



After a pandemic hiatus, the CSSA Convention is on track to be held in Colorado Springs, CO July 12–16, 2023. [Four tours are planned and described inside, page 5.](#)

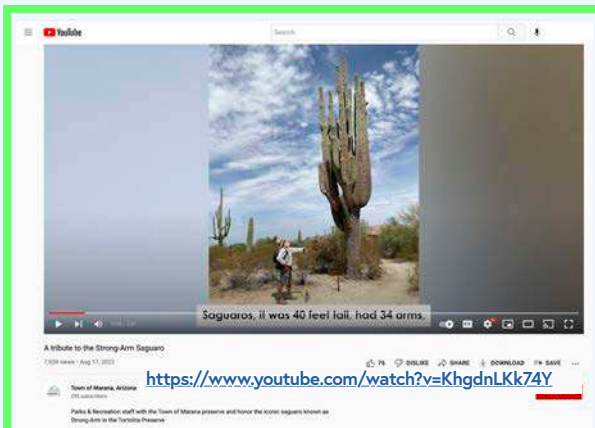
Above: View from inside the brand new Summit House on top of Pikes Peak, 14115'.

Stay up to date with the details:
<https://cssaconvention.com/cssa2023/index.html>

Surprising(ly Stinky) Stapeliads (page 17) takes a look at the care and varieties of these plants and their beautiful, and smelly flowers. Pictured: *Orbea paradoxa*



Predawn on the rooftop Cactus and Succulent garden at the Changi Airport, Singapore. Karen Hart shares a few delightful moments she spent there before she boarded her plane. Page 4



A Saguaro Giant Falls

An iconic saguaro fell in the Tortolita Preserve, Manana, AZ. At least 34 arms had been counted before it fell. Named Strong-Arm Cactus, this saguaro was estimated to be at least 150 years old. Check out this story, "Strong-Arm Saguaro cactus dies in Arizona desert", from WBUR Boston <https://www.wbur.org/hereandnow/2022/08/25/strong-arm-saguaro-cactus-dies>. Bonus- there's a link to an engaging video from the Manana, AZ Parks and Recreation Department at the end of the article.

News from the Fort Worth Cactus and Succulent Society

For many years, the Fort Worth Cactus and Succulent Society has maintained a greenhouse and outdoor garden at the Fort Worth Botanic Garden. The small greenhouse was gifted to the Botanic Garden several years ago by Dr. Ed Maddox, a local veterinarian, in memory of his son. Dr. Maddox, now deceased, was an active member of the club as well as a volunteer at the Botanic Garden, and he contributed many of the specimen plants that are now kept in the greenhouse. Club members, with assistance from the Botanic Garden crew, take care of watering and repotting the greenhouse plants and planting and weeding the outdoor garden. Each spring, the collection of potted *Neobuxbaumia polylopha* and other cacti that are cold sensitive are moved from the greenhouse and planted in the outdoor garden in their pots. Then, in the fall they are moved back into the greenhouse. Plans are in the works to eventually move the cactus garden to a new location in the Garden in an area that is now being developed. We are hoping to also have a larger greenhouse that will be accessible to the public.

Jacky Sylvie
Reprinted from *The Cowtown Connection*, September 2022,
newsletter of the Fort Worth C&SS



On a FWC&SS workday at the Fort Worth Botanical Garden.



Kelly Griffin

The concept of keeping plants in their natural habitat is one that most people readily concur with. But with the advent of the

internet marketplace (Ebay, Etsy and the like) has come the unsavory and rather barbaric industry of selling plants stolen from the wild for quick profit and usually for ungodly prices.

To help keep plants in their natural habitat, I would ask that you consider the following;

Avoid buying plants online from sellers when things seem questionable. For example, avoid buying from dealers that are only selling bare root plants (often with chopped off roots).

Avoid buying plants being sold from dealers that offer just one species for sale or those that have no confirmable address. If it seems sketchy, it probably is.

Avoid purchasing plants at extremely high prices. Often they are so expensive because of the risk that was taken to illegally dig and transport them. A nursery that grows the same plants can offer even a mature plant at a reasonable price and still make a profit. If a plant has a price tag of 300 dollars, has no roots and looks like someone just dug it out of the ground, run!

Avoid plants that were clearly not grown in cultivation. Cultivation provides for more pristine and even growth. If it looks very old and has no roots, it is probably a wild plant.

Plants that have signs of nursery soil mix were more than likely grown at a nursery while plants with "dirt" from the ground with no signs of pumice or perlite are more likely than not contraband. Remember, they did not grow the plant so why would they invest in pots and soil mix?

The current plants that have been targeted are Dudleyas, Agaves and many cacti species.

Dudleyas that are torn from cliffs often have a real difficult time reestablishing themselves, particularly in environments that do not have a cool wet growing season. Many of these are accustomed to coastal environments that get winter rainfall. So,

Kelly Griffin ▸ All that is Kelly Griffin
October 20 at 4:34 PM · 🌐

This is a seed grown (in cultivation) *Agave utahensis eborespina*. Please please don't buy the field collected ones offered on the internet. There are people that are going to the wild and taking them and then trying to sell them to you. They are not collecting these with permits. They are not collecting them to "save them" as rescue plants. They are taking them from nature and trying to make a quick buck. Don't support this behavior.

