



Central Spine

NEWSLETTER OF THE
CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY

MARCH 2017



Fouquieria macdougalii is a bushy plant very attractive to hummingbirds that grows well in the Valley.

Tristan Davis provides us an in-depth look at the genus and gives growing tips in his excellent article in this issue.

Lucas grew up in the southeastern United States in central Mississippi where he was constantly exposed to the natural world by his naturalist father. It was there that he developed a love and passion for plants and became interested in how to recognize and classify species. He



Lucas C. Majure

received his B.S. and M.S. degrees from Mississippi State University. He then went on to earn his Ph.D. at the University of Florida where he focused on the origin, relationships and speciation in prickly pear cacti, the genus *Opuntia*, and relatives.

Lucas was hired by the Desert Botanical Garden in October, 2014, as the Biologist of New World Succulents. He focuses his research on understanding broad patterns of evolutionary relationships in the family *Cactaceae* and other groups of arid-adapted plants. One of his primary foci are the arid regions of the Caribbean

where he has been developing projects to look at the origin and diversification of cacti in the Greater Antilles (Cuba, Hispaniola, Jamaica and Puerto Rico). He also has multiple projects on-going in the desert southwest, including parts of the Chihuahuan, Sonoran, Mojave and Great Basin Deserts.

Lucas will be discussing his on-going work in the Greater Antilles with a special focus on Hispaniola and Cuba. There are roughly 80 species of cacti in the Greater Antilles, and many of those species are found only on the islands and nowhere else in the Americas, such as the genera



Photo 1 Harrisia eriophora, a species common in northern Cuba. This photo was taken just east of Havana, Cuba.

Consolea, *Dendrocereus* and *Leptocereus*. He will be discussing our current understanding of the species that occur there, and the possible ways in which those species may have originated on the islands. He will also delineate current threats to those species' survival on the islands.



Melocactus matanzanus is endemic to Cuba and only known from one small group of populations in northern Cuba. It is a species threatened by over-collecting by hobbyists.



This is the seasonally tropical dry forest in the Sierra Martín García, Dominican Republic. Both *Consolea moniliformis* (front) and *Stenocereus fimbriatus* (back) are common species found in these areas throughout Hispaniola.



Consolea picardae from around 900m elevation in the Sierra.



Leptocereus paniculatus is an arborescent species common in the Hispaniola tropical dry forest. It is commonly harvested for its wood for use in furniture building.

FOUQUIERIA: Not Your Usual Ocotillo

Photos and text by Tristan Davis

If you have ever visited the Southwest of the USA, then you are already familiar with ocotillos whether by name (scientifically, *Fouquieria splendens*) or by sight. The ocotillo we all see in the Arizona landscape is one of the iconic symbols of the Southwest and Sonoran Desert. The ocotillo is also one of the most common desert landscape plants used in the Phoenix area for its unique form (referred to as “candelabra form”), its hardiness (no supplemental water, hardy to well below freezing), and attractiveness (red-orange flowers almost year round that hummingbirds love).

Did you know that the ocotillo we all know and love is only one of eleven different species of ocotillo in the genus *Fouquieria*? Each of the eleven species of *Fouquieria* can be grown successfully in the Phoenix area, though some are more vigorous here than others. All but our native *Fouquieria splendens* are only found naturally well to the south in Mexico, but can still be grown in our area.

All of the species are drought deciduous (that is, they lose their leaves when there is a lack of water) to some degree; one of the coolest features of the genus is that their flowering cycles are completely separate from their leaf cycles. It is not uncommon for ocotillos to be in full bloom with not a single leaf in sight!

So, if you are like me and love growing unique denizens of the desert, consider adding some of these species to your collection and/or landscape - the hummers will love you for it. The following summarizes some of the characteristics of each species in the

genus, in alphabetical order, so you can pick the best one(s) suited for you.

FOUQUIERIA BURRAGEI This gorgeous species is easily distinguished from others in the genus by vegetative features in addition to floral features. The leaves on this species have a bluish-gray hue that is unique in the genus. Additionally, the flowers range anywhere from deep pink to pure white, though



Fouquieria burragei with white flowers.

mostly-white is the most common color seen in cultivation. The species is also known to sport different colored flowers depending on the time of year; in the spring and fall, flowers can be pinkish, whereas in mid-summer flowers can be pure white - even on the same plant!

