

ESPINAS Y FLORES



PROGRAM

Mark Muridian will be giving us a program about travels through Chile with an in-depth look at the Atacama desert

PLANTS OF THE MONTH

Astroloba by Chris Miller

Cristate, Monstrose and Variegated Cacti by John Durham

THE NEWSLETTER OF THE SAN DIEGO CACTUS & SUCCULENT SOCIETY INC.

AFFILIATED WITH THE CACTUS & SUCCULENT SOCIETY OF AMERICA

VOLUME 39 NUMBER 11

SATURDAY NOVEMBER 12TH, 1:00 PM

ROOM 101 CASA DEL PRADO, BALBOA PARK

PRESIDENTS MESSAGE

Sunday, October 16th, 2005

Greetings, one and all-

October's meeting was terrific! Aside from a couple minor technical glitches, John Trager's program of plants in cultivation was outstanding. I kept thinking that with the massive photo archive the Huntington Botanic Gardens must have, how on earth does someone decide what to take and what to leave? John's photography is always high-quality, and never boring. Thanks again to John and the Huntington for a wonderful program!

Our "Meet the Member" series was as lush and interesting as the garden of Tom and Laura Demerritt's, such a depth of fascinating plants and anecdotes about installing and maintaining a garden of this diversity. I'm really looking forward to the next one.

As was mentioned at the meeting, we managed to make our goal of funding a \$5000 gift to the Anza Borrego foundation for help in purchasing the Porter-Grade in holding near the park's inner perimeter. While this is an area that many visitors to the Anza might assume is already part of the park, with our donations and help from the community, it certainly will be in the future. It's an outstanding example of cactus and succulent habitat that we can all hope will be preserved for future generations. Remember that every plant purchase you make at our annual sales

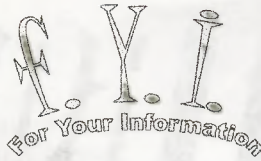
and regular monthly sales goes directly into our general funds for these sorts of projects.

Speaking of projects and perpetuity, the San Diego Cactus and Succulent Society will be forever honored with a plaque at a new cactus and succulent garden at the Cuyamaca Water Conservation Garden. The garden dedication ceremony will be held on Tuesday, November 15th, at 4:00pm, but you may feel free to stop by any time to see it. The garden is open to the public free of charge, and contains a plethora of xeric and water-wise gardening examples. More details about hours, getting there, and other events can be found on the internet at: <http://www.thegarden.org>

November's meeting line-up looks like a lot of fun already; Mark Muridian will be giving us a program about travels through Chile with an in-depth look at the Atacama desert, and our own Chris Miller and John Durham will be giving brief talks on *Astroloba* and *Crested Cactus* forms, respectively. Our usual monthly plant sales, benefit plant drawing, and exchanges are reason enough to come early and stay late, but we can always use extra hands to help set things up and put things away. Don't be shy!

I look forward to seeing you all there!

Mark Fryer



BRAG PLANT WINNERS

Cactus

1st Place: *Escobaria zilziana*
Paul & Carol Maker

2nd Place: *Trichocereus grandiflora*
Peter Walkowiak

**3rd Place: *Gymnocalycium gielsdorfiana* (syn.
Gymnocactus gielsdorfiana)**
Peter Walkowiak

Succulents

1st Place: *Ipomea cornea*
Rudy Lime

2nd Place: *Euphorbia Decaryii* hybrid
Peter Walkowiak

3rd Place: *Pachypodium rosulatum* (syn., *cactipes*)
Peter Walkowiak

ASTROLOBA

By, Chris Miller

I decided to do an article on *Astroloba* when I started to see *Gasteria* hybrids marked *Gasterloba*. After searching the internet, the SDCSS Library and my library, I only found two small sections of large books that talked about *Astrolobas*. One was John Pilbeam's *Haworthia and Astroloba* published in 1983 and the other was Doreen Court's *Succulent Flora of Southern Africa*, revised in 2000. Due to lack of interest by most of the plant world, I almost canceled the succulent of the month.

Astroloba is a small genus of rosette shaped succulents. It is the most closely related to *Haworthia* of any of the other genera in the family *Liliaceae*. They grow in the Cape regions of South Africa in the same vicinities as *Haworthias*.

The plants resemble some of the *Haworthias* with columnar growth, but differ from *Haworthias* in the shape of the flowers. They are usually multi-stemmed, from the ground level. The inflorescence can be straight or branching. Most *Astroloba* species have stiff, spine-tipped leaves. The plants are very slow growing, offsetting very slowly. They take very little



Astroloba robusta

frost. They are also notorious for some species' habit of dropping leaves from segments of the stem, seriously damaging their look.

