

Espinas y Flores

Newsletter of the San Diego Cactus and Succulent Society, Inc.
 Affiliated with the Cactus and Succulent Society of America
 Volume 35, Number 8, Saturday, August 12, 2000 at 1:00 PM



CONES, CORKSCREWS AND CRYPTICS

SOUTH AFRICA IS HOME to a dazzling array of plant species, second only to the diversity of the tropical forests. Among the flora of the region are many exotic looking miniatures, such as cone plants (*Conophytum* species.), "corkscrews" with twisted or curly leaves, and other hard-to-find (literally) cryptic-rarities. John Trager, curator of the Desert Collections at the Huntington, will focus on some of these fascinating plants that thrive in Southern California's climate.

John is Curator of the Desert Collections at the Huntington Botanical Gardens in San Marino, California where he has worked since 1983. His horticultural writings have appeared in the *Cactus and Succulent Journal*, the *Euphorbia Journal*, the Brooklyn Botanic Garden's *Garden Record*, *Garden* (the Journal of the Royal Horticultural Society) and the *Rock Garden Quarterly*.

He is perhaps better known for his photography which has been published in numerous textbooks and horticultural journals including *Aloe*, *American Horticulture* and *Fine Gardening*. Book projects include principal photographer for the *Conograph* (a revision of the genus *Conophytum* authored by SDCSS member Steven Hammer) and co-authorship and photography for *Dry Climate Landscaping with Succulents* produced by the Huntington. John has traveled widely in search of plants (and insects) including Mexico, Costa Rica, Venezuela, Israel, Thailand and China. He holds a Bachelor's Degree in Horticulture from Cal Poly Pomona and lives in Sierra Madre with his wife and three children.

Erratum – Last month on page 10 *Mammillaria hernandezii*, was misidentified. Please make a note of this and do not hesitate to point out errors or omissions.

After our first year as Editors, we hope that you have enjoyed the newsletter. Speaking for myself it has been a pleasure to work with Tom, and your feed back has been appreciated. Without your material to fill these pages, our job would be a lot more difficult. A special thank you, to all that have written for *Espinas y Flores* over the last year.

Sincerely, Joey Betzler
Associate Editor

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

Tom Knapik
4669 71 Street
La Mesa, CA 91941

Phone 619-462-1805 email eyf2000@aol.com FAX 858-569-8510

Newsletter submissions are due before the 14th each month unless other arrangements are made.

Espinas y Flores, the newsletter of the San Diego Cactus and Succulent Society, Incorporated, P.O. Box 33181, San Diego, CA 92163-3181, is published monthly with the exception of a combined May-June issue (11 issues per year). Newsletter circulation is approximately 330, with 20-30 issues going to educational institutions, botanical societies, cactus and succulent nurseries, local publications, related natural history events, exhibits, and other interested groups or individuals upon request. Subscriptions are \$15 per year for bulk mail within the U.S.A.

Opinions stated in the articles and editorials of *Espinas y Flores* are solely the opinions of the authors or editor and do not necessarily represent the opinions of other SDCSS members, the Board of Directors, or the organization in general. All materials submitted to *Espinas y Flores* for possible publication may be edited in form and content. All material in the *Espinas y Flores* may be reprinted by other nonprofit organizations (unless such permission is expressly denied in a note accompanying the material) provided that: proper credit is given to the SDCSS, *Espinas y Flores*, and the author. Please send one copy of the publication containing the reprinted material to the editor. Reproduction in whole or part by any other organization of publication without the permission of the editor is prohibited. Volume 35, Number 8, Published July 26, 2000.

AUGUST 2000 PRESIDENT'S MESSAGE

July's meeting was held in Room 104 as will the August meeting. It's a little crowded but a worthwhile inconvenience as room 101 is being refurbished with new walls, ceilings and floor. The remodeling will be completed by October 1.

The last meeting was very nice by all accounts. Two of the most giving individuals in the club made presentations. Michelle Heckathorn, who runs the plant exchange table, talked about a favorite of many, Sansevierias. Tom Birt, who runs our library, presented the cactus of the month featuring the Mammillarias of Oaxaca. These two exemplary people did fantastic newsletter articles and presentations with displays. Their efforts cannot be over appreciated.

Stan Yalof gave a slide presentation on Belize and Kelly Griffin on Hawaii. These impromptu editions to the program were well received. Stan is coordinating a January expedition of sorts to Belize and can be contacted at 760-743-1560. Steve Southwell's program on staging was cut short but we will look forward to bring him back in March for a very different kind of meeting. We're thinking of doing a plant staging meeting where we'll provide, at wholesale cost, various Bonsai pots with free rocks and potting mix for any members' plants to be professionally planted and staged. This would be a fun way to prepare for the June show.

Officer elections will be coming up this November and in an effort to take care of this as smoothly as possible both Joey Betzler and Jeff Harris have offered to be on the committee. Please call Joey, 858-569-8510 or Jeff at 619-294-5708 to be the third member of with your input. For those who aren't getting enough attention at home and may be interested in participating, please let one of the committee members know.

Thanks again to all and I hope to see you at the August meeting in room 104.

Sincerely, Thomas De Merritt



HUNTINGTON BOTANICAL GARDENS 17TH SUCCULENT PLANTS SYMPOSIUM
Splendid Floras and Great Succulents
SATURDAY, 2 SEPTEMBER 2000 8:30 AM. - 5:00 PM.



