

CACTUS COURIER

Newsletter of the Palomar Cactus and Succulent Society

Volume 57, Number 5

May 2011

The Meeting is the 3rd Saturday!

May 21, 2011

**Joslyn Senior Center
724 N. Broadway, Escondido**

Noon!!



Eunice Thompson...

“The Islands of Baja”
•• Eunice Thompson ••

The islands of Baja California are well known for their endemic cacti: species that only occur on the islands, and so have evolved in a slightly different manner than their cousins on the Peninsula.

Eunice Thompson has been fortunate to visit a number of these islands and looks forward to sharing what she saw with us. And she won't forget the other succulents as well!

A graduate of the University of California, Riverside, she is currently an independent contractor/consultant in Network Engineering.

She is a former president of the Long Beach Cactus and Succulent Society, and member of several Cactus and Succulent clubs throughout Southern California.

Her interest in cactus and succulents is relatively recent (just under 10 years), but as with most things, she began as an avid collector, interested in mostly *Aloes* and *Agaves* and the plants that do well with minimum care in our climate.

With a developing interest in photography and after seeing many inspiring presentations on cacti in habitat, an opportunity presented itself join an expedition to Baja California in 2008 to visit the native plants of that region. She has been fortunate to return since then to visit not only Baja and mainland Mexico, but also observe first hand how people enjoy the hobby in the UK and mainland Europe. She is co-author of "*Tea at Gordon's*" – a visit with Gordon Rowley. There might even be some copies available for sale at the meeting.



REFRESHMENTS

Alice Somers Mike Regan Kathy Cain

Red Bernal Richard Murbiach (*Spelling???*)

BOARD MEETING • PLANT SALES • BRAG PLANTS • EXCHANGE TABLE



**Plant of the Month
May 2011**



Ron Chisum has offered to talk about **Small Agaves**. I suspect those would be the ones we can actually pick up and bring to the meeting! So pack them up – carefully – and bring them along for us to enjoy...



2011 MEETING SCHEDULE

21 May Joslyn Center

NOTE!!! 3rd Saturday!!

25 June Joslyn Center

23 July Joslyn Center

27 August Quail Botanic Garden

24 September Joslyn Center

**22 October Quail Botanic Garden
Plant Show 22nd – Sale 22nd & 23rd**

19 November Joslyn Center

NOTE!!! 3rd Saturday!!

17 December Joslyn Center

NOTE!!! 3rd Saturday!!



Palomar Cactus & Succulent Society

P.O. Box 840, Escondido, CA 92033
Membership Application

I/We wish to join/renew membership in the
Palomar Cactus & Succulent Society

\$20.00 Single Membership
\$25.00 Dual Membership (Same Address)
(1/2 price after June 30th)

Name _____ Phone _____

Address _____

City _____ State _____ Zip _____

Email Address for eBulletin _____

Make checks payable to:
"Palomar Cactus & Succulent Society"
P.O. Box 840, Escondido, CA 92033



Electronic Bulletins

This project is going really, really well. We are saving so much money for the Club that can be added to Speakers, the Library, and to future activities such as field trips. Plus the newsletter looks wonderfully clear and colorful!

I am sending out 37 email-only newsletters and only 40 paper ones (not including several Botanical Gardens and nurseries). This saves **\$37** every month!

If you are ready to go to a PDF of the *Cactus Courier*, let me know! [Eleanore Hewitt – editor]



*Glass Echinocereus by Leopold & Rudolf Blaschka
Harvard University Glass Flower Collection*



Officers • Palomar Cactus & Succulent Society

Vicki Broughton – President

Peter Walkowiak – Vice-President

Libbi Salvo – Secretary

Dennis Miller – Treasurer & Membership Co-Chair

Bruce Barry – Board Member

Dick Henderson – Board Member & Garden Chair

Mary Kaho – Board Member

Chris Barkley – Board Member

John Barkley – Board Member

Brita Miller – Librarian

Ron Chisum – Refreshments & Speakers

Eleanore Hewitt – Newsletter & Membership Co-Chair

2011 Events in Southern California

May 15

Huntington Plant Sale 10 pm to 5 pm Huntington Botanical Gardens, 1151 Oxford Road, San Marino, CA. For information call 626-405-2160