This genus was called *Apicra*, meaning 'non-bitter' (it earned the name when it split off from the *Aloe* genera. It was renamed by Uitewaal to *Astroloba* ('star like petals') in 1947. This reflects one of the main differences between *Haworthia* and *Astroloba*. The star shaped opening to the bloom is regular vice the flared, three up three down arrangement of the *Haworthia*.

Cultivation and care is pretty much the same as for *Haworthias*, they



Astroloba congesta

need moderate watering, good drainage and bright indirect light. Pilbeam stated, "They will take more arid conditions than Haworthia's." I

I planted them in the same mix I use for my *Gasterias* and *Haworthias* which is half super soil and half pumice. They also get watered at the same intervals. Since I have only started growing them this year I don't know if

this will be optimum. I have noticed that cuttings are very slow to root and are still looking ragged. Since they are going into their growing season I am hopeful.



Astroloba bullulata

I have a few young plants and one mature plant (by the good graces of Mr. Fryer). If anyone has a nice specimen please bring it to the meeting.



Astroloba sp.

ASTROLOBA INFORMATION MATRIX

<i>Astroloba</i>	Plant color	Leaf Description	Growth Habits	Locality	Remarks
<i>A. aspera</i> var <i>major</i>	Light green to red in bright light	Triangular leaves (12 - 14 mm broad) are spirally arranged. The rough surface of the leaf is tuberculate: the upper surface of the leaf is slightly convex and the lower surface is concave with a pointed keel.	Sprawling narrow stemmed, slow growing to 20 cm tall	Springbokkeel, vicinity of Montagu and near Waterford in the Eastern Cape	
<i>A. bicarinata</i>		Obliquely curved toward the tip, leaf backs are rounded	Columnar grower, clusters very slowly, 20 cm tall	Near Oudshoorn and in the Ceres Sunderland Karoo	Naturally occurring hybrid of <i>Astroloba corrugata</i> and <i>Haworthia margaretfera</i>
<i>A. bullutata</i>	Deep olive green	Leaves are matt with polished margins, dark tubercles on the lower surface of the leaf. Keel becomes a margin near leaf tip	Neat, compact plant, stems about 60 mm tall, not freely branching from base	Ceres & Sutherland districts & from Laingsberg to Matjiesfontein in Western Province	
<i>a. congesta</i>	Dark-green	Hard, smooth leaves. Margins and keeled have cartilaginous edges, sharp point, no tubercles.	25 cm plus tall	South Africa (Eastern Cape)	
<i>A. corrugata</i>	Light to dark green	Leaves spreading deltoid-ovate with pungent tips. Leaf surface always tuberculate or sperrous, tubercles well dispersed but tending towards longitudinal lines. Non-marginated leaf keel	Stems erect, solitary or clustered, 300-600 mm tall	Little Karoo from Montagu to Ladismith & Seven Weeks Poort and south of Langeberg from Worcester to Riverdale	Flowers white to cream with tinged green or pink edges
<i>A. detroides</i>	Dark green	Smooth, shining leaves are rigid with a sharp point	Tall sprawling stems to 20 cm tall	Zuurberg Mountains in stony places	May be small growing <i>A. congesta</i>

<i>A. dodsoniana</i>	Grey green	Smooth, inflated below, tapering to a sharp point	Long sprawling stems to 25 cm tall, 4-6 cm wide	Uniondale, Prince Albert	May be a large growing <i>A. herrei</i>
<i>A. foliolosa</i>	Light green to purplish brown in full light	Leaves are small roundish-triangular, short, pointed, and stand out almost at right angles from the stem. They are smooth and glossy. Sometimes the margins are white	Extreme tightly spiraling slender tall stems to 300 mm, narrow but rigid column	Langeberg, Beaufort West and eastwards to Graaff-Reinet in Little Karoo and east from Albany to Cradock	Yellow flowers
<i>A. herrei</i>	Young bluish green becoming dark green	Densely leaved in 5 spirally arranged rows	Columnar grower, clusters and grows very slowly. Stems to 200 mm tall	Vicinity of Uniondale and in Great Karoo near Prince Albert, and along the road to Klaarstroom	White flowers and blooms in late winter
<i>A. pentagona</i>	Light green turning to red in full light	Ovate, sharply pointed leaves, smooth, not shining with oblique keel and no tubercles	8 cm in diameter, stems 25 cm tall		Yellow flowers. May also be called <i>A. hallii</i>
<i>A. robusta</i>	dark-gray-green	Smooth incurved leaves, with larger leaves than some			
<i>A. skinneri</i>	Matt green	Spiraling, broad, ovate-lanceolate leaves, tubercles on lower surface, with usually 2 keels, both keels and margins and tubercles are paler green	Wide stemmed 7-8 cm, 10-15 cm tall		Cross between <i>A. aspera</i> & <i>H. pumila</i>
<i>A. spiralis</i>	Grey to bluish green	Smooth and erect. Closely overlapping ovate leaves tapering gradually to a sharp point, distinct oblique keel at the apex	Succulent, erect, rosette, up to 6 inches in diameter (15 cm), 200 mm tall	Little Karoo across to Graaff-Reinet in Eastern Great Karoo	
<i>Poellnitzia rubiflora</i>	Bluish green	Densely leaved in 5 distinct series, sharp tipped, tapering leaves	Low growing cluster, stems to 250 mm tall	In vicinity of McGregor, Bonnievale, & Robertson	Orange red flowers, Nearly always grows under bushes

