



Central Spine

NEWSLETTER OF THE
CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY

JUNE 2017



Best succulent of the 2017 show, Euphorbia horrida, grown by Gard Roper.

NEW TOOLS TO SAVE VANISHING PLANTS: CUTTING EDGE CONSERVATION BIOLOGY STRATEGIES FOR THE CACTACEAE

Photos and Text by Peter Breslin

On June 25, our program will be presented by Peter Breslin. His love affair with cactus plants started at age 10 while living in rainy eastern Pennsylvania. He has been a student of them for 45 years. Peter is an avid grower, mostly of rare North American or Southwestern U.S. species. After a 26-year career teaching high school English and mathematics, he decided to apply to the Environmental Life Science Ph. D. program at Arizona State University. His proposed research generally was in the area of plant conservation biology, biogeography, evolution and speciation in the *Cactaceae*. His dissertation research has focused on the conservation biology, taxonomic relationships, and species distribution of the endemic cactus, *Cochemiea halei*, of the islands in Bahía Magdalena, Baja, California Sur.

A recent assessment of the Cactaceae by the IUCN Red List found that nearly a third of all cactus species are at risk for extinction. What are some of the factors threatening



C. halei in flower, December, 2016, Isla Magdalena.



C. halei growing on pure serpentine rock on Isla Magdalena.

cactus species in habitat and what are some new, high tech methods for developing conservation plans for at risk taxa? Peter is currently studying these methods, as applied to the restricted island endemic, *Cochemiea halei*, a denizen of the archipelago of islands in the Pacific Ocean at Bahia Magdalena. His Ph. D. research at Arizona State University has involved new

techniques in assessing both human and natural threats to isolated cactus species, and the development of conservation plans especially tailored to the unique population biology and life cycles of cacti. This presentation will provide an overview of the habitats of Isla

Magdalena and Isla Margarita and a look at how we can improve the odds for threatened cacti in this region and in other locales.

Peter, a club member, will also be a featured speaker at the CSSA Convention that our club is hosting in July. His presentation will be on a different topic at the Convention.

You won't want to miss it.



Cochemiea halei on the rocky Pacific coast of Isla Margarita.

2017 CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY SHOW AWARDS

Desert Botanical Garden Best in Show for Artistic Merit to Mike Gallagher

Plant: *Euphorbia knuthii*

Sweepstakes Award for Most Points to Steve and Julie Plath

CACSS Cactus Sweepstakes to Steve and Julie Plath

Annual Cactus Show Most Blue Ribbons to Steve and Julie Plath

Best Cactus of Show to Sue Hakala

Plant: *Parodia scopa* sb. *murielle*

Best Succulent of Show to Gard Roper

Plant: *Euphorbia horrida*

Judges' Choice for a Succulent to Steve and Julie Plath

Plant: *Fouquieria fasciculata*

Judges' Choice for a Cactus to Sue Hakala

Plant: *Mammillaria magnifica*

Best Advanced Cactus to Lois Schneberger

Plant: *Tephrocactus weberi*

Best Advanced Succulent to Loran Rodewald

Plant: *Fokea idema*

Best Agave to Steve and Julie Plath

Plant: *Agave albopilosa*

Best Aloe to Steve and Julie Plath

Plant: *Aloe hybrid 'Coral Fire'*

Best Aizoaceae to Mike Gallagher

Plant: *Glottiphyllum nelii*

Best Ariocarpus to Steve and Julie Plath

Plant: *Ariocarpus kotschoubeyanus* v. *albiflorus*

Best Astroloba or Haworthia to Rich Zeh

Plant: *Haworthia limifolia striata*



Aloe Descongii Renolds to Brenna Wasson
Best Jr. Novice Succulent.