May 14 & 15

San Diego Epiphyllum Society – Show and Sale Casa del Prado Patio and Room 101. Show May 15th 11 am to 4 pm, Sale 9 am to 4 pm both days.

www.SanDiegoEpi.org

May 14 & 15

Central Coast Cactus & Succulent Society – Show & Sale Ludwick Center, 864 Santa Rosa San Luis Obispo, CA For information call 805-237-2054

May 20 & 21

Gates Cactus and Succulent Society – Show and Sale Sale 9-4:30 Fri & Sat, Show 21st 9-4:30 Jurupa Mountains Cultural Center, 7621 Granite Hill Drive, Glen Avon, CA. For information call 951-360-8802

www.gatescss.org

June 4 & 5

San Diego Cactus and Succulent Society – Summer Show and Sale Balboa Park, Casa del Prado Room 101, San Diego, CA. For information call 858-382-1797

www.sdcss.com

June 10 thru July 4

San Diego County Fair at the Del Mar Fairgrounds This year's San Diego Horticultural Society's display garden theme of *"Let Your Water Budget Drive Your Plant Choices"* complements the Flower and Garden Show theme of *"Driving in Style."*

June 11 & 12

San Diego Bromeliad Society Show & Sale 10am to 4pm Room 101 Casa del Prado, Balboa Park, San Diego, CA

June 11 & 12

Los Angeles Cactus and Succulent Society – Show and Sale 11th 9-5, 12th 9-3:30 Sepulveda Garden Center, 16633 Magnolia Blvd. Encino, CA. For information email: lacss.contact@gmail.com

July 1-3

CSSA Annual Show and Sale Huntington Botanical Gardens 1151 Oxford Road, San Marino, CA. For information call 626-405-2160 or 2277

Free To The Public.

July 29-30

Orange County Cactus and Succulent Society – Summer Show and Sale Fri. Noon to 7pm and Sat. 9am to 5pm. United Methodist Church, 1000 S. State College Blvd, Anaheim, CA. For information call 714-267-4329

www.occss.org

Aug 13 & 14

26th Annual Intercity Show and Sale 9am to 5pm. La County Arboretum, 301 N. Baldwin Ave, Arcadia, CA.

For information call Tom Glavich at 626-798-2430, or Peter Walkowiak at 858-382-1797.



Agnes' Day With The Succulent People

by Stan Yalof

Agnes met Harley in the landscaping course at Mira Bosta College on a Friday. He asked her out the next day to the Sunbeam Cactus and Succulent Meeting. It sounded good, and a chance to learn something new. The meeting began with two well-organized short talks, one on someone's favorite cactus, and the other on Aloes, apparently an African succulent which resembled American Agaves. Following the talks, there was a break for refreshments. Agnes wanted to have a closer look at the plants that had been talked about on the front table but Harley said, "Later, let's burrow into the tidbits before the choice morsels are gone." "Why don't we eat later, Harley? I'd like to look up front. I'm fascinated with these plants." "Gee Agnes, I'm broke. Let's just tank up on these comestibles." "Harley, I can make a loan until payday." "I don't work." "Well, until your allowance comes in." "Nothing's coming in." "How do you live?" "Well last night I attended the Tortoise Society, the night before, the... , but I won't take your charity. Principles!"

Balancing trays heaped with cakes, crackers, and punch, they went to the front table. Waving her hand over a spiny group of plants, she asked, "These are all cactuses?" "All except those over there. They are a Euphorbia, a Didiera, a Cissus, a grape family member..." "They sure fooled me. What exactly is a cactus?" "It is a taxonomic family, like palms, Euphorbias, and about a hundred others. They are found only in the New World. There are three divisions, called sub-families: Pereskia, Opuntia, and Cereus. Most are suited to the xerophyte life, but some, like the Epis and the Hylocereus appreciate a good drink." "So, the succulents are another family?" "No, the word succulent covers about 28 families of plants, including Cacti, which can handle a desert life style. It has no taxonomic meaning?" "So Cactus and succulents are in different categories, and the title of the club "Cactus and Succulent Society" mixes metaphors, or apples and oranges, doesn't it?" "Agnes, you're splitting hairs. Everyone here knows what a cactus is, what a succulent is."