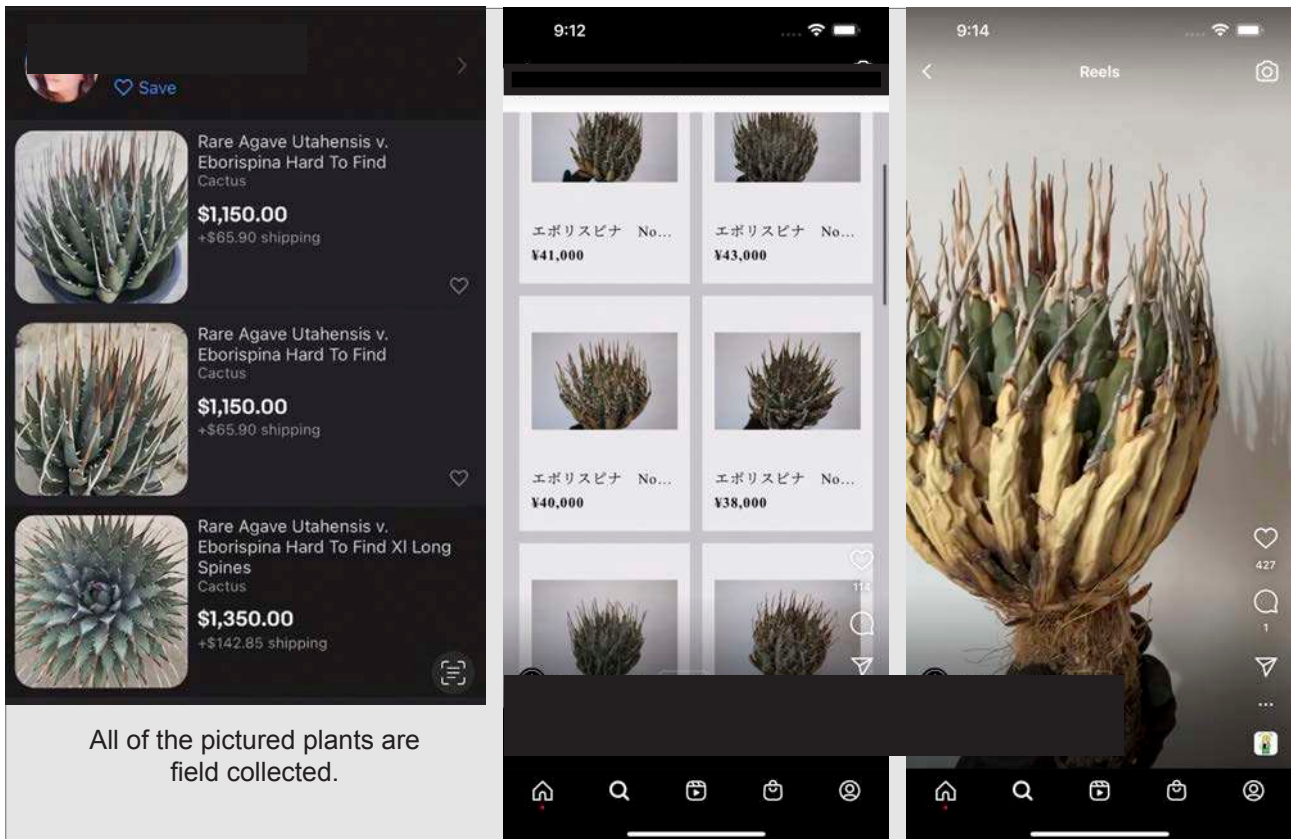
If you have a doubt, don't buy. It is clear which ones they are. Not often potted, roots all cut off. Usually ridiculous prices. The kind you would expect from an illegal, illicit and corrupt activity like this.



Like Comment

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not only are they expensive, but they will likely die. Companies like Tree of Life and Altman Specialty Plants grow thousands of plants from cultivated seed which is a much more sensible option for you and the environment.



The field collected Agaves we see most are from the *Agave utahensis* complex. As stated, they are usually sold bare root with the roots sheared off and almost always have a skirt of dead leaves. Lately, we are seeing *Agave titanota* (including the green oteroi form) coming as dug plants from the wild in Mexico.

There are nurseries in the United States and Mexico that grow these plants from cultivated seed, seek them out when buying these plants. They are much easier to establish than wild collected ones.

The Cacti that are being sold are often very old Copiapoas originally from Chile. These can command prices of hundreds to thousands of dollars. Cacti are CITES one plants and removing them from the wild is an illegal activity. There are some rescue Cacti that have come from AZ that were saved before road building or other land use issues but these are required to have a permit tag with the plant that is not a transferable and should be with each and every rescue plant.

Excuses I have heard from “Sellers”

“These were collected from private land” (do you have proof of that?)

“These were rescued plants” (where is the permit that should be with the plant?)

“I bought an old collection and I am selling it off” (this does happen occasionally but collections seldom consist of an endless supply of hundreds of the same exact species)

Old field collected plants look like they have been around a long time because they have. The lower spines on cacti are often worn away and often the base is woody or corky on cacti. That is how it is supposed to look in the wild and these should stay in the wild for the future generations. Please help make this happen.

We all need to be the stewards of the flora and fauna of our world and in keeping with that, conservation has many tenants well past just discussion. We all need to contribute to actionable behaviors that help to preserve the plants in the wild. We should encourage people to grow them in a sustainable manner like from seed or tissue culture to supply the market demand. Most of all, we need to put a halt to the bad actors that are digging plants from our coasts, mountains and deserts.

Ask questions of the seller, speak out against the illicit collection of these plants and contribute to groups that are working to curtail this unsavory activity. Most of all don’t support this kind of dirty business by purchasing these plants.....and BTW tell your friends not to too!



Proposed Tours for the CSSA 2023 Convention

The Gardens at Spring Creek
Cold Hardy Cactus Garden,
just a small portion of the
largest in the US.

Photos: Rod Haenni

Tour One

This tour will visit five private gardens, Leo Chance’s garden in Colorado Springs and four gardens in Pueblo. Leo’s garden is famous from his writings and presentations and includes many rare hardy species of both cacti and other succulents, especially South African succulents.

Don and Donnie Barnett’s garden encompasses their entire front yard and includes just about all of the cacti that can be grown outdoors all year long in Colorado, including *Sclerocacti*, *Pediocacti* and many yuccas and agaves. Don and Donnie will also be selling plants at the CSSA sale under their Ethical Desert commercial name.

Jeff Ottersberg has a small but old (40+ years) hardy garden that includes specimen plants of *Coryphantha sulcata*, several large specimens of hardy *Echinocereus* and many other hardy cac-

tus species. Jeff is a wholesale only grower who sells to many nurseries through Colorado’s Front Range under the name Wild Things.

Jeff Thompson has a large garden of hardy cacti specimens as well as specimen yucca and agave species. He will not be a vendor at the CSSA sale but may have some seed-grown *Echinocereus* species with provenance for sale to those interested. Jeff is widely traveled throughout Texas and the desert southwest and has collected seed on private ranches not grown by others.

Finally, Dr. Conrad’s extensive gardens of mature yuccas and specimen cacti will be on the tour. This garden was designed and built by Leo Chance many years ago and is of botanic gardens quality.

Tour Two

This trip will visit the Cañon City area, approximately 40 miles south and west of Colorado Springs, to see native cacti in habitat. Colorado has over 40 species and varieties of native cacti and, of course, all of them can withstand temperatures well below zero Fahrenheit.



