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# *Obispoensis*

Newsletter of the San Luis Obispo Chapter of the California Native Plant Society

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FEBRUARY 2012

## Beach Sun Cup

### *Camissonia cheiranthifolia*

Beach sun cup (*Camissonia cheiranthifolia*) is one of the few plants that bloom year around along our coast. It is found most commonly on the unstable, sandy hillocks immediately in-shore from the beach. It can also occasionally found on disturbed sandy soils away from the immediate coast, but this is very rare. Its range is from southern Oregon to just into Baja. In the northern part of it range it is basically a perennial herb. It becomes somewhat woody in the southern portion of its range. Being somewhat in the middle, it can be either in our chapter area. It is quite variable here. Behind the windy beaches it's a flat ground cover, while in sheltered areas it is taller and less spreading. I've seen a few green plants with no surface hairs, but most of our plants are more or less hairy. Some petals have red spots at their base while others lack these spots. What looks like a very large bud arising from the angle between the leaf below the flower and the stem in Bonnie's drawing is actually the elongate fruit, which becomes twisted as it matures. Flower size is also quite variable.

Before 1969 beach sun cups were in the genus, *Oenothera*. At that time the common name applied to this entire genus was "evening primrose." So, *Camissonia cheiranthifolia* would have been called "beach evening primrose" or simply and misleadingly beach primrose. However, that common name is quite misleading. First, primrose is a name better applied to a totally different and unrelated group of plants in the true primrose family (Primulaceae) which include the shooting star and the pimpernel. The only trait that sun cups and true primroses share is their general tubular shaped flowers. Sun cups share, with other members of its family, Onagraceae, four separate petals instead of the five fused ones found in the primroses. In fact, the flowers of the Onagraceae, including the sun cups, have a distinctive set of characteristics. They produce flowers that possess four sepals, four petals, eight stamens, attached to the top of a generally thin, elongated ovary which displays a four-parted structure. This can be summarized as  $CA^4 CO^4 A^8/G^4$ . CA is short for calyx which is the collective term for the sepals. CO stands for the corolla, the collective term for the petals. A is the abbreviation for andrecium, which translates as all the "male things," the stamens. G stands for gynoecium (female thing), which represents the four-parted ovary, style, and stigma. The circled 4 indicates that the four subunits (carpels) that make up the gynoecium are fused into a single pistil.

Why did Dr. Peter Raven separate the sun cups from the evening primroses when they share so

many family characters? First and most easily observed is the stigma. A look at Bonnie's drawing will show it to resemble a single, wide, hemispherical cap as opposed to the four hair-like stigma branches found in the true evening primroses. A second trait is harder to determine. True evening primroses produce their flowers at dusk and bloom through the night and fade in the morning. Sun cup flowers open at dawn and bloom during the day. This means the two genera have different pollinators since their flowers are open at different times of the day. Evening primroses would be expected to be visited by night-flying animals such as moths whereas sun cups would be visited by day-flying ones. While researching tidbits to include about beach sun cups, I came across the discussion of the species in the book by Mary Coffeen titled *Central Coast Wild Flowers*. In it she reprints part of an article about the Morro Bay Sand Spit by my friend and former Cal Poly professor, Wayne Williams. In it he describes the pollination of beach sun cup and is as follows:

"The plant's bright yellow flowers cover new sand deposits everywhere along the sand spit, enhancing dune stability. Its blossoms face down wind. The pollinator is an exceptionally large bumblebee (*Bombus* sp.). We have all heard how bumblebees manage to fly despite the aerodynamic engineering theory that would render them land-bound because of their weight and size. These bees deftly approach the beach primrose flowers by flying upwind for greatest flight stability. Their powerful thorax muscles and large size allow them to survive within this niche, gathering food and pollinating, because of the downwind direction of the primrose corollas. Since the primrose is decumbent where wind speed is slowest, the bees can also work over large territories. I have watched these bees and have never seen any other species pollinating beach primroses at the sand dunes. This symbiosis between plant and insect allows both the plant and the bumblebee to thrive and reproduce."

