

NEWS NEWS NEWS - - - - -

DUES ARE REALLY DUE - Dues must be paid by the February meeting or priviledges will stop. The Espinas Y Flores will not be sent. I do not keep extra issues, so if you need them they are available at meetings. Please send your dues to Warren Buckner our treasurer, 1744 Englewood Dr., Lemon Grove 92045. Dues are \$8.00 for first member of family and \$2.00 for each family member of same address.

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Winners of the January Brag Table are:

- 1st Ruby Winter for her Cotyledon (Tyelocodon) Caclioides
- 2nd Rudy Lime for his Euphorbia balsamifera
- 3rd Dorothy Dunn for her Dudleya greeni
- tied Sandy Frost for her Ferocactus latispinus

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Special Thanks to Sylvia Kramer and Florence Warner for donating plants to our Sale Table.

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There are no names for volunteers to bring refreshments to the February Meeting - SO if you feel like bringing something please do. All efforts are appreciated.

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FROM Perlso Lewis

How to prepare fresh cactus leaves (From the New York Times News Service)

Nopales or nopalitos, as they are called in Mexico, are the oval-or paddle-shaped leaves of the prickly pear cactus. Preparation consists of removing the thorns from the flesh, then cutting the flesh into half-inch strips. Cook them in boiling water until tender.

One use is in a cold salad made, say, with tomatoes and onions and dressed with oil and vinegar and touch of oregano. This salad is sometimes served with pickled jalapeno peppers and cream cheese.

(The people I know who use them like them mixed with scrambled eggs. They are supposed to be very nutritious and good for what "ails" you. Mary)

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WELCOME TO OUR NEW MEMBERS

Donna L. Couchman - San Diego
 Robert & Virginia Natwick - San Diego
 Carl Edward Perry - National City
 Mark S. Strang - San Diego
 Charles & Connie Staples - Des Moines, Iowa

Ruth Cuzner - San Diego
 Wendy K. Olson - Escondido
 Boots & Bob Simmons - San Diego
 Nancy Lea Welnick - Imperial Beach

Succulent-of-the-Month

AGAVES

By Dorothy Dunn

Agaves are among the most ferocious of all succulent plants. Although at one time they were considered as relatives of the Amaryllis bulb and were classified as belonging to the Amaryllidaceae family, most authorities now place Agaves in a separate family, the Agavaceae. The genus Agave was first described by Linnaeus in 1753 and contains more than 300 species. The first species known to botanists - and possibly still the best-known (or notorious, depending upon the point of view) - is A. americana, described in 1753. The genus is divided into two natural sub-genera: Littaea (plants having a spiked inflorescence) and Agave (plants having a branched inflorescence). The name Agave means "noble" in Greek.

Agaves are indigenous to North America and are widely distributed, ranging from Utah in the north to Central America and the West Indies in the south, with the bulk of the population centering in Mexico, including all of Baja California. They occur from sea level to the tops of the higher mountains at elevations of 7,000 to 8,000 feet. In the desert areas they may receive only about five inches of rain annually, while the mountainous varieties may get as much as thirty inches of precipitation per year. In Sonora they grow mainly on the rocky slopes of hills and mountains; most species prefer a limestone soil but seem to grow equally well in almost any well-drained soil. They thrive in full sun.

Agaves range in size from the choice diminutive A. parviflora and A. filifera fma. compacta to the massive A. atrovirens and A. americana, with the larger species producing an inflorescence which may reach 35 feet in height. Agave plants require a number of years to store up sufficient plant food for the production of the spectacular flower stalk which grows with amazing rapidity once it emerges from the center of the plant. With the exception of A. parviflora, the blooming of an Agave plant signals its approaching demise. Under favorable conditions the average life cycle of an Agave is 10 to 15 years, contrary to the popular myth that one may live 100 years before flowering and dying (hence the common name "Century Plant"). In most cases this is no irretrievable loss (and in some may be a great relief!) since the parent plant usually puts out dozens of offsets or suckers before this occurs. In addition, some species produce hundreds of bulbils along the inflorescence, which may be detached and grown into new plants. They can, of course, also be grown from seed. The flowers are generally various shades of cream or yellow, although they may also be green and occasionally purple or red. Bats and hummingbirds are among the possible pollinators.

