Desert Breeze
Newsletter of the Tucson Cactus and Succulent Society December 2024

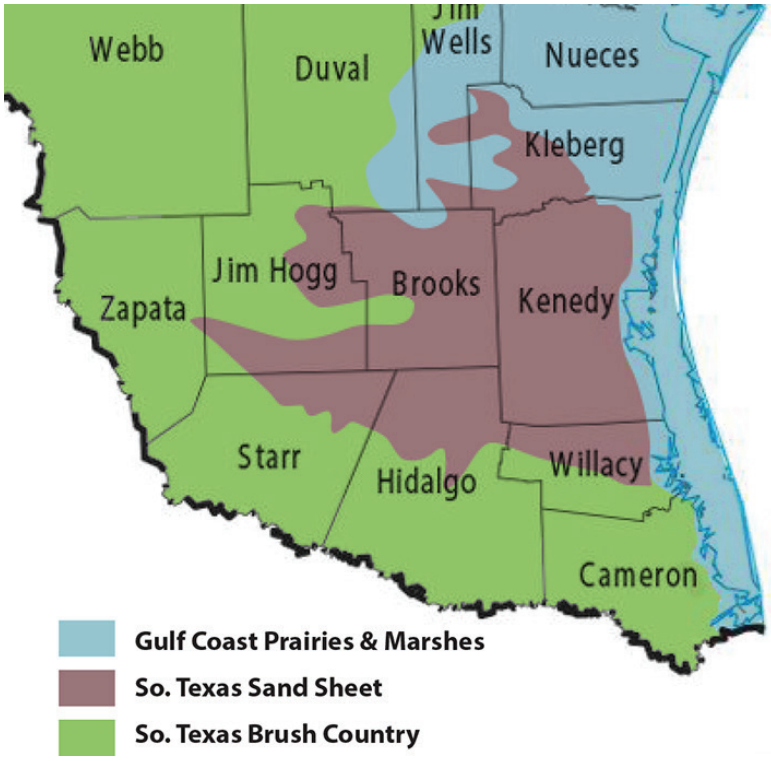
Succulents of the Rio Grande Region of South Texas – a Horticultural Perspective • Part 4

Matthew B. Johnson
Photos by Matthew B. Johnson

This is the fourth in a six-part series on the succulent plants of the Rio Grande Region of southern Texas. The first part provides an introduction to the region. Subsequent parts feature the succulents that are of horticultural interest.

Part 4: Barrel-type cacti – *Ancistrocactus, Astrophytum, Ferocactus, Hamatocactus, Homalocephala*, and *Thelocactus*

Weniger (1970) reports finding a single plant of Glandulicactus *uncinatus var. wrightii* in Starr County. This taxon is widespread in the Chihuahuan Desert with a localized population in northwestern Sonora. The presence of this cactus in South Texas likely represents a chance introduction and it is not included in this paper.



Copyright William R. Carr

Ancistrocactus scheeri – fishhook cactus, root cactus (*Sclerocactus scheeri*)

Two plants of Ancistrocactus scheeri growing together in sandy loam soil; Zapata County.

Plants usually solitary though occasional plants may have several stems from the base and old plants may rarely produce one or more branches along the side of the main stem. Stems to 20 cm (8 in) high, constricted at the base, with 13 tuberculate ribs and forming one or more long, thickened, whitish taproots of uniform diameter. Spines white and yellow or white and brown to blackish, with 13—28 radial spines and 3 or 4 central spines, the lowest one hooked. Flowers green or yellowish green, to 1.25 cm (0.5 in) across. Fruits oval or cylindrical, remaining green at maturity or sometimes developing a purplish blush.

Flowering (December—)January—April. Rocky or gravelly slopes and alluvial plains in Tamaulipan thornscrub and Chihuahuan desertscrub, often growing in the open; 30—2,000 m (100—6,560 ft) elevation. Widespread in southern Texas except for areas near the coast, north to the southern edge of the Edwards Plateau; Mexico in Coahuila, Durango, Nuevo León, and Tamaulipas.

continued on the next page

TCSS Program Presentation
Thursday, January 2, 2024 at 7:00pm
Possibly covering new species of the Agavaceae
More info when available
Presented by Greg Starr

TCSS Meeting Refreshments

Please share and socialize with your fellow members at our monthly meetings by bringing some type of finger food for the refreshment table. For the **January MEETING** we are asking members whose last names begin with **"A" through "G"** to bring something that would serve 10-12 people.

