

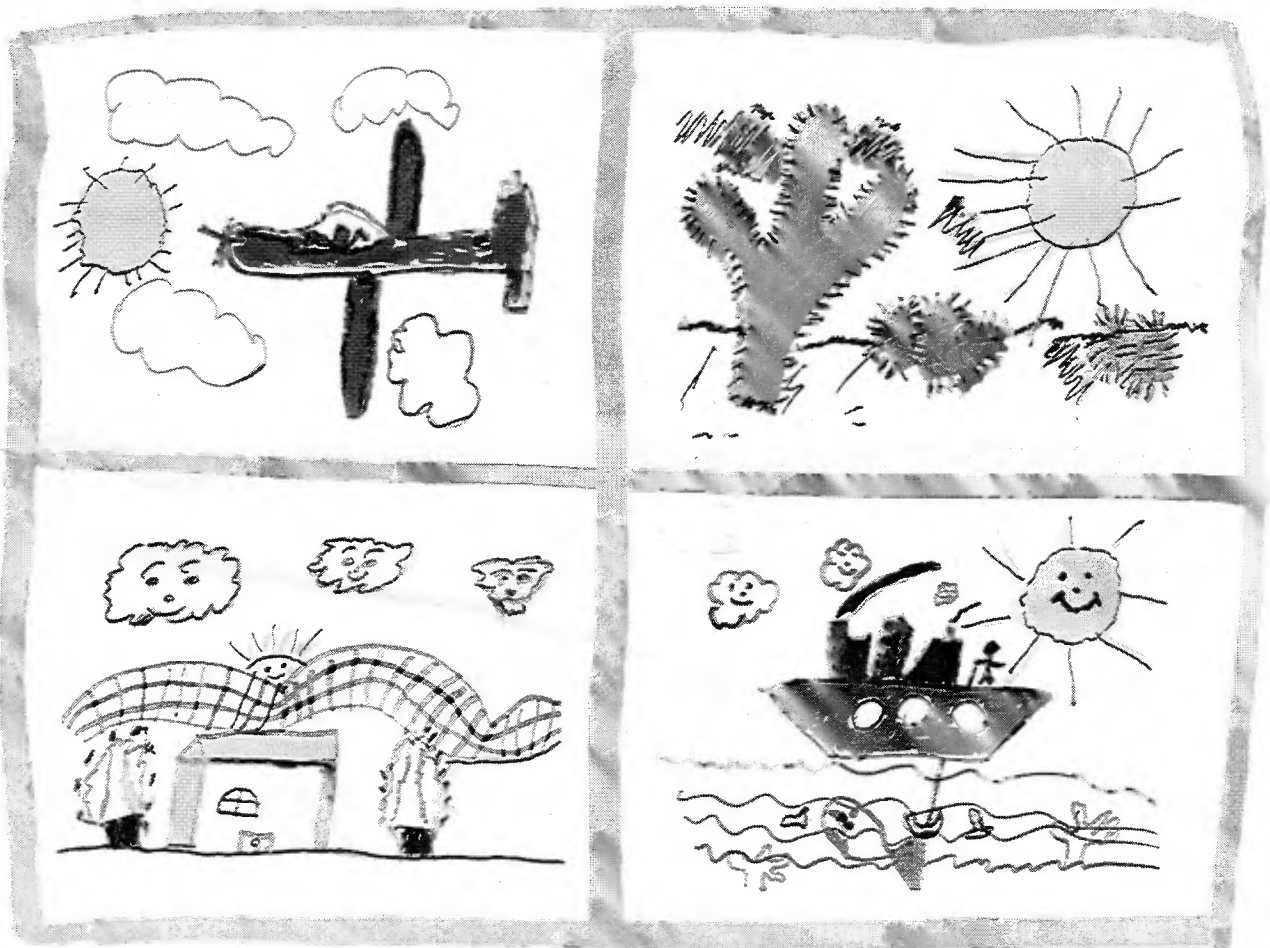
Espinas y Flores

MAMMILLARIA THORNERI

NEWSLETTER OF THE SAN DIEGO CACTUS & SUCCULENT SOCIETY

Affiliate of the Cactus and Succulent Society of America, Inc.

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*During our November visit to Baja California we had occasion to make a contribution to the **Flying Samaritans**, an international organization of volunteer Doctors, Nurses, Pilots, Translators, and Helpers that provides free health care to people in remote places in Baja. To some people, this is the only time in their life they will have medical or dental care. The artwork on this card is a product of the imagination of the children of the San Telmo region of Baja California, the location of one the Flying Samaritan's clinics which is visited on a monthly basis by the members of the Foothill Chapter of the Flying Samaritans.*

January Program: Gary Lyons Survey of the Huntington Collection

Exactly ten years ago — to the month, Gary Lyons presented us with a program: "Development of the Ethel M. Botanical Garden and Cactus Display in Las Vegas, Nevada". This was Nevada's first botanical garden and Gary was the designer, consultant, and director of this accomplishment from 1980-1983. Previous to that he was in charge of the 12 acre Desert Garden at the Huntington for 16 years. At the time that Gary gave his last program to the SDC&SS (*January 1987*) he worked for the Horticultural Department of the Los Angeles City Zoo. Gary has recently returned to the Huntington Botanical Gardens where he is in charge of surveying the gardens and analyzing fifty years of horticultural acquisitions.

Most of us are familiar with the plants at the Huntington Botanical Gardens, however, it has been fifty years since a survey of this scope has been accomplished. Some topics to be covered include the inventory, taxonomic updates, plant status, historical notes and the permanent tagging. The importance of maintaining large botanical collections cannot be understated. If habitat loss and over-collection continues in botanically rich areas, large and small collections may be all that remains of many rare species.

Please note: The December 1996 issue of *Espinas y Flores* was erroneously printed with two blank pages at the end. Kinkos has most generously re-printed fifty issues. If you keep or archive *Espinas y Flores*, there will be copies of the corrected edition available at the January meeting. Or if you wish a corrected issue sent — please contact the editors.

Please send your letters, artwork, poetry, Cactus or Succulent-of-the-Month articles, puzzles, comments, or criticisms, etc. to:

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PUBLICATION DEADLINE IS THE 20th of the prior month.

