



Central Spine

NEWSLETTER OF THE
CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY

FEBRUARY 2018



A succulent Bursera tree creates a beautiful bonsai form on the South Mountain Bursera Trail. Cliff Fielding tells us, in his article in this issue, that as Bursera get older they become much wider than tall.

Be sure to visit CACSS on the web at:
centralarizonacactus.org the Society's website
Facebook Central Arizona Cactus and Succulent Society
CACSS Swap and Shop, a place to connect with members

PHOTOGRAPHING THE PLANTS YOU LOVE Text and Photos by Irwin Lightstone

Whether it's by smartphone, state of the art digital camera, or anything in between, we all take pictures of the plants we love. Without getting bogged down in technical detail, Irwin presents a few simple steps to help you take your photography to the next level.



Join us for an afternoon of cactus and succulent photography. You may never look at your plants the same way again.

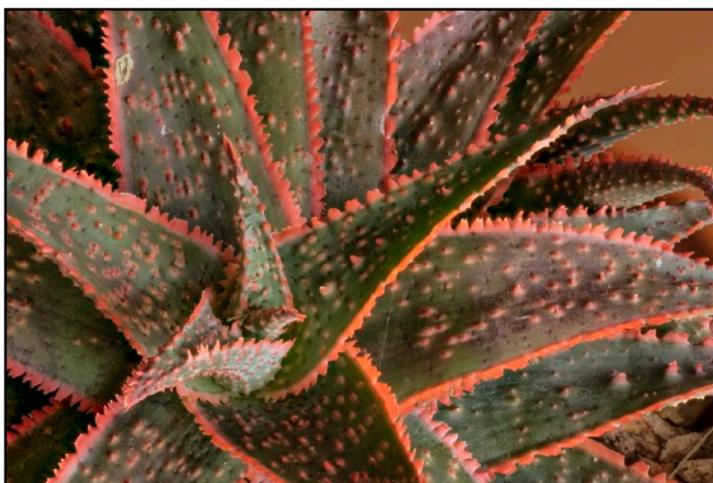
After 29 years practicing trial law, Irwin Lightstone closed his law firm to concentrate on his photography. Irwin is president of the North Texas Cactus and Succulent Society, past president of the Texas Association of Cactus and Succulent Societies, and a vice president of the Fort Worth Cactus and Succulent Society.

He has given photography seminars throughout the country. Additionally, he led programs sponsored by the Dallas Museum of Art, the Dallas Arboretum, the International Photography Hall of Fame, The Huntington, and the Cactus and Succulent Society of America.

Irwin's photography has won numerous awards and is often featured in the Cactus and Succulent *Journal*. He published *Succulent Abstracts* and *Absurdities in Black and White*. Presently, he is working with Steven Hammer on a new mesemb book.

Irwin lives in Dallas with his wife Robin, one cat, two cars, and several thousand plants.

Our program, silent auction, and the rest of the madness starts at 2 p.m., February 25, in Dorrance Hall at the Desert Botanical Garden.



Mammillaria hahniana above left with *Aloe hybrid* 'Christmas Carol.'

My breath is coming in ragged gasps as I gaze upward at the long rocky ascent that awaits me on my first training hike up South Mountain. As I look around, considering a possible retreat, I see an impossibly huge spider crouched on the side of the hill above me. In the weak predawn light, I can see it has countless bone white legs that curve up from its center to touch down on the mountainside three feet away. Each “leg” is covered with long black bristly spines. As oxygen returns to my brain, I realize I am looking at an amazing example of a plant, *Bursera microphylla*, which lives only on South Mountain in the Phoenix area. Over the next two and a half years, I would make multiple weekly visits to the trails and plants of South Mountain. This article will cover the long-term casual observations of an untrained plant lover, some facts from the experts, and a description of a very special place where these unique plants reach gigantic proportions.



Note the peeling bark revealing green photosynthetic tissue.

In conversations with the rare hikers that may stop to talk, the only plant they ask about is the *Bursera*. Why does this tree seem to capture a plant lovers' attention? It could be the fat swollen trunk and branches giving it its common name of elephant tree. This can be a confusing common name because it is applied to an equally interesting pachycaul tree, *Pachycormus discolor*. The *Bursera* really stand out from other plants on South mountain with their tiny dark green leaves and natural bonsai growth. Once you know what to look for, it is easy to pick out the plants from far away. If you accidentally brush up against one, you can smell it before you may see the plant. Like many in the Frankincense family, they have a pleasing camphor smell that is unique

and unmistakable. Mark Dimmitt reports the leaves are actually under pressure and shoot aromatic sap as a defense mechanism against herbivores. The small seeds really stand out as well. When ripe, they are a traffic cone orange that can cover a plant by the thousands.