An international panel of speakers will include:

Robert Chinnock of the Plant Biodiversity Center in Adelaide, Australia / Royal Botanic Gardens, Kew
Mesembs – Diversity in Color and Form, and their Kew Legacy

Robert Benson of Bat Conservation International in Austin, Texas
The Amazing World of Bats and Its Relationship to Plant Pollination and Seed Dispersal

Sean Hogan of Cistus in Portland, Oregon
Exploring the Botanical Diversity of the Mountains of Notheastern Mexico: Searching for Good Garden Subjects for the West Coast

Eva and Voytek Foik of British Columbia, Canada
World Adventures of the Succulent Lover / Succulent Pockets of Namibia
After Optional Dinner (all are welcome) **El Niño: Atacama's Dream / High in the Dry**
and **James Folsom, Joe Clements, John Trager, and Gary Lyons** of **The Huntington**
Arks and Biodiversity: Preserving Plants for Horticulture, Conserving Plants for Nature



Registration is \$65. An optional evening dinner and lecture program is an additional \$25. For registration information and program details call (626) 405-2160. Friends' Hall

CALENDAR OF UPCOMING EVENTS

— 2000 —

■ AUGUST

- 5-6 South Bay Bromeliad Associates Show & Sale, Rainforest Flora Nursery, 19121 Hawthorne Blvd., Torrance CA 90503. Info, Bryan Chan, 8110 Murietta Av, Panorama City CA 91402, 818-787-4265, bcbrome@aol.com
- 17-21 Canadian National Exposition's competitive C&S show, Toronto ONT Canada
- 19 British C&S Society National Show, Springfields Exhibition Centre, Camelgate, Spalding, Lincolnshire
- 19-20 Intercity Show & Sale, LA County Arboretum. Phone Woody Minnich at 661-944-2784, or Dick Hulett at 310-832-2262, or Tom Glavich, 626-798-2430. for more info.
- 19-20 Central Ohio Show & Sale, Franklin Park Conservatory. Info Bruce Brethauer, 2260 Indianola Av, Columbus OH 43202-3024, 614-267-4109, bbrethau@columbus.rr.com
- 21-25 Succulenta 2000, Kirstenbosch Botanical Gardens, Capetown, RSA. Info, Organizing Com, Succulenta 2000, Private Bag X10, Hatfield, 0011 South Africa. Phone +27-11-884-5588, FAX #27-11-884-5685. email kambroo@cis.co.za
- 25-27 Eastern C&S Conference, host Connecticut C&SS, Southbury Hilton, Southbury CT. Info (as soon as it is available) Jeannine Loya, 100 Rensselaer Av, Cohoes NY 12047

■ SEPTEMBER

- 2 **Huntington Symposium**, Huntington Botanical Gdns, 1151 Oxford Rd, San Marino CA. info 626-405-2160 or 2277
- 3 CSSA Board Meeting, Huntington Botanical Gdn
- 9-10 Mid-Iowa C&SS Show & Sale, Merle Hay Mall, Des Moines IA. Info Rebecca Hoepfner, 515-292-1289, email: rehoep10170@aol.com.
- 9-10 Kansas City C&SS Show & Sale, Blue Ridge Mall
- 9-10 Houston C&SS Show & Sale, Houston Garden Center, Info, Mike Navolio, mnavolio@twistercom.com

■ OCTOBER

- 14 Central Oklahoma C&SS Fall Sale, Will Rogers Garden Center, 3400 NW 36th St, Oklahoma City OK. Info Joyce Bateman-Hochtritt, 408-737-1831, cactibud@aol.com
- 14-15 Orange County C&SS Show, Cal State Fullerton, Toni Garretson, 714-539-8773, sharkark@aol.com
- 20-21 New Mexico Xeriscape Conference, Albuquerque Convention Center. Info
- 21-22 San Gabriel C&SS Winter Show & Sale, Los Angeles County Arboretum, Arcadia, CA. Info Woody Minnich, 661-944-2784, Vince Basta, 714-738-1422

■ JULY

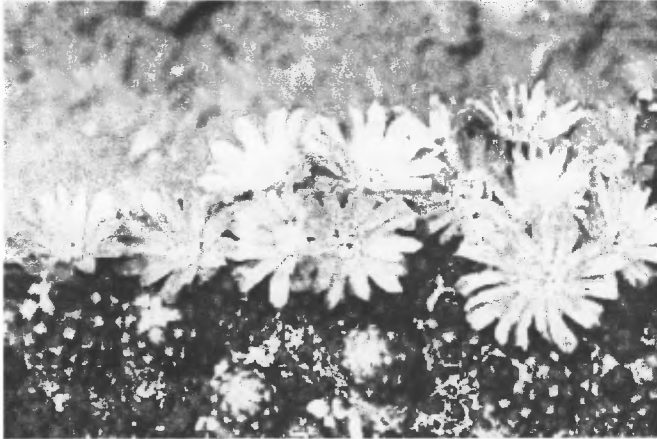
- 1-6 CSSA Convention, Warner Center Marriott, 21850 Oxnard St, Woodland Hills CA.
Please note that this is the correct date—some Affiliate newsletters are still reporting erroneous dates!!

FYI FYI FOR YOUR INFORMATION FYI FYI

- ⇒ **Start planning for the 2001 CSSA Convention.** The convention will be in Woodland Hills, California, July 1 to 6, Start making plans now for the best Cactus and Succulent event of 2001, well maybe second to the SDCSS Show and Sale. See you there!
- ⇒ **Gary Noel of Noel Enterprises**, SDCSS member and Tillandsia expert has been re-published in *The Eastern Spine*, Newsletter of the National Capital CSS. This was in the July–August 2000 Issue. Gary's article appeared in the first issue of *Espinas y Flores*, under the new editors, August 1999, a year ago.
- ⇒ **After 72 years the CSSA Journal will be getting a new look!** In time for the true millennium the Journal will have a new format. The layout will be a collaborative effort between the current editor, Myron Kimmach and Nick Lear in England. They will work over the internet. Join now, don't be left in the Past! Call CSSA affiliate **Kelly Griffin** at 760-942-4866 or see the online form at: <http://www.cactus-mall.com/apps/form.mv>
- ⇒ **SDCSS members are winners at the Del Mar Fair 2000!** **Jeff Moore** of **Solana Succulents** won the: American Horticulture Award, Paul Ecke, Sr., A special award – Best Succulent Garden (first and second place), and an award for his Unique Landscape. **Michael and Joyce Buckner** of **The Plant Man 2000** won an award for their Patio Garden. **Paul Maschka** won the Royal Horticulture Society Education award for his butterfly garden design.
- ⇒ A BIG THANK YOU to **Thalia Criscenzo** for her help with the reception table at the 2000 Show. Also a note of appreciation to **Kay Quijada** for her photos of Pam Badger's exhibits that appeared in the last issue of *EyF* and THANKS for giving out photos at the last meeting
- ⇒ A SPECIAL CACTUS WELCOME to **Sixteen NEW SDCSS Members** from Earthday, The Baja Garden at the Wild Animal Park, our annual show and sale, and the Del Mar Fair 2000: **May Barbera, Walter Cabanillas, Jeremy Gercke, Steven A. Harris, Sunny Loventhal, Calina Nobiensky, Maria Elena T. Ocampo, Anthony Owen, Eugene Orth, Kathleen D. Riley, William Skimina, Jennifer Sohl, Louise Ventola, Ryan Wong, Kara Williams, and Joe Zivny.** Did we forget you or get your name wrong? Please call and let us know 858-569-8510!

