



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

January 2010

Thursday, January 7, 2009 at 7 PM

"South Africa - The Northern Cape Part II"

Presented by Doug Dawson



In September, Doug gave our club a program on Part I of a trip to the Northern Cape in South Africa. This follow-up program will focus on that part of the Northern Cape from the coast at Port Nolloth, many Richtersveld locations, over to Pofadder and down to a bit south of Springbok. This is all part of the Succulent Karoo Region which accounts for over 40% of the World's known succulent species.

Doug is a retired mathematics professor at Glendale Community College and now just teaches summer school each year to earn money for his trips. Right now, seed growing seems to be his greatest botanical passion. It yields much needed biodiversity. So often, especially in the succulent area, propagation by cuttings and even seed seems to limit the breadth of biodiversity. Much of what we grow or can even get seed from, comes from sources which have the same small gene pool for decades from a few select plants. It is good to introduce wild-collected seed with data from time to time to prevent a narrowing of genetic material. New sports or cultivars also effervesce when lots of seedlings are observed. With his lithops, it is like being able to go "rock" collecting for prettier, shinier "living" stones without even leaving his greenhouse. Doug is a past

president of the Central Arizona Cactus and Succulent Society in Phoenix and is also a member of the TCSS. He has done extensive botanical travels in Namibia and South Africa. Doug's program will include Mesembs, Euphorbias, Stapeliads and other succulents, wild flowers and many bulbs. Most of the photos from his talk were taken in August, 2008 (early Spring), with a few from a second trip in April and May of 2009 to show the same plants in blooming season or other conditions.

Please be sure not to miss the second part of Doug's exploration in South Africa. It will be a great way to start the new year!

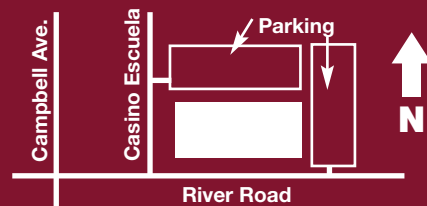
Aloe Roundtable Discussion

February 18, 2010 from 7:00 to 9:00 PM

Junior League of Tucson • Kiva Room
2099 East River Road

On February 18, 2010 we will be having an Aloe roundtable discussion that will be freely open to all our members interested in finding further information about anything and everything related to the Aloeaceae. What plants would be good to put in the landscape garden, what would be frost hardy, what would be a good choice for excellent pot culture and much more. We will be asking some of our best local nursery owners to come out and express some of their experiences with everyone and to let everyone know what would be their choice selections. There may be many questions, a chance for everyone to express their own ideas and to find out what is the best plants to grow in the many areas in and around Tucson. Please mark your calendar now and in February, come out and ask questions, get answers and enjoy talking with others that are interested in learning more about Aloes!

**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 congratulate our three newly elected Directors, Keimpe Bronkhurst, Dale Johnson and Chris Monrad. They will join the eight returning Board Members along with the re-elected officers. I also want to take this opportunity to welcome Bill Holcombe as our new CSSA Affiliate Representative. Bill's job will be to represent and communicate all that TCSS does to CSSA and the rest of the cactus and succulent community. This is a great team.

I want to thank Helen Barber who has served as our CSSA Affiliate Representative from 2003 to 2009. Seven years of dedicated service which included the Tucson 2009 CSSA Convention, being in charge of the convention vendors, and putting up with both her husband, Kevin, and me, when we were members of the Board of Directors of CSSA, which surely complicated her job. My special thanks to her for all she has done to promote TCSS to CSSA and all of its affiliates.

I am really excited about this new year.

With the onset of colder weather the need for winter shelters for sensitive plants is everyone's focus. I remember when I could bring all the tender plants into the house for the winter. It seems the house has gotten smaller or maybe the number and size of plants has gotten larger but using the house as a winter shelter is out of the question. So I built a semi permanent PVC shelter. I hope to write about it and perhaps dedicate one of our round tables to discuss building shelters for our plants. I know others have been engaged in similar projects and it will be interesting to hear about their approach to winter shelters.

Thank you for the wonderful response to our TCSS Activity Questionnaire. Actually, it is a little overwhelming and will take a bit longer to analyze and present you the results, but we hope to have it done for the next newsletter.

Thank you for your continued support

Dick Wiedhopf, President

Library Update

TEXAS CACTI by *Brian Loflin & Shirley Loflin*

The book starts out showing the 10 vegetational areas of Texas, followed by cactus anatomy. It then goes into the genera and species. Each species is given an account of the features, spines, flowers, fruit, seeds and a distribution map. A full-page color photo with insets helps with the identity of the plant.

CACTUS OF ARIZONA FIELD GUIDE

by *Nora and Rick Bowers, Stan Tekiela*

This small book contains information on the size, shape, spines, flowers, fruit and a distribution map. A full-page color photo with insets showing a close-up of the spines and flowers help to

identify each plant. Each species is given a common name first with it's botanical name beneath.

Joie Giunta

President's Award

The President's Award recognizes outstanding Service to the society. Recipients are announced at the annual meeting in conjunction with the Holiday Party. A list of all past recipients will be on are website in the near future. This years President's Award were given to the follow members:

Matt Johnson & Pat Rorabaugh

They have been long time contributors to our success. This year they have opened their garden for our home tour, participated in most of our rescues, including bring fresh greenhouse vegetables for everyone's delight, part of the team that cleans up after every meeting and event and have been generous with their knowledge about the desert habitat. They both contributed significantly to the success of the CSSA Convention.

Wendell Niemann

A more recent member of the society who wishes he knew about us years ago. He is making up for by being an extraordinary volunteer. He is there to assist in the set up and take down of our events. Wendell takes an active roll in our rescue program and more. Someone has to help unload and maintain the rescued plants between sales. Wendell is one of those volunteers and has done a great job keeping our rescued material looking good.

William (Bill) Thornton

Bill is an active member of the rescue crew and helps out at all our sales and events. He spurred on our conservation activities by getting us involved in a potential program to microchip saguaros to help prevent them form being stolen. He has authored a fine article on Saguaros for the CSSA Journal. Bill has a knack for acquiring all sorts of interesting plant from his friends for the benefit of the Society.

I have only briefly described some of the things that these four members have accomplished for the Tucson Cactus & Succulent Society. The list goes on and on.

Thank you and congratulations.

Dick Wiedhopf, President

Garden Tours

The Garden Tour Committee is planning the next tour in our series, for March 2010. We still need gardens in the West and Northwest areas. If you would like to volunteer your garden, please contact a committe member.

Members are: Bill Salisbury, Chairman. Patsy Frannea, Nancy Reid, Rim Tallat-Kelpsa.

Eulophia petersii: A Desert Orchid by Mark Dimmitt

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

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

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

Culture

Eulophia petersii will grow best in a deep pot that accommodates the big root system. Use a coarse, well-drained succulent mix. During the summer growing season, they can take quite a bit of water, but it’s best to water only when the medium dries out, about every two weeks. They can go months without water, especially during the cool season. It is tolerant of temperatures from well over 100F. to freezing. All-day sun is a bit too much in summer; the plant will look much better in very light shade.

To ensure flowering, give the plant a cool, dry winter rest. While it can tolerate down to freezing or even a few degrees below under a cover, it tends not to flower after a cold winter outdoors or in an unheated enclosure. I keep my plants in a cool greenhouse with night temperatures about 45-50 F. Watering during winter also seems to inhibit flowering. I don’t water my plants at all from November until March.

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

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

Other species

The genus *Eulophia* has about 300 species, many of which are xerophytic succulents with beautiful flowers. Most, unfortunately, are very difficult to find. *Eulophia speciosa* has fleshy strap-shaped leaves from underground bulbs and 2-foot tall spikes of bright yellow flowers that look like flying birds. *E. orthoplectra* is similar in size and shape, but its flowers are purple on the front and yellow on the back. *E. keitii* and *E. leachii* have nonsucculent and succulent leaves, respectively, atop above-ground bulbs, and 1-foot spikes of small green flowers. Other species such as *E. guineensis* are herbaceous, bulbous perennials that grow in wet habitats, but also perform well outdoors in Tucson if kept well watered during the growing season.



10 foot tall *Aloe dichotoma* with frost protection frame on right. The commonest variety of *Eulophia petersii* in cultivation is this robust form with large pseudobulbs and very thick leaves. Other clones have smaller pseudobulbs and longer, more slender leaves.



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



A green-flowered clone of *Eulophia petersii*. The plant is more gracile than the brown-flowered one



Eulophia speciosa is worth growing, if you can find it

Holiday Party

TCSS 2009



Last of the Year Cactus Sale



Several last of the year cactus rescues built up our inventory quickly. That triggers a sale. We had over 300 barrels and over 100 medium to very large ocotillo, some 14 feet tall, many nice large cereus cuttings and a few other cacti bringing in \$5,700. We also invited our member businesses to sell with us, five were able to do so on short notice.

Through our email lists and postcard mail list we reach out to over two thousand customer's. While December is not exactly the month most have gardening on their minds, we had over 110 customers purchase 415 plants in a few hours. Thirty TCSS volunteers made quick work of setting up and getting cacti loaded in customers cars and trucks. Not having a truck did not discourage anyone from taking home one of the large ocotillo or cereus cuttings.

A big thanks to the developers, Pima County Department of Transportation, Tucson Electric Power, U of A and Vail School District, who go the extra mile to be sure these plants are saved. The unending labor from our all volunteer TCSS Cactus Rescue Crew and great customers who give these plants a new home makes this program a huge success.!

Joe Frannea

TCSS BOARD

Officers

President: Richard Wiedhopf
885-6367

Vice President: Vonn Watkins
Secretary: Dave Moyer
Treasurer: Joe Frannea

Board of Directors:

(Ending Dec. 31, 2010)

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Martin (Marty) Harow
William (Bill) Hicks
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Ed Bartlett
Mark Dimmitt
Joie Giunta
Bill Salisbury

(Ending Dec. 31, 2012)

Chris Monrad
Dale Johnson
Keimpe Bronkhorst

CSSA Affiliate Rep:
Bill Holcombe (2011)

Cactus Rescue
cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad
Educational: Joe Frannea
Free Plants: Chris Monrad
Librarian: Joie Giunta
Programs: Vonn Watkins
Refreshments: Patsy Frannea
Technology: Kevin Barber
Research Grants: Gerald Pine

Editor: Karen Keller
runbunny@cox.net
Deadline for copy: 15th of each month

TCSS Web Page:
www.tucsoncactus.org
Webmaster: Keimpe Bronkhorst

Everyone is Welcome!
Bring your friends, join in the fun,
and meet the cactus and
succulent community.

December Refreshments

Those with family names beginning with Q, R, S, T and U, V, W 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

January 2010	
Thursday, January 7, 2010	7:00pm Monthly meeting: Presented By Doug Dawson. "South Africa - The Northern Cape Part II."
Tuesday, January 12, 2010	7:00pm Board Meeting at the U of A College of Pharmacy

Acknowledgement of Contributions: September, October, November & December, 2009

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

Scott E. Calhoun
Karen & Lon Chaney
George E. Dodds
Dave & Susan Gallaher
William & Adella Hicks
Douglas C. Jones
Darrell & Brenda Loffi
Angela & Larry Miller
Fred Miller
Michael O'Connell
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Conservation

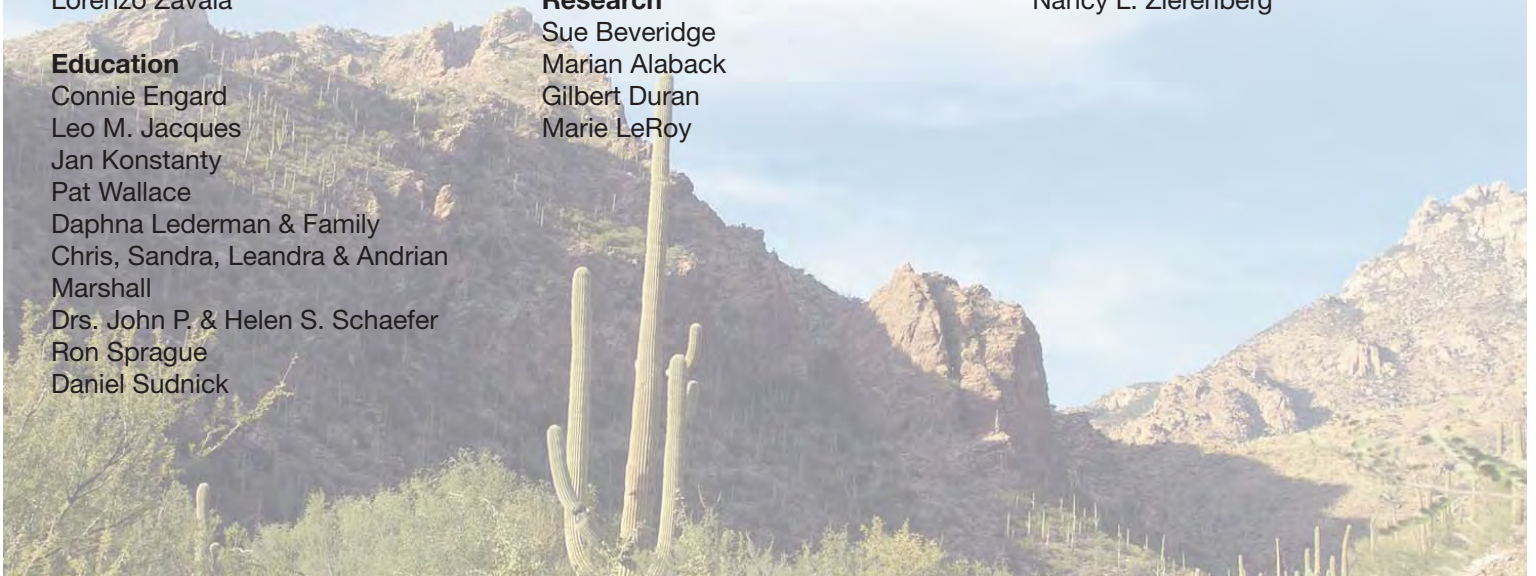
Robert & Vanessa Dearing
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Jan Konstanty
Pat Wallace
Saralaine Millet
Patrick O'Connor
Aeyn Ricks
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Joe & Patsy Frannea
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Dick & Sue Hildreth
Peter & Evelyn Hubbel
Chris, Sandra, Leandra & Andrian
Marshall
Joan McGann
James & Lynne Owens
Margaret Pope
Linda Ryan
Pat Wiedhopf
Nancy L. Zierenberg





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Newsletter of the Tucson Cactus and Succulent Society

February 2010

Thursday, February 4, 2010 at 7:00 PM

"Unusual Agaves, Aloes, and Yuccas"

Presented by Chad Davis - Curator of Agavaceae, Aloaceae, & Nolinaceae at the Desert Botanical Garden



Agaves, aloes, and yuccas are fascinating plants that feature bold forms, as well as dramatic colors and textures for our hot desert landscapes. The vast array of sizes, colors and forms makes them useful both as accents and specimen plantings. This presentation will focus on some spectacular, yet underused, agaves and yuccas, as well as durable aloes that can tolerate our climatic extremes. We will discuss preferred site selection, maintenance practices, potential cultural problems and pest of these amazing plant groups. Special attention will be given to large arborescent species of aloes and yuccas.

Chad has been with the Desert Botanical Garden since 2002. Prior to his promotion to Curator of Agavaceae, Aloaceae, & Nolinaceae in 2003, Chad served in the Security Department as a Ranger at the Garden.

As the Curator of Agavaceae, Aloaceae, & Nolinaceae, Chad curates and maintains three primary plant collections in the Garden. This entails tracking of collections, acquisition and propagation of suitable plant material, designing and planting of garden displays and serving on internal Garden committees. He regularly works with volunteer groups, has obtained and maintains a Certified Pesticide Applicator License, as well as teaching in the Garden's Desert Landscaper School. Chad has designed and installed the Arizona Agave Beds, expanded the Aloe

Collection/displays in the Garden, coordinated the installation of the Succulent Gallery and the new Berlin Agave & Yucca Forrest. He has given numerous presentations to environmental groups and garden clubs such as the Arizona Native Plant Society, Central Arizona Cactus and Succulent Society and McDowell Park Association, as well as leading a workshop during the Cactus and Succulent Society of America National Convention. He is a regular contributor to the Garden's Sonoran Quarterly and has appeared on local and nationwide television shows.

Chad received an Associates of Applied Science in Urban Horticulture from Mesa Community College and is currently pursuing a Bachelor of Interdisciplinary Studies (BIS) degree combining the disciplines of Landscape Architecture and Urban Horticulture at Arizona State University.

Please make sure you attend this excellent program and welcome Chad as our guest speaker! This will be a great opportunity for every member. Please join us, bring a friend and come enjoy your evening!

Thursday, March 4, 2010

"Native Succulents of the Eastern United States"

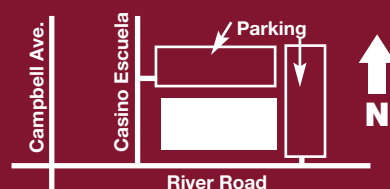
Presented by Michael Chamberland

Free Plants and Door Prizes

Plants for February are in the genus *Mammillaria*. Please refer to the comprehensive article in this month's *Desert Breeze* for cultivation tips.

A double-serving of specimen plant door prizes is offered for this month's meeting to make up for last month!

Meetings are held on the first Thursday of each month.



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

President's Message



SONORAN VIII May 14 - 16 InnSuites Hotel Civic Center

In 1996, we initiated this regional conference to celebrate the success of the 1995 CSSA Convention and thank all the TCSS members for their hard work. The purpose of this regional conference is to learn about growing succulent plants in the Sonoran Desert and especially, Tucson and vicinity. The format for the conference was established so that best parts of a CSSA

convention could be rolled up into a regional conference. May 14th is set-up, activities are open on May 15th and 16th.

The TCSS Plant Show. This is an opportunity to show to the public examples of the diversity of cactus and other succulent plants. Our hope is to provide an educational showcase for these plants and to engage the public and answer questions. Rather than a competitive show we ask the public to vote on their favorite plants by giving them 10 beans to place in the voting box next to each plant. At the end of the show the beans are counted and the owners of the plants receive a small award. It's not 1st, 2nd, 3rd, but "Oh Boy", "Gee Whiz", "Wow" in no particular order. It is fun for the public, especially kids, and everyone gets an "I Voted" sticker. The plant show admission is free and open to the public.

The Plant Sale. This is one of the highlights of any gathering of plant enthusiasts. The first preference of vendors goes to our member nurseries and businesses. They are tremendously supportive of TCSS and this is an opportunity to highlight them to the public. The sale consists of plants, pottery, books and other plant related items. We also have plants from our rescue program available for purchase at this sale. The sale admission is free and open to the public.

Silent Auction. There will be a wonderful assortment of plants and related materials up for bid at this silent auction. If you are registered for the conference you will have a bid number otherwise you just sign in at the registration desk on Saturday May 15 and then place your bids. The auction closes on Saturday just before the start of dinner. Your donations of special plants or plant related material are always welcome and rules governing reimbursements for high value items will be available next month. The silent auction will be in the Lobby of the Hotel and open to the public.

Speakers and Workshops. This portion of Sonoran VIII requires registration and payment of fees. Each registrant will hear 5 speakers, attend 5 workshops of their choice, lunch and dinner on Saturday May 15 and closing lunch on Sunday, May 16. Workshops are limited to about 20 participants so there can be a lot of interaction in the hour and 20 minute long time frame. There will be plenty of time to shop at the plant sale on Saturday and Sunday mornings. The fee for this portion of Sonoran VII will

be \$120 which is a great price for 5 speaker, 5 workshops, 2 lunches, dinner and more. We do limit this to no more than 100 attendees so it is a first-come first-serve event. Registrants will get their choice on workshops based on the date of registration.

Special Dinner Speaker: The Saturday, May 15 dinner and speaker will be available to all TCSS members and guests, whether you are or are not registered for the conference. There will be a small charge and RSVP required for those who are not registered, but well worth it. Our speaker for this evening event is Deborah Lee Baldwin, award winning writer, editor, artist and photographer. Her 2007 book "Designing with Succulents" is in our library.

The complete list of speakers, workshops and vendors will be available soon, along with registration materials. These will be sent to all members and also available on our website. I hope you will continue to support this event.

Thank you

Dick Wiedhopf, President

Library Update

"A Field Guide to The Aloes of Malawi" by *Stewart S. Lane*
Thirty-two aloes are described and divided into five groups. The author gives a description of the plant and the flowers. The back of the book has a page on flowering times.

"Cactaceas de Sonora, Mexico: su Diversidad, Uso Y Conservacion"
Rafaela Paredes Aguilar, Thomas Van Devender, Richard S. Felger
Donated by Mark Dimmitt this book is written primarily in Spanish. The color photographs has Spanish and English descriptions.

"Chile Nuestra Flora Util"
This book written completely in Spanish.

"Tequila Exploring the Legend" A Desert Speaks DVD
David Yetman travels to Jalisco with ecologist Albert Burquez and Ana Valenzuela to inspect the history and production process of tequila.

"Desert Living is Different An Environmental Guidebook for Newcomers"
Written and Illustrated by K-12 Students. Written for the newcomer, this book is a quick read but quite informative for the person new to Tucson.

Joie Giunta

President's Award

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Mammillaria

A Genus for Everyone

By Norm Dennis

One of the perennial favorite genera for cactophiles is Mammillaria. The genus is commonly referred to as Mamms or pincushions. The reasons for this are several: a wide range of forms, profuse flowers twelve months of the year, cultivation demands that range from very easy to challenging, the presence of local species, mostly inexpensive and locally available from nurseries.

The genus ranges from the southwest US to Texas and down to the northern part of South America and some Caribbean islands. Most species are found in Mexico, but Arizona has *M. grahamii*, *M. thornberi*, *M. heyderi*, *M. mainiae*, *M. wrightii*, and *M. lasiacantha*. They are characterized by: tubercles or nipples, areoles on the end of the nipple, flowers from the axils at the base of the nipples, and a fleshy fruit containing the seeds.

Mammillarias typically have two growth forms. Here is a cylindrical form of *M. fraileana* and a globose form of *M. deherdtiana*.

Flowers emerge from the previous years growth and open during the day. They can be solid or striped, in pink, red, white, yellow and cream. Some



M. fraileana



M. deherdtiana

species when injured will exude a milky latex sap. Many Mamms develop showy red fruits, which can persist for several weeks or until found by rodents, birds and ants who in turn disperse the seeds.



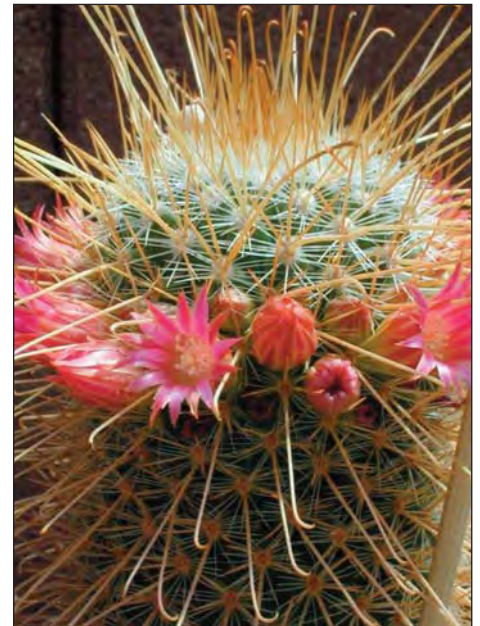
M. haageana



M. rubrograndis

In Tucson, starting in January and February, *M. haageana*, and *M. rubrograndis* are two examples of good bloomers. They may also be acclimated for use as landscape accents in filtered light.

Cultivation includes many different aspects. For the most part, all of the species can be grown inside on the windowsill. Of course some will get quite large with age, forming impressive multi-headed clumps, while others will remain small. *M. magnifica* pictured below will make clumps up to three feet across, while *M. herrerae* stays small enough to fit in a 6 inch pot. Many of the larger forms are appropriate for use as landscape plants in less sun intense areas.



M. magnifica

Typically Mamms prefer a very open potting mix with 50% or more inert material such as pumice. They do best if watered only after the soil has dried out during the growing season, which usually falls in the months March through October here in Tucson. Of course your conditions may vary. Monthly feeding during the growing season with ½ strength balanced water-soluble fertilizer is a good recommendation, or use a time-released fertilizer for convenience. Regular feeding will encourage growth and flowering.