Best Cactus Collection to Cliff Fielding
Plants: Collection of *Copiapoa*



Obregonia Denegril to Ryan Wasson *Best Jr. Novice Cactus.*

Best Crest or Monstrose to Scott
McMahon
Plant: *Copiapoa tenuissima monstrose*

Best *Euphorbia* to Steve and Julie Plath
Plant: *Euphorbia francoisii*

Best *Ferocactus* to Steve and Julie Plath
Plant: *Ferocactus chrysacanthus*

Best *Gasteria* to Pam Edsall
Plant: *Gasteria armstrongii*

Best *Haworthia* to Cliff Fielding
Plant: *Haworthia kolmanideum*

Best *Mammillaria* to Steve and Julie Plath
Plant: *Mammillaria albilanata*

Best Seedling to Dan Smith
Plant: *Welwitschia*

Best Succulent Collection to Cliff Fielding
Plants: *Lithops* collection

Best Novice Cactus to Pam Edsall
Plant: *Echinocereus pacificus*

Best Novice *Aloe* or *Aloe* Hybrid to
Bonnie Scott
Plant: *Aloe* hybrid 'Blizzard'

Best Novice Succulent to Nils Kindgren
Plant: *Echeveria* sp.

Best Junior Novice Cactus to Ryan
Wasson
Plant: *Obregonia denegril*

Best Junior Novice Succulent to Brenna
Wasson
Plant: *Aloe descongssii Renolds*

Chairperson's Special Award for Cactus
to Steve and Julie Plath
Plant: *Epithelantha micromeris v. greggii*

Chairperson's Special Succulent Award
to Loran Rodewald
Plant: *Euphorbia decaryi v. guilliminiana*

People's Choice Award awarded by
visitors Sue Hakala
Plant: *Mammillaria magnifica*



Obregonia Denegril to Ryan Wasson Best Jr. Novice Cactus.



Best novice cactus from the 2017 show Echinocereus pacifical grown by Pam Edsall.

Best advanced cactus from the 2017 show Tephrocactus weberi grown by Lois Schneberger.





From the upper left: Thom Young, Janet Karasz with Gasteria arinacifolia, Lillian Predny with her Sansevieria, and Dan Smith from the 2017 show.



The variegated Agave gypsophila with Aloe hybrid 'Adrea's Orange' pictured on page 14. Photo by: Leo Thamm, Brisbane, Australia.

As an *Agave* and *Aloe* geek (as the author also describes himself), I was anxious to read this new book, so I jumped at the chance to borrow club Librarian Nancy Mumpton's signed copy. This book is worth the price for the photos alone. Many of the *Aloes* and *Agaves* we have in our collections are beautifully showcased here, as well as many more we will all yearn for after

seeing these photos. The author owns Solana Succulent Nursery in southern California that many of us have visited on club bus trips.

The author tells us upfront that this is not primarily a "how-to" book on *Aloe* and *Agave* cultivation, and he appropriately directs us to Greg Starr and Mary Irish's books for *Agave* care. His primary

audience is southern California, especially coastal growing areas, although he does mention when certain species would do better in hotter, drier, inland areas. Any doubt that much of his advice does not apply to us in hot, hot Arizona is removed when he says, “Full sun is almost always best” when referring to *Aloes* and that *Aloe* ‘Blue Elf’ struggles in his coastal world. His first love is *Aloes* and he devotes more pages to them, somewhat fewer to *Agaves*, and just a brief overview of related plants such as *Haworthias*, *Gasterias* and others. He even confesses to having developed affection for *Aloe vera*.

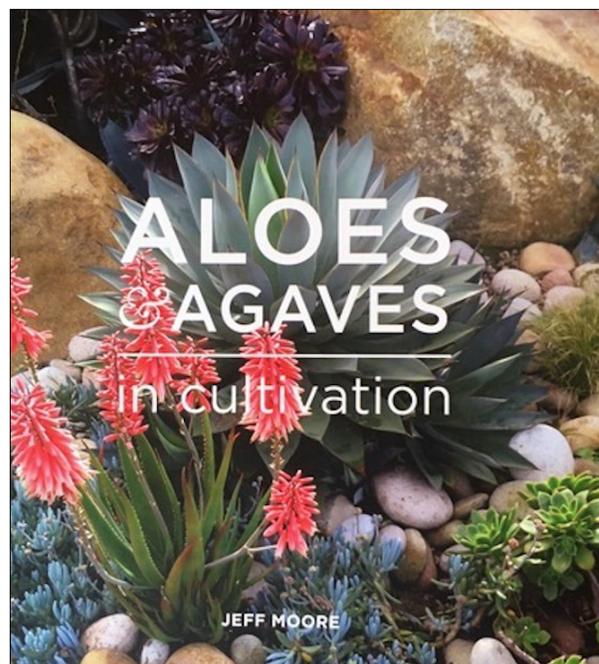
Some reviewers were uncomfortable with his casual, first-person writing style. I really liked it. He is funny in a dry-wit sort of way and you get the feeling he is talking to you. Unlike some experts, he is refreshingly honest about what he doesn’t know. Although primarily a picture book, the author does provide some helpful insights into *Aloe* and *Agave* culture. Here are just a few of the tips that I appreciated.