PEDIOCACTUS AND ALLIES: NAVAJOA AND TOUMEYA - THE CACTUS OF THE MONTH

by Joseph Betzler



Pediocactus knowltonii from Hochstätter's Web Page

The genus *Pediocactus* was created by Britton and Rose in 1913, there are about six to eight species. *Navajoa* and *Toumeyia* have one species each – though *Navajoa* has a lot of variation. *Toumeyia* does not seem to have as much variation in its range and it is commonly called the Grama grass cactus. I have looked for this cactus in the wild and found it growing (with help) in the grasses. It is very difficult to find. The names of these plants have been changed a lot. Much depends on who you choose to follow. These cacti represent one of those complicated cases where the different populations of plants seem to form a continuum from one species to another. Though we like to understand things as being clear cut, often in nature a complex group has variable characteristics that form no distinct boundaries. A good example of this 'complex' is *Navajoa peeblesianus* and its different varieties and forms.

Pediocactus, *Navajoa*, and *Toumeyia* are miniature sized cacti. They also share cold environments in which to live, but the upper temperatures can reach up to 100°F or more in the summer. These seasonal fluctuations can be a bit of a challenge for us to grow in southern California. The smallest species have heads are that ½ to ¾ inch in diameter (dime to nickel sized). The larger specimens can be 4 to 6 inches in diameter. The plants are cylindrical to globe shaped and form solitary to clustered stems. There are no ribs on the body of the plant, but the plants have tubercles, spirally arranged, similar to *Mammillaria* spines, are on the tips of these tubercles. The number, color, size, thickness, texture, and direction are variable.

PEDIOCACTUS

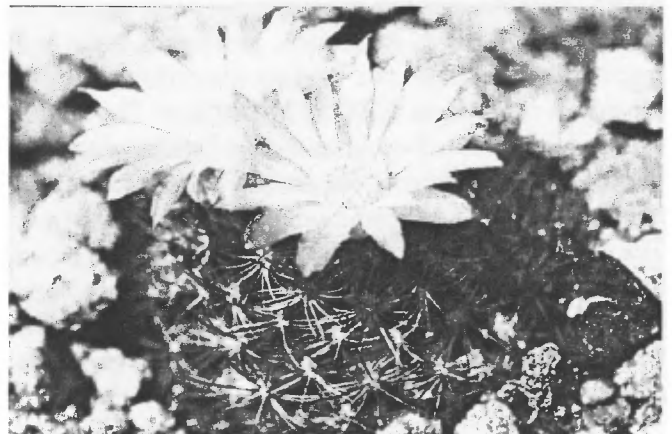
The spine clusters often obscure the plant body. One of the major diagnostic features of *Pediocactus* is flower placement. Flowers are borne near the tips of the tubercles next to the spine clusters (areole). Flowers are ½ to 1 inch in diameter and range in color from yellow to magenta, and cream to white, some flowers are multicolored occasionally with a darker mid-stripe on

each petal. The fruit is green to green-yellow often turning red-brown when mature. Texture of the fruit ranges from: smooth, to few scales. No spines are present on the fruit body. This naked fruit is cylindrical to 'top-shaped' with a constricted base and a slightly convex flower scar. Fruit dehiscence (seed dispersal) is an important feature and discussed below.

Lyman Benson revised the genus in a series of papers in 1961-62. *Pediocactus* in the sense of Benson was enlarged to include members from six other groups: *Echinocactus*, *Mammillaria*, *Navajoa*, *Pilocanthus*, *Toumeyia*, and *Utahia*. The basis for this lumping is the fruit dehiscence through a vertical slit in the ovary wall and the swelling of this wall that 'opens.' This slit swells into a portal for the seed to drop through. Hochstätter (1990) has chased *Pediocactus* and its allies in eleven states which delineates the western United States with only Montana left out. These states are; Arizona, California, Colorado Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming. No plants are recorded in Canada and the Mexican species need further study. This genus of cacti survive in environments that are very harsh. For the purposes of this paper I will tend to follow Hochstätter.

Heil at al, divide the genus into two groups; the "river system" plants form one group. The river that they refer to is the Colorado and its major tributaries. All these species are found within a few miles of the water and most (there is one exception) are in the Navajoan Desert at elevations between 3,400 to 5,900 feet. The other species are from diverse habitats and will be dealt with individually.

The "river system" plants consist of; *Pediocactus knowltonii*, *P. bradyi*, *P. winkleri* and *P. despainii*. One species, *P. knowltonii* the exception, does not actually grow very close to the Colorado River but all the members do grow in gravelly soils, usually alkaline in nature. *Navajoa peeblesianus* was part of this group in the past.



