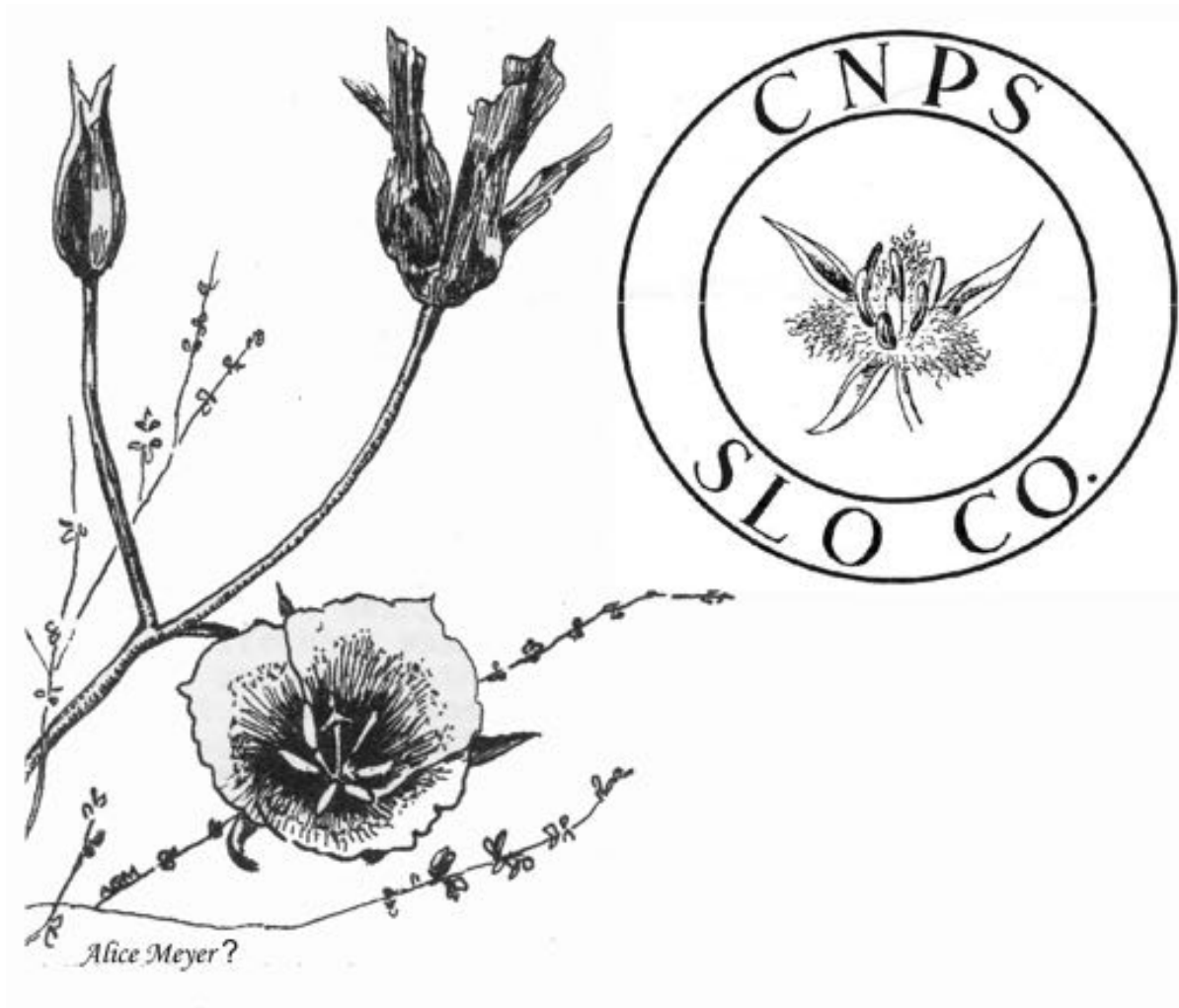

Obispoensis

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



March 2016

ABOUT THE COVER

The drawing on the cover of this issue of *Obispoensis* is a composite of two flowering plants, both are placed in the genus *Calochortus* today. The bouquet of *Calochortus* and *Acmispon* (*Lotus*) was, I assume, drawn by Alice Meyer and used for the first time in May 1974. The Chapter logo was drawn by Bonnie and first used for a banquet program cover back in 1982. The logo has been used on an *Obispoensis* cover a number of times since then. Why have I identified the plants only to genus? It's to emphasize what Dr. David Keil told us at the last Chapter meeting. To paraphrase him, *We need real data and not rumor or hearsay!* and *There is no substitute for notes taken on the spot and time.* The bouquet drawing was used in newsletters just after Alice Meyer, the *Obispoensis* editor at the time, started putting artwork on the covers. There was no "About the Cover" article to accompany the drawings, therefore all we have is the drawing and what we can deduce about it. Bonnie's drawing of the flower of *Calochortus*, then *Cyclobothra obispoensis* in Hoover's *Vascular Plants of San Luis Obispo County*, has lots of documentation surrounding its selection for the logo. In fact, Alice took the name for the chapter newsletter from the specific epithet (name) of this plant. Alice included another plant in the bouquet drawing. However, it is too sketchy to make even an actual guess as to what it should be identified as. As mentioned earlier, there are no contemporary notes about the drawing. Later, I must have thought it resembled twigs of the shrubby deerweed as that is what it was labeled in my index. No notes means it must be considered just art.

David's talk also got me thinking about the early days of the Chapter and its newsletter. I came to the Chapter in fall, 1969, after it was suggested to me that I join by Dr. Robert Hoover himself. I was even able to go on one Chapter field trip with him to High Mountain Ridge! At the time I don't remember the newsletter having a name. Bill Deneen, a teacher at Hancock College in Santa Maria, was the editor. There are no copies of Bill's newsletters in the historical files. I wish there were. If I remember right, it was an 8½ x 11 mimeograph format. Does anybody remember mimeograph duplicated documents from their school days? To create them, you had to type (with a typewriter) them on a special 2-page master. You typed on the first page and the second page contained a coating that transferred to the back of the

