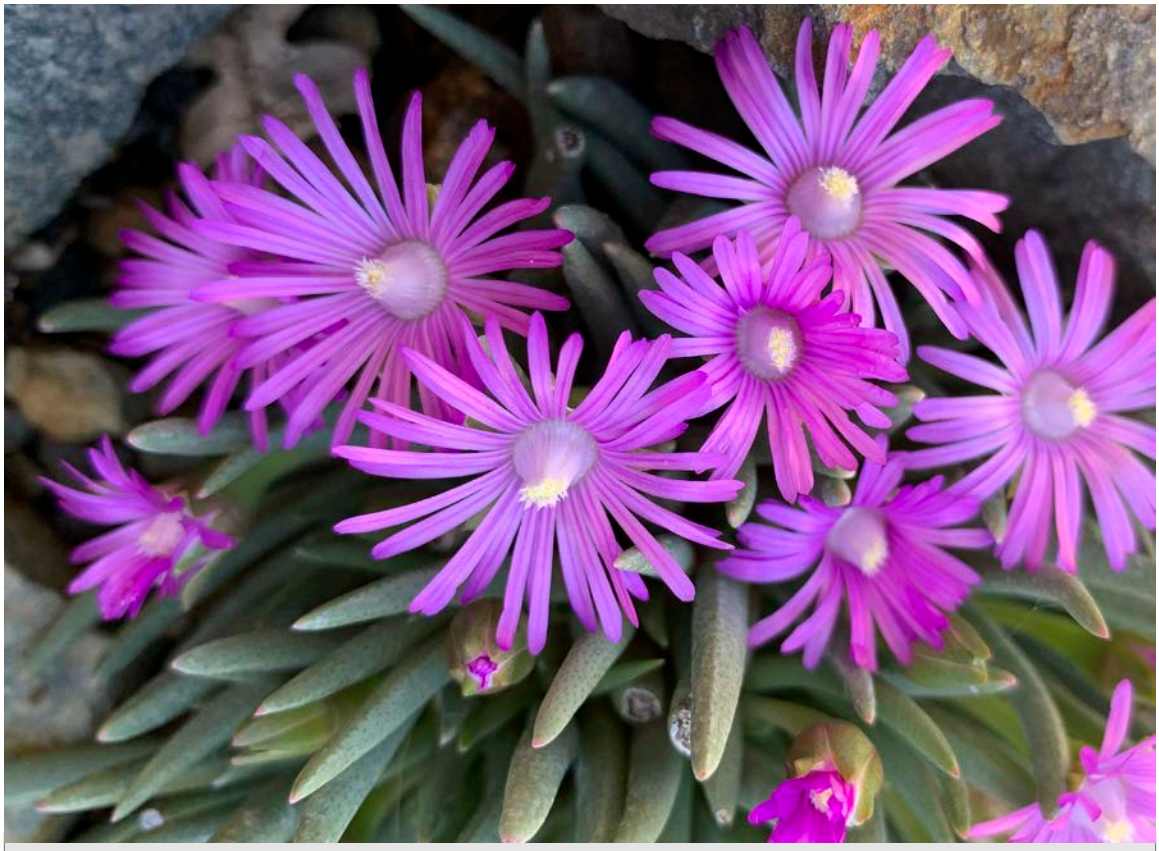
Cactus & Succulent Society of America
To The Point
Spring, 1st Quarter 2022

CSSA Mission Statement Updated

Mission Statement

The Cactus and Succulent Society of America is an international community dedicated to advancing the appreciation, knowledge, research, and conservation of cacti and succulents.



In this issue:

Take an in-depth look at one of the lesser known mesembs, *Marlothistella*. Notice the flower of *Marlothistella stenophylla* (above), with the stamen pulled together in a cone at its center. Page 15.

CSSA Calendar of Events 2022
Full details and updates at
CSSA Calendar

CSSA News

U.S. Botanic Garden Production Facility Virtual Tour

Bob Stewart
Reprinted from The Eastern Spine, January 2022, National Capitol C&SS

The plants shown here were photographed at a past in-person open house day at the US Botanic Garden.

Photos, clockwise from top left:
Euphorbia esculenta
Echeveria 'Blue Curls'
Ferocactus glaucescens
Echeveria agavoides

The U.S. Botanic Garden has two major facilities- the large conservatory in downtown Washington D.C. near the U.S. Capital and a large greenhouse complex in S.E. Washington that is not generally open to the public. In the past, an open house at the Garden production facility was held on a Saturday in March. Appointments to attend were by registering through the U.S. Botanic Garden web site. Unfortunately, the open house has been cancelled the past two years due to Covid-19. This year there will only be a virtual tour of the facility in early March. More info here:
https://www.usbg.gov/production-facility-virtual-open-house

Arizona man admits to stealing and trading protected cacti for drugs, sentenced to fines and probation

By Nicole Garcia | **Published** January 6, 2022 5:23PM | **Updated** 8:10PM | Crime and Public Safety | FOX 10 Phoenix

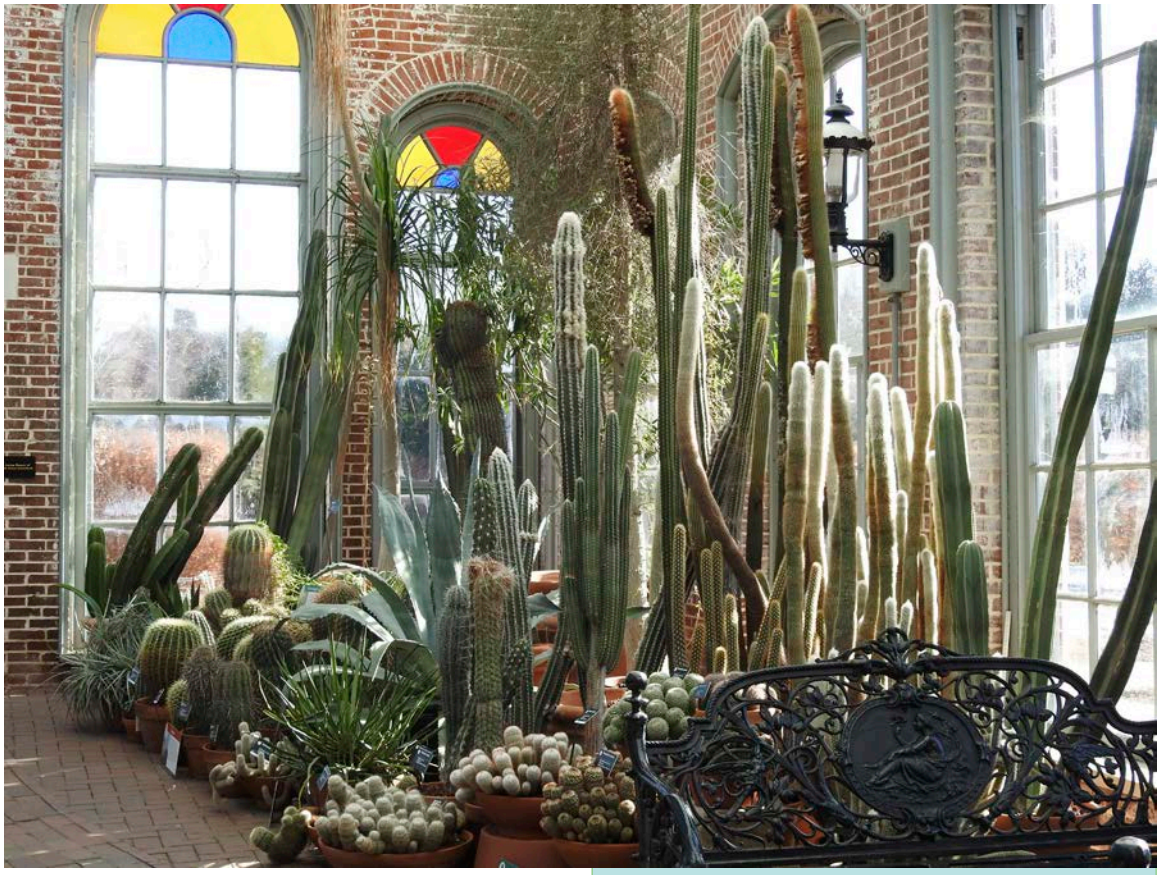
Arizona man admits to stealing and trading protected cacti for drugs

