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Kaktos Komments

a bimonthly publication of the Houston Cactus and Succulent Society
to promote the study of cacti and other succulents



Hungry Bee on Mammillaria plumosa
by John Weistroffer



Houston Cactus and Succulent Society
Founded in 1963
Affiliated with the Cactus & Succulent Society of America

Membership

Sara Ortiz and Andrea Varesic

Wow, you won't believe what happened on January 24th - it was our group's first meeting of the year, and it was absolutely incredible! Our family has continued to grow; this time, we had a whopping 41 members and nine guests - it was the biggest meeting we've ever had! And the best part? This is just the beginning of a fantastic year, 2024 - we're growing faster and stronger than ever. And let me tell you, the meeting was packed with excitement from start to finish. We had some fantastic presentations, program by Steven Brack "Strange Mesembs", Jeff Boggan's showcase of the stunning *Aztekium valdezii* for our January Cactus of the Month, and Liliana Cracraft's introduction of the beautiful Succulent of the Month, *Euphorbia lomelii*.

But that's not all - our President, Andrea Varesic, generously donated a couple of giant Apple Cacti, and we gave one away as a door prize, and the other went to the exchange table. And guess what? Lucky Jose Jimenez, one of our guests, and I were the lucky winners! It was an unforgettable meeting, and we can't wait to see what's in store for the rest of the year.

On February 28, 2024, HCSS met at the Metropolitan Multiservice Center. There were 29 members in attendance, four guests and 12 members joined us on zoom.

Program "The most famous genus of all: *Astrophytum*" by Gierayl Nacar Clepper. The February Cactus of the Month, *Astrophytum myriostigma*, was presented by John Weisteroffer. The succulent of the month, *Aloe brevifolia*, was presented by Kristi Schmidt.

Many door prizes (potted plants, agave pups, a keychain and coaster) were donated and won by attending members. The last of the books from the estate of Mr. Grant Wells were taken home by many in attendance. The raffle table was active with donations from our members.

The cactus T-shirt design contest results were announced. Karina and Samantha submitted a total of 16 designs for a new club T-shirt. Two designs were the clear winners of a membership wide vote. Karina's number two blue design and Sam's number one desert design were chosen. Karla printed, these designs on canvas bags and swag to illustrate the winners.

We want to thank Wally for a donation of \$50 to the club.

Calendar:

March 13, 2024	7:00 pm Board Meeting via Zoom
March 27, 2024	7:00 pm Membership Meeting, Metropolitan Multi-Service Center "New Mexico and Texas Desert Habitats (Part II): South NM and West TX, " Are hard-to-grow desert plants hard to grow in Houston?" by Echo Pang
March 30, 2024	Field trip to Tom Cardinal's house in Humble
April 20, 2024	Potting party at Karla's house. Details announced later by e-mail
April 24, 2024	7:00 pm Membership Meeting, Metropolitan Multi-Service Center "Drainage: Practical Data for Effective Potting Mixes," explaining the science behind water retention in soils. by Joseph Rodd
May 1, 2024	Deadline for submitting articles for the KK.
May 10-11, 2024	Spring Sale, Metropolitan Multi-Service Center

Stay tuned on HCSS's monthly preliminary educational programs.

“New Mexico and Texas Desert Habitats (Part II): South NM and West TX “ Are hard-to-grow desert plants hard to grow in Houston?

- Echo Pang, HCSS 1st VP and Owner of Echo's Cacti and Succulents

Spring is chiming in and it is the best time of the year for hikers to enjoy nature's beauty. **In March, Echo will lead her audience on a virtual trip to various habitats from New Mexico back to Texas.** She will share her method of locating and identifying habitat plants and documenting wild plant seeds collected from habitats. Echo will also share her experience on utilizing different microclimate in one's front and backyard to accommodate “hard to grow” desert plants species in tropical Houston climate.

Here is a short bio of Echo Pang:



In my eyes, cactus is a combination of “beauty and beast”- delicate flowers embraced by ferocious spines. And their strategies of surviving the harshest habitats never cease to amaze me.

