



DESERT BREEZE

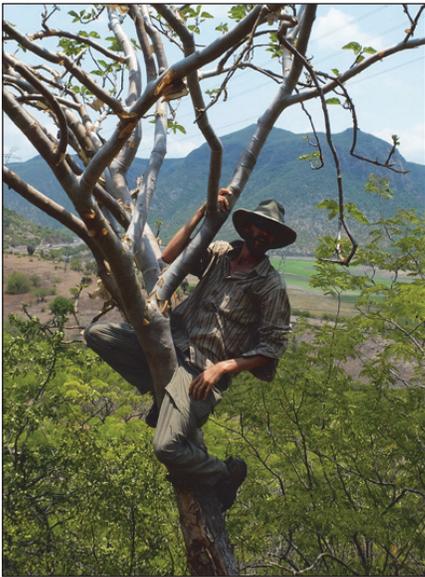
Newsletter of the Tucson Cactus and Succulent Society

July 2015

Thursday, July 2, 2015 at 7:00pm

“*Jatropha* in Mexico - Resolving the Evolutionary Relationships of the Mexican sub-genus *Curcas*.”

Presented by Nathan Michael LeClear



Nathan's program will be about his field work collecting material of *Jatropha* in Mexico, primarily in Oaxaca, Puebla, Michoacan, Durango, and Sonora during the last two summers (including the current). His work is molecular, aimed at resolving the evolutionary relationships of the Mexican sub-genus *Curcas*.

His graduate program at UT and the plant biology program is a joint PhD program of Integrative Biology and Molecular Biosciences Departments at the University of Texas at Austin. Research themes span the range of evolution, biogeography, physiology, anatomy, ecology, molecular/cellular biology, and genetics.

Originally from Emporia, Kansas he studied botany as an undergraduate at Emporia State University under the advisement of Dr. Marsh Sundberg, and graduated in 2006. After working for the city of Eugene, Oregon as a seed collector for wetland conservation for a season he began his Masters at the University of Texas - Pan American in Edinburg, Texas under the advisement of Dr. Andrew McDonald. His thesis research was the ethnobotanical history of the economically important species *Jatropha curcas*, and a study of the seed oil chemistry of the same species, which was completed in 2010. After working as an arborist in Texas for a year he spent several seasons botanizing the western US with a consulting firm for the US Forest Service in California, Utah, Nevada, and Idaho.

Returning to academia in the Autumn of 2012 he began his doctoral research on the systematics, biogeography, and



evolution of breeding systems in the neo-tropical species of *Jatropha* under the direction of Drs. Beryl Simpson and Randal Linder. His field work has taken him to Arizona and many states of Mexico, to which the majority of the nearly fifty species of sub-genus *Curcas* are native, many being narrow range endemics. This summer concludes the third year of his PhD, and after its completion he aims to continue to work in the field of botany with a focus on conservation and education.

This will be an exceptional time for all to gain added knowledge of these plants. Be sure to join us, hear a great program, enjoy some refreshments and get some marvelous plants.



President's Message

The seeds for this society were planted by Cactus John Haage back in the early 1960's. John would have never dreamed what his seeds for a group interested in cactus and other succulents would grow into. Today, we are well over 1000 members with broad range of knowledge and interests. We have saved more than 75,000 plants

from destruction and returned most to the Tucson environment to grow and thrive. We have had 100s of speakers on a broad range of cacti and succulent topics. We have hosted or co-hosted 4 national conventions and 10 Sonoran Conferences and now working on number XI. We have provided educational activities for K-12 and taught hundreds of younger children with our cactus model activity.

We have produced a cookbook and our latest effort is the "Field Guide to Cactus and Succulents of Arizona." We have had numerous plant shows, sales, silent auctions, free plants and more to interest our members and the public at large about the diversity and unusual nature of cacti and succulents. We are engaged in development of a Pima County public park to show off and educate about these plants, which is aptly named Pima Prickly Park.

