

# Espinas y Flores

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

Volume XXIII, Number 9

September 10, 1988

## SEPTEMBER MEETING

Saturday September 10, 1988

1:30 P.M.

Casa Del Prado, Room 101, Balboa Park

## PROGRAM

Exploring South African Plants  
with Tina Ekewilders

San Diego Union writer and KPBS Garden Broadcaster Tina Ekewilders explored Southern African indigenous plants during a two week trip last year in November, preparing herself for a group spring garden tour in September '89. Her narrated slide presentation will show plants from Kirstenbosch National Botanical Garden in Cape Town, The Durban Botanical Garden and plants from Pretoria and Johannesburg region.

Because of a previous commitment, the program will begin at 1:30.

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DEADLINE FOR THE OCTOBER ISSUE ---- September 24

Thanks to Dana Adams for getting out last months issue of the paper. I  
appreciate her efforts very much. Mary

BURSERA AND PACHYCORMUS

by Dorothy Dunn

"Elephant Trees"! - This is the intriguing and evocative common name usually applied to this group of bulky, even grotesque and "other-worldly"-looking plants. And, when seen in their natural habitats, surrounded by equally weird and unbelievable botanical wonders and geological upheavals, it is not difficult to perceive them as some prehistoric, lumbering beasts masquerading as trees. With their huge, swollen trunks and limbs and peeling, papery bark hanging in shreds, it is easy to visualize them as belonging to another time and place.

But - enough of flights of fancy, and on to the cold, hard, (and probably boring) facts. Other than their shared common name "Elephant Tree", Burseras and Pachycormus bear no close relationship to each other. Bursera is the type genus of the Burseraceae, or Torchwood family, which encompasses 20 genera and anywhere from 300 to 600 species (depending on which book you are reading), all native to tropical to temperate regions of both the Old and New Worlds. The genus Bursera contains about 40 species, only a few of which could be considered truly succulent, and was named for Joachim Burser, a 17th-century German botanist. Burseras (native only to the New World) are closely-related to two Old World genera renowned since Biblical times - Commiphora, the source of Myrrh, and two species of Boswellia, from which Frankincense is derived. All species of Bursera contain a somewhat volatile oil or resin, and all parts of the plants - wood, bark, and leaves - are very aromatic. The flowers are usually creamy-white and quite small and inconspicuous. The fruit is a fleshy one-seeded drupe, encased in a fleshy aril (seed covering) which may be yellowish, pinkish, or bright orange or red. In some species, various parts of the plants were reputed to have medicinal properties. For example, an infusion of the bark or gum of Bursera microphylla was a popular native remedy for venereal diseases, and the gum of B. odorata was used to cure scorpion stings, insect bites, and other wounds. It was also known to have drastic purgative properties. The bark was used in tanning hides, and varnish is obtained from several of the Mexican species.

Six species of Bursera occur in Baja California, and one of those, B. microphylla, can be found as far north as Anza-Borrego State Park in Southern California. However, the "grove" I encountered there consisted of about five stunted, straggling, dessicated examples bearing little resemblance to the magnificent specimens to be found in Baja California's Central Desert.

In contrast to the moderately plentiful Burseras, the genus Pachycormus is monotypic - represented by a single species, P.

discolor. Two varieties are also sometimes mentioned - var. pubescens and var. veatchii. It is endemic to the peninsula of Baja California, the type species being described from Magdalena Bay. Pachycormus belongs to the Anacardiaceae, or Cashew family, which also includes the Sumacs, Pistachios, Mangoes, Peppercorn Tree, and Poison Ivy. It was first described in 1844 as a species of Schinus. The generic name Pachycormus means "thick - or stout - stump or log", and the specific name discolor refers to the plants' tendency to have two rather distinct colors of flowers. The most frequently-encountered native name is "Torote Blanco", meaning "Big White Bull".

Pachycormus is the only succulent genus in the Anacardiaceae, which consists of 50 genera and about 400 species. As in the Burseraceae, all species are limited to the tropical and warm-temperate regions of both the Old and New Worlds. One closely-related Madagascan plant, Operculicaria decaryi, is sometimes considered to be marginally succulent.