Growing cactus and succulent in Houston connects me from the tropic to the desert and from home to nature. I can explore the world's geography and study many climate types upon researching plants. The most fun part comes from combining multi-principal knowledge with botany and apply them in growing thousands of cacti and succulent species in Houston, where we face challenges of summer flood and winter hard freeze. In 2022, my husband HK and I started Echo's Cacti and Succulents nursery to offer plants and seeds for sale on our Etsy store (<https://echosacti-succulents.etsy.com>). We have roughly 1500 species of cacti and succulents to date and we are still expanding by mainly propagating from seeds. This is just a beginning. Our goal is to eventually have a botanical garden designated to cacti and succulents for Houston.



“Drainage: Practical Data for Effective Potting Mixes,” explaining the science behind water retention in soils.

by Joseph Rodd, HCSS Conservation Chair

We all know that a “well-draining” potting mix is essential to growing healthy cacti and succulents, but in our humid Houston climate, what does that actually mean? Everyone's definition is different, and – spoiler alert – many of the classic “well-draining” recipes actually hold a lot more water than you think.

In April, Joseph Rodd will present an updated version of Practical Data for Effective Potting Mixes for proper soil drainage. You've probably seen Joseph at meetings; he currently serves as HCSS's conservation chair and grows a variety of cacti and succulents from seeds. Last year he spoke to us about the cacti of Big Bend. In this presentation, Joseph will provide lots of useful information to analyze different soil materials;

how they perform, and where to buy them in Houston. There will also be a live demonstration, and everyone is encouraged to participate! Just bring a zip-lock bag or a small pot of your own typical potting mix if you want to test it out.



Three Conservation Updates from 2023

By Joseph Rodd, HCSS Conservation Chair

1. An Effort to Protect Saguaros from Heat and Drought

Over 60% of cactus species face elevated extinction risks due to climate change. The famous saguaro (*Carnegiea gigantea*), which is native to the Sonoran Desert of Arizona and Mexico, is no exception. Maybe you have already heard about the challenges faced by this iconic species, since last year multiple major news outlets reported on the threats it faces from extreme heat and lack of rainfall associated with climate change.

2023 was Earth's hottest year – by far – in over 150 years, and July marked the hottest month on record. In the Phoenix area temperatures reached over 110 degrees 30 days in a row, “the really large, old, majestic plants are the ones that are being impacted the most,” explained Kevin Hultine, Director of Research at Phoenix's Desert Botanical Garden. Saguaros “between 40 and 80 years old are just collapsing because of the combination of drought and heat. The garden has about a thousand saguaros, and typically 10 die every year, but since 2020, it's been more like 40.”

Thankfully, the National Park Service reports that “there is no indication of this phenomenon occurring in Saguaro National Park,” where temperatures are typically a bit cooler than in Phoenix. There, “concerns in seasons of drought revolve around the establishment of new saguaros. Seedlings are vulnerable in their early years as they attempt to take root and grow in the Sonoran Desert, and they cannot store water when they are very young.” Unfortunately, the park has been in an extended period of drought since the mid-1990s, which “has resulted in a lot fewer saguaros entering the population in the last 25, 30 years.”

Scientists and conservationists are working to combat these challenges. Dr. Helen Rowe, associate research professor at Northern Arizona University, has partnered with scholars from the Desert Botanical Garden, University of Arizona, Audubon Society, and National Autonomous University of Mexico to identify and



propagate the most drought- and heat-tolerant subpopulations of *C. gigantea*.

Interestingly, there are some areas of the Sonoran Desert where, despite the local climate being even harsher than in Phoenix, saguaros still seem to be flourishing. In particular, “Kofa National Wildlife Refuge is a really hot, dry environment, yet the saguaros there are thriving – they’re doing really well,” Dr. Rowe said. “So that’s of great interest.”

Her team plans to take seeds from *C. gigantea* in that area, along with others, and compare how they grow in northern Mexico, Tucson, and Phoenix. “We want to be able to plant saguaros that will be the most well adapted to basically our new, hotter environment,” said Dr. Rowe. However, because they are so slow-growing, identifying and breeding heat-resistant saguaros could take many years, and the project is not yet fully funded.

2. Compromise in California’s Battle to Protect the Joshua Tree

The saguaro isn’t the only succulent with a national park named after it that is suffering from heat and drought. The National Park Service explains: “in Joshua Tree, we are experiencing the effects of climate change. From 1895 to 2016, the annual precipitation dropped by 39 percent, and the average temperature increased by 3°F (2°C).”