Echinocereus triglochidiatus Engelm in Wislizenus, 1848 (top)- claret-cup cactus in Colorado, USA. https://upload.wikimedia.org/wikipedia/commons/d/d8/Echinocereus_triglochidiatus_%28claret-cup-cactus%29_1_%282823449975963%29.jpg

Boarding the Cog Railway (bottom) to go from the top of Pikes Peak down to Manitou Springs

Many of the more interesting species are native to the Cañon City area, including: *Echinocereus fendleri*, *Echinocereus triglochidiatus*, *reichenbachii* and *coccineus*; *Coryphantha vivipara* and *missouriensis*; *Cylindropuntia imbricata*, both purple and white flowering; and many *Opuntia* species and hybrids.

Tour Three

Three public gardens comprise this tour: The Gardens on Spring Creek in Fort Collins, Denver Botanic Gardens in Denver, and Kendrick Lake in Lakewood, a Denver suburb. Spring Creek boasts the largest collection of cold-hardy cacti in the United States as part of a three-quarter acre xeric Undaunted Garden designed and planted by Lauren Springer, a well-known and talented author on xeric plants and famous garden designer and speaker. The garden is a new one, built in 2019, but includes many specimen plants and rock work.

Denver Botanic Gardens incorporates many hardy cacti and hardy succulents in several different gardens amongst its 23 acres. More than seven distinct gardens feature cacti and succulents with many specimen plants and planted in combination with non-succulents to promote the xeriscaping concepts espoused by DBG for several decades. A cactus house with tender cacti and succulents is also on the grounds and on the tour.

Kendrick Lake is an early example of xeriscaping featuring cacti and succulents in a natural setting in Lakewood, Colorado. Most of the plants have been in the raised beds for over thirty years and provide new incentives for gardeners in cold climates to expand their plant palettes while reducing needed water.

Tour Four

A trip to the top of Pikes Peak for spouses and partners of convention attendees who are not succulent aficionados. The Pikes Peak Cog Railway has been operating since 1890 but was shut down from 2017–2021 for a complete refurbishment, including all new track and cable and new rail cars. In addition, the Pikes Peak Summit House has been torn down and completely rebuilt and enlarged during the past few years. The several mile route goes from 6400' to 14,111 feet and leaves from the Manitou Springs station. The view from the top is spectacular in all directions and inspired the writing of "America the Beautiful". Lunch and souvenirs are available at the Summit House.



J & J

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Joyce & Jim Hochtritt

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**Changi Airport:
Postcard from
Karen Hart**

Reprinted from The Point, August 2022
Cascade Cactus and Succulent Society of WA

During my recent travels to Australia, I flew from Changi airport in Singapore, which is consistently considered the best airport in the world. It contains various gardens and the world’s tallest indoor waterfall called the “Rain Vortex.” I was fortunate to walk through the rooftop outdoor Cactus Garden before my pre-dawn flight.

Photos: Karen Hart.



Partnered with the spectacular Gardens by the Bay in Singapore, the Jewel Changi Airport is its own destination. Link to their website to see more.

<https://www.changiairport.com/en/discover/attractions.html#/filter?tab=all>

Jewel Changi Airport – Rain Vortex and Forest Valley →

Canopy Park – Mirror Maze (right center)

Terminal 1 – Transit – Lily Pad Outdoor Deck (right bottom)

Photos courtesy of <https://www.changiairport.com/>



Kapi'olani Community College Cactus & Succulent Garden

Brian Kemble
Reprinted from San Francisco Succulent
Cactus Society Newsletter, October 2014

When we think of a public succulent garden, we are apt to picture a large botanical garden with a prominent sign calling attention to itself and a visitors' center, but the wonderful garden at Kapi'olani Community College (KCC) in Honolulu is much more modest than this, occupying a slope alongside a campus parking lot just inland from Diamond Head, at 4303 Diamond Head Rd.

The garden was started by Moriso Teraoka in 1988, after he noticed that the area adjacent to a school parking lot was weedy and unkempt. As an avid grower of succulent plants, he thought the site would be perfect as a place where he could plant out his potted specimens and let them grow to maturity. After securing permission from the school, he set to work with other volunteers on clearing the area,



Fig. 1 KCC Garden view

Fig. 2 Garden view with several specimens of *Neobuxbaumia polylopha*. Photo by Karl Seff.

Fig. 3 Garden view with *Alluaudia procera*, *Adenia globosa*, and *Echinocactus grusonii*. Photo by Karl Seff.



bringing in rocks and creating raised beds, and planting a wide assortment of cacti and succulents. Members of the Cactus and Succulent Society of Hawaii helped with the effort, contributing plants and gardening time, and nearby residents pitched in too, as did students at the college. The area under cultivation has expanded over the years, and the plants have grown by leaps and bounds, so that today there are many impressive specimen plants in a

Fig. 4 *Adenia globosa*.
 Photo by Karl Seff.
 Fig. 5 *Cissus subaphylla* (Yemen)
 Fig. 6 *Cissus subaphylla*
 Fig. 7 *Euphorbia stenoclada*
 Fig. 8 *Euphorbia* sp.
 Fig. 9 *Monadenium kimberleyanum*

thriving and beautifully laid-out succulent landscape. The garden has received two Beautification Awards from the Outdoor Circle, an environmental non-profit group which recognizes community improvement projects and seeks to maintain the beauty of Hawaii's environment.

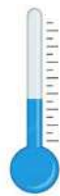
The KCC Cactus & Succulent Garden has quite a few large *Euphorbia* species, an assortment of impressive columnar cacti, some wonderful *Beaucarnea*, *Alluaudia* and *Pachypodium* specimens, beds of free-flowering aloes and colorful bromeliads, and a host of other botanical marvels. Just minutes away from Waikiki, it is easy to get to and can be visited any day of the year.



Fig. 13 A group of *Pachypodium*
 Fig. 14 *Sansevieria francisii*
 Fig. 15 *Senecio deflersii*



Coddling Your Plants Through an Arctic Winter



Mike Hellmann
Reprinted from St. Louis C&SS newsletter,
CSSA Article Archive

This is my nineteenth year of overwintering succulent plants. Even though this is my third year with a greenhouse, I still have many plants in the basement and throughout all levels of the house. There are a few key points to remember when preparing to limp your plants through the winter. First is to grow them well and healthy over the summer so they are better able to overcome the long, punishing season indoors. Proper fertilization, light levels and pest control will give your plants a big advantage when moved indoors. Second is remembering the fact that you want your plants dormant (except for winter growers) during their stay indoors. Growth at this time is weak and unnatural. Plants need to rest in order to grow and flower properly during the growing season.