Some growers keep their plants in heated greenhouses and have the benefit of a longer growing season,

while other growers have plants outside with only protection from rain overhead. Of course there are some species that benefit from our winter rains like *M. grahamii* and *M. heyderi*. Others are prone to rot when watered too much, especially with lower temperatures. Also pictured on the following page is *M. grahamii* along with *M. heyderi* v. *macdougalii* – both of these are local species.

With good care, many species of *Mammillaria* can grow into nice specimen plants faster than one might expect. For example, *M. plumosa* can grow from a two inch plant to a 16 inch plant as pictured below over a period of 7 years. An important precaution is that *M. plumosa* is very sensitive to over watering, and in addition should only be watered from the sides or below, and never on the top of the plants – otherwise the plant is very likely to rot. A shallow pot is recommended rather than a deep one that can stay too wet.

In a period of 5 years, *M. hahniana* can grow from a two inch plant to a 10

inch or larger specimen plant and flower each year. This species offers a good opportunity as it is easy to grow and readily available. Some forms (as pictured) are *M. hahniana* forma *supra*, and are known for their ready formation of offsets and clumps.

Of course, many of us are unable to provide the space for large plants, so why not grow a specimen of one of the many small Mamms, such as *M. huitzilopochtli*. Over a period of 5 years, the plant may attain a size of 8 inches.

Some of the more difficult species include *M. tetrancistra*, *M. lasiacantha*, *M. humboldtii*, *M. solisiodes*, *M. albicoma*, and *M. glassii*. These are sometimes available from our local nurserymen. Easy species include *M. hahniana*, *M. magnimamma*, *M. spinosissima*, *M. haageana*, *M. compressa*, *M. gemnispina*, and many others. Most of these are easily found in our local nurseries, along with dozens of other species in the genus.

If you are curious or want to grow *Mammillaria*, you will find yourself in

good company. The TCSS has several members who are fans of the genus, as are our nurserymen. So be sure to ask questions of our members and growers – take advantage of their experience to enhance your fun in growing these always popular plants.

If you are reading this and are not in the Tucson area, remember to consult with your local experts for more information on growing mamms in your area.

For additional information on *Mammillarias*:

Book: "**Mammillaria**", by John Pilbeam 376 pages., 425 color photos

www.tucsoncactus.org/cgi-bin/MySQLdb/DisplayCollection.php?Collection=Gallery5

mammillaria.forumotion.net/forum.htm

www.mammillarias.net



M. grahamii



M. heyderi v. *macdougalii*



M. herrerae



M. plumosa



M. hahniana forma *supra*

Matt Johnson & Pat Rorabaugh

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I have only briefly described some of the things that these four members have accomplished for the Tucson Cactus & Succulent Society. The list goes on and on.

Thank you and congratulations.

Dick Wiedhopf, President

SAVE THE DATE

The next free TCSS Desert Garden Tour will be Sat. March 20, 2010. 9:00 am - 3:00pm. There will be 5 member gardens to visit, located in the West and Northwest part of Tucson. More details to follow. taking home one of the large ocotillo or cereus cuttings.

George Virtes, Jr

January 8, 1943 – January 7, 2010



George was a special part of the Tucson Cactus and Succulent Society and along with Gail, helped it grow to more than a thousand members. When volunteer efforts were needed George was always there to help. He had a passion for being involved. It was never too hot or too cold, too hard or too easy, too much work or too little effort, it was what it was and he was there with Gail to help. I and so many others who knew him will miss him and think of him often. We express our thoughts of sympathy to Gail and all his family.

If you would like to share your thoughts and memories about George or just read what others have to say, visit www.rubinmemorialchapel.com, click on obituaries. It will take you to a memorial guest book.

TCSS BOARD

Officers

President: Richard Wiedhopf
885-6367

Vice President: Vonn Watkins

Secretary: Dave Moyer

Treasurer: Joe Frannea

Board of Directors:

(Ending Dec. 31, 2010)

Linda Bartlett

Martin (Marty) Harow

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Joie Giunta

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Chris Monrad

Dale Johnson

Keimpe Bronkhorst

CSSA Affiliate Rep:

Bill Holcombe (2011)

Cactus Rescue

cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad

Educational: Joe Frannea

Free Plants: Chris Monrad

Librarian: Joie Giunta

Programs: Vonn Watkins

Refreshments: Patsy Frannea

Technology: Kevin Barber

Research Grants: Gerald Pine

Editor: Karen Keller

runbunny@cox.net

Deadline for copy: 15th of each month

TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

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 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

February 2010

Thursday, February 4, 2010	7:00pm Monthly Meeting, "Unusual Agaves, Aloes, and Yuccas", presented by Chad Davis, Curator of Agavaceae, Aloaceae, & Nolinaceae at the Desert Botanical Garden in Phoenix, Arizona
Tuesday, February 9, 2010	7:00pm Board Meeting at the U of A College of Pharmacy
Thursday, February 18, 2010	7:00 - 9:00pm Aloe Round Table Discussion

**Photos taken
 by John Durham**



How many rescued plants can you fit in one trailer? (Stacking and transporting can become quite a challenge at times.) Our hardworking crew dug well over 200 ocotillo and barrels at the UofA Science and Technology Park recently before new construction grading.



TCSS Rescue Crew volunteers line up ocotillo for tagging and sorting before they get loaded for transport to our holding area.



At the conclusion of a cool and windy morning dig, the rescue crew shuttle, tag and load plants.



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

March 2010

Thursday, March 4, 2010 at 7:00 PM
**"Wild Cacti and Succulents
in the Eastern USA"**

Presented by Michael Chamberland,



Succulents in the eastern States are isolated in small areas of special habitat. Many are rare and local, little known, and seldom illustrated in mainstream wildflower guides. Succulent plants are few and rare in the northeastern States. The number of succulent species increases exponentially as one travels into the southern States, with Florida possessing more succulents than the other eastern States combined. The number of succulents increases as one travels south through Florida, culminating in the Florida Keys, where columnar cacti and arborescent prickly pears grow. This is the northern margin of the Caribbean flora. Non-native succulent species in Florida include aloes, crown-of-thorns, kalanchoe, Epiphyllum, and some other cacti. The non-native succulent species are almost as numerous as the native succulents in Florida. But they have not become truly invasive like the worst of Florida's exotics. In other States, the introduced succulents are principally sedums and other Crassulaceae, usually of minor and short-lived occurrence.

Michael Chamberland is the Curator of Horticulture at the Tucson Botanical Gardens. He has studied plants at the University of Connecticut and Arizona State University. With a degree in Botany, he has worked both in herbaria and botanical gardens around the USA. Michael has mounted numerous treks into the most remote and forbidding parts of the Eastern States. Having lived to tell about it, he will shed light on the myths and dark secrets of this little known part of the succulent world.

This will be a very special program that may open your eyes to plants you never thought would be growing in the eastern states. Please bring your friends, join us and welcome Michael as he takes the floor and presents a much needed subject to our club.

Thursday, April 14, 2010
**"Taxonomy For Cactus Lovers:
Latin shouldn't be Greek to you"**
Presented by Mark Dimmitt

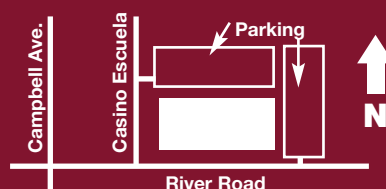
**Free Plants and Door Prize
Golden Barrel,
Echinocactus grusonii**

Native to Mexico (Queretaro) where it is endangered in the wild. This plant is fairly slow growing to 3 feet tall (90 cm), 3 feet in diameter ultimately.

The Golden Barrel is one of the most commonly used and widely available landscape cactus in the American Southwest. It is popular for its golden spines that keep looking attractive after several years. The Golden Barrel has 1.5 to 2 inches (4-5 cm) yellow flowers from end of March to end of April. The flowers are produced only on mature specimens receiving enough full sun. The flowers are not very visible being small in relation with the size of the barrel, and lost into the creamy colored wool at the top of the globe. Water generously in summer.

www.deserttropicals.com/Plants/Cactaceae/Echinocactus_grusonii.html

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



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

President's Message



Don't be fooled by our weather. We still have more than a month to go before we are sure that a hard freeze possibility is over. If all this rain and warmer weather seems too good to be true, it probably is. This is the time to be vigilant.

It is also the time of year when many of the botanical gardens have their spring sale. I can't wait to go to them in hopes of finding that species or specimen that I can't live without.

The Desert Botanical Garden (Phoenix)

The plant sale is a one-stop shopping experience with one of the largest selections of arid-adapted plants available in a single location. Garden Members' Preview: Friday, March 19, 7 AM-5 PM. Open to the Public: Saturday, March 20, 7 AM-5 PM. and Sunday, March 21, 9 AM-5 PM. Tucson Botanical Gardens (Tucson) Visit the Gardens this March for a new twist on our spring plant sale – the New Leaf Plant Sale. Vendors will feature one or more “new plants” – plants recently brought into cultivation, new cultivars or “retro plants” that are returning to popularity. They will have a wide selection of other plants.

Members sale Friday, March 26, 5-8 PM.

Saturday, March 27, 9 AM – 4 PM.

Tohono Chul Park (Tucson)

This year featuring the mint family genus *Agastache*, also known as giant hyssop. Of course, Tohono Chul will present the usual rogues' gallery of native and drought-adapted plants, many of them available nowhere else. Come and see the largest selection of Penstemons anywhere in the Southwest, as well as an impressive assortment of cacti, shrubs, wildflowers, trees, herbs, vines and groundcovers. Bring your wagon - Sale is in Propagation - East side of the Park

Members Preview: Wed., March 17, 3-6 PM Public Sale: Sat., March 20, 9AM TO 5PM & Sun., March 21, 10AM TO 4PM

Boyce Thompson Arboretum

This important seasonal fundraiser helps support botany conservation and education at the Arboretum - and offers our members and visitors two weeks worth of great savings on a wide selection of drought-tolerant cacti, agaves, herbs, trees, shrubs, wildflowers and other plants ideal for landscaping here in our Sonoran Desert. **Spring Plant Sale March 12 - 28 daily from 8:00 AM to 5:00 PM. during business hours**

Most important to remember: Visit our member Cactus and Succulent businesses. They really deserve our support for all the good things they do for this society

Thank you

Dick Wiedhopf, President

Library Update

Cacti of Texas in their natural habitat by Gertrud & Ad Konings

After a brief explanation of what is a cactus, the authors take you through 120 different species of cacti. A two-page photographic spread is devoted to each species, showing close-ups of the flowers and spines. There isn't a lot of text, but the photos make up for that. The last pages show a distribution map for each species.

Wild Orchids of Arizona and New Mexico By Ronald A. Coleman

Arizona has 26 native species of orchids New Mexico has 28. From March through September orchids can be found in the area. This book has 30 pages of color photographs as well as illustrations with line drawings, maps, genus and species keys for plant identification.

Joie Giunta

The Propagating of Cactus and Succulents Roundtable Discussion

**March 18, 2010 from 7:00 to 9:00 PM
Junior League of Tucson • Kiva Room
2099 East River Road**

On March 18, 2010 we will be having a very good roundtable discussion that will be freely open to all our members interested in propagating Cactus and Succulents. When to propagate, what plants to select for propagation, the planting of seed, rooting plant cuttings, etc. We will be asking some of our best local nursery owners to come out and express some of their experiences with everyone and to let everyone know what they might do. There will be lots of questions and a chance for everyone to express their own ideas and techniques. Please mark your calendar now and on March 18, come out and ask questions, get answers and enjoy talking with others that will share their experiences.

FUNFEST Cactus Model Project

There are two upcoming events where we have been invited to bring our education outreach cactus model exercise. The first is the Pima Community College NW Campus Earth Day event on Wednesday, April 21 and the second is the "Math & Science Experience at Cochise College" on Friday, May 7. In preparation for these events we are planning a brainstorming meeting (not a work party!) on Wednesday, March 10 at 7:00pm at the U of A School of Pharmacy. There are three major topics for this meeting: 1. To consider changing the title of our exercise to focus on learning about cactus and downplay the "arts & crafts" aspect of building a model; 2. To come up with ways to adapt this exercise to high school and college levels (the original exercise is aimed at upper elementary and middle school students). 3. To reflect on the experience of the past 2 FUNFEST's, to tweak the exercise to make it better. Anyone who is interested in the TCSS Education Outreach Program is encouraged to attend this meeting, and previous FUNFEST volunteers are especially

TCSS Desert Garden Tour - March 20, 2010

The second in a series of self guided TCSS member Garden Tours will be Sat., March 20th, 9:00 am- 3:00pm. Visit 9 of our member's gardens and see how they grow, maintain and display their cacti and succulents. Homeowners will be available to answer your questions. The tour is free and open to TCSS Members and Guests. It is recommended that members wear their TCSS badge. We have grouped the gardens on the West/Northwest side of Tucson for your driving convenience. There are two gardens in the Casas Adobes area and seven more southwest of the Silverbell/Ina intersection. Please park only on streets adjacent to the home. Brief garden descriptions and driving directions are listed below. More detailed garden descriptions and photos will be posted on the web in mid March. Please vary the order to your convenience, but the last five can only be accessed by checking in at the gate on Abington Road and exiting onto Sunset Road.

*Look for the green TCSS signs and balloons

*1. BILL & ADELLA HICKS - 1061 W. Safari Drive

A variety of cactus and succulents have re-vegetated this landscape in a natural desert setting dotted with native trees, shrubs and ocotillo. Enjoy many outstanding specimens in an eclectic mix of the owners' interest in succulents, whimsical yard art and a small zen garden treat.

From Oracle and Orange Grove drive west on Orange Grove to Caravan Lane. Turn left and follow Caravan to the end where it turns left into Safari Drive. Continue to 1061.

2. NEDRA WILLIAMS - 1651 W. Calle del Santo

Enter this backyard landscape through a lovely mature patch of native desert. Inside you will find a wide variety of cacti, succulents in the ground and containers. Large mature Senita and Organ Pipe dot the property and enjoy the serenity of falling water and a large Koi pond

From Orange Grove and La Canada go west on Orange Grove, take the first left, Pomona Rd, and drive south to corner of Pomona and Calle del Santo. Tour entrance will be there, but you can park on Calle del Santo too.

3. MARCIA LINCOLN & VICTOR ONG - 6701 Waycross Road

Save plenty of tour time to meander around the many paths in the "tamed" 2 acre main yard on this 13 acre property. You'll discover a wealth of cacti and succulent specimens, desert adapted trees/shrubs, and a huge enclosed vegetable and fruit tree garden. A mini-farm of turkeys, chickens, dwarf goats and an old macaw will simply delight you. A restroom will be available at this garden.

Drive west on Orange Grove to I-10 and take the frontage road up to Ina. Turn left and take Ina to Silverbell. Turn left on Silverbell and go about 1 mile to Belmont Road. Turn right on Belmont, and drive west to Waycross Road about 0.8 mile. Turn right on Waycross and drive to 6701. (About 0.3 mile)

4. STAN JANKOWSKI - 5790 W. Crystal Valley Court

Several additions of rescued plants blend from this property into the natural surroundings and 360 degree views from this hilltop retreat. Interesting succulents and vines dot both the front and rear patios with garden sculpture accents. A rare saguaro branch tip is rooted and growing.

From Waycross and Belmont drive back east on Belmont to Abington Road. Turn right and take Abington Rd. to Crystal Valley Ct. Turn right and proceed to cul de sac. (A steep winding driveway will give your legs a workout)

5. VISIT FIVE MORE MEMBER GARDENS INSIDE "TUCSON MOUNTAIN RESERVE"

From garden #4 go back to Abington Road, turn left and go north to the gated entrance on your right. (A detailed map and driving instructions will be handed out at the gate when you enter this development) The TCSS Rescue Crew is very fortunate to have several active crew members who live in this gated community. Along with their many hours of labor for TCSS, they have worked as a team to add over 100 native plants to many of the islands and entrance features of TMR. Also, as they have landscaped their own yards you can see that they have incorporated numerous rescue plants to gently blend their housing into the surrounding natural desert.

JOE & BEVERLY BANNON - 6175 N. Tucson Mountain Drive

Providing a dramatic silhouette, ocotillo line the entrance ridge to this home and rescued plants enhance the landscape throughout. Many cacti and succulent specimens dot both front and rear patios and a unique water fountain adds a special touch.

KENDALL ELMER, MARGIE & SAM WOODRICH - 5595 W.

Tucson Mountain Place A hidden delight nestled on the side of a hill surrounded by a re-vegetated native plant pallet with additions of yucca and agave specimens. An intimate rear patio includes a soothing koi pond surrounded by relaxing ramada seating, many container specimens, and accents to attract both bird and butterfly visitors

JERRY & MARGO ESTRUTH - 5756 N. Tucson Mountain Drive

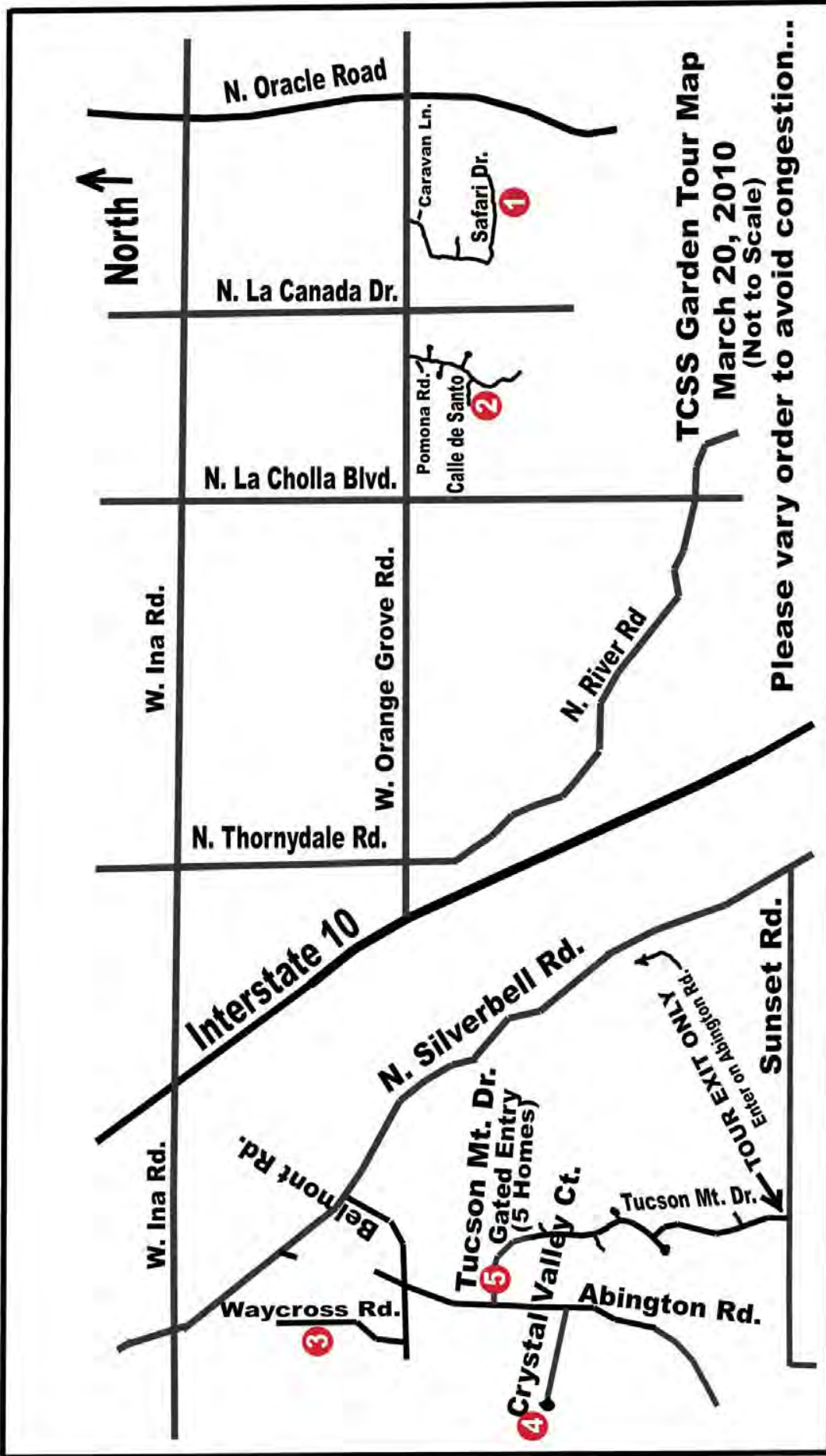
With emphasis on using mostly native and rescued plantings in their landscape, the owners also have a special tended nursery of saguaro seedlings, pinecone cactus and mammillaria. Expansive mountain and city views enhance the beauty of this setting.

NOE & LUCILLE MAYOTTE - 5475 W. Four Barrel Court

A recent conversion to a low water use landscape design makes this a must see for those wanting to benefit from the cost saving advantage of using native plants in their garden. Dramatic specimens adorn the entrance and you'll find an impressive collection of saguaro and other plantings along with a commanding specimen of Mexican Grass Tree in the back patio.

BILL & LYNN RAMSTAD - 5415 W. Four Barrel Court

This is a "drive by only" viewing to see the attractive use of our rescued plants to enhance the street scape landscaping in this natural desert setting. **From here you will return to Tucson Mountain Drive, turn left and exit through the gates onto Sunset Road.



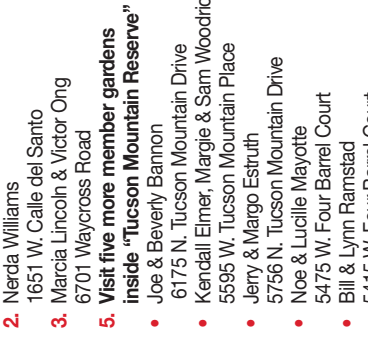
1. Kendall Elmer, Margie & Sam Woodrich
5595 W. Tucson Mountain Place



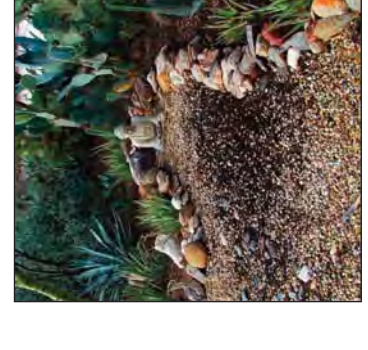
2. Joe & Beverly Bannon - 6175 N. Tucson Mountain Drive



3. Stan Jankowski - 5790 W. Crystal Valley Court



4. Bill & Adella Hicks - 1061 W. Safari Drive



5. Nelda Williams
1651 W. Calle del Santo
Marcia Lincoln & Victor Ong
6701 Waycross Road
Visit five more member gardens inside "Tucson Mountain Reserve"
Joe & Beverly Bannon
6175 N. Tucson Mountain Drive
Kendall Elmer, Margie & Sam Woodrich
5595 W. Tucson Mountain Place
Jerry & Margo Estruth
5756 N. Tucson Mountain Drive
Noe & Lucille Mayotte
5475 W. Four Barrel Court
Bill & Lynn Ramstad
5415 W. Four Barrel Court

Some of Mark Dimmitts photos from his article on Growing Succulents in the Desert



Twenty five bulbs of *Lachenalia aloides* planted in a 14-inch square flat. This is the most common species in cultivation, and one of the most vigorous. It flowers in March in Tucson.



Lachenalia rubida is the earliest species, flowering in November in Tucson.



Lachenalia matthewsii is another miniature species, growing 4-6 inches tall. The yellow flowers appear in April.



Lachenalia viridiflora is a small species that blooms in February. The flowers on 6-inch spikes are a rare metallic blue-green color that is difficult to capture in print.



Lachenalia bulbifera is the largest species; the leaves and flower spikes can be a foot long. The flowers range from orange to red. This clone is a good red. It flowers March and sometimes into April if not too hot.



Two lachenalias of unknown identity found at Trader Joe's.



Lachenalia orthopetala is a small species, about 6 inches tall. The white flowers bloom in April.



**Some of Mark Dimmitts
photos from his article
on Growing
Succulents in the Desert**

Lachenalia mutabilis is named for the flowers which change color as they age. It flowers in March.



Lachenalia aloides var. *quadricolor* is the most colorful member of the genus.



Lachenalia glaucina is a robust plant with lavender flowers in March.



Lachenalia arbutnotiae bears bright yellow flowers in late March into April.

welcome. So put your thinking caps on and come join us to improve and expand this important community outreach project. If you have any questions or want more info see me at the regular TCSS meeting on March 4, or e-mail me at funfest@tucsoncactus.org.

