

The Newsletter of the San Diego Cactus & Succulent Society Inc.  
Affiliated with the Cactus & Succulent Society of America



Volume 37 Number 8  
Saturday August 10th 2002  
1:00 PM Casa Del Prado  
Room 101 Balboa Park  
San Diego California

# ESPINAS Y FLORES



Program

AGAVES AND FRIENDS

by Kelly Griffin

Plants of the Month

FEROCACTUS

by Dick Kessler

&

LITHOPS

by Tom De Merritt

# Presidents Message

**I**t was so good to see so many of you at the July meeting - 75 members signed in as well 9 guests. Everyone was abuzz about the **NEW ESPINAS Y FLORES** and the consensus was that it is beautiful. Paul Steward was given a spontaneous ovation for his work, though I believe he had stepped out of the room!

*-Thanks Paul for a great job.*

Chris Miller did a fine overview of the Lobivias - rekindling for me an old love of these fabulous blooming little cactus. Thanks also to Terry Parr for his talk on the "other" Mesemb's - quite a reminder of the great diversity of this genus. I want to thank all of you for the warm reception given my presentation on the Galapagos - I felt very privileged to visit such a spot and it was fun reliving the adventure with all of you!

The big news for the month is that we are going to go on another field trip in September instead of a picnic. For all you picnic lovers - it will return next year!

*We are going to*

## **LOUSLAND!**

This Estate - devoted to gardens and rare plants is located in Montecito. If you have never been there, it is hard to describe other than as a premiere garden and showplace for many spectacular plants - some that can be seen no-

where else on Earth! If you have been in the past - this is your opportunity to see the new cactus installations, including the newly acquired collection of Merritt Dunlap of Fallbrook which includes 300 New World species, including a Galapagos opuntia. This is a trip not to be missed!

## **DETAILS:**

**SATURDAY, SEPTEMBER 14, 2002**

**DEPART:** San Diego - parking lot behind the Organ Pavilion 8:00 AM  
North County pick up 8:45 Park and Ride I-5 at La Costa

**COST:** \$ 35.00 for members, \$42.00 non-members

**INCLUDES:** Transportation on luxury coach, entrance fees including docent tour, and picnic lunch (bring desert to share.)

We may plan another stop, time permitting, and will return to San Diego around 7:00PM. Attendance limited to 47 so make your reservations ASAP.

Call Pam or Lee @ (619) 589-1223.  
Or email [pambadge@earthlink.net](mailto:pambadge@earthlink.net).

If you have not brought snacks for the meeting lately -

## **IT'S YOUR TURN!**

I look forward to seeing all of you on August 10th.

*Pam Badger*

# PROGRAM

This Month Kelly Griffin will cover the genus *Agave* as he has experienced it while traveling in the U.S., Mainland Mexico and Baja California. He will include some shots of the interesting associative flora (*the friends, if you will*) that are found along the way. The talk will be a mix of habitat, plants, flowers and friends. Kelly is sure to show some quite different cultivars - variegates as well as hybrids.

Kelly Griffin is currently the Curator of a private botanical garden. He has been growing, admiring and studying succulent plants from an early age and joined the Gates C&S society at just sixteen. It has been a life long passion thus far. We hope it continues!



---

---

## July 2002 Brag Table Winners

Judged by Tom De Merritt  
Recorded by Shirley Berry

### Cactus

1. *Trichocereus* hybrid
2. *Copiapoa cinera*
3. *Mammillaria magallanii*
3. *Lobivia saltensis*

John Durhan  
Phyllis Flechsig  
Don Patterson  
Terry Parr

### Other Succulents

1. *Adromischus marianae*
2. *Adenium obesum*
3. *Pachypodium succulentum*
3. *Echeveria maruvella*