A pair of poachers who had been clearing out cacti for years are now paying the price, and one of them is from Arizona. FOX 10's Nicole Garcia reports.

Another reminder of how important it is to be vigilant when buying our plants. Our own CSSA Board Member, Irwin Lightstone, is interviewed in this story.

Click link for video:

https://www.fox10phoenix.com/news/arizona-man-admits-to-stealing-and-trading-protected-cacti-for-drugs-sentenced-to-fines-and-probation



A Desert Delight

Article and photos courtesy of
Missouri Botanical Garden mobot.org

The Mediterranean collections, once housed in the Missouri Botanical Garden's Shoenberg Temperate House, are being distributed in the new Emerson Conservatory and the Linnean House. The Temperate House is currently being converted to an arid plant display house, highlighting cacti and succulent plants. Renovations and upgrades to the interior of the Temperate House include cleaning the glass, painting the metal structure and hardscape walls, and installing a new automated irrigation system. To support optimum growing conditions for the cacti and succulent plants, the existing soil is being replaced with a custom soil mix. All of the hardscape and aesthetic touches visitors have come to love (including the Moorish walled garden and overlooking antique portico) will remain.

"We are very excited with this additional space for our cacti and succulent collections," Wyatt says. "They represent a very important historic plant group for the Garden, dating back to the Garden's founding.

C&S News at the Missouri Botanical Garden

A sizeable collection of cactus and succulents at the Missouri Botanical Garden have been waiting for a more permanent home. Quite sometime ago, the greenhouse they called home was torn down. Since then, the collection has been "temporarily" housed in different locations. That's all about to change!

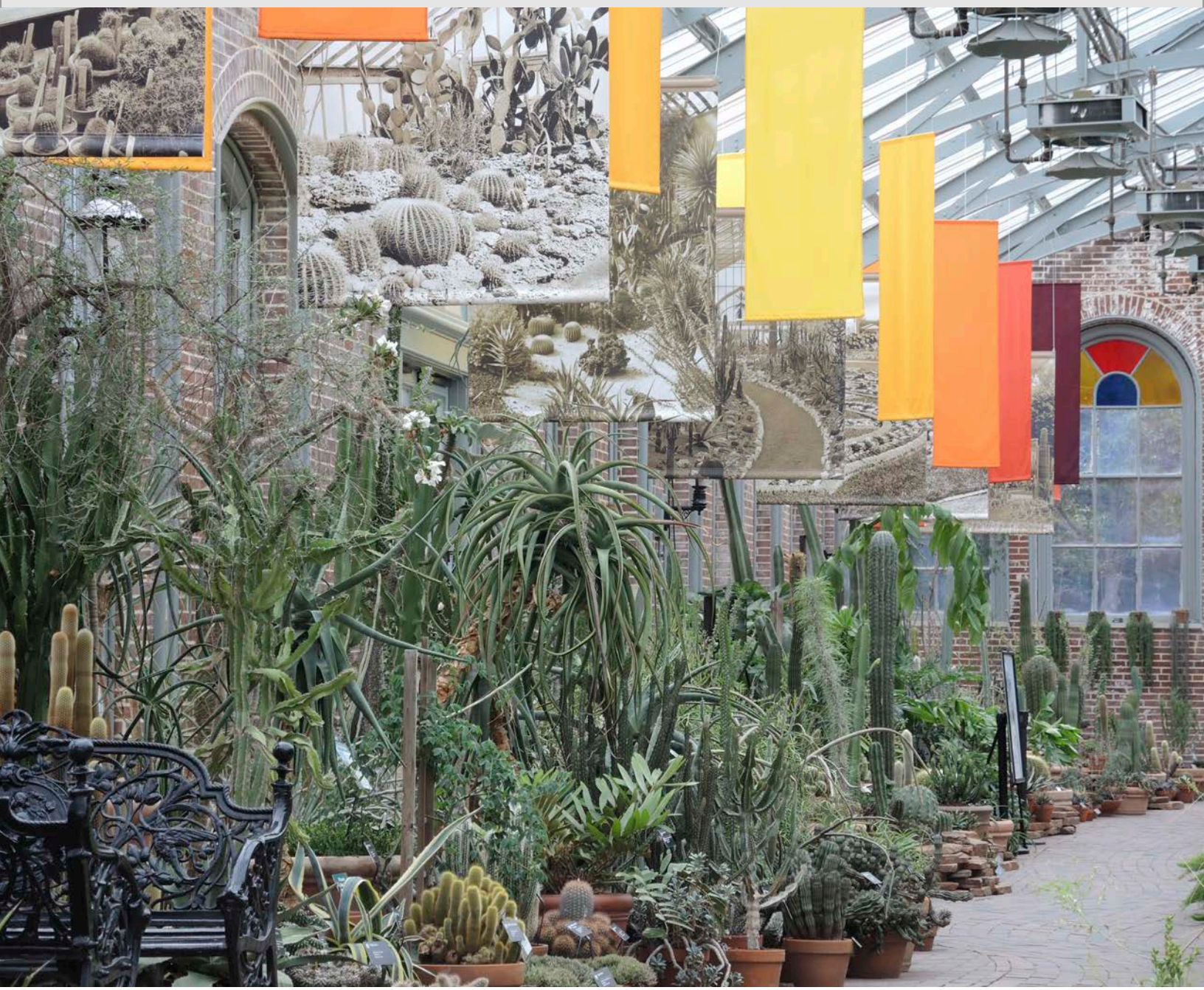
Above: Cactus Collection inside Linnean House - Southeast Corner

Below: Cactus and Succulent Collection in Greenhouse

Photos: ©Tom Incrocci/ Missouri Botanical Garden

Dr. George Engelmann, advisor to Henry Shaw, studied and described cacti, as did Dr. William Trelease, the Garden's first director after Shaw's death in 1889. Since the closure of the previous desert house in 1994, we've only been able to display about one third of the Garden's arid plant collections and have not had the capacity to grow many specimens to a large size. The conversion from a temperate house to a desert house will allow us to display a greater number of the desert plants to a mature size." The new displays will feature plants from the North American deserts and those of Africa and Madagascar. Species that grow best in containers will be displayed in the Linnean House. "We will use the growing conditions in both locations to optimize the growing conditions for any given species," Wyatt explains. "For instance, we can keep the arid house warmer in the winter, so we will grow colder desert species in the Linnean House." With more of the Garden's cacti and succulent collections on permanent display, Wyatt and the Garden's horticulture staff will be able to use greenhouse space to grow additional species for public viewing and enjoyment. As with all Garden landscapes, plant selections will integrate display of the living collections with active plant conservation and research efforts.