Agnes was having a ball. She summoned her strengths as a leader in numerous school forensic battles. "I believe the dictionary defines succulence as "juicy." Some juicy plants grow by the water. Pull 'em out and they're dead in an hour!" Harley smiled indulgently. "Succulence as we use it is the storage of water in specially enlarged spongy tissue of the roots, stems, or leaves. That gives us root, stem, and leaf succulents. Of the 100 plant families, about 25 to 30 have succulent members. Cactus is almost totally succulent. Some families might have only one succulent member."

"I've been listening in. You are a visitor, and we hope to see you often. I'm Ken Lamont, President of this club." He held out his hand and shook heartily. "I agree with everything Harley has said, but I'd like to add a few clarifications. Succulents have made physiological

adaptations to withstand the desert rigors, like thick cuticles, hypodermal cells, storage tissues, parenchymatous, occasionally with above and underground storage organs, what we call caudexes." Harley nodded in agreement. "Couldn't have said it better."

"That does make your definition clearer, but I am still puzzled. You talk about storage tissues stuffed with water, and I can see that in the cactus genus, but what about that small tree on the table..." Ken located a *Bursera*, a small to medium tree from Baja California. "I must correct you on calling cactus a genus. I don't want to be stuffy, but according to the taxonomy rules they are a family. If we aren't precise in our classifications we get chaos. That small tree is a *Bursera*, and they drop their leaves in the hot season..." "...and have a tap root," added Harley. Agnes looked confused, "And you call them succulents? No parenchymice, no caudex...?" Ken chuckled, winked at Harley and at the increasing group. "I see that you need a fuller explanation. There are many adaptations that succulent plants, err, arid land plants have made: like opening their stomata at night and storing the CO₂ for photosynthesis during daylight hours, what we call CAM. Another voice piped in, "Also, young lady, these plants handle a hot hot sun without their respiration going out the stomata and burning their glucose reserves." "Hey, that's interesting," began Agnes, "so these desert plants have invented this CAM and this hot hot sun metabolism." "We call that C-4, and it's used also by tropical grasses like sugarcane and com. C-3 metabolism, named for its three carbon intermediate compound to a six carbon atom sugar, is the plant standard. C-4, when used, feeds into C-3..." Alice asked, "So these metabolisms are not the exclusive domain of succulents or arid land plant or desert plants." After a bit of foot shuffling, the group assented that this was true.

"Hi, I'm Tim. One thing desert plants are good at is gathering water from rare rainfall, mists, from anywhere. Some cacti have a mat of roots over a big area only two, three inches under. A little water, and they grab it. And they don't leak it out back into the ground." The crowd voiced assent. "And some plants have tactics. The flower opens, gets pollinated, and in 15 minutes it closes down. Why waste energy?" "Tactics, that's good, but most plants have them... sensitive plants, pitcher plants, orchids... It's not unique to arid plants. From what I've heard here: Of the 100 or so plant families, about 28 have evolved strategies for surviving in an arid land. From what I've heard, these strategies involve: Stems (usually for water conservation); Roots; Greenery reduction; and Metabolics (for respiration).

"Stems, according to you guys involve a thicker, less permeable cuticle. What else?" Harley quickly answered, "to keep down water loss, stomata on the shaded side, fewer in number, aided by wax coverings, hair, and spines. Sometimes expansion pleats to let in more water." "Harley, can you find these on non-succulents?" "Here and there, yes, but probably not on a single plant. But I guess no succulents have them all." "How about swollen stems, a caudex? Isn't underground and above ground storage common? Tell me about succulent roots." "I can answer that", said Tim. "Roots can be deeply tapping to reach for water or surface spreading to catch light rains and dew. Some would

disallow taproot plants as xerophytes, as they have a water source. I would allow them in if they prefer or can get started as a seedling under desert conditions. And taproots are used by many plants. Spreading roots are in a lot of stuff: grasses, desert brittlebushes..." Alice added, "And for dropping leaves to get by, this also seems to be a way of life for a lot of plants. Some arid land plants do it, some don't?"