This ocotillo is a relatively fast grower and can grow into a very large bush form from a 1-2 foot specimen in a matter of about

5-8 years (believe me that's fast for an ocotillo). *F. burragei* is fairly cold hardy here in the Valley too, though the tips of the branches are damaged when the temperatures remain below about 25-28F for a significant period of time. With larger specimens, this isn't a problem, and you can trim off the distal ends of dead branches without ill effect. I would protect plants smaller than two feet tall from temps below 28F.

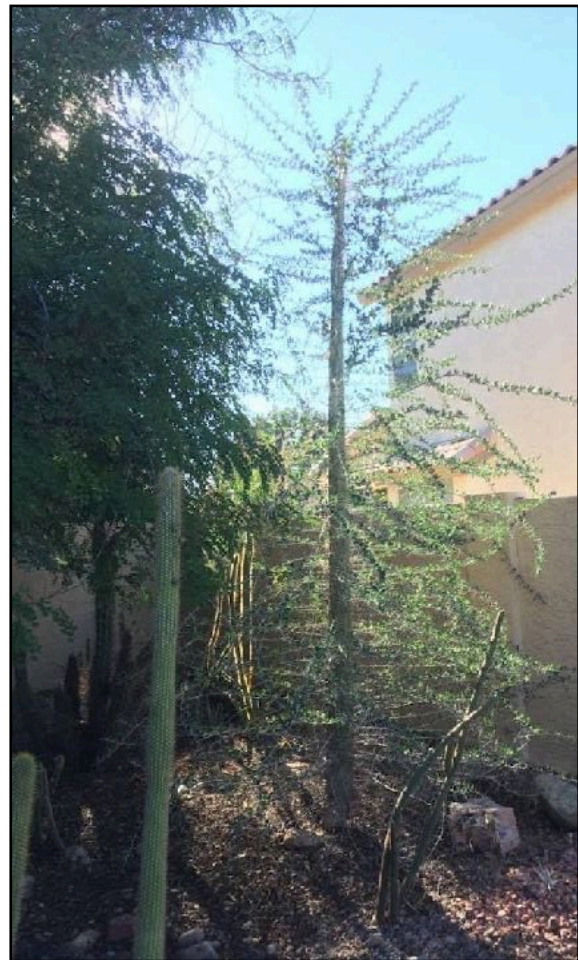


This species can also take the full force of our sun, and can easily handle reflected heat when established. All in all, this is a gorgeous unique ocotillo that is highly recommended.

FOUQUIERIA COLUMNARIS (boojum)
For succulent-lovers, the boojum is almost as recognizable as our native ocotillo. Although rather unique in shape (often described as an "upside down carrot"), one can easily notice the relationship with other ocotillos by looking at one of the long side branches; they are almost identical to branches of the other members of the genus. The primary distinguishing characteristic of the boojum is the succulent trunk with horizontal radiating branches throughout its length.

Habit-wise, an important distinction of the species is that it is strictly a winter-grower

when mature. Leaves usually appear at the end of September here in the Valley, with growth from the apex occurring around the end of January. The species starts losing its leaves in April/May and is dormant through the summer. Flowering of mature specimens often takes place in



Fouquieria columnaris

early summer.

The boojum has a somewhat undeserved reputation as being an extremely slow-grower; that's what I believed too when I planted my 11" boojum in my front yard in 2005. I figured I'd never live to see it bloom! However, here we are in early 2017, it is well over 12 feet tall and developed its first flowers last summer.

On average, my plant puts on almost a foot of growth each year. That is by no means common, but don't despair of ever owning one and not seeing it as a mature specimen. It can happen.

Flowers of the boojum are white and appear at the very tip of the trunk, as well as from the tips of horizontal branches in the upper quarter of the plant.

FOUQUIERIA DIGUETII This species is another ocotillo with a tree-like form, but in my experience, this is the only one that grows directly into a tree form relatively rapidly. Mine never go through a "bush-like" shape like other tree ocotillos. The species grows a short trunk early on and establishes vertical height at a decent rate.



Fouquieria diguetii

The flowers on this species are similar to our native ocotillo, but the flowering panicles are a bit more open and the petals are not reflexed at anthesis. The flowers are very similar to the flowers of closely related *F. macdougallii*, but the latter's flowering panicles are even more open.



Fouquieria diguetii flower

The one downside to this species is that it does not usually flower until quite mature. My first one to flower was over six feet when it first bloomed. Nonetheless, these are great ocotillos if you have the space and patience.

They are hardy down to 25F, and can handle full sun in Phoenix without a flinch. I also appreciate the fact that this species often blooms through the winter months. They are a nice addition to a landscape where you want some color year-round.