President's Message

Let's quickly look back at 2024. A highlight was the dedication of the Labyrinth at Pima Prickly Park and again thanks to Kermie Hodge and his team. A few months later a devastating storm struck the Park and thanks to Linda Heisley and her team of volunteers the Park has been renewed. We had some great silent auctions and rescue plant sales that help maintain a positive financial position and afforded you an opportunity to acquire great plants.

Now to our future: A new home for some of our activities including the library, seed storage and propagation, a dedicated classroom for education and meetings, an office and more will be available in 2025. This will provide more spaces for members and the public to interact. This is just a start. We are all excited about this and will show it off soon.

Our Saguaro reforestation activities are moving forward and you will be hearing more about this and how you can be a part of this program.

There are more interesting and exciting opportunities for us, the largest local Cactus and Succulent Society in the World. Stay in touch on with the website and this newsletter.

My sincere appreciation to the outgoing Board Members and Officers and to all of you who again made 2024 another outstanding year.

Thank you for your support.

Happy Chanukah, Merry Christmas and Happy New Year

Dick Wiedhopf, President

Instructions To Join The TCSS Zoom Meeting on January 2, 2024

If you have a laptop or other device where you can enter a web site address enter **https://bit.ly/tcssmm**

Copy this into your browser address line or just click on it. If this does not work and for all other types of devices see our Zoom Meeting Instructions page on our web site. It is **https://tcss.wildapricot.org/resources/pdf_files/ZoomInstructions.pdf**

You can also find a link to it by going to our Meeting notice information on the web.

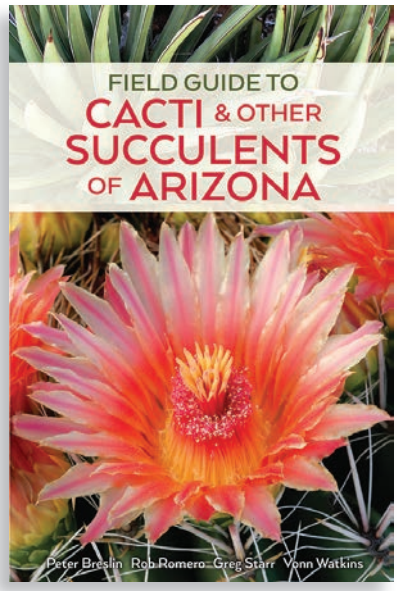
Field Guide Update

The fourth edition to TCSS's Field Guide to Cacti and Other Succulents of Arizona is at the printers as you read this.

Books will be available in January 2025.

The new edition addresses the genus change from Mammillaria to Cochemiea for six Arizona species as well as the change from Echinocactus to Homalocephala. Distribution maps, species photos and descriptive details have been updated when applicable.

Thomas Staudt
Editor



Acknowledgement Of Contributions

The Names Below Represent The Tucson Cactus and Succulent Society Members And Friends Whose Donations Helped Make This Year A Success. We Extend Our Sincere Thanks For Your Support.

Anonymous As Requested
Susan Mckuhen
Judi Marro
Christian K Monrad

Through benign neglect a downed Mexican fence post (*Lophocereus marginatus*) arm has created a new line of fencing. This took just over a year.

Photo: Thomas Staudt

continued from previous page

Ancistrocactus scheeri is widespread and locally abundant is South Texas. Some populations are quite dense with hundreds of plants growing in relatively small areas. The species commonly grows in the open though plants are also found in partial shade. In Texas, this species occurs at elevations up to about 245 m (800 ft). It is found at much higher elevations in the Chihuahuan Desert in Mexico. This cactus grows in areas that receive up to 625 mm (25 in) of annual rainfall along the eastern limit of it range. Over most of its Texas range, *A. scheeri* is readily distinguished from other cactus species. At the northern limits of its range, it grows in close proximity to *Ancistrocactus brevihamatus*. The two species can be distinguished by vegetative characters. Additionally, they occupy different habitats with *A. brevihamatus* growing on hills while *A. scheeri* grows in adjacent valleys (Allan Zimmerman, personal communication). Flowering begins in winter and continues into spring. The greenish flowers do not open widely. The fruits gradually dry when ripe if not removed by birds. The taproot can extend to 30 cm (12 in) or more in length. This is sometimes branched and can extend downward or laterally. The point where the stem is attached to the taproot is rather delicate. Plants of *A. scheeri* that have been broken off of their roots by livestock or wildlife becoming attached to the hooked central spines are sometime found. This is usually fatal in habitat, but if not too desiccated, such plants will readily develop one or more new taproots if planted.