Some healthy *Aloes* just naturally (even in habitat) have “burned” leaf tips. Learn to live with it or buy something else. Now I know that my *Aloe broomii* is supposed to look like that.

Some *Aloes* are more attractive to the difficult-to-eradicate *Aloe* mite than others such as *Aloe x spinosissima* (I threw all of mine away), *A. longistyla* and *A. andongensis*.

He reminds us that some *Agaves* and *Aloes* just can’t be identified with certainty, even by the experts. Many are hybrids with as many as six ‘parents’ and there is a lot of variation within species. So it is okay to say something looks ‘saponaria-ish’ and leave it at that.

He mentions some varieties that are easier to propagate and some that are not. *Aloe ramosissima*, for example, is difficult from cuttings. (Reviewer’s note: Ty Peterson at Arizona Cactus Sales gave me a good tip a few years ago that works. Put your *A. ramosissima* cuttings in pure ¼” minus decomposed granite in the spring in bright shade and water every other week when the temperature is above 90 degrees. Be careful; the new roots break off easily.)



Gasterias and *Haworthias* sometimes have a tendency to abandon their old roots and then put on new ones. He advised that if you un-pot an otherwise healthy specimen and discover it has few roots, just give it some new soil and it should be okay.

Hybrid *Aloe* ‘Goliath’ (and sometimes its cousin ‘Hercules’) becomes top-heavy, and if not supported or trimmed, falls over. I hated to hear that.

If your *Aloe* experiences crown rot, don’t give up on it; new growth may eventually

push through. My *Aloe rupestris* from Cathy Babcock did just that and it resulted in a multi-headed specimen.

He tells us that the black spots on some of our *Aloes* and *Gasterias* are likely a somewhat benign fungus issue; not fatal but ugly. He suggests removing the old blighted leaves and hope the new ones come in clean.

Because the variegated *Agave attenuata* usually produces non-variegated pups, he shares a trade secret on how to induce it to produce variegated offspring (it involves decapitation—see page 302 for more details).

Check out the club's copy of this beautiful book. After you do, you will likely want to buy your own copy.



Best cactus of the 2017 show Parodia scopa sb murielle grown by Sue Hakala.

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I am looking forward to the 37th CSSA Biennial Convention, which is a little more than a month away. It is a great honor for our club to have been chosen to host this convention and have such an easy opportunity to attend. There will be twenty programs spread across three days, a silent auction, a regular auction, an opening reception, an opening banquet, and three days of continental breakfast included in the \$285 registration fee. There is also a choice of five tours that you can sign up for an additional fee. If you are not able to attend the entire convention, you can also sign up for a day or two. Please visit the website www.cssaconvention.com to learn more about your options.

In order to have a successful convention, we need many volunteers. Dan Smith, our convention volunteer coordinator, has populated the volunteer website with the positions needed. For every ten hours you work, you will get one free day of speakers. As we get closer to the convention and have figured out who is signed up for what, we will be asking the volunteers who qualify what day they want to attend. You will receive a badge that will be color coded by day that will gain you admittance into the speakers. You will also be able to participate in the silent auction and attend the regular auction as a participant. The plant sales area will be open to the public beginning on Friday so you are able to attend that as well. To sign up as a volunteer go to this web address <http://signup.com/go/ppmbfPs>. Many thanks to those of you who have already signed up!