The Joshua tree (*Yucca brevifolia*) grows in the Mojave Desert of the United States and Mexico, where in harsh areas it is already too hot and dry for all but a few young seedlings to become established. Current research suggests that by 2099, “the average annual temperature inside the park could increase by 8°F (5°C) [and] eliminate nearly all suitable habitat for Joshua trees in the park. Even with lower emission scenarios, nearly 80 percent of suitable habitat in Joshua Tree could be lost.”



For the Southwest’s most famous yucca, the problem of climate change is compounded by other threats. Joshua trees are also being destroyed in large numbers by wildfires and development. Over the past decade, a housing boom in southern California has led developers to “bulldoze them by the thousands.” This has carved up the Joshua tree’s range, 40% of which is on private land, into small isolated habitats, damaging an entire ecosystem in the process.

In 2019, the Center for Biological Diversity (which I’ll just shout out briefly as one of my absolute favorite conservation organizations) filed a petition to protect *Y. brevifolia* under the California Endangered Species Act. This led to a four-year legal battle that pitted environmentalists, native tribes, and politicians who supported the petition (like California Senator Dianne Feinstein) against solar companies, developers, and labor unions that opposed it.

First, in 2020, the California Department of Fish and Wildlife voted unanimously to make Joshua trees candidates for protection, which instantly provided interim/temporary protection across the state. Development interests attempted to overturn this protection in court, but this effort was rejected by a judge in 2022. However, that same year, the California Department of Fish and Wildlife ended up recommending that the state *not* protect the Joshua Tree.

Last year, the California legislature stepped in to pass an unprecedented law that represents a sort of compromise. The Western Joshua Tree Conservation Act, which is the first state law specifically focused on protecting a species from climate change, requires companies to obtain a permit before cutting down or relocating

a *Yucca brevifolia*. These permits are easier and cheaper to get than if the state had listed the tree as protected, which obviously benefits developers. But environmental groups applauded the precedent established by California's new law, pointing out that it's certainly "better than requiring no permit at all."

3. Good News for the Colorado Hookless Cactus (or Cactuses?)

Most succulents are nowhere near recognizable as the Joshua tree and Saguaro, and I was unfamiliar with the Colorado hookless cactus (*Sclerocactus glaucus*) until it found itself in conservation headlines last year.

2023 marked the 50th anniversary of the Endangered Species Act, the landmark national legislation that still serves as the primary framework for protecting imperiled species from extinction. Although the United States had passed earlier legislation in 1966 and 1969, these acts were limited in scope; in fact, plants were not even eligible for protection. Since 1973, over 1,700 total species have been listed, and today the US Fish and Wildlife Service considers significantly more plant species endangered than animals.

Coinciding with that anniversary, the US Fish and Wildlife Service proposed last year the removal of the Colorado hookless cactus from the list of federally threatened species. This announcement is the result of ongoing conservation efforts, but also better scientific understanding of the genetics and taxonomy of the plant in question.

It turns out that the Colorado hookless cactus isn't one cactus; it's two: *Sclerocactus glaucus* and *Sclerocactus dawsonii*. Both are small barrel-shaped cacti (typically under five inches tall) that produce gorgeous pink flowers in spring, and both are endemic to a narrow range of semi-arid high-elevation desert in western Colorado. But the latest genetic analysis suggests that they should be considered distinct species.

After an extensive five-year review, the US Fish and Wildlife Service recommended that *Sclerocactus glaucus* be removed from the federally threatened species list, and that *Sclerocactus dawsonii* not be listed. The department found that "the species are much more abundant than thought to be at the time of listing," and emphasized that "collaborative conservation activities have contributed to the positive outlook for the species."

Still, the future of these cacti remains unclear. Nearly all populations of both species are threatened by habitat destruction for energy extraction, water storage, transportation, and residential development projects, not to mention industrial rock collection operations, illegal plant poaching, and damage from livestock. As a result, the Denver Botanic Gardens, which has led much of the research on these rare species, will continue to monitor their populations for another ten years.



Sources:

Saguaros:

Davis-Young, Katie. "Scientists hope to breed a heat-resistant saguaro as more die in a warming climate."