Don Patterson  
Rudy Lime  
Don Patterson  
Marylyn Henderson

# F.Y.I.

For Your Information

- ξ It's time to start preparing your plants for the 17th Annual Inner-City Show & Sale. Saturday & Sunday August 24th & 25th. 9:00 AM - 5:00 PM daily.
- ξ The Huntington Symposium August 31st, Africa: Finding the Lost Continent is the theme for this year's Succulent Plants Symposium. Presentations will focus on Africa's succulent biodiversity, conservation issues, medicinal plant uses, and other topics. Guest speakers include Christopher Dalzell of Durban Botanical Garden in Durban, South Africa; Ian Oliver from the Karoo Desert National Botanical Garden in Worcester, Western Cape, South Africa; Steven Hammer of the Sphaeroid Institute in Vista, California; Gerald Barad from Flemington, New Jersey; and Michael Vassar of The Huntington. Tours, plant sales, and a silent auction will be offered for participants. Luncheon is included in the registration fee of \$70. An optional dinner is available for an additional \$25. For additional information and registration call: (626) 405-3504 or e-mail [mthorpe@huntington.org](mailto:mthorpe@huntington.org)



## SDC&SS Board member Joe Kraatz writes:

*"I went down to Quail for the opening of the *Amorphophallus titanum* (common name: Corpse Flower) and had a long talk with Kimberly King the reporter with NBC 7/39. The stench of the flower was amazing!!"*

**S**adly, we note the passing of George Edmund. Lindsay. Former Director of the San Diego Natural History Museum, Curator Emeritus of the California Academy of Sciences in San Francisco, CSSA Fellow died Tuesday, July 16th at his home in Tiburon California. The cause of death was congestive heart failure. Best known for his work on the genus *Ferocactus*, see upcoming editions of EYF for details on the life of a truly amazing man.



A jovial George E. Lindsay with your Editor signing copies of his dissertation for the SDC&SS library (1995).

# FEROCACTUS THE GENUS FROM THEN TO NOW

by Dick Kessler

**F**erocactus, fero, ferox

meaning bold, fierce, ferocious, cruel and vicious are good terms for this genus. You can just imagine what a cactus with a species name of tortulospinus (tortured spine) might look like. Imagine being challenged by this fiercely spined cactus that for one species reaches 13 feet in height! Or tangle with another species that has spines up to 8 inches in length. The spines of some species have been used as fishhooks! This is a genus that doesn't ask for respect it demands it!

Ferocactus, the genus is formidable for sure!

We are fortunate in San Diego since examples of this remarkable genus are found locally. The distribution is from the Southwest of the US south to central Mexico and all of Baja California. It prefers arid and semi arid climates thus its boundaries correspond to geography with those conditions.

Historically, the genus was given its current name by Britton and Rose, *The Cactaceae* in 1922. Although it has been collected as early as 1733 by William Houston in Mexico as *F. nobilis* (modern day *F. latispinus*). The famed Swedish 'Father of Taxonomy', Carl Linnaeus used an earlier description of this plant and described it as *Cactus nobilis* in 1767. It is obvious that the famed botanist also shared in the respect given to this species by calling it noble!

More recently, the genus has received attention by our very own Dr. George Lindsay and Dr. Reid Moran. Dr. Lindsay was Director of the San Diego Museum of Natural History. He wrote his doctoral thesis in 1955, detailing the results of 25000 miles in boat and auto travel to study these plants. Dr. Nigel Taylor of Ken Gardens has reviewed the genus in *Bradlyea* in 1984 with particular attention to the *Ferocactus* of central Mexico.

In 1996 the penultimate *Ferocactus* review, *The Taxonomy and Ecology of the Genus Ferocactus*, was published again by our very own

