

On the Dry Side

OCTOBER 2012

CCCSS September Meeting Recap

09/09/2012

Our vice president, Markus Mumper, led the meeting in Charles Varni's absence. Gene Schroeder presented our plant of the month and members brought in many fine examples of spiny *Euphorbias* from Madagascar.

Wayne Mills gave us a report of the recent very successful North Central Coast Garden Tour. Many thanks to Wayne for all of his efforts in organizing the event.

We have a new feature of our monthly meeting called "What Am I?" where members can bring in plants for identification.

Our speaker, Tim Harvey from the Huntington Botanical Gardens, gave a fantastic presentation on propagation by tissue culture (TC). The process involves taking plant tissue and transferring it to an agar culture medium that contains glucose, thus allowing the plant to start to grow without the need for photosynthesis. There are also plant hormones added to the media such as cytokines which activate lateral bud growth and auxins which stimulate root formation. The optimal combination of hormones is critical and is one of the greater challenges of tissue culture. Disinfection of the soil and plant material as well as sterile working conditions are also of the utmost importance. If not done properly yeast and fungi pathogens thrive on the glucose in the culture media and outpace the growth of the plant.

Cacti are particularly difficult to propagate by tissue culture since much air and dirt is trapped in the wool of the areoles creating great conditions for bacterial and fungal growth. The plant tissue is then housed in a climate controlled growing room and once established is transferred to compost or pumice. This too is a critical step as acclimation from artificial to normal growing conditions and "hardening off" can be quite tricky. It seems as if the loss of an entire crop at this point is a fairly common occurrence. There is the potential to use many plant parts for tissue culture, but often the apical meristem is the most successful which requires "butchery" of the plant to get to it, however *Haworthia*'s (which are now apparently getting lumped into the genus *Aloe*) can have TC from the flower, so the parent plant does not need to be destroyed. When successful, TC allows for the rapid production of rare and historic plants as well as popular plant hybrids which help to subsidize the ongoing study and perfection of TC methods.

Lastly, Tim wanted to dispel the notion that TC plants are weaker than those produced by conventional means, he stated that they are equal in hardiness. While I doubt any of us are going to try this in our kitchens at home, it was an extremely informative presentation by a world class authority on the subject.

Submitted by Maggie Wagner

C C C S S
E - N E W S L E T T E R
M E M B E R S P A G E



A highlight of the North Central Coast Succulent Tour (9/8) was a stop at the John Kuden residence. Wayne Mills deserves much thanks for the wonderful day!

WEBSITES

http://calphotos.berkeley.edu/browse_imgs/plant.html --Educational site that posts pictures by scientific name. (e.g. - If you have an aloe, but you do not know the complete name, you may find it here!)

www.sacredsucculents.com --This is a mail-order nursery near the coast. It also has ethnobotanical information. They offer seeds and plants of items not available elsewhere.

<http://www.huntington.org/huntingtonlibrary.aspx?id=210&linkidentifier=id&itemid=210> -- The Huntington Gardens website. Virtual tours, announcements of lectures and sales, exotic succulent hybrids.

<http://CSSA2013.com> Cactus & Succulent Society of America. (Convention)

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She would like some help trimming her back yard succulents. She has large specimens and would like an experienced person help do it correctly.

*Your editor has successfully
made Cactus Pear Jelly.
It will be made available for
snacking at our 10/14 meeting.*



PLANT OF THE MONTH-

OCTOBER

Copiapoa

BY CHARLES SPOTTS

The Genus **Copiapoa** is an individual genus of well defined characteristics which separate it from all of the other cactus genera. The name derives from the Chilean province of Copiapo. Current treatment has reduced the number of over 70 reported names to about 13 defined species, some of which have important recognized varieties, totalling about 30 recognized names. Many previously commonly defined species (e.g. **C. haseltoniana**, **C. krainziana**, **C. dura**, **C. tenuissima**) have been lumped as varieties into one of the 13 species, but this is not a universally accepted revision. Some authors (Schulz, and Kapitany) continue to use about 30 names as a matter of convenience while not attempting to enter the taxonomy debate.