FOUQUIERIA FORMOSA Aside from the widely distributed *F. splendens*, this species has one of the most extensive ranges of any in the genus. In my experience, this one rivals *F. shrevei* as

the most excessively slow-growing of them all! Boojums are speedsters compared to my specimens of *F. formosa*.

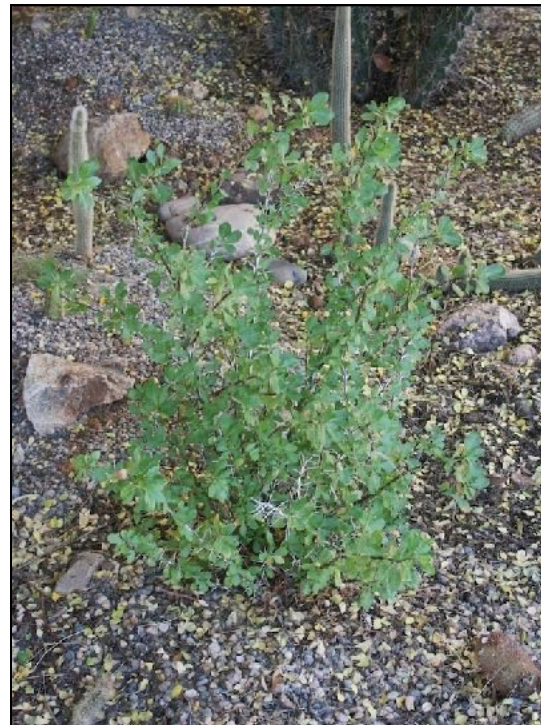
The most unique aspect of this species has been that it literally has thrived in our coldest winters. That's not to say it is found in colder temps in Mexico, as it isn't. I don't know why this is the case, but my *F. formosa* go through their most significant growth spurts in early spring, immediately following our coldest winters (2007 and 2011 winters caused the most growth in my plants!).



Fouquieria formosa flower

If you are looking for a cold-hardy species besides our native *F. splendens*, this one is the one for you. Besides hardiness, its slow growth can be a positive if you have limited space in your landscape. However, given enough years, it does grow into a large tree, at least in habitat. The species also is a reluctant flowerer until it gets some good age/size on it, although I have had two foot plants bloom once. The flowers are quite distinctive in being bunched together and having a significant curve to the corolla; perfect for the curved bills of hummingbirds in their native habitat.

FOUQUIERIA FASCICULATA For those interested in caudex-forming plants, *Fasciculata* is usually in their collection or on their "Want List." Even in habitat, the species can form large caudices (large, usually round distinct bases of plants where they store nutrients/water).



Fouquieria fasciculata

This species does quite well in pots, and when subjected to pruning, can win many a prize at the cactus and succulent shows around the country. As a landscape plant, it is grossly under-used. It seems that the species does not thrive in full sun in the Valley though. Here they appreciate a good dose of filtering, especially from the afternoon sun.

Most plants bloom at a decent size too (2-3 feet tall), and the flowers are a pretty white color. When cold-stressed, the leaves often take on a maroon color that adds to their attractiveness in the landscape.

FOUQUIERIA LEONILAE This dainty species is one of the most rare of all the *Fouquieria*. It is distinguished from the other species by being relatively thin branched and lightly spined in most clones.



Fouquieria leonilae flower

The flowers appear when only 1-2 feet tall, and are dainty on a long inflorescence and dark blood-red colored. The downside of this species is its sensitivity to temps below 28F or so, and that it seems to be a bit susceptible to rot if overwatered. However, if you are willing to keep an eye on it and give it plenty of light, but not too much afternoon sun, they can be one of the most attractive and unique of the *Fouquieria*.

FOUQUIERIA MACDOUGALII

Commonly known as the Mexican tree ocotillo, as the name suggests, this is a species with a tree-like form. In our area, they tend to stay shorter and form medium to large bushes instead.

Next to the native species, this has got to be the easiest of all the ocotillos to grow in the Valley. To top it off, they bloom at a very small size (one foot), and bloom freely- even in containers.



Fouquieria macdougalii (see cover photo)

The species has two major flushes of flowers in the Valley: one in the spring, the other in the fall. However, my plant has had at least some flowers bloom in every month of the year, whether or not the plant had any leaves on it! Like our native ocotillo, flowers grow from the tips (or near the tips) of branches, and the branch tips on *F. macdougalii* are located all over the plant. When it blooms, the plant is literally covered with beautiful red flowers; the hummingbirds simply love this plant! Flowers grow from inflorescences and are a bright red with long pedicels so they are distinct in their very open/airy structure.

