



*Espostoa mirabilis* by Ron Souder.

**Program: April 28, at 2 p.m., Papago Buttes Church of the Brethren, 2450 N. 64th St., Scottsdale**



Presentation: Of all the succulents available in the marketplace, my favorite types are "fat plants" or caudiciforms. These plants are characterized by a part of the plant that basically is swollen and used for water storage, and from this part, a thin vine or stem grows. A perfect example is *Dioscorea elephantipes*. However, there are many other plants that fall into this classification, such as *Euphorbias*. It is a broad classification that can also include pachycaul trees, such as *Ficus palmeri*. Other plants also have caudexes, such as cycads, however, these plants will be reserved for a discussion another time. In my opinion, "fat plants" are some of the most unusual plants on this planet. These magical plants have found a way to adapt to some of the most

inhospitable environments our world has to offer. As a result of these adaptations, they can be a challenge to grow, trying to duplicate natural growing conditions, while growing in containers. For myself, this is the attraction!

Many species are perfect for first-time growers, such as many forms of *Euphorbias*, *Dioscorea*, *Cyphostemmas*, cucurbits, *Pachypodiums*, and a plethora of other species too many to mention here. My personal favorite is *Dioscorea elephantipes*. This is the plant that started it all for me! I had recently moved to California and was visiting a houseplant store in a strip mall when there it was, a plant that looked like a tortoise with a vine growing out of it. I was hooked!

Growing "fat plants" can be a challenge, as well as fun. Soil is always my first consideration. Finding a soil mix that is best for you in relation to your climate and care can be a lifelong endeavor! Most soil mixes become an "average" mix which can be used on a wide range of plant species. This cuts back on having hundreds of different formulas. Most soil mixes should be a minimum of 60% inorganic material, such as pumice or perlite. My current mix is about 70%-80% inorganics. The remaining percent should be a good organic component, such as a commercial potting mix or compost. I also



*Cyphostemma* species



recommend adding a slow release fertilizer when repotting to give your plant a great start. With this well draining soil, your watering schedule can vary depending on climate, time of year and sun exposure. Most of my plants are watered once a week during active growing seasons and sometimes no water for long periods during dormancy or rainy season. Fertilize during growing times regularly with a complete food containing all essential nutrients and alternating two to three times a year with an organic food, such as fish emulsion.



*Dioscorea elephantipes*

Sun exposure can also be a challenge. Just because a plant comes from a desert doesn't mean that it has to grow in the hot blazing sun. In fact, most of your "fat plants" will appreciate some shade or filtered light during part of the day. Many caudexes will burn with direct sun exposure. Always acclimate new plants to your climate and exposure.

If you really want a challenge, try growing your plants from cuttings and seeds. It can be a lot of work, however, the satisfaction is well worth it. Learning how to grow these plants will take you to exotic countries and environments; you will never know it all, but that's the fun part. Remember to be inquisitive and have patience growing these wonderful "fatties," and your reward will be great!

Bio: Al's interest in the natural world started in his childhood. Growing up in Chicago, he would make regular visits to the Field Museum of Natural History and read books on the natural sciences. His favorite hobbies were growing exotic plants like cacti, collecting fossils, minerals, and insects.

After moving to California at the age of 17, he found his passion in plants. He was amazed at the diversity and beauty of the flora of California. He was employed by South Shores Nursery in San Clemente, California while attending California State Polytechnic University in Pomona. He received his Bachelor of Science in Ornamental Horticulture with emphasis in landscape design and retail nursery management.

After graduation, he was hired by Rodgers Gardens in Corona Del Mar, California. Within a year, he was promoted to nursery manager. Soon Al had the opportunity to start a new business. He was asked to help open a nursery/gift shop in Escondido, California called Canterbury Gardens and Gifts. Soon after he was asked to be a partner in the business. Al recently retired from Canterbury Gardens after 35 years of service. Al is now running his nursery business, Botanic Wonders, full time; his true passion. Botanic Wonders specializes in growing and selling rare and exotic plants, including cacti, cycads and rare succulents. Visit the website at [www.botanicwonders.com](http://www.botanicwonders.com)

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## ANNUAL SHOW UPDATE By Show Chair Dan Bernstein

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We are a month away from the 2024 Annual CACSS Show & Sale!

Public times are Friday and Saturday, May 17 and 18 from 9 a.m. to 5 p.m., and Sunday, May 19 from 9 a.m. to 4 p.m.

Wednesday, May 15 is submission day. This is the day members bring their plants to Dorrance Hall at DBG where the show takes place. Entries will be accepted between 7:30 a.m. and 6 p.m. You can temporarily park your vehicle in the small lot behind Dorrance.

If you cannot deliver your plants during the specified time, please contact me through the club website to make arrangements. We want to ensure that everyone interested in submitting a plant is able to do so.

Plants must be retrieved from Dorrance Hall Sunday at 4 p.m.

This event will be unique in the annals of the CACSS. For those that may not know, Dorrance Hall was unavailable during our usual late March-early April window because of the Botero exhibit. DBG offered this May time slot, and we jumped on it despite knowing that the heat would preclude any outdoor activities.

In 2025, and thereafter, we will resume our Dorrance Hall based annual show, with the conservation education component, and a return to our multi-vendor sale staged in Boppart Courtyard. We already have confirmed the dates for 2025, March 26-30.