first page creating a reverse image of the typing. You then ran the stencil through a special machine that transferred the image to the handout or newsletter page. Bill must have spent lots time on the newsletter, because the newsletters were several pages long. If I remember right, they came out irregularly. Alice took over the editorship of the newsletter around 1973. She changed the newsletter format to a folded 8 ½ x 14 sheet. It was sent to a printer, I think. But she still had to type the original by hand. The newsletters were usually eight pages long typed both front and back. The oldest newsletter in the historian's files doesn't have anything on front cover, it is totally blank! The first cover with a drawing was Bonnie's drawing of common polypody fern. In those days, the newsletter had no title, only the names of the state organization and chapter. The first time the name *Obispoensis* appeared on the cover and the current format used was December 1990. Joyce Malone had become the editor then. In 1991, Joe and then Jora Clokey took over the editorship. They kept Joyce's format. Bob Hotaling became editor for the October 1995 newsletter. For the record, the first time a cover had an "About the Cover" article discussing it was June 1976.

The name, *Calochortus*, comes from the Greek *kalos* meaning beautiful and *chortos* meaning grass. *Calochortus*, as now recognized, has at least three quite distinct flower forms, all of which occur in our local area. The form for which Dr. Hoover kept the genus name and the one that has priority for the name is what we locally give the common name fairy lantern, *Calochortus albus*. This species is locally common and comes in either white or red varieties. Its flowers droop and its large petals form a more or less closed chamber. The other two types of *Calochortus* produce upright flowers. If the petals form an upward facing bowl, Dr. Hoover used the genus name *Mariposa*. Mariposa is also the common name for this type of *Calochortus*. Locally we have several species of mariposas varying in color from white, to pink, to yellow. The mariposa in the bouquet is probably *Calochortus clavatus*. It was a yellow up-turned cup with conspicuous glandular hairs within. One can imagine the black dots above the dark bases of the petals are glandular hairs. The presence of these hairs is what gives the species its epithet, *clavatus*, meaning club shaped referring to the hairs.☼