FOUQUIERIA OCHOTERENAE Along with *F. leonilae*, this species is a tough one to grow for me. It is also sensitive to temps below 30F and temperamental with its watering requirements. Additionally, it gets to be a pretty decent size before it is willing to bloom (often over 4-5 feet tall before you get flowers), but doesn't seem to like full sun exposure in the Valley. This make the species a tough one to locate in an acceptable microclimate.



Fouquieria ochoterena

If you have a large area under a large Palo Brea or similar tree that has limited, but consistent, sun filtering, then this may be a good one to try. But, good luck tracking one down, because it is also one of the most difficult species to find. If you

find it though, don't pass it up as the plant is a beauty.

The leaves take on a maroon color at the slightest stress so it makes a striking addition to the landscape. If you can get yours to bloom, the flowers are also a deep maroon color and are unique in being located away from the branch tips. Instead, they grow out horizontally from the long branches, an apparent adaptation to allow pollinators heavier than hummingbirds a place to perch while feeding on the flower nectar.

FOUQUIERIA PURPUSII After the boojum, this is probably the species most sought after by hobbyists. To me, it's like an intermediate between a boojum and a



Fouquieria purpusii

regular ocotillo. Mature plants form a trunk not unlike a boojum, but less pronounced.

The species also has a growth form where the branches seem to twist and turn every which way so they provide a very unique look to your landscape. Even more so than the boojum, I see *F. purpusii* as having come directly out of a Dr. Seuss book. *F. purpusii* does fairly well in the Valley, especially when provided some relief from our mid- to late-summer sun. Flowering usually occurs when it reaches about 3-4 feet, but can occur in smaller plants too.

This species is one of the slower growing of the genus, so you may have to wait awhile. Similar to the closely related *F. fasciculata* and *F. columnaris*, this species has white flowers.

FOUQUIERIA SHEVEI For those that specialize in growing *Fouquieria*, *F. shrevei* is the Holy Grail of ocotillos, at least nowadays. In the past, *F. purpusii* perhaps held that distinction, but that species can now be found regularly for sale and in shows across the country. *F. shrevei*, however, though occasionally available in the past, has completely disappeared from cultivation save for a few lucky souls. In habitat, it is highly restricted to just a couple of valleys in Mexico that have heavy gypsum deposits.

The species has several rather unique features that separate it from other ocotillos: orange resinous epidermis of the trunk of older specimens, whitish bark and longish thorns, and sessile flowers. Out of flower, the species is extremely difficult to tell from *F. splendens*. In flower, it is the easiest of all ocotillos to identify.

All ocotillos bloom in groups on short to long inflorescences. *F. shrevei*, however, blooms singly (rarely doubles) from the

very base of thorns at the distal end of branches. Additionally, the flowers are pure white. The most significant drawback of this species is that, more than any other species I've grown, this one is the "World Record Holder" of SLOOOOOOOOOWWW growth.



Fouquieria shevei

One of my plants was obtained when it was a 4" seedling in 2010 and is now all of 6" tall. That is not to say that this is the most common scenario, as I have had others that have shown a bit more rapid growth, but "rapid" is definitely a relative term with this species. So, if you find this one anywhere, grab it and prepare to be very patient. On the flip side, one of the best things about this species is that it

can bloom when it is only between 1-2 feet tall.

FOUQUIERIA SPLENDENS Lastly, this is the species that most of us are familiar with. Along with *F. shrevei*, it is also the only one with a candelabra form growth pattern (as opposed to a tree or bush form). It is extremely easy to find and add to your landscape as both large and small specimens. It is very cold hardy (down to 18F at least), and can bloom in almost any month of the year. The only negatives for the species are that they do



Fouquieria splendens flower

not bloom consistently until they are about 4-5 feet tall, and are relatively slow-growers. Although the flowers are typically reddish orange, many growers do not realize the flowers can be other colors. There are even certain clones of the species where the flower is said to be a more yellow color. This species is the only species in the entire genus that has a described and named subspecies and varieties mostly based on flower color and/or length.

The described names of *Fouquieria splendens* are:

- *Fouquieria splendens* ssp. *splendens* (the dominate race found in the U.S.)

- *Fouquieria splendens* ssp. *brevirostris* (a race found in Mexico with very short flowers)
- *Fouquieria splendens* ssp. *campanulata* (composed of two varieties that interbreed occasionally)
 - *Fouquieria splendens* ssp. *campanulata* var. *campanulata* (with pink flowers)
 - *Fouquieria splendens* ssp. *campanulata* var. *albiflora* (with white flowers)

No matter the name, all of these taxa can be grown successfully in Arizona, if you can find them. I have both varieties of *F. splendens* ssp. *campanulata*, but both are slow growers for me and have yet to bloom. *F. splendens* ssp. *campanulata* var. *albiflora* is getting big enough that I would expect to see blooms soon.

