

# 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. 10.

October, 1979

## October Meeting

Saturday, October 13, 1979

1:30 pm

Casa del Prado, Room 101, Balboa Park

*South African Succulents*

by Walter Wisura

The October program will feature a slide show of South African plants in their native habitat. Mr. Wisura is Plant Propagator at the Rancho Santa Ana Botanic Garden in Claremont, California. He was born in Czechoslovakia and educated in Germany and has travelled extensively throughout Europe, Scandinavia, and Iceland. Prior to coming to Rancho Santa Ana, Walter worked at the Kirstenbosch Botanic Garden in South Africa which, like RSA, is devoted to the native flora of its area. Walter is an excellent speaker and this promises to be a most entertaining afternoon.

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## CACTUS-OF-THE-MONTH

### *Wilcoxia* Britton and Rose

by Jim Dice

*Wilcoxia* Britton and Rose is a genus of slender-stemmed, branched, vine-like cacti with relatively large, showy flowers and clusters of tuberous, dahlia-like roots (Fig. 2). *Wilcoxias* are native to arid regions from the extreme southwestern portion of Texas and of south-central Arizona to south-central Mexico (Puebla) and southern Baja California. The generic name commemorates Brig. Gen. Timothy E. Wilcox, who was "an enthusiastic student of plants for many years" (Britton and Rose, 1909). The most frequently heard common names include Dahlia Cactus and Pencil Cactus.

These inconspicuous, suffrutescent desert perennials are found, for the most part, at low elevations among desert scrub communities, generally hidden beneath such thorny shrubs as *Cercidium*, *Prosopis*, and the like, which they use for support. Occasionally they may be found in open areas, but there they rarely attain a height of over one to two feet and are sparingly branched (Weniger, n.d.).

The tubers serve as organs of water and food storage, normally a function of the above-ground portions of the stem in the Cactaceae. The presence of these underground tubers (water storage) and a fibrous wood system (Gibson, 1973) (for mechanical support) makes stem succulence of reduced importance among *wilcoxias*.

The large, diurnal (nocturnal in some spp.) flowers are borne on areoles of the upper portion of the plant and may be white to pink, orange-red, or rose-purple, depending upon the taxon (Figs 1 and 3).

The juicy, scarlet, pyriform fruits are indehiscent and bear spines. Benson (1969a) reports that the distribution of *W. striata* is determined primarily "by the movements and roosting habits of the species that feed on the fruits," as "nearly all the seeds are eaten by birds."

The earliest known collection of a member of this group was that made by Poselger, near Laredo, Texas, in 1850, and which he described in 1853 as *Cereus tuberosus* (Nom. rejic., later homonym - see Benson, 1969b), later described by Lemaire, in 1868, as *Echinocereus poselgeri*, and transferred by Britton and Rose (1909) to *Wilcoxia*.

At present, there are from seven to ten (depending upon the authority) recognized taxa in the genus. They include the following (with their reported flower color and distribution):

- Wilcoxia albiflora* Backeberg — white-light pink; Sonora.
- W. papillosa* Britton and Rose — scarlet; Sinaloa, Guerrero.
- W. poselgeri* (Lemaire) Britton and Rose — light purple with darker center; southernmost Texas, Coahuila to Nuevo Leon and Tamaulipas.



Fig. 1. Stems and tuberous root system of *Wilcoxia albiflora*.

Fig. 2. Flowering stem of *Wilcoxia australis* (Nom. nudum).

- W. schmollii* (Weingart) Backeberg — purplish pink; Querétaro.
- W. striata* (Brandege) Britton and Rose — purple(?), white; southwestern Arizona, Baja California, Sonora, northern Sinaloa.
- W. tamaulipensis* Werdermann — pale pink with darker mid-stripe; Tamaulipas.
- W. viperina* (Weber) Britton and Rose — red-orange; Puebla.
- W. viperina* var. *tomentosa* (Bravo) Bravo — purple-rose; Morelos (Las Estacas).
- W. zopiloteensis* Meyran — reddish-purple; Guerrero (Cañón del Zopilote).
- W. australis* nomen nudum (see Glass and Foster, 1969) — pink with purple; unknown.

