CALIFORNIA NATIVE PLANT SOCIETY
San Diego Chapter Newsletter

June 2007

www.cnpssd.org **CNPS (916) 447-2677** **info@cnpssd.org**

NATIVE PLANT NURSERIES

San Diego County residents have more sources for buying California Native Plants than we did a few years ago. It has not been easy for small nurseries to make headway, especially with last summer's killing heat and last winter's killing cold, which hit many nurseries very hard. In the face of this, it would be important to support the wonderful nurseries that have been working so hard to grow natives for landscaping in our region.

Here is a list, and I invite people to give me feedback about this list and to add to this list if they know of more growers:

Retail and Wholesale Nurseries specializing in CA native plants:

Las Pilitas Nursery in Escondido: 760-749-5930
Rancho Jojoba Nursery in Lakeside: 619-561-0751
Moosa Creek Nursery in Valley Center:
hkraus@moosacreek.com 760-751-1929
Native Plant Connection in Descanso:
juljanssen@nativeplantconnection.com
Recon in Imperial Beach: 619-778-6205 wholesale only,
(main office; will provide contact to the nursery)

Some nurseries that grow a lot of non-natives also grow some CA natives. Check out the lists at big growers like:

Miramar Wholesale Nursery (they also sell retail),
Village Nurseries,
El Sembrador Nursery.

You may find Toyons, Cleveland Sages, or some other well-known CA plants.

Please send me information about any more nurseries that you know of. For instance, I would like to know the status of some nurseries that were growing several years ago but that I have not heard from, including Bee Valley in Jamul and Bitterroot Restoration in Del Mar. Email me, please.

When I've had a couple of weeks for feedback, I'd like to put this on the CNPSSD website.

Kay Stewart, kaytaff@sbcglobal.net

JUNE MEETING PROGRAM

Mission Valley Preserve Pollinator Garden

by Kym Hunter

San Diego River Park Foundation

Learn how the San Diego River Park Foundation, working with community groups, students, agencies, and private partners, is improving a wetland in the Mission Valley Preserve. Formerly dominated by weedy annual non-native plants, the group has brought back the native plants, with a focus on attracting pollinators, to create a pleasant community place in an area of the City that is currently lacking in park lands. Kym will also discuss progress made in organizing volunteer groups to care for the Point Loma Native Plant Garden.

Tuesday June 19 at 7 PM
San Diego, Balboa Park, Casa del Prado, Room 104

CALENDAR

June 13 (2nd Wed) CHAPTER BOARD MEETING , 6:30-8:30 p.m., Tecolote Nature Center. Take the Sea World Drive/Tecolote exit from I-5. Proceed east until the road ends at the Tecolote Nature Center. Board Members, please e-mail Carolyn Martus if you are unable to attend. Members are always welcome at the board meetings, please RSVP.

June 19 (3rd Tue) CHAPTER MEETING & PROGRAM Meeting at 7:00 p.m., Program at 7:30 p.m., Room 104, Casa del Prado, Balboa Park.

July 11 (2nd Wed) CHAPTER BOARD MEETING

July 17 (3rd Tue) CHAPTER MEETING & PROGRAM

CNPS PROMO MAT'LS

Here are some CNPS promotional materials that you may use. Kathy LaShure (Bristlecone Chapter) developed a series of posters with plant facts to promote CNPS. (Thank you, Kathy!)

These posters are located on the CNPS website on the "Admin" page under "Marketing Materials." There also is a banner posted at the site. These are Adobe files (PDF) that are easily printed by most folks. Instructions for printing them are posted at the webpage. The website link is:
http://www.cnps.org/cnps/admin/posters.php

There also is a web page listing of "plant factoids" that may be useful when creating your own promotional materials (newsletters, handouts, etc.) That link is:
http://www.cnps.org/cnps/admin/factoids.php

Sue Britting

JULY-AUG NEWSLETTER

Our next issue will be a combined July-August issue. This means that August event annnouncements need to be sent along with July material.

If August material cannot be firmed up by the July deadline, please note that it can be posted on our web site.

FIELD TRIPS

Only one field trip this June, but it will be one you won't want to miss. We've completed the public field trips for spring 2007. My thanks to members **Betsy Cory, Alan Bennett, Julie Kirker, Arne Johanson,** and **Wes Hudson** for collectively leading seven field trips and introducing nearly 100 people to the beauties of our local native plants. Just think what we could do in a wet year!

Dave Fleitner, Field Trip Chair

CNPS SD FIELD TRIP BASICS-always

* Heavy rain cancels all field trips.
* Wear sturdy shoes; bring water, sunscreen, etc.
* Unless noted, trips are free and open to members and public

Saturday, June 16, 9:00 – 3:00 p.m.