### DBG NURSERY PLANTS WILL BE AVAILABLE FOR PURCHASE.

Look for an email blast from Kenny Zelov a few days prior to the Show & Sale describing some of the plants that will be available for purchase. Kenny is a longtime DBG horticulture staff member who now manages the Nursery.

### EDUCATION UPDATE: CONSERVATION

Ottosen Gallery (connected to Dorrance Hall) will be the center for this program. Table displays in Ottosen will include the following:

- DBG staff members Raul Puente, Steve Blackwell and Michiel Pillet will organize a presentation of cacti that were confiscated at the border and are being cared for at DBG, including a large group of *Ariocarpus*.
- DBG Cactus Collection Manager Noemi Hernández will present plants that were impacted by last summer's brutal heat.
- Member Erik Lundberg will illustrate how to grow cacti from seed as a method for combating poaching.
- Mike Gallagher will present challenges faced by an expert grower in the face of climate change. A display of Mike's prize-winning plants that were clobbered by the brutal heat of last summer, but are now coming back to life, will be on display.

Across Boppart Courtyard, the Volunteer Headquarters room in Marley Building will be the site of a series of presentations called 30 Minute Chats.

Chat presenters will include the following people:

- Raul Puente, DBG curator of Living Collections, IUC.
- Steve Blackwell, DBG conservation collection manager.
- Michiel Pillet, DBG Conservation staff, Prickly Prospects Nursery in Tucson, IUCN.
- Scott McMahon, CACSS member and former president, former DBG cactus collection manager.
- Mike Gallagher, long-time CACSS member, one of our most accomplished succulent growers.

## FOOD AND DRINK

There will be lunch available in the Volunteer Headquarters room for volunteers throughout the show days beginning on Wednesday. Details are unavailable at this time. It will not be anything special, but it will get us through the event. If you have any special dietary issues you should BYO.

Drinks will not be provided. There are water filling stations throughout DBG. Please bring your own refillable water bottle.

## PREVIOUS ARTICLES

Steve Plath, expert grower, CACSS member and a former judge at our shows, authored a series of excellent articles that appeared in previous issues of the *Central Spine* about preparing your plants for display. You can find them through these weblinks (click on the underlined part):

- [Showing Cactus and Succulents for the Novice](#), Part 1 of 3 by Steve Plath, 1/15, page 8
- [Showing Cactus and Succulents for the Novice](#), Part 2 of 3 by Steve Plath, 2/15, page 8
- [Showing Cactus and Succulents for the Novice](#), Part 3 of 3 by Steve Plath, 3/15, page 6
- [Showing Cactus and Succulents for the Novice, a Judge's Perspective](#), by Steve Plath, 3/08, page 4

## MEMBER JENNY KUO (COOKIE'S CACTI) ON YOUTUBE AND INSTAGRAM

If you haven't already, do yourself a big favor and check out member Jenny Kuo's terrific YouTube and Instagram channels. I haven't spoken directly with her about this, but there is an excellent chance she will be posting a video of the show soon after it closes on Sunday, May 19. Here are the links to her channels:

<https://youtube.com/@cookiescacti?si=Y1FaZ0JC9nj628Sj>

<https://www.instagram.com/cookiescacti?igsh=MXh1YmM1aHUyN3hrMQ==>

## UNDERREPRESENTED PLANTS

We have identified underrepresented plants in previous shows. A big shoutout to member Lois Schneberger for providing historical data and to member Tristan Davis for consolidating. If you have show-worthy specimens of anything on this list, please consider entering your plants to help us provide a well-rounded show.

