Adenium is our Plant of the Month. Particulars about horticulture care will be available at our monthly meeting. Inside this issue is more information about this fascinating genus. *Adenium pink hybrid by Dan Smith.*
Join Mark on Sunday, August 25, at 2 p.m. in Dorrance Hall at the Desert Botanical Garden for our monthly program.

Mark A. Dimmitt has a Ph.D. in biology (herpetology) from the University of California at Riverside after earning an M.S. from UCLA and a B.S. from Pomona College. He worked at the Arizona-Sonora Desert Museum from 1979 to 2011, first as curator of botany, and eventually as director of natural history (field ecologist). His areas of research included botany and vertebrate biology. He is the author of more than 50 scientific and popular publications about ecology and horticulture. He is a Fellow of the Cactus and Succulent Society of America. His major publication is the plant and ecology chapters of A Natural History of the Sonoran Desert (2000) and is the senior editor of the revised edition (2015).

Mark's other and ongoing career is as a plant breeder. He spent a couple of decades hybridizing Trichocereus (Echinopsis, cacti), then Tillandsia (bromeliads); he has introduced about 50 cultivars. Since the late 1970's, his main focus has been on hybridizing the genus Adenium. ‘Crimson Star,’ ‘Evelyn Marie’ and ‘Bouquet’ are among his creations. He is co-author of the book Adenium: Sculptural Elegance, Floral Extravagance (2008). Mark also collects and grows a number of other weird plants, mostly succulents and epiphytes.

Dr. Dimmitt will also be bringing plants to sell.
SAVE THE DATES

- September 21, PEG meeting on Copiapoa in Dorrance Hall
- September 29, Board and CACSS meeting
- October 27, CACSS HUGE silent and live auction
- November 17, CACSS meeting
- March 27, 2020 CACSS Annual Show and Sale

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For anyone that has perused botanical journals like the Cactus & Succulent Journal (the official publication of the national Cactus and Succulent Society of America, of which the CACSS is an affiliate), you surely have noticed that in almost all issues there is at least one article describing a species of cactus or succulent new to science. To date, a total of ten new species have been described in the Cactus & Succulent Journal in 2018 and 2019 alone.

Many of you probably assume that the discoveries are most likely in very remote locations visited by very lucky and connected botanists that hail from exotic localities. However, although many new species discovered in recent years are indeed remote, they are often found along highways or other readily visited and/or accessible localities.

New species have even been described recently from just around the corner in our own state (for example, Opuntia diploursina in 2014). So, in many instances, new discoveries are right under our own noses. Almost without exception, botanists do not go out “looking” for a new species, they just happen to stumble across them. Often, the new species is quite common within the correct range.

And if you thought that the discoverers and describers of these new species are stuffy old folks that spend all their time in a lab in a musty old herbarium or on the trails in some backcountry locale looking like Charles Darwin, then you might be surprised that these scientists are often right in front of you. In all likelihood, you probably have met at least one of them. In Arizona, you can hardly shake a stick without hitting someone who has authored a new species description. I’m sure you have heard of Greg Starr (Starr Nursery), Robert (Bob) Webb (Arid Lands Greenhouses) and Wendy Hodgson (DBG curator and botanist). All of these—and others in our great state—have authored plenty new species descriptions.

Even I have been lucky enough to be a part of several discoveries. Back when I was in college in 1983 and studying birds of South America, I visited an isolated mountain range in eastern Peru. Guess what the commonest bird was there? Yep, a brand new species of bird. Was it hard to find? Not even close. It was one of the commonest birds in the area. I saw the first one over my tent, (ash-throated Antwren Herpsilochmus parkeri, which I described in 1986).

In 1985, I was in Peru on an expedition in the high Andes and sure enough, the commonest bird around camp was indeed another new species of bird. Unfortunately, determining what its closest relatives were for the description took over 30 years to figure out! The poor bird will finally get a name later this year.
When I moved to Arizona and started getting interested in cacti and succulents, I was honored to be able to participate in botanical expeditions in Mexico with Greg Starr. In 2017, we were visiting a remote canyon in southern Mexico looking for a rare Agave for Greg’s research when I happened along a smallish cactus I didn’t recognize. Before we left the canyon, I was convinced it was something completely new. Sure enough, this was confirmed once we got back to the USA, and just over a year later, we published the new species description and gave the cactus a name. It’s called Tepelmeme cliff cactus, *Thelocactus tepelmemensis*, published in July 2018, is named after the Mexican community of Tepelmeme.