We'll start in the basement where the desert cacti, euphorbias, sansevierias and most other succulents spend the winter. The exceptions here are the tropical plants that need at least 60F to survive. Cacti fare better here along with deciduous plants, agaves, bromeliads and most caudiciforms. Forty-watt fluorescent bulbs on timers illuminate the plants. Since the plants shouldn't be growing, broad spectrum bulbs do very little. I've kept some cacti in complete darkness for the entire winter with no ill effects. Watering here depends primarily on temperature. Sixty degrees plus and you'll have to



Bright windows are prime real estate for growing cactus indoors during the winter. (top)

Jatropha looking good in a basement light garden. (bottom)

water more. Try to run temperatures as cool as possible as this discourages winter growth and minimizes the need for water. It is beyond the scope of this article to go into much detail on what to water and when. As a general rule, I lightly water most succulents and columnar cacti every two weeks and the globular cacti every four. Below 55 degrees and I don't water at all until things warm up. Cooler temperatures will also reward you with more flowers. Dormancy is a needed rest and the reward is better plant health and flower production. Remember to put lights on timers, run a fan around the clock to circulate air, remove topdressing to better monitor soil moisture and use a vacuum to remove dead leaves, cat hair, dead bugs and spider webs.

I keep all my warm-blooded friends upstairs where the temperatures never see 60 degrees or below. Antplants, melocactus, uebelmanias, ficus, carrallumas and others perch on or next to south/east facing windows where, when unobscured by fall leaves clinging to the trees or evergreen Christmas decorations hanging outside the windows, there is access to lots of light. I water the rhipsalis, antplants and other leafies once per week if sunny. The South American cacti and stapeliads are watered biweekly. Keep watch out for mites, mealy and scale. They go from nothing to complete infestation nearly overnight.

No matter where you overwinter your plants or how, you'll have casualties. Some are inevitable as certain plants available in the hobby are just too demanding, regarding culture, for most of us to maintain. You can only force or compromise with Mother Nature so much. For example, my biggest plant challenge comes with the tropical stapeliads such as the hoodias, trichocaulens, pseudolithos, etc. My peat-based mix is most likely the culprit along with our steamy, amazon-like summers. If



Grouping plants by water requirements simplifies maintenance when growing indoors.

you make yourself aware of the origins and habitats of your plants, you'll better understand what makes them tick (or die). You can then categorize them by watering needs, full-sun or shade, growing season and soil mix.

Watering a helter-skelter mix of plants on a bench presents many more challenges than if all the plants on the bench desired a similar level of soil moisture. One last hint to maintaining a healthy collection is to focus on your favorite groups and what you do well

with, weeding out those that present an uphill battle or that have worn out their welcome. For the past few years, I've focused on fewer groups to better manage my collection. This evolution never stops and will always change. It is very tough to have a little bit of everything from all over the globe. Focus on what you like the most and what treats you best. From there you can grow forever in a plant hobby that shows no sign of getting boring any time soon.

On the CSSA Website

...**NEW CSSA Membership Levels**

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2023 CSSA Convention*
in Colorado Springs

<https://cssaconvention.com/cssa2023/index.html>

...Find an **Affiliate Club** to attend

<https://cactusandsucculentsociety.org/Affiliates/affiliates.html>

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*Convention attendance and Seed Depot are available only to paid members.

Did you know?

CSSA has been funding research grants for decades!

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Please request a proposal packet from:

Phuc Huynh
Huynhphu7@gmail.com

http://cactusandsucculentsociety.org/Grant_Application_Pkt.pdf



A NEW OPPORTUNITY AND MY FIRST CSSA SHOW AND SALE

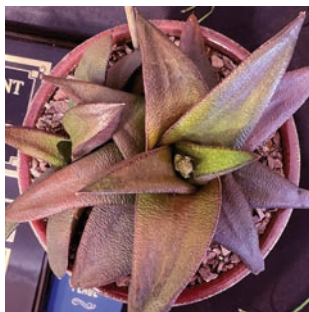
Photos and text: Nick Diomede
Reprinted from Central Spine, newsletter of Central Arizona C&SS



For six out of the past eight years, most members have seen me at the treasurer's table, whether they were paying a membership fee, an auction win, to ask a question, or just say hello. Many also see me taking money (as fast as I can) during our large auction events and overseeing the registers/vendors at each of our last five Show and Sale events. While deeply involved with the CACSS, in recent years I had started getting involved with our national organization, the Cactus and Succulent Society of America (CSSA). During this time, I set my sights on increasing my responsibilities within the community. On July 1, 2022, I was appointed to the Cactus and Succulent Society of America's treasurer position.



That July weekend found me at The Huntington Botanical Gardens (HBG) for the Annual CSSA Show and Sale event (my first time at any California show and/or sale event). While I was hoping to have some time to enjoy the event and the HBG, I was there to oversee the sales and register area and the auction event. True to form, it dominated my time. However, there were no regrets as this is what I have always enjoyed doing.



I did get to see some fantastic show plants, see some old friends and make many new friends in the cactus and succulent community (why did I not do this earlier?). Typical of an event that happens once a year, it had its share of challenges (and in my opinion, the southern CA weather was not one of them!). The event was very successful, with many people seeing and purchasing a lot of great plants!



I would be remiss if I did not say something about the fantastic show plants I got to see. With so many divisions of plants to admire, I need to limit this to my favorites. Those would be the ones with out-of-the-ordinary color. The two top ones being *Neoporteria occulta*, sitting with its first place ribbon, black as can be, or the variegated *Euphorbia poissonii*, with colors so vivid I sought out the grower to ask if he used food coloring when he watered his plant. These favorites were followed closely by the burnt red *Agave*, the purple tinged *Gasteria* and red tinged *Astrophytum*. There was quite a bit of jealousy knowing the sun we share treats them better over there. Onward to the Intercity Show!

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Myrtillocactus geometrizzans

Karina Boese, Houston, TX
Reprinted from Kaktos Komments September/ October 2021, newsletter of the Houston C&SS

Species: *Myrtillocactus geometrizans*

Family: Cactaceae

Genus: *Myrtillocactus*

Order: Caryophyllales

Common names: Blue Candle, Bilberry Cactus, Whortleberry Cactus

Myrtillocactus geometrizans was one of the cacti that I fell in love with at first sight. Perhaps because of their amazing bluish color, some look so simple yet elegant and they have more friendly looking spines compared to other common cacti available in our garden centers.

They are widespread from northern and central Mexico down to Oaxaca, including the Baja California Peninsula. In these native habitats when conditions are favorable, they can grow into huge highly branched candelabra-like tree cacti reaching heights of up to 16 feet. The flowers are greenish-white in color and very fragrant. The name *Myrtillocactus* comes from the Greek word: myrtillus, which means small blueberry. It refers to their small size fruits which resemble Bilberry (*Vaccinium myrtillus*) and True Myrtle (*Myrtus communis*). The fruit is edible and tasty. Some say it tastes like a marriage between fig and berries, very sweet! They are being sold for consumption in their native land and often go by "Garambullo" in the local markets.



