

THE XEROPHILE

October-December 2019

Cactus &
Succulent
Society of
New Mexico



Mark Your Calendars

Friday 18 October

Regular meeting and slate of proposed officers. John 'Obie' Oberhausen presentation on the Cactus Rescue Project and the Santa Fe Cholla.

Friday 15 November

Regular meeting and election of 2020 officers. Irwin Lightstone presentation on photographing cacti and succulents.

Saturday 14 December

Holiday Party. Come help set up at 5 pm; dinner is at 6 pm and will be followed by short member presentations.

Check the website for updates and changes.

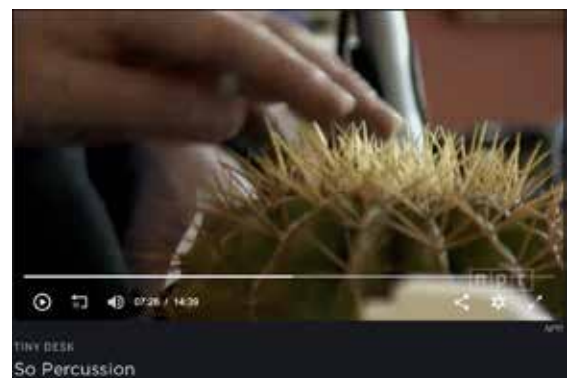
Playing the Amplified Cactus

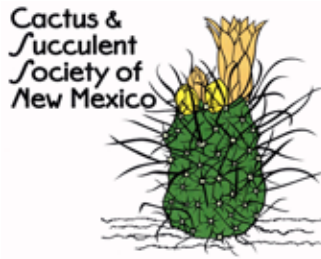
“And then we play a cactus for 20 minutes for a different reason,” he added. “Not because the audience will say, ‘Wow, that’s the best cactus player I’ve ever heard,’ but because the sound is beautiful.”

From an interview with band members of So Percussion: <https://www.ny-times.com/2007/07/20/arts/music/20perc.html>.

No, it’s not a joke. The acoustic properties of cacti can be amplified using a

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The Cactus and Succulent Society of New Mexico (CSSNM) is a non-profit organization dedicated to interest in, preservation of, and education about cacti and succulents from all over the world. We are an affiliate of the Cactus and Succulent Society of America.

Regular meetings are held at 7 pm on the third Friday of most months at the Albuquerque Garden Center; 10120 Lomas, NE. Details about programs and schedule updates may be found on the website: new-mexico.cactus-society.org.

The CSSNM may be contacted by email at: [CSSofNM \[at\] gmail.com](mailto:CSSofNM[at]gmail.com) or by snail mail at: P.O. Box 21357
Albuquerque, New Mexico 87154-1357

“The object and purpose of the Society shall be exclusively for the study, appreciation, propagation and promotion of cacti and succulents among growers and collectors; the conservation and cultivation of native cacti and succulents; and, the exhibition of said materials whenever and wherever possible.”

Officers

President	Margaret Todd
Vice President	Becky Wegner
Recording Secretary	Cheryl Haaker
Treasurer	Pia Louchios
Executive board members	Penny Hoe Lee Graham Ralph Peters

Appointed Positions

Program Chair	Steven Brack
Webmaster & Show PR	Ralph Peters
CSSNM Email	Steven Brack
Garden Maintenance	Robert Perz
Librarian	Judith Bernstein
Representatives to CAGC (4)	Steven Brack Judith Bernstein Becky Wegner Vacant
Affiliate CSSA Representative	Oleg Lagutin
Membership Chair	Lee Graham
Newsletter	Margaret Ménache
Spring Show	Daniel Finley
Spring Sale	Steven Brack
Fall Exhibition-Botanic Garden	Margaret Todd (info only)

The newsletter is published on a quarterly schedule with issues being emailed to members and posted on the website on or near the first of January, April, July, and October.

If you are interested in submitting an article, please contact the editor, Margaret Menache (margaret@margaret-menache.com) on or before the 20th of the month preceding the publication date.

Submissions for the January issue should be sent to Margaret on or before 20 December.

