A stunning crested *Carnegia gigantea* by Steve Ford.
Join Jan for our monthly program June 30, at 2 p.m. in Dorrance Hall at the Desert Botanical Garden

South Africa has some of the most diverse flora and fauna on earth, especially considering the nation's relatively limited global land area. In September 2016, Jan Emming took a three week long journey there. He covered a large swath of the country from Kruger National Park in the northeast to Cape Town in the southwest, including a number of locales in between that are not usually very well frequented by cactus and succulent aficionados.

This program highlights some of the vast biodiversity of the nation. While succulent plants, that are of great interest to many people in the CACSS, are the primary focus of this program, significant attention is also paid to other plant groups as well as bird and mammal diversity. Join us for a look at the numerous natural reasons to visit this wonderful nation.

From left: Jan Emming, a sunbird at the Cape Peninsula and a view of the Oudtshoorn.
A member asks: Where can I find and photograph crested saguaros?

First, what is a crested saguaro? The explanation below comes from the National Park Service, U.S. Department of the Interior, Saguaro National Park Resource Management Division website.

Cristate or “crested” saguaros, or other cactus, form when the cells in the growing stem begin to divide outward rather than in the circular pattern of a normal cactus. This is an unusual mutation which results in the growth of a large fan-shaped crest at the growing tip of a saguaro’s main stem or arms (see cover).

The cause for this mutation is unknown. However, there has been some speculation about the presence of a “trigger” which may initiate the process. One heavily implicated trigger is frost, as crested saguaros tend to be more common in the northernmost parts of their range. Unfortunately, there is not enough evidence to confirm this theory.

Saguaro “crests” generally measure between 3-5 feet in diameter. The largest crest in reported history was said to be nine feet across; however, this claim was never confirmed.

Cristate saguaros commonly grow in the shape of a fan or semi-circle. They tend to exhibit convoluted patterns and folds, and have even been said to resemble broccoli.
While Saguaro crests do tend to be larger and more elaborate, other species of cacti are more than capable of developing similar mutations (see below). Crests have been noted in a variety of succulent plants, from *Agave*, to cholla, to prickly pear, and they occur in all different shapes and sizes.

To answer our member's question on where to find and photograph crested saguaros, the answer can be found with the Crested Saguaro Society. The Society is comprised of naturalists who volunteer their time to locate and photograph crested saguaros. They have documented over 2,202 crested plants. Their website, crestedaguarosociety.org, has LOTS of photographs of crested plants organized by Arizona county, California, Nevada, and Mexico. The crests are zany, incredible, artistic, and just plain fabulous! Do spend time looking at these incredible plants. With the Society's permission, the photos are from their website.
REIMBURSEMENT  

By Treasurer Judy Tolbert

There have been questions and possible misunderstandings about reimbursement to members for expenses made in favor of CACSS activities, supplies, etc. As your new treasurer, upon receipt of your requests, I have and will in the future order payment directly online from our financial institution. These payments, which take approximately five business days, come to you directly from the bank in a window envelope with the return address of Chase Bank. If you are expecting a check from CACSS for any reason, please be alert for the payment to arrive in this type of envelope.

Another issue which has arisen is incorrect addresses which have delayed payments for weeks. That said, all future payment requests will require a “Payment and Reimbursement Request Form” which can be emailed to you, or I will have copies at the meetings to hand out. A fillable copy of this form will be available on the CACSS website at a later date.

Thank you for the opportunity to serve as your treasurer.

CACTUS AND SUCCULENT SOCIETY OF AMERICA BIENNIAL CONVENTION

By CSSA Affiliate Representative Mike Gallagher

When: July 17-20, 2019
Where: San Luis Obispo, California
Host Hotel: The Kinney Hotel www.thekinneyslo.com

Join an unusual array of speakers, including our own Doug Dawson and Greg Starr, attend field trips to local succulent venues and habitats, and visit other local attractions. Purchase books and plants and participate in a plant auction among many other activities. Meet people from all over the world that share your interests.

Information for the convention can be found in the summer issue of the Cactus and Succulent Journal, or online at www.cssaconvention.com

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Members who entered the Annual Show for the first time and won a ribbon. From top left: Anita Walker, Annmarie Parker, Kathi Roark, Dan Saddler, Valerie Harris, Kevin Dubeel, Diana Rogers, and Mike Harris.
Congratulations to all!