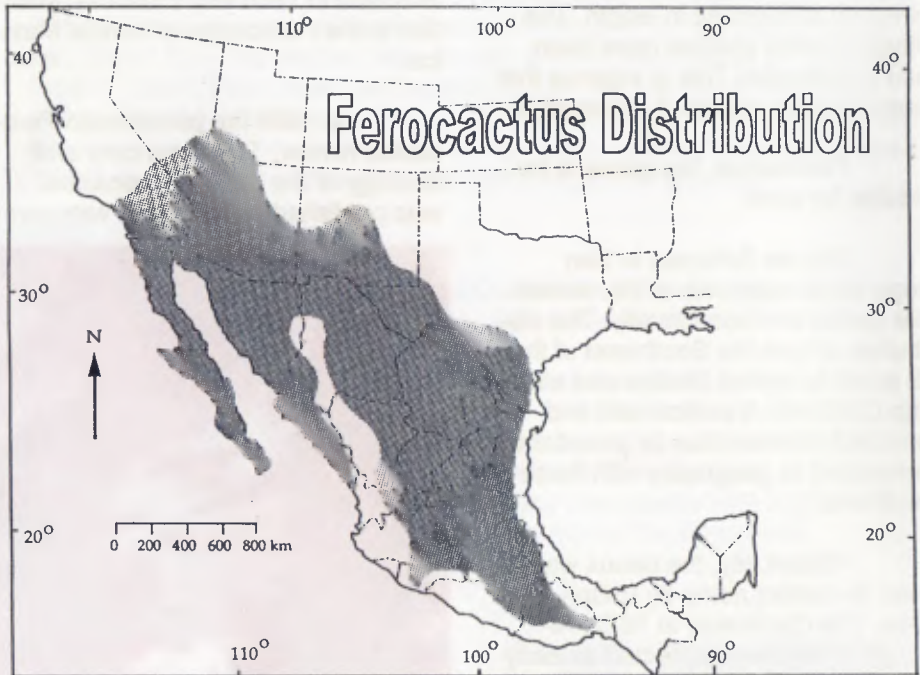


*Ferocactus diguetii*

Tireless Termites Press whose editors are Reese Brown, Mark Raptis, Stan Yalof, and Fred Fox. This review is certainly the most extensive since it builds on Lindsay's original thesis, and then adds material on Synonyms by Madelyn Lee, Biography on Dr. Lindsay by Larry Mitich, a important discourse of the variation of the species *Acanthodes* from Baja to San Diego County by Frank Thrombley, a review of Britton and Rose's descriptions by Dr. Hugo Cota including an

lease his review of *Ferocactus* in his now famous and popular style. One presumes he will continue his conservative taxonomic classifications.

All of the literature goes to conclude the following: *Ferocactus* was split from *Echinocactus*, by Britton and Rose. It seems a bit obvious why both were included together for many years: both are 'barrel' cactus, both are found in the arid regions of the Southwest and Mexico and for the



initial molecular analysis that was later expanded to a full chromosomal analysis and extensive color photographs.

Since the mid 90s, Anderson's *The Cactus Family* offers an encyclopedic review of the genus, that takes some taxonomic liberties. Finally John Pilbeam is due to re-

most part they do look similar. Anderson believed "*Ferocactus* differs from the closely related *Echinocactus* in having stem tips not densely woolly". Clearly the difference is how one views the word 'densely'. DNA analysis doesn't show clear differentiation with *Echinocactus*. Bottom line, both *Ferocactus* and *Echinocactus* are related from the standpoint of just

about any attribute including DNA analysis. Whether they are related *enough* to reverse Britton and Rose's judgment about splitting is yet another matter.

### Ferocactus Taxonomy

Depending on one's view and analysis and of course the basis for the analysis, the genus includes anywhere from Britton and Rose's 31 species, Lindsay's 25 species and 10 varieties, Taylor further reduces some species to varieties, Anderson suggests 20 species and several varieties. Since Lindsay's fieldwork, there have been two new species described: *F. lindsayi* and *F. reppenhagenii*. In fact, Dr. Jon Rebman has found in Northeastern Baja a new species yet undescribed.

I am a big fan of subscribing to the conclusions of someone who



has spent years and 25000 miles examining these plants, subject to the new technology of DNA analysis. Therefore I concur with Lindsay's

taxonomic analysis when he said: "When one works with a particular group of plants he naturally evaluates the characters which he feels are most dependable in analyzing the taxa. There is variation in the stability and value of any character, and over-emphasis of a particular one and disregard or ignorance of the rest is to be avoided. In *Ferocactus* the habit of the plant; the number, shape, and type of ribs; the arrangement and



character of spines; the shape, size, color, type of tube scales, and time of appearance of the flower; size, shape, color, fleshiness, type of scales, and time of maturation of the fruit; as well as the shape, size, color, and morphology and surface sculpturing of the seeds, all are important. Any one character may be diagnostic in one taxon and too variable to be of value in another, so it must be evaluated according to the group with which it is used. For example, spine characters are important because they are usually fairly stable and are always present. The contrasting qualities of hooked versus straight spines always appear in keys, and were used by de Candolle, Schumann, and others to separate subtribes and sections. However, one can find straight spined and hooked spined individuals within a single spe-

cies, and sometimes both spine forms occur on a single plant. *Ferocactus covillei* has very strongly hooked central spines in Arizona, but adult plants near Guaymas, Sonora, always have straight spines, which has resulted in repeated misidentification of the plants in that area. Another example is flower color, which is a dependable key character for separating *Ferocactus gracilis* and *F. acanthodes* var. *tortulospinus* which are sympatric in Lower California. *Ferocactus gracilis* always has red flowers, and those of *F. acanthodes* var. *tortulospinus* are always yellow. In other species, such as *F. latispinus*, the flowers may be purple, red, yellow, or white. The type specimen of *F. wislizenii* had yellow flowers, but the great majority of the plants in this taxon have red flowers. Plants near Benson, Arizona, have red or yellow flowers."