Pediocactus simpsonii from Hochstätter's Web Page

The smallest taxon is *Pediocactus knowltonii*. Individual heads can be ½ to 1 inch in diameter and with age the stems form clusters. Not only is the size small but the distribution is very small as well. This plant is protected and grows at 6,600 feet. It receives more snow than any other *Pediocactus* except perhaps *P. simpsonii*

Pediocactus bradyi grows in a very narrow band along the Colorado River, in the vicinity of Marble Canyon, in Arizona. It grows in limestone flakes. In the extremely hot dry summer months the plants pull themselves below the surface of the soil. With the first rains, the plants 'pop-up', and are usually the first ones to bloom and set seed in this genus.

Pediocactus winkleri is a recently described plant (1979) with a limited range in Wayne County, Utah. It grows between 5,000 to 5,300 feet on alkaline hills. This cactus also 'hides' during the extremes in temperature. These extremes can be from 105°F to -30°F, few cacti can tolerate these extremes. Read more about the U.S. Government protection of this species and *P. despainii* at: <http://www.blm.gov/utah/resources/te/T&E.html>

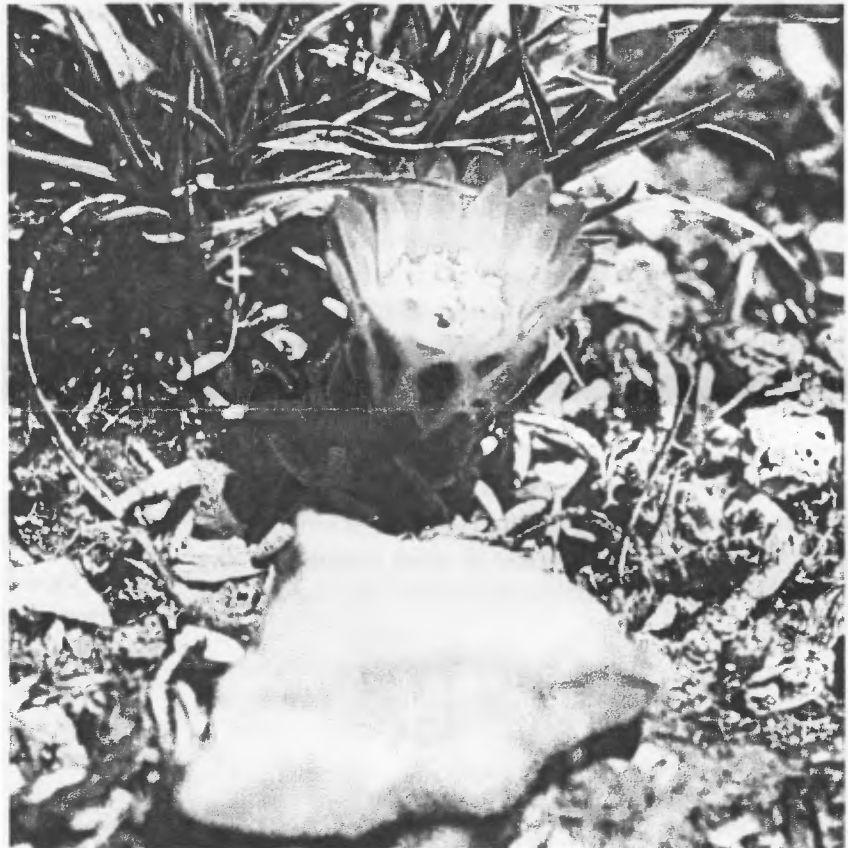
Pediocactus despainii is the most recently described (1980) pedio. It is the largest "river system" plant, with specimens up to 21 inches tall by 3½ inches in diameter. Plants can be found on rocky slopes near juniper forests at about 5,900 feet. The range is very limited in southeastern Utah. The flower buds are formed in the fall and do not open till the following April or May. This feature is common in *Pediocactus*; the flowers overwinter. When the flowers open in spring they are the showiest of the genus. This is the extent of the "river system" group, the following plants grow in diverse mountainous areas.

This first taxon is also the type species (the Plant that the genus is based on) *Pediocactus simpsonii*. There are three varieties recognized. Variety *simpsonii* inhabits mountainous areas associated with pinyon-juniper, sagebrush, ponderosa pine and spruce-fir forests at the higher elevations. Those elevations range from 6,700 to 11,000 feet! The robust variety (var. *robustior*) occupies the dry regions of eastern Washington and Oregon, the extreme west of Idaho and northeastern Nevada. It is found in open rocky grassland. The eastern most member is var. *minor*. This variety grows in eastern Wyoming through Colorado to Taos New Mexico. Most plants grow below 9,500 feet and can be found in association with ponderosa pine or open prairie grassland.

Pediocactus paradinei inhabits two distinct but

adjacent habitats in extreme northern Arizona. At 7,000 feet the plants grow in pinyon-juniper woodland on the Kaibab Plateau eastwards to the open grass covered alluvials at 5,000 to 6,000 feet. When the plants are in their retracted state they are almost impossible to find. The name "Gypsum Cactus" describes some of the habitats of *P. sileri* one of the larger bodied plants (6 inches tall and 4 inches in diameter). It can be found in the gypsum soils of Fredonia, Arizona, but grows just as well on the adjacent red sand soils.

According to Hochstätter the list of species would be *Pediocactus sileri*, *P. nigrispinus*, *P. simpsonii*, *P. paradinei*, *P. knowltonii*, and *P. bradyi*. The first two are not described here. Check out the web sites listed below for more information on these and look at the many images online.



