

## President's Letter ——— September 2004

I am writing this edition of the President's Letter in a most unusual place. I am on the northern most of the Sandwich Islands in the Pacific Ocean. You might know it better as Kaua'i, "The Garden Island" of Hawaii.

Being in Hawaii is not all that unusual but visiting a cactus garden on one of the wettest islands in the world might qualify. I am at the Moir Pa'u a Laka Cactus and Flower Garden. Who would have thought...a cactus garden in the middle of the ocean??

Hector and "Sandie" Moir lived at and managed the Outrigger Kiahuna Sugar Plantation. Sandie began her garden in the early 1930's. As most people would, she assumed that just about any exotic tropical plant would flourish on the island. After all, the plantation is not far from the wettest place on plant Earth, Mt. Wai'ale'ale, which *averages over 450 inches of rain a year*. 800 inches was recorded in one year!!

Alas, she was mistaken. Her little corner of the island received much less rain, about 19 inches a year. Undaunted by this miscalculation, she decided to try cacti and succulent plants. They thrived. By 1948, the Moir Garden was classified as "one of the ten best cacti and succulent gardens in the world." It was mentioned in the same breath as the Huntington and the Royal Gardens of Monaco.

Unfortunately, time and neglect have teamed up to take the garden out of the world-class category. It seems the current owners' time and money have gone to the 600+ plant orchid garden which also graces the property. Ben, the gardener who has been there for 25 years, said he doesn't know too much about cacti and doesn't want to. (No wonder the garden has declined.) He went on to say that the management has shown no interest in find someone who would. (There goes my excuse to move to Hawaii.)

The plants were poorly labeled but the garden was dominated by a great number of aloe and Euphorbia species. I think I got some good pictures and hope to make them available to anyone who has an Internet connection. The "coolest" plant I saw was a huge, crested, variegated Euphorbia.

There were four major types of cacti - columnar, Opuntia, epiphytic and other climbing species. The Hylocereus (sp??) were in bloom and there appeared to be several species of Selenicereus. The Agave celsii were huge, as was another species I couldn't identify. The dominant Opuntia were of the former Nopalea genus but there were a few others. All in all, it was an interesting place to spend an afternoon in Hawaii.

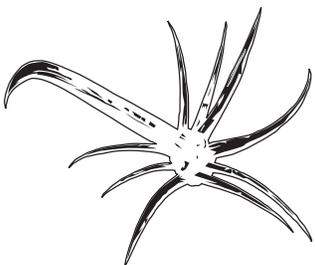
Aloha.

p.s. Be sure to check out the Club Calendar on Page Two to see what's coming up.

p.s.s. A special reminder to begin thinking about what plants you are going to donate to the Ultra Huge, amazing, Stupendous, Sensational Silent auction at our October meeting. And save your pennies so you can be sure to have enough money to caste the winning bid for the "plant of your dreams."

### *Fun & Frolic at Leo's House*

All members of the CACSS are welcome to the home of Leo Martin on Sunday, October 17, at 5 pm. Leo will provide coffee, iced tea, and light snacks. If you desire anything else, bring it. A folding chair in your trunk might be a good idea in case turnout is high. For the first meeting we filled all the chairs and sofas in Leo's house, and two people sat on an end table! This will be the regular meeting of the Convention Planning Committee. Even if you can't volunteer with the Convention, you might have some good ideas for us to use, so please join us. Leo's address is 4205 East San Miguel, Phoenix, north of Camelback off 40th Street.



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## Calendar

All CACSS meetings held last Sunday of each month at 2:00 PM at Dorrance Hall in the Desert Botanical Garden unless noted.