NPR. <https://www.npr.org/2023/08/25/1196064415>

--. "Researchers are looking for ways to protect saguaros from climate threats." 91.5 KJZZ. <https://kjzz.org/content/1855390/researchers-are-looking-ways-protect-saguaros-climate-threats>

“Excessive Heat and the Saguaro.” *National Park Service*. <https://www.nps.gov/sagu/excessive-heat-and-the-saguaro.htm>

Pillet, Michiel, et al. “Elevated extinction risk of cacti under climate change.” *Nature*. <https://www.nature.com/articles/s41477-022-01130-0>

Shafiq, Saman. “‘Sentinel of Southwest’: Saguaro cacti are collapsing, dying in Arizona heat.” *USA Today*. <https://www.usatoday.com/story/news/nation/2023/07/26/saguaro-cactus-dying-arizona-heat-reuters/70470713007>

Zhong, Raymond and Collins, Keith. “See How 2023 Shattered Records to Become the Hottest Year.” *New York Times*. <https://www.nytimes.com/2024/01/09/climate/2023-warmest-year-record.html>

Joshua Trees:

“California Legislature Passes Joshua Tree Protection Law.” *The Center for Biological Diversity*. <https://biologicaldiversity.org/w/news/press-releases/california-legislature-passes-joshua-tree-protection-law-2023-06-27>

“Climate Change.” *Joshua Tree National Park*. <https://www.nps.gov/jotr/learn/nature/climate-change.htm>

“Saving the Joshua Tree.” *The Center for Biological Diversity*. <https://www.biologicaldiversity.org/species/plants/Joshua-tree/index.html>

Wells, Caleigh. “California is taking an unprecedented step to save Joshua trees.” *NPR*. <https://www.npr.org/2023/07/06/1186154299/california-is-taking-an-unprecedented-step-to-save-joshua-trees>

Colorado Hookless Cactus:

“Colorado hookless Cactus (*Scelerocactus glaucus*).” *U.S. Fish and Wildlife Service Environmental Conservation Online System*. <https://ecos.fws.gov/ecp/species/2280>

“Endangered Species Act of 1973.” *Wikipedia*. https://en.wikipedia.org/wiki/Endangered_Species_Act_of_1973

Kesting, Amanda. “Colorado cactus to be removed from threatened and endangered species list.” *9 News Denver*. <https://www.9news.com/article/tech/science/colorado-cactus-threatened-endangered-species/73-57dbf54d-0a0b-4e91-94d2-09b15bdce90b>

“National Collection Spotlight: Colorado Hookless Cactus (*Scelerocactus glaucus*).” *Center for Plant Conservation*. <https://saveplants.org/plant-profile-colorado-hookless-cactus-sclerocactus-glaucus/>

Szuszwalak, Joe. “Protections no longer needed for Colorado hookless cactus.” *U.S. Fish and Wildlife Service Press Release*. <https://www.fws.gov/press-release/2023-04/protections-no-longer-needed-colorado-hookless-cactus>

March Cactus of the Month**Josie Watts****Mammillaria mazatlanensis****Family:** Cactaceae**Genus:** Mammillaria**Species:** Mazatlanensis

This is a small cylindrical plant with reddish-brown spines. It forms clumps with many heads. The plant can grow to 6" tall and the heads, 2" in diameter. There are 1-6 central spines, 12-18 radial spines. The spines are sometimes hooked. It is greyish green in color. Mine has reddish highlights.

It flowers in summer with large blooms, often purple in color, but pink to red are also possible. It has green stigmas. Fruits are reddish to brown, club-shaped, and up to 2 cm and containing tiny black seeds.

The plant is native to Mexico along the Pacific coast.