Below: General view of the Desert Exhibit and the Cactus Collection in the Linnean House. Photos: ©Tom Incrocci/ Missouri Botanical Garden



CSSA Photo Contest

To celebrate and contemplate the plants we love, the CSSA is holding a photo contest open to CSSA members and the minor children of CSSA members. For the theme of **"The Artistry of Cacti and Succulents,"** you are invited to enter up to three images. There are two divisions; adult (16 years and older), and youth (younger than 16 years). Prizes will be awarded in each of the divisions.

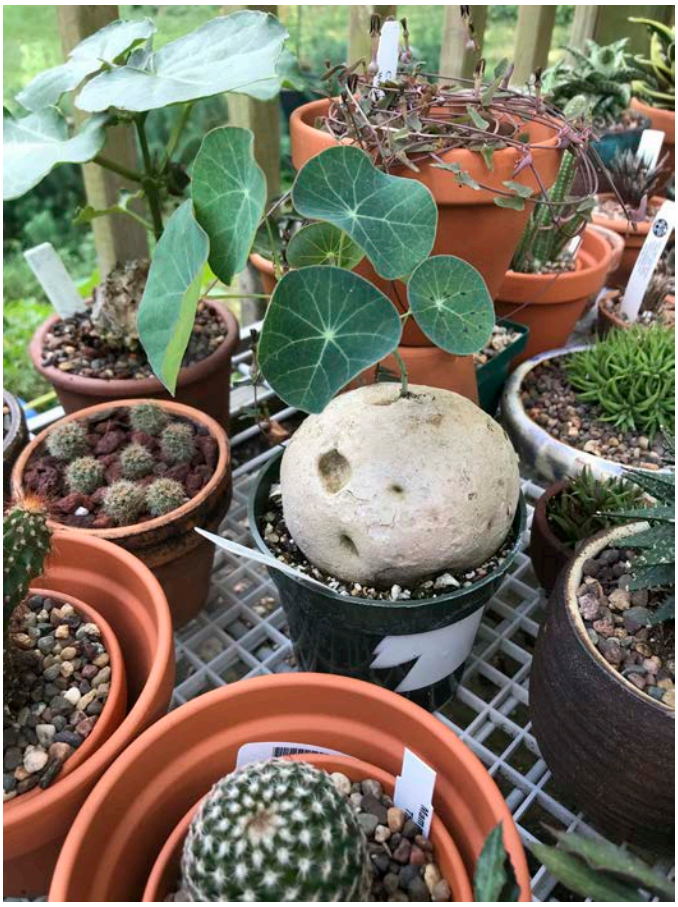
- **First Place: $100.00 Gift Certificate from B&H Photo – Video, publication of the image in *To the Point*, and an 8 x 10 inch (approximate) print of the image.**
- **Second Place: $25.00 credit toward purchase at the CSSA Seed Depot, publication of the image in *To the Point*, and an 8 x 10 inch (approximate) print of the image.**
- **Third Place: Publication of the image in *To the Point*, and an 8 x 10 inch (approximate) print of the image.**
- **Honorable Mention: Publication of the image in *To the Point.***

As there are no entry fees, you have nothing to lose!

For more information about entry and the specific contest rules
Click Here

***Ariocarpus scaphirostris* flowering**
Photo: Irwin Lightstone

Summering Plants Out-of-doors



Lou Kilbert
Reprinted from Michigan Cactus & Succulent Society newsletter July 2001; from the CSSA Article Archive

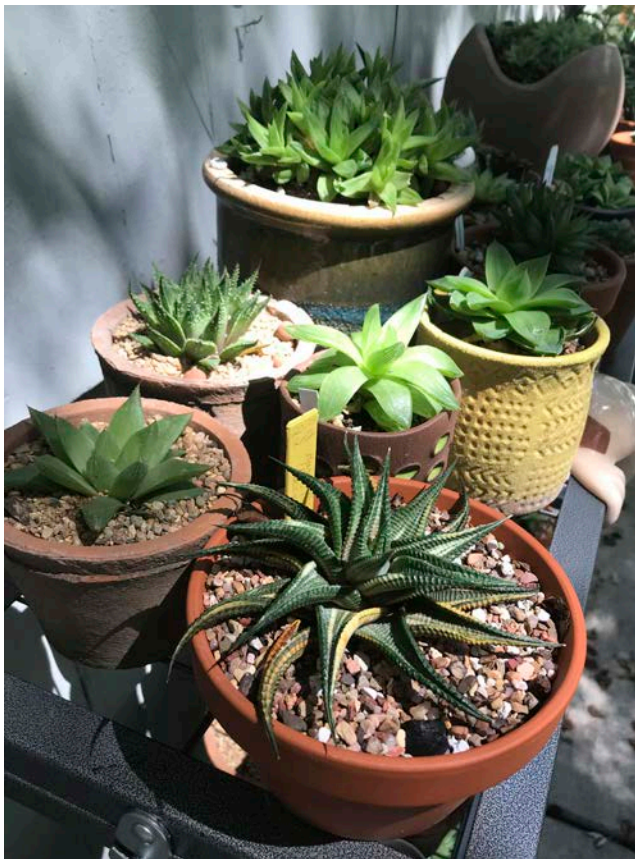
Which succulents should be placed out-of-doors in the sun and which ones would be best placed in the shade? Just about all of your houseplants will benefit from a summer out-of-doors. The first problem that you face is that your plants have been trying for many long months to adjust to the long dark days of winter inside your home where the light is even dimmer. Just picture the effect when you walk from the relatively dark interior of your home into the bright summer sunlight. There is at least a moment when you can't see; you need to adjust to the high light intensity. And that's in summer! In winter, the dimming effect of your house would be even greater although you don't notice it as much. Even plants grown in a greenhouse need a period of adjustment before they go into the full sun of a summer day.

Because of this when you put your plants out, put them in at least partial shade. I use a large red maple tree for shade in the backyard. After two weeks, some of these plants can go into full sun. It is best to keep plants that are in full sun well watered. If a plant is uncomfortable because of the heat, it cannot move itself under an awning or tree to get relief. If it has sufficient water, it may be able to avoid sunburn. That doesn't mean keeping the soil soggy or letting the pot set in water for days on end!

Tall columnar and most barrel cacti will definitely benefit from a summer in the sun. If the plant is in too small a pot, it may be hard to give it enough water, so a plant that is under-potted may suffer sunburn whereas the same plant in a good sized pot that is watered regularly will not show the same effect. In general the smaller barrels need some shade, especially from the afternoon's hot sun. Rebutias, Gymnocalyciums and some Lobivias, are in this class. In nature, they grow in the shade of tall grasses, although not under trees.