Myrtillocactus geometrizans (top)
Myrtillocactus geometrizans f. *cristata*
(bottom)

Myrtillocactus geometrizans one of the popular species in cultivation, where young plants usually remain unbranched for many years. I have noticed since late last year this cactus is now available at more nurseries in Houston and the surrounding area. Most of them are small size of course, but based on my experience so far, they are relatively simple to cultivate in Houston. I have had success with stem propagation. The cuttings, which grow quickly, need to be taken in the summer, when the temperature is high, or the cuttings will not root. *Myrtillocactus geometrizans* are often used as grafting stock because of their fast growth rate. Houston has wet winters, be sure to keep this species where it will be dry and never below freezing. During the winter they will go dormant.



Myrtillocactus geometrizans cv. *Fukurokuryuzinboku*

Myrtillocactus geometrizans* cv. *Fukurokuryuzinboku

Another popular cultivar that has been saturating US market is the fukurokuryuzinboku. It is a cultivar from Japan that takes on a peculiar monstrose form. Their ribs are plump and shaped like human breasts, therefore they are commonly known as “breast cactus”. Although I wish that everyone who is desperately looking for this cultivar, would take the time to learn the proper botanical name! It was named after Fukurokuju and Ryujin, two of the Seven Lucky Gods in Japanese mythology.

If I have not convinced you to get one of these so far, just go for a stroll in the local nursery and when you see one, I hope you will agree with me that their color and patterns are just mesmerizing!

References:

<http://www.llifile.com/>

<https://apps.cals.arizona.edu/arboretum/taxon.aspx?id=991>

<https://worldofsucculents.com/>



Surprising (ly Stinky) Stapeliads

Jen Greene

Reprinted from *Espinas Y Flores*, March 2022,
newsletter of the San Diego C&SS

Huernia thuretii

The genus *Stapelia* hails mainly from South Africa, as many of our favorite succulent species do. They're generally low-growing, spineless, and have simple branches or simply stems that grow in mats or as small shrubs. When it comes to foliage, they're rarely something to write home about, although there's a certain alien-world appearance to the unusual stems that's attractive in a way.

What attracts most growers to *Stapelia* isn't the foliage – it's the incredible blooms that give them their common name: Carrion flowers.

There are dozens of species in the genus, and at least 160 that were once classified in this genus but have since been given genera of their own – *Huernia*, *Caralluma*, *Hoodia* and plants in those genera are still often referred to as Stapeliads, despite no longer being classified in the genus.

Fragrant Flowers

The flowers of nearly all stapeliads and stapeliad-like plants do tend to smell like rotten meat, but depending on where you have them planted, the smell isn't always overpowering or even particularly noticeable. If you stick your face right up next to them, they'll definitely knock your socks off, but grown outdoors and in open spaces, the smell is rarely so strong you

can't walk near them. Even growing some in my greenhouse, the solution to the freshly opened bloom smell was to open the greenhouse doors and let it air out.

Stapeliads are pollinated by flies and similar carrion-eating insects, and here in San Diego they're quite convincing to the common houseflies we have buzzing around. The houseflies often lay eggs around the fleshy center corona of the bloom, convinced that the flower is actually a source of food for their offspring.

Flowers are short-lived, typically only lasting a day or two after fully opening. Species with larger flowers, such as *S. gigantea*, will develop buds that look almost like balloons as they gain size. While individual flowers last only a day or two (making it easy to clip off fading flowers and dispose of them), the plant itself will often flower profusely over a longer period of time, weeks or even months.

Growing Your Stapeliads

Some genera/species are trickier than others, but care is roughly the same.

As with most succulents, if you're growing them in a pot, use well-draining soil. Closer to the coast, where humidity is higher and daytime highs lower, you may want to create a soil mix that's as much as 50% pumice to 50% succulent soil. If you're further inland, like

me here in Escondido, I find most of them do better with more organic material in their soil. My *Stapelia gigantea* are in straight succulent soil (I use E.B. Organics, or more recently, I'm giving the Gnosis Nursery "Alchemy Blend" a try), and they've needed that much organic matter to have water readily available.

Your stapeliads can tolerate extremely dry conditions, just like most succulents, but for thick fleshy stems and profuse blooms, you'll want to water yours more often. They also do better when given a dry dormant period that corresponds to the same time of year they'd be dormant in habitat – but unless you're growing one of the less common species, chances are you can ignore the dormancy period.

When in doubt – water less often. It's much easier to rehydrate your plant than it is to try and save it from rot. For most growers, rot is the biggest threat to cultivation, so be cautious!

The biggest indicator that your stapeliads need water is if they're starting to wrinkle and shrink, or if the arms are drooping like a sad houseplant. I find my *Edithcolea* to be a bit of a drama queen, drooping and getting a bit floppy if it's thirsty, and my *Hoodia parviflora* also drooped precariously when I left it a bit too long between watering.

A little bit of fertilizer helps encourage prolific blooms, just as it does in your stereotypical flower garden. Fertilize when you water during warmer times of year, and I've seen the best blooms when I use half strength fertilizer nearly every time I water. I've used fish emulsion and a dedicated cactus fertilizer with equal success, but I will say people seem far more offended by the smell of fish emulsion fertilizer than any of my stapeliad blooms.



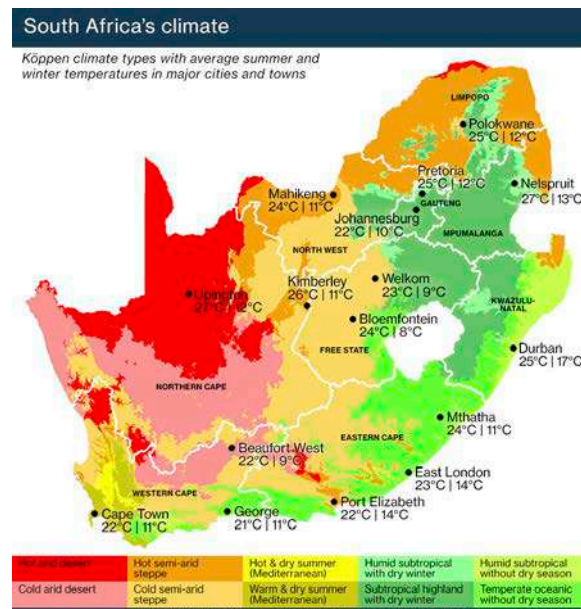
Stapelia gigantea

Most stapeliads will blush a darker color when given more sunlight than they necessarily need, and some look more attractive with that protective blushing. When kept in brighter sunlight exposures, they tend to need more water for regular blooming, which is something to keep in mind.



