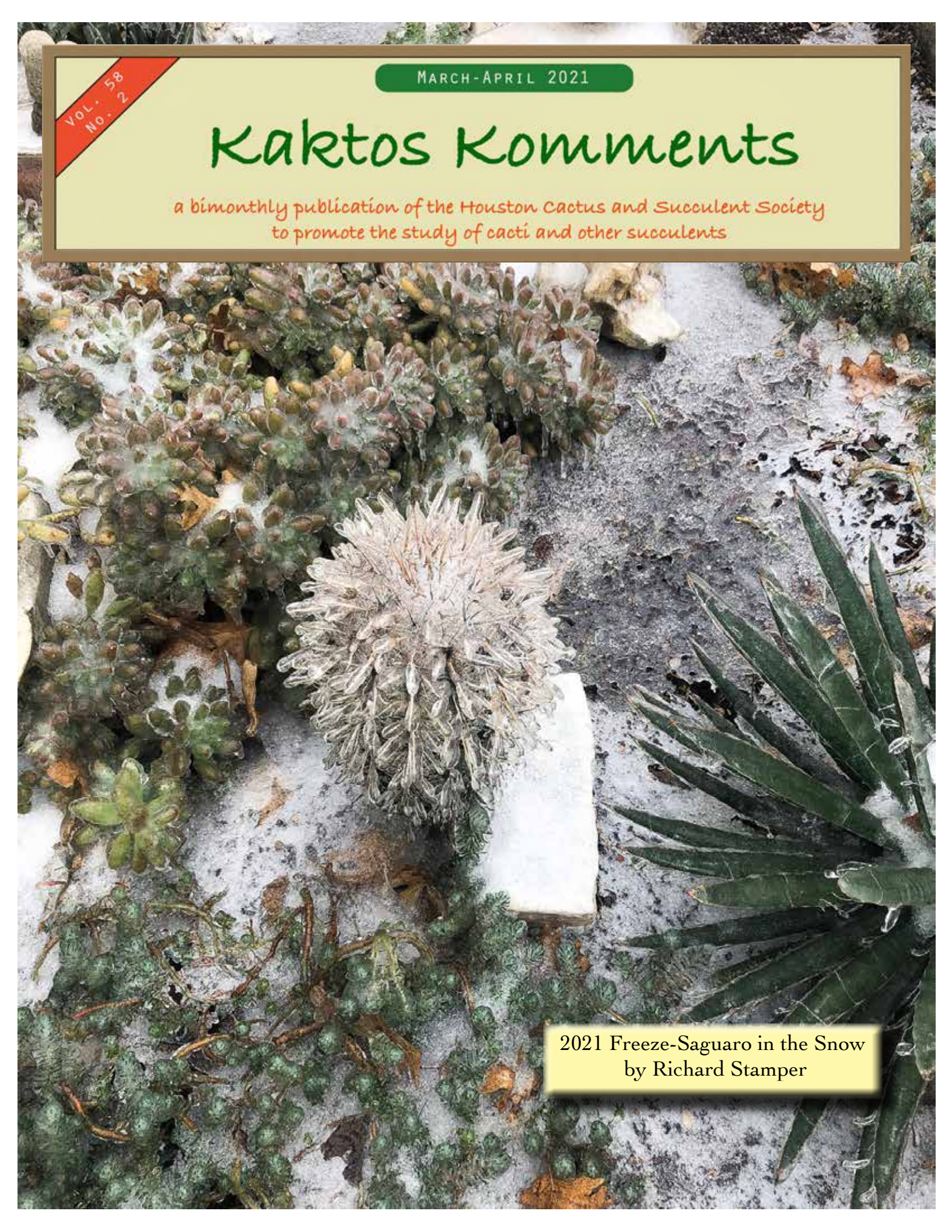


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Kaktos Komments

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



2021 Freeze-Saguaro in the Snow
by Richard Stamper



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

From the editor**Karla Halpaap-Wood**

February surprised us all with unusual cold weather. Most of us lost electricity for hours or days, which made it hard to keep our plants above freezing. Last time I saw temperatures like that in Houston was in 1989. Now it's time to clean up and replace what we lost. I was lucky, most cacti and succulents in greenhouses stayed above freezing, lost only a few large opuntias that I did not protect.