Copiapoas are characterized as simple stems a few inches in diameter, or multiheaded cushions of up to dozens of stems up to several feet in diameter. The stems may be up to a few feet in height, but many are clusters low to the ground, and some may be regarded as geophytic. The stems are usually brown or grey in color, usually with well defined ribs, although in some (e.g. **C. hypogaea**, **C. humilis**) the areoles are not arranged as ribs.

Copiapoas are endemic to the coastal desert (the Atacama desert) of Western Chile where in some regions rainfall is seldom (if ever) recorded. Their only water source is the coastal fog which often blankets the region. They are very slow growing, and it is known that some plants reach ages of a hundred years or more. Flowers, usually yellow, arise from the top of the stem which in many species is covered with a woolly mat. Seeds are dispersed from mature fruits by way of a small hole which develops near the top, a feature unique to the copiapoas.

Cultivation is not difficult, recognizing that they are inherently slow growing plants. Water in the summer, dry winter. Some growers mist their plants frequently to simulate the natural foggy environment, although plants in small pots may dry out too quickly unless soil watered. Plants should be given a lot of light (although I provide about 20 percent shade in Paso Robles). Most will tolerate temperatures to freezing or below if dry, but in Paso Robles I have experienced damage in the low 20s. Except for those with tuberous roots, they are best grown in shallow pots to minimize the accumulation of wet compost in the root areas. Keep in mind that the plants grow very slowly. It is probably impossible to achieve the full potential of the larger forms in pot cultivation, but younger plants and dwarf forms are very attractive and some may be able to fill a large pot from seed in 10 to 20 years.

Some commonly encountered species:

C. cinerascens--Plants may form large mounds of hundreds of greyish stems. All forms have large tuberous roots. Clusters of 8 spines on well defined ribs.

C. cinerea--(a large and variable complex including *columna-alba*, *dealbata*, *longistaminia*, *krainziana*, and others) Plants solitary or form small clusters of grey columnar stems up to 2 feet high (or higher in some vars) and up to 10" in diameter. Areoles on multiple ribs bear one or two black spines. Variety *krainziana* has generally globose stems with long flexible spines, forming clusters with age.

C. dura--(*C. echinoides* v. *cuprea*) typically globose, but columnar forms occur. Body dark brown to blackish with stout black spine clusters

C. haseltoniana--(*C. cinerea* v. *gigantea*) Body grey-green with orangish woolly cushion at the apex.

C. humilis--One of the smaller species. Plants globose, solitary or forming clusters of soft bodied brown heads . Ribs are indistinct but heads are strongly tuberculate. Spine clusters arise from a white woolly areole. Variety *tenuissima* has very fine spines and is one of the smallest of the copiapoas

C. hypogaea--Geophytic with a tuberous root. Small, soft brown body, areoles woolly. Forms mounds of strongly tuberculate heads with age.

C. laui--(*C. hypogaea* v. *laui*) Smallest copiapoa, cluster of heads each up to 1" in diameter. Geophytic with a well developed tap root.

Copiapoa



C. cinerea



C. cinerea in habitat



C. krainziana



C. tenuissima



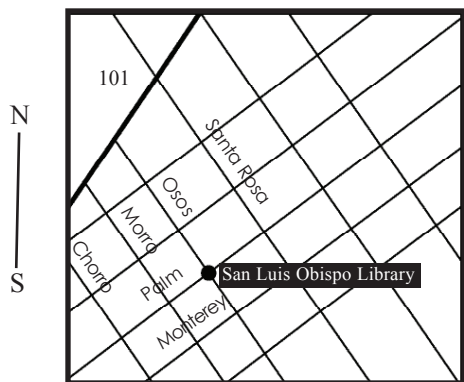
C. haseltoniana



C. hypogaea

NEXT MEETING:

Sun. October 14
at 2:00 pm



San Luis Obispo
Public Library

995 Palm Street
San Luis Obispo

SPEAKER OF THE MONTH



Todd Masilko has a background in Industrial Design and has been an enthusiastic grower of Cacti and Succulents for over 10 years. He is currently an Instructor in the at Pasadena's Art Center College of Design and runs a Pasadena based product design consultancy.

