



DESERT BREEZE

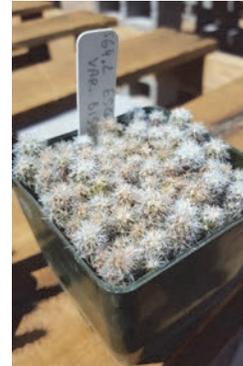
Newsletter of the Tucson Cactus and Succulent Society

June 2018

Thursday, June 7, 2018 at 7:00pm

Sowing Cacti: where Art and Science meet

Presented by Michiel Pillet



Cacti are everywhere here in Tucson. Simply looking at our prickly landscape, it is easy to forget that if you go back far enough in time, every single cactus you see was once a tiny seed. Growing cacti from seed is one of the most rewarding and educational activities a cactophile can engage in. It allows commercial growers to offer the plants we love. It also permits conservationists to propagate plants for reintroduction into the wild. Unfortunately, very few enthusiasts end up giving sowing a shot. As we will see, it really is not all that difficult. However, seedlings need vastly different conditions than their adult counterparts, and there is lots of conflicting information out there. Together, we'll attempt to make sense of it all, and hopefully some of you will go home having caught the seed-growing bug. Make sure to bring your glasses so you can enjoy the intricate diversity seedlings have to offer!

Growing up in Belgium, home of the biggest cactus and succulent conference in the world, I moved to Montana in 2008 for college. In 2016, I started my doctoral studies at the University of Arizona, working on the impact of climate change on plants, including cacti. Early this year, my wife and I acquired property here in Tucson to start a succulent conservation nursery. I currently grow the majority of critically endangered and endangered cacti, most from seed. My goal is to propagate every single species of cactus to protect against extinction and to make rarely grown taxa more widely available. Tucson is without a doubt one of the world's centers of cactus mania, much of it revolving around the many beautiful nurseries here as well as the activities of TCSS.

Please join us for an excellent presentation by Michiel. Enjoy some great refreshments (please bring food and snacks if your last name initials are requested). Also, win a plant and get a free plant (provided by TCSS) when you retire for the evening.

June Meeting Refreshments

Those with family names beginning with N - Z, please bring your choice of refreshments to the meeting. Your generous sharing will be greatly appreciated and enjoyed!



This map is for location only. It is not to scale.

Thursday, July 5, 2018 at 7:00pm
Using DNA to help sort out Adenium species
Presented by Mark Dimmitt

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



President's Message

I have been a member of the Tucson Cactus and Succulent Society for almost 50 years. I have watched the membership ebb and flow but never believed that we would reach 1,200 members. For sure, we are the largest local cactus and succulent society in the world. We must be doing something right. Our society is based on our passion for these plants,

concerns about the environment and our belief in educating everyone about cacti, succulents and the Sonoran Desert.

Several months ago, I was interviewed by Time for Kids, a weekly publication subscribed to by teachers for their classrooms. The article is about our rescue program. I supplied information and John Durham supplied photos of this activity. Great! That's not the end of the story. We got an email from a mother of an 8 year old in Maryland whose son "came home from school and proclaimed that when he grows up he is moving to Arizona and going to join your organization to help stop poachers." She

would like more information to support his interest. This just raised my enthusiasm about what we do to a new level.

We have a new Treasurer, Cathy Robson, who has stepped up to fill out the remaining term of Linda Bartlett. We appreciate and express our thanks for the years of service by Linda. Cathy and Linda transitioned at the end of Sonoran XII which was perfect timing if that is possible. I have just received the final financial statement from Cathy for Sonoran XII. We made \$5,349.85. On to Sonoran XIII?

Our member and my friend, Dr. Paul Myrdal passed away last week after a long battle with cancer. Paul was a faculty member at the College of Pharmacy and in the early days of our rescue program developed a purple colored aerosol that we used to mark the south side of rescue plants. Our sincere condolences to his family.

Hot weather is upon us, so take all the precautions that you know so well and stay cool and hydrated.

Thank you for your support.

Dick Wiedhopf, President



DID YOU KNOW?

There is evidence of Agave DNA in our genes! Well, at least this appears to be true in the case of Pima Prickly Park volunteer Linnea Gentry! Linnea is responsible for the planting, watering, and overall development of the Agave Garden in the park. Her father was renowned botanist

Howard Scott Gentry who has been recognized as the world's leading authority on agaves. (Please refer to www.art-botanical.org/Bio__Gentry1.html for fascinating background information.)