Membership**Kathy Fewox**

Due to COVID-19 restrictions, HCSS will continue to meet via Zoom for the foreseeable future. While not as much fun as meeting in person, the Zoom meetings are enjoyable and informative. Plus, you can always turn off your camera if you prefer, and dress as informally as you wish.

The HCSS Zoom meeting of January 27th was attended by eleven people. Richard Stamper presented a very enjoyable program on *Haworthia splendens*. David Van Langen gave an interesting Cactus of the Month presentation.

On February 24 our Zoom meeting was attended by fifteen people. Chaden Yafi presented a fascinating and informative program on Plant Neurobiology. Josie Watts told us about her Cactus of the Month, and Succulent of the Month was presented by Karla Halpaap-Wood.

Everybody please stay safe by masking up and observing social distancing, and get that vaccine as soon as you can. Together, we can beat this!

Please email any news of HCSS members and their families to July Olson at saint.juniper@gmail.com or Kathy Fewox at kathyfewox@gmail.com.

Calendar:

March 10, 2021	7:30 pm Board Meeting via Zoom
March 24, 2021	7:30 pm Membership Meeting via Zoom Program: "Opuntia humifusa: A Cactus for the Ice Ages." by Wallace Ward
April 28, 2021	7:30 pm Membership Meeting via Zoom Program: TBA
May 1, 2021	Deadline for submitting articles for the KK.

March Cactus of the Month**Cactus Boy*****Ariocarpus retusus* sbsp. *panarottoi* Halda & Horacek 1998****Nomenclature:**

Kingdom: Plantae
 Clade: Tracheophytes
 Clade: Angiosperms
 Order: Caryophyllales
 Family: Cactaceae
 Subfamily: Cactoideae
 Genus: *Ariocarpus*
 Species: *A. retusus*

Location

Near Mamaleon, Near Tula, Tamaulipas, Mexico

Habitat: In the Sierra Oriental. Chihuahuan Desert at between 650 to 2650 feet above sea level. Often found in grasslands, in limestone areas.

Description:

Ariocarpus retusus commonly known as a “Living Rock” is one of the largest species that distinguishes for the fat triangular tubercles forming a starry rosette. It is a widespread and extremely variable plant. Tubercle size and shape vary widely, a terminal areole is sometimes present at the tip. The vast amount of phenotypic variation in the species has led to the erection of several variants and has received numerous unnecessary names of no botanical value.

Habit: Solitary, slow growing geophyte cactus with tubercles slightly projecting above ground level. The flat tuberous body is below the soil.

Stem: Grey, or blue-green, flattened, globose, rounded on top, 3-12 cm high, 10-25 cm in diameter.

Tubercles: Leaf-like, divergent, erect, basally compressed, usually becoming attenuate at the apices, convex or nearly flattened adaxially and often with shallow adaxial undulations or wrinkling, not fissured, 1,5-4 cm long, 1-3,5 cm wide, nearly as wide as long.

Areoles: At the tips of the tubercles, rounded, 1-5 mm in diameter often only on younger specimens.

Flowers: Diurnal 4-5cm in diameter, 2-4,2 cm long, white to pink (or magenta), occasionally with reddish midribs.

Roots: Tap root.

Flowering time: Autumn.

Fruits: White, green, or rarely pinkish, 10-25 mm long, 3-10 mm in diameter.

Remarks: All of the *Ariocarpus* seedlings are spiny and quite different from adult specimens, though the spines are feather-like. (*This description taken from LLIFE, Encyclopedia of Living Forms.*)

In my opinion this Ario is just another form of *Ariocarpus retusus* Scheidweiler 1898. Many extra names have appeared over the years for plants that have no taxonomic differences from the original description. I bought



these from Living Stones in Tucson. In 2018-19 they came out with some very nice *Ariocarpus retusus* varieties. They raised these from seed, some of which came from the collection of Jerguen Mendel. The ones I have must be at least 10 years old. They are very pretty for an *Ariocarpus*...

Culture: I have a spotty history with Arios. Generally I think they need very strong light and a free draining substrate. I limit water from Thanksgiving to about Easter. During the warmer months they like a good watering every 10 days or so. Let the substrate dry between watering. I fertilize on a “when I think of it” basis 3-4 times a year with my usual Dyna-Gro and Grow-3.

