

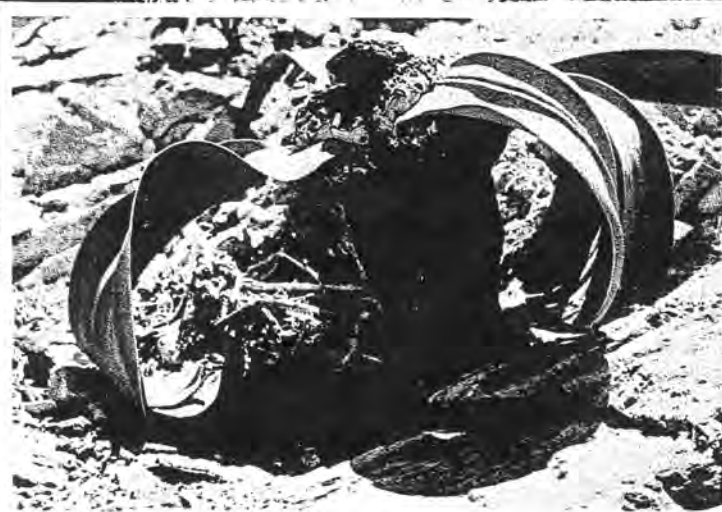


# Espinas y Flores

BULLETIN OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY

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

VOLUME XXIX NUMBER EIGHT, SATURDAY, AUGUST 13, 1994 @ 1:00PM



THIS PHOTO OF A MATURE *WELWITSCHIA MIRABILIS*, ONE OF OUR PLANTS OF THE MONTH, IS FROM SKELETON COAST BY AMY SCHOEMAN, 1984

Miles Anderson, fastest grafter in the west will give a slide program demonstrating his technique. He has helped bring many strange and unique succulents into culture by propagating them via grafting. He will have plants for sale from his nursery in Tuscon and may give us a live demonstration after his program.

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Assembly of this issue was overseen by the President with contributions from the following: Dylan Hannon, Joe Quijada, Martin Mooney and Frank Thrombley.

- ▶ If you won a trophy or plaque please bring in your plants and show them off next to your newly engraved award.

▶ Refreshments for August:

Lorna Odegaard	Camille Horak
Ethel Standish	Deritt Hughes
Millie Richter	Susan Hopkins
Bob Taylor	Ellen Low
Floyd Gable	

MORE VOLUNTEERS WITH REFRESHMENTS WOULD BE GREATLY APPRECIATED!

- ▶ Stay tuned for our Picnic issue, our annual picnic will be in September at Kate Sessions Park. More details to come at meeting and in the next news letter.

© Brag table winners for July were judged by Myron Kimmach:

CACTI

1 <sup>st</sup> <i>Lobivia</i> species	Don Patterson	<i>Hoodia bainii</i>	Marylyn Henderson
2 <sup>nd</sup> <i>Echinocereus leteus</i>	Don Patterson	<i>Operculacaria decaryi</i>	Allen Weiss
3 <sup>rd</sup> <i>Pilosocereus palmeri</i>	John Williams	<i>Adenium obesum</i>	Joe Quijada

SUCCULENTS

Calendar of Events:

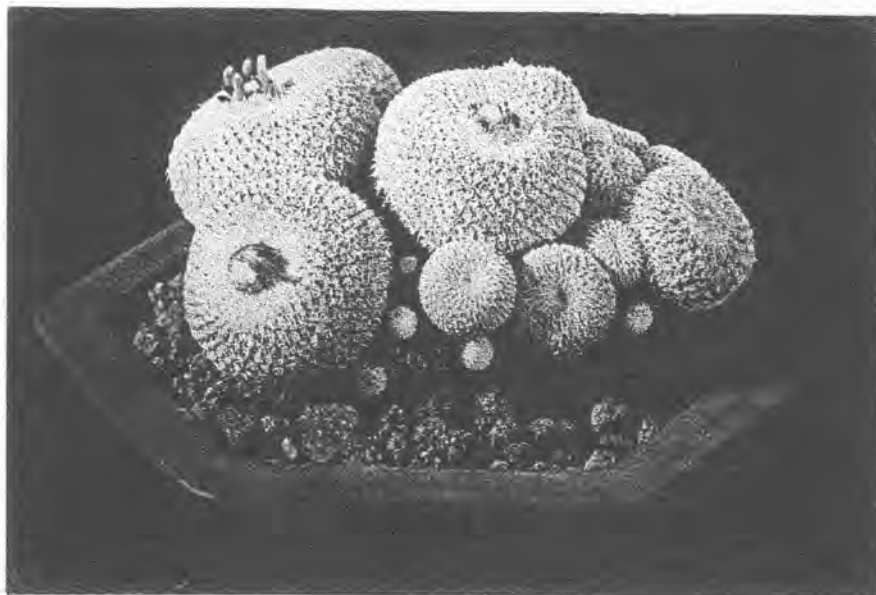
July 31 Sunday, San Gabriel Valley C & S Soc. Picnic/Auction at Almansor Park in Alhambra, 11:00AM call David Tufenkian at 818/794-3082 or Jim Hanna at 310/920-3046.

August 13, Saturday, San Diego C & S Soc meeting, 1:00PM

August 20 & 21, Saturday & Sunday, Southern California Inter-City Show and Sale at L. A. Arboretum in Arcadia. Contact Larry Grammer 310/599-1146, Woody Minnich 805/944-2784 or Charles Spotts 818/341-3046 for show times and how to enter.

September 10, Saturday, San Diego C & S Soc annual picnic Kate Sessions Park 11:30 to late afternoon

September 10, Saturday, Huntington Annual Succulent Symposium call 818/405-2160 for information



*Epithelantha micromeris* - one of the small cacti from Texas. Photo from Cacti and Succulents for the Amateur by Glass & Foster

## Cactus of the Month

# Small Cacti

By Joe Quijada

Did you ever try to put 10 pounds of junk in a 5 pound bag? I think most cactus collectors have had a similar problem. No, I don't mean to imply your collection is junk, but to the space the collection occupies. We all hear about the fellow who builds a new greenhouse and promptly fills it to capacity.

Small cactus may not be the solution, but it does stand to reason that small

cactus take less room than large cactus. What is a small cactus? For this article I decided not to set a limit on diameter or height but to comment on some of my favorites. The names after the species are the botanists that described the plants.

*Aztekium ritteri* Bodecker: This monotypic species is a spherical plant from Mexico. It is a slow and finicky grower on its own roots. Most

collectors prefer to graft this little guy, but it must be grown hard or it will grow uncharacteristically.

*Copiapoa hypogaea* Ritter: A globular species, with dull brownish-green skin and small black spines. The golden yellow flowers appear in late early to late summer.

*Copiapoa laui* Diers: A true miniature, each head is less than an inch in diameter, flowering in midsummer, with glossy, yellow blooms about the same diameter as a plant body. Both species flower diurnally and are from Chile. Very careful watering is required.

*Discocactus horstii* Pfeiffer: An interesting plant from Brazil, globular, with a cephalium of bristly white wool. The nocturnal flowers are produced in the summer, the blooms are white and strongly scented.

*Epithelantha micromeris* (Engelmann) Weber: Unusual small plant from Texas, with diurnal pink flowers appearing in summer. A coarse, well drained soil mix is a must for this fellow.

*Frailea pygmaea* var. *phaeodisca* Britton & Rose: This plant belongs to a group of small spherical cacti from southeastern South America. Yellow flowers appear in summer and are about one inch across. *Frailea* can produce two different types of flowers: normal and cleistogamous which do not open but produce seed.