Photos by Wendy Barrett.
My favorite tool is a canning jar lifter, a left-over piece of equipment from a long-ago fantasy that I would can all my own food. Quickly I came to appreciate the canned goods aisle at the supermarket, but not one to give up my dream, I saved all the equipment I had purchased “just-in-case” I ever wanted to revisit that fantasy. “Just-in-case” never came! Now I find that old jar lifter to be a helpful tool to use when steadying spiny, columnar cactus, as well as lifting small globular cactus when potting up. It helps keep the cactus upright and straight with minimal damage to both plant and fingers, and it is definitely more satisfying to plant cacti than to lift canning jars out of a boiling water bath. Photo and text by Jeanne Ann Brush.

I purchased this Hori-Hori knife on Amazon. It has become my “go-to” tool. This spring it helped me pull up buckets of weeds easier than all my other methods. One little problem I found was that my drip lines had a few leaks. Guess I got a little carried away. It is also helpful for digging holes, cutting pots, slicing down root balls, measuring depth, etc. I always have it close at hand. Photo and text by Kathy Miller.
Best Novice Succulent of the 2019 show: *Gasteria* ‘Ox Tongue.’ Grown by Elaine Hu.

PURCHASED: I got this at the Desert Botanical Garden plant sale in 2016.

POT: The plant has been in a blue glazed ceramic pot since it was purchased.

FERTILIZER: The plant gets fertilized starting from spring until the end of summer with “Cactus Juice,” once to twice a month.

POTTING MEDIUM: The mixture contains 70% regular potting mix and 30% pumice.

SUN EXPOSURE: The plant gets morning sun and shade in the afternoon. Shade is especially important during the summer season.

WATERING: I water the plant once every 7-10 days starting from spring to summer; once a month in the winter season.

FROST PROTECTION: The plant stays on the outdoor patio all year long. It is protected from frost when the temperature drops to the low 30’s. I keep the plant completely dry during freezing days.

SPECIAL NEEDS: No special needs required.

**PURCHASED:** I purchased it October 2017 at the master gardener Fall Festival from a visiting Tucson vendor.

**POT:** The plant stayed in the plastic nursery pot for about 6 months, then was moved to the current 4 1/2" terra-cotta pot with the bottom 3/4 glazed.

**FERTILIZER:** I fertilize every four months with Pro Sol 10-16-38.

**POTTING MEDIUM:** The plant is in my usual medium consisting of 1/3 pumice, 1/3 Black Gold cactus mix, 1/6 sand, and 1/6 worm castings.

**SUN EXPOSURE:** This plant lives under my patio cover with morning sun until 1 p.m., then outdoor shade for the rest of the day.

**WATERING:** I water once weekly in summer, if needed, and once monthly in winter.

**FROST PROTECTION:** The plant has been living under my patio cover about one foot from the house wall. It has not needed additional cover so far. It needs protection below 28 degrees.

**SPECIAL NEEDS:** No special needs, but light encourages spine growth.

PURCHASED: I picked this up about four years ago as a tiny offset from a club member that was moving out-of-state.

POT: I don’t remember who made the glazed pot.

FERTILIZER: I use what the club sells, and I might fertilize three times a year.

POTTING MEDIUM: I use Black Gold Cactus soil with extra pumice.

SUN EXPOSURE: Currently it is under 60% shade cloth until June. Then, all my *Haworthias* go inside under fluorescent lighting until the summer temperatures cool off.

WATERING: It depends on what time of year it is. Inside, under fluorescent lighting, I water less in the summer and then more as it starts growing. When my *Haworthias* are outside from fall to late spring, I might water 2 or 3 times a week. It depends how they are looking.

FROST PROTECTION: I use frost cloth as needed or I load all my *Haworthias* into boxes and bring them back inside for a few days.

SPECIAL NEEDS: *Haworthias* aren't fussy, but they are winter growers. Mine live under fluorescent lights in the summer because I got tired of them melting in the summer heat when dormant and rained upon or accidentally watered.
Purchased this year:

Books: We purchased a total of 31 titles (including 1 DVD) for the library. We sold 11 books and periodicals unneeded by the library on Amazon and eBay.

Periodicals: The library renewed the subscription for the CSSA Journal as well as our membership. *Phoenix Home & Garden*: We are continuing to acquire, from donations, the issues featuring our members’ gardens and Lori A. Johnson’s photography.

Supplies: We purchased $45.74 worth of supplies to maintain the collection.

Donations to the library by members: Our club thanks the following people for their generous donations: Lois Ripley, Thom Young, Martha Goode, Marian Alaback, Steve and Julie Plath, Sue Hakala, Nancy Mumpton, and Julie Rada (who is a non-member).

Number of items checked out: Wendy keeps track of the books out and notifies members before the next meeting when items are due. Nancy does the same for periodicals. This year, 125 members checked out 193 items which includes 188 books and periodicals, and 5 DVDs.