September 26, 2004 2:00 PM (Sunday)

**CACSS:** Leo Martin, past President of the CACSS, current Director of the CSSA, program chair for the upcoming 2005 CSSA Convention in Scottsdale. Topic: Journey through the Valley of the Rio Huaura, Lima Province, Peru, June 2003. *Leo attended the Course on Cactus Botany at La Molina Agricultural University, organized by Carlos Ostolaza, in Lima, Peru. Speakers included Jim Mauseth, Professor of Botany at the University of Texas. CSSA Fellow Dr. Ostolaza is the leading authority on cacti of Peru. Following three days of lectures, for three weeks the group toured the valley of the Rio Huaura. Plant seen included Carica, Haageocereus, Jatropha, Matucana, Mila, Neoraimondea, Opuntia, Puya, Stenomesson, Tillandsia, Trichocereus, Weberbauerocereus.*

October 23, 2004 9:00 AM (Saturday)

**CACSS:** Members-only tour of H. B. Wallace garden. Car-pooling will be mandatory. Meet at Cynthia's at 9:00 am. Pay careful attention to parking instructions and speed limits.

October 31, 2004 2:00 PM (Sunday)

**CACSS:** Silent Auction: Gigantocactomanical Silent Auction of members plants. *Wildflower Pavalion*. Open to the Public! We accept cash and local checks. All plants must be carried off the day of the sale by purchaser; no mail orders.

November 21, 2004 2:00 PM (Sunday, not last Sunday of month)

**CACSS:** Woody Minnich, proprietor of Cactus Data Plants. TBA

December 12, 2004 **12:00 PM** (Sunday, not last Sunday of month)

**CACSS:** Holiday Party, Elections. *Webster Auditorium*.

### EVENTS OF INTEREST IN THE SOUTHWEST AREA

September 14, 2004 7:00 PM (Tuesday)

**ARIZONA NATIVE PLANT SOCIETY:** Wendy Hardy & Daryl Workman

The first meeting after our summer break will be an interesting presentation from the City of Scottsdale regarding the native plant salvage program. Please mark your calendar to join us, and invite a friend or two!

October 1-3 2004

**ARIZONA NATIVE PLANT SOCIETY:** Annual Conference (see notice p.4)

October 7, 2004 7:00 PM (Sunday)

**TCSS:** Matthew Johnson will do a talk based on information and pictures from his new book *Cacti, other Succulents, and Unusual Xerophytes of Southern Arizona*. This will be the first part of a two part presentation.

**WWW.CENTRALARIZONACACTUS.ORG**

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## *Exploring the valley of the Rio Huaura, Lima Province, Perú — Leo Martin*

In June 2003 I was invited by Jim Mauseth, Professor of Botany at the University of Texas, Fellow of the Cactus and Succulent Society of America, to attend the 6th Course in Cactus Botany at La Universidad Nacional Agraria La Molina, where Jim was to speak. This annual course is organized by retired general surgeon Carlos Ostolaza, MD, editor of the Journal of the Sociedad Peruano de Cactus y otros Suculentos (SPECS), and the leading authority on Peruvian cacti. Jim lectured on his life's work: the microscopic anatomy of cactus and how they differ from other plants. Other talks included whirlwind surveys of all the succulents in Peru, and all species of cactus near the city of Arequipa in the south.

After the conference, a University bus carried us for 3 weeks, exploring in the valley of the Rio Huaura in Lima province. (Pronounced wah-OO-rah.) Graduate students documented and recorded ranges of populations, collected herbarium specimens, and filled in gaps in the understanding of Peruvian botany. Among those on the trip were students of botany, entomology, and ethnomedicine.

Peru is on the west coast of South America, between Ecuador to the north and Chile to the south. It is about three times the size of California, or almost as big as Alaska. The northern tip almost touches the equator. The Andes Mountains split the country top to bottom into the dry west and very wet east.

The population is around 20 million, now concentrated in the largest cities. Outside the cities the population is almost entirely agrarian.

Throughout South America, more rain falls on the eastern slopes of the Andes than the western. This rain drains via the Amazon and Paraná to the Atlantic Ocean. This leads to more water in the southern Atlantic, and it courses around the southern tip of South America to the Pacific Ocean to even out sea levels. As it passes by Antarctica the water is cooled drastically. This water flows north along the western edge of South America as the icy Humboldt Current. The current is so cold the coast is very cool even in tropical zones. Lima seldom sees temperatures above 80 Fahrenheit.

