



DESERT BREEZE

Newsletter of the Tucson Cactus and Succulent Society

August 2021

Tucson Cactus and Succulent Society • Zoom Program Presentation • Thursday, August 5, 2021 at 7:00pm

The Succulent Flora of Limpopo, KZN and Mpumalanga

Presented by Rob Skillin

Limpopo, KwaZulu-Natal and Mpumalanga are the 3 provinces of South Africa which comprise the northeastern corner of the country. They are adjacent to the countries of Botswana, Zimbabwe, Mozambique and Swaziland.

The succulent flora there is adapted to a subtropical, summer-rainfall regime and is generally totally different than that found in the winter-rainfall areas in the western portions of the country such as Namaqualand and the Richtersveld. The diversity of succulent flora is very high, and comparable to the western areas. Rainfall varies from lows of 4 to 8 inches in the very northeastern tip of the country, to highs over 40 inches in the Drakensberg Mountains, which run parallel to, and inland from the eastern coastline. Rain frequently occurs as thundershowers throughout these northeastern areas. Temperatures are generally mild; highs ranging from 77° - 90° with lows of 45° - 60°. Maximum highs of 113°- 117° are only occasionally felt. It rarely freezes in the winter, except in the Drakensberg Mountains, where snow is possible.

Rob's program will feature euphorbias, aloes, stapeliads, summer-growing bulbs from various different families, adenias, pachypodiums, haworthias and other succulent plants.

Rob has been growing cacti and succulents for 43 years, and have been involved in various local societies for most of that time, starting with the San Diego CSS in the 1970's, then to the Santa Barbara and Bakersfield clubs. He currently belongs to the Central Coast CSS of which he was a founding member, first President and first Show and Sale Chairman. He has also been involved with the CSSA as a member of its Board of Directors, and am a CSSA certified Judge.

Along with his interest in cacti and succulents, he enjoys photography and travel. These interests have come together in a wonderful way during his botanical explorations of the western US and Mexico, and portions of South America, Africa, Madagascar and the Middle East. He has several programs based on these trips, and he speaks regularly to clubs in northern and southern California, as well as at the Huntington Succulent Symposium and 2019 CSSA Convention. Many of his photographs have been published as illustrations for articles and covers of the CSSA Journal and Haseltonia, as well as the Timber Press Book of Succulents of the World. He has recently published articles on *Pediocactus* and *Ariocarpus* in the CSSA Journal.

Please join us for this excellent Zoom program that will be an important educational and informational presentation you must see. Also be sure to log in to win a \$25.00 gift certificate from TCSS or choose a copy of the new 3rd edition of the Field Guide to Cacti & Other Succulents of Arizona.



September Meeting Announcement Tucson Cactus and Succulent Society

Sky Islands Public High School
6000 East 14th Street, Tucson, Arizona 85711

Thursday, September 2, 2021 at 7:00pm

Agave Cultivation Tips:

An overview of how to care for your favorite specimens

Presented by Greg Starr

The following article has been approved for reprinting by the Tucson Audubon Society.

Additionally, these boxes can be purchased at this TAS site:
<https://tucsonaudubonnatureshop.com/collections/outdoor-accessories/products/habitat-at-home-bee-habitats>



President's Message

The reality of Covid-19, Delta variant, is impacting everything we plan to accomplish. It is my philosophy that your health and safety and that of your family are the most important criteria for planning events. We were all looking forward to a September in person meeting and the Good Time Silent Auction. These events are now

in jeopardy due to the resurgence of this Covid-19 variant. I know we would do what is necessary to protect our plants from insects or disease, so we must apply the same concern to Covid-19. We will follow guidelines from the city, county and state as they are updated. The bottom line is to wear an approved mask indoors and in groups and get vaccinated.

We now have more than 1,570 members representing over 1,000 households. This is terrific. We have rescued over 113,000 cacti and succulents since July 1999 and the

program has never been as active as it is now. We will have a Blooming Barrel Sale on August 15 with appropriate COVID-19 restrictions, so watch your email and the website for more information.

We have an area at Pima Prickly Park designated for plants of Baja. We need input on design and donation of more plants native to Baja. Contact park@tucsoncactus.org. We really want to hear from you. The area is surrounded by our new Baja palms. Come by anytime and take a look.