Dirk Walters, illustration by Bonnie Walters

Conservation

Two potentially very large and damaging projects have just appeared on the horizon and in the early stages of the planning process. The first is in the City of San Luis Obispo where the last open area of 111 acres along Los Osos Valley Road between Home Depot and the freeway has been proposed for a large development. The parcel is zoned for the proposed uses that include a large retirement community, 60-75 single family homes, 200 rental units and up to 45,000 square feet of commercial. The massive scale, however, requires that the project extend higher on the hill than the 150 ft. contour designated as open space in the city general plan. This is at the mouth of Froom Creek, and an area that contains a number of listed plants including the southernmost population of Chorro Creek bog thistle and several species of *Calochortus*. CNPS will be working on minimizing damage to native plants once specific plans become available.

The second project is so new that we have only just heard of this from BLM staff. PG&E is proposing a 230 KV (or larger?) major transmission line to connect Santa Maria with the switchyard at Buttonwillow, and several alternative designs might take it through the heart of Carrizo Plain National Monument. Two routes cut across the plains just south of Caliente Peak, across some of the most scenic landscapes. We will have to consider not only the Monument, but also the impacts along the entire route. 500KV towers are 165 ft. high and therefore require a broad right of way in case they were to fall. This would involve road access to towers and other issues that could produce damage. We will work to find the best route and to get decent mitigation of

Chapter Meeting

"Impacts of Geology on Native Plant Distribution Across San Luis Obispo County"

A talk by
Dr. David Chipping, Emeritus Professor of Geology from Cal Poly, where he taught since the early Holocene. Where he used to kick plants out the way to see the rocks, now he kicks the rocks to see the plants, but with great respect. He has served as Conservation Chair for the chapter for many years, and has served as Chapter President and State Conservation Director. He is a CNPS Fellow.

Thursday, March 3, 2016, 7 p.m. at the Atascadero Library, 6555 Capistrano Avenue, Atascadero

From 101 take the 41 east exit.
If coming northbound 101, you take a left then right to get on 41 east.
If coming southbound 101, take a left to get on 41 east.
Take a left on Capistrano Ave. (lights after Rite-Aid).
Library and library entrance is on the right, the Community Room is on the 2nd floor.
Contact Lauren Brown if you need additional information (cell – 805-570-7993).

damage to the flora. You can get information on the planned route from PGE's web site (URL : https://www.pge.com/includes/docs/pdfs/safety/centralcalifornia/CentralCalifornia_FactSheet.pdf) ☼ David Chipping

President's Input

As the spring season progresses and we begin to see effects of the winter rains, I'd like to recommend we take some time to get out on the trails and see things up close.

Wherever we live on the Central Coast, we have access to natural places that will be at their peak performance during the next month or so. Take a drive to Shell Creek

or hike the Irish Hills or walk the Jim Green Trail or visit the coastal buffs at Fiscalini Ranch; there is surely something you will thoroughly enjoy!

I have two favorites you may want to consider this spring. They are uncommon destinations for native plant lovers, but are very special in my book. *continued on next page*



1. South Hills Open Space in San Luis Obispo. Park your vehicle on Bluerock Drive next to Stoneridge Park and walk up the hill. Pass through a simple gate and when you near the hilltop, you have the option of going left, right, or straight. If you go left, you must step over a small fence and proceed up the hill towards the south. If you go right, there is a rocky trail that goes up the hill to the north. If you go straight, you will circle around the hill to the right and eventually return to where you started.

The South Hills are made of serpentine rock, which causes many plants to struggle due to lack of calcium and excess of magnesium. Plants on these hills are unique because they are highly adapted to \ serpentine, at the exclusion of most other plants. We don't see invasive plants here because they cannot survive in such an unfavorable soil environment.

A walk on the hills in March will give you a real treat. There are an abundance of wildflowers (more than on normal hillsides). You will also see the abundant rock outcrops that cover the upper slopes. There are even some rare plants to be found. Bring along a copy of our chapter's book *Wildflowers of San Luis Obispo*, edited by David Keil, to aid in plant identifications.