*Mammillaria* the largest genus of cacti, can contribute many small plants from its 350 species. *Mammillaria deherdtiana* Farwig: A globular, slowly clustering species from Mexico. It produces flowers in the summer, with petals that are violet with a darker center stripe. *M. herrerae* Werdermann: Golf anyone? This neat plant from Mexico looks like a golf ball or, should I say golf balls for it can cluster. These plants are globular, to an inch in diameter, with pink to reddish flowers that are produced in summer. This plant needs careful watering.

Other species of *Mammillaria* that would fit in the small cacti category are as follows: *M. boolii*, *M. chica*, *M. duwei*, *M. clareosa*, *M. jaliscana*, *M. lasiacantha*, *M. painteri*, *M. saboae*, and *M. solisiodes*.

*Melocactus matanzanus* Leon: This species from Cuba is one plant almost anyone would want in their collection. The globular, light green plant is topped with a reddish-brown cephalium from which pink flowers emerge. This plant is easy to grow and it forms its cephalium at an early age.

*Ortegocactus macdougalii* Alexander: This plant is from Mexico. It is a small, globular, pale grayish-green, with fine, short, radial spines and longer central spines that are darker in color with black tips. In summer, by day, the plant, produces greenish-yellow flowers.

*Pelecyphora aselliformis* Ehrenberg:  
This is one of two in the genus of these slow growing plants from San Luis Potosí, Mexico. Somewhat globular in shape, with tubercles very unique for cacti. They look like an inverted "pill bug". The flowers are a purple-pink and are produced over several weeks in the summer.

*Sulcorebutia langerii* Falken & Neumann: This cactus from Bolivia forms globose bodies, up to an inch in diameter which slowly offset to form clumps. Day flowering in summer, the flowers are yellow. There are other species of *Sulcorebutia* that can be considered small cacti, but look out, for most will cluster and clump and soon outgrow the small cactus profile.

*Turbinicarpus schmiedickeanus* var. *schwarzii* (Shurly) Glass & Foster: This is one of the small spherical cacti from Mexico noted for their slow growth. The flowers are white or purple. All the plants in the genus have a thickened taproot, therefore careful summer watering is necessary. Rest dry in winter.

*Turbinicarpus pseudomacroechele* var. *krainzianus* (Frank) Glass & Foster: You could fit about four of these specimens in the space it takes to type its name. It is a dark green miniature species, with white woolly areoles and twisting spines up to 1 inch long. Flowers are diurnal and greenish cream in color.

#### References Cited:

- Glass, Charles & Robert Foster 1976. Cacti and Succulents for the Amateur, Abbey Darden Press, Alhambra
- Innes, Clive & Charles Glass 1991. Cacti, Portland House New York.
- Pilbeam, John 1987. Cacti For The Connoisseur, Timber Press, Portland Oregon.
- Schuster, Danny 1990. The World of Cacti, Pierson & Co., Sidney, Australia.

Dr. Friedrich Welwitsch (1806-1872) was an Austrian physician and scientist. He went to Lisbon in 1839, intending to remain a short time, but he became so much engrossed by the flora of Portugal that he stayed for 14 years. He was then commissioned by the Portuguese government to conduct a company of men on a survey of the flora and lower fauna in the Portuguese colony of Angola, 1853-1861. On his return the government granted him a pension to visit England and work out his newly-discovered material at Kew; but he was soon accused in the Portuguese Parliament of "selling the Angola specimens and living in splendor on the proceeds" and his small pension was revoked. He continued to work on his plants until his death, and in 1896-1901 the complete catalog of his African Plants was published in London by William Philip Hiern (1839-1925). In a Lisbon periodical of 1854 Welwitsch established several new succulent plant discoveries.

