STICKY ISSUE

STOCKTON CACTUS & SUCCULENT SOCIETY
NEWSLETTER
MAY 2017

MEETINGS: Fourth Thursday each month, 7:00 p.m.
* Unless otherwise noted
WHERE: Poot’s Cactus Nursery
17229 East Hwy 120
Ripon, CA 95366

*NEXT MEETING: Thursday, May 18th, 2017
DINNER: 6:00 p.m.

STOCKTON CACTUS & SUCCULENT SOCIETY
C/O BRIAN POOT
5617 ANADA COURT
SALIDA, CA 95368

Austrocylindropuntia pachypus
2017 BOARD:

President: Lesley Slayter (209) 679-3078  lesley_shores@yahoo.com
Vice President: Brian Poot (209) 679-8899  jeffgordonfan24@sbcglobal.net
Treasurer: Roelyn Poot (209) 599-7241  billroelynpoot@gmail.com
Secretary: Faye Sutton (209) 620-5406  sutton5591@charter.net
Board Members: Jerry Slayter, Bill Poot & JD Wikert
Newsletter: Brian Poot (209) 679-8899  jeffgordonfan24@sbcglobal.net

BOARD MEETINGS: Please note, board meetings will now be held the second Wednesday of each month, at 7:00 p.m., except in December, or if that date conflicts with something else. Anyone is welcome to attend, but please call first to let them know you will be coming to make sure of the date. Thanks!

We can always use new ideas & opinions for the club, as well as help with behind the scenes stuff. If you are interested, please come to a board meeting. Thx!

MEMBERSHIP INFORMATION:

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All dues should be sent to the treasurer before the February general meeting.


CALENDAR:

May 11th - Board Meeting at the Poot’s 7:00 p.m.
May 18th - Annual Potluck & Auction at Poot’s Cactus Nursery

June 14th - Board Meeting at the Poot’s 7:00 p.m.
June 22nd - General Meeting 7:00pm: Keith Taylor - Winter growers

July 12th - Board Meeting at the Poot’s 7:00 p.m.
July 27th - General Meeting 7:00pm: To Be Determined

OTHER UPCOMING EVENTS: (not club related)

Monterey Bay Cactus & Succulent Society Show & Sale: May 20-21 at the San Juan Bautista Community Center, 10 San Jose St, San Juan Bautista CA

SUNSHINE REPORT:

HAPPY BIRTHDAY to: Sharon Johnstone & Richard Kinzey.
THIS MONTHS MEETING: Auction & Potluck

This year’s annual auction & potluck will again be held at the Poot’s on May 18th at 6:00 p.m. If you wish to come early to tour the greenhouses then you may arrive as early as 5:00 p.m. or if it’s too hot we can tour after supper. Please remember to bring a dish to share. The club will provide plates, silverware, & drinks. Please remember to bring your lawn chairs as well. This year we are again asking you to donate garden related items for the auction. Please remember that this is not a garage sale & in the interest of time & keeping interest in the auction, we would like to request that all items donated either be edible or of garden relation; like garden books, pots, pictures, garden gloves or clothing, tongs, birdhouses or feeders, plants, seeds, etc. Also, it would be a good idea to place a reasonable, minimum starting bid on your items if relevant, so our auctioneer will know where to start. Please remember that you are not there to always get a bargain, but to help support the club as well. Thanks & hope to see you there! Bring boxes for your winnings.

PLANT STUDY: by Elton Roberts

Neochilenia esmeraldana

I have had Neochilenia esmeraldana since way back when a plant was named and that name almost never changed. Back when it was actually known by two names. As a result I have it as # 215 and # 261 in my early book of plants that I have. It was Neochilenia esmeraldana and I got it later as Chileorebutia esmeraldana. I got my plants in about 1973 so it was about ten years after Ritter named the plant. The plant came from Northern Chile at Esmeraldas. In his book Backeberg lists the plant as rare. If he printed that in 1966 I guess that the plant would still be rare. I am not too sure just how plentiful it is now days as I very seldom see it on sales tables. The plant is not fast growing but I have taken my plants apart several times since I got them.

You can put them on the green house bench and not have to worry about doing anything with the plant for quite a few years. The clump in the photo is in a 5-inch pan that it has been in for close to ten years. It is finally getting to the size that it needs to go into a six-inch pan where it could stay for quite a few years. That is to say; ‘the plants are not fast growing plants’. For me they have been trouble free all these years. They did have a bad life for a while when they were on alkaline water. During the alkaline years the plant just kept getting more compact as it slowly shrank. Since the advent of acidic water the plant has filled out and even grown some new heads. The description calls for a plant that is 4 cm in diameter and spherical. True to most cultivated cactus my plants largest head is 6 cm in diameter and 8 cm tall. The plant in the photo is 12 cm in diameter and to reach that size has taken quite a few years. This is another plant that opens its flowers one size and they grow larger each time they open. The flowers are to 5.5 cm in diameter at the largest. The plant can produce as many as a half dozen flowers at a time or other times it will only open one. The plant, will in cultivation flower at least 4 times a year. I keep my plants in a heated hot house but the plants can take cold down to at least 35 F. I have the plants in my regular soil mix and I keep the plants dry over the winter.