All these things and more have come from that seed started by Cactus John Haage in 1960. That seed has been growing and nurtured for more than 50 years and what a special society it has grown into.

Now to the real point of this article. It takes just one seed to grow something special and this is a great time of year to collect seeds and to start them on their way to becoming something special. It is very important for all of us to maintain our plant collections and pass on plants to our fellow member, the public and the future.

I go out in my collection and look for seed pods every day. I collect, clean and store and even identify some that I can. Hopefully, I will germinate and grow on many of them, but as my collection has grown that has become more difficult. So this is what I want us to do. SHARE!

On several occasions, I have been able to pollinate rarer plants with the help of members and produce seeds to be grown on either by one of our nurseries or interested members. This is what I would like you to do.

Start bringing seed to share at our regular meetings. They can be packaged individually with all the information you can provide and/or a picture of the parent(s). Or bring in seeds that can be shared and we will provide envelopes for members to take home a quantity to grow. I now we can all bring in thousands of *Ferocactus wislizeni* seeds but let's think about what would be more interesting and unusual.

We could start a contest each year for seed grown plants, best cacti or succulents, at age 1,2,3, etc.

It all starts with a seed.

Thank you for your support.

Dick Wiedhopf, President

Trust Funds for TCSS

Sara and Lloyd Perper were friends and active members of TCSS for many years. Sara died on December 3, 2010 and The Sara Woods Perper Revocable trust continue to benefit her husband Lloyd until his death on April 14, 2015. Unknown to us, we had a 4% interest in the trust along with 8 other organizations. We received a check from the Trust for \$11,427.14 in unrestricted funds.

The Board of Directors decided that these funds would support special projects of the society and be designated when used, crediting the Sara Wood Perper Trust.

The first use approved by the board was to purchase 50 copies of our Field Guide which are inscribe as a gift from the TCSS supported by the Trust. Thirty of these copies will be presented to the teachers attending the STEMazing Institute at PPP.

I truly believe that if you do good things than good things will come your way. That has been my goal for TCSS and it has certainly work our well.

We do need to think about the future of TCSS and what part do we all play. TCSS is more than just a hobby society and to some extent it is involved with the preservation of our Sonoran Desert environment.

So, the Board is working on the development of a "Legacy Fund" where each of us could contribute a part of our Estate, Life Insurance or just an annual donation that would be invested for the future.

Dick Wiedhopf

You are the eyes and ears of TCSS

The Tucson Cactus and Succulent Society includes over 1100 folks with a commitment to making sure that our Native Desert Plants don't end up in a landfill. If each of us makes it a point to keep our "EYES & EARS" open as we travel thru out the Tucson and Pima County area, and make sure to get our message to builders, developers and contractors who are clearing land, expanding roadways, building shopping centers and developments.

The next time you pass an obvious construction site, please make note of any/all information on the posted signage: Location, Company Names, Contact information (Personnel, phone #s, email, etc.) and forward it to Noé Mayotte, Community Relations "point person," for

the Cactus Society. He will quickly follow up with the folks involved in the project, explaining the TCSS charter, and encouraging them to "partner with TCSS" to save any native plants that might be in the path of construction equipment, and will not be relocated elsewhere within the site.

I would like to acknowledge the input on Rescue leads from John Durham, Carl Englund and Carol J. Owens...Keep 'em coming! No Cactus should go UN-Rescued!

Noé Mayotte's contact info: noemayotteaz@yahoo.com
HA: 520 572 4053, Cell: 520 495 9421

FROM THE FLORILEGIUM

Ten years after the U.S.-Mexico Boundary Survey (1859) and the Pacific Railroad Surveys (1855-1860), the U.S. government continued to send survey expeditions into the American West. The most ambitious of these was the U.S. Geographical Survey West of the 100th Meridian, led by First Lieutenant George M. Wheeler from 1872 to 1879. Wheeler had proposed to Congress a survey project to map land west of the 100th meridian at a scale of 8 miles to the inch, an effort that he anticipated would take 15 years.