In order to have a successful auction and silent auction we need donations of show quality plants. You can either make a 100% donation or a 70/30 split, with you getting 70% of the proceeds and CSSA getting 30%. Carol Parrot, the auction coordinator, will send out instructions on how and when to donate closer to the convention, but meanwhile consider making a donation.

I hope to see you at the convention as a registrant, a volunteer or both, hopefully, with a donated plant in hand!

TUCSON CACTUS AND SUCCULENT SOCIETY

This is the seventh straight year that TCSS has reached over 1,000 members. They have also rescued over 80,400 cacti and succulents since the start of the rescue program in 1999. Visit their web site at www.tucsoncactus.org and read informative articles and newsletters. Congratulations to all!

FAVORITE TOOLS



I hate when pumice rises up to the top of my pots. So when planting and after the dirt is in, I tap the pot hard to settle it and get air bubbles out. I then add a layer of top dressing made of irregularly shaped rock pressing firmly into place. When it's time to water (right away for *Agaves* and 7-10 days for *Aloes*), I press down the rock and add more. The edges of the rock interlace and keep the pumice in place. Gard Roper



I always have various makeup brushes lying around; this one has a permanent spot on my potting bench. The brush end is used to sweep away soil, and general debris, from the "pokier" plants. Since the brush is made to use on your face, it's very soft, and won't leave scratches on anything. The sponge-applicator end is used to get spots and stains off the leaves. Wet it, and lightly dab away dried on soil, bird poop, etc. Tara L. Richards

Our membership crested 2,900 in May! The CACSS Facebook (FB) page membership has grown to 2,907 which is a ten-percent increase in the month of May. Please join the CACSS FB page. Our FB page is an open forum on cacti and succulents with a variety of commentaries sprinkled in along with requests on cactus and succulent IDs. Of course, our FB page allows for the opportunity to post your favorite plant photos.

Sixteen new international members joined our FB community from eleven (11) countries and represent 6% of the new FB members in May. First time countries are: Belgium, Cyprus, Indonesia, Jamaica, and Latvia.

In May, there were plant identification requests for six (6) succulents (non-cactus) and twenty-five (25) cacti, twenty-eight (28) of the thirty-one (31) plants were identified. We still have time to assist in the ID of the last three plants in May.

Below is a sampling of other topics and requests from our May FB page postings:

- CACSS pumice pile was open thanks to Gard Roper.
- CACSS Show winner's photos!
- Cactus and Succulent Society of America 37th Biennial Convention July 26–30, 2017 in Tempe, Arizona.
- My son is now addicted to *Lithops*!
- What is the naming convention for the seeds resulting from my cross pollination of two *Gymnocalyciums*?
- Great video of the Desert Botanical Garden.
- The cactus and the tortoises decided to be photogenic today—Great photo!
- My blooms—love'em!
- Meet the Cactus Whisperer.
- What are the little red bump-outs on my *Mammillaria*?
- Does anyone want this *Senita*?
- It's official, the cactus saw its shadow; 52 more weeks of summer.
- The 'Shazam' For Plants Will Identify Any Plant From A Picture.
- I would like to have a discussion about cactus and succulent books.
- I just got approval from the City of Mesa to remove a fallen cactus.
- Would you believe I'm still not finished with repotting?

Here are the many cacti and succulents in bloom posted on our May FB page: *Adenium*, *Aloe*, *Chamaelobivia*, *Cleistocactus*, *Echinopsis*, *Escobaria*, *Gymnocalycium*, *Hoodia*, *Hoya*, *Parodia*, *Lobivia*, *Mammillaria*, *Echeveria*, *Echinocereus*, *Echinopsis*, *Ferocactus*, *Gasteria*, *Lophophora*, *Matucana*, *Notocactus*, *Opuntia*, *Plumeria*, *Portulacaria*, *Rebutia*, *Sansevieria*, *Stapelia*, *Tephrocactus*, *Trichocereus*, and many

more. The super-bloom continues as exemplified by the great photos posted on our FB page in May! A secondary benefit is the assist in plant identifications. Find the beautiful photos here: <https://www.facebook.com/groups/cacss2/> (copy and paste to your search engine).