Lindsay (and Thrombley) suggested that the great variability of San Diego to Baja plants had to do with natural hybridization. This maybe true but recent DNA analysis by Cota, Rebman and Wallace do not necessarily support this conclusion. So whether some plants deserve variety or species designation is still a matter of some conjecture.

Clearly the genus has had its share of taxonomic 'wars', but it has been rather well studied and if one is not too demanding identification of the plants is somewhat easy. Use of modern technology such as spreadsheet analysis of plant attributes makes short work of rough cut analysis. based *Ferocactus* sites are quite useful for quick pictures and descriptions.

Again we have a wealth of

local *Ferocactus* plants. Our own Palomar Gardens has a very substantial collection of in ground plants that are currently being reidentified. The San Diego Zoological Society's Wild Animal Park having enjoyed a substantial period of plant collection in Mexico years ago, has both a very substantial collection of *Ferocactus* in pots and in ground. It is probably true



that we have more *Ferocactus* than anyone else outside the native locations. Both locations are being catalogued and reidentified with the results to be published. Grigsby continues to offer a great selection of rather mature plants.

### **Reproduction and Cultivation**

Fortunately, *Ferocactus* tolerates a lot of abuse as long as you



don't give them an excess of water. Remember this is a genus from arid and semi arid desert regions. Although the plants of the Southwestern US and Northern Mexico get watered by the traditional summer monsoonal rains, the western extent of the region by winter Pacific storms, the Baja climate is extremely variable with occasional hurricanes in the



southern region, but very little predictable rain in the northern Baja region. They can be slow growing, certainly one shouldn't expect 10 foot stems after a few years of germination from seed.

Germination from seed is quite straightforward. Seeds sprout within 10 days of being placed in high humidity (80%+) and heat of 70-80 degrees F. Nurturing of seedlings

requires daily moisture and free air circulation and non-freezing temperatures. Seedlings should be shaded from direct California sun.

### Now on to the plant descriptions

I will use Anderson's taxonomy, not because I agree with it since I don't but it serves as a starting point for identification and it has good companion pictures. I will use the rough geographic division of Southwestern US-Northern Mexico, Central Mexico and Baja.

- Southwestern US-Northern Mexico
- Ferocactus cylindraceus
  - Ferocactus cylindraceus var lecontei
  - Ferocactus cylindraceus var tortulispinus
  - Ferocactus eastwoodiae
  - Ferocactus echidne
  - Ferocactus echidne var victoriensis
  - Ferocactus emoryi
  - Ferocactus emoryi var rectispinus
  - Ferocactus hamatacanthus
  - Ferocactus hamatacanthus var sinuatus
  - Ferocactus wislizenii

- Central Mexico (Taylor calls them the Potosi Group)
- Ferocactus alamosanus
  - Ferocactus alamosanus var reppenhagenii
  - Ferocactus latispinus
  - Ferocactus latispinus var spiralis
  - Ferocactus macrodiscus
  - Ferocactus macrodiscus var septentrionalis
  - Ferocactus pilosus
  - Ferocactus pottsi
  - Ferocactus robustus
  - Ferocactus schwarzi
  - Ferocactus lindsayi
  - Ferocactus flavovirens

*Ferocactus herrerae*  
*Ferocactus histrix*

#### Baja Group

*Ferocactus peninsulae*  
*Ferocactus fordii*  
*Ferocactus santa-maria*  
*Ferocactus glaucescens*  
*Ferocactus gracilis*  
*Ferocactus gracilis* var *coloratus*  
*Ferocactus gracilis* var *gatesii*  
*Ferocactus haematacanthus*  
*Ferocactus viridescens*  
*Ferocactus viridescens* var *littoralis*