STRANGE BREW

CRISTATE, MONSTROSE AND VARIEGATED CACTUS

Abnormal growth in cactus can cause bizarre and fascinating shapes and color. Many times these anomalies are more beautiful and interesting than the normal growth form. Desired for their unusual appearance and diverse shapes, you can find a few of these in everybody's collection. Over time, these unique plants become standards in the trade, but each year new individuals seem to appear. Although they can occur naturally, the hand of man is more and more responsible for the proliferation of these wonderful plants.



Ferocactus cylindraceus. Originally crested retiring to standard form. Anza Borrego.



Flowering *Mammillaria* crest

Cristate

A crest is usually caused by a defect along the apical meristem or area of initial growth in a plant. Rather than controlled and symmetrical development pushing new growth upward and outward, the cells divide along an elongated or lateral growing point to form ridges and waves. What causes these 'accidents' of growth? There is much speculation in botanical circles about the definitive cause of abnormalities in growth, but as in most living organisms, genetic mutation is the cause. However, injury to the plant, virus and bacteria or exposure to chemicals can be a trigger. Second generation crests cannot be propagated from seed and must be reproduced vegetively. This is good news for the rest of us, as one crest can



Red *Astrophytum*. C&J Nursery

be sliced up and used to create many plants. Crested flowers occur even less often. They can appear on normal plants, but many times cannot be pollinated due to their unique shape. Crested plants occur in habitat and it is believed that all species can grow as crested plants. It is said, that all crested cactus will eventually grow back into the correct form, even if just partially.

Monstrose

Like crested plants, monstrose types also have a mutation in the apical meristem, but it takes on a chaotic and random pattern that may affect all or part of the plant. This condition can produce bizarre spination, heavy wool, or unusual size and shape of the tubercles. Monstrose flowers and skin texture can also occur. These plants can have little or no resem-



Monstrose flower. *Copiapoa hypogaea*.

blance to the parent. Most of these do not do well on their own root and only grow successfully on a graft. Monstrose characteristics can be passed on in the

“As with past articles, it forced me to do some homework and has helped me in my ongoing education on the plants I love. This reason alone should be incentive for anyone to take on an article for the newsletter”

seed as well as with vegetative propagation, however the results can be quite variable. There is quite a bit of experimentation with chemicals and growth hormones to trigger monstrose growth in succulents, but there is no convincing data that shows any success. Monstrose characteristics can be isolated to create even more bi-

zarrre cultivars as illustrated with the ever-increasing number of *Astrophytum* hybrids.

Variegation

Without chlorophyll, plants cannot synthesize sunlight to produce food and would



Mammillaria bocasana monstrose cv. 'Fred'.

eventually die. A plant in habitat with limited or no chlorophyll would perish as a seedling. That same plant, raised in a greenhouse, could be grafted onto a stock that would provide all the nutrients to survive. The apical meristem in these plants is unable to create cells that can synthesize the green pigment chlorophyll. This creates areas of yellow, white or red epidermis. In leaf succulents this lighter color would take on a pattern of striations or borders. In cactus, it's an open canvas and the patterns are quite variable and unique. Some have no color at all, or appear completely red, yellow or green. These must be grafted to survive. Seed or vegetative propagation can pass on variegation, but the patterns are never the same. As with any unique characteristic, variegated patterns are isolated and hybridized commercially. One well-known example of this is *Gymnocalycium mihanovichii cv. 'Hibotan'*. This Japanese cultivar, once a unique plant, was propagated and widely distributed commercially. When sowing tens of

thousands of seeds, the odds of any variation increases dramatically, leading to more, new and unusual plants.

Final Thoughts

In researching this article, two things occurred to me. First, one must have a better understanding of general botany to understand this very interesting part of the big picture.