Pachycormus trees may reach a height of 15 to 30 feet, with a trunk diameter of at least three feet. The largest tree on record, with a height of 30 feet and a trunk diameter of 30 inches, is located in the lava flows south of Las Tres Virgenes volcanoes in southern Baja California. They occur at altitudes of up to 1500 feet and have a definite preference for rocky outcroppings and hillsides. The wood of Pachycormus is soft, succulent, and pithy, and contains a thick, resinous sap. The compound, medium-green leaves are produced in the early spring (if there has been sufficient rain) and are followed by the fragrant pink blooms. In late June and July large portions of the Baja landscape are literally suffused and enveloped in what appear to be delicate pink clouds - an almost paradoxical contrast to the arid bleakness of some of the surrounding terrain during these hot summer months. The seed is utricle-like, that is, one-seeded with a flat wall.

In the wild both Bursera and Pachycormus are plagued by parasitic growths. In Baja California, from Bahia de los Angeles southwards, B. microphylla is host to the very colorful Phrygilanthus sonorae, the most spectacular mistletoe in the Peninsula. It has brilliant red flowers and often forms large conspicuous clumps which appear to be an integral part of the Bursera branches. However, it does not seem to inflict any serious damage on the host plants. This is not the case with Cuscuta veatchii (Dodder), which attacks Pachycormus discolor. In many areas this very invasive and deadly parasite is gradually decimating whole populations of these magnificent trees.

Culture of Burseras and Pachycormus in Southern California is relatively easy. They grow readily from seed, and this is the usual method of propagation. Seedlings of most species grow moderately fast and quickly form little fat bases or swollen trunks. They can be grown outside in full sun and in warm weather, when

they are in leaf and growing vigorously, they like lots of water. Principal pests seem to be aphids, white flies, and, occasionally, mealy bugs. All of these seem to be less of a problem if the plants are grown outside - they really do not seem too suited to greenhouse culture, and growing them outdoors encourages stronger, more compact growth.

I rather like Erle Stanley Gardner's description of his first encounters with the "Elephant Trees" in Baja California: - "The Elephant Tree is a strange-looking object, having bark that is in various places reddish, yellow, and pink. It has smooth, multiple trunks writhing and twisting in a peculiar symmetry of design. It seems ideally suited to the country. You wouldn't expect to see it elsewhere and you wouldn't want to. It is perfect where it is. To take it anywhere else would be to spoil it."

Literature consulted:

- Coyle, Jeanette, and Roberts, Norman C. A Field Guide to the Common and Interesting Plants of Baja California
- Heywood, V.H. (Consultant Editor) Flowering Plants of the World, pp. 196-198
- Standley, Paul C. Trees and Shrubs of Mexico, vol. 1
- Shreve, Forrest, and Wiggins, Ira L. Vegetation and Flora of the Sonoran Desert
- Wiggins, Ira L. Flora of Baja California
- Cactus and Succulent Society of America Journals - various issues

(Note: Please bring any plants pertaining to this category, as I only have four or five. I particularly need a good Bursera microphylla. Thank you! D.D.)



## GYMNOCALYCIUM : Cactus of the Month

by Shirley Berry

There are many reasons to include Gymnos in your collection of succulent plants.... they are both beautiful and easy to grow! In this genus there is a surprising diversity of plant color, body form, and spination which can be seen when the different species are grouped together as a collection.

Gymnocalycium is one of the largest genera of South American plants, with only Opuntias and Rhipsalis exceeding the number of species. They are mostly single stemmed, globular, strongly spined plants which flower freely in a great variety of flower colors. The body form of some species is very flat (*G. ragonessii*) and some are columnar (*G. schickendantzii*).

The first Gymnocalycium known to European botanists was *G. denudatum*, described by Link and Otto in 1828 under the name *Echinocactus denudatus*. The name Gymnocalycium derived from the Greek words meaning naked calyx or bud. This name was given about 1848 but then lumped back into *Echinocactus* until Britton and Rose separated Gymnocalycium from *Echinocactus* and published it as a separate genus in 1922.

Gymnos are endemic to a wide geographical distribution in South America: Bolivia, Paraguay, Brazil, Uruguay, and Argentina, and found as far south as Patagonia.

Characteristics of this genus are their globular shape and relatively few ribs which are divided into blunt tubercles, often chin-like in shape. There is a horizontal cleft seen below the tubercles in nearly all species. Areoles are on the upper side of the tubercles and may carry 3-5 spines, depending upon the species. Spines vary in their thickness, curvature, and color. Some Gymnos have large tap roots (*G. andreae*), others have shallow root systems.

Flower buds usually appear at the top of the plant on the upper side of the areoles. The buds are smooth with overlapping scales, having no spines nor hair. This is the uniform diagnostic characteristic of the entire genus. The fruits are similarly scaly, often with an attractive blue bloom. Flowers range from less than an inch to three inches, often lasting from 5 to 7 days.