Special Projects: We continue to sell items (mostly books and *CSSA Journals*) on eBay and Amazon that helps the bottom line for the library. Total amount added to the library budget in 2018 was $196.98.

2019 budget request: $1,000.

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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
Our library has increased the collection of John Alcock’s excellent natural history books after a discussion on the club’s Facebook page. We now own four including: *Sonoran Desert Spring*, *Sonoran Desert Summer*, *In a Desert Garden*, and *When the Rains Came*.

We have also received the Summer 2019 issue of the *Cactus and Succulent Journal* with an article by Greg Starr and club member Tristan Davis. They have discovered a new *Agave* species, and describe it in the article. Also in the issue is the ISI plant selections for this year that are available for purchase from the Huntington. Visit the library table at the next meeting to peruse these new additions.
Membership in the Central Arizona Cactus and Succulent Society Facebook page topped out at 4,980 members.

Popular this month:

- **PEG MEETING** Pictures were shared by Tristan Davis from the ever popular Propagation Education Group meeting. May’s program on seed growing was led by member Ken Luiten. Mark your calendar for the next meeting, to be held July 20, 2019, from 9-11 a.m. Details to come on the CACSS FB Page.

- **3-D PHOTOS** Members have been posting amazing 3-D photos of cactus using their I-Phones. Newer I-Phones use their dual cameras to capture depth data, in addition to the flat image, to create a 3-D effect in their photographs. Software uses the data to understand the scene’s three-dimensional characteristics, and simulates them in an image you can move around with your finger or cursor.

Each month a photo of a cactus and succulent posted by CACSS FB members is selected for recognition. Right above: Succulent of the Month: *Adenium arabicum* v. ‘Heartfelt’ posted May 1 by Sandy Silvers.

Left Cactus of the Month: *Parodia mammulosa* ssp. *brasiliensis* posted May 17 by Lori Heade.

Post with Most Likes: Blue *Yucca* posted on May 23 by Amanda L. Bradley with 424 likes.

Thank you all for sharing your wonderful photos. You can join the CACSS FB page at: https://www.facebook.com/group/cacss2/
Edward Palmer (1829-1911) was a self-taught botanist and early American archaeologist. Palmer’s botanical collections (numbering over 100,000) are mostly pressed and dried and reside at research institutions around the world. These include the Smithsonian Institution, Harvard University, the Missouri Botanical Garden, the New York Botanical Garden, Royal Botanic Garden Kew, the British Museum, and many others.

The Palmer botanical collection in the U.S. National Herbarium at the Smithsonian Institution remains the largest, containing over 16,000 specimens collected over sixty years. He collected specimens in the southwestern United States, Florida, Mexico (including Baja California), and South America, and had about 200 species and two genera (Palmerella and Malperia) of plants named after him.

*Agave palmeri* (below), *Dudleya palmeri* (above), *Penstemon palmeri*, *Mimosa palmeri*, and *Prosopis palmeri* are plants named after him with which we are familiar here in the Southwest.
SPECIALISTS TO CONTACT WITH QUESTIONS

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Co-librarians for CACSS collection

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Manages the Seed Depot.

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Doug Dawson  480-893-1207
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Specializations include growing from seed, flora of Namibia, Lithops, other Mesembs, Melocactus, and miniature cacti and succulents of Arizona.

Mike Gallagher  602-942-8580
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Specializations include Aloes, Haworthias, columnar cacti, and Turbinicarpus.

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Manages the Instagram page.

Dean Patrick  480-759-0312
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Specializations in softwood stem-cuttings, plant division and seed starting, rooting cacti, Agave and Aloe.

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Specializations include general propagation and desert revegetation, Ariocarpus, Astrophytum, Cyphostemma, Echinocereus, Fouquieria, and Thelocactus.

Gard Roper  602-996-9745
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Archivist/Historian: Lois Schneberger
Audit Committee: Mike Gallagher
CSSA Representative: Mike Gallagher
Donations: Jim Oravetz
Facebook Coordinators: Dan Smith, Thom Young and Chris Ginkel
Fertilizer Sales: Eric Holst
Holiday Party 2018: Sue Glenn
Librarians: Wendy Barrett, Nancy Mumpton
Mailed Newsletters: Sue Tyrrel
Keeping in Touch with Members: Jo Davis
Membership: Beth Kirkpatrick
Newsletter: Sue Hakala
October Auction: Mike Gallagher
Plant Rescue: open
Private Plant Sales: Sue Tyrrel
Programs and Room Setup: Gard Roper, Wayne Kramer
Propagation Education Group (PEG): Tristan Davis
Pumice Sales: Gard Roper
Refreshments: Tara Richards
Research Grants: Tristan Davis