In hardiness Agaves range from the tender, tropical species of the West Indies and Central America to those withstanding the subzero temperatures of the high plateaus of Mexico and the more northern latitudes of the United States. Because of their tender, tropical nature few, if any, of the Agaves native to the West Indies are cultivated in California.

Agaves demand a healthy respect from even their most ardent admirers as most species are equipped with needle-sharp teeth along the leaf margins and a vicious terminal spine at the tip. However, there are a few soft-leaved and relatively harmless varieties such as the familiar A. attenuata and the somewhat less familiar A. vilmoriniana. Some of the most attractive species belong to the group containing such species as A. parviflora, A. toumeyana, A. filifera, A. schidigera, and A. polyanthiflora, all of which have highly-decorative curly threads or hairs along the leaf margins as well as striking white markings. The "queen" of all Agaves is, of course, the beautiful A. victoria-reginae in all its forms, with its absolutely symmetrical, formal rosettes and dramatic markings. In addition, there are several species such as A. striata and A. stricta which have extremely narrow, stiff leaves and lack teeth along the margins but possess a highly-dangerous spine at the tip.

Although it is easy to confuse Agaves with the Aloe genus belonging to the Liliaceae family, the resemblance is actually only superficial. The tough, fibrous leaves of the Agaves are quite distinct from the soft, pulpy, highly-succulent leaves of the Aloes, and of course the inflorescences are totally different. This is yet another example of parallel development in nature; the Agaves are to the Western Hemisphere what the Aloes are to the Old World.

Much has been written about the economic and practical utilizations of Agaves, which include the production of food, drink, soap, clothing, brushes, rope and other fibers, needles, thread, paper, glue, weapons, military instruments, medicines, red dyes, and animal forage. (For more detailed information on this facet of Agaves, please refer to Howard S. Gentry's The Agaves of Continental North America.) Some of the larger Agaves are called mescal because of a potent alcoholic beverage of that name which is distilled from the fermented sap of the bud stalks. Tequila, the famous native drink of Mexico is also distilled from fermented Agave juices, as well as a drink called pulque. These distilled liquors did not appear until Hispanic occupation, for the Amer-indian did not have distillation in his culture. In 1971 the Department of Health, Education and Welfare conducted a survey exploring cancer-inhibiting constituents in various plants, including Agaves.

Many animals get food, drink, and shelter from Agaves. They are generally beneficial to wildlife (although their vicious teeth and bitter toxins repel most animals) and in many places their presence may be crucial to the survival of some animal popula-