John Swarbrick

Growing Succulents in the Desert by Mark Dimmitt

March 2010: Lachenalias at their peak in March

Winter-growing bulbs are a great source of winter and early spring color. A huge number of species occur in Mediterranean climates (mild, wet winters and hot, dry summers), including Europe, the Pacific coast of North America, South Africa, and parts of South America. Some of the showiest and easiest to grow are lachenalias, also called Cape hyacinths. The genus *Lachenalia* contains about 110 species from South Africa, of which a couple dozen are worth growing. Most species bloom in March in the desert Southwest.

Whether bulbs are succulents is an unsettled question. (See a discussion of the subject on the Desert Museum's website at www.desertmuseum.org/programs/succulents_definition.php) The fleshy perennating organ stores mostly starch, not water. The starch provides energy (and, when metabolized, produces water as well) for a surge of growth that enables the plant to complete its life cycle in a short growing season. Most bulbs do not sprout until the surrounding soil gets wet. A few bulbs use the starch and water to begin growing before the rains come; these are true succulents. Succulent or not, bulbs are definitely xerophytes, and are appealing to many succulent collectors.

Lachenalias can be grown in the ground if you don't have rabbits, packrats, or quail. They are best grown in pots on benches, and put on display when in flower. Plant a single bulb in a 4-inch pot, or several in larger pots in fall. (Larger pots produce bigger plants with more flowers.) A well-drained humus-rich medium is best. Begin watering when the nights fall into the 50s. Water sparingly until the leaves are well up, then keep the medium moist through winter. Be sure to feed them generously during the growing season. After the flowers fade and the leaves begin to turn yellow, stop watering and store in the pots in a dry location over the summer. (And separate the pots or cut off the old spikes. Otherwise seedlings will volunteer all over the place, and soon you won't know what you have.) Some species will rot if they receive much summer water.

Lachenalias are sporadically available from mainstream nurseries and mail order catalogs. You can purchase bulbs in the fall from specialty bulb catalogs. Some local nurseries offer them, and they occasionally appear at stores such as Trader Joe's.

Reference: "The *Lachenalia* Handbook". G.D. Duncan. 1988. *Annals of Kirstenbosch Botanic Gardens* vol. 17.

This article may only be reprinted with the author's permission.

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Tuesday, March 9, 2010	7:00pm Board Meeting at the U of A College of Pharmacy
Thursday, March 18, 2010	7:00 - 9:00pm The propagating of Cactus and Succulents Roundtable Discussion

Acknowledgement of Contributions December, 2009 – February 2010

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

Helen & Kevin Barber
 Martha Brummfield
 Jack J & Tena Byrne
 Jensine E. Ericksen & Donald M. Moxley
 Vernon & Diane Kliewer
 Arlene & Fred Miller
 Hal Myers
 Alyce Pennington & Rick Trapp
 Patricia Phelan
 Carol & Eric Schaffer
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 Jeff & Connie Woodman

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 Elizabeth Davison
 Cherie Gossett
 Michael & Linda McNulty
 Mobil Matching Gift Program (Joseph M. Frannea)
 Arlene & Douglas Ripley
 Margaret Pope & Norm Epstein
 Linda Burback

Part Time Help Wanted

Bach's Cactus Nursery Retail Sales Area

Call 8am to 5pm Mon-Sat

520-744-3333

Ask for Diane Bach



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

April 2010

Thursday, April 1, 2010 at 7:00 PM

"Taxonomy For Cactus Lovers: Latin shouldn't be Greek to you"

Presented by Mark Dimmitt,



Why are these two plants unrelated? The answer is easy if you know a little taxonomy.

This program will explain and richly illustrate the system of taxonomic classification (and nomenclature) in nontechnical language, explain its purpose, extol its benefits, and decry its considerable shortcomings. It will begin by reviewing an animal classification system, which everyone actually already knows (e.g., dogs, cats, hooved animals). Mark will then transfer this innate knowledge to the plant kingdom, with emphasis on succulents. He will show how to identify several of the plant families that we grow. Finally, he will explain the value of having some basic knowledge of plant nomenclature when purchasing plants for your collection (and fruits for your table).

Mark Dimmitt, Ph.D. formally majored in zoology throughout his college career, but also studied botany and ecology extensively. After earning his Ph.D. in Biology from the University of California at Riverside, he spent four years as a vertebrate ecologist in the California Desert District of the

Bureau of Land Management. He moved to Tucson in 1979 to become Curator of Botany at the Arizona-Sonora Desert Museum and in 1997 he became the Director of Natural History. This position allowed him to conduct field research and share oversight of the scientific aspects of the museum's operations. Mark has published numerous popular articles on horticulture (he is an avid plant hybridizer) and several articles on desert ecology. He is also the creator of the 'Desert Museum' hybrid palo verde. He is well known for his hybrids, especially his study of the adenium and various cacti. In 1999, he received the Friend Award from The Cactus and Succulent Society of America for his outstanding accomplishments with cacti and succulents. He has also co-authored a new book, "Adenium: Sculptural Elegance, Floral Extravagance". Mark is an excellent speaker and will deliver a program that should be extremely educational to everyone. Be sure to mark your calendar now and join us on "April Fool's Day" for a program you will really enjoy.

President's Message



Much thanks go to the Home Tour Committee which did an outstanding job in selecting and organizing the spring home tour. Nine homes were featured and I thank the homeowners for hosting over 100 guests who stopped by and enjoyed their plants and hospitality. I am certainly looking forward to the plans for the fall home tour.

I hope you had a chance to attend one or more of the spring plant sales. There is always something of interest

that I have to buy. Kevin Barber and I attended the Desert Botanical Gardens, member's sale that was held on March 19. We arrived at 7:00am just as the sale opened and it was crowded. People get up early to buy plants. They had some very interesting cacti and succulents that attracted our money as usual. We were able to say hello to many of our Phoenix area members who also attend or work at this sale.

We also had an opportunity to visit the new Agave and Yucca garden along with all the other newer planting. The garden keeps getting better and better. We need to have a society tour in the near future.

We checked out several other nurseries in the area and made our final stop at Arizona Cactus Sales, one of our member nurseries. They have always been strong supporter of TCSS and our rescue program. They have a large assortment of great landscape plants that makes it worth the stop. The Jeep was full and we headed back to Tucson.

You should have received by mail the information and registration for Sonoran VIII. It is also on our web site. I hope you will consider attending all or part of this conference. We do it for you!

The Saturday night dinner (May15) is open to all members (\$10.00) and guests (\$25.00). The speaker will be Debra Lee Baldwin, a very well known garden photojournalist and author from the San Diego area. Dinner is included for Sonoran VIII conference registrants.

Start getting your plants ready for the public show at Sonoran VIII. If you have a large number or large specimens we will have 2 trucks available to pick-up and deliver your plants.

Many volunteers will be needed to make this a success and in April we will be requesting your help with this event.

Thank you as always for the support of our activities.

Thank you

Dick Wiedhopf, President

Photos by Mark Dimmitt on his Taxonomy For Cactus Lovers



Why is this not a cactus? The answer is easy if you know a little taxonomy.



Why is this a cactus? The answer is easy if you know a little taxonomy.

GROWING SUCCULENTS IN THE DESERT

Ocotillo: Guaranteed to Flower in April

by Mark Dimmitt



Figure 1: A flowering ocotillo in the Tucson Mountains.

Ocotillo (*Fouquieria splendens*, Figure 1) is one of the most distinctive shrubs in the desert Southwest. Nothing else can be mistaken for it. It occurs in all three warm North American deserts. (The Great Basin Desert is too cold for it.) The species ranges from western Texas to the desert's edge in California, and from the base of the Mogollon Rim in Arizona to central Sonora and the central Baja California Peninsula. There is also a population in the Grand Canyon. The species is one of only 11 in the genus, which in turn is the only genus in the family Fouquieriaceae. The family has no close relatives.

Ocotillo is one of a tiny handful of our regional plants that flower every year without fail. They flower even after a year with no biologically effective rain events (roughly 0.2 inches). In 2002-2003 Tucson suffered a 13 month period with no rain over a quarter-inch. Ocotillos were the only plant that flowered well. Even prickly pears failed to bloom that spring, and the saguaro flowering was very sparse. Moreover, the flowering time is also very consistent. Around Tucson the

bulk of the population flowers throughout the month of April. To the west and south, where it gets warmer earlier, they flower a month or more sooner.

The spikes of beautiful bright red to red-orange flowers (Figure 2) borne at the tips of the long, mostly unbranched canes look like little torches, and some say that's the source of the common name. The word ocote applies to numerous species of pine tree, the pitch of which is used for torches. Ocotillo is the diminutive form of the word. The red-tipped stems do indeed look like little torches. Other sources say that the word means a coachwhip, also an apt name.

Is ocotillo a succulent? This author says yes, definitely. The plant has all the traits of a succulent except for swollen stems or leaves. They have widespread, very shallow root systems that can take up water after very light rains. They can also respond quickly to rain. Ocotillos are leafless during dry seasons (Figure 3). New leaves can be seen emerging from the stems just 24 hours after a summer rain, and will be fully expanded in about 5 days (Figure 4). This rapid response requires something that only succulents possess – idling metabolism. Nonsucculents such as creosotebush take a couple of weeks to resume full growth from their dormant condition. Succulents are never completely dormant; they maintain a low level of metabolism all year. Like an idling car that can rev up to full speed much faster than one that has been turned off over a subzero night, succulents can leap into full growth very quickly. The idling tissue in ocotillo is apparently the thin layer of green tissue just below the bark (Figure 3).

Ocotillos can produce two or more crops of leaves per year. After a wet winter, they leaf out when weather warms in spring (as early as January in the low desert, March in Tucson). They shed the leaves during the foreshummer drought, then leaf out again with the summer rains. The leaves turn yellow and drop a couple of weeks after the last rain. At higher elevations or late autumn in the desert, colder nights cause the leaves to turn orange before falling (Figure 5). Plants at higher elevations also often flower again in the late summer or fall. The population in Texas Canyon east of Benson is an example.

Hummingbirds are the primary pollinator in most ocotillo populations. In dry years ocotillo flowers are almost their only food source as they migrate into or through the Sonoran Desert in spring. The flowers are also pollinated by carpenter bees. Although these bees “cheat” by chewing holes in the bases of the flower tubes to get at the nectar, they still pick up pollen while crawling on the inflorescences. In the eastern part of ocotillo's range in Texas where there are few hummingbirds, carpenter bees are the main pollinator. The flower tubes are shorter there, and the bees don't have to

Continued on page 4

cheat. Other animals such as verdins and woodpeckers steal nectar by poking holes in the flower bases; they are probably not effective pollinators.

Ocotillos are easy to transplant, whether leafy or bare. It is crucial to excavate about a foot of each lateral root without breaking it. Plants from the wild that have been damaged by being roughly torn from the ground, breaking off or splitting the laterals, have a high mortality. Replant at the same depth as they were originally. Plants will reestablish more quickly if the canes are sprayed with water several times a day until they leaf out. Do not water the roots heavily until there are signs of new growth.

While ocotillo is a common, widespread species, there is concern that they are being overharvested for the landscape trade. Ocotillo cane fencing is especially popular. The cut wild plants will regrow, but it takes years. Seed-grown ocotillos have recently become available, and are a greener choice for your gardens. They grow rapidly with generous watering.

Future articles will feature some of the other excellent species of Fouquieria.

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Figure 2: An ocotillo inflorescence. This plant consistently bears unusually long spikes.



Figure 3: A leafless ocotillo stem. A spine has been bent aside to reveal the layer of thin photosynthetic tissue that probably provides the idling metabolism.



Figure 4: A stem in full leaf.

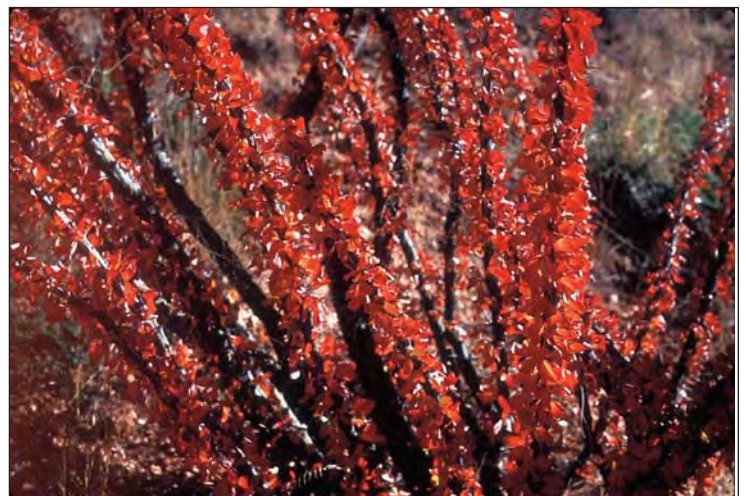
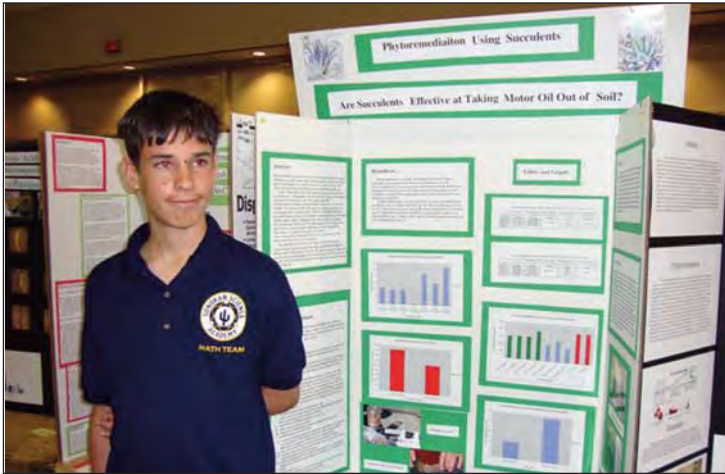


Figure 5: Ocotillo leaves turn orange in the fall if the nights are cold enough.

TCSS SARSEF Winners for 2010

The annual Southern Arizona Regional Science & Engineering Fair (SARSEF) was held in early March and TCSS awarded 10 prizes for the top student entries that had something to do with cactus and succulents. Thanks to Marty Harrow, Wendell Niemann, Patsy Frannea and John Swarbrick who spent the day going through over 1,300 entries to judge and give awards for these student projects. We will be inviting these winners to bring their science projects to Sonoran VIII so that you can see how they conducted their experiments and read their observations and conclusions.

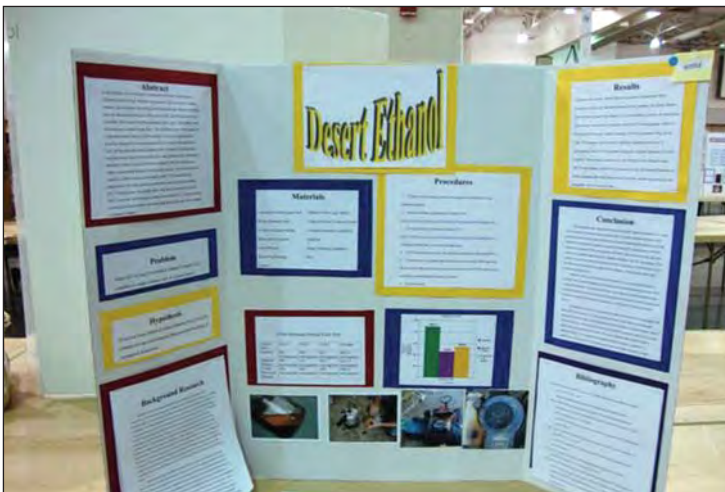
First Place: \$100, certificate and honorary TCSS Membership Phytoremediation Using Succulents ... Are Succulents Effective at Taking Motor Oil Out of Soil?



Arrick, a 7th Grade student at Sonoran Science Academy, used Aloes and Haworthias in his experiment to study the possibility of using succulents to break down toxic substances in soil. Phytoremediation is a green process where plants break down toxic substances in soil by using microbial degradations and accumulation and transformation of a toxic substance in a plant. Grass has been proven to work in this process but he thought that desert plants would be better to use in the desert because grass takes too much water. By carefully measuring his soil and motor oil contaminate before and after his 6 week experiment he determined that the Aloes took out 9% of the oil and the Haworthia removed 43%. He said that he would like to use Sonoran desert native plants for this experiment in the future but did not use them this time because he knew that they were not actively growing in the winter months

Second Place: \$75, certificate and honorary TCSS Membership

Desert Ethanol



Gareth & Jared, 11th Grade students at Empire HS, wanted to see if local plants could be made into a cleaner burning fuel. They tested emission levels for three different types of fuel; gasoline, standard ethanol and one that they made by distilling prickly pear fruit. They tested other desert plants, but found that only the prickly pear fruit was viable to test. They built a distillery to turn the fruit into a usable fuel, then tested the three fuels by running them through a lawn mower engine. They tested the emissions at the DMV using an emissions sniffer. The results were that gasoline produced the most unfavorable emissions, prickly pear the next and that well produced ethanol produced the least. They concluded that their prickly pear fuel wasn't as clean as standard ethanol.

Third Place (tie): \$50, certificate and honorary TCSS Membership

Cold Tolerance of Saguaro and Barrel Cacti



Sophie, a 5th Grade student at Castlehill Country Day School, wanted to help nurseries determine how cold they can keep their young saguaro and barrel plants. She purchased 3 samples of cacti from each species, exposed

her study plants to different time periods of freezing temperature and then observed their damage over 16 days. She concluded that Barrel cacti can survive exposure to freezing temperatures better than saguaros.

Don't Poke Me



Tori, a 3rd grade student at Cottonwood Elementary, took samples of several different thorns off of desert plants and wanted to know which one would go into skin and flesh the farthest. She compared them by

setting up an experiment that would let her measure the difference by dropping a raw chicken breast on each one. She did a lot of research of the different types and names of thorns on several native desert plants for this experiment.

Honorable Mention: \$25, certificate and honorary TCSS Membership

Can Cars Contaminate Cacti?



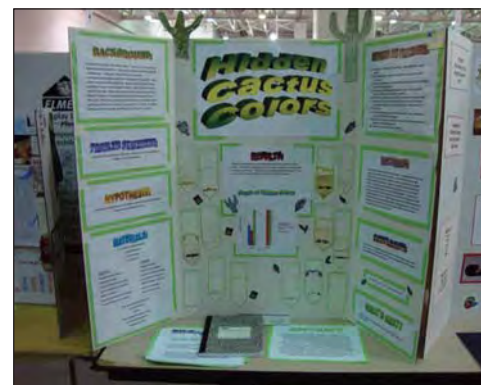
Jude, a 2nd Grade student at Painted Sky Elementary, noticed that when he goes for rides in the car he sees unhealthy cacti on the sides of the road and wonders if car pollution is making them sick. He exposed his sample cacti to car exhaust and then observed and recorded the results. He tested for pollution on the surface of the cactus using a pH indicator and there was more measurable damaging evidence on the exposed plants. He now wonders if other visual damage like spotting was caused more by the hot temperature of the exhaust, so he hopes to repeat the experiment and somehow control the heat.

Battling Buffelgrass... is Herbicide a Friend or Foe?



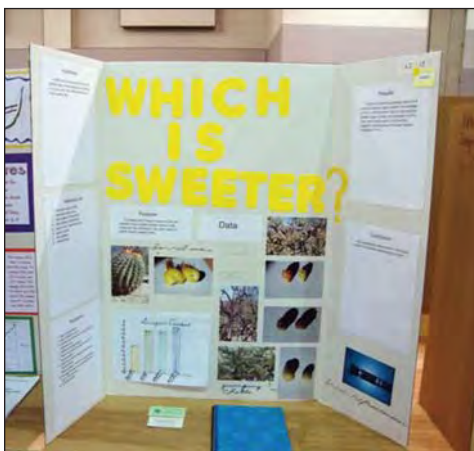
Caroline, a 10th Grade student at Pusch Ridge Christian Academy, set up an experiment to evaluate how the common herbicide proposed to be used by Pima County to eradicate buffelgrass will affect the buffelgrass as well as the surrounding ecosystem of the Sonoran Desert native plants. She observed some damage to the surrounding ecosystem and hopes that the County does more research before using herbicides for this effort.

Hidden Cactus Colors



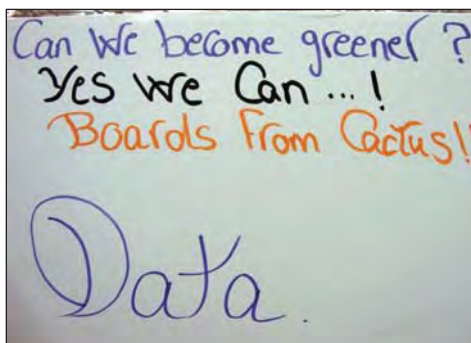
Andrew, a Kindergarten student @ Z Feil Home School, likes to create works of art and was wondering if he could get any usable colors from our native cacti. He compared them to colors he extracted from other plants. He found that the cactus samples didn't give him very much strong color compared to other types of plants he tested.

Which is Sweeter



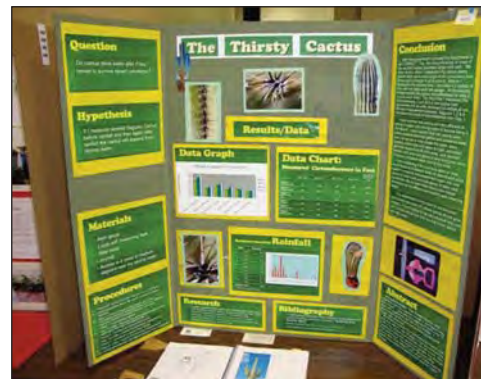
Ally, a 6th Grade student at Agua Caliente, predicted that barrel cactus fruit would have higher sugar content than cholla fruit because the animals in her yard eat more barrel fruits than cholla. She was surprised to find that barrel

Can We Become Greener



Rida, an 11th Grade student at Vail HS, made building boards from cactus fiber and then he tested the cactus boards to see if they would accept and hold paint and if they would hold up to having nails pounded into them. He concluded that his cactus boards worked quite well with both paint and nails.

Thirsty Cactus



Lilyann, a 4th Grade student at Richard B. Wilson Elementary, wondered if cactus store water after it rains in order to survive desert conditions. To find out, she took measurements of saguaro before and after rainfall and concluded that yes, she could tell by the difference in circumference that they did take in water quite noticeably.

Round-Table Discussion: Exploring the World of Seed Propagation

Thursday, April 15, 2010 from 7:00 to 9:00 PM
Junior League of Tucson • Kiva Room
2099 East River Road

On April 15, 2010 we will be having an exploratory round-table discussion that will be freely open to all our members interested in propagating Cactus and Succulents from seed. We hope to discuss member's experiences with seed, how to collect seed from many plants, seed storage, the prevention of pests, when to transplant and much more. We will be asking some of our best local nursery owners and amateur growers who have experience with pollination, seed collection, storage and various techniques for starting a seed garden to come out and express some of their techniques. There will be lots of questions and a chance for everyone to express their own ideas and experiences. Please mark your calendar now and on April 15, come out and ask questions, get answers and enjoy talking with others that will share what they know. We do encourage observation of ideas and the sharing of seed with those who attend.

Free Plants and Door Prize Gasteria Bicolor and other species

Gasteria is a genus of succulent plants native to South Africa. Closely-related genera include Aloe and Haworthia. The genus is named for its stomach-shaped flowers and is part of an expanded Asphodelaceae family.

Gasteria species should be grown in well-drained, sandy soils. The majority of the species prefer light shade and should be protected from direct sunlight or other extreme conditions. They do best in pots on patios in our climate. Inorganic pebble mulch can be placed around the plant to prevent weeds from growing and hold in moisture.

Watering should occur frequently in the spring, summer, and autumn, but should not overwhelm the plant. It is suggested to suspend watering the Gasteria in the winter.

New Rezoning Requirements Encourage Sensitive Sonoran Desert Design

By Julia Fonseca, Pima County

The Sonoran Desert Conservation Plan launched a number of local efforts to protect native plants and animals. The most recent part of the plan to fall into place came in March when the Pima County Board of Supervisors approved new rules that affect future rezonings. The new requirements affect three species of cacti: the saguaro, Pima pineapple cactus, and needle-spined pineapple cactus.

The site analysis will now require differentiating the six-foot and under size class of saguaros from more mature specimens during site inventories. Saguaros greater than six feet offer habitat for cavity-nesting birds, and are more difficult to

transplant. Having size class information at the time of rezoning can help promote more a site development layout that is more sensitive to biological resources.

