SOUTH COAST CACTUS AND SUCCULENT SOCIETY

NEWSLETTER

Number 6 June, 2004

BOARD MEETING: Sunday, June 13, 1:00 P.M.. South Coast Botanical Gardens Classroom. Everyone is welcome!

GENERAL MEETING: Immediately following the Board meeting. KELLY GRIFFIN will be speaking about his trip to Chile early this past spring. His talk will include many slides of Copiapoa as well as many other Chilean coastal plants. Kelly is always an interesting speaker and is exceptionally knowledgeable. Let's give Kelly a big welcome!!

Gary Duke apologizes for the change in agenda. The seed planting party that was advertised will now be in July. Gary's son is graduating from UCSD that Sunday morning.

CACTUS AND SUCCULENT CALENDAR OF UP COMING EVENTS FOR 2004

JUNE 5 & 6 — **SAN DIEGO CACTUS AND SUCCULENT SOCIETY –SHOW AND SALE BALBOA PARK ROOM 101, SAN DIEGO, CA. INFO.–#619-477-4779**

JULY 1,2,3 — **CSSA ANNUAL SHOW AND SALE –HUNTINGTON BOTANICAL GARDENS AT 1151 OXFORD ROAD, SAN MARINO, CA. 626-405-2160 or 2277** PLANT SALES ONLY ON THE 1ST,

THIS IS A FREE DAY

AUG. 14 & 15 — **17TH ANNUAL INTERCITY SHOW AND SALE-LA COUNTY ARBORETUM 301 NO. BALDWIN AVE., ARCADIA,CA. INFO. CALL TOM GLAVICH AT 626-798-2430 or GENE OSTER AT 818-998-9306**

SEPT. 4TH — **HUNTINGTON BOTANICAL GARDENS SUCCULENT SYMPOSIUM ALL DAY AT THE HUNTINGTON.**

SEPT. 26 — **LONG BEACH CLUB ANNUAL AUCTION AT DOMINGEUZ ADOBE 18127 SO. ALAMEDA ST. COMPTON (DOMINGUEZ HILLS) CA.**

OCT. 16 & 17 — **SAN GABRIEL VALLEY CACTUS AND SUCCULENT SOCIETY SHOW AND SALE— LA COUNTY ARBORETUM ADDRESS ABOVE.**

PLANT-OF-THE-MONTH RULES

- A maximum of three plants may be entered in each category (cactus and succulent).
- Advanced entrants must have had the plant in their possession for at least six months, novices for three months.
- Advanced entrants will receive 6 points for first place, 5 points for second place, 4 points for third place and 2 points for showing a plant that does not place.
- Novice entrants will receive 4 points for first place, 3 points for second place, 2 points for third place and 1 point for showing a plant that does not place.
- At the discretion of the judges there may be up to three third places in a category. If plants are not deemed to be of sufficient quality, no third place will be awarded.
- For an entrant to receive points, the entry tags must be collected by the person in charge of record keeping for POM.
- At the annual Christmas party, award plants will be presented to the four highest cumulative point holders in both the advanced and novice classes.

PLANTS OF THE MONTH FOR 2004

	CACTI	SUCCULENTS
March	Ariocarpus	Euphorbia Caupiciform
April	- - - - - - -SHOW TIME- - - - - - -	
May	Copiapoa	Sedum
June	Crest/Montrose/ Vaaruegate	Crest/Monstrose/ Variegate
July	Cereus and other Columars	Kalanchoe/Cotyledon
August	Favorite Cacti (3)	Favorite Succulents (3)
September	Turbinicarpus	Dwarf Aloes
October	- - - - - - NO MEETING - - - - - - - - - -	
November	Miniature (3) under 3 inches	Miniature (3) under 3 inches
Decenber	- - - - - - CHRISTMAS PARTY - - - - - - -	

PLANT OF THE MONTH TOTALS

CACTUS ADVANCED	MAY	TOTAL
Duke	4	25
Fletcher	11	29
Hulett		6

SUCCULENTS ADVANCED	MAY	TOTAL
Duke		8
Fletcher	3	18
Gardner	5	5
Hanna	7	22

SUCCULENT NOVICE	MAY	TOTAL
Crowley		6
Guitlean		1
LaForest	6	9
Lam		6

NOVICE	
Capaldo	4
Crowley	7
Gardner	16
Hemingway	8
Honore	3
Hutchison	8
LaForest	7
Lam	3
Ponce	10
Warzybok	7

FUCHSIA FLASH

"Fuchsia Festival 2004," sponsored by the South Coast Branch, National Fuchsia Society, will be held on Saturday, June 12, and Sunday, June 13 at the South Coast Botanic Garden, 26300 Crenshaw Blvd. on the Palos Verdes Peninsula. Hours are: 10 a.m. to 4 p.m.