The growth habit of these plants is both fast and very slow. In late June, the plants will be almost entirely leafless awaiting the arrival of the monsoon rains. They can maintain their leaves year-round if they have adequate moisture. Even when all the plants on the mountain had lost their leaves to drought, there was one in a grouping that was still in full leaf. The progression from flower to fruit is amazingly fast followed by a long



A Bursera heavily laden with unripe fruit.

ripening process. Within two weeks of the first good monsoon rain, they will start to grow. Small insignificant yellow to cream flowers are at the base of the new growth followed by all the new leaves for that season's growth. The plants are dioecious (separate male and female plants), with the flowers on the male plant having 5 petals and the female plants having 3 petals. In a rapid spurt of activity, they will flower, leaf out, and form full-sized purplish fruit in just 2-3 weeks. The fruit, or drupe, can cover the plant by the thousands, or there may be just a few on a plant, or none at all on the male plants. They will slowly mature throughout

the winter. The seed in the fruit will not germinate until the outer purple cover has shrunk away, which occurs in late March, to reveal a single bright orange seed. The plants themselves are very slow growing in habitat. In a summer with regular significant rainfall, they never grew more than the initial burst of growth, usually less than an inch. This is easy to see because the new growth never extends much beyond the fruit that had been set at the start of the growing season.

The plants, which may number in the hundreds, are most often found on the south facing slopes about 100 feet above the desert floor. The altitude where they start growing may be set by their intolerance to frost and freezes. They seem to grow larger and in greater numbers in protected washes where water may be more abundant.

There is a "Valley of the Giants" where they have reached gigantic proportions. Surprisingly, one of the most spectacular plants is easy to walk to, located about 1/3 of a mile from a paved road with only an elevation gain of 60 feet. If there is interest, I will lead a tour to visit this valley on the Sunday at least seven days after this is published. This would not be a CACSS sanctioned event. You must be able to walk about a quarter mile along a sandy wash that gradually goes up hill and climb several steps about one foot high. The tour will be limited to the first 10 responders to cliffielding@msn.com. If there is greater demand, I will schedule other visits.

While these specimens have reached tremendous size, they are not the largest. The "King of the Mountain," shown to me by Tom, is about 12 feet high and 50 feet wide. It seems to be a male as Tom has never seen fruit on it. If you have never seen a *Bursera microphylla*, plan a trip to the south side of South Mountain to see them in habitat. Don't be fooled by the *Bursera* Trail name. There is only one *Bursera* on the entire trail and you must go on an unmarked side trail to see it. The easiest place to see nice ones is off Telegraph Trail at the petroglyphs.

The DBG's spring Plant Sale is on Friday, March 16 through Sunday, March 18. Our staff needs your help in talking to customers about cacti, succulents and plants in general. So many people attend the Plant Sale that the staff are overwhelmed and can't get to everyone who has questions. You are most needed in the mornings at opening, but you are welcome to come at other times of the day. You don't have to be an expert to talk to people. Many simply need help finding plants and negotiating the lot. Your being here will be most appreciated. Just sign in at the volunteer tent at the far end of the lot and be sure to wear your CACSS badge! All volunteers get 10% off plants at check out too! Many thanks.



Club member, Dan Smith, answers questions on how to grow Adeniums at the DBG Plant Sale. Please consider volunteering.

PEG POINTS: The Latest from the Propagation Education Group By Tristan Davis

In March, 2016, the PEG meeting was all about propagation of *Agaves*, and there were over 25 different *Agave* species (pups, rooted plants and seedlings) that were given away from almost 75 different individual plants. We called the successful meeting, “*Agave Extravaganza*”!

On January 6, 2018, PEG met. We dubbed our January 6 meeting, “*Agave Extravaganza – Part 2*”!



Tristan Davis addresses the PEG group.

Although the first *Agave Extravaganza* was a huge success, Part 2 was ENORMOUS! We had about 40 members and visitors show up. There were plenty of *Agaves* to go around. In total, we had 39 species/varieties of *Agave* and one species of closely related *Manfreda* on display and for the taking. To keep things as fair as can be, Nicky Davis managed the process of who got to pick from the stash first. It was very well managed. Each attendee was able to pick no fewer than three times from the *Agave* collection assembled.