Espinas y Flores is the newsletter for the San Diego Cactus & Succulent Society, a non-profit corporation. It is published monthly with the exception of a combined May-June issue (11 issues per year). All material in the *Espinas y Flores* may be reprinted by non-profit organizations (unless such permission is expressly denied in a note accompanying the material) provided that proper credit is given to the *SDC&SS Espinas y Flores* and the author — and that one copy of the publication containing the reprinted material be sent to the editors. Reproduction in whole or part by any other organization or publication without the permission of the editors is prohibited.



SDC&SS Members seen in Baja California over Thanksgiving week: **Jim & Roberta Hanna, Chuck Everson, Jerry Williams, Lem & Pat Higgs, Lynn & LoWilla Wilson, Duke Benadom, Brigette & Charlie Williams, Carol & Joe Wujcik, Woody & Kathy Minnich, and Michael & Joyce Buckner.** Catavina is such a wonderful magic beautiful place — if it were in the United States, it would probably be as snooty and exclusive as Carefree, Taos, or Malibu! The Boojums are awesome, although, I personally can find no plant that surpasses the beauty of *Pachycormus discolor* in its native habitat! The sad part: garbage, especially those ugly plastic bags stuck on bushes everywhere — as far as the eye could see.

Our **February 8th** SDC&SS meeting will feature a program on **The Genus *Adenium*** with **Mark Dimmitt** of the Arizona-Sonora Desert Museum. There is an article by Mark in the Nov-Dec 1996 CSSA Journal which you may wish to read prior to seeing his presentation. Mark states, "My goals for adeniums are a sturdy growth-form with a large caudex or trunk, vigor manifested as fast growth and disease resistance, such intense flower colors as blood-red and sharply contrasting red/white picotees, and long blooming season. Significant progress has been realized in only three generations." Sounds like a good program.

The Genus *Ferocactus* by **George Lindsay** (*his Ph.D. thesis*) which has been out-of-print for years and years is finally being re-published. This hardbound limited edition is coming to fruition through the guidance of **Stan Yalof**. The 300 editions of this wonderful book with updated photographs and articles will be available at **Rainbow Gardens** and **Myron Kimmach, Books on Succulents**. This is a not-to-be-missed opportunity for you *Ferocactus* fanciers, who isn't? . . .

We have three members under the "Old Age Ain't for Sissys" heading:

We understand that **Bob Taylor** took a fall just before Christmas and apparently cracked a hip. You may write or visit — please, if you have any kind of inclination to visit — he would absolutely love it!!! Bob presently resides in Room #218 @ the Country Hills Rehab Center, 1580 Broadway, El Cajon, CA 92021. Bob, we hope you are doing well. And we hope they'll let you out to attend meetings!!!!

We are sorry to hear that **Frank Thrombley** has been under the weather recently. Apparently he suffered a fall while taking a walk up a hill near his home around Thanksgiving — he pulled his Achilles tendon away from the bone and is presently in a cast. Now both he and Marianne are unable to get around. Thank goodness for Meals on Wheels. We missed you at the holiday banquet. And we miss your wonderful articles in *Espinas y Flores*, Frank. If you are friends with **Frank and Marianne Thrombley** — why not pay them a little visit, write them a letter, take them for a ride, or make a telephone call? They need and deserve the rapport.

And on the mend: **Herman Schwartz MD** (Strawberry Press) is rehabilitating nicely from an accident that occurred almost a year ago. Herman gave us the details of accident which up to that time had been only rumor and innuendo. The Schwartzs were having a new roof put on their home, as the contractors were working Herman was in the house — a large wooden beam dropped, hitting him in the head. Herman says he woke up in the hospital about three hours later with a raging lump on his head and a broken hip. After many months of physical therapy, etc. he is finally doing much better and managing to get around again.

Herman relates that the long-awaited ***Euphorbia #10*** shall, at last, be out this Spring (March-April). The next books to be published will be ***Madagascar II*** by **Rauh** and ***A History of Succulents*** by **Gordon Rowley**. We wish Herman good health and success in his endeavors and look forward to reading all three of these upcoming publications. Strawberry Press please keep us posted.

A not-so-cryptic message to Eastbound, Washington: today's high 62°, today's low 60° — come home!

Dear Fellow SDC&SS Members:

Thank you for electing me as your president and entrusting us, the new SDC&SS 1997-1998 Officers, to make decisions that will shape the club's future. We have an exciting year ahead of us, as we will be hosting succulent enthusiasts from around the world at the 1997 CSSA Convention. Countless hours have already been invested toward making this the best convention ever. As the July date approaches we will need the efforts of all our members to bring this goal to fruition.

Other goals I will work to achieve this year include: greater participation among new members at our annual show, streamlining the meeting schedule, initiating a youth program, and increasing our membership and meeting attendance. As president I have some very big shoes to fill for Joey Betzler has brought an unsurpassed level of organization to our club's operation. He has brought the SDC&SS into the computer age and has taken us farther than most will ever know. I hope my efforts are as substantive.

During the Christmas dinner, as Mr. Betzler acknowledged members, I was standing next to a gentleman who asked me, "Who is Tom Knapik?"

A very good question, even for me! To give you a brief background, I was raised in upstate New York, attended college in California graduating from Humbolt State with a degree in biology. I obtained teaching credentials and now teach mathematics and science at Patrick Henry High School. My first love is Marine biology, however, the unique highly adapted world of succulents which often resemble sea creatures attracted my attention about fifteen years ago. I've been an avid collector ever since.

I became a member of the SDC&SS about ten years ago. Gradually, I participated more in club functions by assisting with the annual show, giving "Cactus of the Month" presentations, participating as a SDC&SS Board of Directors Member, and working as Programs chairperson. I have found that we have a very diverse and talented group of members, people who are as interesting and unique as the plants we grow. I look forward to meeting more of you and learning about "Who *you* are" in this coming year.

Sincerely,

Tom Knapik

The San Diego Cactus & Succulent Society, Inc. invites commercial advertising for publication in *Espinus y Flores*. In order to conform with Postal regulations regarding non-profit bulk mailing, all advertising must be related to the functions of this Society (*education about and the propagation of cacti & succulents*). This newsletter has a circulation of approximately 350. (290 copies are mailed to members and additionally, some 40 - 50 copies are mailed to educational institutions, botanical societies, cactus & succulent nurseries, and some CSSA board members.) Whenever possible, copies are made available to the general public should they attend a SDC&SS meeting, and extra copies of the May-June Show issue are always printed and provided to interested parties.