Just imagine how much observation time required to allow one to come up with this kind of natural history fact. There are lots more yet to be discovered. That's why natural areas like the Elfin Forest are so important.

Dirk R. & Bonnie Walters

## PRESIDENT'S NOTES

Another year! How they fly. I am hoping that the current rainfall deficit remedies itself and we will have a great year of wildflowers. As I write this I am preparing, along with several other chapter members, to attend the CNPS Conservation Conference in San Diego. When you look at the program and talk abstracts (available at the main CNPS web site), it is clear that everything from art to anthropology, plant taxonomy to computer science, can play a role somewhere within the CNPS mission to protect our flora. The new school curriculum developed with John Muir Laws also shows what fun it can be. For most of our chapter members the accent is on pleasant recreation and meeting great people, and we aim to mix up the science and the fun as much as possible during the year. We are loading the chapter web sites with area-specific plant lists and identification guides (to which you can contribute!), will be running lots of field trips and otherwise trying to make knowledge about the SLO flora more accessible to more people. We welcome members who will open up their gardens and private lands to field trips, and we are interested in starting forums on such things as native plant gardening. We will have our March meeting in the North County again and have an excellent speaker who will talk about plants across the county line in southern Monterey County. I hope to meet all of you during one of our many activities. David Chipping

## CONSERVATION

On January 7 the SLO Tribune ran a story "Shrimp Hunt Threatens Housing" in which stated that a search for a protected fairy shrimp, a denizen of vernal pools, would have to be completed before a "massive housing development" could be started. Of course, the headline should have read "Housing Threatens Shrimp", but our concept of protecting vernal pools and ephemeral wetlands on their own merit, along with their Downingia and other wetland flowers, has vanished with Supreme Court rulings. The only protection lies in the presence of certain animals protected under the Endangered Species Act, the pools and the plants having little leverage in land use decisions. I urge Paso Roblans who know of vernal pools on private land that might be protected in some way to contact me.

The Carrizo Plains plant photo collections continue to grow, and the team is close to getting most of the species recorded. Recent vegetation mapping by the Dept. of Fish & Game and CNPS have defined new plant alliances (defined by a key dominant species) and plant associations (co-associations of

plants that are repeated through the landscape) in the Carrizo Plain and southern Central Valley. Thirty-eight new associations were found; the Carrizo Plain keeps surprising us.

Several people have remarked to me that the plague of Pine Pitch Canker seems to have abated, although scattered mortality is still seen. Similarly, there is still no evidence that Sudden Oak Death disease has crossed the county line from Monterey County. However if this drought persists, trees will weaken and may become more susceptible to infection, so I want everybody to be on the lookout for trouble. David Chipping

## A Warm Welcome to New Chapter Members:

Tracy Curry, Madeline Fay, Jane Wurthy and Taylor Crow

Thank you to Chapter members that have renewed: Jessica Adinolfi, LynneDee Althouse, Janine Arley, Anthony Baniaga, Charles Blair, Gifford Bland, Melissa Boggs, Wendy Brown, Mark Brunschwiler, Miranda Canestro, Craig Cunningham, Helen Davie, Laura Eliassen, Patricia Engle, Chuck French, Cynthia Gaulin, David Gurney, Joy Hanson, Neil & Ann Havlik, Geoff Hoetker, Barbara Johnson, Samantha Kaisersatt, David Krause, Erik Layman, Nancy Jean Mann, Richard Marks, Kathleen McCarey, Wallace McCray, Marilyn & Steve Mullany, Virginia Rarig, Nancy Farrell Rose, Rhonda Riggins-Pimentel, Matt Ritter, Gary Ruggerone, Martie, Rutherford, Jeanette & Darwin Sainz, Pete Sarafian, Bob Sloan, Patrick Stamile, William Vanherweg, Donald Waller, Thomas & Elsie Wheeler and Christina Williams

## Chapter Meeting

**Thursday, February 2, 2012, Groundhog Day: Dirk and David's Best Spring Plant Walks Illustrated.**



Meet at the Veterans Hall, 801 Grand Avenue, San Luis Obispo, 7:00 p.m. 7 - 7:30 p.m. enjoy social time, refreshments and browse our book table. The meeting begins at 7:30 with a little time for chapter business and announcements, followed by the presentation.