Section	Class	Family	Division
I - Cacti	A - Individual Specimens	Cactaceae	3 - Ancistrocactus, Echinomastus, Pediocactus, Sclerocactus
I - Cacti	A - Individual Specimens	Cactaceae	7 - Austrocactus, Blossfeldia, Frailea, Mila, Pterocactus, Yavia
I - Cacti	A - Individual Specimens	Cactaceae	10 - Brasilopuntia, Leuenbergeria, Malhuenia, Pereskia, Peresklopsis, Quiabentia
I - Cacti	A - Individual Specimens	Cactaceae	11 - Buiningia, Coleocephalocereus, Uebelmannia
I - Cacti	A - Individual Specimens	Cactaceae	15 - Cochemiea, Mammillaria, Mammillopsis, Mammilloydea, Ortegocactus - Single-headed (to 6" pot size, 6-10" pot size, 10" + pot size)
I - Cacti	A - Individual Specimens	Cactaceae	24 - Epiphytic cacti (Aporophyllum, Disocactus, Epiphyllum, Hatiora, Lepismium, Rhipsalis, Schlumbergeria, Weberocereus)
II - Succulents Other Than Cacti	A - Individual Specimens	Asclepiadaceae	8 - Brachystelma, Caropegia s.s.
II - Succulents Other Than Cacti	A - Individual Specimens	Asclepiadaceae	9 - Cynanchum, Sarcostemma
II - Succulents Other Than Cacti	A - Individual Specimens	Asclepiadaceae	10 - Dishidia, Hoya
II - Succulents Other Than Cacti	A - Individual Specimens	Asclepiadaceae	11 - Forkea, Raphionacme
II - Succulents Other Than Cacti	A - Individual Specimens	Asteraceae	21 - Othonnia, Senecio
II - Succulents Other Than Cacti	A - Individual Specimens	Alzooaceae	24 - Other Mesembs without prominent roots (Bijlia, Cheiridopsis, Faucaria, Fenestraria, Frithia, Gibbaeum, Pleiospilos, Titanopsis)
II - Succulents Other Than Cacti	A - Individual Specimens	Crassulaceae	27 - Adromischus
II - Succulents Other Than Cacti	A - Individual Specimens	Crassulaceae	31 - Echeveria
II - Succulents Other Than Cacti	A - Individual Specimens	Crassulaceae	32 - Echeveria hybrids
II - Succulents Other Than Cacti	A - Individual Specimens	Crassulaceae	33 - Graptopetalum, Pachyphytum, Tacitus
II - Succulents Other Than Cacti	A - Individual Specimens	Crassulaceae	34 - Sedum, Sempervivum
II - Succulents Other Than Cacti	A - Individual Specimens	Crassulaceae	35 - Other Crassulaceae
II - Succulents Other Than Cacti	A - Individual Specimens	Convolvulaceae	36 - Ipomoea
II - Succulents Other Than Cacti	A - Individual Specimens	Curcubitaceae	37 - Gerrandanthus, Ibervillea, Kedrostis, etc.
II - Succulents Other Than Cacti	A - Individual Specimens	Didereaceae	38 - Alluaudia, Decarya, Didierea, etc.
II - Succulents Other Than Cacti	A - Individual Specimens	Euphorbiaceae - Species Endemic to Madagascar	42 - Thick-stemmed and shrub types: ankarensis, bongolavensis, geroldii, leuconeura, lophogona, pachypodioides, perrieri, stenoclada, etc.
II - Succulents Other Than Cacti	A - Individual Specimens	Euphorbiaceae - Species NOT Endemic to Madagascar	44 - Stem types without prominent thorns and leaves: abdelkuri, obesa, suzannae, etc.
II - Succulents Other Than Cacti	A - Individual Specimens	Euphorbiaceae - Other Genera	46 - Shrub types: cactus, cooperi, misera, obtusifolia, platyclada, poisonii, etc.
II - Succulents Other Than Cacti	A - Individual Specimens	Geraniaceae	50 - Monadenium
II - Succulents Other Than Cacti	A - Individual Specimens	Passifloraceae	52 - Pelargonium, Sarcocaulon
II - Succulents Other Than Cacti	A - Individual Specimens	Passifloraceae	54 - Adenia
II - Succulents Other Than Cacti	A - Individual Specimens	Pedaliaceae	55 - Pterodiscus, Sesamothamnus, Uncarina
II - Succulents Other Than Cacti	A - Individual Specimens	Vitaceae	57 - Cissus, Cyphostemma
II - Succulents Other Than Cacti	A - Individual Specimens	Cycadaceae	60 - Cycas, Dioon, Encephalartos, Lepidozamia, Macrozamia, Zamia, etc.
II - Succulents Other Than Cacti	A - Individual Specimens	Welwitschiaceae	61 - Welwitschia

Fewer than two plants per show. This photo can be expanded. Photo by Tristan Davis.



To paraphrase Dan Smith, "The Show's a-coming. If you got 'em, bring 'em." Photo by Dan Bernstein.



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## JUDGING OUR SHOW By Cliff Fielding

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What makes for a winning plant at our cactus and succulent show? The rules are very clear:

- Condition of plant – 50%
- Difficulty of culture – 25%
- Size and degree of maturity – 15%
- Staging and presentation – 10%

Implementation of these few criteria can be very difficult.

This year we have an excellent panel of judges for our show to solve the complexity of awarding the top plants.



Left Noemi and right, Ken.

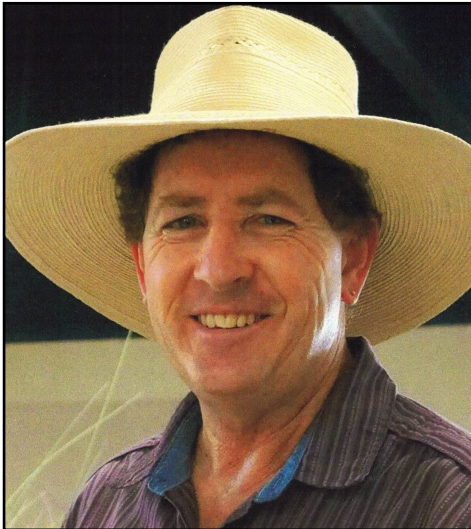
The cactus team will be Noemí Hernández Castro and Ken Luiten. Noemí has worked with cactus and succulents in botanical gardens focusing on their propagation, cultivation and conservation. She is currently curating the cactus collection at Desert Botanical Garden. Observing plants in their natural habitat is one of her passions.

Ken grew up in the desert outside Tucson, Arizona where he developed a deep appreciation for the native flora and fauna at an early age. After purchasing a home in Mesa in 2014, he began to investigate water-wise landscaping which led to DBG and from there to the CACSS for information. By late 2015, Ken started to grow various cactus and succulent species from seed. When he is not wrangling kids or out enjoying the desert, you'll find him in the greenhouse endlessly repotting flats of seedlings.

The succulent team will be Miles Anderson and Michael Chamberland.