In addition to growing plants, he is a photography enthusiast. Over the last several years, he has traveled to observe and photograph plants in habitats in the Canary Islands, Yemen and Socotra, Baja California and mainland Mexico, Namibia, as well as California and the Southwestern United States.

Please be aware that the City of San Luis Obispo is charging for parking on Sunday afternoon, 1pm. The parking structure gives the first hour free and has 2 elevators. Or, you can park on the street and feed the meters! (There are also a few government lots that can be used for free at your own risk!)

A Special Thanks

As of July 1st, I have taken over the position as CCCSS treasurer. While I was going through all the financial information and working to develop a system for myself, it struck me that our previous treasurer, Edie Price, had done this job since the inception of the club 7 years ago! She oversaw all of our finances and kept records of our membership from our humble beginnings of a few members meeting in a private home to the now robust club that has over 100 members and hosts an annual show and sale that is on par with many of the older established clubs in Southern California. I only hope to be able to do as competent a job, although I do not aspire to challenge the longevity of her tenure! Many thanks Edie for a job well done.

Maggie Wagner, CCCSS Treasurer



Cacti and Succulents of Cuba:

The island of Cuba lies less than 100 miles from South Florida, but it is difficult for Americans to visit. The 2012 Biennial Congress of the International Organization for Succulent Plant Study (IOS) was held in Havana, which provided an opportunity to visit Cuba and see a selection of plants in the wild. This talk will provide an overview of cacti and succulents and the habitats where they grow from the Northern coastline near Havana to the most xeric section of the island near Guantanamo Bay in Southeast Cuba.

Do you have a succulent that you have no idea what it is or how to take care of it? Bring it to a meeting for our

****PLEASE IDENTIFY me****

section of the program.

Upcoming Events

October 13&14

Bakersfield Cactus & Succulent Society Show & Sale. Golden State Mall, 3201 F. St., Bakersfield. Oct 13 10 a.m. to 5 p.m., October 14 11 a.m. to 3 p.m. For information: <http://bakersfieldcactus.org/>

October 27&28

Palomar Cactus & Succulent Society Show & Sale. San Diego Botanic Garden, Encinitas, CA. 9 a.m. to 5 p.m. For information: Peter Walkowiak hciservices@gmail.com

November 3&4

San Gabriel Valley Cactus & Succulent Society Winter Show & Sale, Los Angeles County Arboretum, Arcadia, CA. 9 a.m. to 4.30. For information: <http://sgvcss.com/>


2013

February 16 -- Club field trip to Lotus Land. (Details coming!)


June 15 to 20--CSSA 35th Biennial Convention. Austin, TX (save the date): <http://CSSA2013.com>

Please support our business members!

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Oct. 13/14, &20/21
(10-5pm)
1439 6th Street, Los Osos



September Board Meeting Notes: 9/9/12

- Terry Excell requests that all newsletter submission be received by her within ten days after the previous meeting.
- It was agreed that board members may be reimbursed for up to \$50.00/month in discretionary CCCSS specific spending without prior board approval.
- Wayne noted that the account for the recent North County Garden Tour are completely reconciled.
- Gene, Carol and Rob will review the Standing Rules and present the findings at a board meeting for review.
- Rob and Markus to draft rules for the selling of plants at the monthly meetings by club members and present the finding at a board meeting for review.
- Jim Harlow is tentatively planning a CCCSS member field trip to Lotus Land on 2/16/13.

Gene Schroeder' photographs of the 2012 CCCSS Show & Sale are now on line at:
<http://tinyurl.com/2012-CCCSS-Show>
(hit "slideshow" upper right corner)



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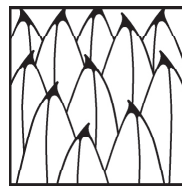
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All submissions to the CCCSS newsletter **must be submitted two weeks prior** to the monthly meeting.

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A one time free newsletter will be mailed out to those who sign in at the monthly meetings. After this dues must be paid in order to start a subscription.