Although wilcoxias appear to constitute a morphologically well-defined group, they have been treated taxonomically in a variety of manners since the time of Britton and Rose. Hunt (1967) includes *Wilcoxia* within the genus *Echinocereus* with which most authorities agree that it is most closely related. Benson (1969a) also takes a conservative approach, including *Wilcoxia* within *Cereus*. Sanchez-Mejorada (1973) revised *Neoevansia* Marshall, including within that

genus *W. striata* and *W. zopilotensis*, as well as *Peniocereus haackianus* Backeberg.

Wilcoxias may be grown outdoors in our climate, though from personal experience they appear to do best in a warm greenhouse. Although frequently grown on grafts, they are not difficult to grow on their own roots, but do require ample pot size to accommodate the clusters of tubers. As with most cacti, they require a loose, well-drained soil mix. Cuttings are easily rooted and will produce the typical tuberous root system. In addition new plants reportedly may be produced by dividing the tubers (Lamb and Lamb, 1975). Seeds (or plants) of most species are not readily available from commercial sources.



Fig. 3. Flowering stem of *Wilcoxia albiflora*.

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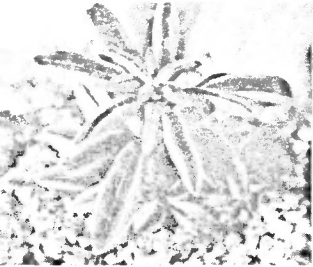
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## Succulent-of-the-Month

### "HERBS AND SPICES"

by Rick Latimer



*Peperomia asperula*

As with the Succulent-of-the-Month of last June, we have a grouping of lesser known or grown succulents belonging to unrelated plant families that have few succulent members united by a rather fanciful theme. The difference this month is that, in general, the plants are more obscure, some are definitely not grown, and some most SDCSS members have never seen, let alone even heard of. This will remain true, if no one brings them in this month!

First, to represent salt-the halophyte succulents. Our first family, the Chenopodiaceae, is related (order Centrospermae) to the Portulacaceae, Didiereaceae, Mesembryanthemaceae, and the Cactaceae. Species of the genus Salicornia are native to Europe, Africa, and N. America. Salicornia virginica, a local native, has segmented leafless stems, swelled with stored water. Plants are at various times submerged in salt water. Plants are able to selectively concentrate certain salts in their cell fluids so as to maintain a balance necessary for osmosis. In the same environment, other plants would soon wilt and die. Another halophyte in this family is Suaeda maritima. Mitchell Beauchamp once said anyone who grew these was crazy, so we will be waiting at the door with a large butterfly net! Another halophyte family is the Zygophyllaceae. Two succulent species are Auzea capensis and Zygophyllum fontanesii. Jacobsen recommends watering them with a 3% salt solution. Some of the Mesembs are halophytes, such as Mesembryanthemum crystallinum and the Hydrodeas, sea shore natives and Dactyloopsis digitata which grows in inland saline soils (dry lakes?) A member of the Compositae, Coulterella capitata is a shrub 1-3 feet high and 5 feet wide with flat but succulent grayish leaves. Although it is in the daisy family, the flower heads have only one flower (and forming a loose cluster), so that this plant is a primitive member of this family. Plants are native to southern Baja. Our last halophyte is Batis maritima, a salt marsh plant extending from southern California to tropical America. The leaves are like round fingers. The flowers are quite unspectacular and male and female flowers appear on different plants. Batis with two species is put in a family and order by itself like Welwitschia!

Now in Batidaceae, this last plant was originally allied with Schinus molle, the pepper-corn tree. (Another Schinus species is the Brazilian pepper tree.) This is a convenient link to the next spice-pepper. True pepper is Piper nigrum from Java. (Chili peppers are in the potato family.) The genus name Peperomia means pepper-like, and this genus is in the Piperaceae. Three Peruvian succulent species are P. asperula, dolabriformis, and columella. The succulent leaves all have "windows". Pep-