Fishhook cactus is easily grown in containers and in the ground in southern Arizona. The attractive spines and unusual greenish flowers are appealing. Plants do best with partial shade and should have good drainage. A deep container to accommodate the taproot is recommended. This species is reliably hardy to -12° C (10° F). Healthy plants can flower continuously over two or more months which each flower lasting several days. Flowering can begin in early January or even late December in mild winters or be delayed until February in cold winters. The flowers and flower buds are undamaged by overnight freezing temperatures to at least -6.5° C (20° F). Fishhook cactus can be grown from seeds. Many plants will begin to flower in their third year. Several volunteer seedlings have come up in an area of the yard that receives occasional irrigation. Branches may also be rooted. Care should be taken to avoid breaking off the thick taproots during transplanting. If this happens, the stem can be rooted and will develop new taproots. Fishhook cactus is vulnerable to cactus moth larvae. If noticed in time, rubbing alcohol can be injected into the hole excavated by the larva using a fine jet from a spray bottle. Often, this will cause the larva to emerge where it can then be removed. Cactus beetles will parasitize this cactus when growing in the ground. The adult beetles should be relocated to areas well away from this and other cultivated cacti. Red spider mites can be a problem in a shade house or greenhouse. Control measures should be implemented immediately to prevent permanent scarring of the plant's epidermis. Packrats will feed on fishhook cactus if the plants are near their nest. Javelina likely pose a threat.

Ancistrocactus scheeri with multiple stems arising from the base; Zapata County. Such clusters are uncommon.

Young plant of Ancistrocactus scheeri showing spine detail; Starr County.

continued on the next page

continued from previous page

Astrophytum asterias – sand dollar cactus, sea urchin cactus, star cactus, star peyote

Astrophytum asterias with ripe fruit and seeds; Starr County.

Plants solitary, with stems dull gray green or blue green, with scattered, tiny, white tufts of hairs on the epidermis; flattened and level with or dome-shaped and extending only slightly above the soil level, to 15 cm (6 in) across, with eight low ribs. Spineless with dense, short white or gray hairs in the areoles. Flowers yellow with a red center, to 5 cm (2 in) across. Fruits spherical, covered with spinescent bracts and white hairs.

Flowering June—September. Gravelly or clay soils of slopes and plains in Tamaulipan thornscrub; ca. 60—90 m (200—300 ft) elevation. Texas populations are highly localized in western Starr County. Mexico in Nuevo León and Tamaulipas. Of conservation concern.

Astrophytum asterias is highly localized within its range in Starr County. There are old reports of this species from Zapata County but it is apparently not present there today. The plants are still abundant in some areas where they have been protected. They grow in the open as well as beneath shrubs. At one location in Starr County, several plants had colonized a gravel parking area. During drought, the plants sometimes pull into the ground. This species flowers opportunistically in response to rainfall. The plants readily reseed in habitat but face several threats including illegal collecting, habitat loss, invasive species, and climate change. Plants were heavily collected for the cactus trade in the past and illegal collecting is still a threat. Predation by rabbits during droughts has been documented in South Texas. *Astrophytum asterias* is classified as endangered under the U.S. Endangered Species Act and by the State of Texas, as well as by the Mexican government. Several populations are protected on preserves and private ranches in Texas but invasive species and climate change make the future of this cactus uncertain.

Seeds remaining on the apex of Astrophytum asterias; Starr County.

Sand dollar cactus is a uniquely attractive plant. The lack of spines is shared only with *Lophophora williamsii* among the cacti of South Texas. The plants do best in containers in horticulture but can be grown in the ground if rabbits and rodents are excluded. Partial shade and well-drained soil will improve success. This species is hardy to at least -12° C (10° F). Flowering can begin when the plants are four years old. The plants produce multiple flowers over several months and cultivated plants can flower as early as April. Propagation is by seeds. One volunteer seedling was observed in an area of the yard that receives supplemental irrigation. This plant disappeared after a year, presumably due to predation by a rodent or bird. Sand dollar cactus is perhaps more challenging to grow than other cacti from the region due to its propensity to rot if watered during very hot weather. Reducing irrigation to occasional light spraying during periods of excessive heat greatly reduces this problem. Predation by rabbits and packrats can be a problem. Javelina are also likely a threat should they have access to areas where the plants are growing.

Ferocactus hamatacanthus var. sinuatus – lower Rio Grande Valley barrel cactus
(Ferocactus sinuatus)

Typical plant of Ferocactus hamatacanthus var. sinuatus; Zapata County.

Plants usually solitary with stems dark green, to 30 (60) cm (12 (24) in) high with 13 narrow ribs.