Aside from its ambitious scope, the Wheeler Survey was noteworthy as one of the first expeditions to make extensive use of photography to document the landscape. Wheeler hired Timothy O'Sullivan, a noted Civil War photographer, to accompany the survey party to photograph the landscape, geological formations, and the occasional cactus.

Wheeler's 7-volume final report contained few of O'Sullivan's actual photographs, but many were used as the basis for the lithographs and woodcuts to depict the landscape. In Washington, the expedition's photographs were often bound separately into albums and issued as promotional materials for Wheeler's multi-year project in an effort to secure continued congressional funding.

Traditional scientific illustrations fill the paleontology, archaeology, zoology, and botany volumes. The botanical report was written by Joseph T. Rothrock, a botanist and physician who served under Wheeler for two years as botanist and surgeon for the expedition. It contains 30 botanical illustrations, 21 of which are by Isaac Sprague, one of the foremost botanical artists of the day who had also provided illustrations for the botanical reports written by Asa Gray and John Torrey for several of the previous survey expeditions.

What is most memorable about the botany volume is its beautiful and unusual frontispiece, a chromolithograph of a painting by H.J. Morgan that depicts a "grove" of saguaros. The vegetation is more verdant than we expect to see in the desert, and this very grassy setting is even more baffling after reading Rothrock's

description of the expedition's encounter with the saguaro:

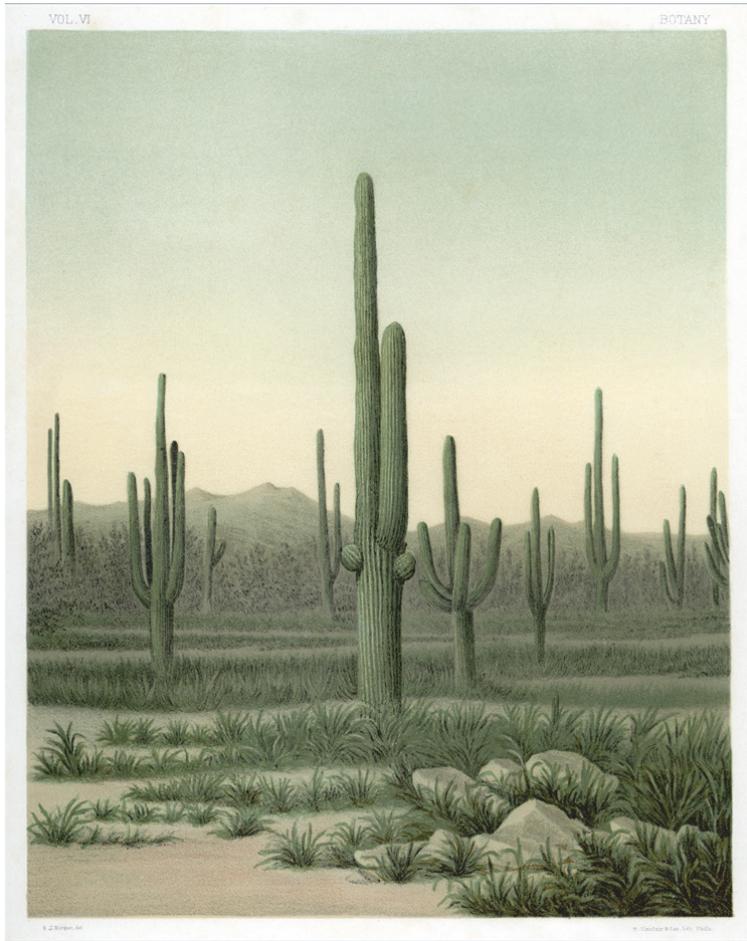
"Crossing a series of mesa lands at an elevation of 6,000 to 7,000 feet, we begin the descent to the parched, superheated valley of the Gila River. A complete change comes over the flora. If verdure and superabundant vitality were the expression of plant life on the timber clad Mogollon Mesa, in the valley of the Gila, hardness of texture and contraction of form would be characteristic of the flora. The attempt to make an analysis of one's feelings on being somewhat unexpectedly brought face to face with this peculiar vegetation would be futile, as no point of comparison appears to offer. The giant *Cereus* occupies the hill-sides which have a southern and southeastern exposure, towering up to a height of from 30 to 50 feet. *Fouquieria*, with its leafless, wandlike trunk, and its tip of scarlet flowers, *Agave Palmeri* and *Parryi*, and various species of *Dasylium* [sic], dry, rigid skeletons of plants without the living green; *Canotia*, a tree 20 feet high, a foot in diameter, with green branches provided with stomata, but no leaves, all go to complete this desolate floral landscape."