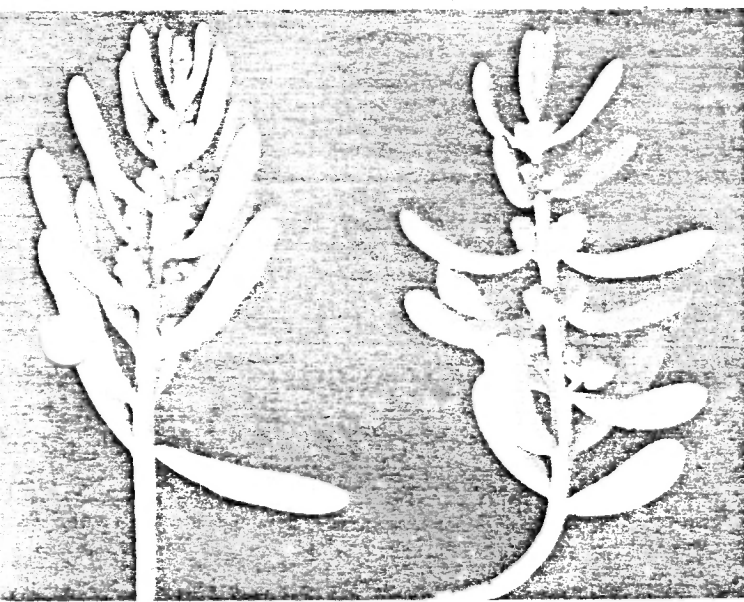
*Coleus* sp. #2 smells like Vick's salve when rubbed!

eromias are strictly foliar plants. Two well-known house plants are *P. caperata* and *P. sandersii*.

Next, the Mint family\* which contains some essentials: mint (*Mentha*), lavender (*Lavandula*), basil (*Ocimum*), catnip (*Napeta*), oregano (*Origanum*), savory (*Satureja*), sage (*Salvia*), rosemary (*Rosmarinus*), and thyme (*Thymus*). (Sorry, parsley is in the carrot family.) Genera with succulent members are *Coleus* (*pentheri*, #'s 1, 2, & 3) and *Plectranthus nummularius*, the "Creeping Charlie".

*Pilea globosa* is another Peruvian succulent with windowed leaves. The difference with this plant is that the upper surface of the leaves are the opaque part (purple), whereas the bottom surface of the leaves has the window! The assimilation of light occurs when sunlight reflects off the ground stones and thus hits the under part of the leaves. I only know this plant from pictures. It is a member of the Urticaceae and is distantly related to elm trees and the genus *Dorstenia*.

The family that we will end this month with is the Rubiaceae.



Some famous members are *Gardenia*, *Coffea arabica* (coffee), and *Cinchona officinalis* (quinine).

There are two succulent genera in this family, which contain among the wierdest (and yet among the most obscure) succulent plants.

*Hydnophytum formicarium* from New Guinea and *Myrmecodia echinata*

from Malaya are both not only caudiciforms, but also epiphytes!

The latter plant has a spiny and tuberculate caudex up to 10 cm.

thick which is traversed by peculiar hollows which are inhabited by biting ants. The species name of the former, suggests similar housing arrangements. It remains to be seen if these two plants are yet grown in this county.

Flowering branches of *Batis maritima*, pistillate at left, staminate at right

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## Pests of Succulent Plants

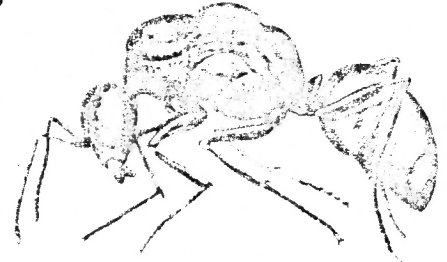
Part VIII. Ants.

Dr. Ronald E. Monroe

Ants are seldom considered as a direct pest of succulent plants; however, there are occasions when they can be a direct problem or, more commonly, as an indirect pest by encouraging and/or shielding other more serious insect pests.

Systematics—There are several species of ants (Hymenoptera: Formicidae) that may be a problem in nursery greenhouses or succulent plant collections (Metcalf *et al.*, 1951; Little, 1972). The most common of these is the Argentine ant (*Iridomyrmex humilis*) of the southern states and California, the odorous house ant (*Tapinoma sessile*) which is widely distributed, the thief ant (*Solenopsis molesta*) which is widely distributed, the cornfield ant (*Lasius niger alienus* v. *americanus*) also widely distributed, the pavement ant (*Tetramorium caespitum*) of the Atlantic Seaboard and the larger yellow ant (*Lasius interjectus*) which is widely distributed. The red harvester ant (*Pogonomyrmex barbatus*) of the Southwest has been known to cause problems with plant seed, but it is not a common pest.