Be sure to check out our new website (same old address www.tucsoncactus.org) with alot of opportunities for knowing, growing, showing and conserving. Our new webmaster is Barb Watts. We all thank her for taking on this responsibility. Her contact is: webmaster@tucsoncactus.org.

Thank you for your support.

Dick Wiedhopf, President

Instructions To Join

The TCSS Zoom Meeting on August 5, 2021

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://www.tucsoncactus.org/pdf_files/Zoom-Instructions.pdf

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

If you can not get connected at the last minute, you can email us at HELP@TucsonCactus.org and someone will get right back to you.

Receive the Cactus and Succulent Society Journal, published four times annually

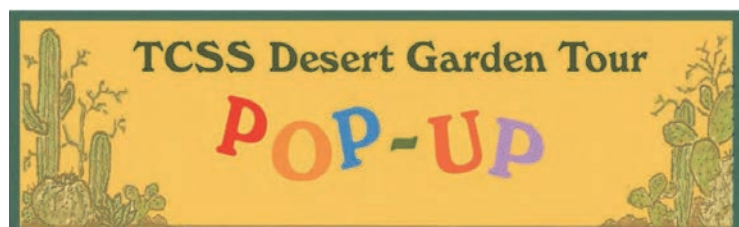
Participate in the CSSA Biennial International Convention

Participate in the CSSA Webinar Series

Participate in CSSA's members-only Field Trips to native habitats of cacti and other succulents

Purchase cactus and succulent seeds from the CSSA Seed Depot

Support CSSA's mission to support the cactus and succulent community through education, conservation, scientific research, and research grants.



The TCSS Garden Tour Committee is hoping that we will be able to resume our member garden tours this October. Last year we had planned on trying individual tours on scheduled Saturdays and we would like to return to that format this Fall. If you are interested in sharing your desert landscape with other TCSS members please let us know, and we will arrange and make announcements for a tour just for your home on a Saturday that works for you. You can choose any Saturday between October 2021 and May 2022 that isn't already taken to showcase your garden at its best. Please give us at least a 2 month notice so that we can arrange enough time to get the word out in the newsletter. On the day of your "Pop-Up Tour" please plan to have your garden available for members to tour from 10am to 2pm. For questions, more information, or to reserve a Saturday, please contact our committee at gardentours@tucsoncactus.org

The Cactus and Succulent Society of America (CSSA) now has a YouTube channel.

You can subscribe on their Website Cactusandsucculentsociety.org. While on the CSSA website, you can also join the society for \$50 a year. With this membership, you get the following benefits:

TCSS 2021 SARSEF SCIENCE FAIR WINNERS



As a new school year approaches we want to give special congratulations to the students who took part in SARSEF this past Spring. After judging several projects that related to cactus and succulents, the TCSS education committee awarded the following prizes to recognize and encourage curiosity and asking questions they care about by using science and engineering to find solutions that are meaningful to them.

TCSS FIRST PLACE 2021 SARSEF PROJECT \$100

The Saguaro: Climate Victim or Not?

Maxime Ferriere Grade: 5 Sam Hughes Elementary

Maxime wanted to know if saguaros are affected by climate change. Hypothesizing that the death rate of saguaros would be higher with climate change. Maxime collected data on the death rate of saguaros at Tumamoc Hill. There has been an increase in the death rate of saguaros there since 2012, with extreme heat and cold events.

TCSS SECOND PLACE 2021 SARSEF PROJECT \$75

Making a Saguaro H.A.W.T. Amanda Whalen

Grade: HS Veritas Christian Community School

The purpose of this experiment was to use biomimicry to design and build a wind turbine tower which utilizes the structure of a saguaro cactus and test the aerodynamic efficiency and load bearing capacity of this tower against a conventional tubular tower. Amanda chose this project because she is passionate about environmental issues, and believes that science should look to nature for inspiration in solving problem. She concluded that a wind turbine tower designed with the pleats and spines of a saguaro cactus would better utilize winds, especially at lower wind speeds, to produce more electricity. This is an important step to maximizing wind power as a source of energy to be dependently used in a future without fossil fuels.

