

# Espinas y Flores

BULLETIN OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY  
Affiliate of the Cactus and Succulent Society of America, Inc.

Vol. XIV, No. 8.

August, 1979

## August Meeting

Saturday, August 11th, 1979  
1:30 pm  
Casa del Prado, Room 101, Balboa Park

*Baobab: Portrait of a Tree*

The August program will be a 52-minute film on the world's largest succulent, the Baobab Tree (*Adansonia digitata*). This film, narrated by Orson Welles, is without commercial interruption.

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<u>In This Issue</u> . . . . .	<u>Page</u>
<i>Echinocereus</i> — R. Monroe . . . . .	2
Cactus Cartoons — W. Scott . . . . .	3
Stapeliads — R. Latimer . . . . .	4
Pests of Succulent Plants: Part VI — R. Monroe . . . . .	6
Green Thumb Show . . . . .	7
Picnic Highlights . . . . .	8
San Diego Botanical Garden Foundation Show Schedule . . . . .	10
Notes & News . . . . .	10

## Cactus-of-the-Month

### Echinocereus

Dr. Ronald E. Monroe

The genus Echinocereus (hedge-hog torch or spring wax candle) was first proposed by Engelmann (1848) when he described E. viridiflorus as the type species for this magnificent group of cacti. Britton and Rose (1937) recognized 60 species, Borg (1959) accepted 78 species and Backeberg (1977) discussed 92 species and 31 varieties. This huge number of species has recently been revised downward to currently include ca. 65 species and 50 varieties (Anonymous, 1974). However, Weniger (1974) indicated that this genus is one of the largest genera of cacti, both in number of different species and in number of individuals found growing within their range.

Echinocerei are oval, conical or cylindrical and always with ribbed stems. The vertical ribs of some species may be divided into podaria, but these are never separated from one another; thus, the ribs are always an outstanding character of them all. The plants are very spiny and these spines may be straight or curved, but never hooked. Most of these cacti are low-growing with stems seldom over 12 inches high, but some may grow 20-24 inches high. Normally, the stems are erect, but a few species have prostrate stems. A few species have single stems, but most are very caespitose and exist in huge clumps. The flowers of this genus develop on the ribs at the spine-bearing areoles, where they literally burst through the epidermis of the stem; most appear just beneath the growing tips, but some species produce flowers anywhere on the stem. The flowers are usually large and showy and considered by many as being the most beautiful in all the cacti. One interesting character concerning the flowers of this genus (U.S. species) is the prominent, green stigma with varying finger-like lobes.

The distribution of the echinocerei is extremely broad. They inhabit a wide belt of the North American continent from Utah and Wyoming south throughout most of northern Mexico to slightly beyond Mexico City, and from central Oklahoma and Texas on the east to California on the west.

Some of the more striking species or varieties admired by collectors are: E. viridiflorus v. davisii (a dwarf plant with green flowers), E. melanocentrus (a small plant with rose-pink flowers), E. fitchii (a small plant with large pink flowers with burgandy centers), E. baileyi (a small plant with large fuchsia-colored flowers), E. pectinatus v. rigidissimus (a small plant with huge lavender-pink flowers), E. dasyacanthus (a larger plant with huge yellow, pink or violet flowers), E. triglochidiatus (a large plant with large, waxy scarlet-red or orange-red flowers) and E. engelmannii (a large, caespitose plant found in California and Arizona with huge violet-red flowers and extremely variable-colored spines).