Spines white, yellow, or reddish, becoming gray with age; radial spines 8—12, central spines 3 or 4, the lowest flattened and hooked. Flowers yellow, to 7.5 cm (3 in) across. Fruits oval, green when ripe, edible.

Flowering June—September. Various soils of ledges, slopes, and plains in Tamaulipan thornscrub, coastal prairie, oak-juniper woodland, and tropical deciduous forest; near sea level—ca. 915 m (3,000 ft) elevation. Texas from the lower

continued on the next page

continued from previous page

coast, along the Rio Grande, and extending eastward along the southern margin of the Edwards Plateau; Mexico in Coahuila, Nuevo León, and Tamaulipas.

Ferocactus hamatacanthus var. *sinuatus* is the eastern, more mesic form of the species. It replaces var. *hamatacanthus* in areas to the east of the Chihuahuan Desert. This variety has been observed growing together in Texas with *F. hamatacanthus* var. *hamatacantus* near Lake Amistad in Val Verde County. There are likely additional zones of contact in northeastern Mexico. Intermediate forms between the two varieties have not been reported. Variety *sinuatus* occurs in a wide range of habitats from coastal areas to exposed rocky, limestone ledges and grows on cliffs in tropical deciduous forest in the Sierra Madre Oriental. In southern Texas this variety generally grows beneath trees or shrubs but can also grow in the open and is usually found at low density. Plants in Texas populations seldom exceed 30 cm (12 in) high but plants at least twice that high are occasionally found. This variety ranges from essentially frost-free areas in southern Tamaulipas to sites in northern Coahuila and central Texas that can drop to -12° C (10° F). Annual rainfall within its range averages 450—750 mm (18—30 in). The ripe fruits are juicy and slightly tart.

Lower Rio Grande Valley barrel cactus is easy to grow in containers or in the ground. The dark green stem with long, pale spines provides attractive contrast and the flowers are showy. The plants do best with some afternoon shade in southern Arizona horticulture. Periodic irrigation during the growing season will improve growth and appearance. This barrel cactus will tolerate considerable moisture so long as drainage is adequate. The plants are hardy to at least -12° C (10° F) and will likely tolerate lower temperatures for brief periods. This variety will often begin flowering after five years and can produce several flushes of flowers over the summer if irrigation or rainfall is adequate. The flowers remain open for a single day during hot, sunny weather and can last two days with cloudy conditions and lower temperatures. Propagation is by seeds though offsets can be rooted. This taxon is especially susceptible to infestations of the larvae of cactus moths as well as cactus beetles. Interestingly, these insect pests rarely bother *F. hamatacanthus* var. *hamatacanthus*. The reason for this is unknown. Rabbits, packrats, and javelina are also potential threats.

Ferocactus hamatacanthus var. sinuatus growing on limestone ledge; Val Verde County.

Hamatocactus bicolor – twisted-rib cactus, fishhook cactus, hedgehog cactus
(*Hamatocactus setispinus*, *Hamatocactus setispinus* var. *setaceus*, *Thelocactus setispinus*)

Two old, clustering plants of Hamatocactus bicolor (var. setaceus); Starr County.

Plants solitary or clustering; stems to 30 cm (12 in) high; with 13 somewhat wavy ribs. Spines white and yellow or white and brown, slender and weak with 10—19 radial spines and a single, hooked, central spine. Flowers yellow with a red center, fragrant, to 7.5 cm (3 in) across. Fruits spherical, red when ripe.

Flowering mostly May—September. Rocky, gravelly, and alluvial soils of slopes and plains in a wide range of plant communities including Tamaulipan thornscrub, coastal prairie, saline scrub, mesquite savanna, oak-juniper woodland; near sea level—400 m (1,300 ft) elevation. Widespread in southern Texas east to the Coastal Bend and north through the Edwards Plateau; Mexico in Coahuila, Nuevo León, and Tamaulipas.

There are two distinct forms of Hamatocactus bicolor in Texas. Most recent treatments do not distinguish these but the stems exhibit distinct morphological traits and the forms occupy non-overlapping ranges. The flowers, fruits, and seeds are the same for both forms. The typical form has comparatively soft stems to 12.5 cm (5 in) in diameter with high ribs and a dark green epidermis. The spines are white and brown. It tolerates more shade and moisture than the other form. This form ranges from Mexico northward along the Gulf Coast to the Coastal Bend and northward over much of southern and central Texas, westward to the Rio Grande between Eagle Pass and Del Rio where its range continues into Mexico. It occupies a wide range of habitats and vegetation types from saline scrub along the coast to thornscrub, prairies, savannas, and the crests of limestone and granite hills with oak-juniper woodland. Annual rainfall across the Texas portion of this area averages 450—875 mm (18—35 in). The second form, often classified in older literature as Hamatocactus setispinus var. setaceus, has firm stems that are 5—7.5 cm (2—3 in) in diameter with low ribs and a pale green or yellow green epidermis. The spines are often white and yellow though plants with white and brown spines are found in some populations. Weniger (1970) states that this form is less tolerant of excess moisture than the other form. It occupies a small area in the western part of South Texas including Hidalgo, Jim Hogg, Starr, Webb, and Zapata counties, and adjacent areas of Mexico. This form is found only in thornscrub habitats where annual rainfall averages