You will have a much better chance of getting your cacti to flower if they summer out-of-doors. Grandma kept her Christmas cactus on an unheated porch in the winter but put it out in full sun on a tree stump in the backyard for the summer. She did the same with

her orchid cacti as well; although, since they were larger, they sat on the ground. I keep my orchid cacti in the shade for convenience. They can take full sun. There is more to this story than full sun versus shade. Is your sunny position open to the air? You should provide good ventilation in the sun, and in the shade. Usually, the problem is not too much sun-light but too much heat!! That's why you need good airflow. On the other hand, some locations get an excess of wind and that can be drying which accentuates sunburning. In shade, muggy, still air gets excessively humid, and that promotes fungus diseases.



There are aesthetic reasons for keeping your succulents in the shade. Sunburn is obviously ugly and scarring. Some people like their plants green-green! In the sun, they will probably take on all sorts of colors that many of us admire.

Plants in full sun require more frequent watering than plants kept in the shade. Therefore, they are easier to care for in the shade.

Whitish-grayish or furry leaved plants generally tolerate sun better than plants that are deep, dark green. White or yellow variegated plants require more light than all green plants.

Finally, plants kept out-of-doors in summer will be resistant to insects and diseases. With so many benefits, why not put your plants outside? With a large collection, like mine, it's a lot of work (I wish I could put them all out!) but it's worth it.

Chihuly in The Desert: A Two-Part Exhibition Debuts in Phoenix and Scottsdale

Press release materials courtesy of 2021 Chihuly Studio

PHOENIX, AZ, December 6, 2021 -- Dale Chihuly, the American artist renowned for revolutionizing the studio glass movement, debuted a new exhibition, Chihuly in The Desert, in Phoenix and Scottsdale, Arizona on Friday, December 3. The two-part exhibition takes place at Desert Botanical Garden and Frank Lloyd Wright's Taliesin West, a UNESCO World Heritage site. Chihuly's installations harmonize with the beauty and diversity of the environment, showcasing a remarkable confluence of American art and architecture set amid the magnificent backdrop of the Sonoran Desert. Spanning across two iconic Arizona locations, the installations are featured across multiple settings – inside the buildings, on the lawns, in the water, and emerging from the desert itself. The exhibition features new works being shown for the first time and is on view to the public through June 19, 2022.

"I'm thrilled to share my work with visitors of these iconic locations," said Dale Chihuly. "Returning to Desert Botanical Garden and presenting my work for the first time at Taliesin West is a special moment for me and I hope those who see the exhibition will experience something beautiful and unexpected."

Dale Chihuly is known for ambitious architectural installations in cities, museums, and gardens around the world. He utilizes a variety of media to realize his creative vision, including glass, paint, charcoal, neon, ice, and Polyvitro.

Frank Lloyd Wright's Taliesin West

Chihuly in the Desert at Taliesin West features installations that combine art, architecture, and nature by pairing the work of architect Frank Lloyd Wright and Chihuly in a way that has never been done before. Specifically situated to be in dialogue with the iconic buildings and landscape, Chihuly works on view include Alabaster and Amber Spire Towers at the Entry Plaza; Red Reeds and Nii-jima Floats at the Front Pond; Black Saguaros and Scarlet Icicles on the Studio Lawn; Golden Celedon Baskets in The Garden Room; Fire Amber Herons at the Tower Pool and Marine Blue and Citron Tower at the Garden Squares.

Dale Chihuly Fiori Boat, 2018
Desert Botanical Garden, Phoenix, installed 2021
 Photo by Nathaniel Willson

Desert Botanical Garden

Chihuly in the Desert at Phoenix's renowned Desert Botanical Garden showcases Chihuly's stunning, large-scale installations nestled among a world-class collection of desert plants. Featuring installations on the Garden's trails complemented by a major indoor gallery in Dorrance Hall, the dynamic exhibition includes never-before-seen installations and is a must-see throughout the seasons. The works on view include Fiori Boat, Aqua Blue and Amber Chandelier, Calendula Persians, and more, situated in dialogue with the majestic Sonoran Desert ecology, underscoring Desert Botanical Garden's mission since 1939 to conserve and research desert plants and their habitats in the Sonoran Desert.

To purchase tickets to Taliesin West and/or the Desert Botanical Garden or to learn more, visit ChihulyintheDesert.org.

Top: Dale Chihuly - Sonoran Neon, 2021
Center: Dale Chihuly - Lime and Lava Red Tower, 2021
Bottom: Dale Chihuly - Macchia Forest, 2021
All photos: Desert Botanical Garden, Phoenix

Photos by Nathaniel Willson

Thelocactus rinconensis

Jerry Vaninetti

Reprinted from Cascade Cactus &Succulent Society's e-Newsletter, The Point, November 2021

Thelocactus is a cactus genus ranging from Central Mexico into Southern Texas (375 miles) comprised of about a dozen species and a daunting number of subspecies, varieties, and forms owing to differences in climate, elevation, and soil of its extensive, but somewhat non-continuous habitat range. They are globular (ball-shaped) cacti, with 8–20 ribs (spiraling in some species), with raised angular or hexagonal tubercles. Their Latin name "nipple cactus" is derived from their very pronounced tubercles. Most range from small to medium sized cacti, except for the larger *Thelocactus rinconensis*. They are known for their beautiful spination and showy flowers (Figures 1 & 2). The *T. bicolor* pictured in Figure 1 may be the most unusual and beautiful flower I've obtained in my collection of cacti from an otherwise non-descript cactus.

They grow in arid environments and are easy to grow in containers. They tend to bloom in the spring and again in late summer. They are typically solitary plants and grown from seed. As with most cacti, they require good drainage and go dormant in the winter months when they should not be watered. Though rarely found in retail stores, you can buy many of the *Thelocactus* species on-line from growers in the Tucson area, especially Miles2Go and Arid Lands, and from eBay and Etsy vendors. They are also readily available from shows and sales held by cactus and succulent clubs in the Southwest US and California.

Fig 1: *Thelocactus bicolor* sporting quite a showy bloom.
Photo: Jerry Vaninetti

Fig 2*: Thelocactus hexaedrophorus*
Photo: Petar43 - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=49241523

Figure 3: Cultivated *T. rinconensis*
Photo: Jerry Vaninetti

Thelocactus rinconensis

Thelocactus rinconensis is the largest of the *Thelocactus* species, sometimes reaching 8" diameter. It is a robust, easily grown plant but its flowers are not particularly dramatic. However, its tubercles and spines are the main attraction, along with its size. It originates from the Mexican states of Coahuila and Nuevo Leon (just south of the Texas border) where it grows at elevations ranging from 2,000' to 6,000'. It is a cold-hardy species able to handle temperatures into the low 20s, provided it has not been watered during the winter season. There is considerable variation in form and spine length in cultivated (seed-grown) plants (Figures 3 & 4) and in habitat (Figure 5).

Consequently, as many as a dozen subspecies, varieties, and forms have been described, most particularly in R. Gonzalez' 50-page article in *Xerophilia Magazine* which includes numerous excellent photographs of plants in habitat.