#### Baja Island Group

*Ferocactus tiburonensis*  
*Ferocactus chrysacanthus*  
*Ferocactus chrysacanthus* var *grandiflorus*  
*Ferocactus diguetii*  
*Ferocactus diguetii* var *carmenensis*  
*Ferocactus johnstonianus*  
*Ferocactus townsendianus*

#### San Diego County

*Ferocactus viridescens* var *viridescens*  
*Ferocactus cylindraceus* var *cylindraceus*  
*Ferocactus cylindraceus* var *lecontei*

In general the plants are globose to tall cylindrical, from 12 inches to 13 feet. Typically green to gray green in stem color. Ribs are 8 at minimum to 40 at maximum. Spine can be whitish, yellow, blood red, black and gray. Central spine length can be 1 inch to 8 inches. Spines can be straight, twisted and severely hooked. Flowers are typically yellow and orange, but are also violet and red. Radial spines can be setaceous or bristle like and white in color.

Although this genus seems to be thoroughly studied and thus most

everything to be known is known, there are important gaps. The entire Baja Island Group doesn't have near



the attention and study it needs due to the extreme remoteness. The *Ferocactus johnstonianus* on Angel de la Guardia Island has been visited only about three times including its discovery: Johnston 1921, Lindsay 1947 and Lau 1976. There is very little known about the newer *Ferocactus*: *lindsayi* and *reppenhagenii*. There is more to be written about these species. This is a genus that at once is near and far. It is native to our locale, but much more needs to be learned about it. We have yet to get our arms around this genus!

Many thanks to Reese Brown of the Tireless Termites Press for the use of the photographs.

Postscript: Sadly I report the passing of Dr. George Lindsay, although I didn't know him directly, I certainly knew his botanical drive and adventure by reading his writings. His words will remind us of all that we know and hope to know in this more than amazing endeavor of plant exploration!

Dick Kessler  
Oceanside, Ca  
Jul 19, 2002  
dk@kandkbotanicpublications.com

# LITHOPS

by Tom De Merritt

Luckily as a genus goes much has been written about this group. This is due in large part to the attraction many have to these "living stones". While the genus is rather simple it is very difficult to recognize the species from a description alone. Illustrations and comparable pictures of the most important forms are a must to key out the species. Color is an essential characteristic in the definition and delineation of species. The traditional classification methods of form, shape of markings, size and form of the translucent windows, lines and spots are also utilized in species identification.

In habitat these plants mimic their surrounding which make them very difficult to locate.

Plants are most often located by first finding the material that they grow in. This is very often a quartz conglomerate. The color of the plant mirrors closely the soil or rock that it grows in. The lines and markings on their translucent tops serve to camouflage the plant into the surrounding ground.

Lithops are designed/adapt to exist in particularly hostile environments. Because they have specifically evolved to exist in very harsh environments

they are not easily maintained in any other environment. The anatomical design of the plant must be observed if the local culture is to be successful. The structure of the plant serves to protect it from loss of moisture in a hot, dry and windy desert climate. Its water storing leaves are inverted cones attached to a very short cylindrical stem. In the field the plant grows well buried in rocky soil. This protects the vertical surface from damaging sun and wind, greatly reducing moisture loss.

An important point here is that when Lithops are grown in more moderate climates the plants are necessarily grown with more of their bodies exposed or they can suffer from a lack of fresh air; just the opposite of what they naturally do in the wild. The Ph content of the soil is neutral to slightly alkaline. The soil can be a mix of rock and soil, mostly rock, limestone and even clay for a few species.

Flowers are either yellow or white. The number of blooms depends on the amount of rain or watering. If given enough water they will bloom through about half of their growth cycle. If the flowers are successfully pollinated a seed capsule develops, which remains on the plant through the dormant period. When the first rain hits this capsule has a cover, which swings, up and out. As



the rain fills the capsule it opens and the seeds are washed to the ground. If moisture and warmth persist germination of the seed occurs within a few days. In areas of extended drought the seeds remain viable for years.

Distribution is primarily three provinces of South Africa, (Transvaal Cape and Orange Free State) and Namibia but they do also slightly extend into the southeast border of Botswana. Elevation ranges from sea level to 8000 ft.



The rainfall in these areas ranges from 4 to 35 inches per year. There has been no

evidence of interbreeding or natural hybridization in the wild, which lends one to believe that the species aren't closely related.