Additionally, the data on the Agaves that Greg was working on to get us into that locality helped form the basis for another new species description that he and I published just this year (*Agave oteroi* published in 2019). The interesting thing about *Agave oteroi* is that it has long been known in cultivation, but was erroneously lumped in with *Agave titanota* or referred to as *Agave FO-076* (a reference to Felipe Otero’s Field Collection Number from the original seed collection of the species). Many of you likely have it now in your collection. Now, you can put a proper name on the tag!

And, as of this time, Greg and I are working on at least two other new species of *Agaves* that we know about and will be describing as soon as we get back to Mexico. One of these we sleuthed out as a potential new species based upon some posts on the Internet last year and our own plants. We confirmed that it is indeed a new undescribed species on our May 2019 trip to Mexico. I’m also working on getting to Bolivia to collect data on a new species of *Cleistocactus* I sleuthed out based on some Internet photos I ran across a few years back.

So, when you are reading those botanical journals, keep in mind new species could be lurking just around the corner, and the discoverer could be the person in line in front of you at the grocery store. (Our CACSS library has a copy of the article by Tristan Davis et. al. on the new species of *Thelocactus tepelmemensis.*)
This year, in the greater Phoenix area, the monsoon rains have been delayed. Rainfall has been scarce, with triple digit daytime temperatures creeping ever higher. Now are the dreaded “Dog Days of Summer” when evening temperatures creep above 90 degrees and gardeners work to keep their struggling plants alive. The common thread running through this month’s postings was: How can I help/save my struggling plants, and should I water my cactus and succulents during extreme heat events?

Top Topics for July

• For those who missed the original post of July 25, Administrator Chris Ginkel posted a link to the August 2018 *Central Spine*. It has a wonderful article by Tom Gatz entitled, *Watering Cactus and Succulents during the Summer—Proceed with Caution*. If you want a fighting chance to keep your succulents alive over the summer, this article is a MUST read.

• It may be too hot to pot or plant, but that hasn’t stopped our members from their favorite pastime of buying plants. Many posts showed pictures of new purchases waiting to be planted when the weather is cooler. The “off season” is a great time to work on plans for the garden. Fall is just around the corner!

• *Adeniums, Adeniums, Adeniums*! Many of our newer members have definitely caught the *Adenium* bug, thanks to posts by Dan Smith, Robert Sacha, Mike Harris, Wendy Barrett, and BJ Seemuth. Judging from posts of *Adenium* purchases, the local nurseries must be wiped out!

continued
Each month a photo of a cactus and succulent posted by CACSS FB members is selected for recognition. Post with Most Likes: Rosy-faced Lovebirds posted July 20 by Robert Serrano. Thank you all for sharing your lovely photos. You can join the CACSS FB page at: https://www.facebook.com/group/cacss2/

Cactus of the Month: Echinopsis hybrid posted July 29 by Chris Ginkel.
Best Crest or Monstrose of the 2019 show: *Echinobivia* ‘Rainbow Bursts.’ Grown by Tom Briggs.

Purchased: From Home Depot about three years ago. The plant has more that tripled in size since then.

Pot: Potted in a decorative glazed pot from Goodwill.

Fertilizer: Fertilized infrequently with the Society’s 10-16-38 fertilizer.

Potting medium: It’s in 60% Black Gold cactus mix and 40% pumice.

Sun Exposure: It’s under 30% shade cloth in the summer, and in full winter sun on the north side of the house.

Watering: It’s watered weekly with captured rain water.

Frost Protection: It gets a little color in the cold of the winter, but no special treatment other than less water.

Special Needs: My luck almost ran out with this cactus. A week after the show I noticed a little dry spot on one edge. It turned out to be rotting up the core of the plant. After four surgeries and advice from Chris Ginkel and Sue Hakala, it’s growing in pumice. Thank you!

Purchased: I may have bought this a long time ago from Dan Bach.

Pot: It grows in a small glazed pot purchased at a show.

Fertilizer: I use the club’s 10-16-38 fertilizer.

Potting Medium: Uni Gro or Tank’s coir based mix cut with 50% pumice.

Sun Exposure: It grows under 60% shade cloth all year.

Watering: I water the collection once a week in the summer, once a month in the winter, except for the *Mesembs*.

Frost Protection: *Ariocarpus* can take some frost, but I don’t take any chances.

Special Needs: None.

Purchased: It was purchased about 40 years ago.

Pot: It grows in a terra cotta pot that’s low and wide.