The Pima pineapple cactus is listed under the Endangered Species Act. Rezoning applicants will now be required to use the Fish and Wildlife Service survey protocol. While inventory for this species was always required, using the FWS survey method will likely increase the chance of detecting this small cactus. Proposed rezonings located with the Priority Conservation Area for this species would be affected by this provision. These areas are primarily in the Altar Valley and the piedmonts of the Sierrita and Santa Rita Mountains.

A new requirement was also added requiring inventory of Needle-spined pineapple cactus. The Priority Conservation Area for this species is primarily located near the Cienega Creek Natural Preserve. To view Priority Conservation Areas for the two pineapple cacti species, visit the Sonoran Desert Conservation Plan mapguide site at: <http://dot.pima.gov/cmo/sdcpmaps/>. Zoom in and click the Priority Conservation Areas for each plant species.



Illustration by Bill Singleton, Pima County

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Deadline for copy: 15th of each month

TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

Everyone is Welcome!

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

March 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!

4 8 0 3 4
3

Cacti Rescued 238 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

Thursday, May 6, 2010

"Large Opuntias of the USA:
What Are They and Where Are They"
Presented by Joe Shaw"

Library Update

Dudleya and Hasseanthus by Paul H. Thomson

There are detailed species description of Dudleya and Hasseanthus from the author, Britton & Rose and others. A plate number is included to reference the photographs. Distribution maps are included. A section on horticulture includes culture, shade, propagation, pests and diseases. The general description section gives a page of the descriptive terms used along with line drawings, making it easy to associate what the author is saying. Measurements are in inches rather than metric

Joie Giunta

April 2010

Thursday, April 1, 2010 7:00pm

Monthly Meeting, "Taxonomy For Cactus Lovers: Latin shouldn't be Greek to you", presented by Mark Dimmitt

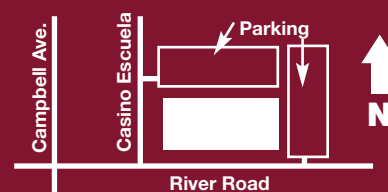
Tuesday, April 13, 2010 7:00pm

Board Meeting at the U of A College of Pharmacy

Thursday, April 15, 2010 7:00pm

TCSS Roundtable Discussion

**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

May 2010

Thursday, May 6, 2010 at 7:00 PM

"Large Opuntias of the USA: What Are They and Where Are They"

Presented by Joe Shaw



This program describes the large Opuntia species of the USA and provides photographic information about the plants, as well as information about where they occur. Information is presented for about 25 species of Opuntia. A 10-minute

follow-up talk will be presented that describes Opuntia-animal interactions; mammals, birds and insects.

Joe obtained his B.S. in Botany (UC Santa Barbara) and a doctoral degree in Plant Pathology at (UC Davis). He was an associate professor in the Department of Botany and Microbiology at Auburn University from 1988-1998. Since 1998 he has worked in the biotechnology industry, first mining the mouse genome for druggable genes and now as a medical/scientific writer. For the past few years he has collaborated with David Ferguson (Rio Grande Botanic Garden, Albuquerque, NM) to document the Opuntia species of the USA in a Web site <http://opuntiads.com>. Joe lives in Germantown, Maryland with his companion and dog.

This will be a special program for everyone to enjoy. Please join us for an excellent topic for all who have wanted to know more about these marvelous plants. Let's welcome Joe to our Tucson organization by coming out and enjoying the Opuntias.

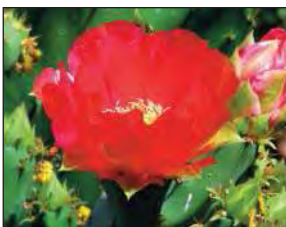
Thursday, June 3, 2010

"Travels in Africa and Arabia 6:

The Genus Sansevieria"

Presented by Bob Webb

Free Plants and Door Prize



1. Free plant (cuttings From Mark Dimmitt): Opuntia alta 'Fruit Punch'. Opuntia alta is a hexaploid species that originated as a natural hybrid between *O. engelmannii* lindheimeri and *O. stricta*. In 1999 Tom Wiewandt gave Mark Dimmitt a pad of a plant he collected near McAllen, Texas. It was the most colorful prickly pear he saw there, with reddish-purple flowers. Mark Dimmitt grew about 100 seedlings from this plant, and selected this clone as the best of them. 'Fruit Punch' is an extremely vigorous and floriferous cultivar. (The plant in the photo is a five-year-old cutting.) It is covered with large purplish-red flowers in May, and continues to grow new pads and some flowers through the summer. It comes from a

wetter, more humid climate, and needs supplemental water in southern Arizona.



2. Raffle plant (cutting): Opuntia unknown hybrid 'Tucson Ruby': This plant volunteered in the wash on Mark Dimmitt's property. It looks pretty much like a normal *O. engelmannii*, but it evidently crossed with one of the red-flowered plants in his yard. The flower color varies with the weather from blood red to red-orange to reddish-purple. 'Tucson Ruby' is a normal prickly pear in size, and is desert-adapted (plant it and forget about it). Flowers in May.

President's Message



This is your opportunity to spend a weekend with the Society at Sonoran VIII on May 15 & 16, 2010 with set-up on May 14. Everyone is welcome to participate to whatever extent meets your availability.

Let's start with the best deal, Full Conference Registration. You get 2 full days of workshops (5) of your choice and hear (5) special speakers talking about growing our favorite plants. Check out the speaker and workshop list it's outstanding. You

also receive in the full registration, lunch on Saturday and Sunday and a great dinner and speaker on Saturday night. You get all this and more for only \$120. There will be plenty of time to buy plants, books and art, view the plant show and participate in a great silent auction. **WHAT A DEAL!!!**

Almost every event is also available to purchase as a single ticket. You can purchase a ticket for each workshop you want to attend (\$15.00 each) or Lunch and a speaker on Saturday and Sunday are also available at \$15.00 each. The Society Saturday Night Dinner is specially priced for current members at \$10.00 and \$25.00 for guests. See the great list of speakers and workshops online or in this newsletter.

If you prefer to just volunteer your time Friday, Saturday or Sunday it would be greatly appreciated. There are 3 areas where we need special help. 1. Running cash registers at the plant sale. 2. Driving or assisting in the pick up of larger plants for the plant show, (we rent the trucks with lift gates) 3. Being on duty at the plant show. This is an inside job of monitoring the show and handing out beans to visitors to vote for their favorite plant. If you can help with these or many other volunteer positions during the weekend call 885-6367 and leave your name and day and evening contact information and we will get back to you.

Thank you in advance for your help in making Sonoran VIII a great success.

The University of Arizona, Campus Arboretum Spring Issue recognized the Society for its collaboration and contribution of plants to the Arboretum. A number of our members sit on the Advisory Board and a special note of congratulation to our member Libby Davison, Founding and current Arboretum Director, who is retiring. Libby, we all are proud of what you have accomplished.

A special get well to Harrison Yocum.

Thank you

Dick Wiedhopf, President

TCSS Is Given Award



On April 15, 2010 the SciEnTek-12 Foundation, the parent organization for the Southern Arizona Regional Science & Engineering Fair (SARSEF) and Funfest, held a SARSEF Awards and Recognition Reception where TCSS was recognized for it's support of SciEnTek-12 for over 5 years with the plaque shown above.

TCSS At Pima College Earth Day



On April 21, 2010 TCSS participated in Pima Community College NW Campus Earth Day event with an informational booth titled "Exploring Cactus - Unique Desert Survival Traits". We discussed with students the unique adaptations that cactus have developed to allow them to survive and thrive in the desert environment. This represents a new resource in TCSS's education outreach effort targeted at the high school and college level. Special thanks to Dave Palzkill and Norm Dennis in developing the materials and who provided the expertise to address the detailed questions raised by the visitors to our booth (shown below).

TRICHOCEREUS HYBRIDS EXPLODE IN MAY (AND BEYOND)

by Mark Dimmitt and Mark Sitter



A bed of Trichocereus hybrids in flower.

Trichocereus hybrids, sometimes called torch cacti, put on magnificent displays of large, brilliant flowers. Collectors will throw impromptu parties when all their plants bloom on the same day. Locally, blooms may start as early as mid March. However, the first big flush of blooms is usually in early May, followed by more through mid summer. The best cultivars will bloom massively every 10 days to two weeks over a span of three months. There are often occasional flowers in between the big shows, and sometimes continue into autumn. Each flush lasts one to three days. If you want to snarl traffic or cause streams of onlookers or photographers to congregate, these are the cacti you want to plant in your front yard or other public place.

First, a Taxonomic Note: Botanists have lumped most of the members of this large group of South American cacti in to the single huge genus *Echinopsis*. The former genera included *Echinopsis* (sensu stricto), *Lobivia*, *Trichocereus*, *Helianthocereus*, *Soehrensia*, and a few more. Many horticulturists, including the authors, do not accept this. The great majority of species easily fit into one of the former genera, and each has distinctly different growth forms, flowers, and cultural needs (Figure 2). A brief summary of the most commonly grown ones:



Figure 2; Comparison of flowers of (left to right) Echinopsis, Lobivia (2 fls), Trichocereus, Helianthocereus (2 fls).

Echinopsis (sensu stricto): Smallish globular plants (mostly 6-12 inch tall stems) with large, white or pale pastel, nocturnal, moth-pollinated flowers with very long floral tubes. The dried fruit can be easily crumbled to release the seeds.

Lobivia: Small globular plants with small, brightly colored, diurnal, bee-pollinated flowers with shorter tubes than those of Echinopsis. Same fruits as Echinopsis.

Trichocereus: Some restrict this genus to the columnar shrubs to trees with very large, white, nocturnal, moth- or bat-pollinated flowers with long tubes. Examples include *T. terscheckii*, *pachanoi*, and *spachianus*. The seeds are embedded in a sticky mucilage. Whether harvested wet or dry, the pulp must be macerated in a large volume of water to extract the seeds. Some taxonomists include the next genus in *Trichocereus*:

Helianthocereus: Medium-sized plants resembling oversized North American hedgehog cacti (*Echinocereus*) that bear large, brightly colored, diurnal, bee-pollinated flowers with short tubes (a few have white, nocturnal flowers). Fruit same as in *Trichocereus*.

Soehrensia: A small genus of about 10 species of mostly single-stemmed plants resembling North American barrel cacti (*Ferocactus*). They bear smallish, brightly colored, diurnal, bee-pollinated flowers with almost no tubes.

Echinopsis and *Lobivia* are mostly high elevation Andean species. They require special care to grow them well in the extreme heat of the low desert. On the other hand, *Trichocereus* and *Helianthocereus* are very tolerant of both hard frosts and desert heat. They are superbly adapted to growing in our climate. (When we use *trichocereus* without the italics, we are referring mostly to *Helianthocereus*, *Soehrensia*, and their hybrids, including with *Echinopsis* and *Lobivia*. Except for *T. spachianus*, the arborescent *Trichocereus* species will not hybridize with others in this group.)

Development of South American cactus hybrids

The numerous species in the *Echinopsis*-*Trichocereus* complex cover a great range of flower colors and sizes, and many of the species hybridize readily. *Echinopsis* – *Lobivia* hybridization got serious in the 1950s and 1960s with Johnson Cactus Gardens' Paramount Hybrids. Development continues today with the Schick Hybrids being offered through Huntington Botanical Gardens' International Succulent Introductions. These plants are a bit small for landscape use, and, as stated earlier, are a little delicate in hot desert climates.



Helianthocereus huascha rubra, the original torch cactus. It's a superb bloomer, and a parent of many of the modern hybrids.

Trichocereus – *Helianthocereus* – *Soehrensia* hybrids are larger plants with big flowers that are suitable for planting in the ground. They are also well adapted to desert Southwest's low elevation climates. Hybridizing them with *Echinopsis* and *Lobivia* preserves their size and desert-adaptedness, and adds even more flower forms and colors to the palette. Bob & Bev White, the founders of B & B Cactus Farm in Tucson, and Mark Dimmitt created a number of hybrids in the 1980s and 1990s, using species and a few early hybrids of unknown origin. (The Whites did not keep records, so it's difficult to determine which cultivars are their creations.) There is another center of *Trichocereus* hybridizing in Germany. But because of CITES, there has been very little international trade.

Culture

Trichocereus hybrids grow well in large pots or in the ground in the desert Southwest. Some growers can adapt them to full sun, but to avoid sunburn it's safer to grow them in light shade, as under an unirrigated mesquite or palo verde tree. They respond dramatically to generous water and fertilizer. With weekly watering and monthly feeding, the best cultivars will flush massive blooms every two weeks or so for three months or even longer. With water restriction, bloom will be much reduced in number. (Some clones will flower for only one or two days a year; there is a great deal of genetic as well as cultural variability.) The authors obtain superb results using a water soluble 'Bloom' formula fertilizer, one with low nitrogen and high phosphate. Deadheading (cutting off the spent blooms) close to the stem will result in greater flowering potential since the plants may often abort new flower buds in favor of producing fruit from pollinated flowers. *Trichocereus* flowers may be enjoyed as cut flowers indoors in water.

If you live in the desert, you'll need to protect your trichos from javelinas, rabbits, squirrels, or even deer; they will eat your flowers. Additionally, insect pests may include, the giant cactus beetle, *Moneilema gigas*, the cactus weevil, *Cactophagus* species, thrips, and cactus moth (blue cactus borer), *Cactobrosis fernaldialis*. These can easily be treated with regular applications of systemic insecticides.



'Glorious' is an old hybrid obviously derived from *H. huascha rubra*. An extremely vigorous grower and bloomer.



'First Light' is a pastel Dimmitt hybrid. Bed photographed at B&B Cactus Farm.



Dimmitt named *'June Noon'* for its brilliance resembling the desert summer sun. It is often misspelled as "June Moon".



An unnamed yellow Dimmitt hybrid bred from *H. pseudocandicans*, which has flowers that range from yellow to pink to red.



'Ember Glow' is a Dimmitt hybrid with bright red flowers. The plants bloom only a few days a year.



'Purple Daze' another Dimmitt hybrid, is a very intense purple. A related clone has purple flowers with a red midstripe on each petal.



'Volcanic Sunset' is also a Dimmitt hybrid. The glowing orange flowers are large and perfectly formed. The plant blooms several times a year.



'Radiance', a stunning orange.



'Sunset' bears large deep fuchsia flowers with an orange midstripe on each petal.



'Yes!' was Dimmitt's last Trichocereus cultivar to be released. The cross was made in 1983, but the plant was very slow growing. The main reason is that it spends most of its energy producing great quantities of large flowers, the most intensely colored of all his creations – deep purple with red midstripes



B&B Cactus Farm created 'Epic', which is a very large purple-pink and a profuse bloomer. Bob White named it 'Epi' because of it's Epiphyllum-like flower, but it got corrupted to 'Epic' in the trade. Bed photographed at B&B Cactus Farm.



'Apricot Glow' is an extremely floriferous Dimmitt hybrid.



'Embers' Mostly orange with a flush of pink on the tepal edges.

Sonoran VIII Conference - Copper Room
Saturday, May 15, 2010 • Dinner: 6:30 – 7:30 PM
Program: 7:30-8:30 PM
“Designing with Succulents”

Presented by Debra Lee Baldwin



Award-winning garden photojournalist Debra Lee Baldwin explains how top designers use geometric, architectural succulents to enhance gardens and containers with spectacular blooms and foliage of every color—including cherry red, sky blue and magenta-black. As Debra shows the wide range of succulents now available, you'll discover how to use these sculptural plants to beautifully express your personal style. Included are low-maintenance, easy-care container arrangements perfect for patios, entryways and decks.

Award-winning garden photojournalist Debra Lee Baldwin is a regular contributor to the Los Angeles Times and major gardening magazines, and served as the succulent consultant for the latest edition of the Sunset Western Garden Book. Her own garden near San Diego has

been featured in Better Homes & Gardens and other publications. As an expert on succulents, Debra has given presentations at major botanical gardens and garden shows throughout the western US and at the Philadelphia International Flower Show. Debra's books, Succulent Container Gardens and Designing with Succulents both are bestsellers. More at www.debraleebaldwin.com and www.succulentchic.net.

This will be an excellent program for all of us to really enjoy. Please try to attend and enjoy a fabulous dinner menu and also welcome Debra to Tucson and the Sonoran VIII Conference.

Other Excellent Programs Featured at Sonoran VIII

Saturday, May 15: 9:30 - 10:30 AM

Russ Buhrow (Tohono Chul Park) – Growing Cactus and Succulents in Tucson

12:00 - 2:00 PM Lunch and Guest Speaker Cory Martin (Miraval Resort) – Seasonal Cactus & Succulent Gardening Techniques

Sunday, May 16: 9:00 - 10:00 AM

Scott McMahon (Curator of Cactus at the Desert Botanical Garden in Phoenix, AZ) –Cactus Cultivation

1:10 - 3:15 PM Lunch and Guest Speaker Mary Irish (Author and Gardening Consultant from Scottsdale, AZ) – The Cultivation of Yuccas

An Exceptional List of Workshops Presented by the Best for Sonoran VIII

These workshops will feature actual demonstrations, hands on participation, plants or other materials on hand to help give everyone excellent detailed information. You will receive a wealth of knowledge by participating in the workshop experience. Don't miss this great educational opportunity!

Martha Burgess – Native Cacti and Other Succulents for Food, Nutrition, Medicine and Craft

Jessie Byrd – Desert Garden Design

Mike Ellis – Cactus Grafting Techniques

Larry Grammer – Excellent Container Planting & Staging Techniques

Matt Johnson – Knowing the Cactus and Succulents of Southern Arizona

Gene Joseph – The Basics of Growing in Containers

Dave Palzkill – Succulent Propagation - Asexual Methods and Seed

Mark Sitter – Cactus and Succulent Insect Pests - Kill Them Dead

Greg Starr – Agave Propagation

Bob Webb and Toni Yocum – The Genus Haworthia in Succulent Plant Collections –Growing and Propagating the Medusoid Euphorbias

Pima Valley Greenhouses

On Saturday, April 24, 2010, 21 members of the Society took advantage of a special tour of this wholesale facility. Our member Keith Burkard, who is the manager of the operation, led the tour. We spent 3 hours learning about the wholesale and greenhouse growing of cacti and succulent. It was the most knowledge filled event in which I have ever participated. Keith presented so much valuable information about greenhouse growing, propagation, experimentation and just good business ideas that everyone attending got something of real value from this tour.

The wholesale facilities provide wonderful plants to many of our local nurseries plus stores in the rest of Arizona, New Mexico, Southern California and Las Vegas. If you see a Pima Valley Greenhouses label on a plant you purchase you now know you are supporting Tucson and some of our members who own and operate this facility. You will also know it is a quality grown plant from Tucson.

There was an added bonus at this tour; we got fresh homemade (by Keith) cheese cake, coffee and a wonderful free plant.

Thank you Keith!

Library Update

Desert Gardens

A photographic tour of the Arizona-Sonora Desert Museum Edited by Richard C. Brusca, Mark A. Dimmitt and George M Montgomery

The book is written about the plants, landscaping and history of the Arizona-Sonora Desert Museum. There are chapters on the different exhibits and gardens with color photographs to enhance each section,

Hot Pots

Container Gardening in the Arid Southwest by Scott Calhoun & Lynn Hassler. This easy to follow book is written exclusively for the Southwest area. It covers the growing of various species and shapes of plants and how to use them in the landscape. There is a section for soil mixes, dressing, feeding and watering. It also includes ideas on labeling your plants.



TCSS BOARD

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Cactus Rescue
cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad
Educational: Joe Frannea
Free Plants: Chris Monrad
Librarian: Joie Giunta
Programs: Vonn Watkins
Refreshments: Patsy Frannea
Technology: Kevin Barber
Research Grants: Gerald Pine

Editor: Karen Keller
runbunny@cox.net
Deadline for copy: 15th of each month

TCSS Web Page:
www.tucsoncactus.org
Webmaster: Keimpe Bronkhorst

Everyone is Welcome!
Bring your friends, join in the fun,
and meet the cactus and
succulent community.

May 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!

4 8 0 3 4
2

Cacti Rescued 238 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

Classic Trip to Northwestern Argentina

South America Nature Tours is organizing its classical trip to
Northwestern Argentina. The trip takes place in November
the month matching the peak of the flowering season for
many Argentinean cactus species. We will see around 100
species of cactus in their habitat, and over 50 species of
Bromeliads, Tillandsias, Dyckias, Deuterochonias, Achmeas,
Bromelias, etc.

Dates: November 5th - 20th, 2010 (trip not yet confirmed)
Mode: All inclusive, starting and ending in Cordoba.
Duration: 17 days Price: \$ 2850, all inclusive except air fare.
(Price may vary if number of people is less than 9).

For more information please contact: Guillermo Rivera
South America Nature Tours Holmes
Beach Florida 1-941-447-2160 rivera@intecar.com.ar
www.southamericanaturetours.com

May 2010

Thursday May 6, 2010 7:00pm

Monthly Meeting, "Large Opuntias of the USA: What Are
They and Where Are They", Presented by Joe Shaw

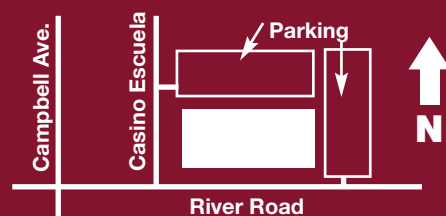
Friday - Sunday May 14, 15, 16

Sonoran VIII Conference

Tuesday May 11, 2010 7:00pm

Board meeting at the U of A College of Pharmacy

**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

June 2010

Thursday, June 3, 2010 at 7:00 PM

"Travels in Africa and Arabia: The Genus Sansevieria"

Presented by Bob Webb and Toni Yocum



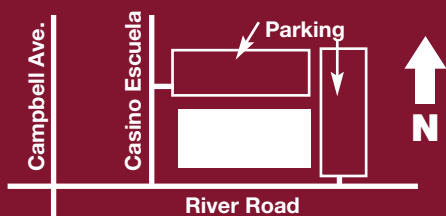
Be sure to attend this program by Bob and Toni as they have put together yet another great exploratory adventure. You don't want to miss this presentation!

Bob has worked on land-use issues, landscape ecology and conservation concerns of the southwestern United States and Baja California for more than 30 years. For the past 12 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 20 years.

Bob Webb has collected succulent plants for about 20 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 30 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.

Meetings are held on the first Thursday of each month.



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

Thursday, July 1, 2010
"Saguaro lightning strikes"
Presented by Carl Noggle

Free Plants and Door Prize

Stapelia asterias:

They are a medium sized, stemmed stapelia with dark purple, odiferous flat starfish shaped flowers about 4-5 inches across. They survive outside for years, with some die back during the coldest winters. They work well in pots or in the ground under cover of a tree or shrub.

President's Message



Thank you for your participation in our Sonoran VIII Conference. I really like this conference since it highlights all the best things we can do and the people who can do them. The Sonoran VIII committee really did themselves proud this year with a great new venue for plant sales, a new more convenient schedule, a great show and silent auction, interesting speakers and great hands-on workshops, special exhibits, book sales and the Tucson

Decorative Painters Guild and their wonder painted gourds. It was a great weekend.

Remember! It's less than 2 year to Sonoran IX and we have already started to plan for that event.

Our last meeting was about Opuntias and I just can't leave the subject, so I am proposing that we entertain establishing an Opuntoid Garden in Tucson. That's the whole family. Here are my thoughts.

Tucson Cactus & Succulent Society "Opuntoid Garden"

Prickly pears and their relatives are an important economic plants which are used for food by humans and many animals and insect species, landscape material for the southwestern environment, medicinal and cosmetic purpose and more.

Brief description:

A several acre facility to highlight opuntias and related genera. This would be a public demonstration garden, a research garden, an educational facility and small nursery facility.

Support:

Land would be leased from local, state or the federal government at a very nominal cost. No additional taxpayer support would be required and funds for development would come from grants, gifts, the TCCS and other supportive organizations.

The facility would support the introduction and care of all forms of this group of plants including many hybrids. It would also support hybridization of this group to fill the needs of a diverse group of constituents.

Events to support this might include the following type:

- Blooming open house
- Fruit tasting and selection
- Chefs and food preparation event
- Landscape demonstration event
- Plant sales

Facilities:

- Educational displays demonstration area
- Botanical garden planting

- Nursery growing area
- Introduction area
- Visitor Ramada
- Gift shop, restrooms etc

Source of Material:

- Cactus Rescue
- TCCS and other Society Donations
- Nurseries and Landscapers.
- Purchased specimens

Related activities:

- Web and email site
- Online publishing

Tucson would be great environment to have this dedicated facility.

