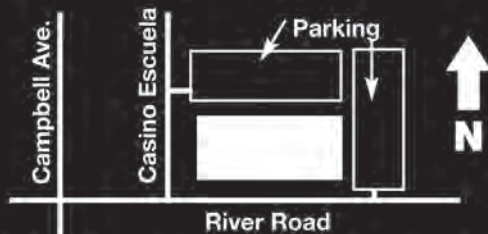
Gift Exchange:

The gift exchange will be different this year, more like "Let's Make a Deal" where you can choose what's behind box 1, 2, or 3. That will be your gift and you can open and show it to everyone. Gifts should be valued around \$10.00.

Meeting:

Additionally there will be a short Annual Meeting, Election Results, Awards and Table prizes.
Please RSVP by calling (520) 256-2447.

Holiday Party and Gift Exchange



Junior League of Tucson, Kiva Bldg.
2099 E. River Road





President's Message

Let's talk about the weather. Here it is the last week of November and we are still experiencing temperatures in the 80's and more important low temperatures in the 50's. What happened to the good old days when frost started in mid November and ended in mid April? Are we starting to experience real climate change? Will there be a serious effect, good or bad,

on our native cactus and succulents? What plants will show a major change to their culture? What can or should we do?

In 2013, I want us to start examining some of these questions especially from the plant growing perspective. You are 1,000 contributors of data plus we also have Pima Prickly Park as a great laboratory. Now is the time to put our collective heads together and encourage participation with others to understand how best we can take advantage of this continuing climate change. This is just another challenge for those who grow plants in the Sonoran Desert.

For more than a decade Chris Monrad has served on the Board of Directors and has been one of the leaders of our rescue program. He is also one of the four founders along with Vonn Watkins, Lois Ludwig (move to Idaho) and me. In 1999, we did our first rescue on a school site in Oro Valley and the rest is history. His standards for details, adherence to the law and exact compliance to our Rescue Partner requirements has

made our rescue program successful. He has always been an important factor in dealing with the development community.

For the last several years, Chris has been the person responsible for the free plants and door prizes at meetings. We do need someone to take over that responsibility in January.

I hope you all realize that Chris is the one responsible for the yellow spine variety of our native barrel which is now in production and can be seen in many developments. It was his keen eye and interest in *Ferocactus* that lead to the breeding program for this spectacular variety. He made it possible to give every attendee at the 2009 CSSA Convention one of these plants. This is just one of his amazing accomplishments.

Chris, from all of us, thank you for everything you have done for this Society. We sincerely appreciate your years of service on the Board of Directors.

Just a reminder, the Holiday Party is December 2 at 3:00pm. Please bring your food by 2:30pm. The gift exchange will be different this year, more like "Let's Make a Deal" where you can choose what's behind box 1, 2, or 3. That will be your gift and you can open and show it to everyone. Gifts should be valued around \$10.00. If you forgot to RSVP, give us a call at 256-2447.

Thank you.

Richard Wiedhopf, President

Growing in the Desert Series: Succulent Cymbidium Orchids – Try Something Different

by Mark Dimmitt

Orchid collectors grow orchids; succulent collectors grow succulents. But why do so few succulent collectors grow succulent orchids? There are many, and some are adapted to our desert climate. I've already dealt with the most extreme desert species, *Eulophia petersii* (January 2010). Here's another worth trying, and it's one of several that are called "black orchids".

The Asian genus *Cymbidium* has numerous species that grow in the ground in moist, cool-tropical habitats. Their hybrids (Figure 1) are extremely popular in mild-climate areas such as Southern California. They are not very succulent, although they do have water-storing pseudobulbs at the base of their long grasslike leaves. More important, they fare poorly in the desert because our autumn nights are too warm for the plants to set flower spikes.

Cymbidium canaliculatum (Figure 2) an oddball in the genus. It is widespread across tropical northern Australia, where it grows on the

branches of eucalyptus trees in hot, arid climates. It is a very succulent species; it has to be in order to survive several months a year with no rain. An abundance of one-inch, chocolate-scented flowers are borne in spring; they range from green to dark brown (Figure 3).

The species is quite difficult in cultivation, but hybrids with standard cymbidiums are robust and easy to grow in hot climates. *Cymbidium canaliculatum* is dominant in its hybrids, so all of them to date have the small, dark, chocolate-scented flowers and succulent foliage. The most commonly available is a grex (cross) called Little Black Sambo (Figures 4 and 5). *Cym. Australian Midnight* (Figure 6) has an even darker flower. Look for them in orchid nurseries; succulent dealers have not yet discovered these wonderful plants.

CULTURE

These orchids have thick roots that need a coarse potting medium for good growth. My favorite mix for nearly all plants these days is coir

(coconut husk fiber, not dust). Pure coir chips (quarter- to half-inch), or a mix of coir and pumice or perlite works well for cymbidium hybrids. A peat-based medium also works if it's made coarse by adding at least 1/2 by volume of large pumice or perlite (sponge-rock).

The plants need very bright light; the best location provides full morning sun and filtered afternoon sun. Water and feed them generously during the spring to fall growing season. They seem to need drier conditions in winter to set flower spikes, but don't let the medium become bone-

dry. The plants can tolerate temperatures in the low hundreds in summer, to near freezing in winter.

Flower spikes become visible in February or March; they bloom for several weeks in April and May. Little Black Sambo's spikes are arching, while those of Australian Midnight are more pendant. These hybrids are vigorous growers and can become very large plants. Divide clumps in spring after the flowers fade; break or cut out at least 3-growth divisions.



Figure 1. A collection of standard cymbidium hybrids in Santa Barbara, California. These will not flower in hot climates.



Figure 2. *Cymbidium canaliculatum* var. *sparkesii* is a tough succulent species that grows on eucalyptus trees in tropical Australia. It's difficult to grow, but its hybrids are easy and flower well in hot climates. This variety has very dark flowers.



Figure 3. The flowers of *Cymbidium canaliculatum* range from green to dark brown.



Figure 4. *Cymbidium* Little Black Sambo 'Ink Spot' is an easy hybrid to grow in hot climates. It bears arching spikes of 50-75 small flowers in spring; they smell of chocolate.



Figure 5. *Cymbidium* Little Black Sambo 'Black Magic'



Figure 6. *Cymbidium* Australian Midnight 'Tinonee' is a new and still rare hybrid, but worth searching for. It grows larger than Little Black Sambo, and its pendant spikes have almost black flowers.

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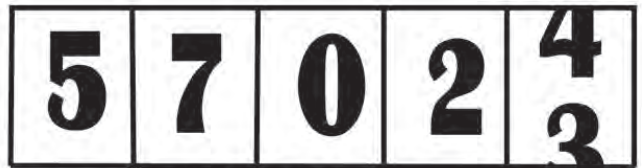
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Cacti Rescued 280 Rescues Accomplished

Please see our Website Calendar for the next rescued cactus sale. They are scheduled at various times during the year based on our inventory.

TCSS Club Members receive a 10% discount

Where have all the Cactus Slings Gone?

If you have one the rescue crew would sure like them back.

December 2012

Sunday, December 2, 2012 3:00pm - 5:00pm
Tucson Cactus and Succulent Society Holiday Party
and Gift Exchange

Tuesday, December 11, 2012 7:00pm
Board meeting at the U of A College of Pharmacy

*Wishing Everyone a Beautiful
Holiday Season.*

Karen Keller, Newsletter Editor