Viejas Mountain.

Dr. Jon Rebman, botanical curator of the San Diego Natural History Museum**,** will lead a tour of the area that he has botanized extensively, with over 300 native species. You can print out a complete checklist at: www.sdnhm.org/research/botany/ lists/viejasmountain.html. Bring lunch and water. **CNPS members only; membership forms available.** Directions: Meet at Las Coches Park & Ride (Thomas Guide 1252 D-1). Exit I-8 (to the south) at Las Coches, turn left on Camino Canada and left into the parking lot.

MEMBERSHIP APPLICATION

Please complete this form, make out a check payable to "CNPS", and mail to:

California Native Plant Society
2707 K Street, Ste 1
Sacramento, CA 95816

___ Student or Limited Income $25
___ Individual $45
___ Family, Group or Library $75
___ Plant Lover $100
___ Patron $300
___ Benefactor $600
___ Mariposa Lily $1,500

Name(s): _____

Address: _____

City/State/Zip: _____

Phone #: _____

e-mail address _____

San Diego Chapter: rev 3/06

PRICKLY-PEAR (Opuntia) vs NOPALMOTH (Cactoblastis cactorum)

Prickly-pear cactus was introduced to Australia in 1839 and by 1925 over 50 million acres of land in Queensland and New South Wales were covered with the species proving our native species can be invasive exotics in other areas. In 1920, *Cactoblastis cactorum* was introduced into Australia from Argentina as a biocontrol agent. The *Opuntia* control resulting from releases were a huge success resulting in 90% reduction of the non-native *Opuntia* in Australia. There was a memorial cairn erected in Dalby in 1965 to record the indebtedness of the people of Queensland to *Cactoblastis cactorum* for its effectiveness at reducing the introduced weed. Cactus moth also known as Nopal moth (*Cactoblastis cactorum*) is an important biological control agent of *Opuntia*, prickly-pear cactus, in Australia, South Africa and Mauritius where prickly-pear cacti are an invasive plant species imported from the new world. Unfortunately this biocontrol moth, which is indigenous to South America, was introduced to the Caribbean in 1956 where it has consumed both native and non-native *Opuntias*. By 1988 the species had been found in Cuba and by 1989 on the Florida Keys in the US. The Nature Conservancy report on the species states the species was found in Miami ports 17 times between 1981 and 1993, all on vegetation imported for propagation citing Pemberton 1995. Since 1991 *C. cactorum* has been found infesting commercial nurseries in Florida. The species has spread to Georgia, South Carolina, and Alabama. All six species of prickly-pear cactus in Florida have been attacked. It appears to be headed our way with the potential to decimate our naturally occurring *Opuntias*.

The fourth edition of the *Checklist of the Vascular Plants of San Diego County* by Jon P. Rebman and Michael G. Simpson lists nine naturally occurring *Opuntias* in San Diego County. Some *Opuntia* species occur in coastal regions of the county while others are desert species. The county list includes *Opuntia basilaris* var. *basilaris, Opuntia chlorotica, Opuntia engelmannii* var. *engelmannii, Opuntia littoralis, Opuntia x occidentalis, Opuntia oricola, Opuntia phaeacantha, Opuntia polyacantha* var. *erinacea, and Opuntia x vaseyi*. An additional three species have been introduced to the area since Prickly-pear cactus fruit and pads are a food stock in some local cultures. It is not believed that *Cactoblastis cactorum* will impact *Cylindropuntia* species in the county.

USDA has developed a Strategic Plan for the control of *Cactoblastis cactorum* and I have pulled information from a report dated Nov 3, 2004 but updated July 1, 2005 by Joel Floyd for this article. I am quoting directly from that report in many cases. In 2003, USDA/APHIS/PPQ initiated the development of a strategic plan to control, contain, or mitigate the spread of *C. cactorum* from southeastern US to the desert southwest and Mexico where the spread of such an organism would be devastating to our natural resources. Eastern Texas, Arizona, and California are identified as the regions at the greatest risk in the US from *C. cactorum* based on predictions of survival requirements for the species. The report documents a desire for more data on survival in other parts of the world to further validate the model identifying the southwest as at risk. The moth did not establish in Pakistan or Kenya from early introductions.