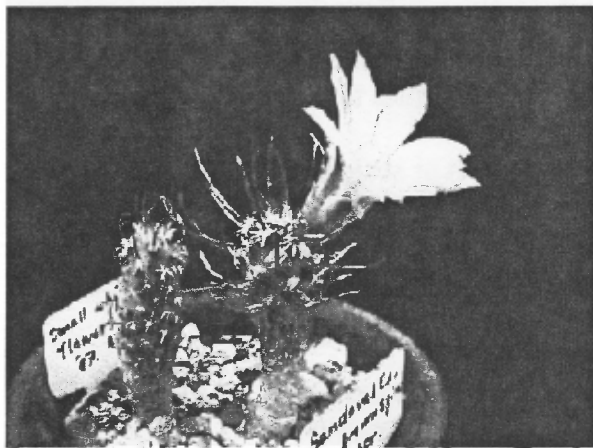
Navajoa peeblesianus fa. *menzelii*, named for SDCSS member Juergen Menzel

NAVAJOA AND TOUMEYA

Navajoa peeblesianus var. *peeblesianus* usually are single stemmed plants and grow in a restricted range. These plants are found at 5,000 feet on low gravelly hills on the Little Colorado River near Holbrook, Arizona. It is common in its range, but during the dormant season it is rather difficult to find due to its retractile root. This retractile property is common in many of the 'pedios' which makes field collected plants difficult to establish. The variety *fickeisense* also has a range along the Little Colorado as well as the Colorado River. The altitude is similar but the plant is not as threatened as its sister variety. This genus was first described by Croizat in 1943 in the Cactus and Succulent Journal of the USA, (volume

15 pages 88-89). Hochstätter recognizes many forms.

Toumeyia papyracanthus, the Paper spined or Gramma grass cactus has been bounced around from *Mammillaria*, to *Echinocactus*, *Pediocactus*, and *Sclerocactus*. For this writing I am using *Toumeyia*. The plants can be found in two disjunct areas. In New Mexico small populations range from Santa Fe to Albuquerque. The Arizona location is near Holbrook. Further differentiating these plants from *Pediocactus* is that they are taller (see Figure 8.7, from Benson, 1981) and the fruit dehiscence is different.



Toumeyia seedling photos by Koichiro & Hiromi Yoneda.

CULTURE

Cultivation of *Pediocactus* and its allies is difficult. Since most *Pediocactus*, *Navajoa*, and *Toumeyia* are listed as threatened or endangered they may not be collected in the wild. There are even projects to reintroduce plants back into the wild in areas that have been extirpated of plants. Cultivated plants or seeds from nurseries are available. Plants do well when they are grafted, though they lose their natural features and become bloated. If you decide to tackle these plants don't forget that the 'river system' plants have two dormant seasons: summer and winter. If you decide to graft these plants, it is best in spring, or early summer, or early fall. The mountain plants are dormant only in winter and grafting is possible when ever they are, actively growing. Seedling cultivation is probably the best method being used for propagation. It is important to cold stratify the seed and label the seed pots well; all seedling pedios look the same. These plants do not like humidity. If you want to talk a bit more about these fascinating plants look up member Juergen Menzel, he has grown these plants for quite awhile and discovered *Navajoa peeblesianus* fa. *menzelii*.

Please Bring in Your Plants

BIBLIOGRAPHY:

- Arp, G. 1972. A revision of *Pediocactus*. *CSSA Journal* 44:218-222
- Beaston, W. Web site: www.labs.agilent.com/botany/public_html/cacti_etc/images/cacti/Pediocactus/nigrispinus.html
- Bureau of Land Management, U.S. Government Web site: www.blm.gov/utah/resources/te/T&E.html
- Benson, L. 1981. *The Cacti of Arizona*. Revised Third Edition. The Univ. of Arizona Press.
- Brack, S. Web site: www.mesagarden.com/pedio.html
- Hiel, K., B. Armstrong, and D. Schleser. 1981. A Review of the Genus *Pediocactus* *CSSA Journal* 53:17-39.
- Hochstätter, F. 1990. *To the Habitats of Pediocactus and Sclerocactus*. Self Published.
- Hochstätter, F. Web site: hometown.aol.com/fhnavajo/html/genera/docu.htm
- Hochstätter, F. Web site: www.cactus-mall.com/cdrom/sclero.html
- Weniger, D. 1971. *Cacti of the Southwest*. Univ of Texas Press.
- Yoneda, K. and H. Web photos: www.asahi-net.or.jp/~dt4k-ynd/text/toumeyia2.htm

An Apology

I would like to offer an apology to the members of SDCSS for my contribution to last months excess in our program length. Sometimes my enthusiasm has a way of spilling over and making a bit of a mess.

It was not my intent to have the Maui slides, I brought in, add to an already full program. I was unaware that there was another mini program on the docket. My original plan was to show anyone that was interested a few slides at the end of the meeting, that way, I had thought, it would not interfere with the program nor would it delay anyone that was uninterested. Nice thought but a bad plan, as it would have been nearly impossible to show slides at the end as people were trying to leave and pack up. So...we did it before the main speaker.

Bottom line, it had the effect of making the meeting long and shortening the time allowed for our speaker and for that I am truly sorry.

Steve Southwell did an absolutely terrific job turning some semi-ugly plants into real show pieces and he had much more to share with us. We will have to have him back again soon! Thank you Steve for such a great program!

Sincerely, Kelly Griffin

ABROMEITIELLA *AKA DEUTEROCOHNIA

by Joe Quijada

Years ago while visiting Grigsby's Nursery, I was fascinated by a plant that had outgrown its pot, completely covered the bench, and was on its way to covering the entire nursery.

Like many of the interesting plants we grow there is not a lot of information written about Abromeitiellas * 'also known as' Deuterocohnias.

In the *Bromeliad Lexicon* the late Werner Rauh writes;

--- "Named after the botanist J. Abromeit, the two species forming the genus are found in the high Andes of Argentina and Bolivia. They are interesting terrestrial bromeliads, forming very large mats of cushions; very firm, spiny, made up of innumerable small single rosettes resulting in a mound or dome. After flowering, the plant divides at the uppermost leaf axes, and continues to divide thus presenting a very long growth pattern.

--- Densely arranged leaves, short-triangular, succulent, green or scaled, sharp spiny tip, and flared, toothed margins.

--- Few flowers in a sessile inflorescence, with long, yellowish-green petals. *Abromeitiellas* are extreme xerophytes, requiring little water in cultivation but a lot of light in order to maintain the compact cushion growth. In winter, the plants can be kept cool. Suitable for growing with cactus."