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contact microphone. Not surprisingly, as Wikipedia reports, “amplified cactus is a medium rarely written for, even in the contemporary music genre” (https://en.wikipedia.org/wiki/Amplified_cactus). John Cage’s *Child of Tree* (1975) specifically called for a cactus and pea pods as two of ten plant instruments. Paul Rudy has a composition for 10” cactus (1999). So Percussion, a NYC-based group, also plays the amplified cactus. The image on page 1 is a screen shot from an NPR video of a So Percussion performance (<https://www.npr.org/2012/04/02/149643877/so-percussion-tiny-desk-concert>). ✨

Cover Image: People of all generations found ways to connect at the CSSNM Exhibit and Educational Event at the Botanic Garden. Image by Margaret Menache.

President's Letter Margaret Todd

Do these few 61 degree mornings we've had mean that Fall may be on the way? I don't know about you, but I look forward to days that barely reach 80 so that I can work outside most of the day.

We've recently concluded our Fall educational event, the third Cactus and Succulent Exhibit at the Botanic Garden, which I feel was a success and hope other members agree. The event could not happen without the hard work of the nine Committee members, and the participation of the 14 members who volunteered to host, the 16 members who provided the 168 show plants, and



the five members who provided giveaway seedlings and starts. Of course, many of the same people are reflected in those numbers. All will be given credit in the Closing Report to be distributed prior to the October meeting, but another thank you is warranted.

Speaking of the October meeting, the Agenda includes the presentation and finalization of the slate of officers for 2020 in preparation of a November vote. I believe the Nominating Committee is still in search of at least one more candidate. Remember, you don't need to be a plant expert to serve the organization as an officer or in any of the appointed positions, and many of the positions are not labor intensive. We really need some of you newer members to volunteer to serve. It's a great way to get to know the other members and learn more about our organization.

I encourage all of you to visit the CSSNM website for information about upcoming meetings, as well as details of past events. I hope to see many of you at the next meeting, ✨



Editor's Letter Margaret Menache

This issue of the Newsletter abounds with stories and images from, or about, the third Cactus and Succulent Exhibit at the Botanic Garden: beginning with the President's Letter and including the page of photographs for September.

Even though it is my photograph, I feel like the cover image captures a lot of the spirit of our educational events. What is more satisfying than to see two sets of hands spanning multiple generations joined together in learning about cacti.

Of course, we have Claire Ross and her mother, Kate, to thank for that educational moment. The Kactus Kidz have been a part of the Exhibit for the last three years. Adding to that, this year Claire has added newsletter columnist to her accomplishments. I was able to find a few more or less quiet minutes with her to talk about her cactus-related interests. That interview is on page 6. Her mother was able to join in as we were finishing and added some insights on learning about



cacti with Claire. As Kate told me, "It was hard in the beginning because she had a lot of plants die because we just didn't have any experience. So we kind of learned the hard way - by losing a lot of plants." As they walked off, Claire was already describing new ideas for next year. I'm sure we'll all have an opportunity to learn more, thanks to the efforts of these two!

Of course, the Exhibit wasn't the only thing going on during the summer. Steven Brack was out travelling the world and sent back two reports from his trip to Africa. Space limitations prevented me from including both articles but the first is in and the second will appear in the next newsletter.

We are also very fortunate to have an article from Gertrud Konings. You will remember that she and her husband, Ad, were here in June. We hope to have her as a sort-of regular contributor on topics related to "Cactus 101".

Enjoy this issue! ✨

Cactus 101

Gertrud Konings

Many desert plants are often confused with cacti. Agaves, yuccas, ocotillos, even spiny acacias are not rarely called cacti, according to the false rule – when it is prickly, it is a cactus. The only plants usually correctly identified as cacti are the prickly pears. Here are some guidelines to follow in order to do a correct identification.



Fig 1: The prickly pear (*Opuntia engelmannii*) belongs to the subfamily Opuntioideae.