Looking so barren and desolate for much of the year, a closer inspection of these hills will surely charm your heart!



2. The Strand at Montaña de Oro State Park. Park your vehicle at the end of Sand Spit Road in the Park. Walk along the path through a lovely coastal scrub landscape until you enter the sand dunes. Continue down the path until reaching the seashore. Walk north along the beach for about a mile, then begin to investigate the dunes on the right hand side.

Because of the abundant rains this winter, we immediately notice how the coastal foredune vegetation has covered the beach with carpets of green leaves. Within a stones throw of the surf, we find profuse stands of the magenta sand verbena, *Abronia maritima*. As we walk further east, we see giant silver dune lupines, *Lupinus chamissonis*. And, as we reach the upper dunes, the Morro Bay estuary comes into view and the dunes drop swiftly into Shark Inlet.

This walk takes more stamina, as walking in sand involves coordination and balance. However, the out-of-the-way place drops us into a small wonderland of wilderness, surf, sand, and fascinating plants. ☼ Bill Waycott

Hoover Award

Dr. Neil Havlik was recognized with the 2015 Hoover Award for his contributions to appreciation and preservation of the San Luis Obispo native flora. The honor, named for Dr. Robert Hoover, was presented to an appreciative Neil Havlik at the annual Banquet on January 23. Prior recipients meet yearly to select an honoree judged for their accomplishments in education, conservation and chapter support.

Dr. Havlik served as San Luis Obispo City Natural Resources Manager from 1996 until his retirement in 2012. In that role, he oversaw the creation of the city greenbelt. He was instrumental in the acquisition of key parcels, protection of other private parcels, the expansion of the greenbelt trail systems, and was the guiding force behind the joint publication (with our chapter) of the immensely popular Wildflowers of San Luis Obispo guidebook. His role in protecting Chorro Creek bog thistle populations within the greenbelt led to a 2015 special award from the US Fish and Wildlife Service.

Neil majored in Biology at Cal Poly San Luis Obispo, graduating cum laude in June 1968. At our banquet, Dr. Havlik recounted how honored he was to have studied under the late Robert Hoover. He then attended the graduate program in Botany at UC Santa Barbara from January 1969 to June 1971, earning a Master of Science degree in Botany. In 1978, Neil went back to school, seeking a Doctorate in the interdisciplinary Wildland Resource Science program at UC Berkeley. He earned his doctorate in that field in June 1984.

He held a variety of positions with the East Bay Regional Park District in Oakland for fifteen years, involved in land use planning, environmental impact



John Chesnut presents Hoover Award to Neil Havlik

Photo by Marlin Harms

analysis and mitigation, natural resource management, property management, and land acquisition. In 1987 he became the first Executive Director for a non-profit land trust headquartered in Fairfield, California (Solano County in the lower Sacramento delta).

Since retirement, Dr. Havlik has contributed greatly to developing a local Carrizo Plains Conservancy initiative, a special purpose land trust targeted on bringing more property under protection in our Carrizo region.

Neil Havlik also serves on the board of the Coastal San Luis Resources Conservation District. The RCD projects play an essential role in furthering preservation of our rural landscape, quietly enlisting landowners in vital protection projects.

Please share your appreciation of the Neil's wonderful contributions to our county and its flowers.

Sahara Mustard, an Emerging Weed Threat for the Central Coast?

By John Chesnut

Sahara mustard (*Brassica tournefortii*) is an old-world annual that has expanded rapidly across the American desert southwest in recent decades. The California Invasive Plant Council evaluates its threat as high due to its severe impacts on native flora and its capacity to rapidly expand its population. Sahara mustard has recently become an abundant weed in the Los Osos sands, perhaps encouraged by the extensive sand disturbance that accompanied sewer system construction.