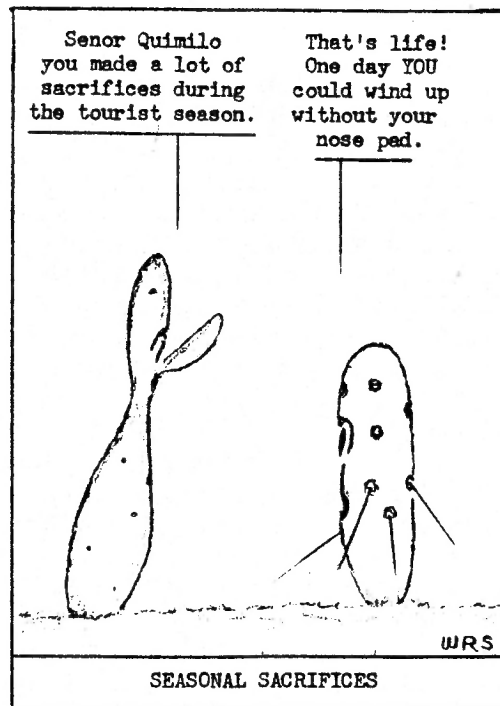
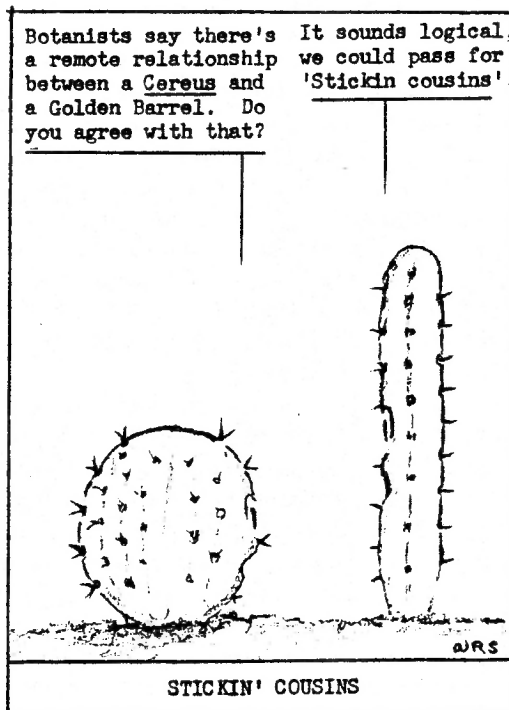
Although most species of this genus are very easy to grow, many find that they are shy bloomers and some simply die after several years of apparent normal, good growth. It is best to consider that many of these plants are used to quite cold winters and very dry summers—therein lies the secret: keep the plants dry and cold during the winter (a refrigerator may be necessary) and generous water and light fertilizer in the spring should induce bloom; a very dry summer in full sun (or full greenhouse light) followed by a good watering in August may bring about a second blooming period (particularly the desert species).

Propagation is from either rooted cuttings or seed, but some may prefer to graft the dwarf species as they can be difficult (E. viridiflorus v. davisii and E. palmeri).

Pests (mealy bugs, red spider mites, cutworms and slugs) are easily controlled via the usual means mentioned in previous articles.

#### References Cited

- Anonymous. 1974. Species list. Ashingtonia.
- Backeberg, Curt. 1977. Cactus Lexicon. Blanford Press, England.
- Borg, J. 1959. Cacti., Blanford Press, England.
- Britton, N. L. and J. N. Rose. 1937. The Cactaceae. Dover Publ., Inc., New York.
- Engelmann, George. 1848. In: Wislizenus, Mem. Tour North. Mex. 91.
- Weniger, Del. 1974. Cacti of the southwest. University of Texas Press, Austin.





*Stapelia variegata* Linnaeus  
 Plant with crested stems. From Johann  
 Wilhelm Weimann: Phytanthoza  
 Iconographia, 1757-45.

## Succulent-of-the-Month

### STAPELIADS

by Rick Latimer

In 1624 Justus Heurnius (van Horn) sailed to the Dutch Indies, returning to the Netherlands in 1639. He was the first collector of plants from the Cape region of South Africa and his inclusion in his small plant collection of an *Orbea variegata* (*Stapelia* v.) gave this plant the distinction of being among the very first South African plants to become known in Europe. This species was the first South African plant to have been described in a botanical publication. Johannes Bodaeus Stapelius (died 1636) called this plant *Fritillaria* (Lily) *crassa promontorii bonaespei*. Linnaeus erected the genus *Stapelia* in 1737, naming it after Stapelius (van Stapel). In 1811 Robert Brown established three new genera — *Huernia*, *Piaranthus*, and *Caralluma* — naming the first genus after Heurnius, but misspelling his name.

The order Gentianales includes two families with succulent members — Apocynaceae and Asclepiadaceae, as well as other families such as the Oleaceae (Olive family). The Asclepiadaceae, or Milkweed family, is divided into several tribes, such as Ceropegieae and Stapelieae. At present there are about 25 genera and 450 species, but due to new descriptions and revisions, as well as the uncertain boundaries between the species, an exact number cannot yet be given. A few of the newer genera are *Pseudolithos* (*Lithocaulon*), *Pseudopectinaria*, *Whitesloanea* (with the dubious honor of being an extinct genus), and the recently resurrected *Orbea*.