In the *Illustrated encyclopedia, Cacti and Succulents*, Miles Anderson writes;

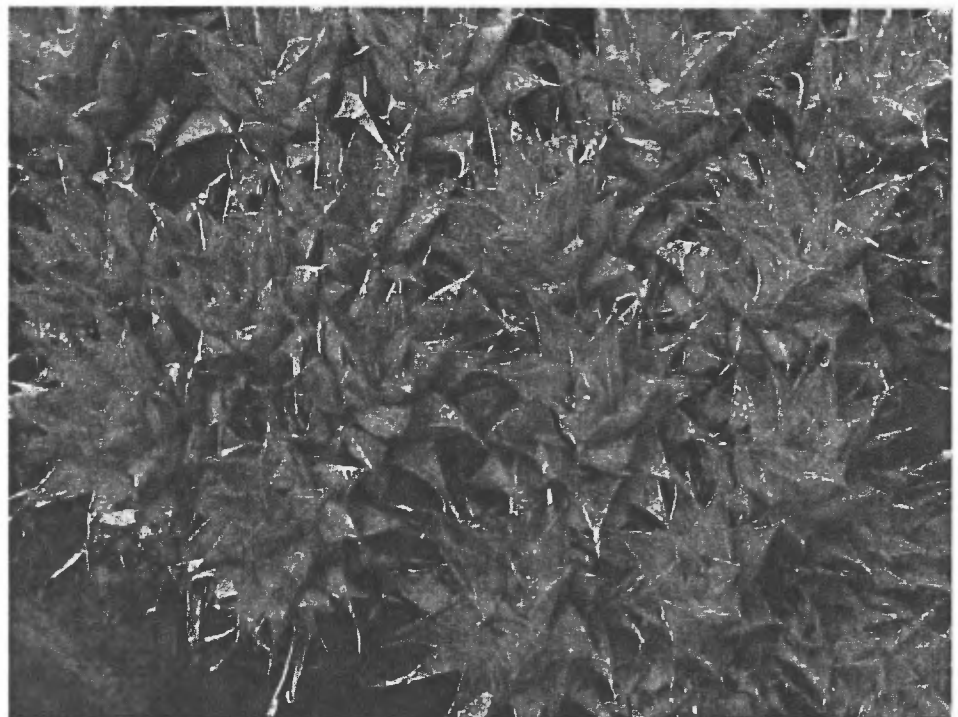
--- "These dwarf members of the pineapple family form mounds or mats, made of many small rosettes. The leaves vary from gray-green to green. They are fairly slow growing but will tolerate low humidity, temperatures down to 35 degrees and some sun."

In the *Blooming Bromeliads*, Ulrich and Ursula Baensch write;

--- "*Abromeitiella* includes only three species. They are at home in the arid, hot regions of Argentina and Bolivia. By means of short, subterranean stolens, the plants produce dense clusters, resembling pillows. It is the only genus with such a phenotype.

In 1996 Michael Spencer and Lyman Smith merged *Abromeitiella* with *Deuterocohnia*.

In the 1998 *BSI list of Bromeliad Binomials*, there are now the following species: *Deuterocohnia bracteosa*, *D. brevifolia*, *D. brevispicata*, *D. chrysantha*, *D. digitata*, *D. glandulosa*, *D. haumanii*, *D. longipetala*, *D. lorentziana*, *D. lotteae*, *D. recurvipetala*, *D. scapigera*, *D. meziana*, *D. schreiteri*, and *D. strobilif.*



Deuterocohnia brevifolia

I have grown *Deuterocohnia brevifolia*, *D. lorentziana*, and *D. meziana* in the coastal region of San Diego. They can be grown in pots or on rocks. They must be grown in bright light for tight rosettes. Full sun may burn the leaf tips. I grow them under 40% shade cloth, and fertilize and water freely. I have also grown *Deuterocohnia clorantha* which may or may not be a species, with equal success. All these plants are easy to grow and will add to your collection. **Please bring in your specimens to share.**

References:

The Bromeliad Lexicon, Werner Rauh, Blandford Publisher, 1979
Blooming Bromeliads, Ulrich Baensch, Ph.D. & Ursula Baensch, Tropic Beauty Publisher
Illustrated Encyclopedia, Cacti and Succulents, Miles Anderson, Lorenz Books, Anness Publishing Inc.
An Alphabetical list of Bromeliad Binomials, Published by The Bromeliad Society, Inc.

**NEVER BUY A NOISY CACTUS:
 A True Story**

In the second such incident in the Southwest, a San Diego woman purchased a large cactus during the redecoration of her home. The huge cactus was a fitting centerpiece for her "New Southwest" look, and she was quite happy with her \$3,000 purchase - for a while. A few days later, she noticed that the big cactus seemed to be swaying ...and humming. Bewildered, and not knowing where else to turn, she dialed 9-1-1 and - fortunately for her -got an operator who knew what this uncactus-like behavior meant. She was told to clear out of the house immediately -like right now! - and wait for an emergency team. The responding five man team had just enough time to move the huge cactus into the back yard before it burst wide open, scattering about a thousand tarantulas in all directions. The nursery where she had purchased the cactus refunded her\$3,000 and paid for exterminator service for the entire block. When asked later how her plants were, the lady replied, "Plastic and silk, thank you!" The fashion of using cacti for home decoration is fairly new, but tarantulas have been using them for mass breeding farms for a long, long time.



Brag table winners

Cacti
 1st Joe Quijada for *Arrojadoa penicillata*
 2nd Jeff Wright for *Gymnocalycium* sp. 'red cap'
 3rd Jeff Wright for *Mammillaria alamosensis*

Succulents
 1st Rudy Lime for *Portulacaria afra*
 2nd Don Patterson for *Rhytidocaulon macrolubum*
 3rd Pam Badger for *Encyclia hanbutyii*
 (an orchid)

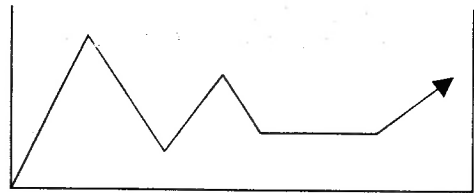
Here are the donors from our last meeting's Benefit Table:

- Carol Jean Wolcott..Pereskia sp. (2), Opercularia, Euphorbia leucodendron, Rhipsalis sp., and Euphorbia pteroneura.
- Shirley Berry.."CACTUS GUIDE" by Ladislaus Cutak
- Jeff Wright..(3) custom pots
- Camille & Rich Horak..Nidularium sp.
- Chris Miller.."CSSA Journal" Feb. 2000

Thank you for your generous Support!