The San Diego Cactus & Succulent Society encourages the propagation and culture of succulent plants and their conservation. In order to promote these goals, the society will not allow the sale of field collected plants at our general meetings, nor at the June sale; all advertisers are expected to follow this policy. Education is one of the society's most important goals. The SDC&SS has a very extensive and outstanding library. A majority of our members regularly invest in botanical books to increase their knowledge and enjoyment of this hobby.

The deadline for all ads with camera-ready copy is the 10th of the month prior to issue. We invite your inquiry for advertising rates, which are based on size and number of insertions. Please contact: Herb Stern (619) 223-9124 or Joey Betzler (619) 569-8510.

BAJA'S ANGELS OF MERCY THE FLYING SAMARITANS

In November of 1961, American pilot Aileen Saunders Mellott was flying a group from La Paz to San Diego when she ran into a treacherous dust storm. Her twin-engine Bonanza was buffeted by high winds and dense, billowing, blinding sand. Fuel was running dangerously low.

The storm made landing at San Diego or Tijuana all but impossible. "We doubled-back and tried to land at Ensenada," Mellott told us, "but it was already socked-in, so I made an emergency landing on a dirt strip I'd seen atop a lonely mesa near El Rosario."

Down in the village, Doña Anita Espinoza heard their plane land and sent a truck to rescue Mellott and her frightened passengers. She fed them, put them up for the night, found some aviation gas at the Santa Maria Sky Ranch some 65 miles away, and sent them on their way home the following day.

So impressed was Mellott by the generous spirit of El Rosario, she too became a Good Samaritan. "I just wanted to thank the people for being so nice to us," she says. "They hardly had anything, but gave us everything. So two months later we collected food, clothing, toys, and 100 pounds of candy for a one-time Christmas airlift. A Boy Scout troop in La Jolla volunteered to gift wrap every package."

"By the time we were ready to depart, our collections had been so successful I had to recruit pilot friends to help with the airlift, which included nine planes."

Among those first Samaritans drafted for the airlift was doctor /pilot Dale Hoyt. Once in El Rosario, Hoyt became very concerned for the medical needs of the

community, so he opened the first Flying Samaritan Clinic right then and there on Doña Anita's kitchen table.

After seeing 22 patients, Hoyt had to stop because he ran out of supplies. Yet he returned a few weeks later and his enthusiasm soon led to regular trips to El Rosario. And with the passage of time, those trips grew into a monthly clinic.

In the years that followed, the Flying Samaritans opened a string of 20 free medical clinics in some of the most remote areas of Baja. Patients often came from as far as 135 miles away by truck or donkey cart.

Now an international nonprofit organization, the "Flying Sams" as they're called, provide medical, dental, ophthalmology and hearing clinics on a regular basis to far-flung spots like Santa Inez, Cataviña, El Testerázo, and Punta Prieta, in addition to a special monthly surgical clinic at San Quintin. The group's 12 Southern California chapters have more than two thousand members, treat over eight thousand Baja residents annually, and fly more than eight million miles a year. . .

The Flying Samaritans are always looking for IFR pilots, doctors, dentists, nurses, pharmacists, translators, and others who want to help. The phone number for the Orange County Chapter of the Flying Samaritans is (714) 731-6834.

Taken from "Baja's Angels of Mercy — The Flying Samaritans" by David Santiago from pages 71-72 of the **BAJA Explorer**, volume 2, number 4, July/August 1992.



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The Cardon is Not a Saguaro

Cactus of the Month: Pachycereus pringlei

by Monte Woodworth

For the past twenty years a portion of my work has allowed me to familiarize myself with the peninsula of Baja California. Part of the pleasure of being a naturalist tour guide has been in sharing the unique plants of the Baja Sonoran Desert with my clients. One of the most wonderful, startling, and impressive plants of this area is the *Pachycereus pringlei*, or Cardon, as it is known in Mexico. The Cardon shares its home with one other uniquely bizarre plant of Baja, the Boojum (*Fouquieria columnaris*). During my years in Baja, I have become friends with these sentinels of the desert, and the sight of the first of them as we drive south lets me know that I am entering an area of Baja that I truly love. I have witnessed the growth and subsequent changes in shape of several individual plants as I visit them every year.

The Cardon is often confused with the Saguaro, (*Carnegiea gigantea*), at first sighting but upon comparison one can appreciate both the similarities and differences. Both are large, massive tree-like cacti reaching heights of 12 to 15 meters. Some specimens of *Pachycereus pringlei* have measured upwards of 20 meters, while the *Carnegiea* tops off at about 18 meters. The habitats of these two giants overlap in a narrow coastal zone along the eastern edge of the Sea of Cortez, Isla Tiburon, and a small isolated spot about 100 kilometers from the coast. Beyond that, the Cardon resides on the Baja Peninsula south from San Felipe to the cape, and the Saguaro is found from the overlap zone on the Sea of Cortez northward into the Arizona Sonoran Desert.

Both plants have a hardwood rib-like skeleton that supports the tonnage (*up to ten tons in very large plants*) of the outer fleshy layers of accordion pleats which gives them their characteristic and recognizable shapes.

The Saguaro has a narrow base of 10 to 20 centimeters and gradually widens to 30cm to 40cm about halfway up and then again tapers off to the top.