Miles Anderson was bitten by the cactus bug at 11 years old. With the goal of having a

cactus and succulent nursery, he went on to receive two degrees from the University of Arizona. Miles' To Go nursery has been providing high quality mail order cacti and succulents for 33 years.



Left Miles and right Michael.

Michael Chamberland has grown cacti and succulents in Arizona for over two decades. His articles on cacti, succulents and other horticulture topics can be found on the web.

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Be sure to visit CACSS on the web at: [centralarizonacactus.org](http://centralarizonacactus.org),  
Facebook, Instagram and YouTube at: [CentralArizonaCactus](#), and  
members only at: [CentralArizonaCactus Swap and Shop](#).

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## EDUCATION COMMITTEE UPDATE By Chair Sue Hakala

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The Committee (aka Ed Group) consisting of Kim Andrews, Rita Gosnell, Nick Diomede, Wayne MacDonald, Barnaby Wasson, Chris Willis, and myself have been meeting and creating fun educational experiences for CACSS members.

Rita organized the first Project Jump Start this year, an open garden experience for new members at Beth Kirkpatrick's house held in March. An email was sent to new members who joined in 2023.

Kim put together an online survey sent to all members to give the group direction as to what plants and topics members want to know about. Using that feedback, the group is working up 10 minute presentations to be given by Wayne, and others, before monthly meetings. I'll continue to find writers/articles on the most requested plants for the newsletter.

The Plant of the Month printed cards will be expanded from *Adenium*, *Copiapoa* and *Euphorbia* to include *Lithops*, *Opuntias* and *Mammillarias*. Nick will be in charge of getting items formatted and printed. Cards are available at meetings.

Chris has selected two handouts that will be placed on the Ask an Expert table at each meeting with seasonally appropriate information.

Chris and Rita will be using the survey feedback to select topics/presenters for Saturday workshops throughout the year.

Wayne is going to arrange for book reviews for CACSS library books that might be of interest to members.

New ideas for the future include guided desert walks/hikes and a dead cactus contest.

Please share any ideas you have on these and other topics with committee members. Your input is important and valuable in giving members what they want and need to grow great plants and have some fun.

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## THE SAD SIDE OF TEQUILA AND MEZCAL PRODUCTION By Tom Gatz

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Tequila popularity and consumption has skyrocketed world-wide in recent decades. According to Forbes magazine, within the next two years, tequila is on pace to overtake vodka in the U.S. as the most popular category of spirit used in mixed drinks. Blue agave is harvested from cultivated plantations. Large areas are now being cleared to make way for yet more blue agave monoculture farming. Monocultures of blue tequila agaves now have the most severely reduced levels of genetic variation ever documented in any commercial crop, making them increasingly vulnerable to catastrophic diseases. Runoff from tequila production is also creating water quality issues in nearby watercourses, and increasing global demand is resulting in the clearing of more natural habitat for larger plantations and the cutting of more firewood for baking agaves. And, sadly, the essential workers who harvest these agaves are rarely if ever adequately compensated for their effort.



Many tequila distilleries now use giant pressure cookers (autoclaves) in place of the traditional horn ovens. This greatly reduces the time to bake the agaves, but can also negatively affect the taste of the tequila.

To be legally labelled as 'tequila,' the product must be made with the sugar from a minimum of 51% Weber's blue agave, a variety of *Agave tequilana*. However, true tequila aficionados will still turn their noses up at anything that is not made from the sugar of 100% agave azul (blue agave). It turns out that the commercial alcohol-producing haciendas in Mexico were having trouble keeping up with the demand for tequila made entirely from the sugar of the blue agave, so they successfully lobbied the Mexican government in the 1970's to allow them to use up to 49% corn and sugar cane syrup in the production of tequila. These cheaper 51% tequila "mixtos" are used in most of the margarita mixes used in bars and restaurants in the U.S.

Tequila is actually a type of mezcal, and it is the only variety of mezcal that the Mexican government requires be made using a specific species of agave. All other mezcals can be made from one or more of over 40 different agave species. Most mezcal production (other than tequila) is also from cultivated agaves (mainly from a high-sugar variety of *Agave angustifolia*). However, mezcal is now one of the new favorite drinks of choice among global hipsters. In recent years, these hardcore mezcal lovers are seeking out specialty mezcals made from certain agave species that only grow in the wild. This is resulting in a serious over-harvesting of these wild agave populations. It is feared that some populations may eventually be eliminated.

This information was “distilled” from the new book *Agave Spirits -The Past, Present and Future of Mezcal*, 2023, by Gary Paul Nabhan and David Suro Pinera who make a plea and a plan to attempt to correct many of the problems identified in this article. Thanks to Sunday DBG docent Adelina Petrov for her help in writing this article. Please drink responsibly.



Blue agave is harvested from cultivated plantations, and large areas are now being cleared to make way for yet more blue agave monoculture farming.



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## CACTUS AND SUCCULENT SOCIETY OF AMERICA ANNUAL COVER PHOTO CONTEST By Sue Hakala

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The CSSA is accepting entries for the Annual Cover Photo Contest. They are seeking images of cacti and succulents with strong visual impact and very sharp focus. Each image must have a vertical (portrait) format so it can be used as a cover image for the *CSSA Journal*, distributed internationally.

Contest entry period closes on May 1, 2024.