continued on the next page

continued from previous page

450—550 mm (18—22 in). Both forms show a marked preference for growing in the shade of other vegetation but the later form is more tolerant of sunlight. I am not aware of any reports of the two forms being found growing together. They are reported to be interfertile. These forms are visually distinct as early as six months after germination. Both forms can be locally abundant with populations of hundreds or even thousands of plants. Growth is rapid and the plants flower at a young age. Birds will eat the fruits and small ants remove the seeds and pulp from fruits on cultivated plants in a shade house if the fruits are not promptly collected as they turn red.

Hamatocactus bicolor (typical form) in limestone soil; Val Verde County.

Flowering Hamatocactus bicolor (var. setaceus); Starr County..

Twisted-rib cactus grows well in containers and in the ground in the Tucson area. The typical form also grows well indoors in a window or other location with some bright light. This species is free-flowering over the summer months and the fragrant, bicolored flowers often appear on many plants at the same time. On warm, still days, the aroma of the flowers can be detected from several feet away. Both forms are reliably hardy to at least -12° C (10° F) and plants from northern populations of the typical form will survive brief periods to -18° C (0° F). The species grows readily from seeds. Branches have been successfully rooted. The two forms behave somewhat differently in cultivation. The typical form requires more shade in Arizona horticulture and is more tolerant of excess moisture. It volunteers from seeds less frequently. One seed-grown plant flowered at 16 months of age and the form regularly flowers after 2 years. These plants may be more susceptible to cactus moths than the other form but do not appear to be as readily affected by red spider mites. The "var. setaceus" form tolerates more sunlight. It commonly volunteers from seeds in areas of the yard that receive supplemental irrigation. Seed grown plants began regular flowering at 28 months of age. Red spider mites readily attack this form in the shade house. Cactus beetles occasionally parasitize both forms. Rabbits and rodents do not seem to be as prone to sample this species compared to some other cacti. Information is lacking on whether javelina represent a threat though they should be considered suspect.

Homalocephala texensis – horse crippler, devil's head, devil's pincushion; manco caballo
(*Echinocactus texensis*)

Young plant of Homalocephala texensis; Zapata County.

Plants mostly solitary with low, broad stems usually only 5—12.5 cm (2—5 in) high and to 30 (60) cm (12 (24) in) across with 13 ribs. Spines reddish, becoming gray with age, stout, rigid, ribbed, with 6 or 7 radial spines and a single central spine. Flowers pale pink or white with a red center, fragrant, the petals distinctly fringed, to 6.75 cm (2.5 in) across. Fruits spherical with spinescent bracts, turning bright red when ripe

Flowering February—April. Growing in a wide range of soils and habitats including Tamaulipan thornscrub, coastal prairie and scrub, mesquite savanna, Great Plains grassland, oak-juniper woodland, post oak savannah, and Chihuahuan desertscrub, near sea level—1,675 m (5,500 ft) elevation. Widely distributed in Texas except for the eastern quarter, panhandle, and far western Trans-Pecos, southeastern New Mexico, southwestern Oklahoma; Mexico in Coahuila, Nuevo León, and Tamaulipas.

Homalocephala texensis has perhaps the most extensive distribution of any non-opuntiod cactus in Texas. Its range extends into adjacent New Mexico and Oklahoma as well as a large area of northeastern Mexico. This species has one or several taproots and is usually found in deep alluvial sand, loam, or clay soils but plants sometimes grow in shallow, rocky, limestone soils. It appears to be absent from granitic soils. This cactus grows in areas along the Gulf of Mexico that are subject to saltwater inundation during strong hurricanes, in high valleys in the eastern Trans-Pecos, and it is extensively distributed across the southern Great Plains. The plants range from frost-free areas in Tamaulipas to locations that can experience temperatures of -23° C (-10° F) or lower. Western portions of its range receive as little as 250 mm (10 in) of yearly rainfall while eastern areas average up to 875 mm (35 in) of precipitation. It is often abundant though with its low growth form, it can be dangerously inconspicuous if growing among grasses or low vegetation. The common name, horse crippler, and its Spanish equivalent, *manco caballo*, are apparently well deserved. The stout spines can injure livestock and will also penetrate hiking boots and ORV tires. Spines on plants from some western populations are particularly robust and imposing. In addition, the spines may be effective in protecting the plants from hailstones that are a common feature of thunderstorms across northern portions of its range. The low