If you are interested please attend an open planning meeting on the Opuntoid Garden concept on Monday, June 7, 2010, 7 to 9pm, Drachman Hall, College of Pharmacy, Room B111. See our website for map and details.

Thank you

Dick Wiedhopf, President

Library Update

Rebutia

by John Pilbeam

From Bolivia and Argentina, Rebutias flower easy and are easy to care for. This book describes over 70 species accompanied by photos showing their colorful flowers. Questionable names and hybrids are located in the back of the book.

Water-wise Plants for the Southwest

by Nan Sterman, Mary Irish Judith Phillips and Joe Lamp'1
Edited by Diana Maranhao

From trees and bushes, vines and ground cover, perennials and annuals, this book contains ideas to add to your cactus garden. Listed by the common name, then botanical, each page contains zone, form, growth and size, uses, soil and pests. Includes a brief description, informational icons, cultivation and shared species. All listed plants are drought tolerant.

Growing Succulents in the Desert series

Welwitschia

by Mark Dimmitt



Figure 1. An ancient *Welwitschia mirabilis* in Namibia. Photo: Ernst Van Jaarsveld.

Almost any plant nut will agree that welwitschia is among the top two or three strangest plants on the planet (Figure 1). Also one of the ugliest. But the plant becomes more fascinating the more you know about it.

There is a single species, *Welwitschia mirabilis* (*W. bainesii* is a synonym), and is the only species in its family and order (in other words, it has no close relatives). It's a conifer, and technically a woody tree. Its closest (rather distant) relatives are *Ephedra* (which includes Mormon tea and ma huang), and a tropical liana, *Gnetum*. The plant is native to the Namib Desert in Namibia and Angola. Big plants, which may be more than a millennium old, look like stranded octopuses.

The bizarre growth habit of *Welwitschia* accounts for its strange appearance. Seeds germinate in a normal way, and produce two cotyledons (seed leaves), soon followed by the first pair of true leaves (Figure 2). Then the apical meristem dies! The plant can produce no more leaves for the rest of its life. Instead, the two straplike leaves lengthen and widen from their bases for as long as the plant lives. Eventually the leaves split lengthwise; thus old plants may appear to have more than two. They die and fray at the tips; the living portion may be a meter or more long.

CULTURE

Small seedlings are susceptible to damping off, but once a plant is a few months old, *Welwitschia* is very easy to grow. There are only two important things to know. First, protect it from hard freezes. Second and most critical, NEVER let it dry out. In a small pot it will die almost overnight if the medium dries out. That's because *Welwitschia* is NOT a succulent. It has no water storage organ. In habitat the roots go very deep and access permanent moisture, much like mesquite trees. Ernst Van Jaarsveld, horticulturist and curator of the conservatory at Kirstenbosch National Botanical Garden, says that in nature they also have shallow lateral roots that take up moisture from fog. But in cultivation I have never seen anything but roots that go straight down.

Contrary to popular myth, a deep pot is not necessary. The roots will wind around the bottom with no problem. However, a large deep pot is beneficial to reduce the risk of drying out if you forget to water it for a few days. Potting medium is unimportant as long as it is well drained. But again, a finer-grained medium will dry out more slowly.

Growth rate increases with plant size. Seedlings grow a few inches of new leaf on each side per year. Leaves of larger plants (Figure 3) can elongate a foot per year. I have one in the ground in my yard (Figure 4), and it has done well. On

cold nights I cover it with two layers of cloth, and it has survived 17 degrees F (-8 C) with no damage.

If you have a Welwitschia on display, it's sure to be a conversation-starter.



Figure 2. Six-month old Welwitschia seedlings. The longer "leaves" are the cotyledons; they will die in about a year. The shorter pair are the only true leaves the plant will ever grow, because the apical meristem has died



Figure 4. This 10-year-old Welwitschia has been in the ground in Tucson for six years. It's covered when frost threatens.



Figure 3. A 20-year-old Welwitschia. The cut stems held the cones, which recently matured and were removed.

Sonoran VIII Conference

Photos by Dick Weidhopf



Sonoran VIII Conference

Photos by Dick Weidhopf



Sonoran VIII Conference

Photos by Dick Weidhopf and Vonn Watkins



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Bill Holcombe (2011)

Cactus Rescue

cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad

Educational: Joe Frannea

Free Plants: Chris Monrad

Librarian: Joie Giunta

Programs: Vonn Watkins

Refreshments: Patsy Frannea

Technology: Kevin Barber

Research Grants: Gerald Pine

Editor: Karen Keller

runbunny@cox.net

Deadline for copy: 15th of each month

TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

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 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!

4 8 0 3 4
3

Cacti Rescued
238 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

May 2010

Thursday, June 3, 2010 7:00pm

Monthly Meeting, "Travels in Africa and Arabia: The Genus Sansevieria" Presented by Bob Webb

Monday, June 7, 2010 7:00pm-9:00pm

Opuntia Garden Concept Meeting

Drachman Hall, U of A College of Pharmacy, Room B111

Tuesday, June 8, 2010 7:00pm

Board meeting at the U of A College of Pharmacy

In Remembrance of

Maury Clapp

Long time member, TCSS past president
and good friend.

Our condolences to the family.



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

July 2010

Thursday, July 1, 2010 - 7:00 PM

"Spectacular Saguaros and Spectacular Lightning Strikes"

Presented by Carl Noggle



Saguaro zapped by lightning

The Tucson area is famous for spectacular lightning and spectacular saguaros. We get about three or four flashes per square kilometer per year, and most of us have wondered how our favorite charismatic desert dwellers manage to survive in this threatening environment. An intrepid local group of lightning researchers, arid-lands botanists and other assorted desert rats has investigated this for several years, and we will present the results of our study. Many important questions will be answered, including, but not limited to:

- Why aren't all the saguaros burnt to a crisp?
- Just what happens when a saguaro is zapped by lightning, anyway?
- I have a nice saguaro in my front yard. Can I protect it from being struck?
- How do I protect myself from being struck?
- Is there any way to recognize a lightning-struck saguaro?
- Is this really a serious research program, or are you guys just fooling around in the desert?
- How can I help?

Carl Noggle owes his life to the Sonoran Desert, having moved here as a child from Michigan because of asthma. He has lived here for 52 years, and has always had an interest in desert plants, animals, rocks, weather, etc. He has a degree in physics from the University of Arizona, and for much of his career has been part of a group that developed the first accurate real-time lightning location technology. This system is now providing accurate lightning locations and tracking storms worldwide. In his spare time Carl hikes and bikes around the area, grows a few cactus and gives occasional educational high-voltage electrical shows. He lives in Tucson, and although he has lived elsewhere for a few years on occasion, he has always seen the light and returned.

Please welcome Carl, one of our members, for a whole new way of thinking about our native saguaro, *Carnegiea gigantea*. Please be sure to attend his amazing look at the natural world of the saguaro and how it relates to the electrical forces of nature.



Lightning strikes in Tucson

Thursday, August 5, 2010

"Unusual Agaves, Aloes, and Yuccas"

Presented by Chad Davis - Curator of Agavaceae, Aloaceae, & Nolinaceae at the Desert Botanical Garden

President's Message



Summer is here! I thought it would never come, but now that it's here I am looking forward to fall.

We are fortunate in the Tucson area to have so many experts and resources for our cactus and succulent interests. We have wonderful nursery men and women who support our society but during these summer months is our chance to repay them for this support. It is a slow time in the nursery business and with the economy down it is even slower. If you want to help

out, and insure that these nurseries continue to provide us with a great diversity of plants, stop in at your favorite ones and buy a plant or two. It's a good investment and you'll have some new plants to enjoy.

I am always looking for new things to use in the care of my collection. Have you tried Velcro Plant Ties. They come in a roll of 45' X 1/2" and are easy to use to support and or tie up your plants and are also reusable. I bought them at Home Depot but I am sure other garden centers have them.

I am in the repotting mode and one of the best tools with plastic pots is a cheap pointed soldering iron. You just heat it up and make all the drain holes that you want without the fear of cracking the pot. One caution is to do this outdoors and don't inhale the vapors of the melting plastic.

With a lot of drain holes to cover I use coffee filters. They can cover the bottom of a 10" pot with no problems. After a couple of months they dissolve and there seems to be no problem with drainage or loss of soil. They are cheap and readily available. I also cut up paper towels for small standard square pots and that works very well.

I still encourage all of you to go to kitchen outlet stores and buy your gardening gadget needs there. I continue to use my lazy Susan from Ikea. It is inexpensive and allows me to center a plant and easily adds soil all around the roots. A metal tea strainer works great for collecting and cleaning large seeds like those from Opuntia species. Rubbing them in the strainer removes excess fruit material that is clinging to the seeds. A sharp serrated bread knife works great for removing prickly pear pads that are in the way. I came across packages of small wooden barbecue skewers that are perfect for supporting small plants. Keep your eyes open at Big Lots for interesting additions to your garden gadgets. Finally, never throw away chop sticks. They have all sorts of wonderful uses.

If you have some interesting objects that you use, send us a note about them to the newsletter and we will feature them in an upcoming issue.

We are moving along quite rapidly on plans for a public garden featuring members of the prickly pear family (Opuntoids). We will create a feature on our website to keep you up to date on our progress.

Thank you for your support.

Dick Wiedhopf, President

Free Plants

Agave victoriae-reginae

Agave victoriae-reginae is a very slow growing but tough and beautiful Agave. It is considered to be one of the most beautiful and desirable species. It forms individual slow growing dense rosettes up to 45 cm in diameter (but usually rarely grows taller than 22 cm), most populations are solitary, but some offset heavily. It is extremely variable with the very open black-edged form sporting a distinct name (King Ferdinand's agave, *Agave ferdinandi-regis*) and several forms that are the more common white-edged form. Loves full sun with supplemental water or slightly filtered light, completely frost hardy. Does very well in pots or in the ground.

Library Update

Aloes in Southern Africa

by Gideon F. Smith & Braam van Wyk

Vivid color photographs highlight the pages of this book showing Aloes in their diverse habitat. Covering cultivation, propagation, biology, habits, pests and diseases, there is even a section giving the uses of Aloes.

Guide to Succulents of Southern Africa

by Gideon F. Smith & Neil R. Crouch

This book contains many different types of succulents in various families. There are photographs and descriptions of the plants as well as distribution maps. A familiarity of the climate will help in the care of these plants

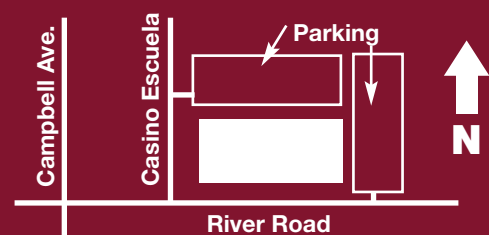
TCSS Logo Caps & Tote Bags



Our latest TCSS Logo Items that were produced for Sonoran VIII are now available for purchase @ \$8 each. All cotton unstructured caps with our logo in either black or rust have an adjustable velcro tab so they fit all sizes. The 18"x14"x 4 1/2" totes are made of an extra heavy

woven canvas. If you want to show your support for TCSS with any of these items they are available for purchase at our monthly meetings or send an email to tcss@tucsoncactus.org for further information.

Meetings are held on the first Thursday of each month.



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

Growing Succulents in the Desert series

Cochemiea – The Red-Flowered Pincushions

by Mark Dimmitt



Figure 1. Flowers of *Cochemiea poselgeri*.

What would you get if a *Mammillaria* adapted to humming-bird pollination? You would get a *Cochemiea*. A typical pincushion flower is a small pink funnel. Imagine elongating that funnel, making it narrowly tubular, and changing the color to bright red. Now you have a *Cochemiea* (Figure 1).

Cochemiea is a small genus of only five species, all endemic to Baja California. The plants vary from tight clusters of stout stems like a hedgehog cactus (e.g., *C. setispina*, Figure 2), to long, thin, creeping stems (e.g., *C. poselgeri*, Figure 3). All five species have clusters of tubular red flowers that are borne at the stem tips following summer rains.

Culture

Cochemieas are as easy to grow as most *Mammillarias*. *Cochemiea setispina* tolerates desert heat and nearly to completely full sun. It is also hardy to at least the mid teens F. *Cochemiea poselgeri* is very heat tolerant, but its creeping stems require filtered sun. This tropical species is also frost tender. The other species grow along the Pacific Coast of Baja California, and are less heat tolerant than the first two.

In habitat these cacti experience a long winter dry season, which does not seem to be critical in cultivation. However, if

they are kept dry for several months, a good watering during the hot season will trigger a big flush of bloom that lasts about two weeks. (Figures 4, 5). With regular watering they tend to flower sporadically and sparsely over a longer period.

Unfortunately, this beautiful genus is difficult to find in nurseries.



Figure 2. Several *Cochemiea setispina* plants in habitat in central Baja California. They are growing in the open in hot, dry desert.



Figure 3. *Cochemiea poselgeri* growing in the shade of a *Jatropha cinerea* near San Ignacio, Baja California Sur. Stems that creep too far into the open ground will sunburn and die. In fact, this species' stems are often burnt anyway.



Figure 4. *Cochemiea setispina* blooming at the Arizona-Sonora Desert Museum.



Figure 5. *Cochemiea poselgeri* in the Cape of Baja California, flowering massively after a summer rain. Photo: Gene Joseph.



Figure 6. *Cochemiea pondii* is endemic to Cedros Island off the Pacific coast of Baja California.

Planting 100 Barrels in 60 Minutes



Barrels holding area

Our TCSS Cactus Rescue Crew has planted thousands of Barrel cactus (*ferocactus wislizenii*) over the past ten years. When they are removed from an area to be developed, they should be replanted to help preserve some of the root system and to allow new roots to grow. We have tried many different soils and techniques and have found one that is inexpensive, quick, and effective.

When we are tagging and loading the barrels for transport to the holding site, we trim the roots to be even with the outside diameter of the barrel cactus. If you leave longer roots, they will dry out quickly and not encourage the growth of new roots. The tips of the cut roots will yield many fine new roots. Also all damaged roots are cut just before the damaged area.

The key to planting them quickly and allowing air and water to reach the root system is about 4 inches of pea gravel. We have spread the entire surface of our holding area with 4 to 5 inches of pea gravel. We also loosed about 4 inches of dirt before spreading the gravel. When unloading a barrel, the gravel surface is kicked with your boot to roughly create the shape of the bottom of the barrel, some are concave, some convex. Place the barrel on the gravel and rotate back and forth a few inches ending up with the south white dot mark on the skin of the barrel facing south. You're done! If any roots show from the side, kick a little gravel over them to be sure they are covered. You can also hold the barrel to the desired angle as you rotate it and push the gravel around the base to hold it. This process is fast and allows a lot of barrels to be planted quickly. We often bring in 150 barrels in one trailer



Barrels planting with roots

load. About 30% shade is desirable for the first several months to help prevent sunburn. This can be easily provided with shade cloth or take a few branches from a bush.

While many of our barrels are sold within a few weeks, some are around for several months. We have been working a site near Kolb and Interstate 10 with lots of barrels. We have 450 in stock now and are planning a sale mid to late July. Our sale dates and plants to be sold are posted on our web site and email notices are sent to all TCSS members and our customer list as soon as the date is established. For larger sales we also send postcards for those without email.

Joe Frannea

TCSS BOARD

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885-6367

Vice President: Vonn Watkins

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Board of Directors:

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Cactus Rescue

cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad

Educational: Joe Frannea

Free Plants: Chris Monrad

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Refreshments: Patsy Frannea

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Webmaster: Keimpe Bronkhorst

Everyone is Welcome!

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

July 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!

4 8 3 3 4
3

Cacti Rescued 242 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

May 2010

Thursday, July 1, 2010 7:00pm

Monthly Meeting, "Spectacular Saguaros and Spectacular
Lightning Strikes" Presented by Carl Noggle

Tuesday, July 6, 2010 7:00pm

Board meeting at the U of A College of Pharmacy

Acknowledgement of Contributions

March 2010 – June 2010

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

Ruth Kea & Family

Toni Moen

Michael & Nanette Burnett

Education

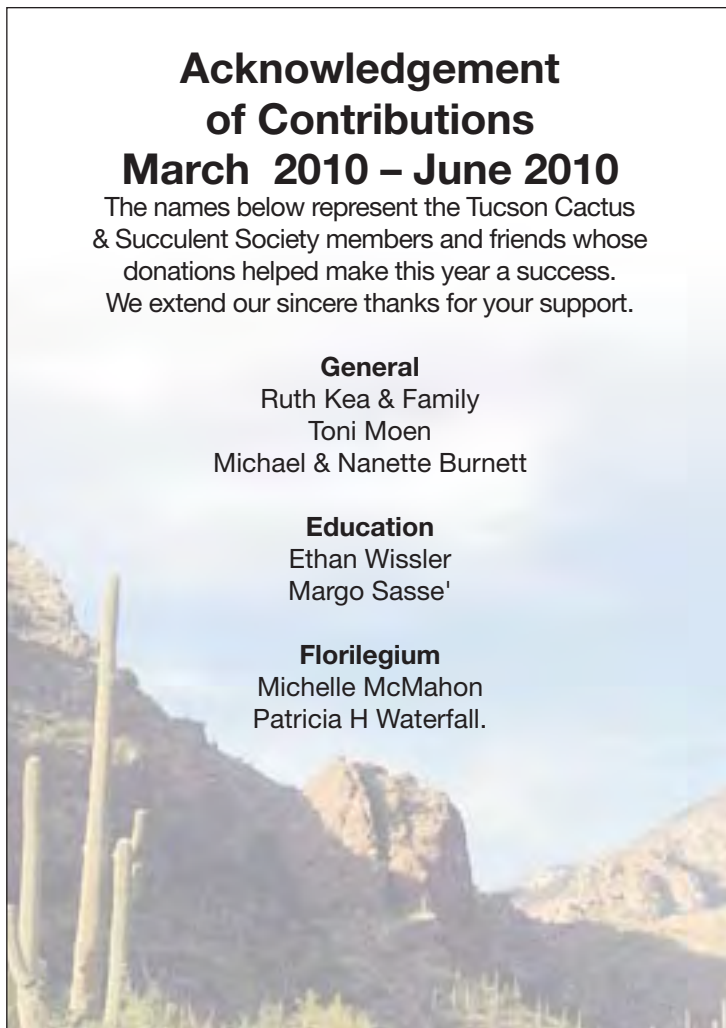
Ethan Wissler

Margo Sasse'

Florilegium

Michelle McMahon

Patricia H Waterfall.





Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

August 2010

Thursday, August 5, 2010 at 7:00 PM

"Unusual Agaves, Aloes, and Yuccas"

Presented by Chad Davis - Curator of Agavaceae, Aloaceae, & Nolinaceae at the Desert Botanical Garden



Agaves, aloes, and yuccas are fascinating plants that feature bold forms, as well as dramatic colors and textures for our hot desert landscapes. The vast array of sizes, colors and forms makes them useful both as accents and specimen plantings. This presentation will focus on some spectacular, yet underused, agaves and yuccas, as well as durable aloes that can tolerate our climatic extremes. We will discuss preferred site selection, maintenance practices, potential cultural problems and pest of these amazing plant groups. Special attention will be given to large arborescent species of aloes and yuccas.

Chad has been with the Desert Botanical Garden since 2002. Prior to his promotion to Curator of Agavaceae, Aloaceae, & Nolinaceae in 2003, Chad served in the Security Department as a Ranger at the Garden.

As the Curator of Agavaceae, Aloaceae, & Nolinaceae, Chad curates and maintains three primary plant collections in the Garden. This entails tracking of collections, acquisition and propagation of suitable plant material, designing and planting of garden displays and serving on internal Garden committees. He regularly works with volunteer groups, has obtained and maintains a Certified Pesticide Applicator License, as well as teaching in the Garden's Desert Landscaper School. Chad has designed and installed the Arizona Agave Beds, expanded the Aloe Collection/displays in the Garden, coordinated the

installation of the Succulent Gallery and the new Berlin Agave & Yucca Forrest. He has given numerous presentations to environmental groups and garden clubs such as the Arizona Native Plant Society, Central Arizona Cactus and Succulent Society and McDowell Park Association, as well as leading a workshop during the Cactus and Succulent Society of America National Convention. He is a regular contributor to the Garden's Sonoran Quarterly and has appeared on local and nationwide television shows.

Chad received an Associates of Applied Science in Urban Horticulture from Mesa Community College and is currently pursuing a Bachelor of Interdisciplinary Studies (BIS) degree combining the disciplines of Landscape Architecture and Urban Horticulture at Arizona State University.

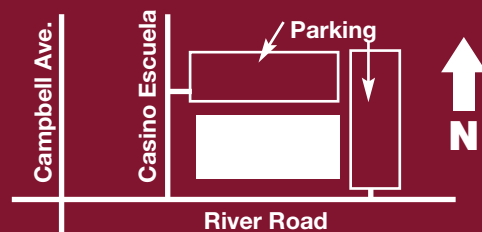
Please make sure you attend this excellent program and welcome Chad as our guest speaker for August! This will be a great opportunity for every member. Please join us, bring a friend and come enjoy your evening!

Thursday, September 2, 2010

"General Overview on the Subfamily Opuntioideae"

Presented by Raul Puente
Curator of Living Collections at the
Desert Botanical Garden in Phoenix, Arizona

Meetings are held on the first
Thursday of each month.



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

President's Message



I had some interesting visitors to my garden this month in addition to the unwanted Agave weevil. I notice that a large Agave americana was looking a little limp, which could only mean that it had been attacked by the weevil and was done for. Even though it was gone, I treated it with Imidacloprid to kill off any larvae that were left, before removing the plant. When I dug out the Agave and all the associated pups, I

noticed there was movement in the ground. There was something there, probably an adult weevil; no it was much bigger than that. As I uncovered it, I was surprised to find a very large black beetle with 3 horns protruding from the head. I looked around and found 3 more relatives. 2 males and a female. Yikes, I have been invaded. Fortunately, there are a number of entomologists who are members of the TCSS who all assured me that what I had found were native ox beetles *Strategus aloeus* (L.). They eat decaying plant material but don't eat growing plants. That was good news. They are spectacular looking. It is amazing that we have lived in this home for more than 30 years and this is the first time I have seen these beetles. On Sunday, July 25 we had

another rescue sale. We sold hundred of plants thanks to the efforts of the rescue crew, the behind the scene efforts of the Board and Officers and all the volunteers at the sales. It is real team effort. Thank you all! A very busy schedule of fall activities is unfolding. Let me just remind you of what's in store. There is the Opuntoid Garden Planning, Rescues, Blooming Barrel Sale, Home Tours, Good Time Silent Auction, September, October and November Regular Meeting Programs, Roundtables and the end of the year Holiday Party.

Thank you for your support of TCSS

Dick Wiedhopf



Blooming Barrel Sale

Sunday, August 22, 8am to Noon.

Mark your calendar for this annual special sale. This year there will be almost 500 native barrels in bloom. This should be a spectacular sight.

Opuntoid Garden Design Kick-off Meeting

Tuesday August 3, 2010

7pm to 9pm Room B-111

College of Pharmacy-Drachman Hall

The Board of Directors has engaged Desert Green Design to complete a conceptual landscape design which will include our goals and programmatic elements for this specialized garden.

We want your ideas and input for this exciting project. Please join us for this first meeting.

TCSS Fall Round-Table Discussions

September Round-Table Discussion:

Insects and Pests of Cacti and other Succulents

Thursday, September 16, 2010 at 7:00PM

Junior League of Tucson, 2099 River Road

This discussion will help open up our ways and means of controlling and even preventing our plants from being attacked by pests. We will invite anyone who has further knowledge about this topic to come and offer advice, talk about the good as well as the bad insects and discuss the ways to control many of the pests. This will be an open discussion for everyone.

Library Update

How to get started in Southwest Gardening

by Janice Busco with Rob Proctor

The first section delved into creating your garden and what it takes to achieve the effect. The second section covers fifty plants with pictures, a botanical and common name, uses, types of soil, hardiness and mature size.

Euphorbias A Gardeners' Guide

by Roger Turner

The majority of Euphorbias in this book are not the typical variety from Madagascar and Africa. They are hardy varieties found in the Central and Mediterranean Europe, South America, Mexico, Israel, Greece and other areas. There are a few pages of color photographs, some line drawings showing the plants, seeds and capsules.