Things I’ve learned:

- Transplant in the early Spring. When transplanting, clean the roots off and trim back any dead ones. After that leave the plant in the shade (under the bench) for a couple weeks so that any wounds can dry out.
- Their new pot should not be too big. Arios don’t mind being a bit crowded. Most have a thick taproot underneath the tubercles. They usually like to be raised a bit in their new digs so that you can see some of the taproot.
- After sticking them in their new pot, I thump the sides of the pot to settle the substrate around the roots. Then I leave the plant without water in the shade for another couple of weeks.
- With all Arios I commence watering with 1-3 careful, slight applications. When the plant begins to actively grow I increase the amount.
- Arios can take full sun in pots (Eastern exposure), but I keep them under 30-50% shade when they are well established in their pots.

Do not buy Arios or other cacti and succulents off dealers on-line or off if you suspect they are field-collected. Those days are over. Too many habitats are leveled for whatever lame reason. Collecting for profit has become far too common.



March Succulent of the Month**Wallace Ward****Haworthia marumiana Uitewaal var. reddii** (C.L. Scott) M.B. Bayer**SYNONYMS:**

Haworthia batesiana reddii

H. cymbiformis var. reddii (C.L. Scott) M.B. Bayer

H. reddii C.L. Scott

COMMON NAMES: none.**HABITAT/DISTRIBUTION:**

Eastern Cape Province and Western Cape Province, South Africa.

DESCRIPTION: Forms stemless rosettes, up to 75 mm in diameter; offsets into clumps or mounds filling crevices; leaves have a line of tiny spines along the keel and along the margins; leaves are opaque with reticulate (netlike) patterning and lines radiating along the length of upper and lower leaf surfaces; often grows wedged into soft-rock crevices often on steep slopes. An excellent picture of *H. marumiana* var. *reddii* appears at p.61 of Bayer's *Haworthia Revisited* at the upper right-hand corner. I have presented two photos with this article of two offsets from the same parent plant.

CULTIVATION/GROWTH: I use a very well-drained soil mix, watering around every two weeks or less in the Houston winter and more frequently in the summer. I have not had my plants more than two years or so. I do consult cultivation advice on Google, looking for more authoritative sources. *H. marumiana* var. *reddii* seems to thrive with average *Haworthia* care for our damp, usually warm climate. However, I did bring the reddis indoors during the February 2021 freeze. My plants have not yet flowered.

USES: I have no information on any uses to which this variety or species is put.



AVAILABILITY: My original plant came either from an HCSS Show or Sale or possibly from the Exchange Table. Some sources are likely selling the plant under its prior name as *H. cymbiformis* var. *reddii*; in fact, that is how my plant was labeled when I purchased it.

GENERAL COMMENTS: M. Bruce Bayer in his 2012 essay on rationalizing names in *Haworthia* argues that “Species concepts in the genus have always been idiosyncratic, driven by a propensity to recognize variation over similarity and fostered by a general ignorance of population variability in the wild.” To stop the endless proliferation of new *Haworthia* species in the scientific literature, Bayer recommends growers and editors of popular (as opposed to scientific) journals) “exploit the advantages of an informal system of nomenclature that will give them unlimited flexibility without clogging up the formal nomenclature any further.”

REFERENCES:

Bayer, M.B. "A Rationalization of Names in *Haworthia*: A List of Species with New Contributions and New Synonyms." South African Biological Institute (2012)

Bayer, Bruce. *Haworthia Revisited: A Revision of the Genus*. Hatfield, South Africa: Umdaus Press, 1999.

Haworthia genus: SANBI (South African National Biological Institute). PlantZAfrica.com

for access to Bayer's continuing musings on the genus *Haworthia*, see haworthiaupdates.org

April Cactus of the Month

Josie Watts

Mammillaria pectinifera

Tribe: Cactaceae

Species: *Mammillaria*

Subspecies: *Pectinifera*

Aka: *solisia pectinate*, *pelecypora pectinate*

This plant has a narrow distribution in Tehuacan in the Cuicatlan Valley in the state of Puebla, Mexico. This area is described as “tropical Mexico”. It is an area of flat limestone hills. The plant grows among other vegetation and retracts into the soil during drought.

It is usually solitary, but produces clusters with age. It grows above ground and is squat-stemmed and completely covered with flattened spines. It is cylindrical, 1-5 cm in diameter with 20-40 spines, which are pectinate (feather-like). The spines are 1.5-2 mm long and lack central spines. It grows to 6”.