## The Hoover Award

It is given to a member who makes a significant contribution to the success and well being of the SLO Chapter of CNPS.

“In Recognition of Distinguished Service”

### Bill Shearer

In the world of gardening with California native plants, one never knows when they will be captivated by its magic. It was in the late 1990's, as Bill was walking his dog through Pismo State Beach, Oceano Campground's Native Plant Garden, and meeting Jack and Grace Beigle, that he became aware of the possibilities of gardening with native plants. It started by Bill asking lots of questions. One thing led to another and Bill eventually joined the “Garden Gang” on Tuesday mornings and in Grace's words, “He was enthusiastic!” Bill has now contributed countless hours to the development of the garden. He has also worked on the removal of non-native invasive species and on restoration projects in the Oceano Campground and at the North Beach Monarch Butterfly Grove. Today his special project is the reforestation of the peninsula area in the Oceano lagoon and serving as Co-chair of the Garden Committee. By the way, Bill has just been awarded his 1,000 hour pin by the Central Coast State Parks Association for the work he has done in the state parks.

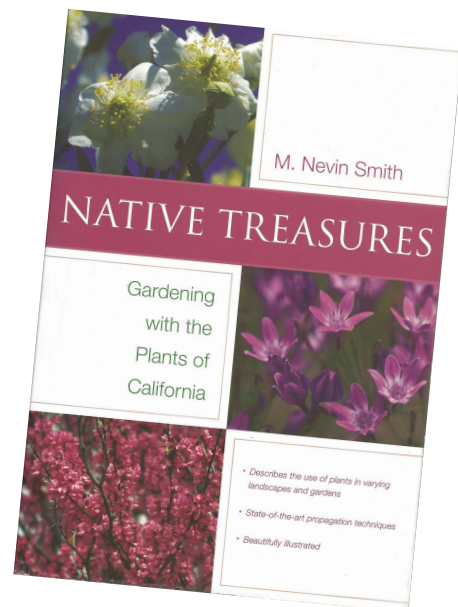
Bill's enthusiasm for gardening with native plants was brought to a new level around 2002, when Bill signed up for a California native plant gardening class at the Dunes Center in Guadalupe. It was taught by Al Naydol, who was an active CNPS member, an expert “Cal Native” gardener and at that time was Chief Environmental Officer of Vandenberg Air Force Base. The spin off from those classes was a group of south county CNPS members called the “Native Rooters.”

Bill's garden at his home in Arroyo Grande is a beautiful oak woodland in the middle of the city, where Bill's knowledge of California native plants is evident everywhere and he has generously shared his garden on many CNPS Garden Tours. Bill has also made additional contributions to our chapter by propagating, cultivating, and delivering native plants to our November Plant Sale and helping out at our monthly meetings, our annual pot luck banquet and at work parties through the county. Thank you for your contributions to the SLO chapter of CNPS.



## Book News

Nevin Smith has spent his life growing native plants and exploring the wilderness areas of California. During the 1980s, his articles on natives appeared in *Fremontia* and, finally, he was prevailed upon to put the articles into book format. That book is *Native Treasures*. We have been without copies to sell for two years, but now have books available. There are chapters on manzanitas, ceanothus, ribes, lupines, sages, buckwheats, oaks, penstemons, and many more. *Native Treasures* is, indeed, a treasure and a joy to read. Easy to dip into when have a question about a specific plant; delightful to curl up with on a cold foggy day to read about all the glories you might try to grow in your own garden.