Online Reading

A few older books are in digital format. Titles in English include *Gymnocalycium A Collectors Guide*, Britton & Rose *The Cactaceae*, four volumes, Bradley, *The History of Succulent Plants*, Nel, *Lithops* and a few others. Go to www.tucsoncactus.org. On the left side click on 'Publications'. Scroll down to 'Digital books about cacti and succulents'. There you can download a pdf. of Britton & Rose. There is also a link to www.cactuspro.com.

Growing Succulents in the Desert

Stapelia flavopurpurea: A sweet starfish flower

by Mark Dimmitt



A large specimen of Stapelia flavopurpurea in full flower during late summer. The medium in this rock pot by Steve Holmes is only one to two inches deep, which helps prevent overwatering

Most succulent collectors have grown at least a few stapeliads, a tribe of the former milkweed family Asclepiadaceae (The family was recently combined into the dogbane family, Apocynaceae). All stapeliads are succulents, and they bear a wide range of flower sizes and shapes. Most species share the trait of being pollinated by flies and carrion beetles. Therefore the flowers look and smell like dead things. There will be a future article about these.

The featured species is one of the few exceptions; it isn't a "carrion flower". The flowers don't look like rotting meat, and they have a powerful and delightful sweet fragrance. They're still fly-pollinated, but they offer nectar (energy food) instead of the false promise of a place to lay eggs. However, the flowers appear to produce no nectar; they're still apparently relying on deceit to get pollinated.

The flowers are born in late summer; healthy plants produce many one-inch star-shaped flowers with a plethora of frills, spikes, and warts. The color ranges from brown to bright

yellow-green, often with purple centers. The penetrating fragrance is reminiscent of honey or some cookies or candy being baked in grandma's kitchen.

Culture

This species is easy to grow. It does best in filtered sunlight in any well-drained potting medium. Protect it from frost in the winter. Like most stapeliads, plants become senescent after several years, so they should be restarted from cuttings when growth and flowering slow. The best time is in late summer when they're growing most actively. The one problem I've encountered is that if the stem is even partially buried, the plant will usually rot. Cuttings should simply be laid on the surface of the potting medium. Healthy young plants grow rampantly. An easy way to propagate them is to place empty pots filled with medium adjacent to a plant when it begins to run over the edge of its pot. Masses of stems may hang a foot or more over the edge of a pot for a time, but the joints are loosely attached and easily broken.

Stapelia flavopurpurea

Photos by Mark Dimmitt



A brown-flowered form of Stapelia flavopurpurea



A flower of Stapelia flavopurpurea. While you're getting close to enjoy the fragrance, the flower offers a visual treat too. Spikes, fur, and wrinkles; a punk flower?

Aloe 'Hercules' and Agave ovatifolia - Two great Succulent plants to create focal points in your landscape

by Tom Gatz

(modified and reprinted with permission from the Gatherings, the Desert Botanical Garden volunteer newsletter)

I usually wait a few years after new plant varieties are introduced at the plant sales and nurseries until we see how well they actually do here before recommending them to friends. Here are two where the waiting is over. I love these plants!

Aloe 'Hercules' (dicotoma X barberae)

You can't miss this massive tree aloe with a beautiful trunk when you first enter the new Succulent Gallery at the Desert Botanical Garden. This fast growing tree aloe was created by crossing two species of aloe: Aloe dicotoma and Aloe barberae (formerly bainesii). It is believed that a phenomena known as "hybrid vigor" may explain why the hybrid 'Hercules' is hardier and grows faster than either of its parent. It should survive temperatures down to at least 20 degrees. Jim Elliott at Arizona Cactus Sales in Chandler had a 6 foot-tall specimen survive (but with upper leaf damage), uncovered two nights in the mid to low teens during the deep freeze of January 2007 that killed a nearby Aloe dicotoma. It has since recovered and is now over 10 feet tall. My specimen survived two nights of temperatures down to 21 degrees in my north Phoenix yard (under a frost cloth with a low voltage light) with only a little tip damage. Acquired as a foot-tall specimen in 2004, it is now 7 feet tall. An eventual height of over 30 feet is possible so make sure you don't plant it under a tree or an overhang! I water mine deeply in



Aloe 'Hercules' (on left) with Chad 'Hercules' Davis, Agave and Aloe Horticulturist (on right). Photo by Tom Gatz

the fall and spring months about twice a month, cutting back the amount and also the frequency to once a month during the heat of the summer and in the winter. Jim Elliott doesn't water his at all from November through February and waters overhead every other week the remainder of the year. It appreciates some afternoon shade in the heat of the summer here but likes lot of winter sun. Jim Elliott's specimen has outgrown its shade and does okay in full sun with some lower leaf scalding. San Marcos Growers reports that it will eventually produce beautiful green-tipped salmon colored flowers from spring to fall. Don't confuse this hybrid with Aloe 'Goliath', a hybrid between Aloe barberae and Aloe vaombe, which has heads so heavy that it is prone to breakage.

Whale's Tongue Agave (Agave ovatifolia)



Whale's tongue agave is named after its wide, short, cupped leaf blades. Photo by Lee Brownson

Displayed for the first time at the Desert Botanical Garden in the new Berlin Agave Yucca Forest, this low and wide pale powder-blue beauty was only recently described in 2002 by Tucson nurseryman Greg Starr and his Mexican colleague Jose Angel Villareal. It can be acclimated to full sun but also appreciates filtered sun or afternoon shade in the low desert. Lee Brownson, executive director at the Wallace Desert Gardens, installed a specimen in a landscape in full sun against a south-facing wall in 2004 and it is now 3 feet tall and 4 feet wide. This species apparently really takes off if well watered. Greg Starr reports that it does not produce "pups", survives temperatures down to at least 5 degrees and can reach 5 feet tall and 6 feet wide, so give it plenty of room. I kept one in a large pot for several years where it was never really happy, so I recently transplanted it into the ground. The only possible downside with this species is its apparent susceptibility to agave snout weevils. Ty Peterson at Arizona Cactus Sales lost a stunning 4 year-old specimen growing in full sun in spite of treatment for weevils every other month from March to October. See the "Good Growing Guides" under "Gardening Help" on the Desert Botanical Garden's website for weevil control tips.

Both of these plants will likely do best in soil with fairly good drainage and both have been available at recent Desert Botanical Garden plant sales. If you have the room, give one of these showstoppers a try. If you like the whale's tongue agave and want to go with a nautical theme, consider adding the squid agave (Agave bracteosa), the octopus agave (Agave vilmoriniana), Arizona fishhook cactus (Mammillaria grahamii) and the octopus cactus (Stenocereus alamosensis) to your garden palette!

Roots...



Roots are always interesting when digging up native cacti to be rescued. Normally we are trying to find the roots to chop them off so the plant can be removed. The soil type has a huge impact on root structures. Are they fine roots, heavy, stay near the plant or go for several feet getting their water collector system out as far as

possible. Some roots go straight down to give taller plants support. Saguaros and ocotillo have tap roots to provide stability but they also have shallow roots for water collection.

Continued on page 6

Roots...

Rain water amounts and ground slopes influence root growth and growth directions as When we transplant cactus and water them regularly, (every 2 to 3 weeks) the new roots that develop are usually a fine root structure staying close to the cactus. There is no need to reach out in many directions if it is getting all the water needed at the base of the plant. If you quit watering the plant regularly, it may be in trouble because it has not developed a collector network to capture that precious five hundredths of an inch of rain. Roots from some recently rescued saguaros dried out in just a day or two, all the way to within a few inches of the base of the saguaro. These dry parts of the roots need to be trimmed off before planting as the plant will grow new roots to get itself re-established.

A small barrel cactus that was dug up a couple of weeks ago showed us what a real achiever can do. The area had fairly sandy soil, at least for an inch or two below the surface. This twelve inch diameter barrel cactus was dug up and one of the roots did not get cut. As the barrel was lifted up, one of the roots kept coming and coming as it was pulled out of the ground. The root measured twelve feet long and was about one inch under the surface. The root was mostly growing straight out with a few short branches along the way.

Joe Frannea

Selling 450 Cacti in 45 Minutes!

Another great Rescued Cactus sale on July 25th. How is such a large volume possible in such a short time? TCSS Volunteers, 45 of them and lots of organization. And, of course some anxious buyers. We sold over 525 cacti consisting of 200 barrels, 80 saguaros, 75 ocotillo 70 hedgehogs, 100 mamms and a few cholla. We netted about \$4,700 after tag costs and a few other expenses. Twenty-five percent of this

will be earmarked for our educational outreach program. John Swarbrick set up a table to share some of our outreach efforts with our customers. Our Annual Blooming Barrel sale will be August 22nd, 8 am to noon.

Thanks

Joe Frannea



Photos by Kevin Barber



How to

One thing I've been doing lately was suggested to me from a news-report on the BP cleanup in the gulf. One worker mentioned that 'Dawn' dishwashing liquid works better than others for cleaning the oil off of birds. At my nursery I often get sap from Adenium and Pedilanthus (lady'slipper) on my hands, and it can be hard to remove. I tried 'Dawn' and it worked very well on removing Adenium sap, and only slightly less so on the Pedilanthus sap, so I've switched to using it on a regular basis. I think it's worth trying as a hand-cleaner for removing sticky sap from other plants such as Euphorbia sp. The two previous dishwashing liquids I've tried (Palmolive and Ivory) were not effective. In the past I've used a hand-cleaner from Pep Boys which dissolves petroleum products - it works as well or better than 'Dawn' for dissolving my plant saps, but I suspect it's not as easy on skin after many uses.

Dave Palzkill

Free Plants

Gymnocalycium asterium

Gymnocalycium asterium has a low brown stem, short semi-erect brown spines, and whitish/pink flowers. Give ample airflow, bright filtered light, and protect from frost.

Gymnocalycium is a genus of about 70 South American species. Their main area of distribution is Argentine, part of Uruguay, Paraguay, southern Bolivia and part of Brasil. Most species are globose, rather small varying from 1.5 to 6 inches in size (4 cm to 15 cm). They are popular for their easy flowering habits, although the flowers are generally brightly colored. They are also popular for their ease to care for. The genus name "gymnocalycium" comes from the Greek for "naked calyx" referring to the flower buds bearing no hair or spines.

TCSS on Facebook



The Society has set up a Facebook account to be able to share cactus and succulent photos. Most will be from the Cactus Rescue Crew but any photos that members want to share with the world can be sent to TCSS to post. Only current TCSS Members will be accepted as "Friends" as a few photo albums are only shared with "Friends". One of these is the album with Cactus Rescue Crew members at work. Other albums are open to "Everyone" to view and comment.

To access our Facebook page, use our email address of tcss@tucsoncactus.org in the friend or search box to find us. Also, only TCSS Members who have been accepted as "Friends" will be able to post notes on our wall. Let me know of any features or improvements that you would like to see. We are not planning to duplicate any features or information on our TCSS web site which is www.tucsoncactus.org.

Joe frannea

"Good Eats" at TCSS Monthly Meetings

Sometimes we are overflowing with good things to eat at our monthly meetings. This was the case in July when members with the names beginning with "G through M" really went all out with a huge array of delicious snacks for our members to enjoy. Thanks so much to everyone who contributes to our monthly tradition of sharing good food and friendship.

If you are new to TCSS you may wonder just how all of these goodies magically appear. TCSS has a budget to provide supplies and some basic refreshments. In the monthly newsletter, on the last page under the list of TCSS Board Members, you will find a notice of whose turn it is to bring additional refreshments. We certainly appreciate the generosity of those who share food when their name comes up, but also understand that this is not an easy or convenient thing for some members. Please don't feel guilty if you can't bring something to share when your name comes up. Just come and enjoy the refreshments. If you ever wonder why that box of cookies you brought didn't appear on the table, please note that sometimes when a whole lot of food shows up, we will save unopened non-perishable packaged food for the next meeting.

Our regular prickly pear lemonade is courtesy of members who take time in late summer/early fall to harvest the fruit and freeze for use all year. The harvesting procedure and recipe is in our cookbook or available on our website under "publications".

Special thanks to members who help each month with the refreshment organization. Joie Giunta and Linda Morlock faithfully bring and set up coffee, Cyndi Garrison efficiently sees that the food gets out on the tables and that everything gets cleaned up afterwards. Maria & Rim Tallat-Kelpsa, Joyce Thomas, Jim Skalicky and many, many others all pitch in to do the final preparation and set up of the food and drinks. It is a big group effort that adds a tasty, fun experience to our monthly meetings. THANKS EVERYONE !!!

Patsy Frannea

Treats for Crew Members



Alert scouting of new cactus rescue areas often presents a treat or two. For example, we have seen crested cholla, crested barrels and saguaros and a crested hedgehog. Next to one rescue area was a saguaro with two albino (white) arms. A cholla skeleton twice your height is impressive to stand under. We recognized a saguaro skeleton that was struck by lightning, after learning how to identify them thanks to Carl Noggle, our July meeting speaker. Vonn discovered an opuntia variety that has not been described, right near River Road and First Ave. Chris discovered a few golden spined ferocactus wislizeni (fishhook barrels) that are now in full propagation mode due to Chris' pollination efforts and a few of our member nurseries growing them out to eight inch diameter plants. They will soon be showing up around Tucson in commercial areas.

It is also interesting to see some of our hardy desert cactus that are surviving despite difficult conditions. Large saguaros with only wood ribs showing for the first foot or two at the base. A large arm on a saguaro so heavy it droops to the ground but a new head grows in the center of the drooping arm. Barrel cactus and large hedgehogs growing on the top of a huge rocks. Some cacti are partially eaten or damaged by animals, most heal over quickly and often put out new growth around the damaged area.

Continued on the back page

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TCSS Web Page:

www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst

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 N, O, P, Q, R, S, and T please bring your choice of refreshments to the meeting. Your generous sharing will be greatly appreciated and enjoyed!

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				3

Cacti Rescued

247 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 2010

Tuesday, August 3, 2010 7:00pm

Opuntoid Garden Kick-off

College of Pharmacy-Drachman Hall, Room B-111

Tuesday, August 10, 2010 7:00pm

Board meeting at the U of A College of Pharmacy

Sunday, August 22, 2010 8:00am

Blooming Barrel Sale

Treats for Crew Member continued

We also encounter wildlife from time to time, a special treat. A small fawn nestled under a mesquite tree probably staying put while mom hunts for food. A baby horned lizard the size of a quarter but no others seen in the area. Most of these lizards are almost non-existent in our desert but were quite plentiful in most desert areas forty to fifty years ago. I remember catching and playing with them as a child, before we knew better, in the desert near Campbell and Glenn. We spotted a huge nest in a saguaro that gives you pause as to how close you should get. We recently caught a glimpse of a very fast Desert Iguana. We occasionally see snakes and keep our distance of course. One rattler had just devoured a large rodent, obvious by a 3 inch diameter bulge in the center of the snake. Being slightly incapacitated for a while, the snake stayed put under a cholla for the full four hours while we were on the site removing cactus. I probably need to add a Facebook photo album for our wildlife encounters. Our desert is really quite special.

Joe Frannea

The Desert Garden Tour

Save the date Saturday, October 9, 2010. We will open 7 member gardens on that date in the central Tucson area. We are still looking for additional gardens. If you live in the city and would like to share your knowledge and garden with other TCSS members, please call or email Bill Salisbury at 299-3301 or lusalisbury@comcast.net



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

September 2010

Thursday, September 2, 2010 - 7:00 PM

"General Overview on the Subfamily Opuntioideae"

Presented by Raul Puente-Martinez Curator of Living Collections and Research Botanist at the Desert Botanical Garden in Phoenix, Arizona



Raul Puente-Martinez divides his time at the Desert Botanical Garden as the Curator of Living Collections and as a Research Botanist. He is responsible for curatorial aspects such as plant acquisition, maintaining the database and mapping of the Garden's Living Collection. His main research interest is the systematics of the genus *Opuntia* (prickly pears) in northern Mexico, particularly in the states of San Luis Potosi, Coahuila and Sonora. He is also working on a taxonomic revision of the genus *Nopalea*, a unique group of tropical prickly pears from Mexico and Central America which are pollinated by hummingbirds. Raul's

studies are based on fieldwork as well as morphology, chromosome numbers and pollen morphology, among other techniques. As a collaborator for the Vascular Plants of Arizona project, he has written various family treatments as well as produced a number of plant illustrations.

The TCSS has moved forward with a great project that will eventually be introducing Tucson and others to the numerous plants associated with the Opuntioideae. Please join us in welcoming Raul to speak to us about this great group of cacti.

Thursday, October 7, 2010 at 7:00 PM
"Succulent Plant Adventures In Peru"

Presented by Jan Emming

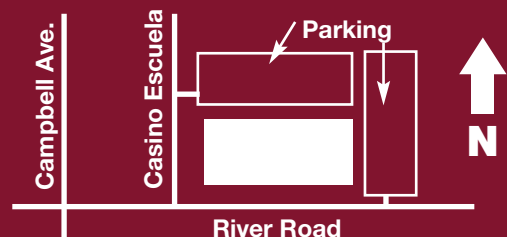
Free Plants

Echinocereus viridiflorus "Green Pitaya"

This hedgehog is native to Northern Mexico and continuing from Texas, New Mexico, Colorado, Wyoming, South Dakota, Nebraska, Kansas and Oklahoma.

Hedgehog cactus are reliable bloomers in Spring. This hardy, small clumping species is easy to grow in a pot. Beautiful greenish/yellow flowers appear in February and March. This species readily forms nice tight clumps and looks great in pots. Plants look best with morning sun and afternoon shade. Regular water and monthly fertilizer will enhance growth and flowering.

Meetings are held on the first
Thursday of each month.



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

President's Message



On August 14, I turned 70 years old. I don't think I "look" 70 and I certainly don't "feel" 70.

It was a great day as there was a rescue planned for that morning. What better way to start-off a birthday than spending a couple of hours in the desert with the nicest people I know, doing something positive for our environment and our own well-being? It was one of those special times when

you see plants that just make you happy. Rob Romero and I came across an old *Ferocactus wislizenii*. It stood-up straight at over 8ft and was covered with a circle of flower at the top. It was healthy, spectacular and probably older than me. Certainly, it is the tallest barrel I have encountered. There were no other really tall barrels but there were a lot of very large barrels in this area and I counted one with more than 50 buds and flowers.

As we walked along this dirt road we spotted very large single specimens of *Mammillaria grahamii*. They looked like they were on steroids. Rob's keen eye spotted a queen of the knight (*Peniocereus greggii*). It kept him busy for the next 30 minutes removing a tuber that must have weighed 12 lbs. Joe Frannea and Joie Giunta joined in with plant slings to move 20 or so very large barrels that we just could not leave behind.

This little section of land was full of wonderful surprises. We came across an area of young cholla's that were perfect for the sale and in just a few minutes we had over a dozens of easily handled plants.

As we dug our final plants and loaded them into trucks to take back to the tagging area there was one small Ocotillo spotted under a tree that needed to be rescued. After digging it out I glance up and in creosote right in front of me was 2 large *Peniocereus* growing right next to each other. Rob and I carefully dug them out as other searched the area and four more were collected. The six plants were within 20 feet of each other. What a great way to spend a birthday morning.

For more than 11 years I have been rescuing plants and every rescue has been a birthday of spirit.

The rest of the day was spent with family, my wife Pat, 3 daughters, their husbands and 2 grandsons. Great food, great fun, great family and great day!

Thank you.

Dick Wiedhopf, President

Library Update

"Trouts Notes on San Pedro & related *Trichocereus* species"

About twenty species of *Trichocereus* detailing the botany, chemistry and history are covered. There are numerous black & white photographs in over 300 pages. No cultural information is provided

"The Succulent Garden A practical gardening guide"

by Yvonne Cave

Well illustrated with color photographs showing how succulents can be used in a garden. Detailed descriptions and information on culture, propagation and maintenance on some popular species

"Tucson Impressions"

Photographs by James Randklev

The sights and scenes in and around Tucson in photograph

TCSS Fall Round-Table Discussions

September Round-Table Discussion: Insects and Pests of Cacti and other Succulents Thursday, September 16, 2010 at 7:00PM Junior League of Tucson, 2099 River Road

This discussion will help open up our ways and means of controlling and even preventing our plants from being attacked by pests. We will invite anyone who has further knowledge about this topic to come and offer advice, talk about the good as well as the bad insects and discuss the ways to control many of the pests. This will be an open discussion for everyone.

October Round-Table Discussion: Preparing Your Plants for the Winter Thursday, October 21, 2010 at 7:00PM Junior League of Tucson, 2099 River Road

We will meet in October to start preparing for the winter. This discussion will cover all ways we should protect our patio and garden plants for the cold, and or, moist months ahead. Even the need for preparing your greenhouse should be included in this round-table discussion. Everyone should take advantage of receiving good tips and ideas that will help during our winter months.

Good Time Silent Auction Sunday, September 19, 2010 Junior League Building • 2099 E. River Rd 12:00noon to 3pm

Good bye to the summer heat and the monsoon and hello to fall and a great time to plant. This event has been a Tucson Cactus & Succulent Society activity for more than 50 years. All proceeds will go to our research programs or our proposed Opuntoid Garden.

This is a celebration: silent auctions, Free Plants, \$2.00, \$5.00 and \$10.00 sale tables and Ice Cream with all the toppings.

continued on page 5

Growing Succulents in the Desert

Hoya pachyclada

by Mark Dimmitt



Hoya is a genus formerly in the milkweed family, now in the dogbane family Apocynaceae. There are at least 300 species, all native to the Old World. Almost all are vines, and range from thin-leaved delicate tropicals to semidesert succulents. This month's featured species is one of the most succulent of all.

Hoya pachyclada (Figure above) does not vine; it is much slower growing than almost all other hoyas. Stems are usually short and densely clothed with very thick leaves. If overwatered and overfed, however, it will produce lengthy stems with long internodes. The leaves continue to thicken over several years. Old leaves may be more than a quarter-inch thick. Plants bear good-sized umbels of white flowers in summer (Flower to right).

This species is native to dry tropical forest in Thailand, where it is typically an epiphyte on trees. It grows well in a humus-rich potting medium. Keep it in a very small pot. Overpotting will usually result in a rotted plant. It can be



grown outdoors in Tucson most of the year, tolerating heat quite well in at least half shade. (Despite its hard succulent leaves, it does not like desert sun.) It can also tolerate cool weather, but keep it well above freezing in winter.

Like many desirable plants, this one is a challenge to find. Even nurseries specializing in hoyas often don't have it, probably because it grows and propagates so slowly.

TCSS Holds The Annual Blooming Barrel Sale

Thanks to our hard core of forty plus TCSS sales volunteers, our August 22nd Blooming Barrel Sale found many new homes for some great ferocactus wislizenii. Most all had buds and many were in bloom so favorite colors could be selected. We had 600 barrels on hand so there were plenty for all. Colors ranged from red to yellow with most in between.

We sold about 250 barrels and 50 hedgehogs as well as a few other cacti. Net profit after expenses for native plant

tags and advertising expenses yielded about \$3,200. One fourth of this will be earmarked for Educational Outreach. Our next sale is not scheduled at this time. Notices will be sent out after a date is selected.

Joe Frannea
Photos by Barry McCormick



continued from page 2

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 meetings and on our website for your convenience. The Board has adopted the same policy as we had at Sonoran VIII with a high value special silent auction table. 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 friends and past members of the Society. Some are large, some old 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 12:30pm in order to give everyone an opportunity to take some home. We will start the set-up at 11:00am and the party will start at noon with the first silent auction ending at about 1:00pm and then about every 20 minutes there after. All you have to do is sign-up and get a bid number.

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 at www.tucsoncactus.org or call (520) 256-2447

TCSS Holds The Annual Blooming Barrel Sale

Photos by Barry McCormick



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885-6367

Vice President: Vonn Watkins
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(Ending Dec. 31, 2011)
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Chris Monrad
Dale Johnson
Keimpe Bronkhorst

CSSA Affiliate Rep:
Bill Holcombe (2011)

Cactus Rescue
cactusrescue@tucsoncactus.org

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Educational: Joe Frannea
Free Plants: Chris Monrad
Librarian: Joie Giunta
Programs: Vonn Watkins
Refreshments: Patsy Frannea
Technology: Kevin Barber
Research Grants: Gerald Pine

Editor: Karen Keller
runbunny@cox.net
Deadline for copy: 15th of each month

TCSS Web Page:
www.tucsoncactus.org
(520) 256-2447
Webmaster: Keimpe Bronkhorst

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
U, V, W, X, Y, Z, and A please bring your choice
of refreshments to the meeting. Your generous
sharing will be greatly appreciated and enjoyed!



