Cliff Fielding will present Atacama in Your Yard on August 27. With over 20 years experience growing over 200 plants from the Atacama Desert in Chile, Cliff will share his secrets for successfully growing them here in the Sonoran Desert. You won’t want to miss it.

_Copiapoa longistaminea in habitat by Doug Dawson._
I have been a plant lover as long as I can remember. I have focused on growing and collecting plants that would grow best where I was living. I was ordering Lithops and Epithelantha’s from the legendary Ed Storms while in grade school. Orchids would become my greatest plant passion for the next 15 years because of their long-lasting blooms.

A career move to the high mountains of Colorado sparked an intense interest in alpine gardening. It is truly amazing the beautiful little plants that grow in some very extreme environments.

A job transfer soon relocated me to the southwest (Albuquerque) where the dry atmosphere and heat lead to a slow decline of the orchids. It did rekindle a desire to revisit Ed Storm’s catalogue for some cacti and succulents. There was no Internet, so I was unable to find his catalogue again. Years later, I was surprised to find out that I had been living within 26 miles of one of the best collections of cacti and succulents in the country (Mesa Gardens).

I then moved to Phoenix to be with my wife and fellow gardener Tammy. Every plant that I brought with me from Albuquerque died within a week.

Tucson was the turning point in my growing and collecting of cactus and succulents. In Tucson, there were many growers that were very informative. I was also able to uncover what happened to the Ed Storms’ collection, as well as discovering the amazing variety of the plants that actually like to grow in Phoenix.

Those that have attended my open gardens over the last ten years can attest to the fact that I grow a lot of different plants. I now have over 200 cacti from the Atacama Desert. I have learned a lot over the last 20 years growing these plants. Many of the finest growers in the country have passed along their tips on how to get them to grow their best. I hope to continue growing them for a long time.

The Atacama Desert is 600 miles of the driest desert in the world. There are towns that have gone for more than a year without any recorded rain. In this harsh environment grow some of the most beautiful cacti in the world. The extremes of the area have forged plants that grow with painful slowness to become massive plants of great age and beauty. How do these plants survive? What is their outlook for the future?
This program on the Atacama Desert will give insight into these questions as well as explore what the cacti in habitat look like and what you might expect them to look like in your collection. We will discuss the most successful ways of propagation, watering, light, humidity, and pests.

There will be a living cactus map of the desert to give you an idea of which plants grow in relation to others. There will also be a few unrooted specimens so you can see what’s going on beneath the soil. It is my hope that each of you will be inspired to go out and get one of these desert cacti, Copiapoa, Eriocyse or Eulychnia, so that in 15 years you can say, “Wow! This is one of my favorite plants.”

Neoperteria eriocephala above and Copiapoa hypogea to the right both from Cliff’s collection.

CACSS meets in Dorrance Hall at the Desert Botanical Garden. Garden admission is free for those attending the meeting. All are welcome.
Léon Diguet (1859-1926) was a French naturalist. He studied science at the National Museum of Natural History in Paris where he was influenced by scientists that included, biologist Jean Louis Armand de Quarterages de Bréau, zoologist Alphonse Milne-Edwards, and anthropologist Ernest Hamy. From 1889 to 1892, he was employed as a chemical engineer at the French-owned El Boleo mining installation in Santa Rosalia, Baja California. During that period, he explored the peninsula's interior, collecting natural history specimens for the National Museum of Natural History in Paris. Afterwards, from 1893 to 1914, he made six more trips to Mexico as an explorer and collector.

1. A return trip to Baja California in 1893-1894
2. Jalisco and the territory of Tepic (a trip in which he conducted research of the Huichol and Cora peoples)
3. San Luis Potosi, Colima and northern Jalisco
4. Puebla, Oaxaca and Tehuantepec
5. Michoacán and the state of Mexico
6. Another expedition to Baja California and Jalisco

As a naturalist in Mexico, he amassed an eclectic collection of insects, cacti, orchids, minerals, crustaceans, and other specimens. He performed archaeological studies in the Mixtec-Zapotec region and at Ixtlán del Rio, as well as pioneering investigations of the burials and rock art in central and southern Baja California. He also conducted historical research of cochineal, studied the Huichol language, analyzed the different types of Agave, and investigated the properties of jojoba. On his journeys,
he took many photographs of the country, the negatives later being housed at the Musée de l'Homme in Paris.

The genus *Diguetia* bears his name, and his name is also associated with numerous zoological and botanical species, two examples being: *Sceloporus diguetii* (synonym *Sceloporus orcutti*, the granite spiny lizard), *Fouquieria diguetii*, and *Ferocactus diguetii*.