Prickly pears have flat segmented stems, called cladodes or, commonly, pads. These are not leaves. Leaves are only found on newly growing stem segments and around forming flower buds. The leaves around the flower buds are called bracts or scales but they are leaves. Other Opuntioideae are the chollas (*Cylindropuntia*) with cylindrical stem segments (Fig 3) and the usually lower growing club chollas (*Corynopuntia*) with club-shaped stem segments. (Fig 4)



Fig 3: Christmas cholla (*Cylindropuntia leptocaulis*)

The stem of a member of the Cactoideae is in general non-segmented, but may form clusters. So what we see of most cacti is their stem. These are usually green and take over the photosynthesis, but they also store water. These cacti are stem succulents.

Both subfamilies of cacti also differ dramatically in the way their seeds germinate. The seeds of the Opuntioideae produce regular seed leaves as we know them from flowering plants, whereas the Cactoideae grow out of the seed as little roundish structures with little “ears”, resembling tiny cat heads.

Two more subfamilies of the Cactus family are known: one is the subfamily Maihuenioideae with only one genus, *Maihuenia*,



Fig 2: The Arizona barrel cactus (*Ferocactus wislizeni*) is a member of the subfamily Cactoideae.



Fig 4: Club chollas (*Corynopuntia schottii* var. *grahamii*)



Fig 5: *Pereskia porteri* represents a primitive form of cacti.

from South America. It resembles more the Cactoideae than the Opuntioideae. The subfamily Pereskioideae holds the most primitive forms of cacti and is named after *Pereskia*, a shrub-like cactus that keeps its leaves. I took a photo of it in Mexico. (Fig 5)

Now what then are the common features of all cacti?

The “most distinctive morphological trait” of all cacti is that they have areoles, cushion-like patches that are covered with short, fine hair (trichomes), from which spines, flowers, leaves and new pads develop. They are the growth points of the cacti. (Fig 6) The areoles are variable and serve in the identification of the different cactus species: they may be round, elliptic or elongate and sometimes even split into two parts. In the Cactoideae the areoles typically sit on tubercles, which are rounded projections of the stem. The upper and lower parts of the areole take on different functions. The lower part of the areole

(the part that points away from the apex) always produces the spines; the upper part, the flower. When these functionally different areas of the areole are split and a midsection connects the two parts, this part might develop spines that become sweet sap producing glands, extrafloral nectaries, to attract ants. Areoles may be covered by felt or long hair or be dry.

Cacti have no typical flower. The buds that produce the flowers grow first like a typical stem segment from the areole, even with areoles that produce leaves and spines. (Fig 7) Then a floral tube starts growing fast and produces at its tip the corolla, the colored part of the flower. The separate, colored structures of the corolla are called tepals and resemble



Fig 7: The flower buds grow first like a typical stem segment from the areole.

the petals of regular flowers. Also, the fruits are therefore enclosed by stem tissue (the pericarpel). This characteristic of the cactus flower is even more strongly expressed in the production of “erumpent flower buds” that develop deep under the epidermis (skin) and must actually break through it when the flower bud starts growing

(some *Echinocereus* species).

Cacti have spines, which are modified leaves. Some cacti only produce them as seedlings or as young plants. Spines grow on the areole and are made up of fibers surrounded by dead cells. Living cells are only present at the base of the spines. Spines also vary greatly in their shape, size, hardness, and color and are therefore important in species identification. According to where on the areole they grow, spines can be distinguished as central and radial spines. (Fig 8) Both types usually differ greatly from each other. Glochids, the short, fine, hair like but barbed spines, occur only in Opuntioideae. ✨



Fig 6: A prickly pear pad covered with areoles.



Fig 8: Central and radial spines usually differ greatly from each other, as shown on this *Thelocactus bicolor* var. *bicolor*.