Plant damage—Ants seldom ever attack succulent plants *per se*, but they do freely (the Argentine ant, the pavement ant, the red harvester ant do this more commonly) harvest their seed which is a serious concern of nurserymen interested in propagation and of collectors who are trying to propagate rare, new species. The most common means of plant damage, however, is via subtle, indirect means in which they "tend" other insect pests. These other pests are mainly aphids, some scale insects and mealybugs which secrete a sweet-tasting substance called "honeydew". Thus, many species of ants are found transporting and protecting such pests for which in return they can feed on the sweet, sugary secretions. Therefore, the ants may not only distribute and transport such pests but they possibly protect them from their own natural enemies as well.



Biology—The biology of any single species of ant will certainly vary from that of another species. They are all, however, social insects that live in colonies that usually comprise several hundred to many thousand individuals of which some are workers and some are wingless females or queens. The queens lay eggs which hatch into white, grub-like immature forms and after several months are normally transposed into pupae. These pupae later moult into more workers which forage for food, protect the colony, tend the queen, the eggs and the larvae or into winged queens and kings. At certain times of the year these reproductive forms swarm and leave the colony and after mating the new queen(s) begins a *de novo* colony.

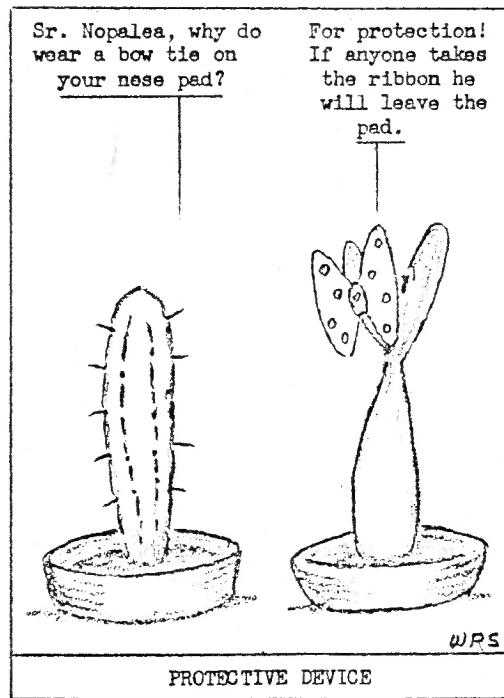
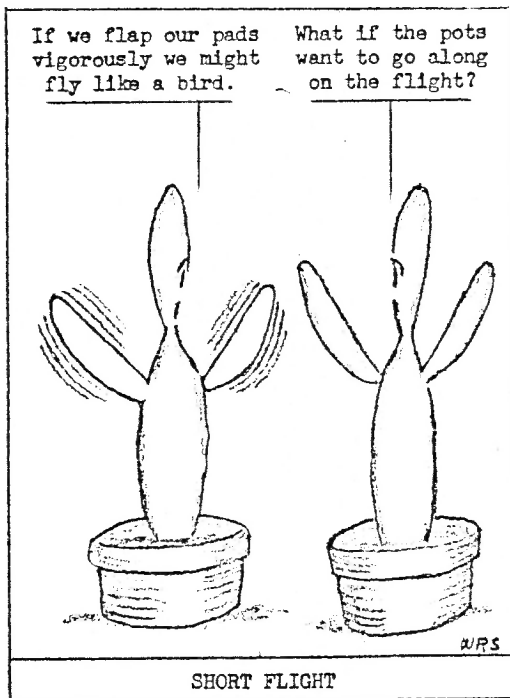


Control—Although there are several insecticide sprays that will certainly control ants (malathion and Sevin sprayed on the ants for a direct kill or chlordane or diazinon sprayed on the benches or greenhouse walls to kill foraging ants before they reach the plants) the most economical and easy approach is to use bait stations which attract foraging ants and allow the ants to remove the attractant/poison and take it to the colony where the poison will be consumed by many or all the colony and solve a problem before it gets started. Two such baits that are available are housed in metal-enclosed stations for consumer protection (Antrol Rand Tat<sup>R</sup>).

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by Marcia Monroe

Leaving Italy at the age of three, Tony migrated to the United States, living in Hoboken, New Jersey, for a short period of time and then spending the major part of his life in Manhattan, New York, where he took evening art courses. Ten years ago he moved to San Diego with his wife, Rose. They have a son, daughter and several grandchildren.

Tony is a descriptive zoologist (taxonomist) in malacology (the study of mollusks) for the Natural History Museum of San Diego. He has written twenty-five scientific papers and described numerous new species in the family Muricidae. With the late George Radwin, he co-authored the book Murex Shells of the World and illustrated and wrote the Seashore Life Coloring Book.