Ferocactus diguetii is the largest of all of the genus of Ferocactus reaching 13 feet tall and may grow almost 3 feet in diameter. It is an island endemic from Baja gulf islands growing on gravely slopes on rocky hills.
FAVORITE TOOLS

My favorite tool is this old Coleman compressor. We have a bunch of very messy trees in our yard which just love to shed all over my plants. This baby makes cleaning them up for the show and sale a breeze. Heather Holst

I haven’t planted anything in the last 30 years when I wasn’t wearing my kevlar gloves. They are made for the saw industry so workers can grab a moving saw blade—really. They keep everything out of my hand except for the really big spines and they are flexible and cool to wear. Find them on the web. Sue Hakala

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.
**Euphorbia horrida**
Best Succulent of 2017 Show grown by Gard Roper

PURCHASED: Gard found this about five years ago at one of the Tucson nurseries.

POT: It was in the plastic nursery pot for a few years and in this ceramic pot by Mark Mauridian ever since.

FERTILIZER: Gard uses the club’s ‘Pro-Sol’ 10-16-38 at about half the recommended strength four times a year.

POTTING MEDIUM: Gard starts with his standard 50% potting soil (‘Black Gold’ if he can find it) and 50% pumice. Then he adds a little more pumice for some extra drainage.

SUN EXPOSURE: Full morning sun and then under 50% over head shade cloth for the remainder of the day. Gard says some large clones can take full, all day sun, but 50% shade is best if in doubt.

WATERING: Once a week in the warm months and about every 12 days in the winter. Gard says he still waters on this schedule during the monsoon season but that he “moves the water wand a little faster.” Still, make sure water comes out the bottom of the pot.

FROST PROTECTION: He covers it with one layer of frost cloth when the first frost advisory is issued and he leaves it on for six weeks or more. He finds that it seems to appreciate this mini-greenhouse effect, but he makes sure to remove the cloth before spring warm up.

SPECIAL NEEDS: Almost none; that’s why he likes this species so much. It thrives here, it’s easy to grow, comes in several clonal varieties, it is not rot-prone if you don’t over pot it, and it’s a great plant for beginners. Gard’s only caution is that its roots tend to adhere to the sides of the pot. So, be sure to use a pot that is wider at the top and narrower at the bottom to make it easier to remove when it is time to pot it up. If it still won’t budge, Sue Hakala advised Gard to soak it overnight to facilitate removal. Two people and wrapping it in old beach towel helps too.
*Tephrocactus weberi*
Best Advanced Cactus of 2017 Show grown by Lois Schneberger

PURCHASED: Lois found this plant at the Huntington Library and Garden while on the CACSS trip to California nurseries June, 2012. While not the most attractive cactus, Lois knew it was not common in collections. Lois hopes to get it to bloom someday.

POT: It was in the original nursery plastic pot for several years and transplanted into a clay pot in the spring of 2016.

FERTILIZER: Lois uses the club’s 'Pro-Sol' 10-16-38 at the recommended strength monthly during the growing months.

POTTING MEDIUM: She uses a 50% standard potting soil and 50% pumice. Sometimes a little more pumice is added for some extra drainage.

SUN EXPOSURE: Her shade house has 50% shade cloth on the top and west side of the structure.

WATERING: It has been watered 2 or 3 times this summer plus additional moisture from Mother Nature. In the winter months, it’s watered probably once a month, depending on contributions from Mother Nature.

FROST PROTECTION: Fortunately, this species is frost-tolerant. The plant has received no frost cloth protection. In the shade house, she does group pots closer together for warmth.

SPECIAL NEEDS: None.
There are many unsung heroes who made the CSSA Convention a success. Many, we will never know about. Cindy, who frequently volunteers for club projects, took on the convention bags featuring Steve Plath’s beautiful logo.

She started last November obtaining bids on the bags, purchasing them and the pads of paper and handmade clay saguaro magnets. She also took on the task of getting the convention T-shirts and hats ordered, but that’s another story.

Over the passing months, while watching favorite TV shows, Cindy patiently placed a teaspoon of wildflower seeds into the packets she designed for attendees. She did a bit of arm twisting to get over 20 organizations to agree to submit materials.

As the convention neared, she picked up the 300 bags and inserts (with the help of Jo Davis and Sue Tyrell) and started filling up her family room.

When the assembly team arrived, there were boxes everywhere. In about three hours, all 302 bags were filled.

Cindy and her husband, Ron, transported the bags, T-shirts and hats to the convention site. With help from Jo Davis, they unloaded and readied everything, for attendee pickup. They undoubtedly sighed in relief. Thanks Cindy and helpful Ron plus everyone who made the gift bags such a great success.