Larryleachia marlothii

If you're in a part of the county that generally doesn't get a frost, or if you do, it's very light – try



This map of South African climates, with the key below describing moisture/seasons, should be a helpful resource to compare where your species of Stapeliad comes from and gain an idea of temperature and rainfall levels. For most of South Africa, the rainfall season is during the hot summer months, with even the desert regions receiving several inches for a month or two.

<https://southafrica-info.com/land/south-africa-weather-climate/>



growing your stapeliads in ground! I have *S. grandiflora*, *S. gigantea*, and *O. variegata* all as in-ground plants and they are thriving in exposures that are often too hot for the pretty soft succulent hybrids that work well in arrangements. They also grow easily in a ground-cover like manner, so they work well around other plants that are more sculptural.

If you need a divider between yourself and a particularly unpleasant neighbor, you can always use them as edging between yourself and said neighbor. Might I also suggest some Voodoo lilies for summer blooms to offset your winter carrion flowers?

Propagation

I'd be remiss if I didn't comment on how easy it is to propagate most of these species. They can be grown readily from cuttings for exact clones of the parent plant, or you can pollinate them to produce huge seed pods. The seed pods look almost identical to a Plumeria seed pod (if you've seen one of those), but failing that, they're almost a jumbo-sized green bean that slowly darkens as they ripen.

For easiest growth when propagating from cuttings, take your cuttings in spring, as the weather is just warming up. They can be lain flat on succulent soil and may produce roots that way, as my *Orbea variegata* do constantly. Some species seem to do better

when their cut ends are allowed to callous over, and then placed directly into damp soil or a 50/50 mix of soil and pumice. When waiting for roots, avoid watering much if at all. The rooting medium should be damp, at best, and misted or splashed with water to keep the soil from turning into dust until the cutting has firmly rooted. Just as with rooted plants, when in doubt, skip watering for at least a day or two.

You'll know your cutting is rooted by gently wiggling it: a rooted cutting will feel like it's "grabbed on", while one that hasn't will feel about the same as it did when you first put it in the soil. If you can't feel a difference, it's probably not rooted yet. Just don't dig it out to stare at it! You'll break or damage any baby roots that have tried to come out.

The Easier to Cultivate (And Easier to Find) Species

The species I'll list and highlight here share one thing in common: they're all easy to grow! Compared to some species which have very specific requirements, these are easy enough to use as landscape plants or stick in a container.

One of the most striking and well-known species in the genus is *Stapelia gigantea*, with flowers that can reach over 1 foot in diameter when fully open! These, like many of the *Stapelia* blooms, can and will grab the attention of even the non-gardeners in your family



with their “Demogorgon head” looking blooms. This species is also the worst, in my experience, for attracting flies that lay eggs – if you want to avoid that but still find the flowers fascinating, select a species with smaller blooms. Flowers are fairly consistent, being extremely large, red and yellow banded, always star-shaped and 5 petaled, although flukes can and do occur. Shorter daylight hours in fall and early winter trigger blooming.

A very similar species but with smaller flowers is *Stapelia grandiflora*, with blooms that vary in shape, color, and size. Some growers have selectively bred this species for specific bloom colors, and you can find them ranging from a deep, almost black-red color to a striped pale pink-red with yellow bands. Smaller size of blooms means smaller smell and less chance of flies arriving, but these can be large enough to attract them anyway.

Not a “true” stapeliad, but one of the genera that was split out from *Stapelia* a while back, *Edithcolea grandis* (aka Persian Carpet Flower) is extremely popular, and for good reason! The flowers are of a decent size, up to 5” across, and striking enough to make most people stop and do a double take. The flowers typically have a yellow base, with red spots/edging and a complex pattern that almost resembles the Persian carpets that give them their name. Compared to the plants in the *Stapelia* genus, these have a more spiky-looking growth habit, and tend to be more densely packed with their branches and stems.

Formerly known as *Stapelia variegata*, the *Orbea variegata* is commonly called the Starfish Plant,



or Starfish Flower. These tend to have longer stems compared to the Persian Carpet flower, but blooms are smaller. Flowers are extremely variable, and much like *Stapelia grandiflora*, these seem popular subjects for selective breeding to favor coloration. A typical flower is a yellow to pale white background with deep red to maroon speckles, with a distinctive raised center circle similar to the next species I’ll list: the Lifesaver Plant.

Many people probably recognize the Lifesaver Plant, or *Huernia zebrina*. Stems look almost identical to the *Orbea variegata*, so determining which of the two you have without seeing a flower is almost impossible. Once they do bloom, however, the Lifesaver plant has a glossy ring that’s deep red or pink, with zebra-striped yellow and red petals on the outer edge of the flower.

Less Common but Rewarding Species

The species here are those that are uncommon or downright rare, but rewarding if you find yourself captivated by this group of plants like I am!



Caralluma arachnoidea



Duvalia caespitosa



Huernia oculata



Orbea dummeri

Pseudolithos, or dinosaur eggs, are definitely high up there on the “alien looking plants” list. They are extremely challenging to grow for the novice, being highly sensitive to overwatering, and I’ve yet to successfully grow one myself. I’m told they produce truly noxious flowers, guaranteed to keep anyone and everyone you know far, far away from wherever you have them growing. Impressive for a plant whose body rarely gets larger than a few inches across or tall.

The genus *Hoodia* might sound familiar; some (many?) species are used to make appetite suppressants! They’re also very alien-looking plants that thrive in extreme heat and highly acidic soil. I grow my *Hoodia parviflora* with a chunk of limestone on the soil, and I’ve heard it recommended to mix a small amount of gypsum into their potting medium to help. Alternatively, using a small amount of vinegar to acidify your water (be sure to test the pH before watering your plants!) can accomplish the same thing. They’re also documented as somewhat short lived; in the wild, plants typically only live about 15 years, although cultivated specimens can live to 20 – 25 years of age.

Hoodia gordonii – Produces huge, pillowy blooms, beginning in late spring and extending through summer. Can reach just over 3 feet tall in ideal conditions. Under ideal conditions, can live up to 25 years in cultivation. One of the easier hoodia to grow.

Hoodia parviflora – Sometimes called the largest stapeliad, some sources say this can grow to the size of a small tree (up to 6 feet tall)! Less commonly grown as it is more susceptible to rot compared to *H. gordonii*.