References:

1. Gertrud and Ad Konings: Cacti of Texas in their natural habitat. 2009 Cichlid Press
2. Mauseth Research: Cacti. Cactus Spines. Retrieved August 1, 2019 from: <http://www.sbs.utexas.edu/mauseth/ResearchOnCacti/Spines.htm>. James D. Mauseth, Section of Integrative Biology, The University of Texas, Austin, TX 78712
3. Daniel Sánchez, Dalia Grego-Valencia, Teresa Terrazas, and Salvador Arias: How and why does the areole meristem move in *Echinocereus* (Cactaceae)? *Ann Bot.* 2015 Jan; 115(1): 19–26. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4284107/>

Catching Up With Claire An Interview by Margaret Menache



Claire Ross at her Kactus Kidz display in 2019. Image: Margaret Menache

I joined the CSSNM in the fall of 2018 and just missed attending the Exhibit and Educational Event at the Botanic Garden, but I began hearing about Claire Ross almost immediately. And about the amazing Kactus Kidz that she, with help from her mother, Kate Ross, had put on. I didn't know then that when she put together the first Kactus Kidz in 2017, she was 10 years old. Nearly 11, but still!!! In addition to Kactus Kidz, The Event, Claire has also been writing the Kactus Kidz Kolumn for this newsletter since January 2019.



Claire Ross at her Kactus Kidz display in 2017. Image: Donna Behme

I was able to get an interview with Claire just as she and her mother were wrapping up another successful Kactus Kidz event at the Botanic Garden this Fall.

Margaret: What I really want to ask you is how you got interested in cactus and when.

Claire: I was a second grader and I was eight years old. I had just a lot of other stuff going on and so cacti gave me a kind of escape route. My family went to the State Fair. We were just regular old Fair-Goers and we had no idea...

M: You went to that Flower Building? There were lots of other plants there - did they appeal to you?

C: No, just the cacti. I saw all these cool, weird cacti and I was like, "Oh my gosh, that is what I want to do." I saw some weird wacky stuff, maybe some cristate and mon-strose. I learned about that later, of course. I wanted to touch everything and, you know, I learned that not all cacti are mean and spiny. That's really when I was, yeah, I got really interested.

Later in the interview Claire told me that her interest in touching cacti hasn't abated. Sadly, however, when she recently tested out a cactus-as-chair, she was reminded that,



Claire at her Kactus Kidz display in 2018. Image: Margaret Todd

in fact, some cacti are mean and spiny. And can be quite painful!

M: When did you join the CSSNM?

C: I joined the Society on my birthday that year because my parents gave me a membership for my birthday.

M: What have you been doing with cacti and succulents since then?

C: I started out not really knowing what I wanted to do and I would just pick up plants from anybody and I would just try to grow them. Then my plants had some disease problems and I had to create a quarantine facility. I've had to consolidate that and now I just like to grow them from seed. I've given up on having some huge hundred year old thing because I'm just a kid and I don't really have the time you need to take care of something like that. I don't have the patience for that. Now, I just grow them from seeds.

M: Well, if you wanted a hundred year old cactus, you could start one from seed now.

C: Yeah, sure.... I only got eleven seedlings from my first set of seeds. None of them survived, but oh my God, when they first germinated, they were so cute. I just could not resist them. That's when I really started growing them from seed. Since then I've done three or four batches. I have yet to have a successful batch. I hope to have one this year and then have them for giveaways in the Kactus Kidz because, you know, baby plants, people will always love them.

M: I know I do.

C: Me too. Especially if they're like one-month old, really cute.

M: What made you decide to do Kactus Kidz? How did you come up with that as an idea?

C: We were, like, why don't we have a cactus kids display to get more members because I'm the only kid in the whole CSSNM. And so we wanted other young members to be



Claire at her Kactus Kidz display in 2018. Image: Penny Hoe



Claire at her Kactus Kidz display in 2019. Image: Margaret Menache

interested. We had someone come today and say, "I have your cactus from last year and now it has flowers." So, it's really rewarding. When they come back the next year and you hear that, it's like oh, we really made a difference.

M: That's wonderful when something like that happens, isn't it. So, what's in your future in terms of cactus? Have you thought it out any further or are you just going day-by-day?

C: I don't really know where this is going to go. Or what... you know what I mean? I mean, it may just stop here for all I know or I may be a world famous person or I may make a college dorm all my own out of cactus or something crazy like that. Like, who knows. I really don't know what or maybe I'll end up sitting on another cactus. ✨



Claire at her Kactus Kidz display in 2019. Image: Margaret Menache

Notes from Africa (received on 5 September)

Steven Brack

This year I am on two trips to Namaqualand that fall back to back, so I will have six weeks to explore for plants. It is nice to have more time to explore around a single area and give the time needed. All of the time will be spent in Namaqualand, a region rich in succulents found along the west coastal region of South Africa.