The assembly team: Dana Hiser, Sue Tyrell, Cindy Capek, Jo Davis, and Sue Hakala.
CACSS Conference heroes from upper left: Beth Kirkpatrick, co-chair; John Czaplicki, packing/shipping chair; Dan Smith, volunteer chair; Sue Tyrell, sales chair with helper Andrea Groves; Jeanne Ann and Chuck Brush, tour chairs; Eric Holst, audio and video chair; and Natalie Melkonoff, speaker support chair.

(More on the next page.)
Cindy Capek, convention bag, T-shirt and hat chair with Jo Davis centerpiece chair; Nick Diomede (in orange) program book chair with Thom Berger registration helper and Cricket Peterson, program advertising chair; Tristan Davis, plant gift chair; Mike Cone, vendor/sales on-site chair; Carol Parrot (in orange) auction chair with helpers Monte Crawford and Christine O’Hara; Jim Oravetz (in white), security chair with helper Thom Young; Judy Tolbert (in dark blue), sales chair with helpers Janet Karasz, Lin Leivian, George Kazaka, and Pat Adler.

Thank you to everyone who made this the best convention.
The CSSA 37\textsuperscript{th} Biennial Convention was a smashing success. We received so many compliments from the participants and I heard over and over, “best convention ever.” None of this would have been possible without the planning and commitment of our CACSS and CSSA leadership team and all the wonderful volunteers who were so welcoming and service-oriented. All of your efforts are very much appreciated.

Volunteering for something like the convention or our show and sale gives back to us personally in so many ways. We learn so much about each other, we discover hidden talents among us, make new friends and enjoy old ones and have a feeling of accomplishment for a job well done. This convention helps us form a community of cactus and succulent hobbyists. I often hear people say they don’t know anyone; well if you want to get to know people in our society, then become a volunteer.

The next convention is in 2019 in San Luis Obispo, CA, so start saving your money. I will definitely be going as I always have so much fun, learn lots of new things and meet so many interesting people. It is a highly enriching experience.

DONATIONS TO THE CACSS LIBRARY

We have many kind and generous members who donate items to the CACSS librarians for the library collection. We appreciate them all. I will explain how these donations are handled.

The librarians will assess whether the item will be of use in the CACSS collection. We look at the following areas:

- Do we already own a copy?
- If it was copyrighted a long time ago, is it something that should go into our storage area in Webster Auditorium due to it being a classic in the field?
- If it is material of a more current nature, we will decide whether to add it to the collection that we bring to our meetings each month.

Sometimes, even if we own a copy, we may add it because the demand warrants it. Also, in some areas we have very limited choices and we may add an extra copy of an existing title.

With materials not meeting any of the above criteria, we normally offer them to the members at the meetings (sometimes free and sometimes with a price).

If you make a donation and prefer to have the item back if we can not use it, please add a note on it when you give to us stating you want it returned if unneeded by the library. Thank you.
On a hot summer’s day in the Valley, I was up on the Rim in a forest grassy area with some other plant enthusiasts looking at plants. A tiny black teardrop shape started walking across my friend’s shoulder. It was a tick. We pulled up pant legs and found some around sock tops, pulled up shirts and found some ticks around our waistbands. All were settling in to set up a blood transfusion site: our blood into them.

Ticks are about ¼ of an inch in size and grow bigger when they’ve had a blood meal, swelling up into a gigantic size (for them) 20 to 50 times their mass. They are parasites related to arachnids (spiders and scorpions). Deer ticks can transfer the bacteria that causes Lyme disease, not an illness you’d want to get. You won’t even feel them bite. They inject a liquid that stops their host’s blood from clotting and suck away. Ticks hold on to their host with claws, staying on sometimes for several days. They find a snuggly place and bite away with a mouth that looks like the worst rotor rooter you’ve ever seen, complete with sharp backward facing barbs making them hard to pull out.

Females lay thousands of eggs that hatch in the spring. The ticks need a couple of blood meals during their life to grow and molt into an adult. They have special organs on their legs to let them know when a host might be near so they can grab on. Ticks can’t fly or jump and don’t have eyes, so researchers speculate that they sense changes in air currents, temperature and the carbon dioxide that mammals exhale. They can wait up to a year for a host to come by.