The *Caralluma* genus also hosts some plants used for appetite suppressants, but their flowers’ smell will do the trick just as neatly. These can vary from very suspiciously stapeliad-like stem appearances that can

be a challenge to tell apart from something like a *S. gigantea*, while others have huge, angled stems that almost resemble a *Euphorbia* and produce enormous clusters of putrid smelling flowers.

Orbea is the genus of two of the most popular species, but it’s also the genus of some truly hard to find species. *Orbea oculata* is one that is a challenge to find in the US, but produces clearly distinct and beautiful flowers. *Orbea* as a genus is nearly as popular for selective breeding and hybridization as *Huernia*, which also has a large number of species that range in bloom size, color, and pattern.



Thanks to the generosity of the Stapeliad enthusiasts online, the following photos of various Stapeliad species (particularly their blooms) have been shared to display the joy we take in growing these little alien plants.

PHOTO CREDITS

Marcel René de Cotret: *Pseudolithos migiurtinus*, *Edithcolea grandis*

Scott M Harris: *Pseudolithos cubiformis* with seed pod

Michael Straarup Nielsen: *Rhytidocaulon ciliatum*

Christina Ann Wolf (IG @my.grn.paradise): *Duvalia caespitosa*, *Orbea halipedicola*, *Stapelia schinzii*, *Huernia oculata* x *urceolata*

Tony Casler: *Huernia oculata*

Shannon Culp: *Orbea dummeri*

Maria Shmidt: *Orbea paradoxa*, *Caralluma arachnoidea*, *Stapelia olivacea*

Carlos Lopez Ochoa (IG @lopezochoacarlos): *Huernia zebrina*, *Orbea decaisneana*

Jen Greene: *Stapelia gigantea*, *Stapelia hirsuta*, *Huernia bayeri*, *Angolluma* sp. aff *wissmannii*



Aloe descoignsii: A variable grower

Sue Haffner

Reprinted from the Cactus Corner August 2022,
Newsletter of Fresno Cactus & Succulent Society

Aloe descoignsii is the smallest aloe, each rosette usually—no more than 2 inches in diameter. It was discovered in 1956 in the Fiherenana River Valley of Madagascar (Toliar Province) by French botanist Bernard Descoigns and named in his honor.

Going through my files, I found this interesting note on the plant in a back issue of Australian succulent review and newsletter. It isn't signed, but I suspect it was written by Rudolf Schulz, the editor:

"It was a real shock to see *Aloe descoignsii* in habitat! Here were these tiny, shriveled-rosettes growing in limestone rubble in one of the driest areas of Madagascar. They clung to the south-facing slopes, often under rock overhangs, apparently in an unsuccessful attempt to avoid the strong year-round sun, which at latitude 23 degrees south can shine from directly overhead for a part of the year. They looked terrible and it was only the beginning of the dry season! Our guide recommended watering them only once a month as they were prone to rotting. Seeing how they grow in habitat and comparing them to my plants growing in a rich acidic potting mix which is well watered year-round one would be forgiven in assuming that they were two very different plants. My plants are the same size, but the color is dark green as opposed to a dull-grey green and the leaves are never shriveled, even during winter. My plants flower and appear healthy."

"So how does one grow *Aloe descoignsii*? Any way you can seems to be the best answer. Considering how my potting mix is all "wrong," it shows how adaptable this smallest of aloes is. Full sun or dense shade is okay. An acidic potting mix is tolerated as well as its natural limey soil. Water once a month or three times a week. The only requirement seems to be a very well drained potting mix. Make sure the pot being used has large drainage holes and that these are not blocked up with gauze or pebbles.

"So, what type of plant should we try to grow in our collections: an accurate version of the habitat plant or a bloated lush version which only resembles the habitat plant in size and flower? Perhaps growing the species both ways would be an interesting project to aim for." [Schulz, Rudolf] (1994) *Australian Succulent Review and Newsletter*, 4:3.



Three views of *Aloe descoignsii*.

Photo 1: Irwin Lightstone

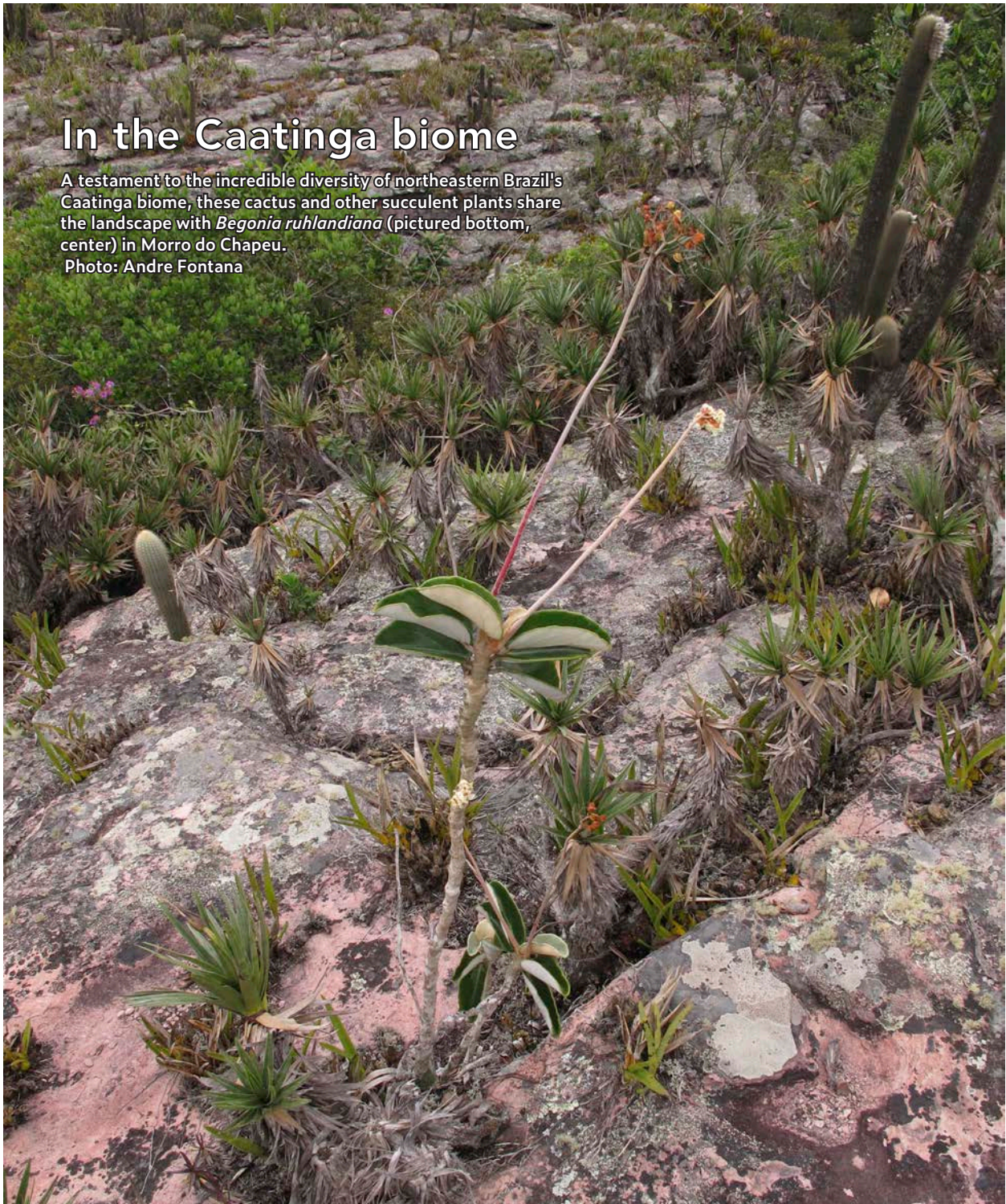
Photo 2: peganum from Small Dole, England - *Aloe descoignsii*, CC BY-SA 2.0, <https://commons.wikimedia.org/w/index.php?curid=47473373>