To our faithful Facebookers and new folks, thank you for sharing your plant knowledge and assistance in the cactus/succulent identification as well as all of your wonderful photos posted. Each month we feature photos of a cactus and a succulent from a CACSS FB member. This month's featured cactus photo is from Chris Ginkel of the *Astrophytum myriostigma* (Bishop's Cap) in bloom. This month's featured succulent photo is from Mike Harris and his *Adenium* bloom in progress. Thanks to Chris and Mike for posting on the CACSS FB page.



The succulent photo is from Mike Harris featuring his Adenium bloom in progress.



*The cactus photo this month is from Chris Ginkel who submitted *Astrophytum myriostigma* (Bishop's Cap) in bloom.*

Do you have questions on the FB photos? Please contact the photographer via Central Arizona Cactus and Succulent Society FB page: <https://www.facebook.com/groups/cacss2/> (copy and paste to your search engine).

Again, thanks to all CACSS members who contributed and/or joined the CACSS FB page in May. We have room for many more CACSS members. So, please take the time to become a member of the CACSS FB page. There is no charge and it is very easy to access, enjoy and participate in our FB page. You can find us on FB @ Central Arizona Cactus and Succulent Society. We would love to see your cacti and succulent photos and answer any questions you may have. Please contribute today!



Tara Richards refreshment hostess photo by John Crummey.

I would like to introduce Tara Richards who became a member recently and kindly volunteered to be our refreshment hostess at monthly meetings. Tara is originally from Flint, Michigan where she worked for General Motors in information technology. She also tended a vegetable garden. At present, she is still looking for work.

Tara Moved here in May of last year and lives in Chandler along with her three cats. She wanted to be closer to family as our president, Beth Kirkpatrick, is her aunt.

She decided to join our Society to learn how to grow and care for cacti and succulents. Her plant collection has grown to 30 plants. She picks up plants off our free table at our monthly meetings.

Let's all welcome Tara to our Society, and thank her for being our hostess.

Be sure to visit CACSS on the web at:
centralarizonacactus.org the Society's web site.
Facebook Central Arizona Cactus and Succulent Society
CACSS Swap and Shop, a place to connect with members.

2017 CSSA Convention Registration Form

Mail Form to:	CSSA Convention 2017			
	P.O. Box 1000			
	Claremont CA 91711			
Email to:	geisel@citruscollege.edu			
Call	909.908.4145			
Website:	www.cssaconvention.com			
Convention Registration		Price	Qty	Extended Price
Early Registration: Before June 10, 2017		\$285		
Full Registration: After June 10, 2017		\$350		
Single Day Registration (for details see website)				
Opening Day, Thursday - Includes banquet (Before June 10, 2017)		\$160		
Opening Day, Thursday - Includes banquet (After June 10, 2017)		\$190		
Friday <input type="checkbox"/> Saturday <input type="checkbox"/> Sunday <input type="checkbox"/> before June 10, 2017 (check boxes)		\$95		
Friday <input type="checkbox"/> Saturday <input type="checkbox"/> Sunday <input type="checkbox"/> after June 10, 2017 (check boxes)		\$115		
CSSA Membership	U.S.	Canada	International	
You must be a CSSA member	\$50	\$60	\$70	

Field Trips:	Field trips are on Thursday, July 27, 2017	Price	Qty	Extended Price
#1	Desert Botanical Gardens	\$55		
#2	Musical Instrument Museum	\$55		
#3	Private Garden Tour	\$55		
#4	Boyce Thompson Arboretum and Biosphere	\$95		
#5	Barnhardt Trail Field Trip (This is a strenuous hike and only experienced, very fit hikers should attempt this.)	\$50		

Tours are subject to availability & minimum number of people signing up and may be canceled.