There will be beautiful and different fuchsia plants, baskets, and trees for sale. There will be culture information, demonstrations, and video.

Admission to the South Coast Botanic Garden is $6.00 for adults, $4.00 for seniors and students, and $1.50 for children. Members of the South Coast Botanic Garden are admitted free.

For information, call (310) 392-3238.

NATURE'S FREAKS

CRISTATION, MONSTROSITY, AND VARIEGATION IN SUCCULENT PLANTS

Of all the bizarre manifestations exhibited by an already somewhat outlandish group of plants, cristate and monstrose growth and variegated pigmentation in cacti and succulents are without a doubt the most outrageous and provocative. Although all collectors of these plants are fascinated by them, reactions to them are varied, ranging from the incredulous to enthralled to shocked revulsion. There are those who think they are among Nature's most beautiful and intriguing creations, and those who think they are ugly, grotesque, repulsive malformations. It's almost impossible to be indifferent to them.

To add to the mystery and controversy surrounding them, although scientists, botanists and collectors have been studying the phenomenon of cristate and monstrose growth in plants for many decades no one has yet come up with any conclusive answers to: WHAT CAUSES THESE PLANTS TO DO THIS? Everything from lightning to hailstorms to woodpeckers to radioactive sources in the ground has been suggested. But the incontrovertible fact remains that, to this day, no one has ever been able to deliberately force a plant to crest or produce monstrose growth, despite extensive experimentation in the past. "Unspeakable atrocities" were committed in the name of science; plants were attacked with everything from knives to X-rays to acids in futile efforts to force plants to produce crested or monstrose growth.

Succulent plants may develop several kinds of abnormal growth, including: (a) fasciation or cristation, (b) monstrose growth, (c) proliferation, (d) carunculation, (e) variegation or chimera, and (f) loss of normal pubescence (hair). Only cristation, monstrose growth, and variegation are presented here.

Crests can be found in almost all plant families, and are quite common in cacti and other succulents. The terms cristation and fasciation frequently are used somewhat interchangeably in the literature. One authority says that any malformation on top of a plant is a fasciation, and if it follows a symmetrical pattern it is crested. Although cristatin may appear in different forms , it always consists of multiple buds instead of a single bud. Almost any part of a plant may be affected - stem, flowers, fruit, or leaf, and sometimes even aerial roots. George Lindsay explains it as follows: "The growing apex of a plant is composed of a group of dividing cells called the meristem. The meristematic cells divide and supply the new cells which differentiate into the specialized tissue systems of the stem. In normal plants the apical meristem is a growing point, and the new tissues are built up around and under it in a symmetrical manner. In a crested plant the apical meristem is a "line" rather than a "point", and new tissues are not produced evenly on all sides, resulting in fan-shaped stems."

Much confusion exists as to the actual differences between crested and monstrose growth. According to Claude Chidamian: "The cristate plant differs from the normal because its growing tip, in-

stead of continuing its usual symmetrical form, develops laterally, producing a flattened growth like a cockscomb which may in time become twisted and convoluted. A monstrose plant, on the other hand, develops multiple centers at its growing tip, from which irregular growth springs." Mostrose growth is usually somewhat dwarfed, with both leaves and stems being foreshortened and possibly gnarled and twisted. A.D. Houghton presented this concise definition: "A normal plant has two axes of symmetry; a cristate has one plane of symmetry; a monstrose plant has no planes of symmetry."

Variegation is the bicolor (or sometimes tricolor) effect resulting from a localized failure of pigment to develop. This is often a temporary condition caused by nutritional deficiencies, and many variegated plants must be grown from cuttings rather than leaves if the variegation is to be retained. There are several kinds of chimeras (plants composed of a mixture of two or more genetically different tissues), and in some kinds the abnormal appearance is limited to the surface cells and buds. If an adventitious bud is formed from the inner cambium layer of cells which are not changed, then the new growth reverts to the normal form or to the normal green where color is involved. Some variegated plants contain so little chlorophyll that they cannot survive on their own roots and can only exist on a graft.