In addition to the freebies that were chosen by each participant, we had two very special *Agaves* that were given away by free auction: *Agave chazaroi* and *Agave albopilosa*. Everyone waited with baited breath for the winning person to be announced. Lois Schnerberger walked away with the gorgeous *Agave chazaroi*, and Dana Heiser took home the much sought-after *Agave albopilosa* (see photos).

Suffice it to say, no one went home disappointed. First timers to PEG meetings exclaimed how much fun they had and how they couldn't wait for the next PEG meeting.

Additionally, Nick Diomedede attended and raked in some new memberships and renewals at the same time.

Moral of the story: Don't you dare miss the next PEG meeting. The meetings are informal and FUN for all, and there are always free plants available. The next PEG meeting is March 10, 2018 (Saturday, 9-11 a.m. in the Webster Building at the DBG).

At the request of PEG members, our next PEG meeting will cover the challenges of growing and propagating *Lithops* species known as the living stones. Our resident club expert on all things *Lithops* related, Doug Dawson, will be on hand to discuss any number of topics on the genus and its relatives and can respond to participant questions. There will definitely be *Lithops* plant freebies available. So expect another auction (don't worry auction participation is free). We hope to see you all there!



Winners of the Agave auction. Left is Lois Schneberger with Agave Chazaroi and Dana Heiser with Agave albopilosa.

Co-Librarians: Wendy Barrett, Nancy Mumpton

Purchases for the library:

Books: We purchased a total of 26 titles for the Library. Two were new editions of titles we own, one was an added copy, and the rest were all new titles for us.

Periodicals:

CSSA Journal: The Library renewed the subscription for this publication.

Phoenix Home & Garden: Through donations, we continue to acquire the issues in which our members' gardens are featured.

Supplies purchased:

Two additional book trucks for book carriers.

Clear Seal laminating film to cover certain paperback books to preserve them.

Donations to the collection by members: Demetrius Arquette, Lee Brownson, Tom Gatz, Celeste Gornick, Sue Hakala, Nancy Mumpton, George Kazaka, Lois Ripley, Jennifer Woelke, and Thom Young.

Wendy keeps track of the books checked out and notifies members before the next meeting when due. Nancy does the same for periodicals.

Number of items checked out: We checked out a total of 9 periodicals and 182 books during the year.

Month, number of books, number of members:

Jan. 29 22

Feb. 1 1

Mar. 31 23

April Show & Sale

May 30 19

June 18 8

July Convention

Aug. 26 19

Sept. 29 22

Oct. Auction

Nov. 18 12

Dec. Party

Total: 182 books, 126 members

Special Projects:

This year I began selling some of our duplicate materials and donations of periodicals and books on Amazon and Ebay. Total amount added to the library budget is \$59.03. I organized all remaining duplicate issues of *CSSA Journal* and *Haseltonia* (Yearbook of

the Cactus and Succulent Society of America) to sell at the Cactus and Succulent Society of America Convention held in Phoenix in July.

Request for 2018 budget: \$1,000.

2018 CACSS SALE

Nick Diomede is the chair of vendor sales, part of our annual show and sale. Cricket Peterson and Thom Young are co-chairs of the vendor sales setup area. Nick will secure vendors and obtain vendor contracts. Thom and Cricket will coordinate vendor sales tents, table setup, and so much more. Questions, suggestions, and comments concerning vendor sales should be directed to Nick. Questions, suggestions, and comments concerning vendor sales setup should be directed to Cricket or Thom.

RETURN TROPHIES AT THE FEBRUARY MEETING

If you were presented with a trophy or plaque at the 2017 show, you need to return it. Please bring them to the February meeting and give them to Lois Schneberger.

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CACSS is an affiliate of the Cactus and Succulent Society of America. Be sure to visit their web site and Facebook page.

FAVORITE TOOL

By Thom Young

OK, so it is not a tool per se, but after being stuck for the umpteenth time transplanting barrels, *Echinocereus*, *Mammillaria*, *Thelocactus* and other spiky cactus and succulents, I thought there must be a better way to handle prickly cactus and/or succulents.