For those with limited space this is a slow growing plant that will bloom every years and several times a year. It will not grow and take up all your greenhouse room. It takes a minimum of care and only needs to be repotted once in about 7 to 10 years depending on how much room you give it.
MONTHLY MINI SHOW: OPEN TO ANY CLUB MEMBERS THAT WANT TO SHOW PLANTS!

The mini show, held at the general meetings, is a time when you can bring your plants, to compete against other members’ plants. There are 10 categories: Cacti & Succulent, (Open, Advanced & Novice Divisions), Bloomers (anything in bloom, also three divisions) & Allied Interest (dish gardens or natural planters). You may bring up to 2 from each category. The forms for judging are available to take home so that you can fill them out prior to the meeting if you wish, or there will be some at the meeting as well.

The plants are judged by the members attending that meeting; whoever receives the most votes wins that month's mini show & will get their name in the next newsletter. The person(s) receiving the most votes at the end of the year will receive a gift from the club.

WE ENCOURAGE ALL MEMBERS TO BRING PLANTS TO SHOW THROUGHOUT THE YEAR!

FYI: The mini show categories are Novice - those with fewer than 5 years of showing in the mini-show. Advanced – those who have shown for more than 5 years in the mini-show & does not sell more than $300 in plants a year. Open – those who sell more than $300 in plants a year. Also you must own the plant for at least 6 months before you can show the plant in the mini show.
Never has there been a better time to appreciate the gritty, bizarre charm of these prickly natives.

Anza Borrego, Calif. - A cactus in bloom is pure poetry - particularly that famous line by Walt Whitman: “Do I contradict myself? Very well, then I contradict myself.” In the desert here, the thick, spine-studded paddles of a beavertail cactus look as surly as always, ready to smack you into next week if you get within striking distance. Yet now, in a super-bloom spring that many judge the best in decades, the paddles are topped by dazzling fuchsia flowers the size of teacups, which beckon you closer to feast on the view. The fish hook cactus lives up to its name, its surface covered with long, curved barbs and a snarl of fibrous hairs; but now it wears a festive garland of creamy white petals smartly trimmed in rouge. Keep away. Come closer. You got a problem with that? “If somebody had taken me from rural Illinois, where I grew up, and dropped me here into this desert landscape to see all these fat succulent things,” said Jon P. Rebman, the chief botanist at the San Diego Natural History Museum and a cactus taxonomist, “I would have thought I was on Mars.”

Dr. Rebman, 52, who is tall, fit, demonically ebullient, and has deep dimples on either side of his face, said he was “coerced” into studying cactuses as a graduate student, but the arranged marriage took. “Cactuses are weird and attractive, and their giant, satiny flowers are stunning,” he said. “I fell in love, and I never looked back.”

For Dr. Rebman and other researchers who study the cactus family, Cactaceae, the 20-grit charm and mulish creativity of their subjects are always compelling, whether the plants are flowering wildly in response to rain after a sustained drought, as happened this year in California and parts of the Southwest, or simply doing what cactuses do best, which is persist in some of the world’s most parched and hostile environments for decades or longer. “In some of the dry valleys of Mexico, they have giant columnar cactuses that are hundreds and hundreds of years old,” said Erika Edwards, an associate professor of ecology and evolutionary biology at Brown University who studies photosynthesis in cactuses and other succulents.

While the basic contours of the cactus survival plan have been known for some time, researchers are still unearthing surprising details about how the plants adapt to adversity, and how they subtly manipulate the niches they inhabit and the other creatures they encounter to suit their defense and propagatory needs. Recently, for instance, scientists have found that as many as 100 species of cactuses are essentially breasts for ants, exuding through tiny nipples in their flesh a minute but irresistible supply of sweet nectar that persuades the insects to nest at the cactal base. The besotted ants in turn defend their green udder against potentially destructive insect predators; clean away pathogenic fungi and bacteria; fertilize the soil with their nitrogenous waste; and spread the cactus’s seed to new sites.