continued on page

continued from previous page

growth habit likely affords some protection from prairie wildfires though especially hot fires fueled by extensive overgrowth of combustible vegetation can prove fatal. This ground-hugging growth form may also help to reduce the likelihood of freeze injury during severe cold outbreaks. The ripe fruits are readily eaten by birds and smaller, herbivorous mammals. In South Texas this species is abundant in coastal prairie and scrub but can be locally common in inland thornscrub habitats where it grows beneath woody plants as well as fully exposed to the sun. Britton and Rose ([1937] 1963) include a reference to the abundance of this species in areas of northern Texas where the plants were piled along the edges of new fields to form walls and also of the plants being strung on wires to make a substitute for barbed wire fencing. The fruits are eaten by birds and smaller, herbivorous mammals.

Though not indestructible, this species is certainly tough. While living in the Houston area in the late 1970's, I had a dozen plants of *H. texensis* growing in Terra Cota containers on a small wooden bench with a fiberglass roof to keep rain off of the plants. This was located on a friend's property. In 1978, the region received up to 650 mm (26 in) of rainfall in 48 hours from tropical storm Claudette. It was a day and a half before floodwaters receded sufficiently for me to reach the location where the plants were residing. The area of the yard where the greenhouse bench was located was still under waist-deep floodwater and a corner of the bench roof was just protruding above the water. The plants in their heavy containers had sunk when the water pushed the bench over. I located each container, carried them to higher ground, and placed them back on the bench in its new location. None of these cacti died or showed any ill effects in spite of having been submerged for at least 36 hours.

Horse crippler is well-adapted to cultivation in southern Arizona. I have had greater success growing this species in containers than in the ground though plants in the ground have done well for many years. This cactus grows well in full sun or in partial shade though some shading for young plants during periods of extreme heat may be necessary to prevent sun-scalding. Established plants can survive on rainfall in Tucson but occasional irrigation is beneficial. Reducing irrigation during periods of extreme heat can reduce the chances of rotting. This species will tolerate considerable moisture with adequate drainage. The simple, low stems are attractive and many plants have impressive spines. The fragrant, delicately fringed, bicolored flowers and bright red fruits are showy. Ripe fruits can remain on the plants for several months if not eaten by birds or rodents. Growth rate is rather slow. Vegetative growth on older plants seems to be confined to the spring. Horse crippler is hardy to -23° C (-10° F) and plants from northern populations may tolerate lower temperatures for brief periods. Healthy plants produce flowers over several weeks with each flower lasting three or four days. Seed-grown plants can begin to flower at five or six years of age. Plants are easily grown from seeds. Occasional volunteer seedlings have been found in areas of the yard that receive irrigation. Branching is rare but a branch from a plant that rotted was successfully rooted. In spite of its apparent toughness, horse crippler is vulnerable to the larvae of cactus moths and cactus beetles. Rabbits and packrats have rarely been known to nibble the edges of exposed ribs but the stout spines of this cactus seem to be an effective deterrent to herbivory. Minor infections of Phyllosicta fungus have been observed during the cool months on plants growing in a shade house. Plants growing outdoors do not seem to have this problem.

Group of Homalocephala texensis in coastal prairie; Cameron County.

Thelocactus bicolor subsp. ***bicolor*** – glory of Texas (*Thelocactus bicolor var. schottii*)

Pale-spined plant of Thelocactus bicolor var. bicolor; Starr County. Plants of this variety in South Texas typically do not grow as large as plants in the Chihuahuan Desert.

Plants usually solitary with stems to 30 cm (12 in) high with 8 broad, slightly tuberculate ribs. Spines white, yellow, and red, with 12—18 radial spines and 3 or 4 central spines; some spines are rounded and others are flattened and flexible. Flowers pink or purplish with a red center, fragrant, to 10 cm (4 in) across. Fruits spherical, drying when ripe.