FOUQUIERIA CULTIVATION TIPS

Being native to arid habitats, all species of *Fouquieria* are used to a lack of water to some extent. As some species are found in locations with more frequent rains than what we have in Phoenix, most appreciate additional water.

The most important thing to remember, if you grow these in the ground and plan to supplement with additional water, is to be sure your growing soil is well-draining. That means you may need to mix in some pumice to your soil before planting.

The second most important thing to remember is, don't continue watering your ocotillos just to keep them in leaf. These plants were built to be naturally drought-deciduous with cycles of flowering coinciding with or following specific rainy seasons. If you water continuously, you risk rot, but more importantly, your plants will not flower as

profusely as they could otherwise. Let the plants leaf out and flower on their own schedule. Hopefully, the next time you are out plant shopping, you'll take a closer look at each nursery's ocotillo section and

try to spy one that is a different species than what you are used to. Your searches will be worth it. *Fouquieria* are some of the most rewarding plants to grow!



Fouquieria splendens ssp campanulata var albiflora

We don't have a specific book on *Fouquieria* in the CACSS Library. We have the articles: "An Introduction to the *Fouquieriaceae*," *CSSA Journal* (v. 41, no. 3, May-June 1969) pp. 97-106. Our member, Tristan Davis, wrote: "Phenotypic Variation in Inflorescences of *Fouquieria burragei* (*Fouquieriaceae*)," *CSSA Journal* (v. 83, no. 2, Mar.-Apr. 2011) pp. 61-66, from Librarian Nancy Mumpton.

Visit the CACSS web site at centralarizonacactus.org, choose newsletters, and find *Fouquieriaceae* by Leo Martin, October, 2001.

We had 198 members attend our February meeting presented by Karen Zimmerman. I think that is a record crowd and what a fun meeting. Program Chair Diana Crummey.

FAVORITE TOOL



Out of necessity, I do all my work putting plants in the ground on my knees. This tool, 17 inches long, is most useful in digging and clearing out stones from the hole. The pointed edge is great for pressing down the soil at the base of the plant once planted in the ground. Lois Schneberger



101s

12" All-Pro Heavy-Duty Trowel

This description from Wilcox All-Pro Tools sums up why this is my favorite tool: 12" All-Pro Heavy-Duty Trowel. The No. 101 is a heavy-duty, narrow trowel built for rugged use. Treasure hunters, prospectors and gardeners can dig in the rockiest soil. Stainless. Chris Ginkel

After this month's meeting, the show is less than two weeks away. We work hard to get everyone to participate and receive plants from 7 a.m. to 7 p.m., April 5. NO excuses. The only time commitment is to pick up your plants at 4 p.m. on Sunday. Our club has close to 500 members and only 54 have signed up to show. Take a look at your favorite plant, spruce it up and bring it to the show. It's just that easy.

The show depends on members helping everything to run smoothly. Only 33% of the volunteer slots have been spoken for. Positions start at 6:45 a.m., Wednesday, and the last positions are at 4 p.m., Sunday. Our positions includes cashiers, assistant cashiers, people to help with the credit card sales, educators, floaters, greeters, monitoring the holding area, and potting up purchases.



Steve Mack with his award-winning Best Euphorbia from the 2016 show.

Friday, Saturday and Sunday the club provides lunch for volunteers and vendors. Rita Gosnell has generously taken charge of our lunch crew, but she has NO volunteers to help her. Please check out the volunteer site on the club web site arizonacactus.org. I recognize a lot of the names on the sign up sheet, and thank those that have signed up, but they are mostly people that have done it for years. They know the secret, it's fun. It is such a good opportunity for newer members to get to know others. Volunteer for something, we'll show you what to do.

Please remember, if you are showing plants, there can be no cleaning plants in Dorrance Hall. Each plant needs a white label in the BACK of the pot so everyone can see what you consider the best side. Plants always look nicer and cleaner with some top dressing to show off your plant. Don't have any, just get some aquarium gravel at Walmart or other stores that does not detract from your plant.

We want everyone to have FUN. Remember this is our time to show the community how much fun growing succulents and cacti can be.

There will be the last volunteer meeting in Dorrance at noon, March 26. Make sure to check out the guidelines on the web site for showing your plants and volunteer for at least one time slot during the show. And most of all, HAVE FUN.