#### Reference:

- White Alan and Boyd L. Sloane 1937. The Stapelieae, Abbey San Encino Press, Pasadena [photograph and text from Chronological Notes section]

# Tweebalaarkanniedood

by Martin L. Mooney

Charles Darwin described this plant as the “platypus of the plant kingdom”. J. D. Hooker, who named the plant regarded it as the most interesting and ugliest plant ever brought to Great Britain. Austrian naturalist Friedrich Martin Joseph Welwitsch, who discovered it on September 3, 1859 near Cabo Negro, Angola, was so astonished that he knelt on the hot sand and stared in bewilderment, thinking that his fantasies had taken



Dr. Friedrich Martin Joseph Welwitsch

flight. He was convinced that he was marveling at one of the world’s most inconceivable creations. The plant has only two leaves that have a combined surface area of up to 100 square yards, It’s no more than a foot or two in height, and may live for over 2,000 years in one of the most arid deserts in the world. It is not a succulent and does not fit the typical definition of xerophyte.

So what is *Welwitschia mirabilis* Hooker fil., the “uglies of creations” according to J. D. Hooker in Gardener’s Chronicle January 27, 1862. There has been a long drawn out argument over the name *W. mirabilis* or *W. bainesii*. There were two famous botanists with the name Hooker, W. J. Hooker and his son, J. D. Hooker (usually referred to as Hooker fil.). W. J. Hooker, in the Gardener’s Chronicle of November 18, 1861, published a provisional name of *Tumboa bainesii*. Then on January 27, 1862, J. D. Hooker published

*Welwitschia mirabilis* in the Gardener's Chronicle; then W. J. Hooker came back on May 27, of the same year, and published *Welwitschia bainesii*.

There is no other plant like this in the world. Be that as it may, from November 1861 to May 1862 three names were given to this plant. The Afrikaans named the plant Tweeblaarkanniedood, meaning "two-leaf-cannot-die". Dr. Welwitsch suggested the genus name *Tumboa*, meaning "a stump". However, W. J. Hooker only published a provisional name and it consequently was invalid. To quote R. A. Dyer, "In accordance with the decision of the standing committee on the stabilization of the specific names published in Taxon 24(1), 1975, the specific name *Welwitschia mirabilis* (Hooker fil.) takes priority over *W. bainesii* W. J. Hooker."

The name, *Welwitschia mirabilis*, commemorates the Austrian physician, naturalist and explorer, Dr. Friedrich Martin Joseph Welwitsch (1806-1872) who described 550 species of plants, as well as 29 animals. *Welwitschia* belongs to the Gnetales, an order of plants grouped with the naked-seeded Gymnosperms. This group started evolving three hundred million years ago. It has no close living relatives,

the nearest being a broad leaved coffee-like plant from the tropics named *Gnetum*. The shrubs of our deserts known as Mormon or Mexican Tea (*Ephedra*) is very remotely related.

*Welwitschia* occurs irregularly in the Namib Desert of Angola and Namibia, with an average rainfall of two inches per year, in some years none at all. The clue to its survival is the cold morning fog that comes in from the Atlantic almost every morning, and its tremendous leaf surface with millions of stomata, some 140,000 per square inch. These closable pores take in water as the fog condenses on the plant, enabling them to survive the long periods of drought.

The trunk may be two feet high and up to six feet in diameter. The plant stem is short and flattened due to an early death of the apical bud within the first year. All subsequent growth occurs around the rim of the sunken stem apex. The tallest known plant measures 58.5 inches with a circumference of 195 inches.

The root system is simple, having a shallow taproot with lateral spongy roots. In general, the taproot extends to a depth roughly equal to the length of the living portion of the leaves. The two leaves clasp the flattened stem or trunk so that growth occurs along the

rim, and no matter how big the stem may get the leaves will keep pace by widening at the base to always surround the stem. The two leaves are leathery and olive-green. They arch upward a foot or so becoming frayed and splintering into ribbons that may give the impression of more than two leaves.