Linnea shared that she had accompanied her father from the time she was "two feet tall." She was named after the Swedish naturalist Carl Linnaeus, and she developed a particular fondness for agaves. "I was doomed from birth, as my father was a desert botanist!" Even so, Linnea stated that she "rebelled" from following in her father's footsteps and went into publishing. Her first job was with EP Dutton Publishing in New York City. In 1983, she came to Tucson and worked at the University of Arizona

Press. She later worked at *Rio Nuevo Publishing* in Tucson until 2000. Leaving the publishing world behind, she was hired at Bach's Cactus Nursery where she worked for nine years. She had returned to plant care... in the Sonoran Desert!

On a personal note: Linnea is an avid hiker. She is married to a physicist, originally from the UK, who enjoys mountaineering. Linnea's background also includes family ranching and farming in California. She and her sister hold the remains of the family homestead and have plans to develop it into an environmental center for research and education.



Once again, Pima Prickly Park is so very fortunate to have such a dedicated and passionate volunteer! Please stop and visit the Agave Garden while you are in the park...and perhaps ask Linnea about the javelinas!

FROM THE FLORILEGIUM

Flowers in the Fabaceae, or legume family, are highly diverse in appearance, from the tiny florets in a mesquite tree's catkin to the radiant stamens of the Baja fairy duster's flower. There are (at present) six subfamilies in the legume family, and each produces distinctly different flowers. Even within a subfamily, the flowers can look very different to an untrained eye.

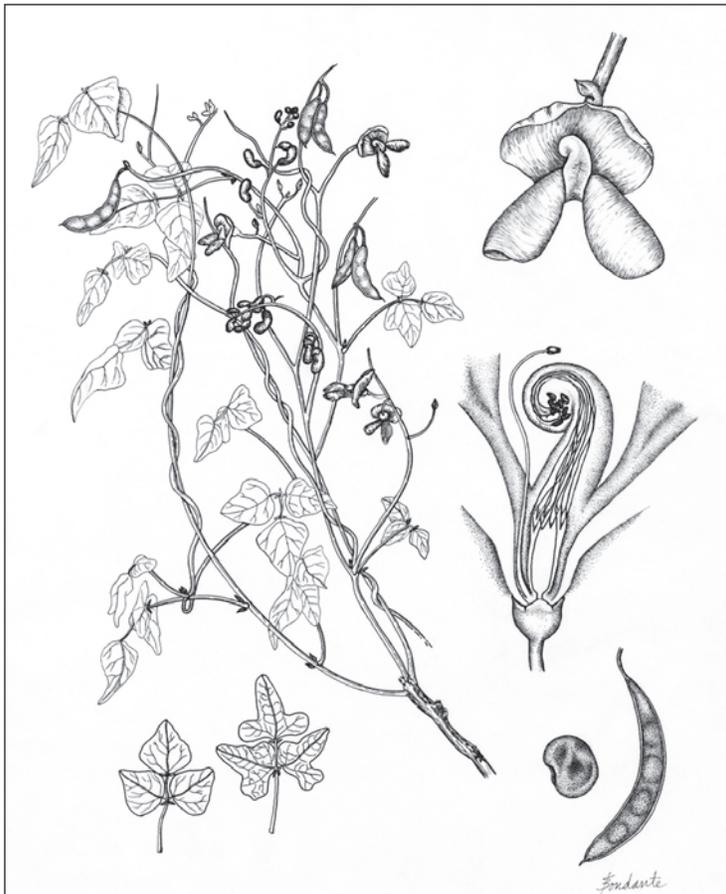
The Sonoran Desert Florilegium includes several of the legume illustrations prepared for the upcoming book, "Legumes of Arizona: An Illustrated Flora and Reference", and those plants all fall within two Fabaceae subfamilies, the Papilionoideae (the butterfly flower subfamily with some 14,000 species) and the Caesalpinioideae (the peacock flower subfamily with roughly 4,400 species). So far this year, we've looked at Margaret Pope's illustration of brazilwood, *Haematoxylon brasiletto*, and Susan Ashton's Mexican palo verde, *Parkinsonia aculeata*, both from the subfamily Caesalpinioideae. Last month we looked at John Gerdes's drawing of *Clitoria mariana*, the butterfly pea, from the Papilionoideae subfamily. Another group of plants from the Papilionoideae is the genus *Phaseolus*, the New World's wild bean.

Phaseolus grayanus, or Gray's bean, is a beautiful Sonoran Desert native that can be found at higher elevations to 8,500 feet. It has a trailing habit, striking trifoliolate leaves with silvery markings along the veins, and, from July to September, deep pink flowers. The fruit is a curved seed pod whose shape is aptly described by the name of the genus that is derived from the Greek phaselos, or "little boat". The plant was named in honor of Asa Gray (1810–1888), professor of botany at Harvard and America's preeminent botanist in the 19th century.