A new voice piped in. "Hi, I'm Shirley. Greenery reduction is a big deal. It includes not only the shedding of leaves under arid conditions, but in some cases, their reduction in size or number. Some go as far as to reduce their branches to a spiny spot, as in the areoles of cacti. Cacti and some others photosynthesize through subsurface chlorophyll. But some stick the desert out with thick leaves, and coatings."

"Thanks Shirley. And we mentioned that CAM and C-4 metabolisms were important to many desert plants, but a lot of other plants, like corn, use it too. So we can't consider that as belonging to succulents. What about special succulent tactics?"

"Oh, succulents are clever with tactics," answered Ken, "you can't beat 'em, they save energy by growing up under nurse plants, by rapid flowering, by shutting down minutes after pollination, by seed germination only after certain humidity, temperature, and light conditions are met..." Shirley interrupted, "Ken, these behaviors are used by annual plants and we certainly only consider perennials as being succulents, and I'm not sure that the word succulent says what we mean." "Yeah, but its traditional. What would we replace it with? We all understand it." Alice looked perplexed. "It's not a family, but a hodgepodge of traits. Look Ken, none of the so-called succulent strategies is the exclusive property of succulents. I'd call them arid-land plants, xerophytes... something less vague."

"Too confusing", Ken stated, nodding to some in the crowd. "Less confusing," said Alice. She picked up some chalk and headed the blackboard with "PLANT HUMIDITY LIFESTYLES." Beneath that she split into XEROPHYTES and NON-XEROPHYTES. Disregarding NON-XEROPHYTES, she split XEROPHYTES in two, Annuals and Perennials. "How about those carpets of desert flowers, grasses?" A new voice belonging to Tim answered, "I don't know. They are desert plants, ephemerals. And they are all over the world. They come up fast after a rain, seed, and are gone in a month or two. I'd call them drought-escaping. We don't show them here. And, don't they have their own society?" "So after a first flush of rain and warm weather the drought escapees leave and we are left with the drought resisters, the perennials, which is the concern of this society."

"Stop right there, call them succulents, and I'll buy it," called out Ken.

"But Ken, some of these are drought avoiders, with their deep roots, and can move in and out of arid land habitats. They're casual about the xerophyte lifestyle. The others, uh, drought tolerators, maintain their metabolism despite teensy water uptakes. That includes the thick skins, the wax coatings, the hairs and spines, the spreading roots, storage vessels, respiration tactics like CAM and C-4, and the energy conserving tactics. These don't belong to any one

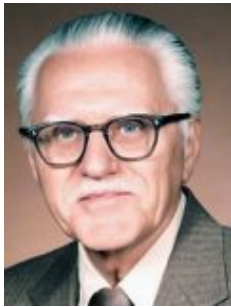
plant group. Even desert animals use them. Your society pretends to be scientific with cactus, a plant family, in its name, and then you mix in succulents, a vague term, confusing plants with lifestyles!"

Ken sputtered, "Agnes, you've been with us one hour, you think that you're an expert but you're just opinionated. I see that you've wasted two hours. I never thought that I'd say this to anyone, but we don't need members like you!" "Then you don't need me either, said Harley." Arm in arm they walked out, slowing only to pick up a plate of cookies for the road.

•• NOTE: The preceding perspective on succulents blends Stan's views with those of Willy Verheulpen, of the Brussels Free University, a regular on the <cacti_etc> Internet list.



In April, we lost one of our wonderfully wise and charming members, **Dick Kubiak**. He worked so hard for the Club over the years and will be much missed. We are very grateful to his son, Ralph, for bringing him to meetings over the last year.



The 2011 Palomar Plant Sale

The weather looks fabulous!



Lorie planted and fostered so many of the plants! Good Job!