Entrants must agree to follow all submission guidelines as listed on the entry form. Only photos submitted through the website portal will be accepted. Visit the website at [cactusandsucculentsociety.org](http://cactusandsucculentsociety.org) and read all the details on the CSSA Cover Photo Contest 2024. The winning image will be featured on the cover and win a \$100 gift certificate to B&H Photo.



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## SMITTEN WITH SANSEVIERIAS Photos and text By Sue Hakala

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*Sansevierias* are those hardy plants you see growing in the dark areas of bars or in the inner courtyard of a mall where the sun never shines. Sometimes their pots become ashtrays, the soil allowed to get hard as a rock. They have underwhelmed most gardeners. Many call them snake plants or mother-in-law tongues; perhaps that's why no one wants them around. *Sansevierias* are, in fact, amazingly tough and beautiful plants.

To correct a misconception about *Sansevieria*, let's start with the pronunciation: Say: san sev ee air ee a. Sansas, as their admirers know them, are a member of the *Agave* family and mostly come from Africa, with a few originating in India and Asia.



*S. stuckyi* (front) in bloom on the west side of my patio in blazing sun. *S. aethiopica* is in the background. They need shade cloth over 108F.

**WHY GROW THEM?** You can touch them, stroke them, admire them up close or from a distance, without having to give them enormous amounts of time and energy. They will look green and lush even in the worst part of the year. Their white bloom consists of small flowers that open in succession on a short spike throughout the spring, summer and fall (depending on the species), sweetly scenting the night. Sansas generally look cheery and healthy all the time. They come in various sizes, shapes, textures, and a variety of colors. Some can grow in almost any location, if protected from frost, even a western exposure here in Phoenix, AZ. Perhaps most importantly, they will make you feel like you are the world's most fabulous gardener as they grow no matter what.

Another reason to grow sansas is the insects they attract: none. Yes, that's right, none. I've been growing over 30 different genera, some for over 40 years. I have never seen an insect even walk across a leaf in my plant house or in the landscape. There are no insect problems; nothing to discuss, nothing to spray and nothing to pick off. Personally, I find this one of their finest qualities—they are always healthy! Then, I live in a dry environment. Scale, thrips and mealy bugs may be present in sansas in more humid areas of the country.

**HOW TO GROW** *Sansevierias*, like all succulents, like a quick draining soil. I use a cactus mix (no bark or sticks), and about ½ pumice, with a little slow release fertilizer thrown in. I find the larger the pot, the larger they will grow—no mystery here. They will grow until they fill the pot. Then, they will split the pot. It doesn't matter what kind of pot you use: metal, clay, plastic, stone. When they want out, the relentless pressure that their tubers put out can crack through anything. It is best to replant them once a year, if

for no other reason than to save your pots. They will love it, and will grow and grow and grow.

*Sansevierias* are succulent plants and must have their soil dry out between waterings or they can rot. Use a water meter to be sure the soil has dried out before you water. If you don't have a water meter, stick your finger deep in the pot. If it feels at all damp, don't water. At my house, the ones in pots get watered once a week in the summer, and maybe once a month in the winter. In colder parts of the country, it would be best to



*S. ballyi* FKH 432 likes bright shade.

keep them dry through the winter with a light mid-winter watering. The only exceptions I've found are the yellow or variegated sansas. They don't like getting cold (generally below 50F), and they don't like direct sun. It seems that the plant tissues are more delicate and can't take the extremes.

All plants are fertilized with rose food three times a year, in late February, early April and early October. I put the fertilizer in acidified water (1 tablespoon white vinegar in a 5 gallon bucket of water) when I fertilize as it helps the plants better absorb the nutrients. Plants in the Sonoran Desert generally have a growth spurt in February-May and October. In other parts of the country, fertilize when the nights warm up and they are actively growing, and don't fertilize when the plants are resting in the cooler months. You can fertilize more. They'll like it. Soon though, you will have more sansas than you know what to do with.

**PROPAGATING** It's so easy to divide sansas. After getting the plant out of the pot (which is no small feat at times), use a large, sharp, sterilized (with alcohol) knife to cut apart the large tubers, leaving some roots. Place the plants in the shade for 7-10 days while the cut dries up and calluses over. This is to seal the wound so that no bad stuff can enter the plant, like bacteria and pathogens. Be sure to sterilize the knife before moving on to a new plant. Or, cut a leaf off a plant, dust it with rooting hormone containing fungicide. After it dries out, just stick it in the soil. Water when the soil dries out, and guess what, you'll have a new plant. Leaf cuttings do not work with variegated plants.

**WHAT KIND SHOULD YOU GROW?** *Sansevierias* have basically two kinds of leaves: soft = tropical home environment and hard = desert-like home environment. Let that be



your guide in purchasing and deciding where to place them. Remember, the right plant in the right place makes everyone happy. Generally, I've found that the soft/tropical ones like a bit more shade so I place them on the north side of my plant house. The hard/desert ones go on the south side of the plant house behind 50% shade cloth. Yes, even in Phoenix. In fact, I grow some on the west side of my patio in the ground where they get the blazing afternoon sun and reflection off of concrete. They love their spot, spread and bloom nicely (see below). Although when over 108, they get 40% shade cloth, but just for that day. They really don't like those dark bars and malls they get placed in or that dark corner in your home.