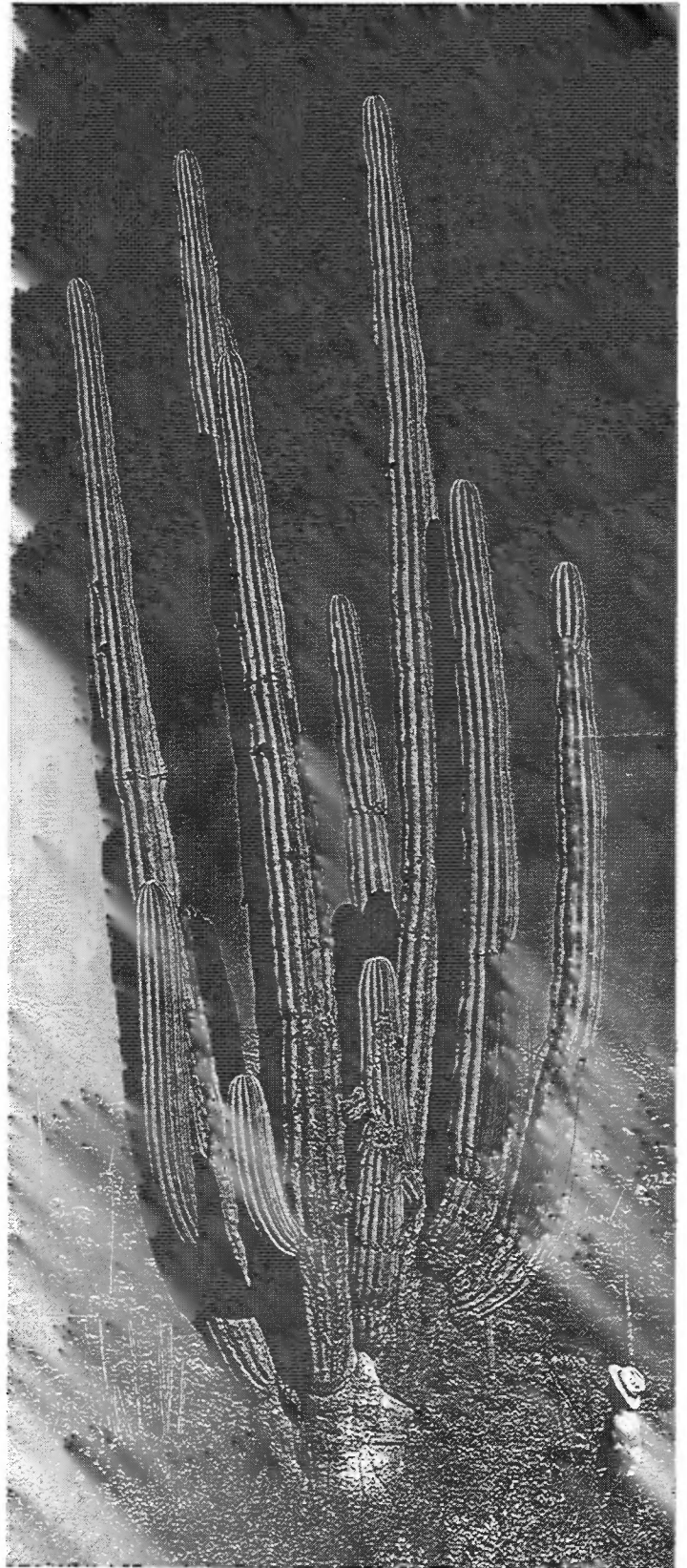


Illustration from **The Cactus File**, Feb.1993.

Cactus of the Month: *Pachycereus pringlei* by Monte Woodward continued

Mature plants branch about 3 to 5 meters from the base; very old specimens have several main branches with secondary branching. The Cardon, however, can grow a main trunk that is as much as 1.5 meters in diameter spreading at the ground much like an elephant's foot, to support its enormous weight (*The name Pachycereus means "thick cereus", like the name Pachyderm for elephants means "thick skin".*). The main trunk and branches grow in slightly decreasing columns with the branching occurring about 1.2 meters above the ground. Mature plants also multi-branch with some secondary branching. In Baja California the rancheros use Cardon ribs in the construction of their houses' walls and roofs, as well as for fences and corrals. I have even seen Cardon wood used in artist's sculptures.

When damaged naturally or when woodpeckers bore holes through the fleshy outer skin and into the pulpy wood, the cactus quickly produces a hard callus tissue around the surface of the hole to protect itself from fungal infection. When the old plant dies and the fleshy tissues rot away these calluses often remain laying about the desert floor; they are known as "boots" due to their characteristic shape.

The *Pachycereus* grow as isolated individuals on rocky outcroppings and in dense forests called "cardonals" at various localities throughout Baja. Usually a coarse gravel outwash at a slope or in low hills provides the good drainage necessary for the Cardon's survival. Unlike the *Carnegiea* that bloom during May and early June, *Pachycereus* bloom in March and April. The

Cardon has white or rose-tinged flowers which are arranged in vertical rows along the ridges of the southern sides near the tops of the branches. The Saguaro's flowers are arranged in clusters at the tips of each branch. The blooms of both cacti are pollinated by small bats, but insects and birds also compete for the pollen-rich nectar. Each produce a fruit filled with hundreds of seeds that are disseminated by birds and ground animals as they forage for food. Local Indians harvest the fruits as a staple food source.

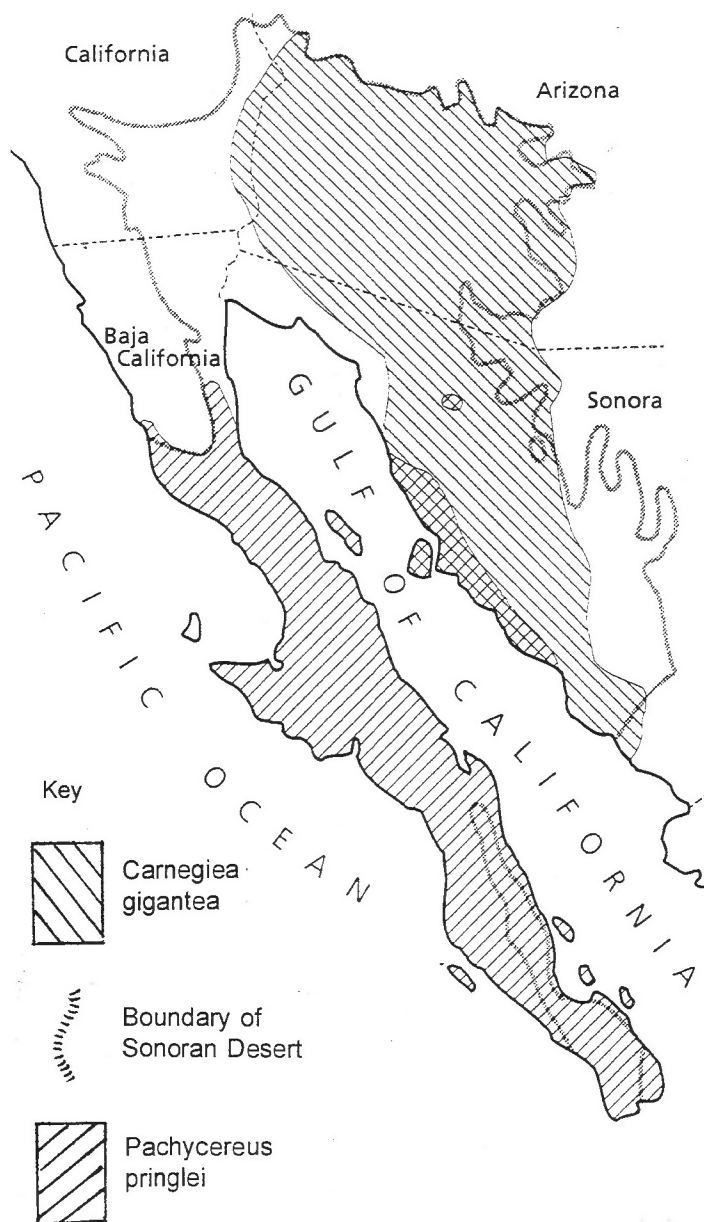


Illustration from *The Cactus File*, Feb. 1993.