I immediately thought of Ferris Bueller: “There's nothing he can't handle.” So, mentally I jumped into the ‘Wayback Machine’ to the year 1986 and through Ferris’ eyes I saw horse scrubbing mitts with long bristles and at long last... SAFETY. And WOW! Do they work! The mitts allow you handle the spikiest plants without getting stuck. Try them, you will like them. Here’s a photo in action with *Echinocereus engelmannii* ssp. *fasciculatus*. What do you think?

Next newsletter issue submission deadline is **March 5**, 2018. 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.

EUPHORBIA FRANCOISII

Complied by Sue Hakala

Grown by Julie Plath

Best *Euphorbia* of the 2017 Show

This is a genus and species name that a horticultural nerd like me loves to say. But, there is a great deal more to this Madagascan member of the Poinsettia family than the name or what is visible at first glance!

PURCHASED: It is likely that my first plant was one I purchased after moving to the Southwest and is probably 17 or so years old. While I love this plant and have shown it many times, its leaf variegation is fairly ordinary.



POT: This original specimen is in a red glazed bonsai rectangle pot. It has been grown as an informal but upright “tree.” I now have a collection of these plants grown in styles which cascade out of an irregular rough, two-toned brown pot, or round decorated

bonsai pots. If the color and style (neutral or colors found in the plant's leaves and growth habit) work, then the choice becomes very personal.

FERTILIZER: It receives a dilute liquid feed of 10-30-20 about once a month during the growing season. Often in spring, and always when repotting, I use a granular 7-7-7.

POTTING MEDIUM: A general potting mix that contains about 50% of a combination of perlite and pumice along with 50% of cinder sand and a little bit of composted organics.

SUN EXPOSURE: It grows with 50% shade cloth overhead during the growing season and then rests in a shadier location in the greenhouse during winter dormancy. Too excessive sun can burn the leaves, but too little and the wonderful leaf colors can "green out."

WATERING: It's kept moderately dry during the winter, but because this is an evergreen, I continue to water thoroughly when very dry. When in full growth in the spring, I gradually increase the watering schedule until watering at least twice a week. I always check before watering when the plant is repotted to account for soil volume.

FROST PROTECTION: This is strictly a warm weather lover. I prefer it stays above 50 F in a heated greenhouse. As they grow slowly and remain small, these make wonderful houseplants for a bright windowsill.

SPECIAL NEEDS: Personal control is an issue for me as this is one that you can collect many different colored leaf forms of: silver, forest green, pink, red, white, veined, splotched, or outlined. Leaf shapes vary: narrow, wide, triangular, tiny, large, curled, weird. The second one I purchased I call "crunchy," which describes the leaf shape and overall habit and stature of this very slow form. I found one named hybrid over the years that is called 'Wet Paint.' I haven't shown it yet, but the leaves shine!

Euphorbia francoisii is very durable and tolerates a lot of abuse as I have bare-rooted it when repotting in spring to grow as a root over rock! I also regularly chop whole branches out of what normally grows very tightly to open up and expose the trunk for viewing. To appreciate these little stunners, once done looking at the tops and all the pretty leaves, you need to get down and look inside. That's the "more to" that I mentioned earlier!

FOUQUIERIA FASCICULATA

Compiled by Sue Hakala

Grown by Steve Plath
Steve and Julie Plath

Judges' Choice for a Succulent for the 2017 Show to

PURCHASED: For me, this plant started as a cutting in 1989 when I lived in San Jose, California, and was one of my first attempts at vegetative propagation of *Fouquierias*. It was given to me by one of the long-time Cactus and Succulent Society of San Jose club members, Millie Zink, who had traveled the world for many years in search of cool succulents. The original plant was a magnificent specimen with a caudex the size of a basketball.



POT: I had re-potted the plant into a traditional low rectangular bonsai pot not long prior to the show.

FERTILIZER: It receives a dilute liquid feed of 10-30-20 about once a month during the growing season.

POTTING MEDIUM: A general potting mix that contains about 50% of a combination of perlite and pumice along with 50% of cinder sand and a little bit of composted organics.

SUN EXPOSURE: It grows with 50% shade cloth overhead during the growing season and then rests in the greenhouse during winter dormancy.

WATERING: Essentially very dry during the winter when it drops all of its leaves receiving only infrequent overhead spraying on the warmest days. When it starts to leaf out in the spring, thorough watering of the soil is done every 7 to 14 days. By summer heat, it is watered frequently, once or twice a week. In the fall, water frequency is tapered off to induce dormancy.

FROST PROTECTION: This plant will tolerate a light frost, but because it takes so long to grow a nice specimen with a plump caudex, I don't risk leaving it outdoors. It's placed in the protection of the greenhouse in winter.