Primary Reference Sources

The *Thelocactus rinconensis* complex, Rodrigo Gonzalez; *Xerophilia Magazine* 6/21/17, p 5–54 https://xerophilia.ro/wp-content/uploads/2017/06/xerophilia-2017.06-21.pdf

The Llifle and Cactus-Art Biz websites

Fig 4: *Thelocactus rinconensis* http://www.llifle.com/Encyclopedia/CACTI/Family/Cactaceae/10887/Thelocactus_rinconensis

Fig 5: *Thelocactus rinconensis* in habitat Amante Darmanin from Malta - Thelocactus rinconensis, CC BY 2.0, https://commons.wikimedia.org/w/index.php?curid=42373535

CSSA SEED DEPOT

https://cssa.myshopify.com/collections/seed-depot

Ficus petiolaris
Mexican Rock Fig

Al Klein, Reprinted from Espinas Y Flores, January 2022
Newsletter of the San Diego C&SS

Ficus petiolaris is another of my favorite caudiciform type plants. Even at a young age, this tree can produce a swollen stem with a lot of character.

I first discovered this plant back in the 1970's. What I found were seedlings in a 3" pot, already showing nice swollen trunks. I immediately bought several and experimented with growing them both indoors and out. They were so adaptable and easy to grow!

There are two other species which are closely related to *Ficus petiolaris*, *Ficus palmeri*, and *Ficus brandegeei*. Some botanists feel that they are just varieties of the same species. In my opinion, the significant differences are enough to consider them two distinct species. They all originate from Baja Mexico.

All three species make excellent bonsai specimens. The leaf of *Ficus petiolaris* has pinkish-red veins, while *F. palmeri* and *F. brandegeei* leaf veins are light green. I have over ten plants in my personal collection. I can't get enough of them!

Both *Ficus petiolaris* and *Ficus palmeri* are easy to grow. They will grow best in part sun to shade. Plants in full sun will produce smaller leaves and have a tendency to "cup." In the shade plants produce large flat leaves with a nice tropical look.

If you want your plants to grow large, plant them in large pots with well draining soil. If grown in the ground, these trees can get large and must be protected from frost. I have grown most of my plants in containers, which stunts growth. This stunting eventually produces very interesting trunks and roots, making them great bonsai candidates.

I grow most of my plants hard in small pots. These plants are not your typical succulent though, in small pots they will need to be watered regularly to prevent wilting. Fertilize regularly also to promote good growth.

I trim my plants at least once a year during their short dormancy period in the winter. I also strip off any leaves during this time. Regular, hard pruning will also encourage multiple branching stems from the caudex which will lead to interesting character for your specimen. This seems to give them a boost of new growth and vigor.

All three species are best grown from seed. Ficus produce figs for fruit. Unfortunately, without the proper wasp for pollination, which we do not have, they will not produce seeds. They can also be grown from cuttings, however in my experience cuttings will not produce a swollen trunk.

I hope that you will consider this wonderful species for addition to your collection!

Top: *Ficus petiolaris* make excellent bonsai.
Bottom, left: *Ficus petiolaris*, ten years in same pot!
Photos: Al Klein

Jane Evans– Lithops in Cultivation

First presented at the 2017 Convention of the CSSA, held in Tempe, AZ this video encourages growers to try raising lithops from seed. Nursery-owner, Jane Evans, leads this informative and fun look at Living Stones.

Watch on the CSSA YouTube channel:
https://www.youtube.com/watch?v=gEXKVftQMh4

Astrophytum caput-medusae

Bob Stewart, Reprinted from November 2021
The Eastern Spine, National Capitol C&SS

This is near the top of the list of cactus species that are rare and difficult to obtain, although seed and grafted plants are available. It is a relatively newly discovered cactus, found by two Mexican botanists in 2002 in the Mexican State of Nuevo León.

It is an extremely weird looking cactus with a tuberous root and stem partially buried in the soil and long tentacle-like tubercules extending into the air. Its appearance is so strange that it was originally described as a totally new genus, *Digitostigma*, but the flowers, fruit and seeds all point to it being a very weird Astrophytum, and it has been given the name *Astrophytum caput-medusae.*

Pictured above is a pot of several seedlings of *Astrophytum medusae* grown from Mesa Garden nursery seed. The seeds are relatively large, and similar to other astrophytum species' seeds. The seeds germinated in 7 to 10 days, but the tiny seedlings made only a small amount of growth the first few months. This apparently is due to the priority given the development of a tuberous root prior to top growth. Once the tuberous root forms, top growth quickly increases. The seedlings shown in the photo are a year old and already mature enough to produce a flower. The flowers are very similar to a typical astrophytum flower.

The cultivation of *Astrophytum caput-medusae* is similar to other astrophytums with the exception that it prefers a little less direct sun. In nature they are always found growing under shrubs with a modest amount of shade. I suspect this has more to do with the ability of the seedlings to survive than the conditions preferred by the adult plants. My plants have been grown under artificial light, so I have no direct experience with preferred outdoor conditions.

To be sure, *Astrophytum caput-medusae* is a unique and interesting cactus.

Did you know?

CSSA has been funding research grants for decades!

Both Academic and Private Grants solicited.

Please request a proposal packet from:
Phuc Huynh
Huynhphu7@gmail.com

http://cactusandsucculentsociety.org/Grant_Application_Pkt.pdf

Marlothistella stenophylla

Brian Kemble

Reprinted from SFSCS Newsletter, November 2021

***Marlothistella stenophylla*, a plant with rose-pink flowers, shown in Jan. 2020**

The succulent members of the Aizoaceae have long been referred to as "mesembs", which is a shortened version of the old family name Mesembryanthemaceae. This large family now holds about 1800 species grouped in numerous genera, but many of the species were first described in an expanded concept of the genus *Mesembryanthemum*, which today has been whittled down to a modest-sized genus of about 15 species. By the early decades of the twentieth century, the great diversity of the family was becoming apparent, and the old concept of the genus *Mesembryanthemum* was becoming increasingly unwieldy and untenable. The result was a splintering into a host of more narrowly-defined genera, ranging from large aggregations such as *Lampranthus*, with hundreds of species, down to monotypic genera such as *Lapidaria*.

One of the less-known monotypic genera is *Marlothistella*, with its sole species being *Marlothistella stenophylla*. This plant was first described as *Mesembryanthemum stenophyllum* in 1925. In 1928, the genus *Marlothistella* was created for a closely related plant that was given the name *Marlothistella uniondalensis*, its name deriving from the town of Uniondale, located at the eastern end of South Africa's Little Karoo region. In 1950, mesemb authority Louisa Bolus decided that *Mesembryanthemum stenophyllum* and *Marlothistella uniondalensis* should be regarded as synonyms, and also that they should be included in the large genus *Ruschia*, as *Ruschia stenophylla*. Finally, in 1995, Steven Hammer published an article reinstating *Marlothistella* as a separate genus, so the name changed again to the combination recognized today: *Marlothistella stenophylla*.

Fig. 1 A plant with flowers more on the purple side.

Fig. 2 A *Marlothistella stenophylla* in full bloom with its gray-green leaves protruding like swords from between the flowers.

Fig. 3 A plant showing off its immature capsules with their five segments.