WHAT'S THE STATUS?

by Tom Knapik



My parents recently purchased a house in Green Valley near Tucson, AZ. They sent me this article and I thought it was an appropriate topic for my column. It was written by Gary Duffy of the Green Valley News and appeared in the March issue this year.

Saguaro Census

Time is relative. For humans, a decade represents a significant amount. For the longer lived saguaro cactus, 10 years is more of a brief interval.

A "Saguaro Census" is underway, with National Park Service workers studying selected areas of Saguaro National Park to determine the overall health and numbers of the giant cactus.

"Ten years ago, researchers at Saguaro National Park observed what appeared to be an increase in browning on the outer skins of saguaro cacti and speculated that air pollution might be the cause," Mark Holden, Park Service spokesman at the national Park explained recently.

To determine if that might be the case, and to see if saguaro cacti in the Tucson metropolitan area might be facing a threat to their survival, the Park Service looked at and mapped saguaros on 45 10-acre plots throughout both the east and west units of the park for future study.

Now, a decade later, the census has begun. "We're looking at their numbers and for indications of their health." Carianne Funicelli, a Prescott College graduate hired as a researcher by the Park Service, said during a trip into the field.

The legwork for the census is being supplied by visiting students from the University of Arizona, Humboldt State University, and Northern Colorado University. The project is funded by a private sector research grant from Canon USA, Inc.

In the decade since the original study was done, the Tucson metropolitan area has encroached ever farther into the Sonoran Desert, and ever closer to both units of Saguaro National Park. Researchers were curious what they would find about the general numbers and health of the giant but delicate cacti.

"There has been a lot of new recruitment," Kale Turner, also hired as a researcher by the Park Service, said after researchers had looked at two of the 45 plots set out a decade ago.

The recruitment, or now young saguaros, could be the product of heavy winter rains that washed over the region as long ago as 1981 and 1983.

Despite their impressive size as adults, saguaro cactus grow very slowly, perhaps an inch a year, if they are lucky enough to take root at all.

For a saguaro cactus to sprout from seed and have a chance at surviving both the hard desert elements and hungry desert wildlife, it needs luck as much as anything else. A seed that falls beneath an existing "nurse plant" like a mesquite tree has a better chance of germinating and surviving into adulthood than does a seed that falls in the open desert, exposed to the elements.

The plants, which can grow to 50 feet and reach 200 years old, are remarkably fragile. It grows only at certain elevations, and then best on sun-facing exposures. The taproot of even the largest specimens penetrates only about three feet into the desert below, making it susceptible to toppling under extreme conditions.

While able to store water and survive long droughts, the species cannot tolerate cold, and killing frosts do take their toll, particularly on very old and very young plants.

One of the causes of concern when the census was initiated 10 years ago was that researchers then saw little evidence of recruitment of young plants. Was air pollution causing the browning, possibly leading to the killing off a particularly delicate desert species? Or were other factors at play?

It is still too early to know, Turner offered. But weather variations could play a larger role than previously suspected, at least in terms of recruitment of young saguaros to replace those that die off.

One reason for his suspicion is that there appears to be a high percentage of mature saguaros compared to adolescent and young ones.

"There was a long period without recruitment, without many new ones establishing," he observed.

While data collected in the census is to be available for examination late this summer, an accurate picture of the possible future of the saguaro will require a long-term approach, Turner said.

By the time the next census time comes around in 2010, the student researchers who participated in this year's study will be nearing middle age. But many of the saguaros they examined will just be approaching adolescence. It will be up to a different generation of humans to complete the study.

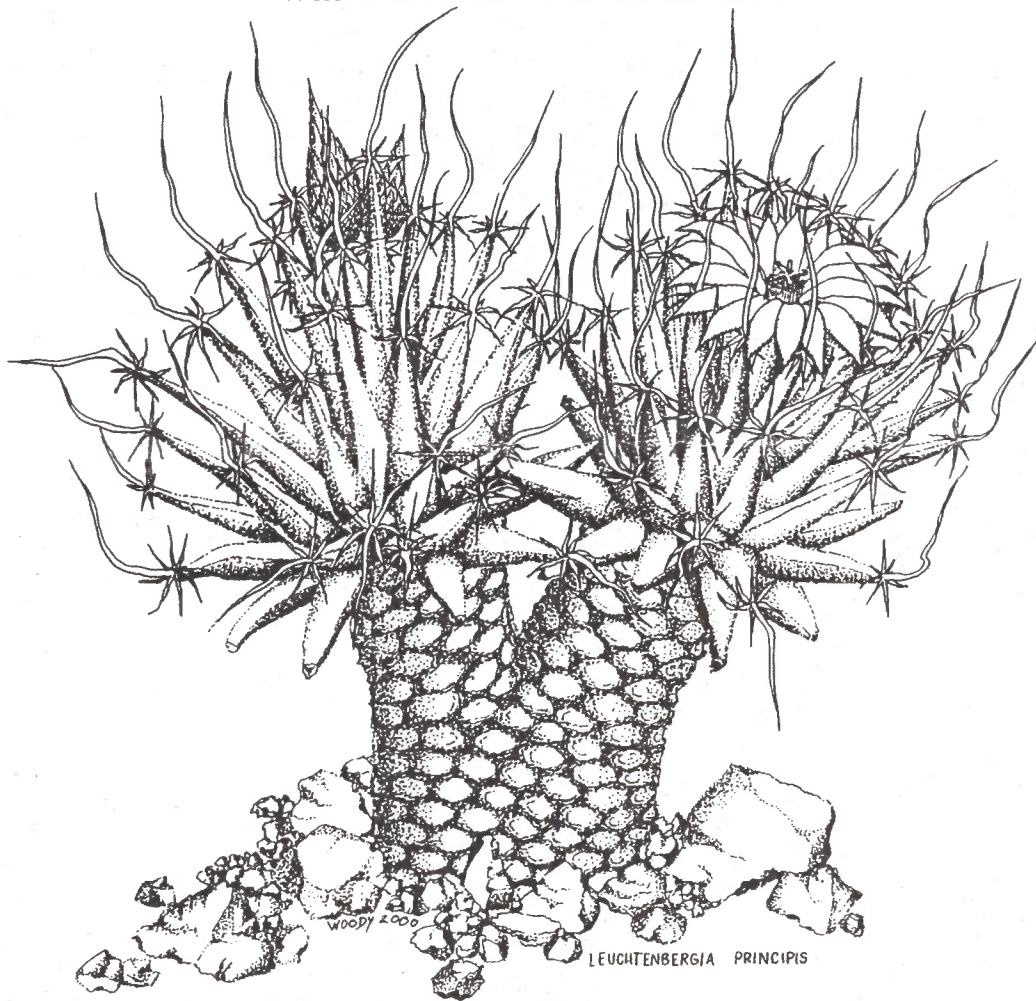
15th ANNUAL INTER-CITY CACTUS & SUCCULENT SHOW

