



DESERT BREEZE

Newsletter of the Tucson Cactus and Succulent Society

August 2018

Thursday, August 2, 2018 at 7:00pm

The Art of Naming a Species: Can They Really Do That?

Presented by Greg Starr



Have you ever wondered how a new species gets named and described? Greg has had a little experience with the process in describing some Hesperaloe species and Agave species and will shed some light on the secret world of botany. For the past 20+ years, Greg has been especially interested in the genus Agave although he has dabbled in other plants, succulent and non-succulent, as well. The genus Agave

is a relatively young one as far as plants go and seems to be in the process of speciating as we speak. In 1982, Howard Scott Gentry published his monumental monograph on the Agaves of Continental North America, in which he delineated a total of 136 species, 25 subspecies, and 29 varieties for a total of 190 recognized taxa in Agave sensu stricto, or in the strict sense, which does not include the genus Manfreda. Since publication of Gentry's book, there have been a total of 41 new species described or pulled out of synonymy and elevated back to species status. Some of the new species described are very localized while others are a result of splitting up some seemingly highly variable species.

In the past three years, Greg has traveled three times to Oaxaca, thanks in large part to funding by TCSS, to study the question of variability in Agave titanota. This has led to a larger study of the agaves in the Marginatae group, that is the one with a continuous woody margin, and to some other, very interesting side projects, including one which will be presented next month. The results of the Agave titanota project are still a long way off as the DNA sequencing still needs to be conducted and then the analysis will need to be performed.

Greg has both a BS in Plant Science and an MS in Botany/Plant Science from the University of Arizona. While working on his MS degree, Greg worked at the University herbarium under the tutelage of Dr. Charles T. Mason. It was there he learned the details of taxonomy and nomenclature and honing his skills at plant identification using botanical keys. For his MS, Greg blended his love of both horticulture and botany to produce a thesis covering the species of Salvia that had been in cultivation since 1900. Greg opened a small, native or near-native plant nursery in July 1985 and although he had an interest in cacti and succulents, it took several years for that interest to become an infection causing him to produce his book, Agaves: Living

Sculptures for Landscapes and Containers, and to be a co-author on the Field Guide to Cacti & Succulents of Arizona. Currently, Greg spends the heat of summer days in the relatively cool environment of his house sitting in front of the computer hoping that a random assault of his hands on the keyboard will result in article for the CSSA journal or another book.

Please be sure to clear your calendar for Thursday, August 2, and join everyone at an excellent evening of friends, fun, books, raffle plants, free plants and lots of excellent refreshments. You will really enjoy Greg's program so, do not miss it!



Thursday, September 6, 2018 at 7:00pm
The Trail of the Unknown: Adventures in Discovery
Presented by Tristan Davis

August Meeting Refreshments

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



President's Message

At the time of this writing we have 1,271 members. This is an astonishing number and your support of what we do is amazing. In order to constantly increase our numbers more and more members have stepped up to leadership positions. It has never been a demand that any member has to do or be something. Perhaps that is why we have been successful. Those of us

who want to give our time (and money) to certain activities are rewarded by the fact that most of the membership appreciates the effort. That's the way it should be.

Our membership costs are minimal and the benefits are huge. The interesting thing is the more you participate in Society activities the more benefits you receive. If you just come to the monthly meetings you can get free plants from other members and sometimes nurseries. There are door prizes and raffle plants that you can win and if you stay to the end you get a very nice free plant. There is also a great speaker and wonderful refreshments at every meeting.

If you just participate in rescues the benefits are huge. This is always a wonderful experience whether you are a novice or an expert. It is an educational experience that can't be had anywhere else. It is hard work but you get to buy plants at Arizona Native Plant tag cost and make it possible for the Society to pay for all the benefits from money earned from the sale of rescued plants. Of course the most important aspect is

that you are saving these plants from destruction and they are being returned to the Sonoran Desert environment.

The Sonoran Conference, the Good time silent auction, and the holiday party are just three events that you can't afford to miss. Great food, great plants and great people. Did you buy the Field Guide? What a great effort a few members and friends did to produce such an outstanding book.