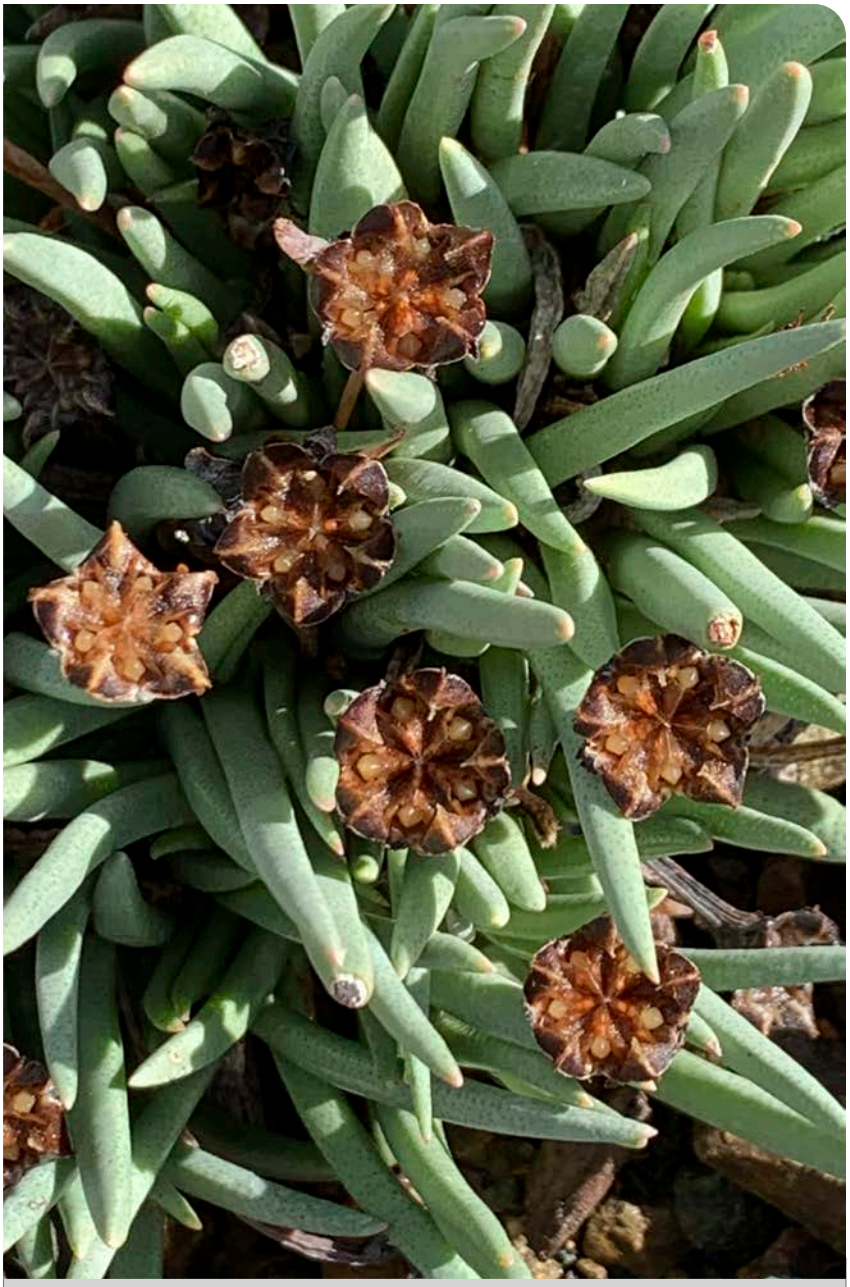
Fig. 4 A plant with capsules of differing ages, the older ones drier and more strongly pentagonal.

Above ground, *Marlothistella stenophylla* is a tight clump of narrow pointed finger-like succulent leaves. In some populations these are as much as 4 inches long (10 cm) and somewhat droopy, while in others they are little more than an inch long (3 cm) and stiffer. In cross-section, the leaves may be round or they may be triangular, and they taper to a ponted tip. The leaf color is usually green or somewhat grayish-green or bluish-green, but at some locations the leaves may redden in exposed positions. The leaf surface is peppered with small dark-green translucent dots, a trait found in various other mesemb genera such as *Pleiospilos, Rabiea* and *Hereroa.*

Below ground, the clump has multiple fleshy tapered roots, resembling a bunch of miniature brown carrots. Such swollen roots are uncommon among mesembs, and they may be evidence of a relationship between *Marlothistella* and other

genera with similarly large tapering roots, such as *Ebracteola* and *Khadia*.

Marlothistella stenophylla is winter-flowering, with a peak in July and August in its South African home. At the Ruth Bancroft Garden in Walnut Creek, the flowering is heaviest in January. The flowers open in the morning and remain open throughout the day. The flower diameter is .8 inch to 1 inch (2 to 2.5 cm), with many narrow radiating petals. Each flower is borne singly atop a peduncle that is about .6 inch long (1.5 cm). The flower color is usually in the pink-lavender-purple range, with a narrow darker midstripe running down each petal. However, at some locations plants may have flowers with a more reddish color.



A plant with open capsules after a rain.

The many stamens are initially gathered into a cone at the center of the flower, with only a narrow opening between them. Later in the flowering, the opening enlarges and the flower's interior is visible. The stamens have white filaments and are topped by anthers bearing yellow pollen. They are encircled by white staminodes (sterile stamens that do not develop pollen). The ovary at the base of the flower is five-lobed, and it develops into a capsule with five locules, or chambers, each containing small pear-shaped reddish-brown seeds. The seeds are only about 1/36 inch long (.7 mm). The capsule diameter is typically .2 to .35 inch (5 to 9 mm), but it may be more than this at some localities. The capsule tapers like a funnel at its base, while its top is flattened, but with five bulging ridges converging at the center, each with a groove down its middle. When the capsule opens, the five wedges between the grooves swing outward to expose the locules with their cargo of seeds. As with many other mesembs, the mature capsules have the ability to open in response to moist conditions, enabling seeds to splash out. They then close again when the rain stops, and they can do this over and over.

The distribution of *Marlothistella* straddles the border between Western Cape and Eastern Cape Provinces, in the southern part of South Africa. Most of the localities are in the central and eastern Little Karoo, in the Western Cape, but the species extends eastward to Joubertina and Willowmore in the Eastern Cape.

Note: all photos are of the Uniondale form of the species growing at the Ruth Bancroft Garden in Walnut Creek, California. This form has leaves that are not as narrow and elongated as those of other forms.

A FEW WORDS ABOUT THE SEED DEPOT

Sue Haffner, CSSA Seed Depot

Pitaya (Selenicereus) seedling
https://upload.wikimedia.org/wikipedia/commons/d/d8/Pitaya_%28seedling%29.jpg

- The CSSA Seed Depot has been a service for members since 1987, providing access to seeds of many plant varieties, both common and rare, for a very reasonable price. Perhaps you've never considered growing succulents from seed. As an old friend used to say, "I won't live long enough to see it bloom!" That's not necessarily true, however, as some cacti can reach blooming size in two to three years, or less.

- Growing cacti and succulents from seed is a facet of the hobby that more growers might consider and that CSSA would like to encourage. With more plants produced in cultivation, there will be less exploitation of plants from habitat. At least, that's the hope.

- The Depot depends on the seed donations of members. It could not function without them, and I am so grateful for the generosity shown. I would like to give a shout-out to these individuals who have provided seeds within the past year: Doug Anderson, Jean O'Daniel. Matt Opel, Russell Wagner, Peter Beiersdorfer, Brian Kemble, Rod Haenni, Roxie Esterle, Thomas Cardinal, Tom Glavich, Rob Hofberg, Kenneth Kohler, Robert Savage, Jeannie Echenique, plus members of my local club, Fresno Cactus & Succulent Society—Fred Gaumer, Dan Gale, Bill Gale and Vickie Veen. Many thanks to all of them.