Secondly, I found no definitive scientific work on the subject. People like J.D. Mauseth are doing research at the vascular level and although informative, it is quite theoretical and a bit over my head. Much of what we know about these plants is accepted knowledge and not backed up by any data. However, my quest for the answer isn't as important as my enthusiasm for these fantastic 'oddballs'. Enjoy!

Sites of interest:

- <http://www.lapshin.org/cultivar/index-e.htm>
- <http://www.wstarke.de/cristate.html>
- <http://groups.yahoo.com/group/CactusFreaks/>



Variegated *Gymnocalycium*. 2005 Show

Picnic Pix

Photos by, John Durham
& Pam Badger



PROGRAM for DECEMBER 10, 2005

HOLIDAY PARTY – 12:00 NOON
POT LUCK DESSERTS
LUNCH PROMPTLY SERVED at 12:30 PM
SPECIAL PLANT EXCHANGE
DISTRIBUTION OF GIFT PLANTS TO MEMBERS
MINI-AUCTION
(NO LIBRARY and NO PLANT SALES)

WE'RE HAVING A TRADITIONAL HOLIDAY BUFFET MENU:

Roast Turkey
Sage Dressing
Mashed Potatoes with Giblet Gravy
Tossed Green Salad
Fresh Vegetable Trays
Cranberry Sauce
Rolls with Butter
Coffee, Tea, Soda, Beer, Wine

WE'LL CONTINUE WITH OUR PAST "TRADITION" AND HAVE A POTLUCK DESSERT.....so please bring something sweet and delicious

Please mail your reservation, with check(s) made payable to SDCSS. Mail TO: SDCSS,
P.O. BOX 33181, SAN DIEGO, CA 92163-3181

Please reserve a Holiday Lunch for Members(s) @ \$15.00 per Member:

MEMBER NAME _____

MEMBER NAME _____

Please reserve a Holiday Lunch for Guest (s) @\$20.00 per Guest (sorry, no gift plant for non-members or members not purchasing a lunch)

GUEST NAME _____

GUEST NAME _____

The Plant Exchange will be conducted during the luncheon, Gift Plants during dessert.

Note: We need to have an accurate count for the caterer so help us by making your reservation as soon as possible.

SAN DIEGO CACTUS & SUCCULENT SOCIETY MEMBERSHIP APPLICATION

The San Diego Cactus & Succulent Society is a nonprofit, hobby organization (affiliated with the CSSA) created to stimulate interest in succulent plants. This society brings together people with a common interest for the purpose of educating the public about the beauty and uniqueness of these remarkable plants, encouraging proper collecting and maintenance of the plants through preservation of native habitats and horticultural propagation, and to foster good fellowship. You are invited to join our society, whether you are an expert, amateur, or a beginner with an interest in unusual plants and flowers.

You will receive our publication *Espinas y Flores*, one of the best cacti and succulent newsletters. We produce 11 issues a year. You will get great articles and keep up with club news for the next year.

Our meetings are on the second Saturday of the month (except June and September) and newsletters are received the week of the meeting. We offer knowledgeable speakers who present educational & entertaining programs; many are world renowned scholars, botanists, explorers and authors. The San Diego Cactus & Succulent Society's Annual Show and Plant Sale occurs the first weekend of June in Room 101, Casa del Prado, Balboa Park, San Diego. A wide range of succulent plants, ceramic pots, and growing supplies are available during most meetings. There is also a plant exchange table and a library. For more information regarding membership or the club, please write to the address below or look us up on the web at SDCSS.COM.

Yes, I/We wish JOIN or REJOIN the San Diego Cactus & Succulent Society. (circle one)

NAME(S):

ADDRESS:

CITY, STATE, COUNTRY & ZIP+4:

PHONE/FAX/E-MAIL:

AMOUNT ENCLOSED:

Do you know that for an additional \$5.00 paid on your membership dues - you can have *Espinas y Flores* delivered by first class mail, instead of bulk mail? Check here and add \$5.00 to your dues payment, if you are far away you will receive our newsletter faster.

Dues are \$15.00 per person, \$5.00 for each additional person in the same household for (bulk rate USA), add \$5.00 for First Class Delivery (optional). International dues, including Mexico and

Canada, are \$30.00 (US funds), additional members as above.

Thank you for joining the SDCSS

SEND THIS FORM TO: SDCSS - Treasurer/Membership, P. O. Box 33181, San Diego, CA 92163-3181

THE LIBRARY CORNER



Dear Friends,

An interesting book to read is "The Sierra Club Guides to the National Parks of the Desert Southwest." Whether you have visited the parks before or plan to visit them in the future, this book is absorbing reading about the history, flora, and fauna found in these national treasures. There are 48 national parks in the United States and this series talks about 11 of them. Park and trail maps and guides are included. Information about all the sites and up-to-date facilities charts are provided for each park.