A February 15, 2007 press release carried in the Union Tribune stated the moth had been trapped in Cancun, Mexico. By 2006, at risk states such as California were to become involved in nursery and residential surveys for *C. cactorum* according to the USDA Strategic Plan. I do not know if this work has started. Plants have been intercepted 3 times at the Miami Port of Entry on material shipped from the Dominican Republic and 2 times from Haiti, 1 time at the Dallas Port of Entry on material shipped from Mexico, 13 times in Lihue Kauai Hawaii from material shipped from elsewhere in Hawaii, and at various Ports of Entry in Puerto Rico 4 times from Puerto Rican shipments. *C. cactorum* has been identified in both baggage and permit cargo shipments in propagative material and on fruits and leaves presumably for consumption.

ARS reasearchers in Miami and Gainesville Florida have produced an effective synthetic lure for use in sticky traps and field tests have shown that baited traps lure male cactus moths at similar or higher rates than traps baited with two virgin cactus moth females. There was some indication from volatile collections of calling females that the lure is still missing one or more minor components of the true pheromone of *C. cactorum*. Unfortunately the lure did attract some non-target moth species in addition to *C. cactorum*. The synthetic pheromone was described as being only experimental in 2005.

Larvae of *C. cactorum* are colorfully banded and thought to be easily identified but amateurs are still at times misidentifying the species. In the Southeastern US, there is only one pyralid species feeding within *Opuntia* species but in the Western US there are seven *Melitara* species and 3 *Ozamia* species that feed on *Opuntias* complicating identification. The adults of *C. cactorum* are relatively non-descript gray moths whereas the larvae have characteristic reddish pink or orangish-red color with dark spots or banding.

Information on the TNC website Invasive Species Initiative page describes the impact of *C. cactorum*. Larvae burrow into cactus pads feeding and growing. They exit the pad and pupate in the soil and leaf litter. Adults do not have functional mouthparts and emerge only to reproduce. A single female will lay eggs (50-90 eggs) on top of each other to form an eggstick. Three to four eggsticks are produced in a female's lifetime. Pads are often skeletonized as the larvae feed leaving the outer epidermis intact. They also leave cactus subject to entry of secondary pathogens which also damage the cactus. The larvae from a single eggstick are estimated to eat the equivalent of approximately four cactus pads to complete their development to the pupal stage. Cactus pads that are fed upon appear to have a "green slime" weep.

continued on p4

Prickly- Pear continued from p3

Nursery stock from foreign countries that have *C.cactorum* are not restricted by PPQ quarantine CFR 319.37 however all imported propagative material since 2002 requires phytosanitary certification and inspection at USDA, APHIS plant inspection stations. *C. cactorum* is considered an actionable quarantine pest and if intercepted in commercial shipments, the plant material will require fumigation, destruction, or return to the country of origin. *Opuntia* fruits and pads for human consumption are permitted from certain countries after a risk assessment is conducted. Currently USDA, APHIS, PPQ's quarantine 7 CFR 318.58 prohibits the movement of cactus plants and cactus parts from Puerto Rico and the Virgin Islands and 7 CFR 318.13 to the US mainland because of *C. cactorum*. There were no other domestic regulations restricting the movement of potentially infected *Opuntia* nursery stock or products for consumption within the continental US at the time of the update report. Inspectors in the Florida Department of Agriculture and Consumer Services found *C. cactorum* on an *Opuntia* plant at a national outlet store chain in Pensacola Florida in 2000. Other Florida nursery infestations have been documented in different Florida counties.

Additional interesting information on *Cactoblastis cactorum* can be found in the report titled *USDA Strategic Plan for Control of Cactus Moth, Cactoblastis cactorum Berg*. by Joel Floyd which can be found on-line at http://www.aphis.usda.gov/plant_health/plant_pest_info/cactoblastis/index.shtml , at The Nature Conservancy website, Invasive Species Initiative page (http://tncweeds.ucdavis.edu/products/gallery/cacca1.html), and from the 2000 Proceedings of a Workshop for Assessment & Planning published in Florida Entomologist Vol 84(4): 465-751 December 2001 with papers accessible on-line at http://www.fcla.edu/FlaEnt/fe844.htm .

Cindy Burrascano

AFTER YOU PLANT, RECYCLE THOSE POTS

Recycle your one gallon plastic pots and RAISE MONEY FOR CNPS! CNPS San Diego has joined with Las Pilitas Native Plant Nursery in Escondido (www.laspilitas.com) or (760)749-5930 to recycle more one gallon plastic pots and raise money to protect native plants.

Simply bring your one-gallon plastic pots to Las Pilitas and for every pot you bring in they will credit CNPS San Diego with 10 cents. The nursery is located in San Diego County about a half mile south of the I-15 off of Old 395 at 8331 Nelson Way, Escondido, 92026, Thomas Guide 1068 J-3.