Photo 3: *Aloe descoignsii* at the University of California Botanical Garden, Berkeley, California. https://upload.wikimedia.org/wikipedia/commons/O/Oc/Aloe_descoignsii_1.jpg



In the Caatinga biome

A testament to the incredible diversity of northeastern Brazil's Caatinga biome, these cactus and other succulent plants share the landscape with *Begonia ruhlandiana* (pictured bottom, center) in Morro do Chapeu.
Photo: Andre Fontana



"This trip started in June 2022, from the city of Salvador in Brasil. My assistant Lukas took me to the airport to launch my expedition to Monte Santo municipality. Initially, the vegetation was green and exuberant, typical of tropical vegetation. As I headed toward our destination, the vegetation became drier. The Caatinga biome* is very arid, composed of shrubs, small trees, and cacti. In the dry season, there are no leaves on the plants, but when the rain comes, everything becomes green and covered with flowers.

All the *Begonia* species here grow like cacti and have succulent morphological characteristics. While keeping in-home collections, you need to cultivate these plants as succulents. Keep the soil well-drained and be careful with watering while providing appropriate sunlight."

Reprinted excerpts from "*Begonia* of eastern Bahia State in Brasil," by Ludovic Kollmann in *The Begonian*, September/October 2022.

*The Caatinga is the only exclusively Brazilian biome, which means that a large part of its biological heritage cannot be found anywhere else on the planet. Source: Wikipedia

A look from someone who is living in the Caatinga biome in Brazil.

"So much destruction and an uncertain future, but solutions do exist. It is possible to see the caatinga with a more optimistic and tender look. This biome is exclusively Brazilian."

<https://youtu.be/4FAtXosbEyo>

Video courtesy of Comundos
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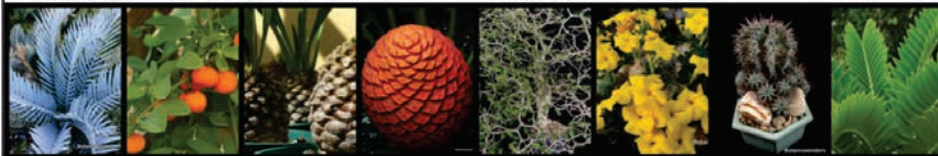
Common rock formations in the caatinga, during the rainy season.

Photo: Ilvandro Batista de q..., CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=52964033>



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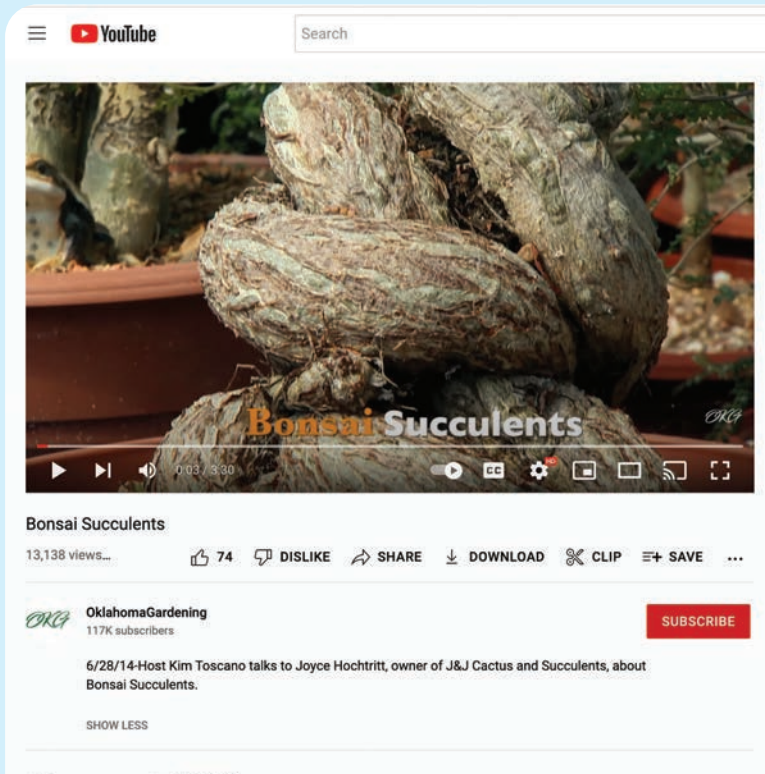
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- Summer - April 1
- Fall - July 1
- Winter - October 1



<https://www.youtube.com/watch?v=ODjJyPrJfKo>

From 6/28/2014-Host of the show, Oklahoma Gardening, (OSU Extension Service), Kim Toscano, talks to Joyce Hochtritt, owner of J&J Cactus and Succulents, about Bonsai Succulents. The video includes terrific shots of Joyce's greenhouse with many plants in bloom.

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Adenium obesum seedling, 2-days old,
growing out of the seed husk.

Photo: Timothy Gonslaves https://upload.wikimedia.org/wikipedia/commons/f/fa/Adenium_seedling_2day_Uthandi_Aug21_D72_20609-21_ZP.jpg

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