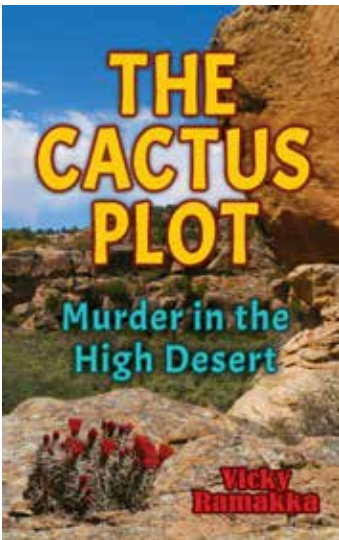
The name “Namaqualand” comes from the Nama people, who have lived here for many thousands of years. They were partly hunter-gatherers and partly pastoralists who moved with their cattle, searching for good grazing lands to follow the rains. In their language the suffix ‘qua’ meant ‘of the’, so the term means ‘land of the Nama people’.

Along the west coast of South Africa is a broad sandy coastal plain, then a range of low mountains that parallel the coast. On the east side of these mountains is an alluvial plain with large areas of rocky and gritty soils. These areas define Namaqualand, an area with low rainfall, but frequent mists and fog. Frost comes on winter nights. The southern end is about 160 miles north of Capetown, then north to the Orange river, the border with Namibia.

One of the signature plants of the region is *Pacypodium namaquanum*, which grows in about the northern quarter. It is found on rocky slopes and mountain tops with basketball sized boulders strewn on the landscape. The boulders provide a place for the wind-blown seeds to fall, giving shelter to the seedlings. This area has



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Copies of The Cactus Plot are available in the CAGC Garden Shop.

This novel is the March 2020 selection for the CAGC Library Book Club, Reading @ the Garden Center. For more information about the book club, contact Margaret Menache at: [gardencenterlibrary \[at\] gmail.com](mailto:gardencenterlibrary[at]gmail.com).

The Cactus Plot
By Vicky Ramakka

Artemesia Publishing,
Albuquerque

Release date November,
2019

276 pp

A review by Kathleen Hall

A mystery wrapped in a Four-Corners landscape studded with botanical gems. Author and Native Plant Society of New Mexico member Vicky Ramakka has called upon her literary fluency and love of place to frame her novel *The Cactus Plot*. She leads us into wild places, throws us a handful of trail mix, and reintroduces us to the community of people, plants and critters we've met out there — the good, the brutal, and the prickly.

Oil-well-studded dryland landscape with its hidden hazards and treasures is seen through the eyes of a young botanist who is just beginning to explore her adulthood and her newly chosen profession. We meet Millie Whitehall at dawn on the day she crosses the state line and makes her way northwest to a seasonal field botany position with the BLM. With growing affinity to the terrain, the task, and the people who populate the upper left hand corner of our state, Millie gains confidence. She makes mistakes and works to resolve them. She marks her successes, defends her integrity, and when things get gritty she rises up with humor and solid survival skills. She's a scientist-as-hero in the process of discovering her strength, ultimately using her botanical training and professional curiosity to crack the puzzles at the heart of *The Cactus Plot*.

And she makes time for a sunset, a petroglyph, a raven calling, an appreciation of the Enchantment that makes this place worth all the stale canteen water and dust it dishes out. That makes her one of us.

The people she meets are also us — a plausibly drawn assortment of companions and suspects. And like Millie, the reader doesn't always know which is which. Satisfying mystery material.

The cast of plants, too, are old friends to native plant aficionados, and like Millie, one of the botanical actors is fictional, but so credible in its cryptobiotic environment that the reader may recall having seen it on a field trip.