If you’re out in grassy forested areas this summer, especially if deer are known to be in the area, tuck pants into socks and check each other and pets for ticks before getting in your vehicle. If you have a tick attached to yourself, a pet or horse, etc., remove it carefully. Use tweezers to flip the tick over and then press on its head until it withdraws.
Don’t try to pull it out as you’ll probably break off the head and it will stay attached by those backward facing barbs. Keep the tick in a plastic bag and freeze it in case Lyme disease symptoms appear and your doctor will need to identify it. Disinfect the area and wash hands. FYI: Lyme disease starts with a bad rash, fever and body aches.

Google ticks on the Internet and see lots of ticks before and after their blood meal. [youtube.com](http://youtube.com) has an excellent video on “How to Remove a Tick” by the University of Manitoba.

---

GROWING CACTI FROM SEED WITH DOUG DAWSON

Offered by the Desert Botanical Garden, Monday, October 9, 6:30 - 8:30 p.m. DBG member price $30, regular price $38.

Growing cactus plants from seed is rewarding, requires patience and an observant eye. Join Doug Dawson (CACSS club member) as he shares his many years of seed growing to learn how to create successful germination. Learn his red cup technique developed for amateurs without greenhouses or those with limited time and space.

---

Next newsletter issue submission deadline is **September 5, 2017**. Email all submissions to: Editor Sue Hakala at cacsscentralspine@gmail.com. Members are encouraged to submit medium resolution images of their plants with captions for inclusion in the newsletter when and where possible.
FACEBOOK
By Thom Young

The Central Arizona Cactus & Succulent Society (CACSS) Facebook (FB) page membership in July totals 3,095. Our growth was slowed a little by summer vacations. This is a two (2) percent increase for the month of June. Please join the CACSS FB page. Our FB page is an open forum on cacti and succulents (C&S) with a variety of commentaries sprinkled in and requests for cactus and succulent IDs. Our page has many informative posts associated with all aspects of C&S growing, gardening, and of course, our FB page allows for the opportunity to post your favorite plant photos.

Twenty-one (21) new international members joined our FB community from eighteen (18) countries and represents 35% of the new FB members in July. There were no first time country members for July.

In July, there were plant identification requests for ten (10) succulents (non-cactus) and thirteen (13) cacti, all twenty-three (23) plants were identified. Great job! FB members!

Below is a sampling of other topics and requests from our July FB page postings:
• Can someone please recommend a good shade cloth for cacti?
• I bought my first ever Adenium.
• Cactus and Succulents are very popular in Germany.
• Free cuttings four different species.
• Take a look at my collection.
• Sometimes my plants get scared of the dark.
• The Adenium seed pod has opened early.
• Does anyone have care tips for growing a Desert Rose?
• Is anyone here in the valley growing Ficus palmeri?
• I've finally added my three favorite Agaves to my collection.
• Succulents from Germany & Switzerland in June 2017.
• TCSS meeting, Anyone you know? (Photo on FB page).
• Missouri Botanical Gardens 2017 Desert Exhibit.
• Assorted cuttings, free. Location on FB page.
• C&S tools for potting and general use.
• Could someone share a recipe for home made cactus soil.
• Ocotillo fence progress.

Tools and aids posted on CACSS FB page for use around C&S:
• Misting bottle with sixty (60%) alcohol forty (40%) water for cleaning tools
• Cinnamon to use as an antibacterial on plant cuts or wounds
• Very worn hay bale hook for removing stubborn plants
Here are the many C&S in bloom posted on our July FB page: *Adenium*, *Adenium*, *Aloe*, *Astrophytum*, *Austrocylindropuntia*, *Aztekium*, *Ceraria*, *Cereus*, *Cochemiea*, *Coryphantha*, *Cylindropuntia*, *Discocactus*, *Dorstenia*, *Echinocactus*, *Echeveria*, *Echinopsis*, *Epiphyllum*, *Euphorbia*, *Harrisia*, *Hoodia*, *Gymnocalycium*, *Jatrophia*, *Leuchtenbergia*, *Mammillaria*, *Melocactus*, *Opuntia*, *Peniocereus*, *Plumeria*, *Pterodiscus*, *Rebutia*, *Sesamothmanus*, *Tephrocactus*, *Thelocactus*, *Trichocereus*, and *many more*. There were so many great photos posted on our FB page in July! The bloom photos assist in plant identifications. You shall find the beautiful photos here: [https://www.facebook.com/groups/cacss2/](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 C&S identification as well as all of your wonderful photos posted. Each month we feature photos of a cactus and a succulent from our FB members. This month’s featured Cactus photo is from Ron Souder and is a *Haageocereus versicolor* in bloom. The succulent of the month’s photo is from Mike Harris and his *Plumeria*. Thanks to Mike and Ron for posting their photos on the CACSS FB page.

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/](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 July. We have room for many more CACSS members. We are now a minority on the FB page. 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!