FALL SALE LOOK-AHEAD

Fall Plant Sale, **Saturday October 13** in the Casa del Prado Courtyard at Balboa Park, mark your calendars and tell all your friends!

We need a few volunteers to help coordinate the sale. These duties include soliciting donations for food, publicity (marketing), and other important administrative duties that need to be done in advance. If you're interesting in helping the behind the scenes effort and working on this fall's plant sale, drop an e-mail to **plantsale@cnpssd.org** – no plant experience necessary.

Seed sales: The seed team coordinates the seeds sales; this includes ordering, collecting, drying and packaging all our seeds.

Plant propagation: Are you interested in growing plants for the sale? Do you have some plants at home you can pot up and donate for the sale?

If you want to help out with the fall plant sale, drop us an e-mail at **plantsale@cnpssd.org.**

POSITION OPENINGS

CNPS needs Volunteers! More volunteer opportunities are listed on our homepage, www.cnpssd.org. If you're interested in any of these positions, please contact us at **info@cnpssd.org**

a. **Webmaster**: If you have any webmaster skills and about 5-10 hours per month, please contact us.

b. **Spring Plant Sale Coordinator**: We need a volunteer to take on the responsibility of coordinating and organizing our spring plant sale at the Tree of Life Nursery in San Juan Capistrano. This volunteer(s) works directly with the staff at TOLN to set the date, advertise the sale, and recruit volunteers to help at the sale. TOLN provides all the plants and their staff on sale day. It's a great opportunity for someone (or 2-3 people) interested in native plant horticulture. The sale is usually scheduled for a Saturday in February or March and requires planning six months in advance. Send an e-mail to info@cnpssd.org or contact any board member if you're interested.

c. Conservation Chair and Committee Members needed: Most of you know we cannot just expect conservation to happen on its own free will. It would be nice if everyone just followed all the rules and regulations and surveyed and accurately reported all threatened and endangered plants that occurred on their property. As volunteers, this is one of our most important responsibilities. The conservation committee reviews development projects throughout San Diego County to ensure that environmental rules and regulations concerning native plant habitats are followed. Our team of volunteers works to review environmental documents (such as EIRs and EISs), write comment letters, attend public hearings, or meet with public officials and resource managers. We are in the process of designating a bi-monthly schedule by which Committee meetings are held on a weeknight evening and the meeting location rotates around the county.

GREEN ROOF TECHNOLOGY

GREEN ROOF TECHNOLOGY COMES TO SAN DIEGO

Benefits include stormwater retention, slowing & filtering; reduced energy use & reduced costs

Cities are facing climate change. Urban areas are warming up. Stormwater overflow is contaminating San Diego's beaches, bays and rivers. Development continues to encroach on the natural environment.

Green roofs (or "eco-roofs") provide a simple, practical solution to all these problems. San Diego's first commercial green roof was planted in March at Good Earth Plant Company in Kearny Mesa. So far, the 1,700 square foot demonstration garden is thriving in the midst of an industrial sea of blacktop and sheet metal.

Jim Mumford, CLP, President of Good Earth Plant Company, started his company 30 years ago when his love for the outdoors led him to bring the beauty of nature into San Diego's indoor environments. Now, Mumford hopes to take his business back outdoors again and bring this successful technology to San Diego.

"Green roofs are successfully improving the environment and providing benefits for businesses and homes around the world. Why can't we bring them to San Diego and make them successful here?" said Mumford.

Green roofs are an engineered, lightweight roofing system that supports plants. Green roof technology is popular in Europe, and used in some North American cities including New York, Chicago, Toronto, and Portland. But green roof technology is not well known in most of the United States.

Green roofs offer a number of benefits both to the environment, and to the businesses and residents that install them. Green roofs can:

- Prevent water pollution.
- Lower energy use.
- Lower ambient air temperatures, combating the urban heat island effect.
- Clean the air and add oxygen.
- Mitigate the loss of environment.
- Extend the lifespan of the roof by two-three times.

Mumford plans to use his own business as the prototype project. "I want to demonstrate what could be done, and find out what can be done," said Mumford. "What better way than to offer two of my own buildings as the first example?"

Mumford's objectives for his green roof project include conducting a performance evaluation of plants, soil, and irrigation. He will record roof-top temperature and stormwater runoff. All aspects will help yield a cost-benefit analysis, which Mumford hopes will prove green roofs are cost-effective for most homes and businesses.