Flowering (February—)March—October(—November). Gravelly or rocky soils in Tamaulipan thornscrub and Chihuahuan desertscrub; 75—1,830 m (250—6,000 ft) elevation. In Texas limited to small areas in western Starr County and the Big Bend Region in southwestern Brewster and southeastern Presidio counties; Mexico widespread in Chihuahua, Coahuila, Durango, Nuevo León, San Luis Potosí, Tamaulipas, and Zacatecas.

continued on next page

continued from previous page

Hamatocactus bicolor (typical form) in limestone soil; Val Verde County.

Thelocactus bicolor is the most widely distributed species in the genus with an extensive range in Mexico. There are several named subspecies and numerous form. Two of the subspecies are found in Texas. Subspecies bicolor enters Texas in Starr County and in the lower Big Bend Region. It occupies both sedimentary and igneous substrates and grows in alluvial soils and rock crevices. Subspecies flavidispinus is endemic to a small area in northern Brewster County where it is confined to Novaculite. In South Texas, subspecies *bicolor* is found at elevations of 75—90 m (250—300 ft) where the plants grow on gravelly slopes in Tamaulipan thornscrub. Annual rainfall in this region averages 450 mm (18 in). This is much higher than is found across the subspecies' range in the Chihuahuan Desert. The plants often form dense populations though these are localized. This cactus grows in the open or in filtered shade provided by adjacent shrubs. The plants generally have a smaller mature size than those found further west, seldom exceeding 20 cm (8 in) high. Branching is rare. Some plants have white and red spines while the spines of other plants are white and yellow. The spines do not grow as long as those on plants from parts of the Chihuahuan Desert. These cacti flower synchronously in response to rainfall with repeat flowering through much of the year. The fruits dry at maturity and release the seeds through the base of the fruits. The seeds are likely distributed by ants and rainwater. Seedlings are often found adjacent to mature plants.

Glory of Texas is well-adapted to cultivation in southern Arizona. It does equally well in containers and in the ground. The plants are attractive with their often dense spination which varies in color. The bicolored flowers are large, fragrant, and especially showy. Plants can be grown in full sun or partial shade. Spine development is enhanced by direct sunlight. This variety is reliably hardy to -12° C (10° F). Plants from northern populations may tolerate overnight temperatures to -18° C (0° F). This is among the most free-flowering of all U.S. cacti. The plants are synchronous bloomers with many plants flowering on the same day about a week after irrigation or significant rainfall. The flowers last a single day during hot weather and two days with cooler temperatures. Seed-grown plants will begin to flower in their third year. Flowering on cultivated plants growing outdoors in Tucson has been observed in every month except January. Propagation is by seeds. This species prolifically reseeds in containers as well as in the ground. Seedlings can form a continuous mass around the parent plant in a container. Over 100 volunteer seedlings have become established in irrigated portions of the yard and many of these are now large, mature plants. So far, no seedlings have been found in unirrigated areas. The plants rarely branch but these can be successfully rooted. Glory of Texas is virtually problem-free. No losses from cactus beetles, cactus moths, rabbits, packrats, ground squirrels, or javelina have been observed. Occasional losses due to rotting following irrigation during very hot weather have occurred but this is not a significant issue. Cultivated plants can live for at least 40 years.

Literature Cited

Britton, N.L. and J.N. Rose. [1937] 1963. The Cactaceae - descriptions and illustrations of plants in the Cactus Family, Vol. 3. Reprint, Dover Publications, Inc.

Weniger, D. 1970. Cacti of the Southwest – Texas, New Mexico, Oklahoma, Arkansas, and Louisiana. University of Texas Press.

K-12 Education Outreach

During the past two weeks, nearly 500 STEM students created saguaro terrariums. Parents and teachers shared a lot of interest in the children's work, and several asked if they, too, could participate. Even a school principal took part. The hope is for these projects to result in a new generation of saguaros.

Special thanks goes to our enthusiastic educators: Edie Campbell, Jillian Echlin, Adora-Marie Higgins and Janine Malkin.

TCSS 64th Birthday Party

Photos: Steve Watts

November 10 was a wonderfully warm Fall day to celebrate the 64th birthday of TCSS. Pima Prickly Park was a great venue for the party and visitors strolled from the Labyrinth through the Ferocactus, Agave and Baja Gardens and safely negotiated the Cholla Maze. Thanks to Joel Fontaine and his group for preparing the park for the party. And Joel, thanks for the beautiful cake. Almost too pretty to cut into. Patsy Frannea and Kathy O'Neill served up that cake along with ice cream.