# Field Trips

**Saturday, February 11, 2012 9 a.m.: LVBHS Burton Mesa Chaparral AHC Interpretative Area Clean-up**

The annual “Spring Cleaning” of the BMC Interpretative Area on the Lompoc Allan Hancock College Campus will begin at 9 a.m. Saturday, March 5. This six-acre area was established in the 1970s in what was then Ken Adam Park, now part of the Lompoc AHC Campus, by what grew into the Lompoc Valley Botanic and Horticultural Society (LVBHS). Each year the LVBHS clears the trails and removes some of the dead vegetation. The Lompoc AHC Campus (1 Hancock Drive) can be reached from SR 1 between Vandenberg Village and Lompoc. Turn onto the campus at the signal then immediately right, following the road to the BMC area. Please bring tools and gloves if needed. Call Charlie Blair, 733-3189, or Mimi Erland, 733-2323, for more information.

**Saturday, February 25, 2012, 9 a.m.: Late Winter BMC Chaparral CNPS Field Trip at the La Purisima**

**Mission.** The California Native Plant Society (CNPS)/ Lompoc Valley Botanic and Horticultural Society (LVBHS) will hold their annual winter field trip to the Burton Mesa Chaparral (BMC) on the La Purisima Mission grounds Saturday the 26th. Meet at the east end of Burton Mesa Boulevard (1550 E). in Mission Hills at 9 a.m. for a chance to see the early bloomers and interesting scenery. To reach Burton Mesa Boulevard, Get to SR 1 north of Lompoc. At the signal where SR 1 turns down hill towards Lompoc, take Harris Grade Road north to Burton Mesa Boulevard, and turn right (east). For more information call Charlie Blair at 733-3189.

**Saturday, February 25, 2012, 10 a.m.: El Moro Elfin Forest, Los Osos.** The Elfin Forest is adjacent to the Morro Bay estuary, a 90-acre natural area belonging to San Luis Obispo County Parks and California State Parks. Its plant communities include coastal brackish marsh, riparian woodland fringe, pygmy oak woodland, maritime chaparral, coastal dune scrub, and oak and manzanita complex. The Elfin Forest supports more than 200 species of plants and more than 50 species of lichens. We will be taking a leisurely stroll along the boardwalk and observing all the diversity of native plants and lichens. Meet at the parking area at the north end of 16th Street in Los Osos (turn west off of South Bay Blvd. onto Santa Ysabel Ave., travel two blocks to 16th Street and turn north). Bring adequate water and dress in layers for the weather; a hat and sturdy shoes are advised. For info, contact Matt Ritter, mritter@calpoly.edu, or Bill Waycott, bill.waycott@gmail.com.

**Saturday, 31 March 31, 2012, 9 a.m.: CNPS and Sierra Club Spring La Purisima Burton Mesa**

**Wildflower Walk.** Meet at the La Purisima Mission Parking Lot, corner of Purisima and Mission Gate Roads (2295 Purisima Road, Lompoc) at 9 a.m. for this annual California Native Plant Society and Sierra Club spring tour of the beauties of the Burton Mesa Chaparral. This is turning out to be a fair year for wildflowers, annuals as well as shrubs. Optional afternoon tour. Sturdy shoes, lunch & liquids, camera and binoculars advised. For more information, call Charlie at 733-3189 or Connie at 735-2292.



*Elfin Forest*

## *Dedicated to the Preservation of the California Native Flora*

The California Native Plant Society is a statewide non-profit organization of amateurs and professionals with a common interest in California's plants. The mission of the Society is to increase understanding and appreciation of California's native plants and to preserve them in their natural habitat through scientific activities, education and conservation. Membership is open to all.

Membership includes the quarterly journal, *Fremontia*, the quarterly *Bulletin*, which gives statewide news and announcements of the Society activities and conservation issues, and the chapter newsletter, *Obispoensis*.



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