TCSS THIRD PLACE 2021 SARSEF PROJECT \$50

pH Indicators from Tucson Plant and Fruit Extracts

Ben Wexler Grade 7 Doolen MS

This project is about seeing if certain plant extracts from plants commonly found in the Tucson area, could be used as a pH indicator. Ben chose this project because he is interested in chemistry and the composition of desert plants. The results of this project were that two of the plants produced a greater number of color concentrations than the other two. The concepts from this experiment could be applied to effluent testing, gardening and the making of dyes

TCSS THIRD PLACE 2021 SARSEF PROJECT \$50

Straight Up Soil Situation

Ben Head Grade: 7 Emily Gray Junior High

When Ben goes up to Mt Lemmon, he sees how native plant life changes from desert and cactus at the base to different native plants along the way with evergreens at the top. He wondered how the soil changes where the plants and trees change the higher in elevation you go. To answer this, he tested soil at the base plus the nine locations where plant life changed. He tested soil temperature,

light, moisture, pH, and nutrients (nitrogen, phosphorus, potash). Results showed the moisture level increased with elevation. He hopes his project will encourage people to choose plants and trees that grow natively. In Tucson, this means plants that need less water.

TCSS HONORABLE MENTION 2021

SARSEF PROJECT \$25

Nature vs. Nurture: Barrel Cactus Seeds

Noah Madrid Grade: 5 Harelson Elementary

Do you think a part of your garden or yard has more pollinators than in the wild? Noah wondered this when he noticed the barrel cactus fruit in his garden. His hypothesis was that the garden barrel cactus fruit had more seeds than in the wild. The experimental results proved that his hypothesis was wrong because the cactus fruit had more seeds in the wild than in the garden. He believes this is because there are far more pollinators in the wild than in the garden. He thinks his project is important because it helps prove that garden barrel cactus fruit will hold the same amount of seeds regardless of where they are planted, which is useful for growing.

TCSS HONORABLE MENTION 2021

SARSEF PROJECT \$25

Which Desert Plant Reduces Carbon Dioxide and Temperature the Most?

Ariadne Wolgemuth Grade: 6 Doolen Middle School

Ariadne chose this project wanting to do something on the environment and a way to help it, and planting the plants that reduce temperature and Carbon Dioxide is one way to help the environment. Ariadne found out that the Creosote reduced the most Carbon Dioxide and the Scarlet Hedgehog reduced the most temperature. Ariadne thinks this project is important because if you plant more Scarlet hedgehog cacti, and more creosote bushes then you are helping stop Climate Change, and even if it is just a little, a little can go a long way.

TCSS HONORABLE MENTION 2021

SARSEF PROJECT \$25

Climate's Effect on Xerophytes and Subtropical Species

Nathaniel van der Leeuw Grade: HS University High School

This project analyzes how vegetation responds to historical changes in rainfall and temperature in Natural Areas surrounding Tucson. He chose this project to further understand how ecosystems like the Sonoran Desert change overtime and how to analyze big data on a real-life topic. The results of this project were that outside factors such as invasive species are impacting healthy vegetation, more rainfall leads to decreases in vegetation, and that the growth of healthy vegetation is constant. His project analyzes how historical vegetation data, through GIS satellite imagery, changes and develops in the Tucson community.

TCSS HONORABLE MENTION 2021

SARSEF PROJECT \$15 plus \$15

Biomimicry Is the Future Jenavieve Echegaray, Lexana

Echegaray grade: HS

Native American Science & Engineering Program

This project is about the science behind the implementation of cactus filtration systems and how they will lead to a healthier more sustainable way to produce drinking water.

TCSS BOARD

Officers (ending December 31, 2022)

President: Richard Wiedhopf • president@Tucsoncactus.org

Vice President: Vonn Watkins • vp@Tucsoncactus.org

Secretary: Monica Wnuk

secretary@tucsoncactus.org

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treasurer@Tucsoncactus.org

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Field Trips/tours: Rob Romero • trips@Tucsoncactus.org

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: Thomas Staudt

conservation@tucsoncactus.org

Newsletter Editor: Karen Keller • runbunny@cox.net

Deadline for newsletter text or photos:

Thursday, August 19 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.**

112,182

Cacti Rescued - Since 1999

551 Rescues - 42,742 Volunteer Hours (updated 05-28-21)

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 2021

Thursday, August 5, 2021 at 7:00pm (ZOOM MEETING)

The Succulent Flora of Limpopo, KZN and Mpumalanga
Presented by Rob Skillin

Tuesday, August 10, 2021 at 7:00pm

Teleconference Board Meeting

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.

Donors

Phyllis Killeen

Anne Berger

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Frank Buffa

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Several Anonymous Donors