Fertilizer: Fertilized in the spring with the club’s 10-16-38 fertilizer at half strength.

Potting medium: It’s in a very lean soil: 1/3 cactus mix, 1/3 pumice, 1/3 perlite with a handful of 1/4” gravel mixed in to open it up even more. This plant will rot if it doesn’t have an open and quick drying soil.

Sun Exposure: Full sun until 1 p.m., then it gets filtered shade.

Watering: In the large pot it’s now in, it gets watered about every 14 days in the hot months if it doesn’t get any rain and it’s not humid.

Frost Protection: Any nights in the 30’s it is under some frost protection.

Special Needs: This Arizona native plant just wants to take its time growing. It can’t be rushed in order to get great spines.
PEG POINTS: The Latest from the Propagation Education Group (PEG)  By Tristan Davis

Next Meeting: September 21, 2019, 9 a.m.-11 a.m. in Dorrance Hall at the DBG. Topic: *An Introduction to all Things Copiapoa.*

What a great PEG Meeting we had in July! We completely destroyed our previous record with 67 attendees. We learned about *Sansevieria* from our very own Thom Young.

Thom facilitated a great discussion about all aspects of the genus (varieties, growth habits, challenges, etc.). I think I can speak for all of us that we definitely walked away learning something new.

Additionally, many of the attendees walked away with free plants! In addition to the many freebies that were donated by our members, Robert Webb of Arid Lands Greenhouses in Tucson generously donated 12 very unusual species of *Sansevieria* for our free raffle (including 2 species that Bob himself described).

All in all, it was one of our best meetings. PEG is growing so much, that for the rest of the year, our meetings will move to Dorrance Hall. Moving to a larger venue is a great thing, because I suspect we will have a huge attendance for our September meeting as well.

Several of our members recently suggested a session on the Chilean cactus genus *Copiapoa.* Many members attended the January talk about the genus in habitat but...
suggested they would like more than just seeing pictures of the plants. They want to learn all about them, especially how to grow them, what varieties there are, etc.

Thankfully, we have an expert grower and aficionado of *Copiapoa* right here in our own club in Cliff Fielding. Many of you likely attend his annual Open Garden and have drooled over his beautifully grown plants. At the same time, you probably noticed that he had quite a few *Copiapoa* in his collection. Additionally, Cliff’s *Copiapoa* never fail to mesmerize—and take home some ribbons—at our annual show and sale each April.

Cliff has graciously agreed to be our special guest speaker at the September PEG meeting and will present some fascinating information about this intriguing genus of cactus. We'll cover topics such as:

- What exactly is a *Copiapoa* and how many are there?
- Where are *Copiapoa* from naturally?
- Which species are most commonly grown?
- Which species are recommended for beginners?
- Which species are recommended for more experienced growers?
- How can *Copiapoa* be propagated?
- Can *Copiapoa* grow in-ground?

Additionally, as is usually the case at PEG meetings, we will have several give-aways of various species of *Copiapoa*. You definitely do not want to miss this great opportunity to learn more about a fascinating genus.

Be sure to visit CACSS on the web at:
centralarizonacactus.org the Society’s website
Facebook Central Arizona Cactus and Succulent Society
CACSS Swap and Shop
Instagram

Authors: Mark A. Dimmitt, David Alan Palzkill, Gene E. Joseph
Publisher: Scathingly Brilliant Idea, 2009
Length: 152 pages with 490 full color photos

A great book written by a team of experts on the understanding and growing of Adeniums is Adenium: Sculptural Elegance, Floral Extravagance. It serves as a manual and reference book for those who own one or have a collection.

Adeniums are also known as desert roses, impala lilies, sabi stars, and Karoo rose. The authors use the scientific genus as its common name: Adenium. This genus lends itself to eye-catching sculptural form with showy flowers over a long season. The authors convey Adeniums are easy to grow if one understands their cultural needs. By taking a little time to learn about their requirements, you will be rewarded by their beauty.

Their natural range is in the African and Arabian deserts, with their improved cultivars spreading around the world. The Sonoran Desert climate is excellent, but not perfect,
for growing Adeniums. Growth rates can be twice as great in year-round tropical climates and much lower in more temperate ones.

The authors group the species and the hybrids taxonomically, instead of by plant form or color, because the parentage of the plant provides important clues to the growing habits and cultural needs of the specific plant. For those seeking plants with specific vegetative forms or flower types, a table is provided to identify the species and hybrids sought. One chapter covers the species and their cultivars. Another chapter covers the hybrids. Each of these chapters addresses the flowering phenology.