A truly desolate floral landscape can, however, be seen in O'Sullivan's photograph, "*Cereus giganteus*". Like much of his work, the photograph was not published in Wheeler's final report, but a quick comparison with Morgan's painting shows that the cacti in the lush, grassy saguaro grove were drawn exactly from the cacti in the photograph. Why the artist added so much greenery to the "parched, superheated valley" is a mystery.

In the end, Wheeler and O'Sullivan's efforts to curry favor with Congress for funding their expansive survey came to naught. Congress in 1879 voted to discontinue the three survey expeditions still in the field, including Wheeler's project, and created the U.S. Geological Survey to conduct future surveys.

Timothy O'Sullivan's photographs can be seen on Flickr (<https://www.flickr.com/groups/timothyhosullivan/>) and in the Smithsonian's online exhibit, "Framing the West: The Survey Photographs of Timothy H. O'Sullivan" (<http://americanart.si.edu/exhibitions/online/osullivan/index.cfm>).

FROM THE FLORILEGIUM



"A Cactus Grove - Arizona (Species - *Cereus giganteus*)", 1871
H. J. Morgan, Chromolithograph
Frontispiece to Volume 6, U.S. Geographical Survey
West of the 100th Meridian



"*Cereus giganteus*, Arizona" Timothy O'Sullivan, Photograph
Expedition of 1871 - Lieutenant Geo. M. Wheeler, Commanding
Expeditions in Arizona and Nevada Image courtesy of the Library of Congress