In sunny locations, try *Sansevieria singularis* which is dark green, hard like a tusk with tiny flowers, or *S. kirkii v. pulchra* which has oval, slightly cupped, dark green leaves. *S. cylindrical*, which can be 30-60 inches tall with a stiff erect fan shape, also likes the sun, but not full sun.

For hanging baskets, *S. parva* and *S. socotra* are handsome. Nice variegated one are *S. hahnii*, with buttery yellow leaves and green stripes (watch the watering), speckled *S. guineensis*, or snakeskin patterned *S. trifasciata*. Silver-colored ones include "Moonshine," a beauty with broad, but short leaves, and *S. trifasciata laurentii*.

If I had to choose one as my all time favorite, I'd probably choose "Lillian True." The leaves are positively sensuous. They look like creamy mustard with beautiful lime to dark green stripes, tall and graceful and always perky, but a bit bashful about the sun. Many people, who aren't yet stricken with a love of *Sansevierias*, covet this plant when they see it.

**WHERE TO BUY SANSEVIERIAS** Every nursery, grocery and discount store always has a few. Sometimes, quite unusual and exotic ones can be found with the more typical. I always check these rather mundane locations, as I never know what I might find. Even at major plant sales, there are few sansas available. You may even find a new introduction, not even named yet, as I did at a Huntington Botanical Garden plant sale. Arizona Cactus Sales in Chandler and B & B Cactus Farm in Tucson have been good sources. Arid Lands Greenhouses in Tucson has more sansas in one place than I have ever seen. Individual growers are always looking for good homes for pups and offshoots, just ask.

Check out the International *Sansevieria* Society at [sansevieria-international.org](http://sansevieria-international.org). They publish a journal with big pictures of the plants and have a good Facebook page. *The Splendid Sansevieria*, by Juan Chahinan, has lots of descriptions, pictures and helpful information. Talk to CACSS librarians for suggestions from the club library. They have ordered *Sansevieria Plant: Plant Guide* (it is a beginner's guide) by Andrey Lalko. Members can be looking for it soon in the collection.

Read other articles that have been in the *Central Spine* written by club members. Go to the [centralarizonacactus.org](http://centralarizonacactus.org) website, hover over the Newsletter tab at the top and click

on Newsletter Index. Click on Plant Index and scroll down to the *Sansevieria* heading. Then click on the articles you want to read.

There's not much written about *Sansevierias*. Most books begrudgingly give a paragraph to the entire genus. Don't let that detract you. These beautiful plants don't need an authority to tell you how to grow them. Just get one, they'll do the rest themselves, all the while looking alluring and captivating. Before you know it, you too will be smitten with *Sansevierias*.



*S. stuckyi* with capitate inflorescence that blooms very low to the ground.

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## PRESIDENT'S MESSAGE By Don Begley

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### NEW TREASURER AND ASSISTANT TREASURER

The CACSS Board recently appointed Glen Legus as CACSS treasurer and Hank Radda as assistant treasurer effective immediately. Glen and Hank have broad business leadership experience, Glen with a major federal agency, and Hank with major Arizona universities. Both have treasury experience with non-profits and experience implementing solid financial controls (checks and balances) in growing organizations. This experience will be key as we begin our long-term financial and strategic planning.

### ANNUAL SHOW AND MINI SALE

Our Annual Show and Mini Sale in May is rapidly approaching. Have you made the final decision as to the plants you will enter? Can't decide? Bring several, up to 25. Need tips on how to display your plants? Mike Gallagher will provide his famous "tips for plant exhibitors" at the April meeting at 1 p.m. Mike has over 200 blue ribbons so he must know something about showing plants. You can register your plants at the April 28 monthly meeting at the registration table in the church lobby, or on May 15 at the show.

We still need more volunteers to support the show. Go to the [sign-up sheet](#) to see the open volunteer slots. Already on board? Get your friends to join you. How fun is that!

### DBG SPRING PLANT SALE

The recent DBG Spring Sale set new records with several of our members assisting shoppers with their plant purchases, while other members taught four classes for people new to growing plants in Phoenix.

### PROJECT JUMP START

Our first Project Jump Start, a specially designed open garden for new members, was held in March at Beth Kirkpatrick's garden. What a great program to welcome our new members and the first since the pandemic. Thanks to Beth for opening her garden and to Rita Gosnell for organizing the event on behalf of the Education Committee.

### CONSERVATION

Raul Puente Martinez and Lane Butler of Desert Botanical Garden spoke at our March meeting presenting their work to implement a newly developed technique to restore burnt, scarred areas by replanting harvested root stems. An exciting project made even more so knowing that our CACSS donation had helped fund the project.

### NEXT MEETING

Plan to attend the April 28 club meeting at Papago Buttes Church of the Brethren from 2-4 p.m. Al Klein, owner of Botanic Wonders in Vista, California, is our speaker discussing "Growing Fat Plants," or caudiciform. He will bring many great plants to sell. Doors open at 1 p.m., so come early and meet and mingle with your fellow members. Remember, Mike Gallagher is presenting his famous "tips for plant exhibitors" at 1 p.m. at the meeting. Look forward to seeing you all.



## PARTING COMMENT

Volunteering is another method of learning. The club not only offers learning about growing plants but also practicing skills by working with a team and its administration. If you would like to volunteer, [please contact me](#). Include your name, email address and area of interest.