The basic culture needs address primarily the Adenium obesum and its hybrids because it comprises most plants available in horticulture. Sidebars are used to note detail variations required in different climates and special needs of a species. Bold print is utilized to emphasize important information and to support the book to use as a quick reference later. Table 2 provides a phenology comparison of their dormancy, stem elongation, leafing, and flowering across seasons organized by the species.

Basic propagation methods that work for Adeniums, including both seed and vegetative reproduction, are covered. Plants commonly found in nurseries labeled simply Adenium or desert rose most likely were started by seed. Genetically identical plants resulting from vegetative methods may have been started by grafting, stem cuttings, air-layering, or micropropagation. All methods are covered in this book which can be found in the CACSS library.

In addition to this book, the CACSS library has two other books on Adeniums:

- The Adenium and Pachypodium Handbook by Gordon D. Rowley
- Home Gardener’s Guide to Growing Desert Roses by Cath Grimshaw

Find other articles on Adeniums that have appeared in the CACSS newsletter through the years. Go to the website, choose newsletters, scroll down to find the articles below by month and year.

- Adenium: Another Rotten Tale by Dan Smith, 4/16
- Adenium Fever—Catch it! by Tom Gatz, 3/08
- Adenium Management at the Desert Botanical Garden—Volunteers in Action by Tom Gatz, 9/13
- Adenium ‘mini’ by Dan Smith, 12/18
- Cool Things We Learned About Adeniums From Dave Palzkill by Tom Gatz, 7/15
- On the Dry Side: Adenium by Timothy Chapman, 6/93
- Waking Up by Mark Dimmitt, 3/13
- Winterizing Your Adeniums by Tom Gatz, 11/14
- Your Adenium is Rotting by Dan Smith, 8/15

Also visit club member and Adenium guru Dan Smith’s website: plantsbydan.com for more information.
This article starts a new feature in the newsletter called, My Oldest Plant. Doesn’t matter the age, just that it’s your oldest. Contact Editor Sue Hakala for submission guidelines at cacsscentralspine@gmail.com. All are welcome.

I will tell you the story of my humble little Aloe. I am not sure if it is an Aloe vera or some other spreading kind of Aloe.

I got it from my girlfriend’s mom in 1987-88 when I was at the University of Arizona. I took this plant back to Illinois in 1988, and I had it there for 30 years. I never managed to get it to bloom there, but it enjoyed some summers outside and occasionally being a home to spiders. It kept filling up pots with pups. One fall, I didn’t get it inside, and it got a chill and died back a bit. She survived but was quite diminished. She steadily started growing back over the next few years. Then in 2017, I up and moved to Arizona! Unfortunately, I could not bring the plant with—no room for plants in the cars—so I gave the plant to a friend.

The plant must have missed me because it wasn’t doing well. I had asked her to bring a pup or two with her when she visited us earlier this spring. She sent me the whole plant! Or at least what was left of it—two beat-up "mature" plants and one tiny pup. They were so beat up I wasn't sure they would make it, but the centers of the plants seemed firm, just the outer leaves were damaged.

I let it out to dry for a few days and then potted them up. About a month later, my friend asked how they were doing and I said I still had hope. She apologized for "killing my plant," but I said these things happen. I went to check it and would you believe it? There was a NEW SHOOT just barely popping up out of the soil! I quickly sent her back the photo, "SHE LIVES!" We were both so happy.

So after 32 years, this little Aloe has come home to Arizona and is apparently loving it quite a bit. I hope to plant it in my front yard eventually, let it spread and be happy.
A member asks: Are all Agaves symmetrical?

Club Agave expert, Gard Roper, says that Agaves grow with a rosette form creating a symmetrical plant. The only one that sometimes doesn’t is Agave chrysantha. Occasionally, plants are injured and get a bit off. Given time, they will attempt to resume their usual form. We just have to be patient. Or, maybe they won’t, he says.

Howard Scott Gentry, Agave researcher extraordinaire and author of Agaves of Continental North America (available in the CACSS library), says that, “Agaves may be regarded as rosette perennials since they require several to many years to grow and flower.” He goes on to say that the rosette of an Agave is also a defensive form.

It also helps the plant when it rains as the radial arrangement of leaves collects rain and directs it to the roots and shades the immediate soil. He says that the rosette is an important adaptation for survival.
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Send comments, suggestions and submissions to cacsscentralspine@gmail.com
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