Predation abounds upon these plants from human natives, rodents, antelopes and insects who eat the plants for moisture. Natural plagues of grubs have been known to eradicate entire colonies where they burrow in the ground and eat the plants from the roots up to the stem. Mealy bugs are often found on plants in the wild. By far the most destructive insect is the corn cricket, also called the armored ground cricket, which devours the flowers and surrounding leaf tissue preventing seed production and sometimes killing the plants completely. By far the worst predator to this group of plants is man. The plants have been collected by the ton for pleasure

and export to the hobbyist. While the plants are protected there are few effective controls over the wholesale collection, sale and export of succulent plants by unscrupulous persons.

Growth cycles begin in the summer (not the spring) as most species grow in summer rainfall areas and continue into mid-fall. When the night time temperatures drop consistently below 58 degrees, watering should be discontinued and the plants be allowed to enter into dormancy. The determination for the final watering before winter should depend on weather conditions in the preceding weeks. During the dormant period the old bodies will slowly shrivel and dry up while new ones develop inside, ultimately to emerge in the summer. Watering is the key to successful cultivation of these plants. Over watering or watering when the plant is dormant is a common error, which leads to rot. Waiting for the new plants to emerge from the dried up old ones is the most difficult aspect as everyone is excited to see the new plants emerge. This emergence is analogous to that of a snake molting it's skin where a shiny new body pokes through the shriveled leaves of the old body. Only then can the watering begin and then the same rules apply as they do with

most succulents, the soil must be well draining and allowed to dry out between watering. There isn't a calendar schedule for watering as its weather



and soil dependant, which varies with different growers. They do seem to prefer a deep watering with a 3-week interval between watering. Fertilizers should be used regularly, perhaps every other watering tailing off toward the end of summer. They need an inorganic based fertilizer low in nitrogen and high in potassium along with other trace minerals. Certain orchid formulas work well, i.e. 2:3:4 or 6:20:30 type ratio is perfect for these non-herbaceous plants. If the fertilizer recommends 4 parts per gallon it is best to cut that down by half strength or less.

Pests are not a common problem with these plants although if mealy bugs do infest they burrow into the soil and only a good drenching with an appropriate insecticide will solve the issue. A good soil mix will inhibit the pests and allow for healthier plants overall.

Decomposed granite is the best base with a small amount of soil and no organic material, e.g. peat moss or manure. Chicken grit is a perfect source of DG available at a livestock feed store for close to the same price of a cactus mix. Pots should be a bit under 5 inches in depth with good drainage holes allowing the soil to dry out within days of watering. Watering is best in the mornings to let the top layer of soil dry during the day. These plants for whatever reason love being pot bound so have no fear of letting them crowd each other in the pot, they thrive being crowded. Strong morning light is desired along with partial shade from the wilting afternoon sun.

Seed growing of these jew-

els is the most rewarding as well as fastest, cheapest and offers the best chance at success with Lithops. One cannot overstate the benefit of acclimation that is gained from growing by seed. These plants will have a stronger immune system and

always be healthier than any purchased from a nursery. Growing from seed requires a slightly finer mix than the normal DG mixes. The seeds should be mixed with fine sand and lightly spread over a prepared surface. Sprinkling coarser

sand slightly covering the seeds should follow this. Some seeds will germinate over a few months and others within a few weeks. Watering is best done from below to prevent disturbing the seeds until the seedlings are established.

Joy from owning these plants can only come from successful growing which is only feasible if one knows the rules. Loss of a favorite plant is so disappointing that one tends to be discouraging from trying again. I love these plants just for the uniqueness they have, the fantastic colors, the excitement they bring to others who see my collection as well as the little care they require. They take up very little space and are the perfect collector plant.

If members have any specimen plants please bring them to show at the next meeting.