Species are native to India (e.g. *Frerea indica*, the most primitive species that even has nonrudimentary leaves, and *Caralluma sarkariae*), Burma (*C. crenulata*), Ceylon — or Sri Lanka — (*C. umbellata*), Arabia (*C. kalmbacherana*), Israel (*C. aaronis*), Lampedusa Island, Italy (*C. europea*), Spain (*C. europea* var. *confusa*), Canary Islands (Fuerteventura) (*C. burchardii*), Morocco (*C. burchardii* var. *maura*), Socotra (*C. socotrana* and *Edithcolea sordida*), Somalia (*Pseudolithos cubiformis*, *Caralluma speciosa*, and *Pseudopectinaria malum*), Ethiopia (*Huernia boleana*), Kenya (*Edithcolea grandis*), Madagascar, or Malagasy Republic, (*Stapelianthus decaryi* and *S. madagascariensis*), Mozambique (*Stapelia gigantea*), Republic of South Africa, which has the largest number of species, (*Caralluma lutea*, *Huernia zebrina*, *Orbea variegata*, *Hoodia gordonii*, and *Stapelia nobilis*), and Angola (*Taveresia grandiflora*). Stems of plants are usually prostrate, but some, like the Hoodias, are erect; smooth, but also velvety, with some having teeth or rudimentary leaves; and are green to pink or purple — sometimes mottled. Stems may produce flowers on the top only (Hoodias or *Caralluma speciosa*), randomly near the top (*Trichocaulon*), or at the base of the stems (*Stapelia*). These specialized flowering areas are called peduncles and are present in other Asclepiads, such as Hoyas.

Stapeliad flowers come in all colors but blue, have a number of shapes — but are basically five-pointed (thus Starfish Flower), and have smooth, but also knobby or hairy, flowers. A few examples of flower colors are: gray (*Caralluma*

*burchardii* var. *maura*), green (*C. sarkariae*), yellow (*C. lutea*), white (*Huernia namaquensis*), flesh (*Hoodia gordonii* or *Stapelia nobilis*), maroon (*Huernia pillansii*), purple (*Stapelia hirsuta*), or black (*Caralluma speciosa*). Many species have multi-colored flowers. *Duvalia* flowers form sharp little stars, while *Hoodia* flowers are almost round. *Taveresia* flowers form long trumpets and some species of *Huernia*, as well as all members of the genera *Orbea* and *Duvalia*, have ring-like swellings (succulent flowers!). *Pectinaria* flowers are nearly spherical with the flower tips joined as in *Brachystelma* flowers, while *Pseudopectinaria* flowers are hollow spheres! The smallest flower belongs to *Echidnopsis nubica* (3mm), whereas the largest flower belongs to *Stapelia gigantea* (400mm, or approx. 15 inches). The actual flower structure is rather complicated. One has to know just what one is doing in order to pollinate a flower. (Hint: the pistil-like structure in the middle is not the pistil!)

*Orbea variegata* is a rather easy plant to grow, crawling in and out of everywhere, but some species are notoriously difficult. *Edithcolea grandis* used to be regarded as the most difficult (and is frost-tender on top of everything else), but *Pseudopectinaria malum* may be even more difficult. I include here some of Frank Horwood's comments:

"It is not an easy plant to keep in cultivation. To grow well, it seems to prefer dense shade and high humidity when it will turn bright green and grow very quickly. Unfortunately each winter it dies back equally quickly and about spring one is left with a piece about the size one started with. It will not flower unless the stem with the developing bud is covered with a leaf or small stone."

Some of the *Stapelias* rest from October through March and some rest from January to June. Some species have been observed to be rotting even in nature! Mealy bugs are particularly fond of the *Stapeliads*, especially where the roots meet the stems. The *Stapeliads*, like the *Mesembs*, seem to me to be unjustly neglected in collections, so more of us should attempt to grow them!

#### References

- Horwood, Frank. "Succulent Safari to Somalia: IV", Cactus and Succulent Journal (U.S.) 48: 286.
- Keller, Fred. "Checklist of *Stapeliads* Published Since The Stapelieae (1937-1971)", Cactus and Succulent Journal (U.S.) 43: 163-167.
- Lamb, Edgar. Stapeliads.
- Luckhoff, Carl August. The Stapelieae of Southern Africa.
- Reese, G. "The Structure of the Highly Specialized Carrion-Flowers of *Stapeliads*", Cactus and Succulent Journal (U.S.) 45: 18-29.
- White, Alain and Boyd L. Sloane. The Stapelieae.

## Pests of Succulent Plants

### Part VI. Cutworms and other moth larvae.

Dr. Ronald E. Monroe

There are hundreds of species (most, incompletely known) of immature moths that vary in numbers from year to year and which can deal devastating damage to cultivated cacti and other succulents. They are difficult to detect before damage has been done; therefore, many a potential show plant has been reduced in value by the ravenous appetites of these caterpillars, and often-times, the whole plant may succumb to secondary invasion from the deep epidermal wounds and contamination from the worms per se or from their faeces.



—Adult of the clay-backed cutworm, *Feltia gladiaria* Morrison, slightly enlarged. (From Ill. State Natural History Surv.)