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## WHAT DO YOU WANT TO LEARN? By Kim Andrews

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The Education Committee is seeking your input on topics of interest regarding cacti and succulents to guide their efforts throughout the year. Input was collected on paper at the January monthly meeting and an electronic survey was announced through email. If you have not yet provided your input, you may do so on this [SURVEY](#). Just click on the underlined part to open the survey.

We want to share with you the results received thus far. The items within each question provided below are in rank order, with the highest votes listed first.

### WHAT PLANTS DO YOU WANT TO KNOW MORE ABOUT?

The plants mentioned most frequently are *Lithops*, *Aloe* trees, *Adeniums*, *Euphorbias*, and *Sansevierias* out of 60 different plant suggestions.

### WHAT TOPICS WOULD YOU LIKE TO SEE DEMONSTRATED IN A WORKSHOP?

The greatest number of topics are within the groupings of landscaping, propagation including hybridizing, plant care, grafting, and dealing with the summer heat.

### WHAT QUESTIONS WOULD YOU LIKE ANSWERED?

Plant care had the most questions, followed by the survival of our plants in the summer heat. The opposite temperature extreme of frost had questions also.

The Education Committee appreciates your input so they can plan what to work on next. Reviving the plant postcards has already started. Look for the next three to be about *Lithops* by Doug Dawson, *Mammillarias* by Sue Hakala and *Opuntias* by Chris Ginkel.

If you have a skill or a topic that you would like to share with the club members, contact Sue Hakala. Fresh faces and new ideas are always welcome.

# **Annual Open Garden and Studio**



**May 11, 2024  
Saturday from 8:30–11:30 a.m.**

**Over one acre of desert trees, shrubs, cacti, succulents,  
and sculpture**

**Rick and Barbara Rosenberg  
5916 E. Caballo Drive  
Paradise Valley, Az.  
480 483 5630  
DrRikRok@cox.net**

**South on 56th Street off of Doubletree Ranch Road  
past Cherokee Elementary School and a left on  
Caballo Drive**

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HELP FOR CAM PLANTS IN THE PHOENIX SUMMER Photos and text by  
Nancy Mumpton

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CAM plants belonging to Cliff Fielding.

Here in the Valley of the Sun, certain succulents like *Crassula*, *Echeveria*, *Sedum*, *Sempervivum*, *Aeonium*, and more are affected by Crassulacean acid metabolism (CAM for short). The sad fact is that garden centers, big box stores and Desert Botanical Garden all sell these plants without warning of their summer needs in Phoenix.

Starting in early summer until fall, many gardeners on various Facebook sites (CentralArizonaCactus, Arizona Cactus and Succulent, Low Desert Gardener) start to post wondering what is happening to their plants, often blaming themselves.

It is NOT the fault of the gardener. Plants that have this type of metabolism (CAM) close their pores on hot summer days and open them at night when it is cooler (in other words, they breathe at night).

In Phoenix, especially during monsoon season, the nights do NOT cool down, but stay as high as 85 to 90 plus degrees overnight. These CAM plants can NOT breathe. As the heat starts to increase, the plants suffer greatly. They drop their leaves; they show evidence of rot; they sunburn.

CAM plants are best moved indoors into the air-conditioning in a very bright location for the summer. Keep checking the night temps. They can come back outside when the nights start to cool down, usually in late September.

If they must stay outside during the summer, put them in the full shade with very little water and let them rest. Once the soil becomes dry, apply some water now and then to keep the roots healthy. The plants will not look good and will lose most leaves, except at the very tops of the stems.

In the fall when nights are cool enough, the plants will perk up again. They can come outside if they are in the house or be moved to a brighter location if under shrub protection. Slowly move them to a bright location outside so they do not sunburn due to being in lower light all summer. You can start to water again. They will then leaf out.

If you don't like the lower stems without leaves, you can cut them back. The plants will grow fuller again all winter if cut back. Also, you can plant the cut stems and root them for more plants. It's a win/win!