- The Seed Depot is always looking for cleaned, identified seeds. If you would like to contribute and have any questions, don't hesitate to get in touch with me, sueh@mail.fresnostate.edu.

CSSA SEED DEPOT

Mammillaria longimamma

Josie Watts
Reprinted from Kaktos Komments May-June 2020,
Houston C&SS

Family: Cactaceae Genus: *Mammillaria* Species: *longimamma*

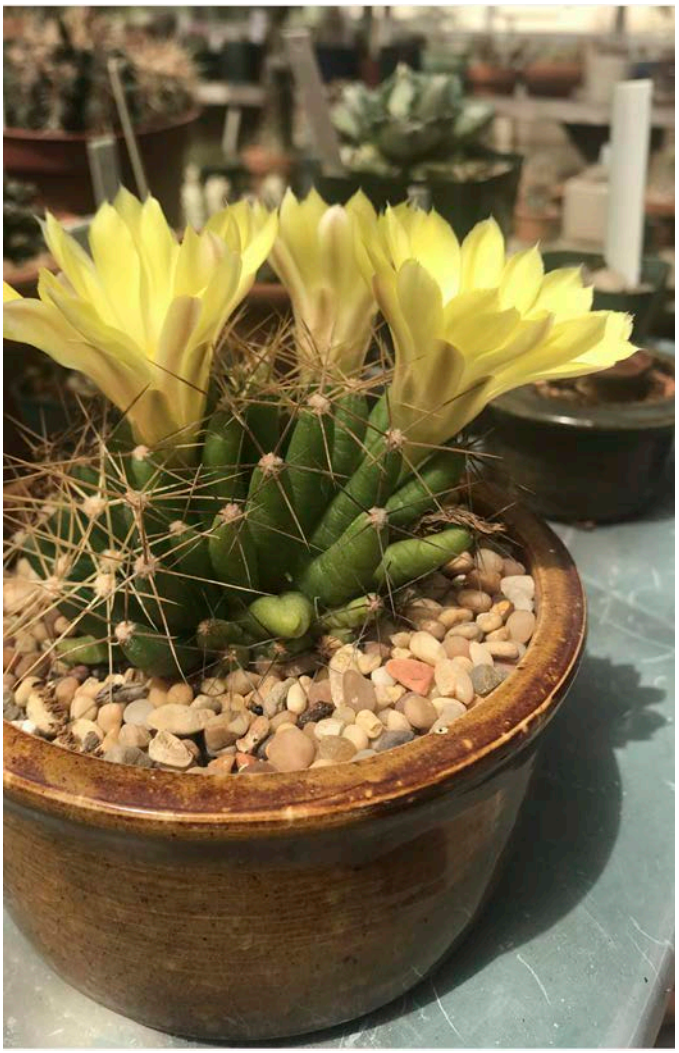
AKA: dolichothele longimamma, mammillaria uberformis

Common names: Nipple cactus, finger cactus.

Origin: This plant originates in Guanajuato, Hidalgo and Queretaria, Mexio, and in Texas. I was unable to determine where in Texas it grows. It grows at an altitude of 1,000 to 2,400 meters above sea level.

Description: The plant is at first solitary, then forming dense clusters. Its height is under 6 inches. The tubercles are long and sparsely wooly. There are 8–10 radial spines, 12–20mm long, white, yellowish, or brown in color and approximately .5 cm wide. The flowers are bright yellow, 6 cm in diameter.

Propagation: It is propagated by seeds, offsets, and tubercles. It is possible to remove tubercles, dry them for a day or two, then plant them, although I have not attempted this. The fruit was mentioned only in www.cactofili.org, where it states that the fruit is not well known, stating the only reference to propagation from seed was in a private collection in Italy back in the 1800's.



They state it is very rarely seen. My plants have not produced any fruits.

Growing conditions: The plant needs moderate water in summer and no water in winter. It can tolerate partial shade to sun. Although it states it grows in zones 9–11, no specific temperatures were given. The only reference to cold tolerance stated it must be protected from frost. It has a large tap root and should be kept in a deep pot with well-draining substrate. One article warned that it was prone to root rot due to the size of the tap root.

My experience with this plant has been very positive. I've had two plants (one pictured) since 2017 and both are thriving. The smaller one has produced an offshoot and the larger one is in the process of doing so. The blooms are large for a mammillaria, and very pleasing. It isn't very fussy and is easy to keep happy.

References:
Dave's Desert website. The Encyclopedia of Cactus website. Onlycactuses.com. www.cactofili.org

Beginner's Guide to 'Big Box' Cacti

Thomas Glavich, Altadena, CA

While picking up home repair hardware or potting mix few of us can skip a cursory look at what is available in the Cactus and Succulent display. The selection varies with season but there are nearly always a few interesting plants for sale. A quick look never hurts. Our nearest Big Box gets plant deliveries on Thursday, so the best selection is late Thursday or early Friday. At the local Big Box the unsold plants are often removed and fresh flats put in their place. Cacti for some reason are placed in a darker corner of an indoor greenhouse with the bigger (and spinier) plants being relegated to the darkest corners. Since the plants probably spent a day in a truck, getting them out of the dark and into the light as quickly as possible is essential. Finding when your local delivery date and buying right after arrival is important to purchasing healthy, unstressed plants.

The ones at the local Big Box were all properly named, and all appeared healthy. Misnamed plants are common in some stores as are completely unnamed plants. I've seen plants at several Big Boxes that were covered with mealy bugs, etiolated from too long in the dark, and scabbed from either skin damage or fungus. These are best left. You don't want to bring home something that is hard to kill or that might spread to other plants. If a few plants in the nursery section are obviously infected, it is best to pass on everything rather than take chances.

Immediate care on getting them home should include isolating

Top: *Gymnocalycium mihanovichii* "Hibotan" as found at a local Big Box store.
Center: This *Hylocereus undulatus* rootstock will need warm temperatures and proper soil to get re-rooted.
Bottom: The same plant- repotted.

them from other plants for a couple of weeks in case of a hidden mealybug or spider mite infestation. They should be washed with a strong stream of water to dislodge any hidden pests. They should then be pulled from the pots, and the roots and potting mix inspected. It is almost certain that they will need to be repotted. If they were in the dark, then they should be left in subdued outdoor lighting for a few days, and moved slowly into brighter light. If the labels are stuck on the pot, then the information should be copied onto a plastic label that will go with the plant. It's not a bad idea to photograph the plant and the label and keep a data base of acquisitions.

A Big Box recent trip had the following available.

Gymnocalycium baldianum, Gymnocalycium mihanovichii, Ferocactus gracilis, Melocactus azureus, Oreocereus celsianus, and two *Gymnocalycium* "Hibotan", one pink and one yellow. What catches the eye immediately is the interesting colored flowers at the top center of each of the plants. The *Ferocactus* turned out to be one of the impossible to find blue flowered cacti. These were purchased in February, not the usual flowering time for any of these, and the flowers were all "straw flowers" attached with a drop of hot glue. There are no blue flowered cacti, but these are not plants for the purist. Some people find these flowers exceedingly annoying. They are easily removed and do no long-term damage.