*Welwitschia* is dioecious, meaning that there are male and female structures (in this case, cones) on separate plants. The female will produce a large number of cones that are red and about the size of an egg on a long stalk. These organs arise from the stem near the leaf bases. The pollen cones of the male plants are about one

half the size of the female or ovulate cones. The seeds are quite large and winged, which makes it easy for them to be blown about by the wind. It was thought that *Probergrothius sexpunctatus* (a squash like bug) was the pollinating agent, as it is almost always found on the female plants. However this insect is unable to fly, and not found on the male plants, therefore it can not carry pollen from plant to plant. Like many of its relatives, this insect sucks the sap from plants, in this case the young cones, destroying the embryos. The actual pollination agent of *Welwitschia* is simply the wind.

#### References:

- Benson, Lyman 1970. The status of *Welwitschia mirabilis*, C.&S. Journal (U.S.) XLII:200
- Bornman, Chris H. 1978. *Welwitschia*, C. Struik, Published in Capetown
- Bulbin, T. V. 1978. Southern Africa: Land of Beauty and Splendor, The Readers Digest Association, South Africa (PTY) Limited, Capetown
- Glass, C. & R. Foster 1976. Cacti and Succulents for the Amateur, Abbey Garden Press, Santa Barbara, CA.
- Horwood, Frank 1974. Succulent Safari to Africa, C.&S. Journal (U.S.) XLVI:260
- Jacobsen, Herman 1974. Lexicon of Succulent Plants, Blandford Press Ltd. London
- Song, Leo C. Jr, 1980. Gross Morphology of Developing Male and Female Strobili of *Welwitschia mirabilis*, C.&S. Journal (U.S.) LII:30
- photo of Dr. Welwitsch from Dedications Volume, Curtis's Botanical Magazine, 1931.



Martin Mooney and *Welwitschia*

Martin went to the country of South Africa to attend an IOS conference in 1976 and came home with seeds of *Welwitschia*. Little did he realize that those few seeds would present him with a propagating challenge that would yield plants for so many.

Martin was successful in germinating the seed and grew the plants to flowering size. The first plant to cone (flower) was a male plant. Without a female plant in flower at the same time he could not produce any seed. Further he did not know if he had any female plants yet, this male was the first to flower for him. What to do . . . a challenge ensues. He learned that male plants flower prior to female plants, usually a year before the female cones are produced.

Not being daunted by this dilemma he conceived of a great idea. Why not freeze the male cone and wait for the female cone. He carefully 'hung' the cone in the freezer section of his refrigerator in such a manner that it would not be touched by any of the normal items placed there.

A year passes and behold, Martin has a female plant in flower. He then removes the male cone, thaws it and transfers the pollen to the female cone. Now he has to wait and see if his idea was a good one. As you all know by now the female plant produced viable seed and martin is on his way to raising more *Welwitschia* plants.

Some of the plants are being distributed through Grigsby Cactus Gardens, The Huntington Botanic Gardens and friends. Thank You Martin for perseverance, Patience and being a very good propagator.

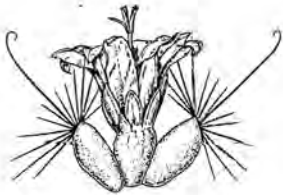
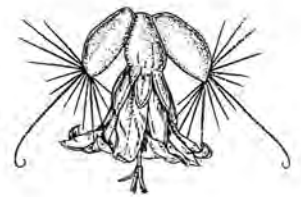
This is a short synopsis and so I encourage all to attend the meeting to hear Martin tell us about these cone bearing plants.

Other Notices

- If you have any *Welwitschia mirabilis*  
or
- Small Cacti please bring them in.
- Authors please bring in your articles the meeting before they are to be published.

Thank You

*The San Diego Cactus and Succulent Society*  
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## *The San Diego Cactus and Succulent Society*

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The San Diego Cactus and Succulent Society, Incorporated [a non-profit tax-exempt organization] is open to all persons interested in growing cacti or other succulent plants. Meetings are held the second Saturday of each month (except September and December) at 1:00 PM in room 101, Casa del Prado, Balboa Park. Board meetings are held at 11:30 AM prior to general meetings. 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 \$20.00 - three mailings per year. Affiliated with the Cactus and Succulent Society of America, Incorporated. Fax available - call