The cold water leads to dry air and very little rain at sea level. The narrow Peruvian coastal plain, where Lima is located, only receives rain during strong El Niño winters. This may be only every 10-15 years. There are frequent winter fogs, however, which ascend quite far up the river valleys. Fog zones can be discerned easily by the presence of rootless bromeliads in genus *Tillandsia* sprawling in cushions on the sands, and by exuberant lichen growth on cacti. It is strange to see areas with no plants whatsoever other than tillandsias, lichens, and cactus. There is a sharp

line at the limit of fog penetration; the tillandsias just stop. There are several hills north of Lima which receive so much fog that a verdant carpet of annual wildflowers springs up each winter. Each hill has endemic plants. These hills were just greening up when we were there.

Within 5-10 miles inland, the land rises steeply to the foothills of the Andes, and then the mountains proper. Within two hours of driving from the coast one is already above 8,000 feet. The Andes are much steeper than any mountains I have seen in north America. There is almost no exposed bedrock, and the slopes are covered with loose, unstable scree. Here in the States hikers learn that stepping on big rocks is safe and stepping on scree is to be avoided. It is exactly the opposite in the Andes, where scree provides the most stable footing, and big rocks provide fast snowboard-like trips downhill.

I was constantly worried entire mountainsides were going to slide down on the road or the hotel. The locals told me this only happens during earthquakes, and that Peru is about 10 years overdue for a big one.

At higher altitudes there is summer rain, which feeds the rivers, but this may be only one or two inches per year. Many pre-Contact adobe structures, including property boundary walls, are still in fairly good shape; 500 years of 2 inches of rain per year leads to about as much weathering as 125 years of average Phoenix rain. The highest we climbed was over 14,000 feet, and even at these altitudes there is never any

frost, being in the tropics. It was briskly cool, though! Nobody even thought of wearing shorts! Glacier zones are even higher in elevation, as you will see.

Rivers come down from the heights carrying snowmelt. The rivers are whitewater for their entire course, and carry a lot of water. Over the last thousand years an extensive system of small irrigation canals was dug to divert water for agriculture. For most of their courses, rivers flow through moonscapes of hot rock. There is almost no vegetation visible, except within maybe ten yards of riverbanks. At lower altitudes the rivers disappear underground, and only can be seen during El Niño winters. Near the coast, so much water has been diverted for agriculture since even before the time of the Inca civilization that none of the many rivers normally reaches the sea, and whatever plants and animals occupied these lower, formerly riparian areas are long-extinct.

The Huaura originates above 15,000 feet high in the Andes. It descends past towns like Oyón and Ambar before reaching the sea at Huacho. Carlos had not explored this river in detail, and wished to study the distribution of some of the plants. One of our companions, Mónica Arakaki, had done

**NEW BOOKS:** Recent new arrivals in the library are:

*Tequila!*, by Valenzuela-Zapata, Ana G. and Nabhan, Gary Paul, (2003, 113 pp., softcover).

The leading agronomist in Mexico's tequila industry and one of America's most respected ethnobotanists plumb the myth of tequila as they introduce the natural history, economics, and cultural significance of the plants cultivated for its production. Valenzuela-Zapata and Nabhan take readers into the agave fields of Mexico to convey their passion for the century plant and its popular by-product, trace tequila's progress from its modest beginnings to one of the world's favored spirits, and tell how innovations from cross-cultural exchanges made fortunes for Cuervo and other distillers.

*Pachycaul and Caudiciform Plants, A Guide to Growing*, by Vosjoli, Philippe de. (2004, 319 pp, softcover).

*Pachycaul and Caudiciform Plants* is a complete guide to the selection and cultivation of caudiciforms and pachycauls, species that develop thick bodies with sculptural forms. The text is complemented with 350 color photos of some of the foremost examples of living art: giant babobab trees, passion flower relatives that resemble witch's cauldrons, and yams that become massive geodesic structures. Welcome to a world of bizarre and alien species that will jostle your preconceptions of plants.