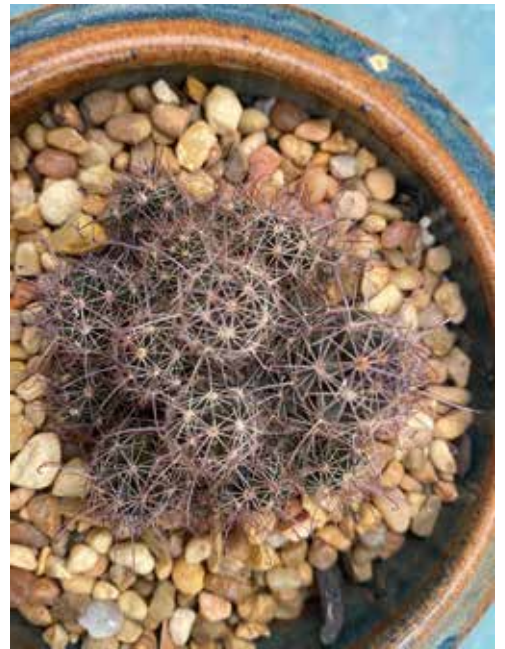
For growing conditions to be optimal, it requires good drainage like most cacti. It is heat-tolerant, but not completely cold hardy. It can possibly withstand temperatures as low as 25°F, but must be kept dry. Although it requires deep watering when dry spring to fall, water should be withheld in winter when it is dormant. I stop watering when we start getting cold fronts in the low 40's. I also fertilize lightly with each watering during the growing season and use rainwater. It should be repotted every 2-3 years and this is best done in late winter to early spring.

Propagation is through offsets or seeds.

My plant was purchased from Echo Pang in September of 2022, at which time it was repotted. It lives in my greenhouse and has approximately doubled in size. Last summer it got infested with mealy bugs, for which it was isolated, the mealy bugs were removed several times, and it was finally treated with a systemic insecticide.

It is one of my favorites because of its unusual color and small size. It has not yet bloomed for me.

References: LLIFE, World of Succulents, and Dave's Garden.



March Succulent of the Month**Bruce Moffett*****Euphorbia neriifolia***

Euphorbia neriifolia, also known as Indian Spurge Tree, is one among the over 2,000 species that belong to the Euphorbiaceae family. It is native to Eastern or Central India and also reported in Sri Lanka, Burma and Thailand.

When cultivated, it looks more like a shrub since it has the traits of a perennial succulent plant. As the plant slowly matures you can expect it to form a tree shape and reach up to 20ft. Most notable feature of the plant are the green leaves that have a strong yellow color on the outside. When the plant flowers you can expect it to produce bell-shaped yellow-green flowers. Another notable feature is the two pronged spikes that line the stems where leaves grew that make it difficult to handle.

Euphorbia Neriifolia needs strong light. Full to partial sun is the best for its growth. It is better to grow outdoor rather than indoor. The watering method is very important to keep the plant healthy. It should not wet feet and an excess amount of water should be avoided. The best way of watering is soak and dry method to avoid overwatering. It prefers a warm climate and will appear dormant when the temperature drops below 50 degrees. It can survive at zone 10a-11b. If you live in a cold area, it is better to plant Indian Spurge Tree in an indoor environment.

It can be propagated by leaf cuttings or seeds. When propagating from cuttings, cut a leaf from the mother plant carefully with a clean knife or scissors. Before replanting, wait for a few days to allow it to callous. You can use root stimulator. Use well-draining pots and soil. It is a slow grower so even though it can be propagated by its seeds is not recommended.

Maintaining the plant is fairly easy. When growing indoors where light isn't too bright, the growth hormones might signal the plant to grow in a leggy manner. So, you want to prune the stems just to keep them in perfect shape, and place it somewhere it won't struggle to search for light. Growing outdoors make sure it gets lots of sun and the pot drains well and don't do much else.

Even though this *Euphorbia* variety is a hardy plant, it is also prone to a few common issues such as root rot and algae growth which crop up as a result of overwatering. Get rid of any leaves that show signs of wilting or appear to suffer from fungal diseases.



April Cactus of the Month

Jose Jimenez

Name - *Echinopsis lageniformis*

Synonyms- *Trichocereus bridgesii*, *Echinopsis scopulicola*

Common names- Bolivian torch cactus, achuma or wachuma

Habitat/distribution- Native to the Bolivian high desert, near La Paz Bolivia. Occurs in Altitudes of 2000 and 3000 meters above sea level. Found growing on rocky cliffs near rivers.