Saguaro Seed Planting Class

TCSS BOARD
Officers (ending December 31, 2024)
President: Richard Wiedhopf • president@Tucsoncactus.org
Vice President: Vonn Watkins • vp@Tucsoncactus.org

Secretary: Monica Wnuk
secretary @tucsoncactus.org

Treasurer: Cathy Robson
treasurer@Tucsoncactus.org

Board of Directors:
(terms expire December 31 of year indicated)
Donna Ellis (2026)
Kris Thompson (2026)
Crystal Cannon (2024)
Edie Campbell (2026)
Linda Heisley (2024)
Kermie Hodge (2024)
Julie Shulick (2026)
Robert Villa (2024)
Brian Vandervoet (2025)
Brad Haeckel (2025)
Joel Fontaine (2025)
Steve Watts (2025)

CSSA Affiliate Rep:
Michiel Pillet (2025)

Cactus Rescue: Donna Ellis, Steve Watts
Tucsoncactus.org
Urban Rescues: Julie Shulick
desertrat@shulick.com

Education: Kris Thompson • education@Tucsoncactus.org
Free Plants: Donna Ellis • plants@Tucsoncactus.org
Florilegium: Joyce Peters • art@Tucsoncactus.org
Garden Tours: Patsy Frannea • tours@Tucsoncactus.org
Librarian: Brad Haeckel • librarian@Tucsoncactus.org
Prickly Park: • park@Tucsoncactus.org
Programs: Vonn Watkins • programs@Tucsoncactus.org
Refreshments: Patsy Frannea • refreshments@Tucsoncactus.org
Technology: technology@Tucsoncactus.org
Research: Doug Rowsell • research@Tucsoncactus.org
Field Trips/tours: Open
Vendor Coordinator: Dale Johnson • vendors@tucsoncactus.org
Plant Sales: Crystal Cannon • sales@tucsoncactus.org
Field Guide Sales: Susan Durham & John Durham
books@tucsoncactus .org
Conservation: Michiel Pillet
conservation@tucsoncactus.org
Newsletter Editor: Karen Keller • **newsletter@tucsoncactus.org**

Deadline for newsletter text or photos: Saturday, December 21 by 4:00pm

TCSS Web Page:
www.tucsoncactus.org
Webmaster: Barb Watts • webmaster@Tucsoncactus.org

For general information and questions related to TCSS, email TCSS@TucsonCactus.org or call (520) 256-2447 during business hours.

Everyone is Welcome!
Bring your friends, join in the fun and meet the cactus and succulent community.

13,599

Cacti Rescued - Since 1999

706 Rescues - 52,271 Volunteer Hours (updated 01-09-24

Please see our under Activities Website Calendar for the next rescued cactus sale. They are scheduled at various times during the year based on our inventory.

TCSS Club Members receive a 10% discount

We need your "Eyes and Ears" to help us find new Cactus Rescue sites. Please email us as much information as you can from new project signs or from other sources to **Site@TucsonCactus.org**. Attach a photo of the sign if you can. Note, we do not remove plants from residences.

January 2025

Thursday, January 2, 2025 at 7:00pm
Program Title to Come
Presented by Greg Starr

Tuesday, January 14, 2025 at 7:00pm in Person
Teleconference Board Meeting

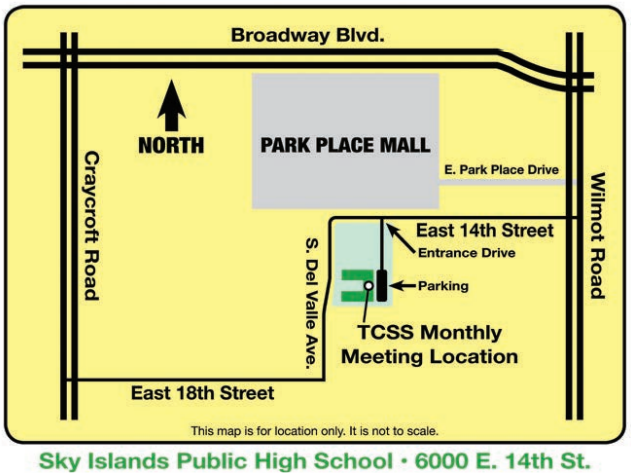
FOUND:

Large, white, terrycloth towel with narrow, red, blue and green stripes was left at the holiday party.
Please contact kris_thompson@centurylink.net to retrieve it.

Letter from the Newsletter Editor
I will be stepping down as newsletter editor. For the past 17 years, I took the role as the newsletter editor of the Desert Breeze. I had fun designing the newsletter, but I decided it was time to step down as newsletter editor and pass the role onto the next volunteer. In the interim, I will be continuing on until a new newsletter editor can be found.

Thank you all for past 17 years and look forward to seeing you at some of the other activities

Karen



Sky Islands Public High School • 6000 E. 14th St.