**BOOK SUGGESTIONS:** Read or browsed any good cactus or succulent books lately that you think might be good additions to our library? We've already had 2 great suggestions and the CACSS has approved purchasing both. Contact me for your ideas (see contact information below).

**HOW DO I CHECK OUT CACSS BOOKS?** To see a list of the books we have please see our catalog. Paul Schueneman, the CACSS librarian, can email you a copy of the catalog (see contact information at the end of this article). Or, you can pick up a catalog from him at a CACSS meeting. Or, there's a copy of the catalog on the CACSS website: [www.centralarizonacactus.org/liblist.htm](http://www.centralarizonacactus.org/liblist.htm). When you would like to check out books or journals, contact Paul at least a couple of days before the CACSS meeting and he will give the books to you there or he will go with you to Webster Auditorium (our books are shelved there) after the meeting and you can browse/check out books.

**BINDING:** Several of our older books, particularly the paperbacks, are starting to fall apart. Some of the books cannot be replaced (eBay, Alibris, etc. do not have them). Does anyone know how to bind books or have the equipment they could loan me to do it? Professional bookbinding is beyond the library's budget.

**NEED HELP?** Contact the CACSS librarian, Paul Schueneman:

(W) 602-381-9859 ~ or ~ (H) 480-706-1672 ~ or ~ (W) [paul.schueneman@ndchealth.com](mailto:paul.schueneman@ndchealth.com) ~ or ~ (H) [schue888@aol.com](mailto:schue888@aol.com)

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**THE LIVING DESERT: PALM DESERT, CALIFORNIA ~ BOB TORREST**  
[www.livingdesert.org](http://www.livingdesert.org)

Going to palm springs or the los angeles area? Then a few hours at the living desert will reward you with unique botanical collections of course you will see all the usual kinds of succulent gardens. In addition, the Madagascar garden has large *Operculicarya decaryi*, *Moringa droughardtii*, *Uncarina stellulifera*, etc.. You will see many pachypodium, aloes and euphorbias throughout the grounds....even in full sun. Also, you will find large African Acacias ( which we should be growing here ), baobab trees and the animals which are nicely displayed. You will enjoy the living desert!

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**ARIZONA NATIVE PLANT SOCIETY ANNUAL  
CONFERENCE, OCTOBER 1-3, 2004**

The Arizona Native Plant Society (ANPS) is holding its annual conference at the lake pleasant, desert outdoor center. Arizona's native plants are crucially interconnected with our native cacti and succulents and with our native bird populations. Please join members of anps for an informational conference to share ideas and work together to assure the survival of our unique native plant heritage for future generations. Hear 9 speakers including Dr. Robert Ohmart, ASU, Brian Nowicki, Center for Biological Diversity, Dr. John Alcock, ASU, Mary Irish, renowned author/speaker and others. There is a cost for room, board, speakers, etc. For the 2-2<sup>1</sup>/<sub>2</sub> day conference. Topics will include the relationship between native plants and wildlife, landscaping with native plants, the effect of drought upon our landscape, managing threatened and endangered species in arizona and other choice subjects on "plants, water and people." For more information, contact doug green, cacss member and anps board member at 480-998-5638 or at [azbotman@yahoo.com](mailto:azbotman@yahoo.com) for added details. Costs for the conference are yet to be determined, but will be held to the bare minimum.

cont. from pg 3. *Perú*

her master's thesis on a revision of genus *Weberbauerocereus*, but had found neither flowers nor fruit of one species, *W. churinensis*, known only from this river valley, near the resort town of Churín, where we stayed.