Cactus of the Month: *Pachycereus pringlei* by Monte Woodward continued

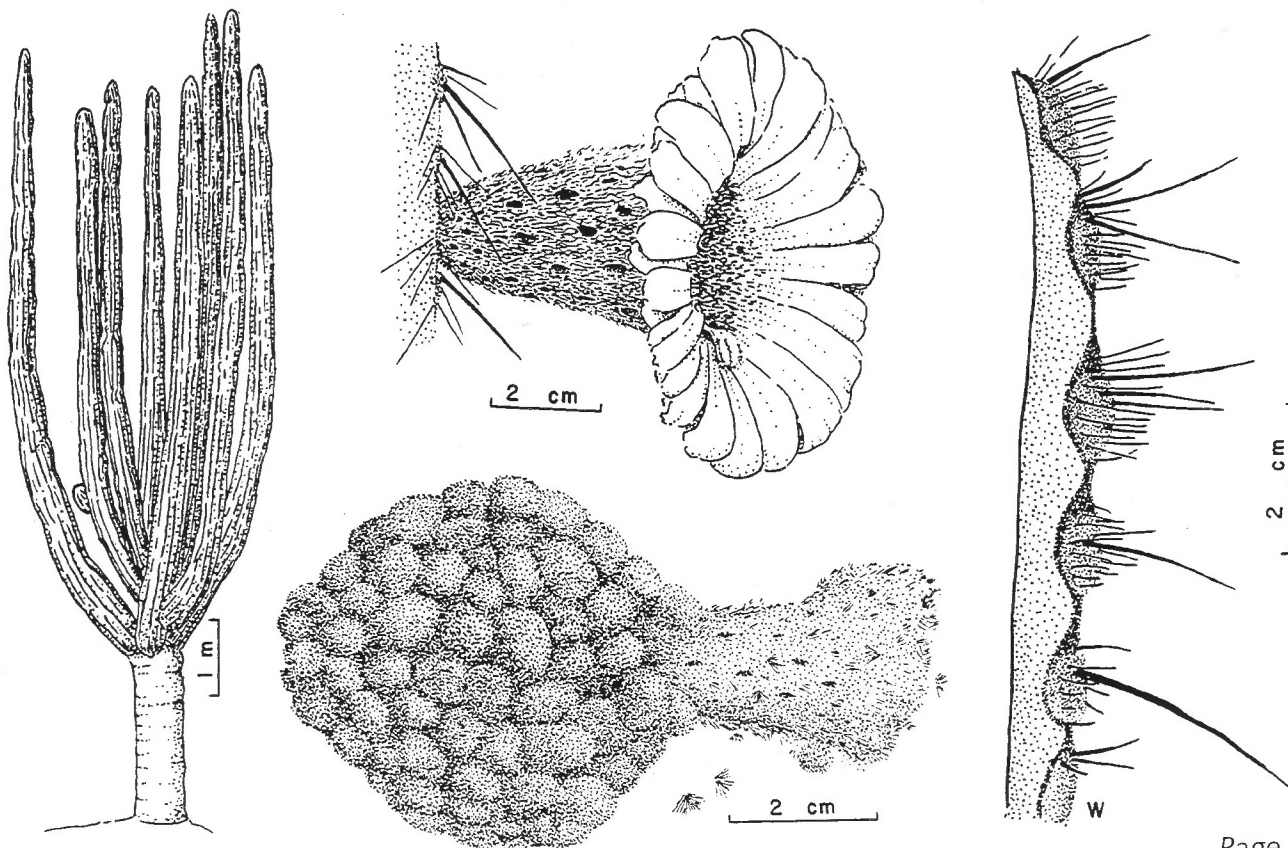
As with most cacti, these giants can and do crest on occasion. I know of several crested specimens of *Pachycereus* in Baja. And, yes, the crests are as gigantically proportioned as the host plant is tall. Twenty years ago I photographed a beautifully formed crested growth that was about six to eight feet tall. Unfortunately, this particular plant is growing very near the highway and about 10 years ago someone just had to have a piece of it and cut away about half of this incredibly marvelous example. Other crests that I have found either exist in very remote areas or the crest is located too high in the branches to be accessible. Thus, these plants have remained unmolested.

Cardons are not often seen in cultivation, except where they naturally occur; both Cardons and Saguaros can be an impressive addition to one's collection. Due to their size at maturity, it is unlikely to see them in collections — but a striking specimen can be pot grown to six or more feet tall. Of course, these will probably never bloom, but what they lack in floriferousness they make up in style and presence.

If you have never seen these wonderful icons of the desert, we are very lucky to be so close as one day's drive into Baja or over to Arizona to view these kings of cacti. And don't forget! The Cardon can be seen at the Wild Animal Park's Baja Hill. (*This alone might be worth the price of admission!*).

REFERENCES:

- Humphrey, Robert R. The Boojum and Its Home. University of AZ Press, 1974.
Labbett, Roger. "Giants of the Sonoran Desert", The Cactus File. Feb. 1993, pp. 24-29.
Roberts, Norman C. Baja California Plant Field Guide. Natural History Publishing, Co., La Jolla, CA: 1989.
Shreve, Forrest and Ira L. Wiggins. "Vegetation of the Sonoran Desert" Vegetation and Flora of the Sonoran Desert. Stanford Univ. Press, 1964.
Wiggins, Ira L. Flora of Baja California. Stanford Univ. Press, 1980. (*Illustrations below*)



Succulent of the Month: Othonna

by Edward Nolan Ph.D.

The Holidays have come and gone, Santa didn't bring you what you wanted, January 1st is a blurry memory, and all you have to look forward to is some silly ground hog telling you how many days of winter are left! But wait! It's Spring in Namaqualand! And nobody told your South African plants that they are not in the Little Karoo anymore, so they rock-in the New Year by bursting into growth and blooming their little buds off. Winter growers: what a wonderful invention!