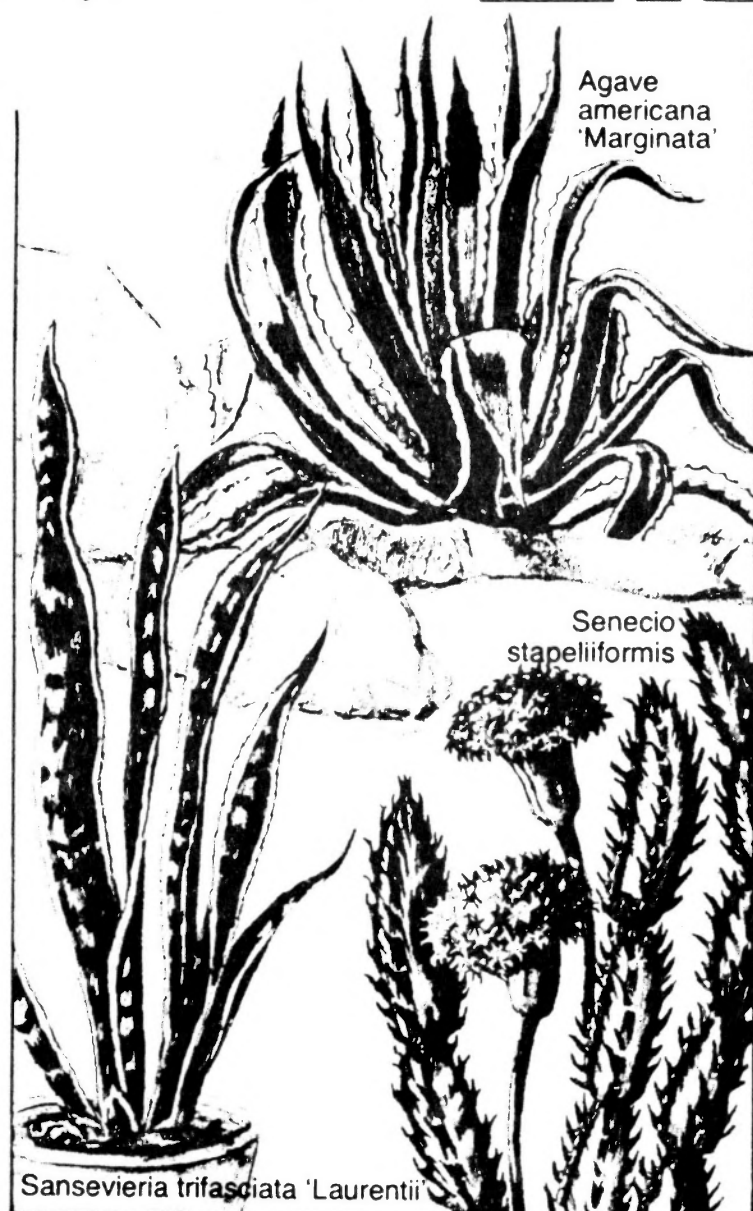
tions such as bighorn sheep, deer, pack rats, kangaroo rats, and ground squirrels.

Pests and diseases are few, but in the wild pocket gophers can be very damaging to Agaves; they tunnel up through the bases of the plants and eat out the central meristematic tissue. Borers may also damage the plants in much the same manner, eventually killing them, and I have recently discovered that Agaves are not immune to scale, mealy bug, or snails. However, they are remarkably free of the usual plant diseases, with the exception of a fungus disease which may occasionally attack them in very humid climates.

Related genera include Yucca, Nolina, Dasyilirion, Manfreda, and Hesperaloe.

Literature consulted:

Breitung, August J.	<u>The Agaves</u>
Chidamian, Claude:	<u>The Book of Cacti and Other Succulents</u>
Dodge, Natt N.	<u>Flowers of the Southwest Deserts</u>
Gentry, Howard S.	<u>The Agaves of Baja California</u>
Gentry, Howard S.	<u>Agaves of Continental North America</u>



Agave and Daisy

Cactus-of-the-Month

THE GENUS COCHEMIEA

by Dorothy Dunn

Among the many plants now classified as Mammillarias, there are several small groups of plants which formerly were routinely accepted as separate "fringe" genera. This was usually due to one or more distinguishing characteristics of flower, fruit, or seed which were at one time considered to be unique to these plants, but which later studies revealed as being not necessarily uncommon to Mammillarias. These genera are Cochemiea, Dolicothele, Mamillopsis, Bartschella, Krainzia, Porfiria, and Solisia. The authority for this broader, more modern concept of combining these plants under Mammillaria began with the publication in 1971 of a paper by David Hunt entitled "Schumann and Buxbaum reconciled" and this was subsequently endorsed and enlarged upon by John Pilbeam in his recent book Mammillaria: A Collectors Guide (1981).

Cochemiea is probably still the most controversial of these "submerged" genera, and is not yet readily accepted as belonging to Mammillaria by many, botanists and enthusiastic hobbyists alike. This is a genus of only five species, all native and endemic to the peninsula of Baja California and a few of its adjacent islands. According to George Lindsay, who monographed the genus in 1945: "An interesting characteristic of these plants is their isolated, limited distribution; their habitats do not overlap and they never intergrade with one another." All species are characterized by brilliant red zygomorphic flowers and in habitat often form huge clusters of hundreds of heads. All five have watery, not milky, sap, and four have hooked spines.