Seed shape and size are used by botanists for classifying species in this genus. The Czech collector, Fric, was the first one in the early 30's to divide the genus into 5 groups, according to prominent seed characteristics. Seeds are the most stable characteristic, whereas external features are subject to great variation. These seed groups show close geographical connection, and supposedly other similarities.



These five seed groups which follow are considered sub-genera of *Gymnocalycium*:

1. *Gymnocalycium* : The first sub-genus is called *Gymnocalycium* and have seeds that are large, round, and black. The ripe fruits are greenish. Species include *G. denudatum*, *G. fleischerianum*, *G. schroederianum*, etc.
2. *Ovatiseminum* : In this second sub-genus the seeds are black and oval and the fruits are greyish or bluish. This group includes *G. gibbosum*, *G. baldianum*, *G. bruchii*, etc.
3. *Microseminum*: This third group includes a very wide range of plants all having very small seed. The ripe fruits may be green, blue, or grey. This group includes the giant *Gymno*, *G. saglione*, *G. calachorum*, *G. multiflorum*, *G. spegazzini*, etc.
4. *Trichomoseminum*: The seeds are brown, small, shiny, and shell shaped. This group contains *G. ronesii*, *G. stellatum*, *G. quelianum*, etc. The fruits are blue-grey.
5. *Muscoseminum*: In this fifth group the seeds are small, light brown, and spherical. The fruits are usually red. There is a strong development of skin pigmentation among this group, many showing red or red-brown patterning. This group includes some of the largest species of *Gymnos* (*G. schickendantzii*).

On the cactus-of-the-month table you will see species divided into these five classifications.

*Gymnos* usually are found growing in grasslands, therefore they are best grown in a half shaded position. They need good light but protection from the hottest sun during the summer months.

These plants are extremely sensitive to lime or alkaline soils. Some growers add a part of damp peat and/or leaf mold to increase the acidity. Since bone meal raises the PH level of the soil, it might be better to use superphosphate for the phosphorus needs of the potting mix. Also, you will find it beneficial to use a high potash fertilizer such as used for tomatoes, in spring and summer. Plants can be watered generously when in growth from late March to October.

*Gymnos* have relatively thick, tough skins and therefore are resistant to attacks of sucking insects and mites to a great degree. Root mealybug may infect *Gymnos* and should be combatted with a systemic, such as Cygon. This genus is much more pest resistant than *Rebutias*, *Lobivias*, or *Coryphanthas*.

Paraguayan species such as *G. mihanovichii*, *G. friedrichii*, *G. damsii*, and *G. anisitsii* enjoy warm, moist climate during part of the year followed by dry heat. However, many growers feel they should never be allowed to dry out completely.

If anyone has a Japanese red mutation of *G. mihanovichii*, please do bring it in, along with any other *Gymnos* you would like to display.

## Gymnocalycium Resources

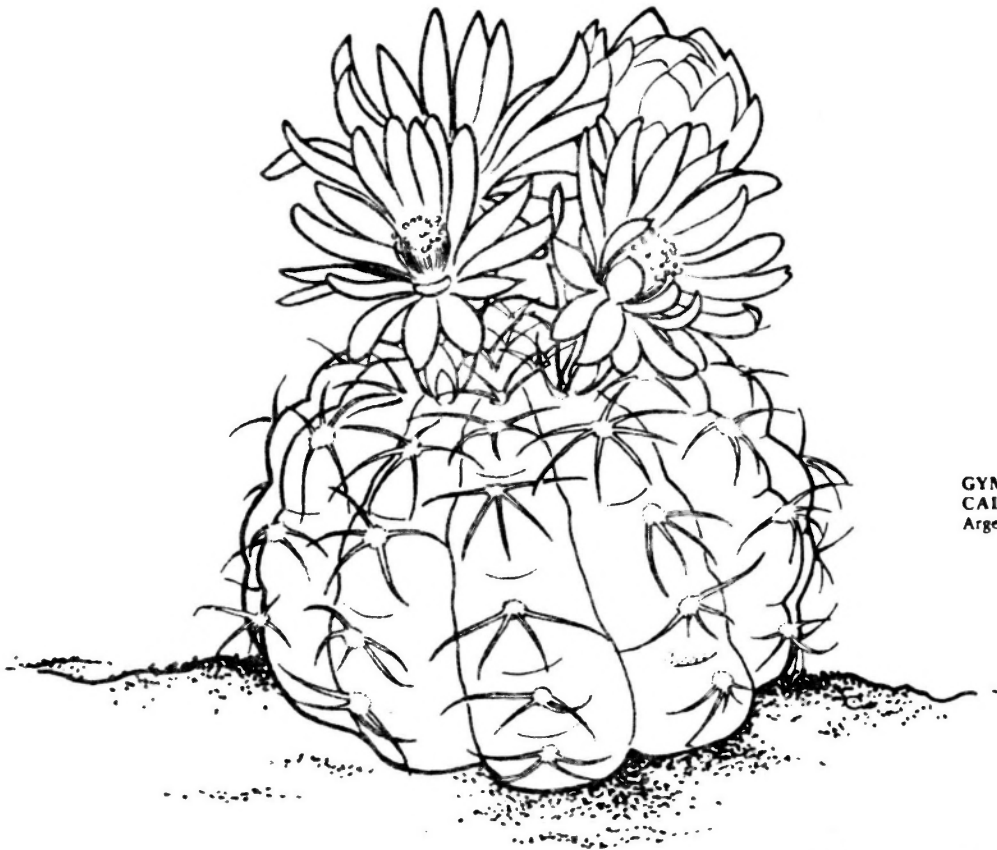
"Cacti and Succulents", Gunter Anderson, 1984, A.C. Block Ltd., London, England