Cacti Rescued 249 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 2010

Thursday, September 2, 2010 7:00pm
Monthly Meeting, "General Overview on the Subfamily
Opuntioideae" Presented by Raul Puente-Martinez

Tuesday, September 14, 2010 7:00pm
Board meeting at the U of A College of Pharmacy

Thursday, September 16, 2010 7:00pm
TCSS Fall Round-Table Discussion
Insects and Pests of Cacti and other Succulents
-

Sunday, September 19, 2010 12:00pm to 3:00pm
Good Time Silent Auction

Practical Tips

Yesterday I was trying to right my wavy prickly pear with the yellow glochids (don't know the technical name but picture here. It fell on my arm and shoulder and of COURSE I wasn't wearing my gauntlet gloves and got thousands of spines in my should and arm, and in both hands. I was really struggling to get them out. Tape, packing tape, even a razor couldn't get them out. I was tweezing but they were breaking off and too many to pull. Also awkward to get them off my shoulder.

Suddenly I realized that the stickiest thing I had in my house was Nads, a wax hair remover. It comes in this nifty pen applicator, with little pieces of fabric to pull the wax off. It worked like a charm. It still left a stubble in the skin but at least I wasn't pulling them out one at a time! Now that I know this works, I'll never be without it. It could be a really handy tool for those of us who handle cacti with these tiny spines.

Corinne Cooper

TCSS Desert Garden Tour

Saturday, Oct. 9, 2010, 9:00 am - 3:00 pm

You will see 8 different and interesting member gardens in the Central Tucson area. You will have the opportunity to discuss types of plants and methods of care with the owners.

The committee still needs volunteers to register visitors at each house.

Sign up at the Sept. or Oct. general meeting or call
Bill Salisbury at 299-3301.



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

October 2010

Thursday, October 7, 2010 at 7:00 PM

"Fog to Glaciers: A Tour of Peruvian Cacti and Bromeliads"

Presented by Jan Emming



Peru is known to possess some of the most dramatically varied scenery and diverse ecology in the world. Home to a huge variety of natural habitats ranging from hyper-arid coastal fog deserts to soaring Andean heights and Amazonian rainforests, the country is a botanical paradise. There are nearly 300 species of cacti known from Peru in over 20 genera, including a number of endemics. There are also numerous bromeliads, many of which are of interest to people who grow succulents since they frequently share the same habitats and growing conditions with the cacti and have showy flowers.

This visual tour of Peruvian cacti and bromeliads focuses mainly on the arid coastal regions, the steep Andean valleys located just inland from the Pacific Ocean, and the highlands set amongst the dramatic glaciated peaks in the western and southern parts of the country. There are many additional species that grow in the northern and eastern portions of Peru in dry tropical forest and even moist rainforest, but the huge size of the country (almost twice that of Texas) more or less precludes covering the entire nation in one trip, or one program. Nonetheless, some of the most iconic Peruvian plants will be shown in this presentation of an extremely diverse and beautiful place.

Jan Emming lives in the small town of Yucca, located in the far northwestern reaches of Arizona where the Mojave Desert intergrades naturally with the Sonoran Desert. In 1999 he started Destination: Forever Ranch and Gardens, a combination botanical collection and sustainable-living experiment on 40 acres set in the

southwestern foothills of the Hualapai mountain range. After 11 years of work, Jan is about ready to complete his first residential structure, a 600-square foot guest house, and move permanently onto the D:F Ranch property for the first time. He has learned that cows will not eat papercrete. He also expects that major progress can finally be made on the horticultural aspects of the property since living there full-time will finally enable him to deal adequately with the legions of gnawing rodents that inhabit the wilderness, causing tremendous plant mortality unless closely monitored. In the desert, it seems that everything is always looking for a meal. A brief update will be provided as to the status of this venture, as requested by the TCSS' venerable president, Dick Wiedhopf.

We are very happy to again have Jan present us with a spectacular program that will take us to a truly magnificent cactus and succulent location far south of Tucson. Please don't miss this great program from one of our devoted members from Yucca, Arizona!

Thursday, November 4, 2010 at 7:00 PM

"The Cacti of the Northern Mojave Desert and Adjacent Areas"

Presented By Donald Barnett

Native Plant Horticulturist at the Springs Preserve
in Las Vegas, Nevada

Free Plants

Boojums

Fouquieria columnaris "Boojums" are cool season growers. This means they are actively growing Fall, Winter and Spring in the Desert Southwest. In the summer when the temperatures soar they are essentially dormant.

Boojums are native to a small spot on costal Sonora and Central Baja, with the main population being in Central Baja.

Mature Boojums should be encouraged to grow October through April in Tucson. This means regular watering at this time unless we receive adequate rainfall. Once the daytime high temperatures consistently stay near 100 degrees cut back on watering because the plant is dormant. Small plants should be watered regularly enough to keep green leaves. In many cases for a small 2 1/4 Inch potted plant that will be twice a week watering.

President's Message



Now is the time to plant! Botanical Gardens are having sales and plants nurseries are anticipating a busy season. I urge you to support these efforts. There are several sales planned for October. Boyce Thompson Arboretum has their fall plant sale from October 8 to 24. Tohono Chul "Desert Corner Plant Sale" is October 9 and 10. The Desert Botanical Gardens in Phoenix has their sale on October 16 & 17. I hope you were able to attend the Tucson Botanical Garden Sale on September 25 and the Arizona Sonora Desert Museum sale on September 25 & 26. Check with the individual gardens for times and special hours for members.

We have a number of member nurseries that I hope you will support by shopping and encouraging your friends and neighbor to support them. They are important to our hobby and in these tough economic times they really need our support.

I visited the Los Angeles Arboretum and the Huntington Botanical Gardens in mid-September. The Arboretum has enlarged their Madagascar garden and it is really looking good with lots of mature and interesting succulents. They have a very nice succulent collection especially their aloe collection. The Huntington is always wonderful and I had a chance to see the Gentry Agave Botanical Illustrations which are on display in their Botanical Center. This is a display loaned to them by our Sonoran Desert Florilegium program. Thanks go to our Margaret Pope for making all the arrangement with Jim Folsom the Director of Botany at the Huntington. He is also very supportive of our Opuntoid Garden concept.

September 16 was the first of 3 fall round table events. This one was all about insects that effect our collections. Mark Sitter from B & B Nursery and Charlie O'Brien, a world renown Entomologist specializing in weevils lead the discussion and answered question. They are a terrific source of information and we really thank them for their participation. The next round table is October 21 and will deal with preparing your plants for the winter.

Your board of directors has elected a nominations committee to prepare a slate of candidates for all the officers and four (4) director positions. The committee members are Bill Hicks, Dale Johnson and Bill Holcombe. Any member in good standing is eligible to run for office. If you are at all interested in serving, please contact one of the committee members. The nominations committee will present a slate of candidates at the November meeting. At that time, nominations from the floor will be entertained so that a final ballot can be mailed out prior to the Holiday Party (nominations must have the approval of the nominee either in person or in writing). The results of the election will be announced at the Holiday Party and the new officers and Board will be installed at the January meeting.

Thank you for your support.

Dick Wiedhopf, President

Library Update

"Monadenium"

by Albert Pritchard

A Cactus & Co. book loaded with great photographs of Monadeniums. There are descriptions of a number of species consisting of place of origin, length and width, leaves and flowers.

TCSS Fall Round-Table Discussions

October Round-Table Discussion: Preparing Your Plants for the Winter Thursday, October 21, 2010 at 7:00PM Junior League of Tucson, 2099 River Road

We will meet in October to start preparing for the winter. This discussion will cover all ways we should protect our patio and garden plants for the cold, and or, moist months ahead. Even the need for preparing your greenhouse should be included in this round-table discussion. Everyone should take advantage of receiving good tips and ideas that will help during our winter months.

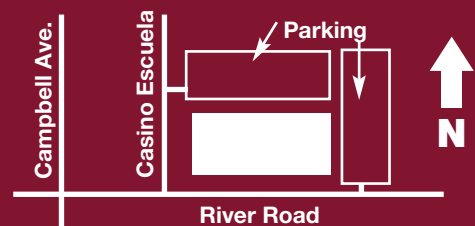
November Round-Table Discussion: The Collector's Discussion Thursday, November 18, 2010 at 7:00PM Junior League of Tucson, 2099 River Road

Many of us have a plant collection. Even if you have collected a large group of plants or a small group, this discussion will need your help. We really want to feature anyone who has started a plant collection or who may be interested in starting a collection. We invite all our collectors to come to this round-table and let all of us know what you have and how or why you started. This will be an excellent opportunity to have some fun, maybe bring in a plant to show and find out who and what is collected by some of our members. This will be an open discussion for everyone so please mark your November calendar and come talk about your plants!

If you have any questions about the Round-Table Discussions, please send an email to: cactusdude1@yahoo.com

Thanks, Vonn

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



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

Growing Succulents in the Desert

Trichocereus terscheckii: the Argentine “Saguaro”

By Kevin Barber

Photos by Kevin Barber and Mark Dimmitt



Figure 1. *Trichocereus terscheckii* at Boyce Thompson Southwestern Arboretum



Figure 2. Two-foot tall *T. terscheckii* ready for planting in 2005.

Many of us would love to have a large stately Saguaro in our yard, but aren't lucky enough to have one already or don't have decades to wait for a small one to grow up. The alternative could be an Argentine saguaro (*Trichocereus terscheckii*, Figure 1). Also known as *Echinopsis terscheckii*, it is called cardón in its native land. Not only is this a

beautiful plant in its own right, it is extremely fast growing if given a little TLC. Who says cacti are slow growing? Extra water, good soil and a smidge of fertilizer will make this plant rocket at over a foot per year in average growth (Figures 2, 3). (I have seen them grow 18 inches a year –MAD).

The plant has beautiful golden spines that seem to grow larger and more colorful as the plant matures. Give it a western exposure and it will glow in the afternoon and evening (Figure 4).

This arborescent cactus loves full sun and is hardy to at least 15 degrees F; it shouldn't have much of a problem anywhere in the Tucson area. It will eventually reach upward of 25 feet and will form numerous branches.

Remember this plant is going to get big! Don't plant it close to other plants even when small. Dig a good size hole (shallow and wide) and add some coarse soil mix to ensure good drainage and allow for root growth. A little slow release fertilizer (Osmocote) will foster rapid growth during the first season. During our dry periods give it some extra water to keep it growing. The plant will let you know if it needs water. You will be able to see the pleats in the plant shrink noticeably. Your objective is to keep it plump and happy to maximize it's growth. Once it's large enough to satisfy you, it needs only a watering once a month during the warm season to keep it flowering. (They like more water than saguaros.)

Saguaros flower almost every day in May and June with 3-inch flowers borne near the tops of the stems. *Trichocereus terscheckii* blooms all over its stems with huge flowers up to 8 inches across (Figure 5). They open after dark and stay open until the next afternoon. Individuals vary in abundance of bloom. The best clones flower in waves several times from April through October if well watered.

It is available in a variety of sizes at many Tucson Cactus and Succulent nurseries. I suggest getting one (or more) at a foot or so in size. Add water and watch it shoot up!

Harrison Gerald Yocum

Passed away on August 31, 2010 at the age of 87. He was born on April 23, 1923 in Bethlehem, PA.

Harrison is the founder of the Tucson Botanical Gardens and a member of TCSS for more than 40 years.

Trichocereus terscheckii: the Argentine “Saguaro”

Photos by Kevin Barber and Mark Dimmitt



Figure 3. One of the plants in Figure 2, now 7 feet tall in 2010. This species can grow even faster.



Figure 4. The long spines glow when backlit.



Figure 6. *Trichocereus terscheckii* in a flush of full bloom, which it can do several times a year. This plant was 19 years old from a 6-inch pot when photographed.



Figure 5. The very large flowers of *T. terscheckii*.

TCSS Fall Desert Garden Tour

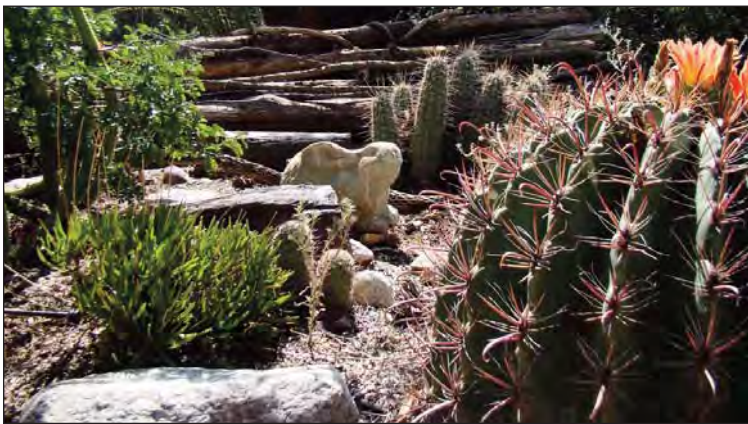
(Total driving distance for this tour is 7.8 miles)



A: Pat Gammill, 825 S. Fremont Avenue



B: Lester Street Landscape, 1534 E. Lester Street



C: Thomas & Maria Voris-Staudt, 1511 E. Hampton Street



D: Robert & Vanessa Dearing, 2845 N. Forgeus



E: Nancy Reid, 2713 N. Hopi Place



F: Sean Walker, 2732 N. Hopi Place



G: Jane Evans & Gene Joseph, 2945 N. Fontana Avenue

TCSS Fall Desert Garden Tour

Saturday, Oct. 9, 2010, 9:00 am - 3:00 pm

Driving directions and brief descriptions of the 7 gardens on the TCSS Fall Desert Garden Tour.

(Total driving distance for this tour is 7.8 miles)

A: Pat Gammill at 825 S. Fremont Avenue

Our gardens can be visited in any order you wish, but here are driving directions to the gardens going from south to north. To get to Pat's house, turn east off of Park just after it joins with Euclid at 18 Street. (This is the first left turn after the underpass if you are driving south from the Broadway/Euclid intersection.) Go one block east on 18th, turn right on Fremont Avenue and you cannot miss her head turning arrangement of golden barrels and fence post cacti mid-block. cacti.

If you really love color, you are going to be delighted with Pat's fun and eclectic use of bold splashes of color accented with her large cactus and succulent collection. Her two African spurred tortoises are an additional treat you won't want to miss. Tucked away in an historic area just south of Broadway, this little neighborhood is a treasure and you will have the opportunity while you are there to peak in on some of Pat's neighbors' landscapes too.

B: Lester Street Landscape at 1534 E. Lester Street

When you are ready for the next landscape, return to Park via 18th, turn right, and drive north. Go under the "basket bridge" and continue north on Euclid past the UofA. Go 7 more blocks past Speedway, turn right onto Lester Street. Drive east on Lester for 7 ½ blocks and you will find a native landscape park hidden right behind the UofA medical complex.

In 2004 TCSS volunteers partnered with the neighborhood residents and the University to provide rescued cacti, rocks and labor to help create this little oasis. Designed by TCSS member Jessie Byrd, this once barren lot has grown into a peaceful public escape. Take a moment to walk the short path and enjoy the now lush landscape.

C: Thomas & Maria Voris-Staudt at 1511 E. Hampton Street

Either return west to Vine Avenue and turn right or continue east to Warren Avenue and turn left to get to the nearby next garden on Hampton. (Just 4 blocks north of Lester)

Winner of a 2009 Xeriscape Award, Thomas and Maria have created an inviting, shady landscape focusing on low water use plants. Passive water harvesting using well placed berms and swales creates interesting topography and active water harvesting using collection tanks captures roof water for irrigation. Through a rich plant palette a they have created a lush desert setting. A recently added ramada provides an enjoyable outdoor room.

D: Robert & Vanessa Dearing at 2845 N. Forgeus

To get to the Dearing house take Vine Ave. north to Grant Road. Turn right on Grant and then left when you come to Tucson Blvd. Travel north to Monte Vista Dr, which is just past Glenn. Turn right on Monte Vista and then take the first right on Forgeus.

Look for Robert's beautifully designed sculptural fence and their very lush landscape packed full of special cactus and succulents. Vanessa's artistically installed tile mosaic wall of color will grab your attention as you come around the house, past a cooling meandering stream and pond and into yet another delightful setting for their creative talents and plant collection.

E: Nancy Reid at 2713 N. Hopi Place

Now return to Tucson Blvd and turn left. Go south a block to Glenn and turn right. Continue west on Glenn. When you get to First Avenue, turn left and go one block to Kelso and turn right. Drive west on Kelso until you get to Hopi. (the 3 street) Turn rd right and park mid-block. There are two gardens for you to see on this block.

Nancy was also a winner of a Xeriscape award, (her's in 2006 for the best use of Sonoran and Chihuahuan plants). Seven years ago she cleared this lot that was full of non-native plants and began landscaping with her extensive collection of native desert plants. This most peaceful and natural design provides a perfect habitat for many native birds, lizards, and other desert creatures.

F: Sean Walker at 2732 N. Hopi Place

Just a couple of houses away from Nancy's you will find an avid collector ... or, as he describes himself, a hoarder fascinated by the oceanic/Dr. Seuss-like forms and abuse tolerance of cactus and succulents. Just try to find and identify all of the many special plants that make up this collector's haven. They are hiding at every turn.

G: Jane Evans & Gene Joseph at 2945 N. Fontana Avenue

Now drive back to Kelso and turn right heading west until you get to Fontana. (3rd street) Turn right on Fontana and go north to 2945. (just 2 ½ blocks) Over the past 20+ years, Jane and Gene have created nearly 3 acres of densely vegetated wonder right here in the middle of the city. 1.1 acres of this is a propagating nursery for their nearby cactus and succulent business, "Plants For The Southwest". You are welcome to experience that space also. It will take a while to wander the paths through this treasure of special plants and collections, so allow some extra time to enjoy this opportunity.

H: Just a few blocks away at 50 E. Blacklidge, is where Plants For the Southwest is located. You are more than welcome to visit this member nursery while you re in the neighborhood. Just drive north to Blacklidge, turn left and go 1 ½ blocks west to the nursery.

FUNFEST 2010

The FUNFEST 2010 is coming 3,4 &5 November and TCSS is going to be there for the third year – with your help! The Math, Science & Technology Funfest is an annual event held at the TCC where over 6000 4th thru' 8th grade students get a chance to work hands on in small groups on projects involving math, science or technology. Over the last two years we have had over 1500 students come through our booth and build a model cactus. This year we are planning for 900 students. The kids work in groups of 8 – 10 with a TCSS leader for about 20 minutes learning the functional anatomy of a generic cactus and then building a model incorporating the functions of roots, stems, core, structure, skin, spines & flowers. It has been a big

hit the last 2 years both with students and teachers. To make this work we need volunteers: to help assemble the model kits in October; and to work the booth in November. The October work party to assemble the kits will be announced at the October TCSS meeting. The Funfest runs from 9:00am to 1:00pm each day (Wed, Thurs, Fri), so we will be setting up 2 hour shifts (9:00am – 11:00am and 11:00am to 1:00pm) on each day and will need 6 volunteers to staff the booth on each shift. If you are interested in participating, please send me an e-mail at funfest@tucsoncactus.org or see me at the October TCSS meeting.

John Swarbrick

Manzo Elementary Awarded School Grant



Our Educational Outreach Committee just awarded a \$500 school grant to Manzo Elementary School in the TUSD district. Manzo will partner with the Arizona Sonora Desert Museum to create a desert tortoise habit and cactus garden

to become a permanent feature of the school. The tortoise habitat and cactus garden will replace existing Bermuda grass, thus reducing their school s water footprint.

School counselor Moses Thompson will oversee the project. TUSD Irrigation will cut and cap existing sprinklers to prepare the site for retaining wall and plant installation by September 2010. Manzo students and staff will dig 8 footings and build an 18 stone-masonry enclosure wall by November, 2010. Students and staff will remove Bermuda grass and install cacti and shrubs by December 2010. Habitat/Cactus garden will be ready for desert tortoise adoption by February 2011.

Manzo Elementary students and staff have been creating Sonoran Desert Habitat for the past four years including a Sonoran Desert Biome. Arizona Illustrated did a short feature on their native plant projects, which can be seen at: www.facebook.com/video/video.php?v=102298906483646

Joe Frannea

Sharing Beautiful Plants at Bargain Prices - Good Times For All

Plant after beautiful plant came streaming in for our Annual Good Times Silent Auction in September. It seemed like we had a record number of wonderful large plants overflowing on the auction tables and outside the \$2, \$5, \$10 and free plants were equally abundant. The TCSS Research Fund will be the main beneficiary of over \$3300 taken in from the sales and the lucky members who took home new treasures definitely benefited from this opportunity for real bargains. Many thanks to the generous donors and to the volunteers who put in hours of work gathering and transporting many of the plants, setting up the auction, handling the sales and cleaning up afterwards. Thanks too, for the servers who kept everyone happy and cooled off with free ice cream and toppings.



TCSS BOARD

Officers

President: Richard Wiedhopf
885-6367

Vice President: Vonn Watkins
Secretary: Dave Moyer
Treasurer: Joe Frannea

Board of Directors:

(Ending Dec. 31, 2010)
Linda Bartlett
Martin (Marty) Harow
William (Bill) Hicks
John Swarbrick

(Ending Dec. 31, 2011)
Ed Bartlett
Mark Dimmitt
Joie Giunta
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Chris Monrad
Dale Johnson
Keimpe Bronkhorst

CSSA Affiliate Rep:
Bill Holcombe (2011)

Cactus Rescue
cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad
Educational: Joe Frannea
Free Plants: Chris Monrad
Librarian: Joie Giunta
Programs: Vonn Watkins
Refreshments: Patsy Frannea
Technology: Kevin Barber
Research Grants: Gerald Pine

Editor: Karen Keller
runbunny@cox.net

Deadline for copy: October 21, 2010

TCSS Web Page:
www.tucsoncactus.org
(520) 256-2447

Webmaster: Keimpe Bronkhorst

Everyone is Welcome!
Bring your friends, join in the fun,
and meet the cactus and
succulent community.

October Refreshments

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

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Cacti Rescued 249 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

October 2010

Thursday, October 7, 2010 7:00pm

Monthly Meeting, "Fog to Glaciers: A Tour of Peruvian Cacti
and Bromeliads" Presented by Jan Emming

Tuesday, October 12, 2010 7:00pm

Board meeting at the U of A College of Pharmacy

Thursday, October 21, 2010 7:00pm

TCSS Fall Round-Table Discussion
"Preparing Your Plants for the Winter"

Acknowledgement of Contributions

July 2010 –September 2010

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.

Conservation

Robert & Vanessa Dearing
Paul & Jennifer Butler

Florilegium

Paul & Jennifer Butler
Linnea Gentry

Educational Outreach

Paul & Jennifer Butler

Research

Paul & Jennifer Butler

General Fund

Paul & Jennifer Butler

In Kind Gifts

Helen Housman Estate
Gail Virtes
Marge Hartsock





DESERT BREEZE

Newsletter of the Tucson Cactus and Succulent Society

November 2010

Thursday, November 4, 2010 at 7:00 PM

“The Cacti of the Northern Mojave Desert and Adjacent Areas”

By Donald Barnett Native Plant Horticulturist at the Springs Preserve in Las Vegas, Nevada



Echinocereus canyonensis

Donald's parents both have Biology degrees and have always been his largest influence. At the age of 5 years old he was fascinated with Dinosaurs. Dinosaurs were extinct and his parents encouraged him into Herps (reptiles and amphibians) and the outdoors. He did a large amount of traveling to Americas' National Parks and looked closely at the true beauty of nature. Around the age of 8 years old the "idea" of xeriscaping began showing up in Colorado. His father convinced his mom to convert their non-sustainable lawn into a desert rock garden. He started out with a handful of native cactus including the red flowering strawberry cactus, *Echinocereus triglochidiatus* and eventually he had over 100 species of cactus and 25 species of agave. At 11 years old, he was more into cactus and succulents and began experimenting with growing yucca and agave from seed. Later he began growing many species of cactus including *Sclerocactus* and *Pediocactus* from seed. At 17, he began working for Wild Things Wholesale Nursery in Pueblo, CO. They specialized in growing natives including succulents of southeastern Colorado to northern New Mexico. At 19 he found a job in Las Vegas, Nevada at the new Las Vegas Springs Preserve (Springspreserve.org). He is currently a horticulturist with many duties, including managing the seed repository, herbarium and over see all the cactus and succulent propagation. Now at the age of 22 his main hobby besides plants is photography, the website, <http://donnie-barnett.artistwebsites.com> has a large



Opuntia x curvispina

amount of photos taken while hunting for the rare species of cactus within the area.