The flowers are pink to white, with darker mid-stripe, 20-30 mm long, and have green stigmas. Blooming period is December to March. Mine are blooming at present. Reproduction in habitat begins at 8 years of age. The fruits are small and red, barely emerging above the spines. The seeds are very small, black, and boat-shaped. They are retained among the tubercles, and released gradually.



This plant is endangered. Several factors have been considered in explaining this designation. One is that they have a low rate of reproduction. They tend to reserve fruits and expel them in response to increased rainfall. This has been verified in greenhouse experiments. This phenomenon is called serotiny or delayed dispersal. The seeds can be retained for up to six years. Another factor is commercial looting.

There was very little to be found about cultivation other than that it is very slow-growing and grows in a tropical type climate, so apparently it does not tolerate cold temperatures very well. It can be prone to rot and requires spare watering. I have had my plant since 2017 and this is the first year it has bloomed, which is one reason I chose to present it. It has been problem free. I water it with rain water and fertilize spring through fall with a weak liquid solution. Water is withheld from the first cold front until temperatures warm up above 60 degrees in spring.

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Rike, J; Subik, R; and Beckett, K. The Illustrated Encyclopedia of Cacti and Other Succulents. L993: Chartwell Books, Inc., Secaucus, NJ

April Succulent of the Month

Bruce Moffett

Agave Lophantha

Agave Lophantha is an evergreen succulent belonging to the Asparagaceae family (formerly Agavaceae). Not sure when that changed? There are more than 200 Agave species.

This native to Mexico and the southwestern United States, Lophantha is also known as Agave Univittata.

The common names for Agave Lophantha include: Center Stripe Agave, Thorn-crested Agave, Center Stripe Agave, McKelvey's Agave, Thorncrest Century Plant and Quadricolor Century Plant

Size and Growth

This succulent slowly grows about 2 – 3 feet high and 2 feet wide. It clumps profusely. It has flat, saw-like leaves growing in an outward spiral from a thick rosette base. It has very strong sharp marginal teeth.

The shades of the foliage vary in color as per the cultivar. Some colors are light green, dark green, yellow, white and combinations. The Agave Lophantha 'Quadricolor' plant has a pale green midstripe and dark green leaves with yellow edges. The sides of the leaves have dark-reddish teeth lining.

The plant takes plenty of years to bloom. When it does, it grows greenish-yellow flowers which reach a height of 12 feet tall. Similar to other Agaves, this plant also blossoms once and dies after. I have had several bloom. Don't touch this plant too much as these plants prefer to be left alone.

Light & Temperature

This plant prefers to grow in full sun, but also tolerates light shade. Partial shade is preferred during the summer season. The outdoor plants are drought tolerant and have the ability to take more heat.

The Agave Lophantha tolerates the temperature to 11° degrees Fahrenheit (-11° C). The USDA hardi-

ness zones of this plant are 8 – 11. In the February freeze my plants had no damage.

The Agave Lophantha grows well in dry conditions and tends to start rotting when overwatered. Therefore, minimal watering should be given to the plant. Water only once the soil dries out completely. All of my plants are in outside beds in porous soil. They do well no matter how much rain we get.

Grooming and Maintenance

The Agave Lophantha is not difficult to grow and maintain. Be careful when handling the plants with its sharp teeth. Because of the thick clumping and teeth they can be hard to weed. This plant grows slowly and even thrives when neglected. Place it under full sun, and it will add a distinct and robust accent to your patio or garden.

The most reliable and fastest propagation method is through offshoots. The offshoots, or suckers, grow at the base of the mother plant and are easily removable. Dry these cuttings for a few days before planting them.

Agave Pests or Diseases

I have never had any of mine be affected by any of these but have read about it.

While this plant is able to tolerate dry conditions and warm temperatures, it is vulnerable to plant-eating pests. Be on a lookout for cactus longhorn beetle, soft scale, and agave snout weevil. Brown spots, drying or withering leaves are common infestation signs.

Use broad-spectrum insecticide on infected plants and monitor the health until it becomes normal.

Overwatering results in root rotting, and it might be vulnerable to infections like *Phyllosticta* pad spot and Anthracnose which occur due to fungus spores.

Prevent these infections with an anti-fungal agent.

Affected plants must be removed immediately to avoid spread.