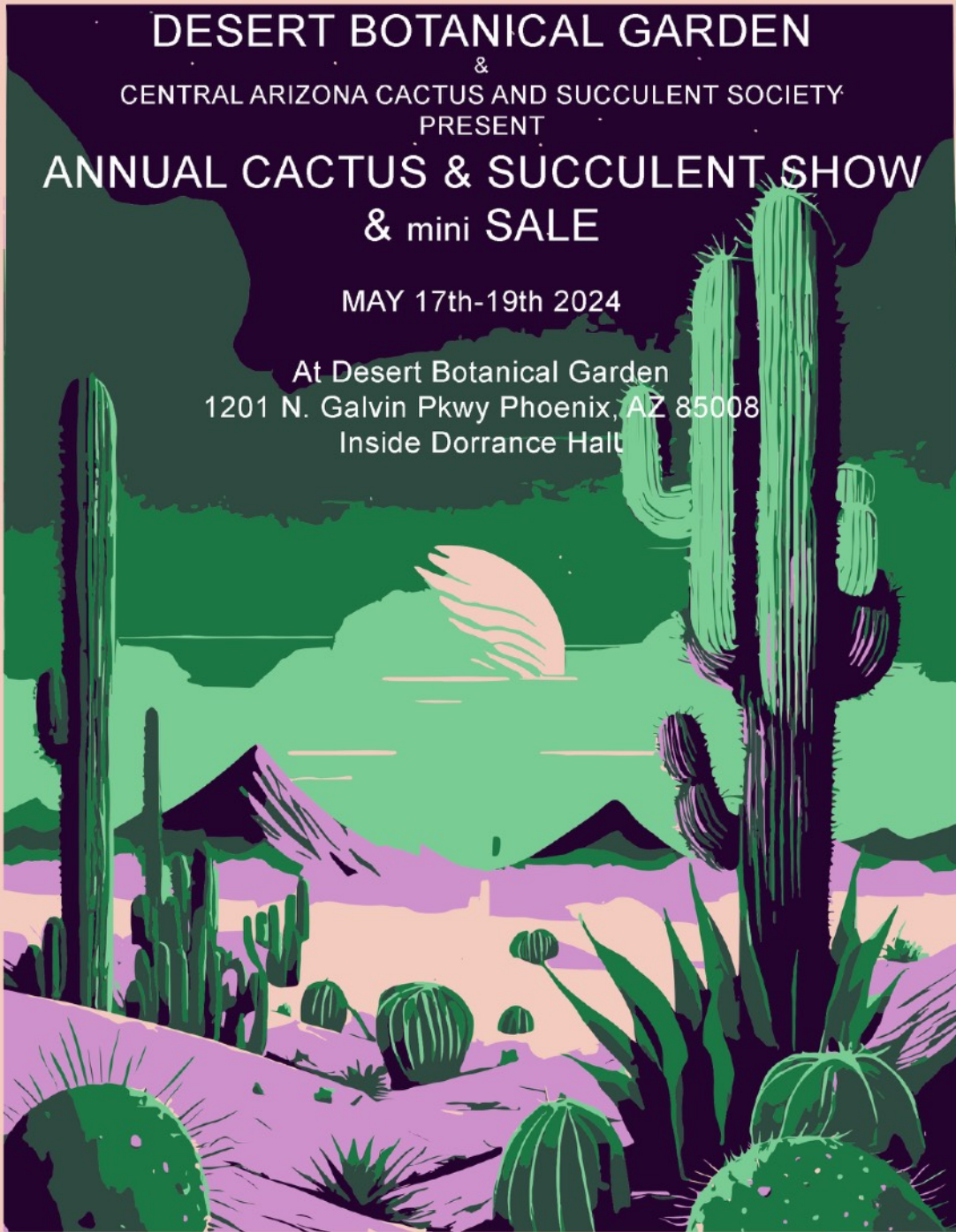
These CAM plants go to higher elevations in summer.

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PURPOSE OF THE CACSS IS TO:

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- study, propagate and cultivate cactus and succulents
- educate members and the public
- aid conservation programs
- support the Desert Botanical Garden and other institutions



# DESERT BOTANICAL GARDEN

&  
CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY  
PRESENT

## ANNUAL CACTUS & SUCCULENT SHOW & mini SALE

MAY 17th-19th 2024

At Desert Botanical Garden  
1201 N. Galvin Pkwy Phoenix, AZ 85008  
Inside Dorrance Hall



FOR MORE INFORMATION VISIT  
[WWW.CENTRALARIZONACACTUS.ORG](http://WWW.CENTRALARIZONACACTUS.ORG)  
[WWW.DBG.ORG](http://WWW.DBG.ORG)





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## CENTRALARIZONACACTUS FACEBOOK PAGE By Michelle Schrade

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If I had to choose a title for this month's postings on the CACCS FB page it would be, Flowers, Flowers, Flowers, Everywhere! Spring is here and after a long winter break, it is wonderful to share photos of our plants coming alive.

This month was filled with questions from many new members to our FB page. Here is a sampler of some of the questions our more knowledgeable members answered. What's wrong with my plant? How do I repot this plant? Can this plant be saved? How do I get this cactus out of its pot? Can you ID this plant for me? And, how can I clean up this clump of cactus?

March 17 Tim Herr asked the group for guidance. He will be moving to Arizona from Georgia and will be bringing his collection of over 1,000 cacti and succulents. His collection includes several genre of each, and his concern was what he needed to do to keep his collection viable. Several members offered detailed advice as to what measures were needed to keep his valuable plants alive.

Each month a photo of a cactus and succulent posted by CentralAZCactus members is selected for recognition.



Left, Cactus of the Month: *Mammillaria mystax* posted March 31 by Ronald Souder. Right, Succulent of the Month: *Euphorbia rigida* posted March 19 by Terry Daniels.



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## PROJECT JUMP START RESUMES AFTER FOUR YEAR HIATUS

By Coordinator Rita Gosnell

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It was a perfect morning as our host Beth Kirkpatrick welcomed new members to the first Project Jump Start program in four years thanks to COVID. The opportunity to meet other new members and learn about growing cactus and succulents from a long time member was met with enthusiasm by all who attended.

An informational packet was included in the visit explaining how to use the CACSS website and Facebook page, listing program/committee chairs and specialists to contact with questions, as well as plant growing articles by Tom Gatz.

A huge thank you to Beth for hosting the event in her beautiful garden!



*Agave macroacantha* by Michelle Schrade.

**Any comments, suggestions, thank yous, etc., please submit  
to *Central Spine* Editor Sue Hakala.**