"Cactus and Succulent Journal", Vol. 48 and 49, 1976, 1977, Abbey Garden Press, Santa Barbara, CA

"The Encyclopedia of Cacti", Cullman, Gotz, Groner, Alphabooks, Dorset, England

"Instant Guide to Healthy Cacti", John Pilbeam, 1984, Time Books, Random House, Inc., New York

"Gymnocalyciums, a Guide for Growers", E.W. Putnam, 1978, National Cactus and Succulent Society, Oxford, England



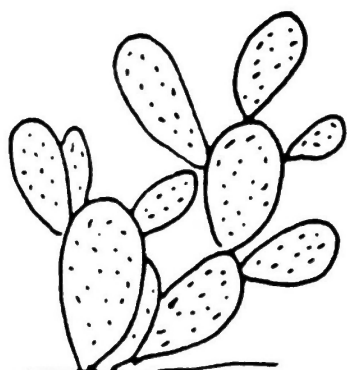
GYMNOCALYCIUM VENTURIANUM or GYMNO-CALYCIUM BALDIANUM (Rainbow chin cactus). Argentina and Uruguay.

## Show Schedule

Sept. 17 & 18	San Diego Bromeliad Society 14th Show	Sat: 1pm-4:30pm	Sun: 11am-4:30pm
Sept. 24 & 25	San Diego Bonsai Club Fall Show	Sat: 10am-5:00pm	Sun: 10am-5:00pm
Oct. 1 & 2	Balboa Park African Violet Soc. Fall Show	Sat: 10am-4:00pm	Sun: 10am-4:00pm
Oct. 15 & 16	San Diego Co. Orchid Soc. Fall "Mini" Show	Sat: Noon-5:00pm	Sun: 10am-4:30pm
Nov. 5 & 6	San Diego Tropical Fish Soc. 18th Show	Sat: Noon-6:00pm	Sun: 9am-4:30pm
Nov. 27	Sumi-e Painting & Ikebana 13th An. Show		Sun: 11am-4:00pm
Dec. 2-3-4	San Diego Floral Assoc. Christmas Show (Christmas on the Prado)	Fri: 5pm-9:00pm Sat: 11am-9:00pm	Sun: 11am-4:00pm

NEWS NEWS NEWS

AUGUST BRAGGING PLANT WINNERS.....



- 1st Place - Beverly Kirkegaard for her  
Pseudolithos migiurtinus
- 2nd Place -Chloe Bajwa for her Coleus sp.
- 3rd Place - Carl McLeod for his Haworthia truncata

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IMPORTANT ANNOUNCEMENT!

Joey Betzler will be resigning as our Plant and Supplies Table Chairman at the end of the year. As most of you know, Joey will be visiting southern Africa this spring to pursue wild and elusive stapeliads.

Joey's departure means we will need to find another chairperson. The board will consult with the new chairperson to determine if we want to continue our present arrangement of selling on consignment, or if we want the society to purchase and maintain an inventory of plants to be offered for sale each month. Anyone interested in this position should volunteer early so they will be able to get some on-the-job training before Joey departs.

I would also like to thank Joey for his fine efforts as Plant and Supplies Chairman over the past three years. Good luck in Africa.