Systematics—There are many species of cutworms (Lepidoptera: Noctuidae) and many have not had the immature forms associated with the proper adult nor are there available adequate keys to identify these pests (Crumb, 1956 ). Metcalf et al. (1951) discussed four types of cutworms: solitary, surface cutworms which eat plants just above, at, or a short distance below, the surface of the soil; climbing cutworms which climb stems and branches and eat buds, leaves, fruits, etc.; army cutworms which occur in great numbers and after consuming all vegetation in one location will move en masse to adjacent areas; and subterranean cutworms which remain in the soil and feed upon roots and underground parts of plants. Mann (1969) listed 47 species of larvae of Phycitidae that caused damage in Opuntia sp., Trichocereus sp., Echinopsis sp., Echinocereus sp., Denmoza sp., Echinocereus sp., Coryphantha sp., Mammillaria sp., Hamatocactus sp., Homalocephala texensis of which Cactoblastis sp., Ozamia sp., and Cactobrosis sp., are noteworthy as principle pests. Additional species of lepidopterous larvae are found in the Pyraustidae (six species), Pyralidae (one species), Gelechiidae (one species), Tineidae (one species) and Gracilaridae (one species). There are numerous miscellaneous species that attack succulent plants from time to time, but most of these are considered as "opportunists" (the adult moth just happened to oviposit an egg or two on the plant when the plant was not its normal host).



Larva of the bronzed cutworm, *Nephelodes emmedonia* (Cramer), dorsal view, somewhat enlarged. (From Ill. State Natural History Surv.)

Plant damage—Cutworms and other moth larvae feed directly on the epidermis, buds, flowers or fruits of succulent plants, usually at night, and either hide

by day within the confines of the plant per se or elsewhere in the garden or greenhouse, returning night after night until the entire plant is consumed or they move elsewhere or moult to pupae. The cutworms are facultative pests. Normally, they feed on grasses, etc., but will feed on succulents especially in years of high populations when their normal host plant is either consumed by the caterpillars or destroyed by man as a weed. The obligatory species of non-noctuid larvae are usually internal feeders (Mann, 1969).

Biology—Each species, naturally, has varying differences in regards to life history and habits. The majority of the cutworms pass the winter in the partly-grown to full-grown larval stage (most southern California species) while other hibernate as adults or pupae (and do damage in the spring). Typically, the caterpillars remain seclusive during the day and feed at night, growing steadily and moulting several times (five to seven moults) until they burrow into the soil where they moult to a pupae. The adult moths emerge, mate and lay several hundred eggs on either plant material or bare soil and the time required to grow from newly hatched caterpillars (ca. 2 mm long) to mature larvae (from 2.5 to 5 cm long) varies from two weeks to five months.

Control—Cutworms and other surface feeding caterpillars are extremely easy to control. The main problem concerning them is the damage done before one realizes that they are even there. Dusting plants with a commercial 5% Sevin powder before nightfall is the easiest means of chemical control. Too, one can spray plants with Sevin (emulsifiable concentrate) at dusk and obtain adequate control. Chlordane or Diazinon sprays on the soil surrounding greenhouses or gardens can also be useful, but this latter control method, like that of using bran baits, can be harmful to pets and should be used only by experienced applicators. Another means of control is nightly excursions with flashlight and knife for direct kills and psychological rewards.

#### References Cited

- Crumb, S. E., 1956. The larvae of the phalaenidae. U. S. Department of Agriculture, Tech. Bull. No. 1135. Washington, D. C.
- Mann, John. 1969. Cactus-feeding insects and mites. Smithsonian Institution Press, Washington, D. C., 158 pp.
- Metcalf, C. L., W. P. Flint and P. L. Metcalf, 1951. Destructive and useful insects. Their habits and control. McGraw-Hill Book Co., Inc., New York. 1071 pp.



#### GREEN THUMB SHOW

The San Diego Wild Animal Park will host the following Green Thumb Show this month:

August 25-26: San Diego County Dahlia Society

## PICNIC HIGHLIGHTS

A large turn-out of members and guests was on hand for this year's annual picnic, held July 14th at Taylor's Cactus Gardens in El Cajon. In addition to the usual feast, there were award presentations, a grafting demonstration, an auction, and plant sales. This year's picnic also marked the 75th birthday of Bob Taylor. In honor of the occasion there were birthday cakes, cards, wishes, and a slightly (that's being generous) off-key rendition of "Happy Birthday" offered by those present. As usual, a good time was had by all and we would like to thank Bob and Suzanne for so graciously hosting this annual event.



Bob and Suzanne Taylor with one of Bob's birthday cakes.