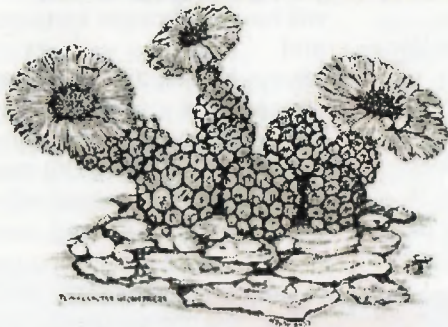
#### References:

Cole, D. Lithops Flowering Stones, 1988

Sprechman, D. Lithops, 1970



**The Living Rocks**  
**17<sup>th</sup> Annual Inter-City**  
**Cactus and Succulent Show & Sale**  
**Sat. & Sun. August 24<sup>th</sup> & 25<sup>th</sup> 2002**  
9 to 5 each day at the L. A. Arboretum  
301 N. Baldwin Ave. Arcadia, CA  
**The largest and finest Cactus & Succulent Show anywhere!**



For more information, please contact: Harry Fletcher 310-538-4078  
Tom Glavich 626-798-2430 Gene Oster 818-998-1306  
Sponsored by the Los Angeles, Long Beach and San Gabriel Valley  
Cactus & Succulent Societies



**WANTED**

Garden tools for the Benefit  
Drawing. Good quality "rust free" work-  
able; hand shears, watering cans, loppers,  
bow saws, things botanical/ educational/  
books and or unique things for our club's  
gardeners, landscapers and collectors

Contact Lee Badger  
(619) 589-1223

# Upcoming Events

## July 26-28 PACIFIC NORTHWEST CONFERENCE

hosted by Cascade C&SS. Upper Gwinn Conference Center, Seattle Pacific University, Seattle. Speakers are James D. Mauseth speaking on how cacti survive in desert; Mac Clarke on his adventures in the Chiricahua Mountains and his visit with the late Charlie Glass in Mexico; Peter Gamarano on Socotra and Madagascar, Mary Wilkins Elert on succulents of Africa; Arthon Elert on Euphorbias; and Harlan Reed, a Hopi Indian, speaking on the utilization of native plants by his home on the Third Mesa of Arizona. There will also be a plant auction and related items, field trips, plant and book sales. Saturday night banquet for \$30 (choice of salmon, chicken or beef) is optional. Registration is \$80 per person for the whole weekend, with lesser fees for less time there. Room rates in Emerson Hall are \$40 per night, or \$75 per night for a couple. Meals extra at reasonable cost. Checks (no charge cards) covering all costs (registration and meals required) must be sent by 19 July to Cornelia Remy, 13406 S E Fairwood Blvd, Renton WA 98058. Further details available on

## August 15-18 [The 5th International Convention](#) of the British C&SS

at Loughborough University, Leicestershire (about 100 miles north of London). Note the venue for this event is different from that originally announced. Theme - "Conservation in Cultivation." Speakers - Pierre Braun and Klaus Gilmer from Germany; Mark Dimmitt and Steven Hammer from USA; Carlos Ostolaza from Peru; and Graham Williamson from South Africa. The speakers are among the leaders in the field of practical study and exploration for cacti and succulents. Info: David Kirkbright E-mail: [Kirkbright@bcandss.fsnet.co.uk](mailto:Kirkbright@bcandss.fsnet.co.uk)

## August 24-25 17th Annual Intercity Cactus and Succulent Show and Sale Los Angeles County Arboretum, 301 N Baldwin Ave., Arcadia CA 9am to 5pm. Information at

<http://www.lacss.com/2002/> or from Tom Glavich at [T.Glavich@aol.com](mailto:T.Glavich@aol.com) or Gene Oster at 818-998-9306 This annual show is thought to be the largest cactus show in the world!

## August 31 Huntington Symposium, Huntington Botanical Gardens, 1151 Oxford Rd., San Marino CA. Info: 626-405-2160 or 2277

## September 1 CSSA Board Meeting, Huntington Botanical Gardens, 1151 Oxford Rd., San Marino CA.

## September 7-8 C&SS of California Show and Sale Lakeside Park Garden Center, 666 Bellevue Ave., Oakland CA Info from Julie Rose 925-833-0453 or e-mail her at: [bfr@ix.netcom.com](mailto:bfr@ix.netcom.com)

~~[MOVED TO OCT 19-20](#)~~

## September 8 Michigan C&SS Plant Sale Info: Kerry Krivoshein 248-524-0227 or [ksk@daimlerchrysler.com](mailto:ksk@daimlerchrysler.com)

## September 14-15 Kansas City C&SS Annual Show and Sale at Blue Ridge Mall

## September 14-15 Houston C&SS Annual Show and Sale Houston Arboretum and Nature Center, 4501 Woodway. 10am to 5pm. More details? Call Hank Andresen, Show Chairman, 281-992-5677