Calculate Total:	Subtotal
Convention Registration:	
Field Trips:	
CSSA Memberships:	
Total Remitted:	

Name 1:	Name 2:	
Address:		
City:	State:	Country:
E-mail:	Zip:	Phone:

Select Payment Type:			
Credit Card Type:	Visa <input type="checkbox"/>	Master Card <input type="checkbox"/>	Check <input type="checkbox"/>
Credit Card Number:	<input type="text"/>		
Expiration Date: Month:	<input type="text"/> <input type="text"/>	Year:	<input type="text"/> <input type="text"/>
			Authorization Code:

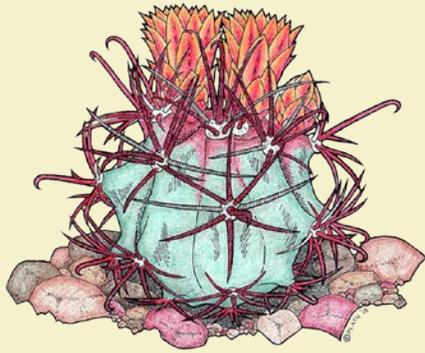
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A \$50 cancellation fee will be assessed for anyone canceling registration prior to May 25, 2015. After that date, there are absolutely no refunds. Reservations for tours will be accommodated on a first come first served basis and are subject to cancellation two weeks prior to conference date.

HOTEL INFORMATION

Hotel reservations can be made by calling 1-800-547-8705 and use group code **2U72GD** for special CSSA pricing. The rate is \$85.00 per night plus taxes. The resort fee is included in this rate.

Tempe Mission Palms is a full-service hotel in downtown Tempe, Arizona, which is also home to Arizona State University. It is in the heart of the Mill Avenue district, which has over 100 restaurants, bars, and shops. Phoenix Sky Harbor airport is four miles away with a light rail station within ½ block of the hotel. The serenity of the surrounding desert landscape and its rose-colored vistas are reflected in the hotel's décor and mimicked in its relaxing ambiance. The guest accommodations feature a variety of comfortable amenities and plush furnishings with free Internet and parking for convention attendees. The friendly staff provides unparalleled service, and is eager to create an unforgettable hospitality experience.



Cactus and Succulent Society of America
37th Biennial Convention

Tempe, Arizona

Celebrating the Beauty of the Desert™

July 26 to 30, 2017



Logo © Steve Plath, 2016 | Photo Credit © Tom Gatz, 2016

Tempe, Arizona, a vibrant urban oasis located in the heart of the Greater Phoenix Metropolitan area, and the Central Arizona Cactus and Succulent Society will play host to the Cactus and Succulent Society of America's 37th Biennial Convention.

The Tempe Mission Palms, our convention hotel, located in the entertainment district of Tempe, is a luxury hotel with pool, exercise room, airport shuttle, valet parking and many other amenities. Our special convention rate is only \$85 per night plus taxes. A light rail stop to other adventures is just out the back door of the hotel.

The Sonoran Desert, a region rich in both habitats and species, will provide the backdrop for informative speakers, plant and pottery vendors, auctions, great food, and opportunities to visit desert plant habitats. The Central Arizona Cactus and Succulent Society is excited to be hosting the 37th Biennial Convention, and is working with the CSSA, to plan a fun, informative, educational and memorable experience. It's time to start planning your visit to Tempe!

World Class Speakers

Graham Charles, England
Joel Lode, Spain
Marlon Machado, Brazil
Gideon Smith, South Africa
Peter Breslin, AZ
Mark Dimmitt, AZ
Chuck Hanson, AZ
Woody Minnich, NM
Ernesto Sandoval, CA
Marcia Tatro, CO
Rob Wallace, IA
Bob Webb, AZ

Great Plants, Pottery and More

Arid Lands, Bob Webb
Cactus Data Plants, Woody Minnich
Carol Wichern Pottery, Carol Wichern
Desert Creations, A. Chavez & S. Freeze
J & J Cactus and Succulents, Joyce Hochtret
Keith Taylor Pottery, Keith Taylor
Mike Cone Pottery, Mike Cone
PW Plants, Peter Walkowiak
Rare Succulents, Petra Crist
Sandy Siegel Pottery, Sandy Siegel
Sticky Situation, Jana Sweets
Succulentia, Steve Martinez

Please visit us at the convention website: cssaconvention.com
for the latest information regarding speakers, vendors, daily schedule, and field trips.