All the plants filled the pots, except the *Gymnocalycium* 'Hibotan', which were loose and ready to fall over. When removed from sales pots, all the plants were all potted in a mix of forest products, peat moss and perlite. This is fine for a nursery where very high humidity is maintained, along with frequent misting or daily watering and a rigorous fertilizing schedule. These are young plants, seedlings probably not more than a year old, pushed quickly by being grown in large flats, with lot of fertilizer and good light. Given that the plants already touched the edges of the pots (and were probably this size when put into the sale pots), they were clearly ready for root inspection and repotting.

As purchased, everything was under potted. The commercial nursery potting mix is not the best for continued strong growth. Peat Moss is nearly impossible to re-wet with a normal watering regime, and water will just run down the edges of the pot. The first step in getting them repotted is to get the old potting mix off. The figure (center) shows the *Gymnocalycium mihanovichii* roots. The *Gymnocalycium mihanovichii* roots are healthy, and a reasonable size for the pot. This is a healthy well-grown plant. It can easily take a 3½ inch pot, and will fill this before the end of this year's growing season. The after picture (bottom right) shows the *Gymnocalycium mihanovichii* repotted, ready for the next growing season.

The pink *Gymnocalycium* 'Hibotan' was another story altogether. The pink top is grafted on a fast growing tropical *Hylocereus undulatus*. The stock plant does poorly in cold weather, generally rots anyway after a year, and should be replaced by something more permanent. Inspection of the roots of this plant shows that there

Top: *Gymnocalycium mihanovichii*, in Big Box store packaging.
Center: Nice plant, nice roots.
Bottom: Without the glued on straw flower, you'd never guess this *Gymnocalycium mihanovichii's* Big Box store origin.

are hardly any. *Hylocereus* are very easy to root, as long as a warm environment and high humidity are provided. Unless this plant is properly repotted, and then kept in a warm environment this plant is doomed. It needs time to reroot and re-establish some strength. The picture (bottom, left) shows this properly potted, in a mix of pure pumice to ensure rapid rooting and fast root growth. An even better solution would be to change the graft to a better root stock, something already rooted and actively growing, and not as cold sensitive. These are not plants for the cactus collector. They are going onto a windowsill or an office partition and are not expected to last more than a couple of months.

The next plant investigated is the *Oreocereus celsianus*. The first picture (top) shows its receiving picture. The second shows the bottom of the root ball (center). Note the curved constricted roots at the bottom of the ball. If the *Oreocereus* remains in this small a pot, the growth will quickly stunt, the potting mix will be nearly impossible to wet, and the hairs will get wet every time the plant is watered. The health of the plant is excellent now, but it will rapidly begin to suffer unless it is repotted. The final picture (next page) in this series shows it repotted in a more suitable pot. These are heavy feeders and fast growers. This is likely to need repotting again before the summer is over. The red 'flower' was left on the plant. It doesn't pull off easily, and there is no point in damaging the plant. It will fall off in a month or so.

The final picture is one reason for checking out Big Box cactus offerings. It was purchased in a 2 inch pot from the local Big Box, and looked like a normal *Mammillaria perbella* when purchased. After a couple of dichotomizing splits, it began to get crest. This is what it looks like today (8 years after purchase) in a 10 inch pot.

Top, left: Straight off the megachain shelf, *Oreocereus celsianus* comes with a decorative flower.

Center, left: To retain its good health, this plant will be repotted in a cactus mix.

Bottom, left: Now repotted, this *Oreocereus celsianus* has a chance to grow into a beautiful adult plant.

Bottom, right: This *Mammillaria perbella* came home from the Big Box store about 8 *years ago.*

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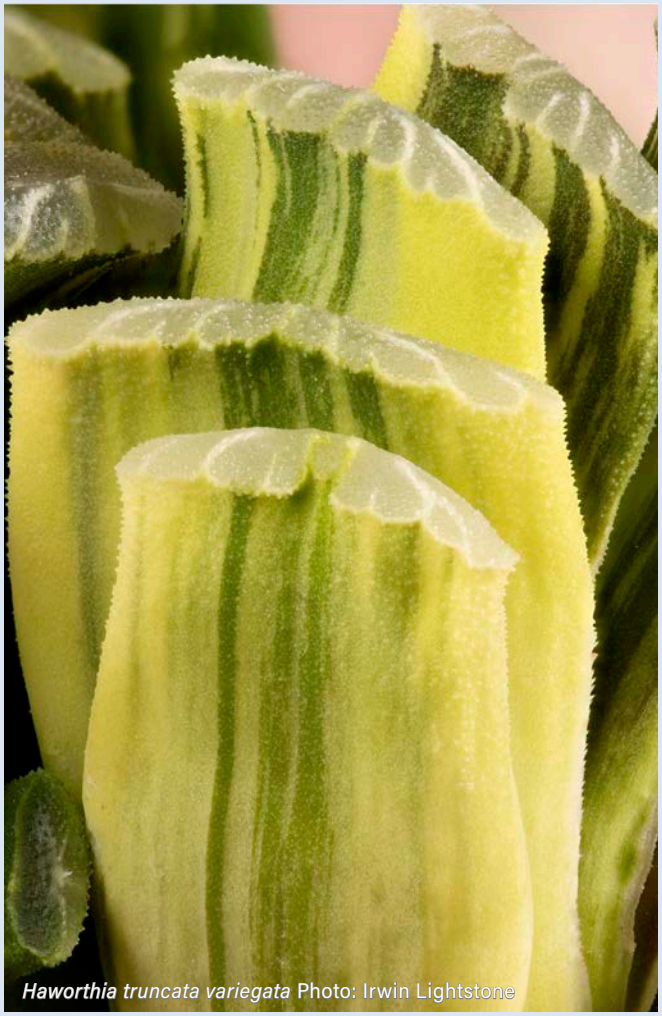

Haworthia truncata variegata Photo: Irwin Lightstone

2022 Resource Guide

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http://cactusandsucculentsociety.org/Affiliates/affiliates.html

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Keep up to date and in the know! Bookmark your CSSA Calendar of Events today. It's the place to find out about shows, sales, upcoming conferences and webinars. (Currently most of our events are on hold due to the pandemic. We will be ramping up as soon as we are able, so stay tuned!)
http://cactusandsucculentsociety.org/calendar_of_events.html

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Uncarina roeoesliana

The prolific blooms of *Uncarina roeoesliana* (right) attract a wide range of pollinators here in Zone 6. Blooming begins in late spring and goes into summer or later. While most Uncarinas have a specialized beetle pollinator in their native habitat, this Madagascan species can adapt to local pollinators.

As each bright yellow flower drops, a wicked barb begin to form in its place, finally drying to a spiky seedpod (top). Breaking this pod open, to see if seeds formed, is no easy task. The sticky barbs attach firmly to fingers or clothing. Removing the offending seedpod is painful and irksome. A genuis strategy for seed dispersal in the wild, though.

The video, How to Open an Uncarina Seed Pod* reiterates how those relentlessly sticky barbs must be removed in order to reveal what's inside this amazing, armored seed pod.

*Turtle Walker https://www.youtube.com/watch?v=NG4Ecn8azx4

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

To The Point

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