## September 14-15 Monterey Bay Area C&SS Show and Sale at Jardins de San Juan, San Juan Bautista CA More details from Sam and Carole Keeton at [skeeton@pacbell.net](mailto:skeeton@pacbell.net)

## September 14-15 Houston C&SS Annual Show and Sale Houston Arboretum and Nature Center, 4501 Woodway. 10am to 5pm. More details? Call Hank Andresen, Show Chairman, 281-992-5677

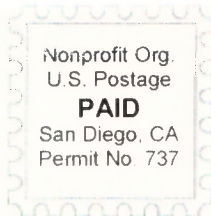
## September 22 Long Beach Club Annual Auction at Dominguez Adobe, 18127 S Alameda St, Compton (Dominguez Hills) CA

## October 12 Texas Association of Cactus & Succulent Societies' Fall Seminar hosted by North Texas C&SS, Dallas TX Contact Bob Barth at 512-327-1173 for more details or Michael Rupe at 512-440-7817 or e-mail him at [epur@att.net](mailto:epur@att.net)

## October 12-13 Central Florida C&SS Sale and Show in conjunction with the USF Botanical Gardens/Plant Clubs. Contact - Mitch Kessler 813-264-5614 or e-mail him at [kessler@kesconsult.com](mailto:kessler@kesconsult.com), or Vicki Hunter at: [bezaleelitsog@aol.com](mailto:bezaleelitsog@aol.com) - note identify for inquiries re: CFC&SS in subject line.

## October 12-13 Orange County C&SS Show and Sale Fullerton Arboretum CA

San Diego Cactus & Succulent Society Inc.  
P.O. Box 33181  
San Diego CA 92163-3181



## **Espinas & Flores**

Editor: Paul Steward  
(858) 486-0535  
manuscripts and mail to:  
12620 Tustin Street  
Poway CA 92064-6037  
psteward@pacbell.net  
eyf2000@aol.com

### **San Diego Cactus & Succulent Society Executive Board Members**

President: Pam Badger (619) 589-1223  
Vice President: Jeff Harris (619) 294-5708  
Secretary: Laura DeMerritt (858) 270-5544  
Treasurer: George Plaisted (619) 583-9551  
Ex Officio: Tom DeMerritt (858) 270-5544

### **Directors**

Lee Badger (619) 589-1223  
Phil Favell (760) 471-8944  
Mark Fryer (619) 299-3429  
Joe Kraatz (760) 758-7042  
Spencer Maze (858) 454-1870  
Terry Parr (619) 460-9111  
Herb Stern (619) 223-9134

### **Standing Committees & Sub Committees**

Conservation: Joey Betzler & Kelly Griffin  
Education & Exhibits  
Brag Table: Shirley Berry & Kay Quijada  
Plants of the Month:  
Lee Badger & Jeff Harris  
Summer Show: Tom Knapik, Joey Betzler &  
Kay Quijada  
Winter Show: Ed DeLollis  
History: Terry Parr  
Liaison  
Balboa Park Desert Garden: Susan Hopkins  
CSSA Affiliate Rep: Kelly Griffin  
Quail Botanical Gardens: Phyllis Flechsig  
San Diego Botanical Garden Foundation:  
George Plaisted  
San Diego Floral Association:  
Elizabeth Glover  
San Diego Wild Animal Park Baja California  
Garden & Succulent Collections:  
Chris Miller  
Library: Tom Birt & Phil Bunch

Membership: Collette Parr  
Mailing: Pam Badger & Jeff Harris  
Plant & Seed Exchange  
Plants: Michelle Heckathorn & Sara Schell  
Seeds: Kally Griffin  
Plant Sales & Supplies  
Annual Sales: Tom Birt  
Auction & Holiday Plants:  
Lee Badger & Tom DeMerritt  
Benefit Table: Lee Badger  
Monthly Plant Sales:  
Jeff Harris & Joe Kraatz  
Monthly Supply Sales:  
George & Jerry Plaisted  
Publicity: Tom DeMerritt & Stan Yalof  
Programs: Kelly Griffin  
Reception: Ethyl Standish  
Regalement  
Monthly: Lee Badger, Rudy Lime &  
Stefy Mangold  
Picnic: Laura & Tom DeMerritt