For many of us Pima Prickly Park is a labor of love. It will be our lasting tribute to the Society and the community who can visit for free and enjoy and learn about cacti and succulents. Our relationship with Pima County and its Native Plant Nursery is fantastic. That is the only adjective I can come up with. More and more members are donating plants and their time to this effort and the results are evident. We are bringing to life this 7.4 acres. Come out and play in the dirt with us.

But, if all you do is join every year as a way of saying we support what you are doing that is really great and important and makes what we do even more rewarding. On behalf of the Society, I sincerely thank you.

All of this makes it possible to support educational grants to K-12 and research grants to projects that benefit our knowledge.

DON'T FORGET THE BLOOMING BARREL SALE, AUGUST 12, 2018.

Thank you for all your support,

Dick Wiedhopf, President

Annual blooming barrel sale

Rescued Barrels, Saguaros, Hedgehogs, Pincushions, small Ocotillos plus Adeniums, Hesperaloes & Pedilanthus

Sunday, August 12, 2018 • 7:00am to 9:00am

4342 N 4th Avenue (between Wetmore and Limberlost)

Member vendors will be selling other cactus and succulents starting at 6:30am

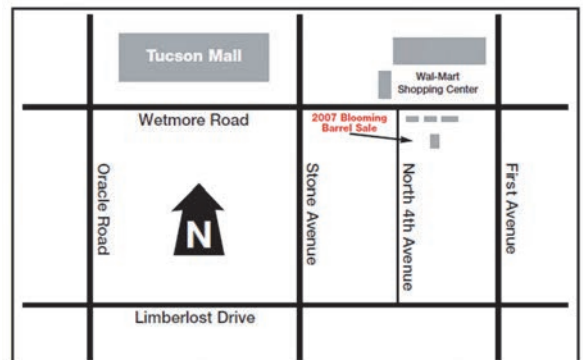
Blooming Barrel Sale Start at 7:00am

(Numbered entry tickets will be given out starting at 6:00am to make the sale more manageable)

Come Early For Best Selection

We have barrel cactus –all sizes-blooming now-yellow, orange and red; newly rescued Saguaros to 4ft; small Ocotillas; Pincushions (*Mammillaria grahamii*)-spectacular ring of pink flowers at the start of the monsoons. The Tucson Cactus and Succulent Society rescue program saves plants that are about to be lost to new construction of homes, businesses, roads and other developments and uses the profits to invest in grants for education (K-12) and research, Pima Prickly Park and to support other educational projects of the Society.

Copies Of Our "Field Guide To Cacti And Other Succulent Of Arizona" Will Be Available For Purchase At This Sale. Thank You For Your Support Of Our Rescue Program



For membership and more information check out our website at: www.Tucsoncactus.org

Tcss Cell: 256-2447

FROM THE FLORILEGIUM

After crisscrossing the globe in the 18th and 19th centuries, British and European plant hunters returned home with their new exotic plants preserved in alcohol, planted in boxes, or pressed between sheets of paper. Drawing these plants from pressed or otherwise preserved specimens became a necessary skill for the botanical illustrator, and some, such as the artists of "Curtis's Botanical Magazine", became highly skilled in drawing from non-living specimens. The great British botanical artist Walter Hood Fitch wrote that drawing from a live specimen was merely copying what you see but that working from dried specimens would "test the artist's ability to the uttermost." It was a valuable and highly respected skill.

The situation was no different in the 19th century American West. Plants collected and transported over great distances would by necessity be dried, pressed specimens, and the artists charged with illustrating them would need considerable skill to turn these shriveled, flat specimens into vibrant, three-dimensional representations.

During the mid-19th century explorations of the western U.S. and Mexico, several plant collectors came upon the remarkable 'Queen of the Night' cactus and sent specimens to botanist George Engelmann in St. Louis. By 1859, he had received specimens of the cactus from West Texas, Arizona, Sonora, and the area of the Rio Grande south to Chihuahua.