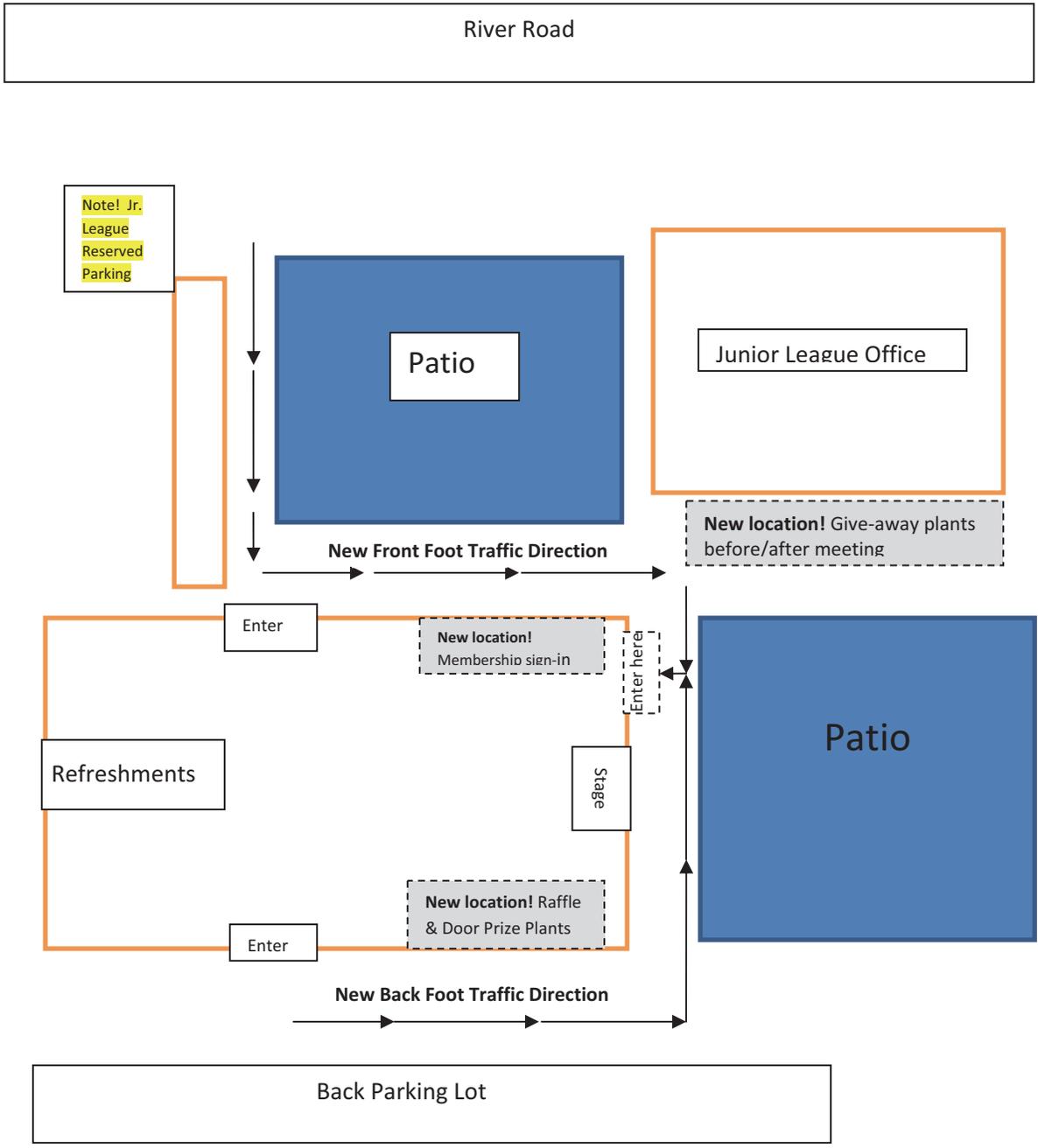
TCSS Monthly MEETING REFRESHMENTS

Thanks a million to so many of you who bring food to share at our monthly meetings. Our monthly newsletter always lists which last names, (alphabetically), are asked to bring something edible to share that month on our refreshment table. Our members respond so generously ... and deliciously. TCSS also has a meeting refreshment budget to provide a few basic items to make sure that we have enough for all to enjoy.

For the past few years Marija and Rim Tallat-Kelpsa have been making and bringing the drinks for the meetings. We are looking for some new volunteers to help with this job. It involves bringing our two large 5 gallon drink dispensers to the

meeting with ice and water in one and some type of punch in the other. Usually we have a prickly pear lemonade, but any kind of punch would work. The cost of any ingredients is reimbursed by our treasury. If this is something you might consider helping with, please contact Patsy at 575-7126 for more information. Perhaps the effort could be shared by a few members by passing around the large drink containers.

Thanks again for all of the wonderful goodies that arrive each month on the refreshment tables and a big thanks to Marija and Rim for their time and effort providing drinks for all of us to enjoy.



(note: not necessarily to scale for presentation emphasis)

New Set-Up for Regular Meetings at the Junior League

The Tucson Cactus & Succulent Society at work beautifying our Community

Thanks to the collaborative efforts of dedicated members of the Tucson Cactus and Succulent Society, Jessie Byrd and her staff of the Pima County Natural Resources, Parks and Recreation, and the generosity of the folks at ASARCO/Silverbell mine, the WTA library received the wonderful gift of a landscape makeover for its 7th birthday. The landscape beautification project included the planting of nearly two dozen rescued native cacti, succulents and other plants from the nearby historic Silverbell mine. Visitors to the library are greeted by a variety of groupings of Ocotillo, Saguaro, Golden Hedgehogs, Barrel Cactus, and Desert Lavender.