Bob gives Tom Hamecher and Ruth Richardson some pointers on grafting.

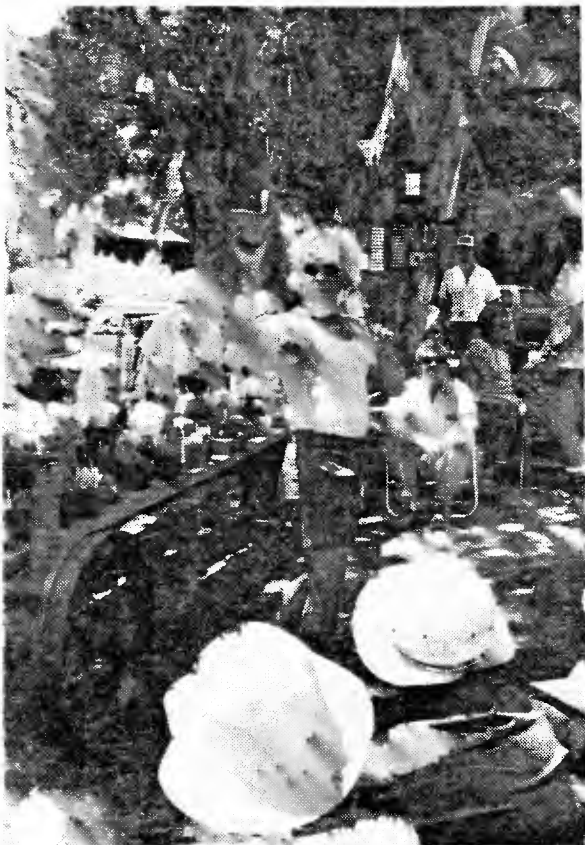




Gerald Dice receives the Phillip Corliss Award for Best Cactus at the June Show from Pres. Tom Hamacher.



Virginia Buckner accepts the Reuben Vaughan Award (Best Exhibit) for son Mike.



Auctioneer Lee Phelps keeps the bidding fast and furious.



Bob Taylor helps Mike Blood select a choice specimen from the garden.

## SAN DIEGO BOTANICAL GARDEN FOUNDATION SHOW SCHEDULE

The San Diego Botanical Garden Foundation announces the following shows which are to be held in the Casa del Prado during the upcoming weeks:

- August 18-19 — San Diego Fern Society Show  
August 25-26 — San Diego Turtle & Tortoise Show



### NOTES & NEWS

SDCSS membership was well-represented in the winner's circle at the Cactus and Succulent Society of America's 14th Annual Show, held June 29 through July 1 at the Los Angeles State and County Arboretum at Arcadia, California. SDCSS members and their winning entries are listed below:

#### Betty Athy:

- 2nd — *Lithops julii* and varieties
- 2nd — *Lithops lesliei* var. *venteri*
- 3rd — *Lithops turbiniformis* var. *marginata* "Red Form" (fasciate)
- 3rd — *Lithops turbiniformis* var. *susannae*
- 3rd — *Crassula mesembryanthemopsis*

#### Tom Hamecher:

- 2nd — *Copiapoa krainziana*
- 3rd — *Espostoa nana*

#### Dan Mahr:

- 1st — *Borzicactus madisonorum*
- 2nd — *Ipomoea holubii*

#### Ron Monroe:

- 1st — *Epiphyllanthus opuntiodes*
- Best Educational Display

#### Henry Varney:

- 1st — *Dudleya hassei*
- 1st — *Echeveria harmsii*
- 1st — *Tacitus bellus*
- 2nd — *Graptopetalum saxifragoides*
- 2nd — *Haworthia pygmaea*
- 2nd — *Crassula susannae*
- 2nd — *Sulcorebutia* collection
- 2nd — *Pilosocereus gaumeri*
- 2nd — *Mammillaria occidentalis*
- 3rd — *Notocactus arassigibbus*
- 3rd — *Rebutia krainziana*
- 3rd — *Aloe descoingsii*

A reminder that the following members have signed up to provide refreshments at the August meeting:

Helen Bowen, Rose D'Attilio, Lydia Evans, Joan Fleer, Trudy Hart, Eileen Smith, Veryl Snowhill, Ethel Standish, Ruth Stanton.

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Also a reminder that library books checked out in June are due at the August meeting.

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Deadline for the September issue is August 22nd.

San Diego Cactus & Succulent Society

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The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti, other succulents, and exotic plants. Meetings are held the second Saturday of each month at 1:30 pm in Room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held after the general meetings. Annual dues are \$6.00 per family. Single copies of *Espinas y Flores* are 50¢.

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