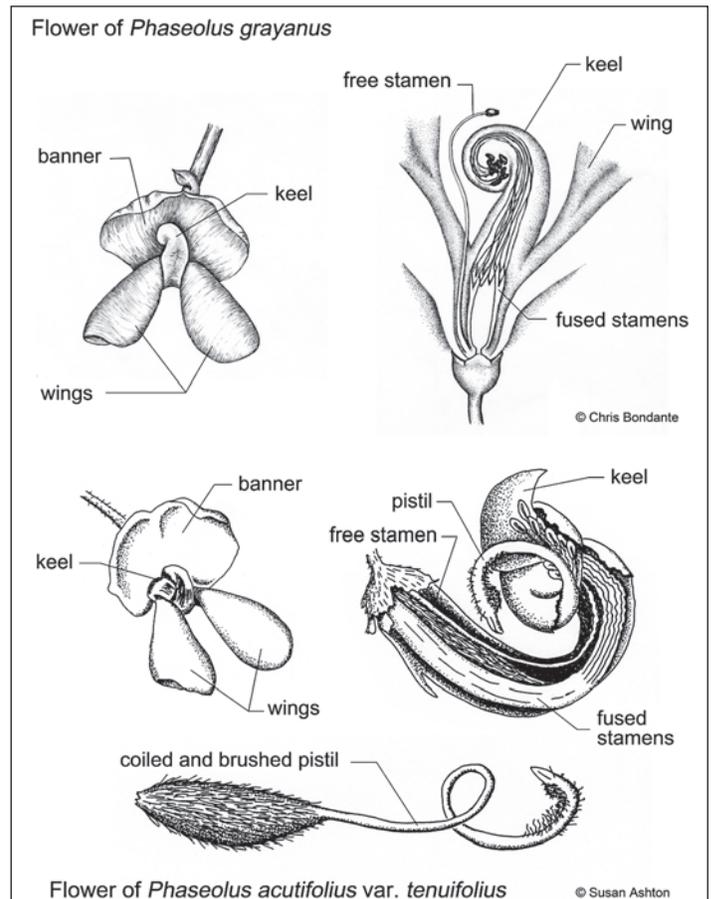
The illustration of *Phaseolus grayanus* shown here is by Tucson artist Chris Bondante. At top right is a drawing of the flower that is the typical form for the Papilionoideae: a five petal structure with a large banner petal at the top; two wing petals on the sides; and a central keel, two petals that are partially joined to enclose and protect the stigma and anthers. Below that drawing is a vertical section of the flower that shows the stamens (male) and pistil (female) within the keel. Nine of the stamens are fused into a tube with a tenth "free" stamen standing apart from the other nine. This arrangement of the male structures is referred to as diadelphous and is common in the Fabaceae.

Beside Chris's illustration of *Phaseolus grayanus* is a comparison of the flower of that plant with the flower of *Phaseolus acutifolius* var. *tenuifolius*, the tepary bean, by Susan Ashton. The flowers appear very similar but there is variation in the reproductive structures and the keel. The tepary bean has a more tightly coiled keel, and within the keel, the pistil is also coiled and has a brushed tip, a pollination strategy that allows the pistil to extend from the keel and brush pollen from the anthers onto the pollinator.

Susan Ashton's complete illustration of the tepary bean can be seen on the Florilegium Program's website, along with another tepary bean, *Phaseolus acutifolius* var. *latifolius*, by Wendy Hodgson. Also on the website is an explanation of how to create a botanical illustration, based on Chris Bondante's process for illustrating *Phaseolus grayanus*. Included in the presentation are several photographs of the plant that provide the color information missing from the pen and ink drawing. Links can be found on the Florilegium Program's home page (www.art-botanical.org).



Phaseolus grayanus, Gray's bean, © 2012 Chris Bondante, Pen and ink



Flower of *Phaseolus acutifolius* var. *tenuifolius*

© Susan Ashton

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Deadline for newsletter text or photos:
Saturday, June 23, 2018

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For additional information call: (520) 256-2447

Everyone is Welcome!

**Bring your friends, join in the fun and meet
the cactus and succulent community.**



Cacti Rescued - Since 1999
400 Rescues - 30,592 Volunteer Hours

Please see our 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.

June 2018

Thursday, June 7, 2018 at 7:00pm

"Sowing Cacti: where Art and Science meet"

Presented by Michiel Pillet

Tuesday June 12, 2018 at 7:00 pm

Board meeting, Ward 6 City Council office at

3202 E First St. Tucson, AZ

Acknowledgement of Contributions

The names below represent the Tucson Cactus & Succulent

Society members and friends whose donations

helped make this year a success. We extend our sincere
thanks for your support.

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Debra Golden-Davis

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