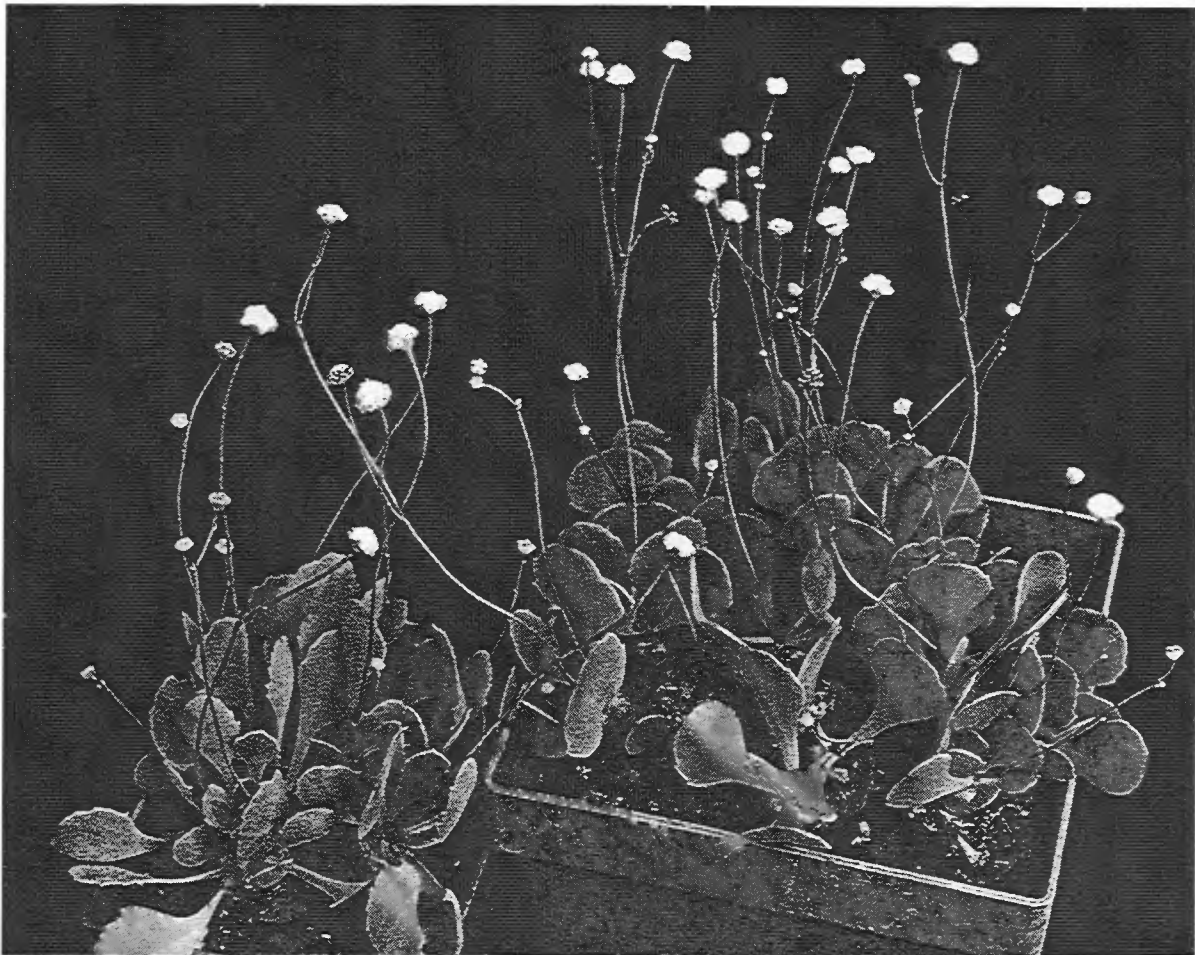
In addition to the usual winter growers such as the Pelargoniums, Tylecodons, Conophytums, Sarcocaulons, Aloes, etc., one of the choicest genera of winter growers are the Othonnas, especially the very succulent species. The Othonnas have remained a relatively obscure group with little available in the way of plants or information. So, once again it seems that I have selected a plant genus that has very limited accessible literature devoted to its description. But alas, I knew that Gordon Rowley perceived this problem also and has published a book on the succulent Compositae in 1994, which focuses on the Senecio and Othonna genera exclusively. Therefore, I knew I could rely on this source for information on this genus of very interesting plants. Not knowing much in a technical sense about the genus Othonna, (or Senecio for that matter) it was a pleasure to browse through Gordon's book, reading the parts on the morphological characteristics with more purpose, but still very pleased to see that this group of plants had found a venerable author to bring their uniqueness into view. The information in the present article

is therefore based on Rowley's publication with a specific emphasis directed toward addressing two issues:

1. Describing the Othonna genus and its diversity primarily from a collectors and hobbyist point of view.
2. Attacking the nagging question... What is the difference between a Senecio and an Othonna anyway!

With respect to this second issue, after exploring Gordon's book with some gusto, it was becoming quite clear that I could not find the definitive difference(s) between these two closely related genera!

To illustrate this issue, both the Othonna and Senecio plant genera include species that have a great deal of diversity in body morphology and growth habits. Senecios are described as annual, biennial, or perennial herbs, shrubs, climbers or trees while Othonnas are described as perennial woody or succulent shrubs and subshrubs, dwarf herbs or geophytes with underground tubers. While this reinforced my basic distinction of Senecios being more "weed-like" and leggy (i.e. undesirable) and Othonnas being more bonsai, pachycaulescent and tree-like (i.e. more desirable) this still was not a sufficient nor quantitative difference that I could find comfort in (or settle a dispute among judges at some future show). Realizing that the difference must, of course, involve the floral structures, I went back over the section that dealt with the flowers in close detail and found the answer to my question, which I will return to, but first a bit more background.



Othonna cacalioides is slow growing and very variable species, highly sought by collectors.
 Taken from "Off-season Othonnas" by Gordon Rowley, *The Cactus File*, vol.1 #11.