ASTROPHYTUM CACTI

By Thomas Cardinal, HCSS

One of my favorite groups of cacti from my extensive collection of 450 plants is the Genus *Astrophytum* or *Astros* for short. Having collected cacti for 40 years I have come to admire *Astros* because they are beautifully shaped, have white flocked spec patterns on their bodies and produce plenty of yellow flowers all summer long. They are truly sun loving cacti and flourish in the intense sunshine and heat of my Houston cactus-garden. The plant photos shown here are from my personal collection

The word *Astrophytum* is derived from the Greek *astron*, meaning star and *phyton*, meaning plant. The “star plant” is unique. The genus is comprised of four species of compact cylindrical cacti members and one unique sprawling, octopus-like member. The first four were discovered between the years 1828 and 1845. Two of these are spineless and two have prominent spines. The number of body ribs of the star can vary too. *Astrophytum* is a Chihuahuan Desert native occurring in north central Mexico and southwestern United States. *Astrophytum* species feature random flocking of white trichomes (or bumps) on the epidermis. The white flocking on the body is an adaptation designed to protect the plant’s tissues from the sunlight. *Astros* also have a hard, skinned outer covering. This helps to protect them from getting sunburn, scratched, or punctured or eaten by insects.

Astrophytum have yellow sun flowers with fuzzy floral tubes that extend up from the apex. Flowers bloom in the afternoon hours of the day. They close in the late afternoon and will open again the following afternoon then close forever. Flowers bloom all summer long sometimes in multiple quantities. Some *Astros* have a red-centered flower, all are radially symmetric and eventually turn into dry, fuzzy seed pods bearing relatively large, black seeds that are among the easiest to germinate. See seed pod photos below.

Astrophytum Asterias (the sand dollar cactus)



Asterias is an extremely flat barrel cactus with a beautiful circular body form with a dull green cover without spines and typically has eight triangular sections with woolly hairs pinhead sized. It produces large yellow flowers with orange throats often larger than the plant itself. At full maturity, it has an approximate diameter of 6” and height of 1” - 2”. I have three in my collection and one is grafted. Hard to find and hard to grow because it dislikes water more than any other *Astro*.

Astrophytum Capricorne (the goat’s horn cactus)

Capricorne grows about 10 inches tall and 4 inches across. It has a gray-green color varying amounts of flocking with prominent ribs and yellow flowers with an orange red throat. The goat’s horn refers to the long twisting spines displayed on the body of the cactus. Only one in my collection and somewhat hard to find.



***Astrophytum Ornatum* (the monks hood cactus)**



Ornatum is the tallest member of the genus, growing as much as 6 feet in height and 12 inches in width. It flowers with beautiful yellow blooms throughout the summer months. The amount of flocking varies. The cactus with no flocking is given the term nudum. This is the fastest-growing species in the genus. I have six in my collection. They are the easiest ones to find and grow.

***Astrophytum myriostigma* (the bishop's cap cactus)**



The star shaped appearance is a reminder of a bishop's headwear. It has three to seven well-defined ribs, and more may appear as the plant ages, giving it a more cylindrical appearance. This plant can exceed 3 feet in height and 8 inches in diameter when it grows in the garden, though as a houseplant it is generally under 1 foot in height. The flowers are creamy yellow. I have six in my collection with two being grafted. They are popular with collectors and easy to find.

Astrophytum caput-medusae or *Digitostigma caput-medusae*

The fifth member of this group was newly discovered in 2001 specifically in the state of Nuevo León Mexico. The caput-medusae is quite distinct from the other members of the genus and very distinct from all other cacti genera as well. Hence, many enthusiasts feel it should be part of its own genus and consider it to be the genus *Digitostigma*. The name *Digitostigma* describes the long digit-like tubercles that grow something like an octopus. With the uniqueness of this cactus coupled with its late discovery, it is currently one of the most sought-after cactus species by collectors world-wide. The flowers are creamy yellow. I have a single plant in my collection and it is grafted.



Astrophytum hybrids

Enthusiasts have been extremely busy in cultivation numerous exotic hybrids. Many have modified or accentuated features such as amount of flocking, number of ribs and lack of spines. Here are some of the hybrids in my collection.



Astrophytum cactus seed collection.

Weeks after the *Astrophytum* cactus flowers bloom the seed pods form. Seed pods burst open with a multitude of large black seeds. They can be collected and stored for future planting. Lately I have been donating my seeds to the CSSA, Cactus & Succulent Society of America seed depot.



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