Although a number of collectors had sent Engelmann specimens of the cactus, he chose to name the plant *Cereus greggii* to honor Josiah Gregg, the only collector to have provided him with a complete flower:

"The specimens sent for cultivation by Dr. [Wislizenus] were unfortunately dead when they arrived here, and neither flower

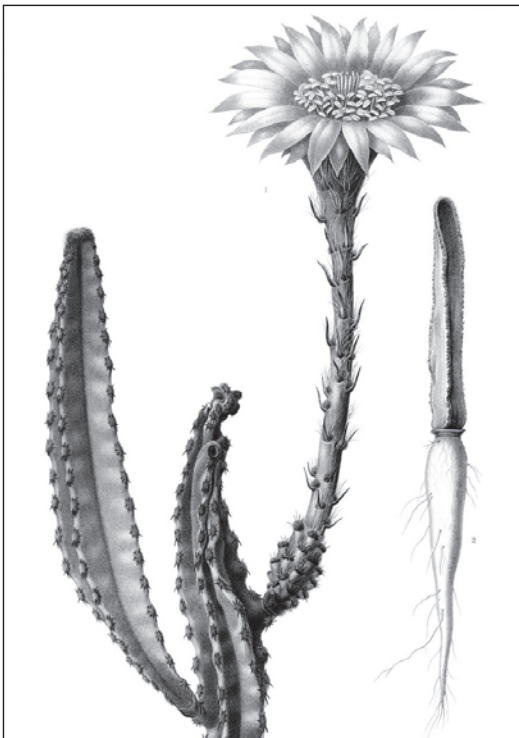
nor fruit had been obtained; but Dr. Gregg has collected the same species near Cadena, south of Chihuahua, in flower, from which I completed the description. I could not have given it a more appropriate name than that of the zealous and intelligent explorer of those far off regions."

By mid-century, only one drawing of *Cereus greggii* had been published—a somewhat rough sketch drawn by John Mix Stanley in 1846. A more refined drawing of the cactus didn't appear for another 13 years when Engelmann's 1859 "Cactaceae of the Boundary" was published. Three drawings of *Cereus greggii* were made by Engelmann's friend, Paulus Roetter, with superb steel engravings prepared by Philibert and Eugène Picart of Paris.

Included here is the Roetter/Picart engraving of the *Cereus* flower shown alongside the actual flower collected by Josiah Gregg in 1847. A close look at the two images indicates that this is the plant material used by Roetter to compose his drawing. While Roetter may have had living stems to work from, he drew the flower from a dried specimen that had traveled from Mexico to St. Louis.

A note about classification: In 1909, Engelmann's *Cereus greggii* was renamed *Peniocereus greggii* by Nathaniel Lord Britton and Joseph Nelson Rose. Josiah Gregg's name remains bound to the plant, and next month we'll look at the extraordinary life of the "zealous and intelligent" Dr. Gregg.

The Florilegium Program's website has a "*Peniocereus* Page" where you can see Stanley's sketch of the cactus along with Roetter's three engravings, works by Lucretia Hamilton, Ella Estill, and Margaret Pope. You can find the link on our home page (www.art-botanical.org).



Cereus greggii Illustrator: Paulus Roetter "The Report on the United States and Mexican Boundary Survey" Major William H. Emory, 1859 Vol. II "Botany of the Boundary. Cactaceae" Image courtesy Cactuspro. www.cactuspro.com/biblio



Peniocereus greggii (previously *Cereus greggii*) Image courtesy of Tropicos, botanical information system at the Missouri Botanical Garden www.tropicos.org/Image/2874

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Deadline for newsletter text or photos:
Thursday, August 24, 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.

August 2018

Thursday, August 2, 2018 at 7:00pm

"The Art of Naming a Species: Can they Really Do That?"

Presented by Greg Starr

Tuesday, August 14, 2018 at 7:00 pm

Board meeting, Ward 3 Council office at

1510 E Grant Rd. Tucson, AZ



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

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.

General Fund

David Chavez

In Memory of Clint Jarvis

Dick & Pat Wiedhopf

Pima Prickly Park

Dick & Pat Wiedhopf

In Memory of Ray Topp

John & Janice Topp Family
Leyla Lara • Dick & Pat Wiedhopf

In Memory

Raymond W. Topp was suddenly taken from us on Friday afternoon, July 20th, 2018 of Cardiac Arrest in Tucson, Arizona. Ray was an important part of our rescue crew. We send our sincere sympathy to his wife, Jenny and all the members of the Topp family and friends.