AND HUGE EXOTIC PLANT SALE

Sat. & Sun. August 19th & 20th, 2000 from 9 to 5 each day
At the L.A. County Arboretum, 301 N. Baldwin Ave. Arcadia, CA

"EXTREME PLACES AND SPACES"

Where Cacti and Succulents Grow



Featuring daily **WALKS AND TALKS** by well known experts presenting various topics from culture to showing. Walks & Talks info. on back of flyer.
Sponsored by the Long Beach, Los Angeles & San Gabriel Valley Cactus and Succulent Societies. **For more information please call:**
Larry Grammer 323-276-8935, Woody Minnich 661-944-2784, Jim Hanna 818-891-9986

Issue Highlights

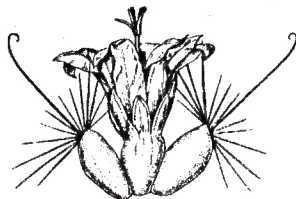
Speaker, Errata, & an Anniversary ... 2
Presidents Message & Huntington Symposium ... 3
Calendar & For Your Information ... 4
Cactus & Succulent of the Month ... 5-9
Brag Table Winners & Benefit Table Donors ... 9
Saguaro Census ... 10

NONPROFIT ORG.
U.S. POSTAGE

PAID

SAN DIEGO, CA
PERMIT NO. 737

The San Diego Cactus & Succulent Society, Inc.
P.O. Box 33181, San Diego, CA 92163-3181



ESPINAS Y FLORES

Editor: Tom Knapik - 619 462-1805
Associate Editor: Joey Betzler - 858 569-8510
Mail to: 4669 71 St., La Mesa, CA 91941
fax 858 569-8510 or e-mail eyf2000@aol.com

SAN DIEGO CACTUS AND SUCCULENT SOCIETY INC

2000 Executive Board Members

OFFICERS

President - Tom De Merritt
858-270-5544
Vice Pres.- George Flaisted
619-583-9551
Secretary - Laura De Merritt
858-270-5544
Treasurer - Herb Stern
619-223-9134

EX OFFICIO

Immediate Past President
- Tom Knapik
619-462-1805

DIRECTORS

Pam Badger
619-589-1223
Ed DeLollis
760-945-7892
Joe Kraatz
760 758-7042
Spencer Maze
858-454-1870
Terry Parr
619-460-9111
Kelly Parrott
619-696-0376

SDCSS Volunteers on Standing Committees and Sub-Committees

Conservation:

Joey Betzler and Kelly Griffin

Education and Exhibits:

Brag Table - Shirley Berry
and Kay Quijada

Plants of the Month - Jeff Harris
and Joyce Buckner

Summer Show - Tom Knapik, J.
Betzler and Kay Quijada

Winter Show - Ed DeLollis

History: vacant

Liaison:

Balboa Park Desert Garden-

Susan Hopkins

CSSA Affiliate Rep. -

Kelly Griffin

Quail Botanic Gardens -

Phylis Flechsig

San Diego Botanic Garden

Foundation - George Flaisted

San Diego Floral Association -

Elizabeth Glover

S. D. Wild Animal Park's Baja and

Succulent Collections - J. Betzler

Library:

Tom Birt and Cynthia Santorini

Membership:

Joey Betzler (858-569-8510), Collette
Parr

Mailing:

Pam Badger and Jeff Harris

Plant and Seed Exchange:

Plants - Michele Heckathorn and Sara
Schell

Seeds - Kelly Griffin

Plant Sales and Supplies:

Annual Sales - Tom Birt

Auction and Holiday Plants - L. Badger,
and Tom DeMerritt

Benefit Table - Kay Quijada and L. Badger

Monthly Plant Sales - Jeff Harris and
Greg Wade

Monthly Supply Sales - George and Jerry
Flaisted

Publicity: Tom DeMerritt and Stan Yalof

Programs: Kelly Griffin (760-942-4866)

Reception:

Ethel Standish and Elizabeth Glover

Regalement:

Monthly - Lee Badger, Rudy Lime and
Stefy Mangold

Picnic - Laura and Tom DeMerritt

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 \$15.00 per single member per year, \$5.00 for each additional (associate) member within the same household. Single copies of *Espinas y Flores* are \$2.00 per copy sent within the USA; foreign subscriptions are \$30.00. Affiliated with the CACTUS AND SUCCULENT SOCIETY OF AMERICA, Inc. SDCSS Web Page available soon please stay tuned for address.