To start with, *Othonna* and *Senecio* are succulent members of the *Compositae* family, which is the largest family in the flowering plant order, with perhaps 1317 genera and over 21,000 species. Thus the *Compositae* exceed even the grasses and the orchids in the size of their family. There are, of course, other genera within the *Compositae* that have succulent species as members, but after all, this article is supposed to be about *Othonnas*, so its bad enough that I can't seem to keep the *Senecio* clan out of it! So let's forget about the other genera! The *Othonnas* (from *othone*, Greek for linen cloth; Type species *O. coronopifolia*) are represented by at least one hundred species. The succulent varieties are almost exclusively from the winter rain fall regions of South Africa, particularly the western Cape region north into Namibia. The vast majority therefore are winter growers in our climate, and

need a summer rest, at which time most species drop their leaves and become truly dormant. In general, the more succulent an *Othonna* species is, the more sun it can take. In habitat, most succulent *Othonnas* grow in full sun on rocky soils or in cracks in rocks with perfect drainage. As mentioned earlier, many species develop into miniature trees with thickened trunks and short truncated branches that give the whole of the body a very bonsai look. Add to this the earth-toned papery peeling bark of many of the species, and it is easy to see the visual appeal of these plants. In addition, the *Othonnas* seem to be quite resistant to most pests, and are easily grown and generally flower freely. Most species begin to leaf-out in our fall and are blooming by late fall or early winter. At this time they should be given strong light and good air flow which is easily accomplished by just leaving them out in the winter rains.

Succulent of the Month: *Othonna* by Ed Nolan continued . . .



(Above) *Othonna retrofracta*
The branches develop from a swollen, bonsai-like trunk.



(Right) *Othonna protecta*
This species also falls into the 'bonsai group' of Othonnas.

Illustrations from "Off-season Othonnas" by Gordon Rowley, **The Cactus File**, vol. 1, # 11.

The leaf morphology of the Othonnas spans a wide range of shapes and structures that reflects the individual demands of water conservation. In most cases the leaf has a waxy cuticle to slow water loss, stipules are never present, and petioles are usually not sharply defined. In general most species have a green to blue-green flat leaf that may be simple in its structure, or heavily lobed, toothed, undulated or of other complex structure. This is especially true of the leaf structure in the geophytic Othonnas such as *cakilifolia*, *armiana*, *filicaulis*, *hederifolia*, *intermedia*, *lepidocaulis*, *pinnata*, and *tuberosa*.

Othonna species that reside in very xerographic environments have leaves that exhibit true succulence. These species have leaves that run the continuum from club-shaped to truly

spherical and are exemplified by the species *clavifolia*, *capensis*, *opima*, and *retrofracta*. Other species deal with water conservation by forming very succulent stems. A good example of this is the very desirable *O. cacalioides*, which truly is the R2D2 of the succulent world with its round little ball-shaped body and clusters of tiny flat oval leaves. In general, the stem succulent Othonnas are particularly desirable and include *O. arborescens*, with its dwarf tree-like structure and peeling crusty bark that makes the plant appear ancient, *O. euphorbioides* which has the interesting characteristic of thorned branches and persistent leaves that dry up around the apex of the growing branch, *O. furcata*, which branches freely from a bottle-shaped trunk and can become large for an Othonna (60-80 cm), *O. herrei*, which has the most interesting faceted dark-colored stem structure and scalloped edged leaves, *O. pachypoda*, (the name says it all), and *O. retrofracta* which is another large grower with a very "Tylecodon look" to it.

Succulent of the Month: *Othonna* by Ed Nolan continued . . .

Since the only plants from the huge Compositae family that fall into the "succulent" category and therefore have broad appeal to the present audience are the Senecios and the Othonnas, a rare opportunity presents itself to investigate the unique floral characteristic of the Compositae. As most plant aficionados probably already know, the Compositae are unique in the fact that what appears to be a single flower turns out to be made up of many small tubular flowers (florets) surrounded by bracts that merge together to form a protective involucre. The ring of "petals", when present, are composed of a ring of florets in which each has a lop-sided corolla extended to one side. This "flower" structure, called a capitulum, often features floral polymorphism, where two or more distinct types of flower exist on the same plant. The differences can be of sex or shape or both. For example, one capitulum may contain radially symmetrical (actinomorphic) flowers called **disc florets** as well as the asymmetrical (zygomorphic) **ray florets**, where one of the five corolla lobes is elongated and directed outward. Thus the ray florets within the capitulum look like the petals of a single bloom. Some Compositae have only disc florets or only ray florets. As a generality, most of the Senecios are rayless and most of the Othonnas are rayed. However, the formal distinction is that Othonnas have a single series of bracts (phyllaries) for its involucre which are more or less united into a cup, whereas in Senecio the bracts are free and commonly in two series. *Othonna* flowers (ray florets) are usually yellow, but some species such as *cakilifolia*, have a beautiful lavender color flower.

Succulent of the Month: *Othonna* by Ed Nolan continued . . .

A Ray florets present or, if absent, then style branches truncate:
flowers never red.

B Phyllaries in 1 series, + or - connate into a cup:
style branches truncate, usually penicillate:
flowers yellow or purple: disc florets male.

OTHONNA

BB Phyllaries in 1 or 2 series, free and + or - reflexing as the fruits are shed;
flowers never purple; disc florets bisexual

C Style branches truncate, usually penicillate;
flowers yellow or white

SENECIO Subg. SENECIO

CC Style branches conical; flowers white

SENECIO Subg. KLEINIA

After looking at the capitula of several Senecios and Othonnas, I must admit that I really can't see the distinction as described above. The *Othonna*'s phyllary bracts do look different and very cup-like and fused, but the Senecio's phyllaries look equally fused and not "free" as described. With respect to this minimal distinction between the flowers of *Othonna* and Senecio, it is obvious that the two genera are very closely related.

New species of *Othonnas* continue to be discovered, and the cryptic geophytes in particular account for most of the recent introductions that as yet are undescribed. Moreover, large inadequacies still exist in the study of the succulent Compositae, which include insufficient herbarium specimens, ignorance of species variation in habitat, and the difficulty of getting and raising seed, etc. Because of this general lack of information, the current state of *Othonnas* in the plant hobby remains obscure with little plant material available outside of field collected specimens. As with other plants that tweaked the hobbyist fancy, such as the pachypodiums, and conophytums, etc. a demand for seed raised material can translate into profits for the cultivator and advance the state of horticultural knowledge at the same time. Happy New Year.

The San Diego Cactus & Succulent Society, Inc.

The San Diego Cactus & Succulent Society was founded on May 6, 1961. Cleovis Hardin was our founding member. Several Life Members were present at the first meeting, including Bob & Suzanne Taylor and Perlso Lewis.

Under the direction of Chuck and Dana Adams the society became a non-profit corporation in 1990.