Other researchers have discovered that a cactus’s roots can operate like sensitive fingers, able to detect when the soil surface has grown dangerously hot and then contracting to yank the entire plant into a lower, slightly cooler position before it’s too late. Scientists propose that a better understanding of the tricks cactuses apply to handling relentless heat and aridity could prove all too relevant in a world of rising temperatures and water scarcity. Not that cactuses are immune to the effects of human avidity. In late 2015, an international group of researchers reported that nearly a third of cactus species were at risk of extinction, making cactuses “among the most threatened taxonomic groups assessed to date.” In addition to habitat loss and the conversion of cactus wilderness to agave plantations (to slake the rising demand for mezcal and tequila), the authors and other biologists cited excessive human affection as a driver of these extinctions. “People can be fanatic about cactuses,” said Gretchen North, a professor of biology at Occidental College. “Cactus rustling and illegal cactus collecting are real problems and a big business, and that’s one of the major causes of endangerment,” especially to rare species and lovable giants like the readily anthropomorphized saguaro.

Symbiotic Relationships: Humans are not alone in their cactus love. Scientists have begun decoding the complex badinage between cactuses and pollinating bats. Reporting recently in the journal PLOS One, Tania P. Gonzalez-Terrazas of the University of Ulm in Germany and her colleagues showed that, whereas most echolocating bats use sonar to hunt moving targets like insects, the neotropical nectar feeding bat, Leptonycteris yerbabuenae, livestreams a volley of high-frequency clicks and cries as it approaches a flowering columnar cactus.

The bat’s goal: to pinpoint the exact spot on each tubular flower where it can insert its snout, lap up the pollen-salted nectar inside and then back off again. Sure, the flower may be stationary, but a mistaken approach, a random flit to the side, could prove fatal. “The bat is flying in the middle of a windy desert, at night, and it’s feeding from plants with really big spines,” Dr. Gonzalez-Terrazas said. “It has to be superprecise.” She’s seen the impaled evidence to prove it. For their part, cactuses like Pachycereus pringlei, the Mexican giant cactus, have adapted their blooms to suit their pollinators’ GPS. Its flowers are exceptionally hard and waxy, the better to bounce a bat’s call back to its ears, Dr. Gonzalez-Terrazas said. The symmetrical arrangement of the petals makes it relatively easy for a bat to calculate the midpoint of an echo, and hence to find the floral opening.

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Other scientists have traced the cactus lineage through DNA analysis, and they have been astonished to learn just how recently cactuses became major players on the landscape. The group as a whole is relatively young, roughly 30 million to 35 million years old, compared with 86 million years for, say, sunflowers and daisies. And it wasn’t until the late Miocene, about five million years ago, that cactuses managed to radiate and speciate their way across the Americas. “By the concept of deep time,” Dr. Edwards said, “they’re a new thing on Planet Earth.” They’re also an almost exclusively New World thing: All but one of the approximately 1,800 known species are native to the Americas, their range stretching from just below Canada’s Arctic Circle down to Patagonia at the toe of Argentina.

There are cactuses the size of grapes and cactuses the height of five-story townhouses; cactuses that thrive in the Andes, 12,000 feet above sea level; cactuses that survive as epiphytes in the canopies of the rain forest; and cactuses that live almost entirely underground.

Only Rhipsalis baccifera, the mistletoe cactus, managed to migrate prehistorically to Africa, Madagascar and Sri Lanka, its fruit presumably carried overseas by birds. But the Old World has plenty of euphorbia plants that look and behave like cactuses, the result of evolutionary convergence on an optimal toolbox for a difficult trade. Behind the success of the cactus family is its prodigious dry wit, its talent for maximizing water uptake and minimizing water loss. Cactuses are succulents, which means their tissues are fleshy and designed to hold moisture, an essential trait for surviving in a place like the Atacama Desert of Chile, where annual rainfall averages half an inch. Cactus roots spread wide and shallow, rather than deep, and are equipped with specialized nodules. On first exposure to moisture after a dry spell, the nodules quickly sprout a network of pale, spidery rain roots, allowing a cactus to suck up every possible droplet from a light desert sprinkle. When the showers are through, the rain roots are jettisoned but the nodules remain, poised to sprout anew.

Cactuses are shaped to minimize sun exposure. Rounded barrel cactuses have low surface area, relative to their succulent storage capacity, while columnar cactuses or prickly pears expose only their thin edges at the tops or sides to direct sunlight. Because photosynthetic leaves are a serious source of water loss in most plants, cactuses have transferred their sugar production services to their bodies, and in many cases have transformed their leaves into spines. Those spines serve assorted tasks, depending on species. But in general they are less about defense against desert animals, as is commonly believed, and more about water management. A mat of spines and hairs holds in moisture and slows the movement of evaporative air across the cactus surface. “If you get out of your shower and run naked through your yard, what’s the last part of your body that dries?” Dr. Rebman said. “Anywhere you have hair. Spines and hair do the same for a cactus.”