CACSS ANNUAL PLANT SALE

By Sale Chair Mike Cone

Our upcoming sale brings a few new vendors and the hard and true plant and ceramic vendors you have come to rely on. I work hard every year to bring the club quality products for our sale, and this year will be no exception. I have a new ceramic artist to add to our list. As he is new to "flower pots," you won't want to miss adding a piece to your collection. Still trying to acquire a wonderful plant vendor, so let's all keep our fingers crossed...Our sale has become quite popular, so I recommend getting there as early as you can so you can get the best selection.

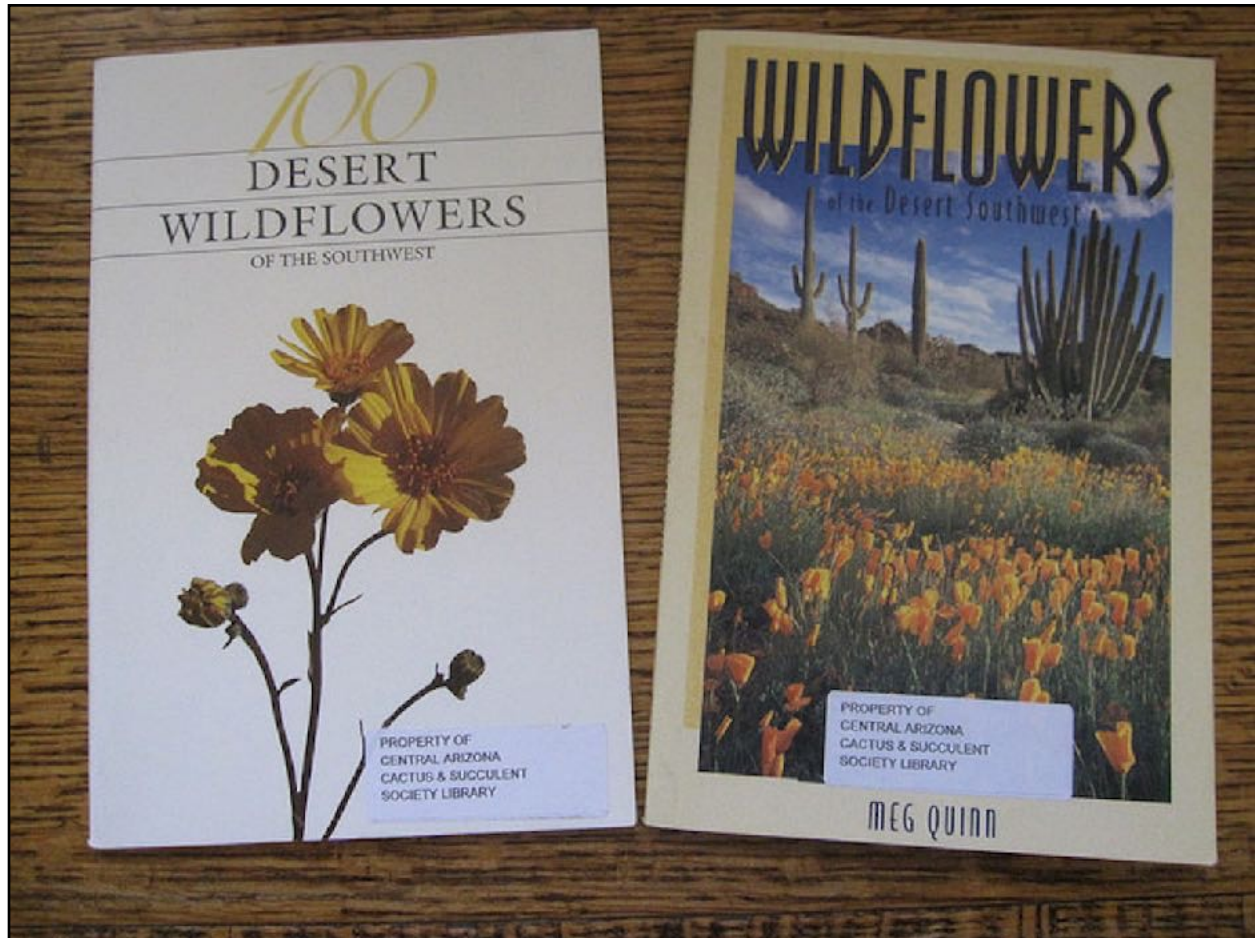


Mike Cone with his award-winning Best Agave from the 2016 show.



Some of the outstanding entries from the 2016 show.

While many wildflowers are not exactly succulents, some are. However, all wildflowers are part of our beautiful desert environment here in Arizona. The CACSS library has two excellent books available on this topic. Both offer large color photographs and detailed descriptions of the plants. Now is the time to get out to see wildflowers around our state. Take a look at these books as your inspiration.



PLEASE REMEMBER: Members are allowed to have out 2 items at a time from the library for 2 months. We now have a labeled large red bin on a library table for library returns. When you return your items, be sure to put them in the bin or hand them to a librarian. Do NOT just set them on the library tables.

Please return your items in a timely manner. If there are extenuating circumstances, please contact Librarians Wendy Barrett (wbarrett@cox.net) or Nancy Mumpton (nancy.mumpton@gmail.com).

PRESIDENT'S LETTER

By Beth Kirkpatrick

In January, thanks to the work of Tristan Davis, we launched a new Research Grant Program which you can read about on our website. I'm pleased to be able to report that we have presented our first grant in the amount of \$2,000 to Peter Breslin, who is a CACSS member. Peter is conducting field studies in conjunction with his Ph.D. dissertation project, studying the distribution of *Cochemiea halei*—a very localized endemic to the islands of western Baja California. Studies are a multiyear project being accomplished in 3 phases; phase 3 will be complete by the end of 2017. He is not only scheduled to talk about his research at a 2017 CACSS meeting, but is also a scheduled speaker at the CSSA convention in August.

Registration information is now available for the 37th Bi-annual CSSA Convention, at Tempe Mission Palms July 26 - 30. You will see details regarding the convention at <http://cssaconvention.com/>

It is a great opportunity to hear internationally renowned speakers, network with folks that share your interests, see and buy interesting and unusual plants, enjoy a tour, and have great food. Consider having a staycation as the hotel is giving us a great \$85 a night rate that includes the resort fee, which is normally \$17.95. I encourage you to support this convention with your attendance.

GYMNOCALYCIUM JOURNAL is available on the web at : schutziana.org.

The October, 2016 edition features two *Gymnocalyciums*:

- *Gymnocalycium friedrichii* is discussed in a 22-page article featuring an evaluation from a different perspective.
- *Gymnocalycium bruchii* (Spegazzini) Hosseus subsp. *deminii* Gapon et Neuhuber, a new subspecies from Cerro Uritorco, is discussed in 13 pages.

Both articles present excellent and numerous habitat photos and cultivated plants.

The CACSS Library has two copies of: *Gymnocalycium in Habitat and Culture* (2009, 288 pages) by Graham Charles.

Visit the web site and read past articles in the *Central Spine*:

- *Gymnocalycium* by Frank Hennessey, 12/82
- *Gymnocalycium Habitat and Winter Culture* by Mike Goodson, 8/85
- *Gymnocalyciums* by Leo Martin, 8/02, 8/01

Next newsletter issue submission deadline is **April 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.

Membership still climbing! The CACSS Facebook (FB) page membership has grown to 2,238. This equates to a 12% membership increase in the month of February. Take the leap and join the CACSS FB page. Read on to find the many reasons for joining our FB page including the open forum on cactuses 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.

Outside of the United States, we had 33 folks from 25 countries join our FB page in February. A sampling of countries represented: the island of Borneo, Iran, S. Africa, Australia, India, Philippines, Canada, and more.

What a speaker we had at our February CACSS meeting! Our speaker was Karen Zimmerman and her topic was: "Aloes On My Mind: Exploring Aloe Hybrids One Generation at a Time." Karen brought many of her *Aloe* hybrids for sale. We hope you were able to attend.

In February, there were plant identification requests for eleven (11) succulents (non cactus) and twenty-one (21) cacti, twenty-three (23) of the thirty-two (32) plants were identified. A tough month for plant IDs.

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

- If plants could talk.
- What fertilizer is best for cactus and succulents?
- Look at the plants I scored.
- Grown from seed progress.
- Grafting progress.
- Help me design my cactus and succulent soil.
- Cactus that can be planted outside in Ohio.
- *Lithop* mush – why?
- Can a limb from my *hoodia* be rooted?
- What a view out my window.
- Photos from Cliff Fielding's open house.
- I am having some serious concerns about my *Aeonium Goliath*.
- Can anyone tell me if you can grow Joshua trees in the Phoenix area?
- Excitement of PEG.
- If you are all alone and want to repot a large cactus...

Here are the many cacti and succulents in bloom that were posted on our February FB page: *Aloe*, *Lachenalia*, *Titanopsis*, *Aloinopsis*, *Kalanchoe*, *Cleistocactus*, *Mammillaria*, *Thelocactus*, *Adenium*, *Thelocactus*, *Kalanchoe*, and *Opuntia*.

The posted photos were absolutely beautiful! 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, 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 and succulent are from Steve Plath in one photo from the San Diego CSS show and sale. It is the photo of the *Gymnocalycium arvatum*, *Haworthia limifolia variegata* and *Aloe erinacea*. 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 the URL to your search engine).

Again, thanks to all CACSS members who contributed and/or joined the CACSS FB page in February. 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 succulents photos and answer any questions you may have. Please contribute today!



Steve Plath's photo from the San Diego CSS show and sale. It is the photo of the *Gymnocalycium arvatum*, *Haworthia limifolia variegata* and *Aloe erinacea*.

March 18, from 8 a.m. - 2 p.m. meet Ironwood Forest National Monument.

This year, former and current faculty members from the University of Arizona and other local experts will cover the botany/fauna/birds/insects etc., of the Monument, then lead short walkabouts into the desert to illustrate what they have presented. A National Geographic photographer will lead two hikes and provide instruction on how to photograph the desert. This event will also feature an authority on the historic Titan Missile program and its interaction with the area within the Monument. Hike leaders from the U of A Ramblers and two local Marana Hiking Clubs (coupled with naturalists to point out local plants of interest) will lead 8k and 5k hikes into the desert.

The nature and photo walks will be held on gentle, flat terrain – suitable for almost every adventurer. The longer 8K hike will be for those with the experience and gear for The Monument's more challenging desert terrain.

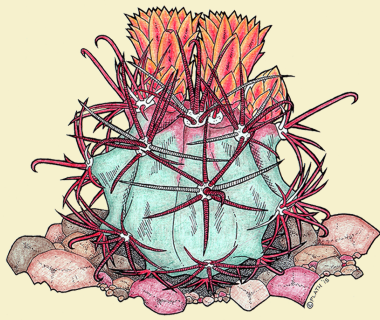
All activities take place outside. Please wear clothing and footwear appropriate for the day's weather and activities, and bring drinking water and a lunch.

Located at the base of scenic Ragged Top Mountain. Directions: Head south to Tucson, exit 236, Marana Road off I-10. Head west on Marana Road, which becomes Trico-Marana Road. Turn right on Silverbell Road and proceed for 12.7 miles. The last five miles of road are bumpy graded dirt with some dips and washboards. Watch for posted signs.

For more information about Meet the Monument, contact Jim Avramis at jimavramis@gmail.com.

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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 \$89 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 Tatroe, 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.

SPECIALISTS TO CONTACT WITH QUESTIONS

Nicky Davis
nicky.davis4@gmail.com
Manages the Seed Depot.

Tristan Davis 480-540-9540
minime8484@hotmail.com
Specializations include plant propagation, and heading PEG (Propagation Education Group).

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

Mike Gallagher 602-942-8580
mgallagher26@cox.net
Specializations include Aloes, Haworthias, columnar cacti, and Turbinicarpus.

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Manages the Facebook CACSS Swap and Shop page.

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heats@cox.net
Manages Society fertilizer program.

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

Gard Roper 602-996-9745
Manages Society pumice pile.

Steve Plath 623-238-3342
sbotanica@inreach.com
Specializations include general propagation and desert revegetation, Ariocarpus, Astrophytum, Cyphostemma, Echinocereus, Fouquieria, and Thelocactus.

Dan Smith 480-981-9648
smithdans@outlet.com
Specializes in Adenium, raising Adeniums from seed, grafting and Adenium culture in general, and co-manages the Facebook page.

Bob Torrest 480-994-3868
robertst9114@msn.com
Specializations include desert landscaping, unusual (including rare fruit) trees and shrubs, Aloes, Agaves, and columnar cacti.

Thom Young 480-460-0782
te77@q.com
Co-manages the CACSS Facebook page.

2017 PROGRAM AND COMMITTEE CHAIRS

Archivist/Historian: Lois Schneberger

Audit Committee: Mike Gallagher

Board Nominations: Mike Cone, Nancy Mumpton and Wayne Whipple

CSSA Representative: Mike Gallagher

Donations: Jim Oravetz

Facebook Coordinators: Dan Smith and Thom Young

Fertilizer Sales: Eric Holst

Holiday Party 2016: 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 Rescues: Lucy Rand

Private Plant Sales: Sue Tyrrel

Programs and Room Setup: Diana Crummey

Pumice Sales: Gard Roper

Refreshments: Tara Richards

Show and Sale 2017: Steve Mack

Website: Deb Keough

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.

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