" This is not wacky stuff," said Mumford. "Buildings from Chicago City Hall to the headquarters of The Gap in San Bruno, California have green roofs. With this project, I can spread the benefit of plants far beyond just one building, and far beyond today into the future."

"We have to start getting serious about ways to improve our environment and reverse some of the damage we've done. When you have children like I do, you start thinking about what we're going to leave behind for the next generation," added Mumford. "I'm excited about creating this project and driving the market for green roof technology in San Diego."

To install his roof, Mumford replaced his existing roof with a 60 mil TPO waterproof membrane. A root barrier, drainage layer, and soil separator came next. Then soil (growing media) and finally plants were put into place. Green roofs can consist of any appropriate type of plants from flowers to vegetables. Mumford has chosen regional native plants for lower water use and maximum environmental benefits, including succulents, grasses, bulbs and perennials that include alliums, primroses, and asters among others.

Mumford also constructed a modular-style green roof on a second building. It essentially uses large flat containers that sit in a grid to provide the growing platform for the plants. Mumford has chosen primarily varieties of sedums. They are a staple among green roofs and provide quick coverage. However, the drawback is that they require watering. As a green roof is geared toward sustainable architecture, water use needs to be kept to a minimum. As San Diego's designated green roof champion, Mumford is putting together a committee to influence public policy and incentives including subsidies, rebates, accelerated permitting and density bonuses. He is in the process of being accredited as a Green Roof Consultant by the Green Roofs for Healthy Cities organization.

For additional information, visit www.greenroofsandiego.com or www.goodearthplants.com

submitted by C. Martus

Copy submissions are due by the first of the month prior to month of publication. (for example, copy for inclusion in the July issue must be received by June 1).

Send copy submittals to: newsletter@cnpssd.org

CNPS Newsletter is published monthly. Chapter dues include a subscription to the chapter newsletter.
Second class postage paid at San Diego, CA.
Postmaster: Send address changes to:
CNPS, 2707 K Street Ste. 1; Sacramento, CA 95816

Dedicated to the Preservation of the Native Flora

The California Native Plant Society is a statewide non-profit organization of amateurs and professionals with a common interest in California's native plants. The Society, working through its local chapters, seeks to increase understanding of California's native flora and to preserve this rich resource for future generations. Membership is open to all.

Membership includes informative publications, free field trips and monthly programs and discounts on books and posters. Also included are *Fremontia*, a quarterly journal with articles on all aspects of native plants, the *Bulletin*, a quarterly statewide report of activities and schedules, and the chapter newsletter. Please call the membership chairperson for more information.

CALIFORNIA NATIVE PLANT SOCIETY
SAN DIEGO CHAPTER
c/o San Diego Natural History Museum
P. O. Box 121390
San Diego, CA 92112-1390

CHAPTER BOARD MEMBERS AND COMMITTEE CHAIRPERSONS JUNE 2007

CNPS Phone (916) 447-2677, www.cnpssd.org, info@cnpssd.org

BOARD OFFICERS

PRESIDENT: Carolyn Martus .....(760) 434-5033h

VICE PRESIDENT: Dave Flietner.....(619) 501-3789h

SECRETARY: Daniel Simon.....(661) 428-4791

TREASURER:

OTHER ELECTED BOARD MEMBERS

POSTER SALES: Cindy Burrascano.....(619) 421-5767h

BOOK SALES: Susan Marchetti….....(858) 273-6486h

LIBRARIAN: Catherine MacGregor.....(619) 435-2165h

LEGISLATION: Peter St. Clair…….....(619) 683-9352

PROGRAMS: Carrie Schneider..... (858) 352-4413w

RESTORATION: Bruce Hanson.....(619) 262-8905h

MEMBER: Hank Kraus.....(760)-751-1929

APPOINTED COMMITTEE CHAIRPERSONS

MEMBERSHIP: Mary Kelly.....(916) 447-2677

NEWSLETTER: Jim Harrison,.....(858) 273-5242

FIELD TRIPS: Dave Flietner .....(619) 501-3789h

VEGETATION: Lexine Schroeder.....(619) 729-5715

RARE PLANTS: Fred Roberts…….....(760) 439-6244h

HOSPITALITY: Sharon Hackett

PLANT SALE:.....plantsale@cnpssd.org
WEBSITE:.....webmaster@cnpssd.org
INVASIVEPLANTS:...…..... ..invasiveplants@cnpssd.org

Open positions include CONSERVATION, EDUCATION, HORTICULTURE, PUBLICITY, WEBMASTER. Please contact any board member if interested in any of these positions

NOTE: For mailing label issues contact Jim Harrison at newsletter@cnpssd.org or (858) 273-5242