Ramakka's contribution to the New Mexico mystery genre is an obvious choice for the inveterate mystery reader. It's a genial introduction to the fragile balance of a complex and enigmatic environment, as well, and an agreeable companion for the fan of character-driven fiction. ✨

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very hot summers that are almost totally dry. An occasional summer thunderstorm will form to the east and wander here, but they are years apart. However they can produce a huge downpour just like in New Mexico. In the winter the rainfall is usually from 2 to 4 inches, but in recent years it has been more in the range of 1 to 2 inches. But there are winter nights with fogs and dew and this is important for the survival of *P. namaquanum*.

The plants have a bend near the top that faces north. This is to reduce the amount of direct sun light falling on the plant. Eventually the plant straightens out below the new growth area. The legend of the Nama people is that they were pushed south,

and they escaped to the south. They were told to not look back, but some did stop and turn and looked to the north: these people were turned into *Pachypodiums* instantly with their heads looking north.

In cultivation they are very long lived, slow growing plants that will flower from seed in about fifteen years. They are adaptable to conditions of more water, so they can be given a soaking water about once a month, with less in the winter if in low light of indoors in a house. They will enjoy being outdoors much of the year when the temps are over 32F. Full to near full sun will be good for them. ✨

July

As usual, there was no meeting for the New Mexico Cactus and Succulent Society. However, the Cactus and Succulent Society of America was holding their biennial meeting in San Luis Obispo, California. Although I believe a few of our members attended the meeting, I wasn't able to snag any reports or photographs from them to put in here.

Snooping around online, however, I did find a pdf of a report from the Sacramento, California chapter. Marilyn Vilas described what sounds like must have been an amazing time - including (lots of) homemade cookies as part of the bus trip to the private garden tours. But what sounded best to me was her statement that "the taped talks from the convention will be available for individual clubs to use as programs." Her full report, including photographs, can be found here: http://sacramentocss.com/ThornyIssues/2019_August_Thorny_Issues.pdf

Further snooping online led me to the CSSA Convention Videos Youtube channel. This link (https://www.youtube.com/playlist?list=PLnGW_v6gmtFzt2JkJgRBPwDjy-IZMggyV_) should land you on a Youtube page with a list of twenty-two approximately 30-60-minute long talks from the 2015 and 2017 meetings. Quite a treasure trove of cactus and succulent information for your listening pleasure.

It's never too soon to reserve the dates for the next meeting, which will be in Colorado Springs in 2021!



CSSA 38th Biennial Convention
July 17-20, 2019
San Luis Obispo, CA

August



Submissions for the 2020 CSSNM tee-shirt were presented at the meeting. Dan Benton, left, urged us to "Save the Endangered New Mexico Saguaro." Penny Hoe, right, presented four panels with her own watercolors, made initially for a CSSNM poster. One design will be selected at the November meeting.

For the program that evening, Gary Duke took us on an amazing tour of Bolivia. Well, of the cacti, bromeliads, and wildflowers of Bolivia... but what else would you go there to see or do? A few more of his images are available on the website.



September

The three-day event (not including setting up and tearing down) at the Botanic Garden was, once again, a great success. The demonstrations were well attended and the Kactus Kidz was a rousing success (see cover photo and interview with Claire on p. 6) - Claire and her Mom let me win a plant even though I got most of the questions wrong! People of all ages came to “ooh” and “ah” over the gorgeous plants, several of which were in bloom, and to learn more about cacti and succulents.



MEMBERSHIP APPLICATION

Name: _____

Address: _____

City/State: _____ Zip: _____

Tel No.: _____ E-Mail: _____

How do you grow? Greenhouse _____ Yard _____ Window _____ Other _____

Favorite genera: _____

Suggestions for a program: _____

Volunteer to give a program? _____

Volunteer for: Officer: _____ Co-Chair an Event: _____

Other: _____

Do you: Buy plants locally _____ Mail order _____ Raise from seed _____ Buy at our sale _____

For current information about the Society, including our email address, go to the Society's website:
<http://www.new-mexico.cactus-society.org>

Complete this application and send it to the address below with your check for \$10.00
made out to the CSSNM.

For more information, contact:

CACTUS and SUCCULENT SOCIETY of NEW MEXICO
P.O. Box 21357
Albuquerque, New Mexico 87154-1357