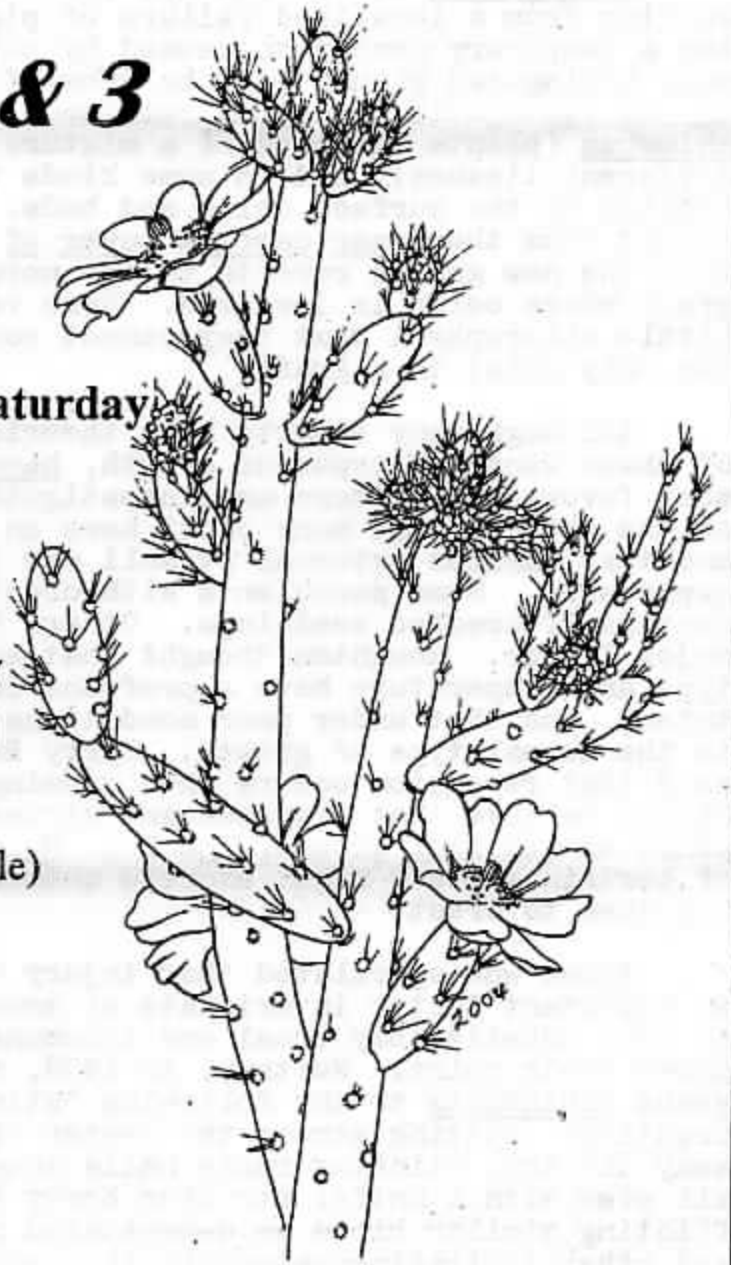
Although many experts have theorized as to the possible causes of these abnormal types of growth, heredity is the causative factor most favored by writers and investigators. Several authorities are of the opinion that many cacti have an inherent tendency to crest and that various external stimuli can trigger this tendency into expression. Some succulents with crested growth produce a good percentage of crested seedlings. Others believe that environment is a major factor. Houghton thought that external conditions such as soil type and temperature have a profound influence on the growth of cristates, and that under poor conditions they show a tendency to revert to the normal type of growth. Harry Butterfield, on the other hand, said that reversion occurs when growing conditions are optimum. Others believe that diseases and viruses play some part in the occurrence of abnormal growth, and E.C. Hummel believed that the larvae of certain insects might excrete chemicals inside the plants, causing them to crest.

Those who speculated that injury or damage to a plant might be an important factor in cristate or monstrose growth subjected plants to some unbelievably cruel and inhumane treatment in their efforts to prove their point. Wolthuy, in 1938, subjected young plants of the genus Echinopsis to the following "stimuli" in an attempt to induce cresting: Cutting across the center of the growing tip; cutting away the top; sticking rusty nails into the plant; stabbing the plant all over with a knife; striking heavy blows with a steel brush; inflicting similar blows on decapitated plants; pouring salt, soda, and other irritating materials into wounds; injecting lactic acid,

The Cactus and Succulent Society of America

Cactus & Succulent Show/Sale

JULY 1, 2 & 3



SALE: Thursday, Friday & Saturday
OPENS: 10:30 am

SHOW: Friday & Saturday
OPENS: 10:30am

(Free Admission to Show and Sale)

Huntington Botanical Gardens
1151 Oxford Rd.
San Marino, CA 91108
For Information: (626) 405-2100