“Cacti of the Northern Mojave and Adjacent Areas” originally was a book idea and is in progress. At the moment it is a PowerPoint presentation and is a ‘complete’ overview of cactus in Nevada. Although, the main area covered is from the Vermillion Cliffs National Monument, Arizona to Death Valley National Park, California and from Joshua Tree National Park, California to the Great Basin National Park, Nevada. Many genera of cactus are found throughout, including the genera *Echinocactus*, *Echinomastus*, *Escobaria*, *Ferocactus*, *Opuntia*, *Pediocactus* and *Sclerocactus*. Each species will be pictured and described with great detail, including habitat, elevation and a few locations where the plants may be viewed. All the information on these plants has been acquired through reading and 3 years of field work.

I will go into the *Opuntia*s with great detail and explain the differences between each of the *Opuntia*s in Southern Nevada.

Sunday, December 5, 2010 from 12:00–3:00 PM
TCSS Holiday Party 12pm–3pm
Junior League of Southern Arizona

Free Plants—See page 5

President's Message

The holiday season is fast approaching which means it's time for Membership Renewal, Election of Officers and



Board Members and our Holiday Party. Information about all these activities will be mail to you in early November. Mark your calendars for the Holiday Party on December 5, 2010 starting this year at 3:00pm. This is a new time due to scheduling at the Junior League facility. All the details will be available in the November mailing. Don't forget you will need to RSVP since space is limited.

We are working on developing an optional online payment system for Membership and Donations and hope to have it available for your convenience (with security) in the next couple of weeks. We know this will make it easier for many members to make payments and keep good records. There will be no change in the dues structure except for student members. The Board will be asked to reduce regular dues from \$10 to 8 to make it a little more appealing to students and meet our needs for the online payment system. I would also encourage you to pay for a student who is interested in cacti and succulent plants to insure that our hobby will have a strong future.

The nominations committee has a slate of officers and board nominees that will be presented to the November meeting. At that time additional nominations from the floor will be accepted as long as the nominee is present or has given written permission to be nominated. The nominations will be closed and a ballot prepared and sent to every current member. The ballots need to be returned by December 1, 2010. The results will be presented at the Holiday Party. The concept plans for the Prickly Park (Opuntoid Garden) will also be presented at the November meeting. There are a lot of next steps. This is only the pre-beginning! There is a lot to consider on how this activity is managed and funded and we want your input. We will continue to solicit your advice on all matters concerning this special community educational activity. A questionnaire is being developed to help us get your input. It also will be in the November mailing.

Finally, sincere thanks to Maria Voris for preparing this newsletter in the absence of Karen Keller.

Thank you.

Dick Wiedhopf, President

Library Update

"Art of Cooking with Cactus: A Collection of Favorite Recipes from the Texas Prickly Pear Council"

With over 290 pages of recipes, this cookbook is just in time for the holidays. Contains Appetizers, Desserts, Main Dishes & more.

"Cactus & Co. XIII Vol. 3"

Agave ovatifolia, Echinocereus chaletii, Melocactus intortus, Yavia cryptocarpa are covered in this volume.

"Cactus & Co. XIII Vol. 4"

Pediocactus nigrispinus, Dioscoreae, Pteroduscus, Pelecyphora strobiliformis are covered in this volume.

"Cactus & Co. XIV Vol. 1"

Ulbelmannia pectinifera var. eriocactoides, Pediocactus, Astrophytum wonders Part 1: asterias, Australian Native Succulents are covered in this volume.

Joie Giunta

TCSS Fall Round-Table Discussions

November Round-Table Discussion:

The Collector's Discussion

Thursday, November 18, 2010 at 7:00PM

Junior League of Tucson, 2099 River Road

Many of us have a plant collection. Even if you have collected a large group of plants or a small group, this discussion will need your help. We really want to feature anyone who has started a plant collection or who may be interested in starting a collection. We invite all our collectors to come to this round-table and let all of us know what you have and how or why you started. This will be an excellent opportunity to have some fun, maybe bring in a plant to show and find out who and what is collected by some of our members. This will be an open discussion for everyone so please mark your November calendar and come talk about your plants!

If you have any questions about the Round-Table Discussions, please send an email to: cactusdude1@yahoo.com

Thanks, Vonn

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



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

Growing in the Desert Series: *Agave zebra* and *Agave pelona*

By Mark Dimmitt

Photos by Mark Dimmitt unless noted



Figure 1 *Agave pelona* (left) and *A. zebra* in the Sierra del Viejo.



Figure 2 *Agave zebra* in habitat. Notice the strong banding and bud imprinting.



Figure 3 *Agave pelona* in habitat.

I'm treating these two very different but equally beautiful agaves in the same article because they grow together in the same habitat (**Figure 1**) and have the same culture. They are endemic to the Sierra del Viejo, a limestone mountain southwest of Caborca, Sonora. This range is in the Central Gulf Coast division of the Sonoran Desert. The climate is hot and very arid. All of these traits make these agaves well adapted to the climate and often caliche-laden soils of southern Arizona.

The similarities stop there. *Agave zebra* (**Figure 2**) is in the subgenus *Agave*, the one with paniculate inflorescences. *Agave pelona* (**Figure 3**) is in the subgenus *Littaea* and has spicate inflorescences. The former species forms offsets, while the latter is always a solitary rosette. The leaves of *A. zebra* are broad, gracefully recurved and channeled, and have beautiful gray banding and very toothy leaf margins that leave bud imprints on adjacent leaves. *Agave pelona* has many narrow, straight, toothless leaves; they're dark green with a smooth white margin.

Both species grow slowly, so they will grace your garden for many years before they flower and die. *Agave zebra* flowers are bat-pollinated and are a dull brownish white. Although the flowering rosette dies, offsets will keep the clone going. But the final act of *Agave pelona*'s solitary rosette is a spectacle. The spike shoots up to about 15 feet tall, densely packed with flowers of a strange brownish-red hue (**Figure 4**). My plants took 20 years from seed to mature, and that was with regular watering.

These agaves are only sporadically available, especially *A. pelona* because it can be propagated only from seed. Each one has look-alike species that can be substituted. Some clones of the variable *Agave colorata* (**Figure 5**) closely resemble *A. zebra*. It's a tropical species, but it tolerates our frost and nearly full desert sun. *Agave ocahui* var. *ocahui* (**Figure 6**) looks almost exactly like *A. pelona*. Most clones are non-offsetting; its inflorescence is a more ordinary yellow.



Figure 4 The striking inflorescence of *Agave pelona*.



Figure 5 *Agave colorata*, a particularly broad-leaved, strongly banded clone.



Figure 6 *Agave ocahui* var. *ocahui* in habitat near Magdalena, Sonora. Photo by T.R. Van Devender



Figure 7 *Agave zebra* (shown) and *A. pelona* typically grow on the high ridges of the Sierra del Viejo.

An Opportunity to Purchase some Great Plants

Large Silent Auction Cactus—Bid at November 4th Meeting

Pick up at holding area later, near Oracle Road and Magee Road

At our November 4th regular meeting we will be auctioning off ten large mature plants. Bids on the plants (pictured here) will taken on bid sheets (using your member number) up until the end of the meeting when a last call for bids will be given. The last bid (highest dollar amount) will be the winner, the plant needs to be paid for with cash, check, Visa, or MasterCard at the meeting. Plants that you win will need to be picked up at a holding location near Oracle Road and Magee by arrangement in the next couple of weeks.

Good luck! These are wonderful specimens that would be a great addition to your collection. Not pictured is a 5' *Pereskia grandifolia*.



A. 16" diam. *Echinocactus platyacanthus*



B. 36" high x 48" wide *Yucca rigida*



C. Toothpick 44" high *Stetsonia coryne*



D. 24" high x 36" wide *Agave mutiflora*



E. 80" tall *Oreocereus celsianus*



J. 60" high x 48" wide at the top
Hesperaloe funifera



K. 14" diam. *Ferocactus pottsii*



F. 43" high *Cleistocactus hyalacanthus*

G. Totem Pole 36"

H. Totem Pole 48"

Lophocereus schottii monstrosus

Free Plants

Ferocactus macrodiscus

Ferocactus macrodiscus is a small barrel cactus, reaching a full size of about 5-6 inches tall and 8-12 inches across. These are found naturally hiding out among the grasses in the southern Mexican state of Oaxaca. When traipsing about down there, one must keep the head down to avoid stepping on these hidden gems. This species is one of the most satisfying to grow as they will produce their pink, candy striped flowers when only about 3-4 inches across.

Keep the plants shaded; water them about once a week in the summer, and then once every two to three weeks from fall until spring.

Thelocactus hexaedrophorus

Thelocactus hexaedrophorus is a hardy, single stemmed, Chihuahuan Desert cactus that gets about 3-4 inches tall and up to 6-8 inches across. Beautiful, white or pink flowers will appear repeatedly throughout late spring and summer. These are found growing among small rocks on the slopes of limestone hills.

Grow these in full sun or very light shade; water about once a week in summer, and then once every two to three weeks in the winter.

Oct. 9, 2010 Desert Garden Tour!

Great gardens, great weather, great crowds and a great committee (see picture). 130 club members and guests toured 7 amazing yards and were treated to unusual, rare and beautiful cacti and succulents. The next Desert Garden Tour will be in April, 2011. Be on the lookout for more information. Your hard working committee consists of Ed Bartlett, Bill Salisbury, Nancy Reid, Patsy Frannea, Marija and Rim Tallat-Kelpsa.

Bill Salisbury



JTED Students Learn Cactus Grafting Techniques

Nicole Harrington, a TCSS member, left teaching at Catalina Magnet High School last year for a great opportunity with Pima County JTED, starting a Central Campus at their Tanque Verde location. They opened the campus this August with a new building and since have installed a 24 by 48 foot greenhouse with students building twelve raised vegetable garden beds. This is just the beginning of her work, they had a ribbon cutting ceremony on October 28th to showcase their new agriculture program!

Over one hundred of Nicole's students recently learned how to graft cactus and they loved the experience! Nicole was awarded a TCSS Educational grant last year and she has put it to good use. Mike Ellis and Miles Anderson contributed their expertise and Mike sold them cactus and other supplies. Another great example of TCSS Members helping make educational opportunities possible.

Joe Frannea
photos by Nicole



Nicole with student grafting cactus



JTED Students grafting cactus

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cactusrescue@tucsoncactus.org

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249 Rescues Accomplished

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TCSS Club Members receive a 10% discount

November 2010

Thursday, November 4, 2010 7:00 pm

“Cacti of the Northern Mojave and Adjacent Areas”

Presented by Donald Barnett Jr.

Tuesday, November 9, 2010 7:00pm

Board meeting at the U of A College of Pharmacy

Thursday, November 19, 2010 7:00pm

TCSS Fall Round-Table Discussion

“The Collector’s Discussion”

FUNFEST 2010

The FUNFEST 2010 is coming 3,4 & 5 November and TCSS is going to be there for the third year—with your help! The Math, Science & Technology Funfest is an annual event held at the TCC where over 6000 4th thru’ 8th grade students get a chance to work hands on in small groups on projects involving math, science or technology. Over the last two years we have had over 1500 students come through our booth and build a model cactus. This year we are planning for 900 students. The kids work in groups of 8–10 with a TCSS leader for about 20 minutes learning the functional anatomy of a generic cactus and then building a model incorporating the functions of roots, stems, core, structure, skin, spines & flowers. It has been a big hit the last 2 years both with students and teachers. To make this work we need volunteers: to help assemble the model kits in October; and to work the booth in November. The October work party to assemble the kits will be 2 to 4 pm at the College of Pharmacy Drachman Hall, room 326. Just take the elevator to the 3rd floor.

The Funfest runs from 9:00am to 1:00pm each day (Wed, Thurs, Fri), so we will be setting up 2 hour shifts (9:00am–11:00am and 11:00am to 1:00pm) on each day and will need 6 volunteers to staff the booth on each shift.

If you are interested in participating, please send me an e-mail at funfest@tucsoncactus.org.

John Swarbrick



Desert Breeze

Newsletter of the Tucson Cactus and Succulent Society

December 2010

President's Message



Let's end this decade up-beat.

I have written more than 100 president's messages and still enjoy telling you about the accomplishment of this society. Vonn Watkins (VP) has planned more than 100 programs and continues to engage speakers that educate and enrich our interest and appreciation for cacti and succulents. The rescue crew organizers, Joe and Patsy Frannea and Chris Monrad, Noe Mayotte, have made it possible for

50,000 plants to be rescued and returned to landscapes all over Southern Arizona.

We have provided school grants, research grants, Science and Engineer Fair awards, Funfest volunteers (this year for 960 students). We have hosted a national convention and 6 Sonoran Conferences (even numbered year). Every September our Good Time Silent Auction gets bigger and better. This year the plants were spectacular and the ice cream and toppings were superb. The great Cactus and Succulent Expo (odd numbered years) features an educational plant show and the nurseries, potters and booksellers that help make Tucson the "Cactus and Succulent Capital of the World".

In the last couple of years, we have added to this list of activities Home Tours and Round Table discussions in the spring and fall. A new feature in the Desert Breeze, lead by Mark Dimmitt on "Growing Succulents in the Sonoran Desert", which has become an instant success.

Our website has expanded and all members have access to this newsletter online and in color. This has saved large printing and mailing cost which we can invest in other programs.

I am very excited about our latest project, the potential "Prickly Park" (gardens featuring Opuntoids and other cacti and succulents). This will be a great educational, horticultural, cultural and scientific opportunity for our society and community.

The best part of all of this is YOU the 1000+ members, who support, enjoy, learn and participate in one or more of these activities. The next decade will be even better.

Happy Holiday to you and your families.

Thank you for your support.

Dick Wiedhopf, President

Sunday, December 5, 2010 3-5pm Tucson Cactus and Succulent Society Holiday Party and Gift Exchange

Junior League Facility, 2099 E. River Road

Setup Time: 1pm - 3pm

Dinner Time: 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 decade or so we have been collecting money and/or food for the Community Food Bank. This year the need is greater, so let's make it special for others. Please bring donations (\$ preferred, they can get 8 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 RSVP on the "green" notice you have already received in the mail.

Thursday, January 6, 2010 at 7:00 PM

"Cactus Cultivation and More"

Presented By Scott McMahon
Curator of Cactus at the Desert Botanical Garden
in Phoenix, Arizona

Library Update

Many thanks to those who donated books and journals this past year. Next year I hope to have a new program to make checking out easier. Since there is no regular meeting in December all checked out books will be due in January 2011.

PACC + TCSS + ARF + TMR = NEIGHBORS WORKING TOGETHER.



I'd like to offer the following report, as a prime example of how several groups of citizens coming together can benefit the community and actually save taxpayer dollars.

I'm not sure if you are aware of it or not, but Pima County has recently completed a fairly extensive, and well-needed refurbishment of the Pima Animal Care Center facility located at the intersection of Silverbell Road and Sweetwater. Pima County has installed a whole block of "spanking new" kennels, and updated the older section, making it more attractive and comfortable for our canine guests. We have installed four very nice and clean visitation areas where potential families can interact with their "new best friend."

We thought that as nice and welcoming as the interior of the facility appears, that the outside area was lacking in "curb appeal," and was in serious need of some attention. Formal landscaping worthy of a facility that sees so much public activity, was virtually non-existent.

Members of the Tucson Cactus & Succulent Society you can visit their website at www.tucsoncactus.org decided to lend a helping hand. When I broached the subject with the Pima Animal Care

Center (PACC), Ed Taczanowsky, the Business Operations Coordinator at PACC, shared some of the budgetary problems facing the facility. As much as they felt that the grounds needed some attention, unfortunately, there wasn't any funding in the budget for landscaping expenditures so that's that! I happened to be discussing the situation with some of my fellow volunteers with the Animal Rescue Foundation (ARF) and several of them quickly offered cash donations to cover whatever costs might be involved in getting some native desert plants for the yard.

My next step was to present the challenge to some of my associates at the Tucson Cactus Society, they said what's the big deal we can get all the plants from one of the sites that would be on our rescue calendar. In checking with the Arizona Department of Agriculture, we determined that because these "rescued native plants" would be installed at a County property, the normal tag fees could be waived. As it turned out, all we needed was a willing donor and the proper documentation from the Arizona Department of Agriculture, and we could get the necessary native plants to complete the project.

Granite Construction, a company that we've been "partnering with" on numerous cactus rescues was planning to install some solar panels in an area that had some saguaro, barrels, and ocotillo, so they needed to be relocated before construction could begin. Several volunteers managed to salvage these plants and transport them to the PACC location.

The folks at ASARCO (Silverbell Mine) magnanimously agreed to let us have all the plants we needed, all we had to supply, was the manpower to extricate them from the rocky hillsides that are found at the mine site, and transport and re-install the plants in their new home at the Animal Shelter. When I put out a call for volunteers from the Cactus Society Joe Bannon, Kendall Elmer, Jerry Estruth and Bill Ramstad all neighbors in our development of Tucson Mountain Reserve (TMR) stepped forward and offered their services. Jim Drain and Rob Romero, also very active members of TCSS quickly volunteered their services as well.

On a recent bright and sunny Tucson morning this hardy crew of volunteers and Ed (Mr. T) Taczanowsky, piled into his truck and made the 90 mile roundtrip to the mine and managed to extricate a goodly number of native plants from the rocky hillsides at the mine site. Upon our return to PACC, we rolled up our sleeves and



Growing Succulents in the Desert

Tillandsia ehlersiana: A Superb Succulent Bromeliad

by Mark Dimmitt

Some succulent bromeliads (family Bromeliaceae) are popular with succulent collectors, primarily the terrestrial genus *Dyckia*. Most succulent collectors have neglected the genus *Tillandsia*. The approximately 600 species of tropical rosette plants in this genus range from terrestrials to epiphytes (and saxicoles) in habitats from wet rainforests to near-deserts. The arid land epiphytes are called atmospheric bromeliads, more commonly and incorrectly known as “air plants”. Atmospherics tend to have only a few roots for anchorage on the host tree or rock. The leaves perform nearly all of the water and nutrient uptake, through specialized scales called trichomes. The trichomes are so dense on species from the brightest, most arid habitats that their foliage is white. Finally, some of the atmospheric tillandsias are succulent.

Most atmospheric tillandsias are difficult to grow outside of a greenhouse in desert climates. They lose water rapidly to the dry hot air, and even watering twice a day is not sufficient to keep them alive in June. I’ve been growing tillandsias for over 40 years, and I’ve settled on one species that I think is the best

adapted to fitting into typical succulent collections without special care. It’s also a very beautiful one.

Tillandsia ehlersiana (Figure 1) has many traits that should appeal to succulent collectors. It’s squat and fat. It has bright white leaves. It has attractive flowers. Best of all, it’s easy to grow among other succulents. This species has a substantial root system for an atmospheric bromeliad, which confers two benefits. It will firmly anchor in a pot (most atmospheric species will not). The root system is functional at taking up water, so a potted plant can be grown outdoors in the desert.

The root system is still tiny relative to the size of the plant. The one in Figure 1 is in a 2-inch pot. That pot has been set into a 12-inch Mark Muradian pot filled with gravel to keep the plant upright and to provide attractive staging.

To grow this plant outdoors in the desert, give it very bright light to keep the foliage white. Full summer sun is too much, but it will do very well under the edge of a mesquite or palo verde tree. Soak both leaves and roots three times a week during the summer, and once a week or so during cool weather. Protect it from frost.



Figure 1. A mature single rosette of *Tillandsia ehlersiana*. It’s in a 2-inch pot, set into a 12-inch pot.



Figure 2. Inflorescence of *Tillandsia ehlersiana*. The actual flowers are the violet tubes; the pink bracts attract hummingbirds. 3

Growing Succulents in the Desert

Tillandsia ehlersiana: A Superb Succulent Bromeliad

by Mark Dimmitt

When mature, a branched inflorescence grows from the apex of the rosette; the pink bracts produce tubular violet flowers over many weeks (Figure 2). A flowered rosette will die in another year or two, but will first produce three to five or more offsets. Offsets mature and flower in two to three years. They can be removed from the mother plant when about $\frac{1}{4}$ to $\frac{1}{3}$ mature size and potted separately, or they can be left to grow into a clump (Figure 3).

If grown in a greenhouse or humid climate, you can mount the plant on a branch (Figure 4). Tie or glue it securely, and in a few months the roots will hold it fast.

Tillandsia ehlersiana is rarely found in succulent nurseries. Look for it in bromeliad nurseries.



Figure 3. A colony of five Tillandsia ehlersiana rosettes. This is the same plant as in Figure 1, two years older. The original rosette is dying and barely visible amidst its offsets.



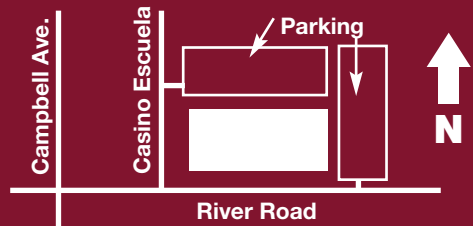
Figure 4. This Tillandsia ehlersiana was mounted on a stick three years before being photographed. A bigger branch would have made a better ornament.

installed about a dozen small and medium sized saguaro, eight golden hedgehogs, ten ocotillo and about eighteen fish hook barrels in and around the beautiful new mural at the Animal Shelter.

We'd like to thank the enthusiastic volunteers who provided the "sweat equity" for this worthwhile project and all of our friends at Silverbell mine and Granite construction who's cooperation, community spirit and generosity made it possible for us to acquire the plants.

Next time you have occasion to drive down Silverbell about a mile south of El Camino del Cerro please stop by the Pima Animal Care Center and take a look at the low/no maintenance landscaping and it doesn't require constant irrigation, because it's mostly "NATIVE!" We're justifiably proud of the result. While you're at it, why not stop in and visit with the puppies and kittens that are in desperate need of a good home. You'll be glad you did.

Meetings are held on the first Thursday of each month.



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

TCSS At Funfest 2010



TCSS was at Funfest 2010 at the Tucson Convention Center for the third year on 3,4 & 5 November. The Math, Science and Technology Funfest is held every year for 4th – 8th grade students to allow them hands-on experiences related to math, science & technology. This year over 7000 students, teachers and chaperones attended Funfest over the 3 days, with over 60 exhibitors. And, over 900 students visited the TCSS booth to learn about the unique characteristics of cactus and to build a model exemplifying those characteristics. Again we got rave reviews from event organizers, teachers and students. But, this would not have been possible without the support of a great group of volunteers that got together before the event to

assemble the model kits and then staffed our booth for the 3 days of Funfest. So a big THANK YOU goes out to: Barbara Carling, Norm & Linda Dennis, Joe & Patsy Frannea, Bill Hicks, Bill Holcombe, Dale & Augie Johnson, Jan Johnson, Caryl Jones, Louise & Bill Kaufman, Sandy Kunzman, Diane Leach, Mark Mayhew, Catherine Mexal, Kristen Michelson, Wendell Neimann, Dave Palzkill & Julie Shulick. Also, a special thanks to Chris Monrad for arranging a donation of 1000 feet of copper wire from Graybar electric (for the 2nd year in row!).

John Swarbrick

TCSS BOARD

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885-6367

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Cactus Rescue

cactusrescue@tucsoncactus.org

Cactus Rescue: Chris Monrad

Educational: Joe Frannea

Free Plants: Chris Monrad

Librarian: Joie Giunta

Programs: Vonn Watkins

Refreshments: Patsy Frannea

Technology: Kevin Barber

Research Grants: Gerald Pine

Editor: Karen Keller

runbunny@cox.net

Deadline for copy: December 23, 2010

TCSS Web Page:

www.tucsoncactus.org

(520) 256-2447

Webmaster: Keimpe Bronkhorst

Everyone is Welcome!

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

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Cacti Rescued 249 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

December 2010

Sunday, December 5, 2010 3:00pm - 5:00pm

TCSS Holiday Party, setup at 1pm, dinner at 3pm

Tuesday, December 14, 2010 7:00pm

Board meeting at the U of A College of Pharmacy

Thursday, January 6, 2011 7:00pm

Monthly Meeting, "Cactus Cultivation and More"

Presented by Scot McMahon, Curator of Cactus at the Desert Botanical Gardens in Phoenix, Arizona



Martha Ames Burgess and her mother Virginia Ames welcomed many guests to their home and art studio on November 13-14. The Tucson Pima Arts Council had a wonderful open studio tour that featured many of Tucson's finest artists. Martha Burgess is one of our members who has presented excellent ethnobotanical workshops at many of our Sonoran conferences. Also a huge 12 foot *Stetsonia cornye* stands along the entrance to their home.