Featured...front and center...among the plantings, you will spot a new "Old Man" cactus..a plant of important significance...prominently displayed near the library entrance. This "special" cactus replaces the original gift (which did not survive) to the library by Ms. Renee Abbett in memory of her father, Mr. Wheeler Taft Abbett, Sr., the library's benefactor. Ms. Abbett commented that the "Old Man" cactus was her Dad's favorite cactus. We feel that it is a lovely addition to the landscape.

An engraved stone acknowledging the Tucson Cactus and Succulent Society's work will be incorporated into the completed landscape. In addition, the library is exploring acquiring funds to add small identification markers and offering public education programs on cacti, succulents and other native plants.

This project would not have been possible without the tireless efforts of many people. I would like to especially recognize and thank the following individuals: Jessie Byrd, Native Plant Nursery Manager, Pima County Natural Resources, Parks and Recreation and Nancy Johannesmeyer, Sr. Environmental Engineer at ASARCO/Silverbell Mine, and TCSS Volunteers: Joe Bannon, David Freund, Tom Kresler and, Noé Mayotte. You're all helping make this world a more beautiful place!

Lastly, I would like to express our gratitude to the Tucson Cactus and Succulent Society for their generous donations of the Society's Field Guide to Cacti & Other Succulents of Arizona to our library. Our copy will be on display along with the new landscape plan.

The next time you visit the library, I invite you to pause a moment to take in the breathtaking beauty of our new landscape. As one customer commented, "it's a beautiful sight!"

Composed by:Catherine (Cat) Strong, Managing Librarian
Wheeler Taft Abbett, Sr. Library

The members of the Tucson Cactus and Succulent Society (TCSS) have been instrumental in saving more than 75,000 native Sonoran Desert plants since our rescue operations began in 1999. The TCSS continues to "partner" with contractors, local/state governments and utilities, along with property developers in "rescuing" some of the smaller cacti and other succulent species that are not economically viable for larger scale relocation. These "rescued" plants are relocated to: public schools; other public buildings and gardens. Please stop by the Wheeler Taft Abbet Sr. Library at Silverbell and Cortaro Farms Road, or Pima Prickly Park, on River Road, for examples of TCSS labors!



David Freund, Noé Mayotte, Reyes Mitchell, Joe Bannon, Tom Kressler and Jessie Byrd



Jessie Byrd, Tom Kresler, Joe Bannon, David Freund, Reyes Mitchell and kneeling, Noé Mayotte



Catherine (Cat) Armstrong, Managing Librarian Wheeler Taft Abbett Sr. Library, Noé Mayotte of TCSS welcoming the "Old Man"

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Deadline for August newsletter text or photos:
Thursday, July 23, 2015

TCSS Web Page:
www.tucsoncactus.org

Webmaster: Keimpe Bronkhorst • webmaster@Tucsoncactus.org
For additional information call: (520) 256-2447

Everyone is Welcome!

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

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Cacti Rescued - Since 1999
359 Rescues - 25,701 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

July 2015

Thursday, July 2, 2015 at 7:00pm

"*Jatropha* in Mexico - Resolving the Evolutionary Relationships
of the Mexican sub-genus *Curcas*." Presented by Nathan
Michael LeClear

Tuesday, July 14, 2015 at 7:00pm

Board meeting at the U of A College of Pharmacy

Donors

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.

PIMA PRICKLY PARK

Monty Turner

UNRESTRICTED FUNDS

Sara Woods Perper Revocable Trust
Jane Erikson

**Meetings are held on the first
Thursday of each month.**



Junior League of Tucson, Kiva Bldg.
2099 E. River Road

**July Meeting
Refreshments**

Those with family names beginning with
B,C, D, E, F, G, and H, please bring your choice of
refreshments to the meeting. Your generous sharing will
be greatly appreciated and enjoyed!