Water From Air: Spines can also spear water droplets from fog and shunt them down to the cactus’s roots. With the aid of its insidious claws, a detachable segment of the aptly named jumping cholla can latch onto unsuspecting passers-by, with the hope of being delivered to fresh soil in which to take root. Cactus ribs likewise play multiple roles, allowing the plant to expand in wet times and contract in dry periods, accordion-style, helping to trap humidity between the pleats. Yet even a plumped-up cactus is not like a cartoon keg that can be tapped for free-flowing water; the water is absorbed into gluey tissue called mucilage that in most cases is not safe to eat.

Some traditional cultures, however, cook parts of the prickly pear cactus into nopales. Others tolerate the nausea and vomiting that comes from eating the dried crowns, or “buttons,” of the peyote cactus for the sake of experiencing the hallucinatory effects of its signature ingredient, mescaline. Another key to cactus hydro-thrift is a willingness to work the graveyard shift. Most plants photosynthesize in the daytime, opening pores in their leaves to allow carbon dioxide gas to diffuse in, and then using the ambient solar energy to stitch the harvested carbon and water into sugary fuel. Opening a plant’s stomata in sunlight, however, means a lot of stored water ends up evaporating — which may be fine for the average temperate-zone bush, but not for a desert dweller. So the cactus has evolved a multistage approach to photosynthesis. It waits until after dark to widen the stomata on its body and absorb carbon dioxide, stashing the gas as an acid until the next morning. At that point, the radiance of the sun can be exploited for sugar-making while the succulent’s stomata stay safely shut. Some researchers are trying to engineer this nocturnal talent into standard crops, in order to allow cultivation of marginal lands using a fraction of the water currently devoted to agriculture. “It’s an energetically more expensive form of photosynthesis,” Dr. Edwards said. “But it’s genius.” One could even say Whitmanesque.
Today is Sunday October 12, 2008 and today there are two flowers open on my Ferocactus robustus. I took the photo of the flower several months ago and did not get around to emailing the photos. So I went out this morning and took a photo of the plant. Well I did not like the photo for the plant had a lot of dead flower remains on it and so looked tacky. So I took all the flower remains off the plant. One thing I was going to say is that I have had flowers open on the plants every day for at least the last four or five months. Then I figured that a lot of people would not believe me so I went out and counted the flower remains I took off the one plant. There were 82 of them. Now if I just tell them that, are they going to believe me anyway? Probably not, so I went back out and took a shot of another plant with a lot of flower remains still on it. So we have two photos of the plants one with all the flower remains removed except for the two flowers that finished blooming yesterday and one that is open today and one with the flower remains still on it. If you look at the flower that is open you can see another bud that will be open in another day or two to the left of it. On another plant is also another flower that is open and there is another bud on it also. The plant that I cleaned up for the photo is 34 cm in diameter. I have four plants about the same size and one smaller. So if I guess right I can say that I have had between 300 and 375 flowers on the plants this season. The flowers are to 7 cm wide when open wide like in the photo. The plant heads are not all that large in diameter but the plant is the largest of the Ferocactus plants. On my plants the largest head is 18 cm in diameter that is spines and all. With out the spines the head is 13.5 cm in diameter. The largest plant is over 5 meters across with heads about 1 meter tall in the center of the mound.

The plant comes from the Mexican state of Puebla, which is down quite a way in Mexico. Keeping that in mind the plant has taken cold down to 16 degrees F. here where I live. With temperatures that dip that low the plant does get dark spots on the body. It is also hard to keep the lower areas of the stems from getting to look grungy. If you look closely in the photo of the plant you can see the discoloration on the lower reaches of the stems. To keep the plant from disfiguring like that try and keep them at or above about 40 F over the winter. I had several of he plants during the big freeze of ’90-91 and one of the plants died and the other lived through it. The one that lived through the freeze took a long time to come out of the effects of the cold. The plants in the photos are from that plant. I give my plants my regular soil mix and try to keep them above freezing. I keep them dry over the winter. I attribute the flowering of the plants this year to the fact that they have been receiving acidic water for the entire growing season.

**RETURNING MEMBERS:** PLEASE ADD TO YOUR WHO’S WHO

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<tr>
<th>Maybelle Abplanalp</th>
<th>Carol Jo Hargreaves</th>
<th>Suzanne Breshears</th>
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<tr>
<td>1408 Bryarwood Avenue</td>
<td>1229 Maple Hill Court</td>
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<td>Escalon, CA 95320</td>
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<td>Ph. (209) 380-1058</td>
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