LIFE MEMBERS:

William* & Ruth Nelson
 Perlso Lewis
 Bob & Suzanne* Taylor
 Walter* & Hazel* Scott
 Oliver* & Sophie Loyland
 Troy Shipman*
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 James & Shirley Berry
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* signifies deceased

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1965-66 Shirley & Jack Ward

Espinas y Flores:

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1968-69	Michael Buckner
1969-70	Nibby Kleinfelter
1971-74	Walter Scott
1975-77	Augie Pfeiffer
1977-78	Audrey Johnson
1979	Jim Dice
1980	Rick Latimer
1981-91	Mary Aubuchon
1992-	Michael & Joyce Buckner

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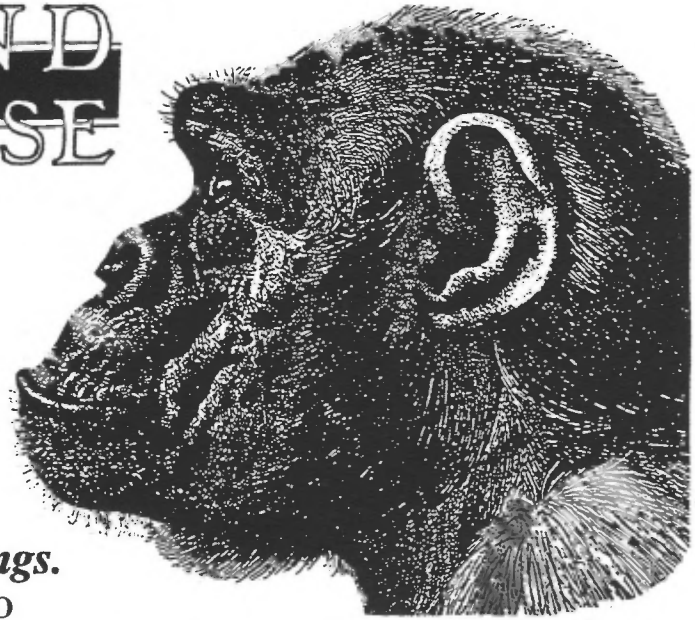
1961-62	Cleoves Hardin
1963	Harry Caulk
1964	William Hoffman
1965	William Nelson
1966-68	Dr. Reuben Vaughan
1969	Walter Greenwood
1970	Jim Stalsonburg
1971	Ione Hubner
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1981-82	Rick Latimer
1983-84	Frank Thrombley
1985-86	Dr. Leroy Phelps
1987-88	Martin Mooney
1989-90	Chuck Adams
1991-92	Michael Buckner
1993-96	Joey Betzler
1997-	Thomas Knapik

WISE AND OTHERWISE

By Michael Buckner

*The year's end is coming;
I feel great contentment.
Completion means rest.
Rest means renewal.
Renewal means new beginnings.*

DENG MING-DAO



We are all functioning at a small fraction of our capacity to live fully in its total meaning of loving, caring, creating, and adventuring. Consequently, the actualizing of our potential can become the most exciting adventure of our lifetime.

HERBERT OTTO

"He who isn't busy being born is busy dying."

BOB DYLAN

TAKEN FROM THE MAGIC CHAIN HEALTH PRODUCTS, VISTA, CA 1996:

"Cactus Magic" — Proven to Lower Cholesterol And Regulate Blood Sugar

Cactus Magic is 100% pure, organic concentrate of *Opuntia streptacantha*, a native cactus of the southwestern United States and Mexico. Research on both sides of the border has shown it to effectively lower blood cholesterol levels and help to trap and evacuate excess fats from the body. It also significantly lowers the glucose (blood sugar) levels in the blood of both healthy and diabetic patients.

A study performed by doctors of the Department of Internal Medicine, at the Race Medical Center in Mexico City, reports:

After (*Opuntia streptacantha*) intake, a significant reduction of total serum cholesterol was found . . . Beta cholesterol, triglycerides, and body weight decreased in obese and diabetics. Glycemia decreased a mean of 63.4 mg/dl in diabetics, and 3.86 mg/dl in non-diabetics. The intake of *Opuntia streptacantha* before meals may be useful in the management of hyperlipidemia, diabetes mellitus, and obesity.

— Frati Munari, A. C., et al. (1983). "Effects of Nopal (*Opuntia streptacantha*) on Serum Lipids, Glycemia, and Body Weight". Archive. Invest. Med. (Mexico) — 14:117.

The purpose of life, after all, is to live it, to taste experience to the utmost, to search out eagerly and without fear for newer and richer experience.

ELEANOR ROOSEVELT

**Last leaf has fallen,
Tree will sleep and I will dream;
Spring is tomorrow.**

JOHN NAKA

***If winter should say, "Spring is in my
heart," who would believe winter?***

— Kahlil Gibran, SAND AND FOAM 1926

"Every seed is a longing."

— Kahlil Gibran, SAND AND FOAM 1926

***Just because the message may never be received does not mean it is
not worth sending.***

Segaki — translation David Stackton

WISE AND OTHERWISE

Real Prosperity

A rich man asked Sengai to write something for the continued prosperity of his family so that it might be treasured from generation to generation.

Sengai obtained a large sheet of paper and wrote: "Father dies, son dies, grandson dies."

The rich man became angry. "I asked you to write something for the happiness of my family! Why do you make such a joke as this?"

"No joke is intended," explained Sengai. "If before you yourself die your son should die, this would grieve you greatly. If your grandson should pass away before your son, both of you would be broken-hearted. If your family, generation after generation, passes away in the order I have named, it will be the natural course of life. I call this real prosperity."

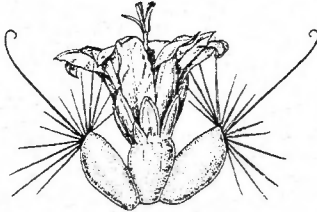
from *101 Zen Stories* transcribed by Nyogen Senzaki and Paul Reps, published by Charles E. Tuttle Inc., 1989, Vermont/Tokyo

**The San Diego Cactus & Succulent Society, Inc.
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Espinas y Flores

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The San Diego Cactus and Succulent Society, Inc. is open to all persons interested in growing cacti and other succulent plants. Meetings are held the second Saturday of each month (except June, Sept. and Dec.) at 1:00 PM in room 101, Casa del Prado, Balboa Park. Executive Board meetings are open to all members; call any officer or director for the time and location. Annual dues are \$10.00 per single member per year, \$5.00 for each additional member within the same household. Single copies of *Espinas y Flores* are \$1.00 per copy sent within the USA; foreign subscriptions are \$25.00. Affiliated with the Cactus and Succulent Society of America, Inc. Fax available - please call editor at (619) 222-3216 for number.