Although the first four species to be discovered were originally described as Mammillarias (or Neomammillarias), prior to 1900 Katherine Brandegee had suggested Cochemiea as a name for one of the sub-genera of Baja California Mammillarias, and in 1899 Mr. F.A. Walton informally recommended that Cochemiea be adopted as the generic name for these species. However, this name was not given official recognition until 1923, when Britton and Rose first used it in their Cactaceae. The name commemorates the Cochimis, an extinct tribe of Indians which once inhabited the central part of the peninsula.

Cochemiea poselgeri was the first Cochemiea to be discovered and described. It is the best-known species of the genus and has the widest distribution, inhabiting lower elevations of the peninsula from just south of Santa Rosalia to Cabo San Lucas. At La Paz it grows in pure sand on the beach, but in other areas it can be found hanging from cliffs in pendant masses, with stems reaching lengths of five to six feet. It is one of the most showy of cacti in its area of distribution, and grows fairly well under cultivation.

Cochemiea halei occurs only on Magdalena and Santa Margarita Islands and is still considered to be very rare. It is the type species of the genus, and was first collected and described by Mr. T.S. Brandegee in 1889. During the 1930's it was first introduced commercially by Howard Gates, an intrepid, inveterate Baja explorer and collector whose name is almost legendary and is linked indelibly with many Baja California discoveries. The plants have straight, dark-colored spines on nearly upright stems and, although in habitat it forms enormous clumps, it does not do well in cultivation.

Cochemiea pondii, also rare, occurs only on Cedros Island, off the Pacific coast of Baja California, where it grows in association with a wealth of other endemic species. It has an interesting growth habit in that the stems branch at and along the entire length of the older reclining stems. It was also described in 1889.

Cochemiea setispina, from the Sierra San Borja in mid-peninsula, is the most attractive species in the genus. It grows in rich canyon soil, forming huge pillow-like clumps, sometimes six feet in diameter, which sprawl over rocks. It was also introduced by Howard Gates, and presents no problems in cultivation. In 1936 George Lindsay found one specimen of C. setispina on Angel de la Guarda Island in the Gulf of California, and a week later, Near Calmalli, located many fine clusters, some of which were in flower. They occurred at higher elevations, and were much more plentiful than at San Borja.

Cochemiea maritima was the last Cochemiea to be discovered, and has the reputation of being the least attractive of the genus. As the name implies, it is strictly a coastal species, being native to the Pacific coast areas near Punta Blanca and Santa Rosalillita, and does not do well in cultivation although clusters in habitat can easily reach a diameter of three feet. It was discovered by George Lindsay in 1935, who never found it growing more than 300 yards from the ocean. It was also introduced to the trade by Howard Gates.

It is a special privilege to find these five species in the wild, as each occupies its own separate, unique, and often inaccessible niche on the peninsula. I hope one day to see them all in habitat.

References:

- Britton, N.L. and Rose, J.N. The Cactaceae
Lindsay, George: The Genus Cochemiea (1945)
Pilbeam, John: Mammillaria: A Collectors Guide
Cactus and Succulent Journal of America, various issues



FRIENDS HELP TROY SHIPMAN CELEBRATE HIS 100th BIRTHDAY

Excerpts from Thursday, January 24, 1985 issue of the Chula Vista "Star News"

More than 140 family members and friends from Texas, Northern California, Florida and Arizona gathered at the Eagles Hall in National City this week to help Troy Harold Shipman celebrate a life-long goal, his 100th birthday.

Born Jan. 16, 1885, in Tigertown, Texas, Shipman has lived in National City for the past 43 years.

Troy Shipman is a "Life-Member" of the San Diego Cactus and Succulent Society. Thanks to Warren Buckner for letting me know about this.

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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 \$8.00 per single member per year, \$2.00 for each additional member of a household within a family. Single copies of Espinas y Flores are 60 cents.

Editor

Mary Aubuchon
1058 5th Avenue
Chula Vista, CA 92011



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