Having an intensive interest in science, as well as art, Tony has collected sea shells, coral, butterflies, beetles, cacti and succulents, and enjoys reading books. He is a specialist in fine art work and has illustrated two succulents (*Ceropegia stapeliiformis* and *Jatropha podagrica*) for the cover of the Cactus and Succulent Journal of America. In addition, he drew the succulent *Trichodiadema bulbosum* for the overlay of Grigsby's Cactus Garden catalogue. Tony has had a one-man show at the Kenyon Gallery in Chicago, and in his spare time gives art lessons.

Tony is a member of the Western Society of Malacologists, San Diego Shell Club, Bromeliad Society of San Diego, Cactus and Succulent Society of America, and a charter member of the Epiphyllum Society of San Diego. He has been a member of our Society since 1969 and has served on the education committee.

Tony has a special liking for the succulents of South Africa and Madagascar, which include: monadeniums, pachypodiums, euphorbias, alluaudias, and cotyledons. He is interested in all cacti from North and South America. He has exhibited his plants in our Annual Show, as well as at the Wild Animal Park, winning many ribbons. His wife, Rose, has an extensive collection of bromeliads, which she has shown at the Casa del Prado in San Diego. Selecting just the right location for each plant at their home, the D'Attilio's have displayed their plantings in a very artistic way.

Showing a keen interest in nature and how it has evolved, Tony collects cacti and succulents, sea shells, etc., and noticing that with each change that takes place in nature, comes an expression of their vast diversity.



## DUES INCREASE

The Board of Directors recently voted to increase the cost of an annual membership (single or family) from \$6.00 to \$7.00. This increase went into effect October 1 for new memberships and will apply to all renewals for 1980. This step is regrettable, but necessary in light of price increases in nearly everything imaginable. In the first eight months of this year alone, printing costs increased over 40%. An increase is necessary if the Society is to maintain its present level of activities and services.



## NEW PUBLICATION

The Boyce Thompson Southwestern Arboretum of Superior, Arizona has announced the publication of its new journal, *Desert Plants*. The first issue (August, 1979) is now available. This quarterly is published by the Arboretum and the University of Arizona. Charter subscriptions are available for the first two volumes for \$10. Available from the Arboretum, Box AB, Superior, AZ 85673.



## 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:

October 20-21 — San Diego Co. Orchid Society Fall "mini" Show  
November 4-5 — San Diego Tropical Fish & Koi Pond Show



## GREEN THUMB SHOW

The San Diego Wild Animal Park will host the following Green Thumb Show in the upcoming weeks:

November 10-11 — Flower and Harvest Festival



NOTES & NEWS

Winners of the "Bragging Plant" competition for September were:

- 1st: Madelyn Lee -- *Othonna clavifolia*  
2nd: Helen Hegyi -- *Aeonium tabulaeforme*  
3rd: Mike Burkhardt -- *Bursera microphylla*
- 

At last month's Board of Directors meeting a nominating committee was appointed for the upcoming election of board members. Members of the nominating committee are: Joan Johnson, Carl McLeod, Marcia Monroe, and Tony D'Attilio. If you have a recommendation, or would like to be considered for nomination, please contact one of the committee members. The election will be held at the December meeting.

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In other action, the Board voted, on the recommendation of Librarian Betty Athy, to deny library check-out privileges to persons with overdue books of two months or more.

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The most recent addition to our library is:

*Cacti* by Wilhelm Barthlott

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September's V.I.P. Table featured an excellent display of cacti by Frank Thrombley, including some gorgeous Mammillarias. October's table promises to be an equally fascinating display of cacti and succulents by Tony D'Attilio.

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

Melba Batchelor, Evelyn Chatham, Anna Cornett, G.F. Garrelts, Judy Hannula, Frances Johnson, Nan Kelsch, Ruth Nelson, Verna Pasek, Nancy Roth, and Harriet Sopp.

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In the July issue, while thanking those who helped with the Annual Show and Plant Sale, I overlooked a member who certainly deserved mention. I hope Wilma Johnson will forgive the oversight.

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Deadline for the November issue is October 25th.

San Diego Cactus & Succulent Society

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Quail Botanical Gardens - Audrey Johnson  
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S.D. Floral Association - Verna Pasek

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¢.

Jim Dice  
6066 Portobelo Court  
San Diego, CA 92124  
Address Correction Requested