Description- light green skin ranging from 4 to 8 ribs. 4 to 6 needle like spines that can be uneven and vary in length. Has white flowers 8 inches in length, 4 inches in diameter flower has small scales and hairs. It is self sterile, so 2 unrelated cacti are needed to produce fruit. *E. lageniformis* is a night blooming cacti. Matures at 16 feet tall, larger specimens can lose their spines. It also branches out like a tree.

Cultivation/growth - once established can grow 11 inches a year. One of the fastest growing of other trichocereus. Very easy to grow from seed. Seeds can remain viable for 5 to 10 years. Requires fast draining rocky soil. Should be brought in or covered during hard freezes.

Remarks- some of the more known cultivars are *Trichocereus bridgesii cristata*, lumberjack, phycho0 and penis cactus which is a monstrose form. Also can be used as a option as grafting stock.

References

Trichocereus.net

Cactus-art.biz via Google

Wikipedia.org - *Echinopsis lageniformis*



April Succulent of the Month

Andrea Varesic

Euphorbia pseudotrinervis Bruyns (since 2006)

Family Euphorbiaceae, spurge family

Synonym: *Monadenium trinerve* P. R. O. Bally

(Original name 1959)

Habitat/distribution: It is found in the desert or dry shrub-land biome in Kenya. It is winter and drought deciduous.

Description: It is a rare caudex Euphorbia. The caudex can reach 5 cm in height/diameter and the branches can grow up to 35 cm. Flowers are chartreuse to pink in color and are found on the terminal ends of the branches.

Cultivation/growth:

It is recommended to repot the plant after it doubles in size or once a year, whichever comes first. It is propagated by seeds or cuttings.

I purchased this plant at my favorite nursery in Sarasota, Florida last fall.

Sources:

Llifle.com

Paradisefoundnursery.com



My plant



bihrmann.com

HCSS January and February 2024 Program Highlights

Echo Pang

January 24th, 2024: "Strange Mesembs" by Steven Brack, CSSA Fellow and Founder of the Mesa Garden.



In this presentation, Mr. Brack showed us many beautiful Mesembs in South African habitats. One trait of Mesembs is the unequal size in the pair of leaves, this feature is called anisophylly. The unusual leaf shapes and odd symmetry are on display to show how Mesembs have adapted to live in nature. "They are the plants that resemble stones live in South Africa and Namibia. They live in various kinds of geology from sandstone, granite and quartz. The rocks reflect away some of the heat from the sun in the summer. In the winter when the rocks get cold they condense moisture out of the night air and provide a trickle of water to keep the plants alive in a very dry climate. This

condensation is not picked up by rain gauges so the climate appears to be drier than it actually is. — Steven Brack".



Fig.1: *Dinteranthus wilmotianus* ssp *inexpectatus*;



Fig.2: *Conophytum lydiae*- the plant is approx 0.5 inch across;



Fig.3: *Conophytum obcordellum*.

Almost every plant body you see is an individual plant on its own root system. They are living in a shallow rock pan that is about 0.25 inch deep in a layer of coarse sand grit. Underneath the grit pan is a huge solid slab of sandstone rock. They are out in full sun with no shade. The winter is fine as often the pan fills up with water from fog and drizzle. But for the warm-hot months there is no rain at all, and virtually no clouds, so the tiny plants survive the hot dry summer. The individual plants are less than 0.5 inch across, so very tiny. Yet they live like jewels of great beauty.

February 28th, 2024: **“The most famous genus of all: Astrophytum”** by Gierayl Nacar Clepper, Astrophytum grower and owner of Madam Cacti.

In this presentation, Ms. Gierayl Clepper introduced the audience to the genus of Astrophytum. There are six species in the genus namely: *A. asterias*, *myriostigma*, *capricorne*, *caput-medusae*, *ornatum* and *coahuilense*. She showed us the endangered conservation status of these plants in the wild and a habitat of *A. asterias* in South Texas. She also showed various cultivars created from selective breeding by Japanese growers over the years. Her work of hybridization of her plants has yielded many unique looking plants with interesting flowers.