Arches National Park in Moab, Utah is above the Colorado River canyon in high desert country. Canyonlands National Park is also in Moab, Utah and is sliced through by the Colorado and Green Rivers. Big Bend National Park in Texas is named for a bend in the Rio Grande from which it is carved. Bryce Canyon National Park is in Bryce Canyon, Utah. Capitol Reef National Park is in Torrey, Utah. Zion National Park is in Springdale, Utah and was created partly by Utah's formidable Virgin River. Carlsbad Caverns National Park is in Carlsbad, New Mexico, home to the huge Carlsbad Cavern. With mostly desert landscape on top, underground are caverns and the famous "Bat Cave." Guadalupe Mountains National Park is also in Carlsbad, New Mexico and contains 3 distinct life zones: the desert, the wet places, and the forest at the top.

Grand Canyon National Park is in Grand Canyon, Arizona, cut through by the Colorado River and contains 4 life zones, from desert to moist coniferous forest. Mesa Verde National Park is between Cortez and Durango in southwestern Colorado. Petrified Forest National Park is in a remote corner of Arizona and includes the Painted Desert within its borders. Plant life habitat changes in these parks from desert scrub to grassland to mountain meadows to woodlands and there are a wide variety of plants living in each of these areas. Some of the plants are endemic to just one particular area.

Appendixes at the back of the book include color photographs of the most commonly seen plants and animals and lists the parks in which each one can be found. So grow a plant that's found in a national park and you, too, can be a national treasure.

Your lovely librarians,

Jan and Phil Kent

UPCOMING EVENTS

2005

October 15 : Texas Association of Cactus and Succulent Societies Fall Seminar/ Dallas Arboretum/ 8 am - 5 pm /contact Harold Messmore at 972-313-1710 or Messmore97@aol.com for more info.

October 15,16: San Gabriel C&SS Winter show & sale; LA Arboretum; 301 N. Baldwin, Arcadia, CA

November 2nd : Epiphyllum Society Meeting; LA Arboretum; Tim Nomer will give talk on Digital Photography of Plants – Taking Good Pictures, Organizing and Cropping Pix, Framing & Making Displays If you missed this talk two years ago at OCCSS, and can make it, you're welcome to stop by.

November 12th: SDCSS General Meeting & Plant Sales

December 10th: SDCSS Holiday Party, details in this issue.

2006

Feb 11th: San Diego CSS Winter Show and Sale, Room 101, Casa Del Prado, Balboa Park; sdcss.com

April 8 & 9th: South Coast CSS Show & Sale, at So. Coast BG, 26300 Crenshaw, PV; 310-832-2262

April 22 & 23rd: South Bay Epiphyllum Society Show & Sale; same addr; info call: 310-831-1209

May 6 & 7th: Sunset CSS Show & Sale, Veterans Mem. Ctr, 4117 Overland, Culver City 310-822-1783

May 21st: Huntington Plant Sale, 10-5pm, Huntington BG, 1151 Oxford Rd, San Marino; 626-405-2160

May 21st: Epiphyllum Society Show & Sale; Los Angeles County Arboretum; 310-831-1209

June 3 & 4th: San Diego CSS Summer Show & Sale; Room 101, Casa Del Prado, SD; 619-477-4779

June 10th: Gates CSS 29th Show & Sale; Sale: Sat, Sun 9-4; Show opens 1pm Sat. after judging; Jurupa Mountain Cultural Center; 7621 Granite Hill; Glen Avon: CA 909-360-8802

June 30: July 2nd: CSSA Annual Show & Sale – Huntington Gardens, Plant sale June 30, July 1st, 2nd; Show July 1st, 2nd; Huntington BG, 1151 Oxford Rd, San Marino; 626-405-2160 or 2277

June or July? LACSS Show & Sale at Sepulveda Garden Center, 16633 Magnolia Blvd, Encino, CA info: 818-363-3432; Set in lovely community garden, just off 101 freeway a couple exits west of 405. Will probably be combined with bromeliad society show.

Aug 19 & 20th: 21st Annual Intercity Show & Sale at the LA County Arboretum; Largest Cactus & Succulent show in world; Long Beach, LA CSS and SG CSS clubs work together on this show. Info 818-998-9306

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Suzie White

The due date for submission of articles will be the meeting preceding the intended issue (approximately one month ahead of time). The due date for letters, "brag table" winners and the "President's Message" will be one week later. All submissions are to be made to the Editor.