Chuck Adams

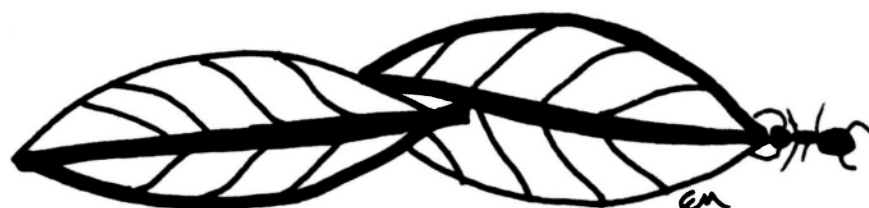
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Those who have signed up to bring refreshments for the September Meeting:

Sarah Jervey	Cathy & Sandy Frost	Mike Cullen
Marian Thrombley	Dana Adams	Chloe Bajwa

As you can see, we have a very short list, so if you can bring something it will be appreciated.

Thanks





# SAN DIEGO CACTUS & SUCCULENT SOCIETY

## OFFICERS

President - Martin Mooney 97 K Street, Chula Vista, 92011	427-6796
Vice President - Bud Aubuchon 1058 5th Avenue, Chula Vista, 92011	427-3388
Secretary - Beverly Kirkegaard 10009 Bonnie Vista, La Mesa, 92041	463-2801
Treasurer - Susan Shepherd 4537 Cochise Way, San Diego, 92117	274-4291
Immediate Past President - Dr. Leroy Phelps 4094 36th Street, San Diego, 92104	280-9690

## BOARD OF DIRECTORS

Shirley Berry, Dorothy Dunn, Cathy Frost  
John Pasek, Rudy Lime, Chuck Adams

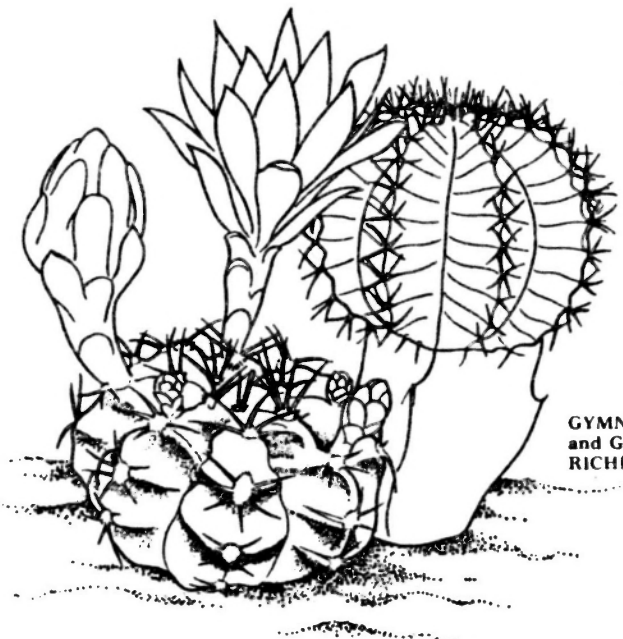
## COMMITTEES

Auditor: James Berry  
Bragging Table: Madelyn Lee  
CSSA Affiliate Rep.: Cathy & Sandy Frost  
Education: Cacti - Phyllis Flechsig  
Succulents - Dorothy Dunn  
Historian: Rick Latimer  
Library: Rick Latimer  
Membership: Susan Shepherd  
Picnic: Martin L. Mooney  
Plant Exchange Table: Mmes. Lemrow & Larberg  
Plants & Supplies Table: Joey Betzler  
Show: Rick Latimer

Publications: Mary Aubuchon / 427-3388  
Reception: Perlso Lewis and Ethel Standish  
Regalement: Diane and Bill Crowley  
Representatives:  
Balboa Park Desert Garden - John Pasek  
Quail Botanical Garden - Phyllis Flechsig  
S.D. Botanical Garden Foundation - Kathy Van Arum  
S.D. Floral Association - Verna Pasek  
Liaison & Publicity: Cathy & Sandy Frost  
Program: Joan Johnson  
Jim Dice  
Joe Clements

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 p.m. in Room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held after the general meetings. Annual dues are \$8.00 per single member per year, \$2.00 for each additional member of a household within a family. Single copies of *Espinasy Flores* are 60¢.

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GYMNOCALYCIUM MIHANOVICHII (*Plaid chin cactus*)  
and GYMNOCALYCIUM MIHANOVICHII V. FRIED-  
RICHIAE "HIBOTAN" (*Red cap*). Paraguay.

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