I will show some of the plants and geography I saw. The cacti: regal, tall, long-spined *Armatocereus*; *Cleistocactus* scrabbling for life; spiny yellow *Corryocactus*, which really should be grown here; hairy white, cephaliated *Espostoa* by the millions, the babies looking like cotton puffs; *Haageocereus*, big-flowered golden clumpers that do very well in our climate; beautiful but variable *Matucana haynei*, which you will find offered for sale under a dozen names; diminutive *Mila*, like twelfth-scale hedgehogs; monstrous (and monstrose!) *Neoraimondia*, clumping columnars big as houses; the strange *Opuntia pachypus*, which doesn't reproduce by seed, and high-altitude and furry *Tephrocactus*, prickly pear kin; and the aforementioned *Weberbauerocereus*, in full flower and fruit. In addition, bromeliads *Puya* and *Tillandsia*: euphorbs *Cnidiscolus* and *Jatropha*; and even some beautiful bulbs, alpine *Bomarea* and *Stenomesson*, one species with different flower colors in each side canyon. If you like to see plants in habitat, don't miss this talk.



## Club Welcomes New Members

At the May 23rd meeting, Doug Dawson announced a program to welcome new members in a meaningful way. New members are encouraged to contact Doug at monthly meetings or at 480-893-1207 to receive an invitation to visit the home of one of our longtime members to socialize, create meaningful networking, and of course, to talk plants and see plants.

We wish to be very careful not to overlook any new or recently new members, so please contact Doug if you or someone you know could have been missed by this program now or in the future. At the May 23rd meeting, six of our new members signed up for this special greeting program, so we're off to a good start!

*Welcome (August 2004)*

*Jerry Van Wyngarden, Phoenix, AZ*

CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY



JO  
DAVIS

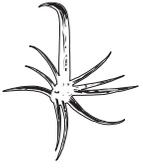
Interested in one of the name badges you see other members wearing? You can have one also.

Send check in the amount of \$7.50

(payable to CACSS) to:

**Jo Davis**

**2714 W. MONTE AVE, MESA, AZ 85202**



CENTRAL ARIZONA CACTUS & SUCCULENT SOCIETY  
P.O.B. 63572  
PHOENIX, AZ 85082-3572



ARTICLE SUBMISSION DEADLINE FOR NEXT CENTRAL SPINE ISSUE IS:  
OCTOBER 5, 2004  
SEND TO [NICK@AGAVEX.COM](mailto:NICK@AGAVEX.COM)

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## Agave Weevils

Sue Hakala

Agave weevils, sometimes call Agave snout weevils for their long curving snout, destroy an agave in no time. The adults are about one inch long, and a dullish black color with a distinctive snout. They possess small wings, and are usually found walking about. They feed exclusively on agaves.

If you notice your agave looking wilted, its leaves split or splitting at the base or, lying down on the ground collapsing, suspect agave weevils. The plant is also beyond saving at this point. The leaf chewing that the adults do allows the entrance of bacterial rot to the plant, thought to be necessary for the development of the larvae. The whitish grub-like larvae eat deeply into the plant. The agave quickly becomes a smelly, slimy mass of rotting plant, a perfect environment for the agave weevil larvae to grow and thrive in. Usually joined by other insects at this stage also eating the plant or other larvae, the plant is never going to recover.

It is best to quickly remove the agave, digging deeply to remove the crown of the plant, and even the surrounding soil. Treat the soil with a 1:10 mixture of household bleach and water to sterilize it. It's important to remove and kill all the larvae or, the cycle will keep repeating with the agave weevils moving to another of your prized agave plants. Agave weevils can quickly plow through a neighborhood. If you notice infested plants near your home, be on the alert. At the Desert Botanical Garden, Cathy Babcock does a preventative chemical treatment two times a year. Call the plant answer line to find out what she is using and when, as the old standby chemicals are no longer available.

Before you begin pouring chemicals needlessly into the soil, be aware that when an agave is going to flower, which it does only once in its life, it begins producing more sugar within the plant tissue. Agave weevils are always present to some extent in the soil, but are especially attracted to the increased sugar the plant is producing. The plant will die when it flowers. The agave weevils take advantage of this event, eating the plant, and helping to clean up the desert. It's all just part of the natural cycle, but it would be nice if it didn't happen in my yard.