Finally, here are her tips about caring for Astrophytums:

- 8-10hrs of bright filtered sun
- 70/30 inorganic vs. organic for the soil
- Fertilize twice a year in March and October
- Repot every 2 years
- Astrophytums are summer growers



BRUCE BAYER HAS DIED (1935-2023)

Wallace Ward

As a long-term member of HCSS I settled on close study of the genus *Haworthia*, obtained seeds from the *Haworthia* Society (headquartered in the U.K.), and began growing lots of *Haworthias* in 2003-2006. I went looking for reference books on the genus over the years and was delighted to find *The New Haworthia Handbook* (1982), *Haworthia Revisited. A Revision of the Genus* (1999), and a series of *Haworthia Updates--Thoughts and Observations on the genus Haworthia* (2010-2012), all authored by Bruce Bayer.

Bayer's publications I found to be carefully reasoned and at the same time flexible, given the variations in *Haworthia* and related genera. His publications also documented his extensive studies of these plants, which are endemic to South Africa and which are scattered all around that country. I learned that *Haworthias* could hybridize easily in nature, so I began hybridizing my own plants to see what would happen.

Therefore it was with sorrow that I learned Bruce Bayer died in 2023. His life is celebrated in the February 2004 issue of *Haworthid*, which arrived in my mailbox on March 1, 2024. I think one of the best ways to honor the life of Bruce Bayer is to quote his thoughts on the effects of South African "Landscape and habitat" on his work (quoted from *Haworthia Revisited. A Revision of the Genus*, p. 220, published in 1999 by Undaus Press, Hatfield, South Africa):

Even living in South Africa and frequently moving about in the countryside, it is very difficult to appreciate the magnitude of the task of trying to understand *Haworthia*. The scale and extent of the problem is only appreciated after many footsore miles. The terrain where the plants grow is invariably rocky and steep, the rocks and soil loose underfoot and access often denied by fences and general inaccessibility. A false sense of understanding is given by those populations which can be seen from the window of a car--and despite the small size of the plants, there are many populations that are that easy to find.

However, the problem is in trying to establish similarities and differences between different populations--in trying to find something that is not there. Populations can be so small and restricted, or the plants so cryptic, that it can often only be claimed of an area that no plants were found. And not that nothing is present there . . . Hopefully this will be done by someone who has a sense of the natural order of things and an appreciation and respect for the desirability of leaving things that way.

So Bruce Bayer should be memorialized for the difficulty and length of his lifetime of exploration and his sharing of his extensive work product with the world about *Haworthia* and related genera.

Tylecodon opelii

by Richard “Cactus Boy” Stamper

T. opelii is a seldom seen geophyte. I obtained two *T. opelii* and two *T. occulens* back in 2021. After killing one *T. opelii* and both *T. occulens* I thought this little gem was also defunct. However, I saw some green on the very tip of the tuber. Reading up on *Tylecodon*, I discovered that they are winter growers. Being late spring at the time, I decided to put the pot under the bench where it could get shade. After summertime, a single leaf emerged. With careful watering and attention, it made it through the growing season. By 2023 several leaves have emerged.

Here is the formal description of *T. opelii* from the website World of Succulents.

Scientific Name

Tylecodon opelii van Jaarsv. & S. A. Hammer

Scientific Classification

Family: Crassulaceae

Subfamily: Kalanchoideae

Genus: *Tylecodon*

Origin

This species is endemic to fields of broken quartz in northern Knersvlakte in the Western Cape Province of South Africa.

Description

Tylecodon opelii is a dwarf geophyte with pale grey-brown, somewhat flaking tuber and usually solitary (rarely up to 3) dark green to nearly black, almost glabrous leaves with just a few fine hairs. The tuber is oblong, up to 1.4 inches (3.5 cm) long, and up to 1.6 inches (1.5 cm) in diameter. Leaves are thick, fleshy, marble- to club-shaped, up to 0.6 inches (1.5 cm) long, nearly equal in diameter, with both surfaces slightly shining. The lower surface of the leaves is flushed beet red. Flowers are cylindrical to slightly funnel-shaped, marron green, up to 0.6 inches (1.5 cm) long, and appear in summer when the plant sheds its leaves.

Etymology

The specific epithet “*opelii* (oh-PEL-ee-eye)” honors Dr. Matt Opel, a botanist from UConn who discovered this species.

I hope this little thing will eventually flower. I planted it in an 80/20 mineral/organic substrate. These days it is on the top bench in the greenhouse with other small plants under 60% aluminet shading.