- Sahara mustard is easily pulled by hand, hand weeding the recently established populations prior to its early seed fall will provide prudent control. •



Fruit with long beak

Sahara mustard is a short-lived annual that germinates in the early winter soaking rains and by February fruits have formed. In comparison with the other weedy mustards found locally, Sahara mustard flowers are smaller and pastel lemon yellow. Its rapidly maturing fruit possess a long (several centimeters) beak extending beyond the fruit. Black mustard (*Brassica nigra*) and short-pod mustard (*Hirschfeldia incana*), in comparison, possess a bright saturated yellow flower and both have short beaks on the fruit.

The flowering tops, of Sahara mustard with maturing fruit, branch freely with stiff arms held at odd angles from the main stem. The rosette leaf margins are deeply lobed with a repeated pinnate margin. Sahara mustard is a strict annual, its tap root is delicate and easily pulled, compared with the other weedy mustard are facultative biennials and often establish strong, nearly woody root systems. The fruits of the drying Sahara mustard plants shatter and disperse an enormous number of seeds. The plants easily break off and "tumble" across windy sand plains. The stiff branching habit appears to be an adaptation to a tumbleweed dispersal strategy.

Sahara mustard has broad ecological range in the old world, from southern Europe to Central Asia where it was a wild collected oil seed crop. The first herbarium record of this species in California dates from the Coachella Valley in 1927. It appears to have remained restricted to this region until 1970's when it began a rapid expansion across the California desert, and as far east as Texas. Anecdotal

stories state that the Coachella date palm growers encouraged Sahara mustard because of its competitive effect on other weeds. Indeed, research has shown that the mustard exudes compounds that suppress growth of competing plants. The regional expansion of Sahara mustard beyond its local confines as a date palm weed was correlated with the explosive popularity of off-highway recreation. Expansion into cold-winter deserts (Utah and Nevada) has also been noted. Sahara mustard is considered a serious pest in the Mojave and Sonora desert. The weed spreads along roadsides and in disturbed ground. Thick patches of the weed out-compete the native spring annuals; while the dry standing skeletons contribute to the well documented increase and severity of desert wildfires.



Sahara Mustard *continued*

Sahara mustard appears to prefer a nutrient-poor sandy substrate. Disturbance strongly benefits patches. Off-highway vehicle pits and dune slopes used for hill climbs can become pure stands of mustard in the Mojave. Its first record in San Luis Obispo County dates to 1975 in the Oceano Dunes. Dr. Keil first collected it in Los Osos in 1985. In Los Osos, sand stockpiles and excavation spoils were the initial population points. The sand and gravel quarries along the Santa Maria River (and the source of Los Osos construction sand) are heavily infected.

Ecologically, Sahara mustard is an extreme "r type" weed. Evolution has minimized everything except maximum seed production for the next growth cycle. Seeds are small for a mustard, but abundant. It does not live through the season, but flowers, fruits and fades away by April. Leaves shrivel as fruits ripen, much of its later photosynthesis appears to happen along its green stems and green fruits.

The intact native coastal scrub is a perennial shrubland association. We can hope that an annual weed (no matter how vigorous) is "swimming upstream" against the ecological inertia supporting a perennial climax vegetation community. Veldt grass (*Ehrharta calycina*), whose widely spaced clumps function as ersatz "shrubs," fits into this landscape with more troublesome ease. However, Sahara mustard could easily dominate artificially or naturally disturbed sandy systems. The flood plains of the Salinas might easily support stands, and the role Sahara mustard plays in the ignition of wildland fires could be very damaging there. Sahara mustard may threaten to further degrade our coastal dune habitat, already deeply impacted by veldt grass. Furthermore, its northward expansion into favorable sandy conditions in the Salinas watershed is underway. Collections in this decade (2010-2014) place it in the interior sands in Ft. Hunter Liggett (Monterey County), near Kettleman City (Kings County) and north of Davis (Yolo County). There are unconfirmed reports of recent expansion into the portions of the Carrizo disturbed by recent solar plant construction.

SOD Blitz 2016 - Save the Date

The SLO Chapter Sudden Oak Death (SOD) Blitz will be the week-end of May 21 to 23, 2016. