Javier F. Gurrola takes us on a trip *Along the Devil’s Highway in Southwestern Arizona* in his article in this issue. One of the many plants he saw on this adventure was this *Bursera* growing in mostly solid rock, in great health and quite happy in this rough environment. Javier has several more adventures to share with us in the coming months.
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CACSS PROGRAM AND COMMITTEE CHAIRS

Due to space limitations, Program and Committee Chairs will appear in the Central Spine periodically throughout the year. The people filling these positions are an essential part of our Society. It takes a lot of volunteers to keep our Society humming, and we are all grateful for your contributions.

Archivist/Historian: Lois Schneberger
Audit Committee: Mike Gallagher
Board Nominations: Jim Oravetz, Jeanne Ann Brush, Chuck Brush
CSSA Representative: open position
Donations: Jim Oravetz
Facebook Coordinators: Dan Smith and Thom Young
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: Kat Hanna
Show and Sale 2016: Dan Smith
Website: Beth Kirkpatrick
Mexico’s Valley of Cuicatlan and Tehuacan: Cactus and Succulent Capital of the World

Two desert valleys in southern Mexico are home to a host of cacti and succulents, many of them endemic. The Valley of Cuicatlan, which drains northward from Oaxaca, and the Valley of Tehuacan, draining southward from Puebla meet at a botanical, natural, cultural, and archaeological hotspot.

David will present some of the sensational plants, vegetation, landscapes, and archaeological treasures from the region. David Yetman is a research social scientist and has been at the University of Arizona’s Southwest Center since 1992. He is a former member and chairman of the Pima County Board of Supervisors. Yetman received his doctorate in philosophy from the University of Arizona in 1972. His research has been primarily directed towards the state of Sonora, its indigenous people, their history, and how they have incorporated native resources into their lives. His books include...
Sonora. An intimate geography (1996); Scattered Round Stones. A Mayo village in Sonora, Mexico (1998); Guarijios of the Sierra Madre. Hidden People of Northwest Mexico (2002); The Ópatas. In Search of a Sonoran People (2010), and Colonial Conflict in Sonora: Indians, Priests and Settlers (2013). He has also written extensively on native uses of plants in Sonora. His Mayo Ethnobotany. Land, History, and Traditional Knowledge in Northwest Mexico (2002, co-authored by Thomas R. Van Devender) combines ethnohistory and ethnobotany. His 2007 volume The Great Cacti. Ethnobotany and Biogeography of Columnar Cacti (in our library) documents columnar cacti throughout the Americas, while a smaller work The Organ Pipe Cactus (2006) describes the natural history of the remarkable plant for which a U.S. Park Service National Monument is named. In addition, Yetman is author of numerous journal articles and book chapters. He is a frequent presenter of lectures on deserts, their people, and their natural history. In addition to his writing, Yetman served for nine years as host for the PBS documentary television series The Desert Speaks, and is currently the host for the PBS series In the Americas with David Yetman. Yetman received Emmy Awards in 2007 and 2014 for his documentary television work. Yetman lives in Tucson with his wife Lynn Fowler. He has five grandchildren and five great-grandchildren.
I am writing this letter from Aurora, Colorado where the weather is very temperate, a bit of an escape from the hot temperatures we have experienced in Phoenix recently. I’m here attending the three-day Mid-States Cactus and Succulent Convention organized by the Colorado Cactus and Succulent Society. This has been a very well planned convention with great speakers, a nice selection of vendors selling pots, plants, books and jewelry. There will be an auction tonight with some very unusual donated plants. I have my eye on the rare Agave albopilosa donated by Kelly Griffin.

I particularly enjoyed Panayoti Kelaidis, Director of Outreach at the Denver Botanic Garden, who spoke on, Cactus and Succulents from Botanical Gardens around the World. It was interesting to see the variety of plants and the passion for gardening that people have worldwide. Diana Crummeley has invited Panayoti to give this presentation in 2017, so don’t miss it. Marcia Tatroe gave a presentation on Rock Gardening with Cactus and Succulents, which illustrated the variety of these cold hardy plants that can be grown in the Denver area. Tomorrow we are going to have the opportunity to see several outstanding private gardens in the Denver area.

At our last board meeting we approved an additional $2,500 to support the Wallace Garden move to the Boyce Thompson Arboretum. This is a very important project that will save these plants and significantly enhance the cactus and succulent collection at Boyce-Thompson. Some of the plants will be planted in currently curated areas, but the vast majority will be placed in an entirely new area northwest of the current garden footprint. This will place Boyce Thomson in the top 100 botanic gardens in the world, and it will be in our own backyard!

Also at the last board meeting, Tristan Davis proposed initiating a new research grant program for our society. The board supported his proposal, and he is now putting together the next steps to initiate this program. If you would like to help Tristan or have ideas for him, please contact him at minime8484@hotmail.com.

Our next meeting will be held on Sunday, June 26. I will not be in attendance so Mike Gallagher will be conducting the meeting. I am sorry to miss this meeting, as David Yetman is another very interesting speaker. Enjoy!
I recently had the pleasure of speaking with Katherine “Kat” Hanna from the club. She recalls joining the Society some time ago. She states a friend, Marty, introduced her to the club as she knew Kat enjoyed growing succulents and invited her to come. She recalls one of her first events was a Christmas party where she won an Agave. Kat said that she found it neat that people would give away cuttings, and that the common interests of the group drew her back after a year away to work on her house.

I asked Kat about her first exposure to succulents and cactus. She recalls her first succulent came from a friend’s mother. She was admiring a plant and she was gifted a cutting.

In speaking with Kat, I got the distinct sense that she is woman who has a passion for growing. She said, “My whole back porch is plant city.” I imagined if we were to go to her home we’d be greeted with an array of plants. She confirmed this and noted that her front porch and carport are full of succulents and cactus. She joked about her brother teasing her about her abundance of plants. She’s grown houseplants, vegetable gardens, tomatoes and a multitude of other produce; essentially whenever she has a plot of land she’ll grow something. “I like to see things grow, I like to have my hands in the dirt.”

She told me about a recent project of hers, a covered canopy area in her yard which is surrounded by a walking area with a rock-lined cactus garden. She said she likes to keep her plants in the shade and this area of her garden has plenty of it.

Some of you may know Kat from the refreshments table at the club meetings. Kat reported, “I try to decorate the table with whatever current holiday is going on. Often I’ll look around my house for something that will look good. That’s how decorations end up on the table.” Her volunteerism surely has benefited many club members.

As it turns out, Kat and I have a lot in common. Her grandfather was a sheepherder and she has family in New...
Mexico where I grew up. I shared with her that my interest in growing things stems from my upbringing on the Navajo reservation where I knew the joys of fall produce and a love of the land.

I told her that I’m still learning to balance growing various succulents and their many challenges as I try to adjust to the seasons, indoors, outdoors, potted versus in the ground, etc. Kat listened kindly and said, “It seems like plants all want to live, they try really hard, no matter what we do, they try to live.”

She talked to me about her *Echinopsis*. Later, I quickly looked this up and was pleasantly surprised to find that I also own one (but mine is not blooming like hers has been). As a new member, it’s inspiring to talk about plants and the love of growing with others.

Kat said that being in the club has increased her confidence in her growing. This year she entered some plants in the annual show: she won her second blue ribbon. “I didn’t care what other people thought about my plants, I liked them and I thought that was good enough,” she said. She got a first place ribbon for a collection, “It was classified as a dish garden,” she said. She won second for another one with some *Aloes* and *Gasteria*. She got several second and third place ribbons in this year’s show. She mentioned she watched the judges one year and that really helped her to understand the process. It made her feel better about entering her plants when she realized how positive the experience would be.

Kat encourages others to show their plants and mentioned her grandson, Andrew, who, she says, is doing well with his cactus and succulents. “I’m proud of him, he’s really taking off. He’s in the junior division and got best in show this year, and he’s just turned 18. He started growing two years ago. His first year showing his plants he won a lot of ribbons. I’m the teacher and he does better than I do!” Kat said.

She said he’ll consult with her to troubleshoot his plant problems,. Sometimes he calls her and says, “Grandma, what’s wrong with this plant?” She said she may have to go over to his house and check the plant.

I read a quote recently which was something to the effect that when you like a flower, you pluck it, but when you love a flower you water it daily. In talking with Kat, I understood that saying.
Book Carrier Needed: We currently have seven very kind people who are carrying books to the meeting for the CACSS library each month. We are looking for one more volunteer who would be willing to take a box home and bring back to our meetings each month. You don’t have to attend every meeting, but it is very important to attend most meetings. If you will not be able to make it, we will ask that you notify Nancy Mumpton or Wendy Barrett (co-librarians) before the meeting.

We have purchased a number of excellent new books for our collection (the reason we need another carrier) so stop by our tables at the next meeting and see what we lend. Even if you are thinking of purchasing a book, it is always a good idea to examine it beforehand.

I will be featuring some of our new titles in coming newsletters. This month I want to mention we have received the new issue of the *Cactus and Succulent Journal* (CSSA Journal) for May-June. Huntington Botanical Gardens features the 2016 offerings of the International Succulent Introductions (ISI) in an article by John N. Trager. Twenty plants are featured with color photos.

CACSS WEB SITE

Be sure to visit our Society’s web site centralarizonacactus.org to find information about growing your plants in the summer months. Choose Plant Information on the left side for insightful articles written by our members.

The index for all articles published in the *Central Spine* will be done soon. We found 40 more newsletters and they take time to process. Here are some articles that may help you for the summer:

- *Hot and Humid Weather and the Plants That Love It* found within Leo Martin’s *From Your President* column, 9/2000
- *Growing in the Heat* found within Leo Martin’s *From Your President* column, 6/2002
- *Plants Killed by Summer Heat* by Sue Hakala, 11/2011
- *Watering Cactus and Succulents During the Summer—Proceed with Caution* by Tom Gatz, 5/2013
The popularity of photography is growing thanks to the increased convenience and accessibility of digital cameras, and the increased capabilities of cell phone cameras. This, coupled with the allure of cacti and succulents, creates a drive in many of us to capture those beauties as best we can.

Here are five tips intended for the beginning photographer, as well as a refresher to the more advanced photographer.

1. Check the background. Before you prepare to press the shutter, look around and assess the situation. Look for distractions such as fences, people or buildings. When possible, as in the case with potted plants, move your subject to obtain a more desirable background. If the plant is in the ground, move your body to a better angle to eliminate any background distractions.

2. Look for the details. If you take the time to look for intricate features in cacti and succulents, you'll find amazing characteristics and patterns. Many cactus flowers have a central stigma which protrudes out of the anther and filament. This can often be star shaped. In cases where this is not present, focus on the anther and filament, and allow the eye to be drawn into the flower. In the case of succulents, focus on the patterns that are often found in the leaves. This will have the effect of drawing the eye into the plant.

3. Get on the level. Photographing on the same plane as your subject often helps improve the photo by providing the best angle and background for your subject. When you are on the same level as a cactus or succulent plant you can capture them as they are seen with the natural eye, and not with the distorted view of looking down on or up at the plant. If your subject is located close to the ground, then photograph it while lying on the ground. Shooting at the level of the plant will add dimension and depth to your photograph.

4. Mind the lighting. It has often been said, "Lighting isn't something in photography; it's everything." Take
advantage of good light whenever you can. Early morning and evening hours provide wonderful, natural light. Look for plants that may be out of direct sunlight. If possible, move plants indoors where light can be better controlled. It's fine to use a flash to create light in low-light situations.

5. Look for contrast. When you are trying to make something stand out, you'll make a bold statement when the key elements in your photograph are contrasting. For example, a bright red flower against a black background makes the flower the statement piece in that photo. Contrast gives the subject in your photo a "pop" by separating it from the background.

I hope you found these tips useful. I can't wait to see all of your amazing photos of cacti and succulents.

Echinopsis candicans
UPCOMING EVENTS

- **July 1-3**  CSSA Annual Show and Sale at the Huntington Botanical Gardens, 1151 Oxford Road, San Marino, CA. Plant sale: July 1-3. The show is open July 2-3. (626) 405-3504.

- **July 22-23**  Orange County Cactus and Succulent Society Summer Show and Sale, Thursday, July 21, 6-8 p.m., Friday, July 22, 9 a.m.-7 p.m., Saturday, July 23, 9 a.m.-5 p.m., at Anaheim United Methodist Church, 1000 S. State College Blvd., Anaheim, CA. (949) 212-8417.

- **August 13-14**  31st Annual Intercity Show and Sale at the LA County Arboretum, 301 North Baldwin Avenue, Arcadia, CA, 9 a.m.-5 p.m. daily. Info: Tom Glavich (626) 798-2430 or Artie Chavez (818) 482-8795.

- **September 3**  Huntington Botanical Gardens Succulent Symposium, all day at the Huntington, 1151 Oxford Road, San Marino, CA. (626) 405-3504.

WELCOME NEW MEMBERS

Deb Burns | Sandy and Joe Cao | Gary Collins and Susan Echols | David Crummey and Ariana Huerta-Crummey | Tyler Eglen | Patricia Forbes | Neal Groves | Sally Hansler | Larry Karasz | Linda and Edna LaMay | Penny Lovestedt | Jim Sweeney | Lisa Sweeney | Pamela and Chuck Yount

ON LINE RESOURCES

- Tucson Cactus and Succulent Society: tucsoncactus.org
- Cactus Mall a good place to find links to cactus and succulent information and websites
- *Cactus Explorers* the free online British cactus and succulent publication
- Cactus Seed Gallery provides an interesting and closeup look at several cactus seeds
- Desert Tropicals a web site that gives growing tips for cactus and succulent plants in Phoenix: deserttropicals.com
Sixty thousand years ago, a Neanderthal man died in Iran. When he was buried, his body was surrounded by eight plants, seven of which are known to have medicinal properties. A close relative of one of those plants grows in Arizona.

Five thousand years ago, physicians in China used a tea called Ma Huang to treat illnesses such as coughing, asthma, headaches and hay fever.

Two hundred years ago, settlers from east of the Mississippi ventured into the Great American West where they learned from the native peoples about a tea made to treat colds, asthma and other breathing problems. Many believed that this tea made them feel more awake and alert, much like caffeinated drinks.

What was this magic elixir and where did it come from? The tea is made from a most unlikely plant, a bush that resembles a weather-beaten, long-needled, stunted pine. Modern day botanists call the plant *Ephedra*.

If you have an interest in arid land plants, and you must or you would not be reading this article, you probably are familiar with *Ephedra*. In Arizona and many other parts of the Southwest, it is known as Mormon Tea. What you may not have known is the use of *Ephedra* by humans predates the arrival of Mormons in Utah by tens of thousands of years!

That is not all of the startling news; the earliest ancestors of modern day *Ephedra* plants may have existed more than 250 million years ago! Microfossil evidence suggests that *Ephedra’s* ancestors date back to the Permian Period of Earth’s life, about 298 to 252 million years ago. It was a time of great upheaval, ending with the largest mass extinction in Earth’s history. No one is sure why it happened but the supercontinent known as Pangaea became very hot and dry causing 90% of marine species and 70% of terrestrial species to disappear forever. However,
from that devastation sprang new forms of life: the first true mammals, the first flying vertebrates and the dinosaurs. And, *Ephedra*’s ancestors survived.

Larger fossil evidence of *Ephedra* is found from the Cretaceous Period, 145 to 66 million years ago, when that single land mass began to break up. Current species date back to about 30 million years ago.

**Conifers and Cacti**
As with many genera, there are differing opinions regarding the number of *Ephedra* species. There are 67 accepted species according to the website, The Plant List (www.theplantlist.org).

*Ephedra* grows on all the continents except Australia and Antarctica. In North America, it is usually found at elevations below 6,000 feet. In other parts of the world, some species grow in much higher elevations with one species, *Ephedra gerardiana*, prospering at 15,000 feet. Species that are found in Arizona include *E. viridis*, *E. nevadensis*, *E. aspera*, *E. cutleri*, and *E. torreyana*.

*Ephedra* is a genus of plants that leaves botanists scratching their heads. It is one of three genera known as gnetophytes, the other two are *Gnetum* and *Welwitschia*. Gnetophytes occupy a unique position on the Tree of Life. First of all, they are considered a subsection of the phylum of gymnosperms, a term that means naked seed. Gymnosperms, unlike most plants (the angiosperms), do not reproduce using flowers. Instead, gymnosperms reproduce by producing cones. To put it another way, *Ephedra* plants are more like conifer trees than cactus plants.

There is a problem, however, because gnetophytes show some characteristics of flowering plants. For many years, it was thought that they represented a “missing link” between gymnosperms and angiosperms. Modern scientists using phylogenetic methods and molecular biology have produced other theories, none of which have been accepted by everyone.

*Ephedra* are dioecious meaning that there are separate “male” and “female” plants. Male and female are words that really apply to animals but they are used here to avoid a long botanical explanation that might put you to sleep. Suffice it to say, if you do not have one of each kind, you will get no seeds.

Another unusual characteristic of *Ephedra* plants is that they usually do not produce cones every year. When they do cone, almost all the plants in a population participate. Then, having produced a huge number of seeds, they all wait several years between before coning again.

*Ephedra* seeds are a source of nourishment for birds and rodents and its
green stems provide grazing material for ungulates such as deer, sheep, camels and lama, to name just a few. Because most species spread via branching rhizomes, they help prevent wind and water erosion of the hillsides and sandy areas where they grow.

**Man and Plant**

Mankind has found other uses for *Ephedra*. No matter where it has been found, it has been used by native cultures for a variety of medicinal purposes. As mentioned earlier, it has been used to treat coughs, asthma, and other bronchial problems throughout the ages. It also has been used to treat venereal disease (ineffective), as a stimulant and to fight fever. Today the active ingredients derived from *Ephedra* (the alkaloids ephedrine and pseudoephedrine) are used in cold and allergy medications.

Unfortunately, ephedrine has developed somewhat of a bad reputation in recent years. Before it was banned by the FDA, it was a major component in over-the-counter herbal weight-loss concoctions. The more serious problem is that ephedrine is used in the production of methamphetamines, a highly addictive drug. It should be noted that only some of the Old World *Ephedra* species contain ephedrine and New World species do not. There are other ephedrine-like alkaloids in the New World plants that may explain Mormon Tea’s reputed stimulative effect.

In spite of their “shady” history, native *Ephedras* are an excellent choice to incorporate into a desert landscape. They remain green or blue-green throughout the driest of years and are extremely hardy, experiencing little or no damage at temperatures in low teens Fahrenheit. Their fine textured appearance is a wonderful backdrop for agaves, yuccas and cacti.

*Ephedra* plants and humans have had a relationship for thousands of years and the fascination with these plants continues. One of the world’s foremost collections of *Ephedra* resides in Arizona at the Wallace Gardens in Scottsdale where a great many of the world’s *Ephedra* species are growing.
This is a first in a series of articles that I plan on submitting to the CACSS Central Spine describing my various road trips throughout the Southwest, and highlighting the many plants we find of special interest. I have been a CACSS member for just over three years. I have a dual Bachelor’s of Science degrees in Biology and Civil Engineering from New Mexico State University. I am currently employed by the City of Glendale as a Transportation Engineer. I have numerous hobbies, but I mainly enjoy exploring and photographing the natural world in all its wonder. I look forward to getting to know my audience better, you the CACSS membership.

The Tinaja Altas Mountains is a relatively small range of desert mountains one could easily overlook in their many travels throughout the state of Arizona. This northwest to southeast oriented chain of rugged batholithic granite is situated within the Barry M. Goldwater Air Force Range in Yuma County. The Tinaja Altas are separated from the Gila Mountains on the north end by Cipriano Pass, bounded by the Davis Plain on the west and the Lechuguilla Desert and Cabeza Prieta National Wildlife Refuge on the east side. They partially extend into Sonora, Mexico on the south end. In Spanish, Tinaja Altas means “high tanks”; so named for the many natural pools or waterholes of weathered concave rock that collect rainwater. These were vitally important sources of water for travelers and settlers centuries ago, including the famous Spanish Missionary Jesuit priest Father Eusebio Francisco Kino. As a matter of fact, the Tinaja Altas is one of many nodes along El Camino Del Diablo (The Devil’s Highway) which stretches from around present day Caborca, Sonora to Yuma. From there, various travelers could reach the colonies of California.

The plant life seems to match the harsh and arid terrain of this part of the greater Sonoran Desert. If they are not wind
swept spindly masses or bunches of brown and dry blades or twigs, they are usually uninviting with fierce arrangements of spines or thorns. During dry periods, which seem to last several months here, even the saguaros look thirsty, seeming to be clinging on for dear life. However, in spite of how dry and sparse it can be out here, cactus and succulent aficionados like us can still manage to find a bounty of beautiful and interesting xerophytic plants.

In this article I will highlight a few of the cactus and succulents plants I think you would find interesting. For a complete systematic treatise on the flora of the region, I suggest you consult with a series of open access papers (18 to date) by Richard Felger and Susan Rutman, Ajo Peak to Tinajas Altas: Flora of Southwestern Arizona; available at http://cals.arizona.edu/herbarium/content/flora-sw-arizona.

IMPORTANT NOTE: In order to legally access either the Cabeza Prieta and/or the Tinaja Altas, you will need to have a BMG Range permit, which is easy and free to obtain at the north BLM office in Phoenix (other locations to obtain a permit are also available.) Also, be aware that is area is active with military operations and signs should be obeyed.

I have had the pleasure of visiting this desert treasure five times and each time I have always managed to find something either new or different about some previous aspect. So what follows is an accumulation of those experiences.

Each time, I made my way to westbound I-8 and eventually to Exit 30 (Ave 29E Wellton). Making a quick pit stop at the Chevron and Jack-in-the-Box, I head for about another three miles south to E County 14 St and make a right heading west. Four miles later is the intersection with the infamous El Camino Del Diablo, where there is no question of which direction to take. From this point, the road conditions are typically good if you only stay on El Camino itself. In approximately 13 miles, you come across Cipriano Pass, the dividing line between the Gilas and Tinaja Altas.

Up to this point, if you were carefully looking out the window, you could spot a number of Echinocactus polycephalus (many-headed barrel), Cylindropuntia ramosissima (diamond cholla), gorgeous stands of golden spined Cylindropuntia acanthocarpa (buckhorn cholla) and Echinocereus engelmannii (Engelmann hedgehog), and a pretty unique member of the Apocynaceae, Asclepias albicans (whitestem milkweed). And depending on the time of year, the vast stands of ocotillos (Fouquieria splendens) could be completely leafed out with their showy red spikes of inflorescences. Continuing south along El Camino, all the white rugged peaks to the west belong to the Tinaja Altas.
A small distance south of Cipriano Pass, a dark basaltic flat-topped structure is out of place among the much lighter granitic peaks that surround the area. Raven Butte is a relatively geologic newcomer to the scene having erupted around 16 million years ago. If you decide to take the side road towards Raven Butte and eventually to an area west of it, you will be treated to some very amazing plant life. (Take note however that along with this side road and any other, not only is a high clearance vehicle highly recommended, but AWD or 4x4 capacities are needed to negotiate the terrain.)

The amazing plant life here not only includes your typical Sonoran Desert fare, but a spackling of Bursera microphylla (little-leaf elephant tree), a few Jatropha cuneata (shrubby limberbush), abundant Mammillaria grahamii (Graham fishhook) and M. tetranicrista (corky seed fishhook), and Agave deserti (desert agave.) The varying stages of decomposed granite make up the growth medium upon which the plants in these side canyons grow. The Bursera in particular form rough and knotty displays as they grow wedged in the parent granitic rock. One can only wonder where the tap root terminates into the bedrock; perhaps measured in meters! And the size a Bursera can achieve is truly impressive with their monster caudex to match.

Continuing south along El Camino, you will spot other side roads that lead into a number of side canyons. The farther south you go, the Jatropha become thicker in distribution, growing out of the granite in much the same manner as the Bursera. If you by chance happen to bend a branch or two, they quickly bleed a reddish sap. Nearer the southern end of the range, a few Opuntia basilaris (beavertail prickly pear) grow here and there.

What makes these beavertails different from their counterparts farther north is that they tend to grow significantly smaller pads. The flower color is typical of the species with their pink and magenta hues. It is not apparent if this population is contiguous with the more northern larger padded populations of beavertails. Could it be a different species or subspecies? If you happen to
come across a *Dudleya pulverulenta* ssp. *arizonica* (chalk dudleya) growing out of a vertical rock face, count yourself extremely lucky. And if you happen to catch it while it is flowering with its orange to red floral tubes, you have just won the lottery! These plants are so sparsely distributed that it is no wonder why they are hard to find given the fact that you may need rock climbing gear to access them. I was lucky to find an almost flowering one on a northern facing rock face on the southern part of the range in late March of 2012.

It is approximately six miles south of Raven Butte where El Camino takes a turn due east toward the Cabeza Prieta NWR and eventually into Organ Pipe National Monument. East of the Tinaja Altas is a vast flat expanse of mixed shrubbery. This is where *Grusonia wrightiana* (desert club cholla) makes its home; a very nasty and uninviting member of the cactus family, yet beautiful in its own right.

I hope you have enjoyed reading this and I look forward to sharing many more of my trips. A parting note, the plants that I enjoy growing and seeing in habitat have more meaning for me if they are placed into the context of the many natural, environmental and cultural aspects of an area. In this way I hope that I have inspired you to see a more comprehensive picture of the life of the plants you know and adore.

Additional Information:
The CACSS Facebook (FB) page grew another 11% in the month of May. Our FB page now has over 1,139 members from around the world. Our FB page is a great forum for identification of plants, sharing photos, new ideas, giving and receiving information on cactus, succulents and related flora fauna. The May FB postings and discussions centered on the spring flowering spectacle and garden/plant pests. The posts included various discussions, plant IDs, plant health assistance and wonderful photos of our collections and environment.

In May, we had plant identification requests for 9 succulents and 9 cactus. Seventeen of the 18 plants were identified and 1 succulent was not identified.

The pests that appeared in our gardens and plants were many. Here are two pests and remedies: aphids – suggested remedy for small confined areas, remove by hand and rinse with water; for larger areas use a spray bottle with 50/50 mix of water and rubbing alcohol; *Opuntia* and cochineal scale, vigorous hosing of the pads will do the trick.

Thanks to those FB participants for their plant knowledge used in the identifications. Each month we feature a photo of a cactus and a succulent that a CACSS member shared on the CACSS FB page. This month the cactus photo is from Lauren Marks. It is the beautiful bloom from *Tephrocactus articulatus*. The succulent is *Tromotriche aperta* with an attractive bloom from Tristan Davis.

Questions on either cactus or succulent photo please contact the photographer via Central Arizona Cactus and Succulent Society FB page. We need all CACSS members to become members of the CACSS FB page. There is no charge and it is very easy to use. You can find us on FB @Central Arizona Cactus and Succulent Society.
MOSQUITOES
Remember to get rid of standing water in your yard to eliminate mosquito breeding places: old tires, flower pot saucers, can lids, pots, etc. Mosquitoes only need a bottle cap full of water for three days to breed.

CORRECTION
The correct grower for this Best Junior Novice Cactus *Echinopsis* ssp. plant is Andrew Mahn.

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