SPECIAL NEEDS: An important factor I have found with *F. fasciculata* (and *F. purpusii*) is that once they leaf out in the spring and start active growth, they don't want to go very dry thereafter. If they do, they'll drop or get crispy leaves and really don't recover and look good the rest of the growing season. Though related to the ocotillo, they don't behave quite the same in re-sprouting leaves between drought periods, at least in my experience growing them in containers.

FACEBOOK UPDATE

By Thom Young

Our Central Arizona Cactus and Succulent Society (CACSS) Facebook (FB) page is an open forum on cacti and succulents (C&S). There are many C&S questions and commentaries along with requests for C&S IDs. Our page has many informative posts associated with all aspects of growing C&Ss. Our FB page offers the opportunity to post photos of your favorite plants in pots, in your yard, and garden.

The CACSS FB page membership rose to a total of 3,389 members in January. Please join the CACSS FB page—it's free.

The following are the different C&S in flower posted on our FB page in January: *Adenium*, *Aloe*, *Astrophytum*, *Cleistocactus*, *Euphorbia*, *Ferocactus*, *Kalanchoe*, *Mammillaria*, *Massonia*, *Matucana*, *Pachypodium*, *Sansevieria*, *Strombocactus*, *Thelocactus*, and *Turbinicarpus*. The photos of our beautiful plants in flower are of great assistance in plant identification. You can find the photos here: <https://www.facebook.com/groups/cacss2/> (copy and paste to your search engine).

Each month we feature a cactus and a succulent (non-cactus) photo from our FB members. January's featured cactus photo is Mike Harris' post of a *Matucana madisoniorum* (on the right). The featured succulent photo is from Anthony Wray's post of a *Titanopsis hugo-schlechteri* (on the left). Thanks to Anthony and Mike for posting their photos on the CACSS FB page.



A gardener's primary objective is making habitats to suit the need of plants.

2018 ANNUAL SHOW AND SALE

By Jo Davis

It is that time of year again for the Central Arizona Cactus and Succulent Society's 2018 Annual Show. With 37 days remaining after our next club meeting (February 25), it is time to pick out those few favorite plants, clean them up, and get them entered. You might just walk away a winner.

All we ask is to ensure that the plants are disease and pest free, clean from debris, and maybe have a nice top dressing. Exhibitor cards need to be filled out completely, top to bottom with your name, exhibition number, and plant name. If you are unsure of the plant name, leave it blank. References and volunteer/plant experts will be available at the time of entry to assist. Plants are to be brought in Wednesday, April 4, from 7 a.m. - 5 p.m.

Our annual event is a large undertaking depending on our many wonderful volunteers to make the show and sale run smoothly. You can sign up online at <https://signup.com/client/invitation2/secure/2167283/false#/invitation> or at our February or March meetings.

Here's hoping some of our new members will get their feet wet. Any questions, please contact me at (cell) 480-440-6590 or (home) 480-839-3792.



Above is Beth Kirkpatrick's succulent arrangement entry, and (right) is Bonnie Scott's Aloe hybrid collection entry from prior shows.



SPECIALISTS TO CONTACT WITH QUESTIONS

Nicky Davis

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Manages the Seed Depot.

Tristan Davis 480-540-9540

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Specializations include plant propagation, and heading PEG (Propagation Education Group).

Doug Dawson 480-893-1207

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Specializations include growing from seed, flora of Namibia, Lithops, other Mesembs, Melocactus, and miniature cacti and succulents of Arizona.

Mike Gallagher 602-942-8580

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Specializations include Aloes, Haworthias, columnar cacti, and Turbinicarpus.

Chris Ginkel 602-908-2664

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Manages the Facebook CACSS Swap and Shop page.

Eric Holst 480-786-2010

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Manages the fertilizer program.

Dean Patrick 480-759-0312

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Specializations in softwood stem-cuttings, plant division and seed starting, rooting cacti, Agave and Aloe.

Steve Plath 623-238-3342

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

Gard Roper 602-996-9745

Manages the pumice pile.

Dan Smith 480-981-9648

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Specializes in Adenium, raising Adeniums from seed, grafting and Adenium culture in general, and co-manages the Facebook page.

Bob Torrest 480-994-3868

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Specializations include desert landscaping, unusual (including rare fruit) trees and shrubs, Aloes, Agaves, and columnar cacti.

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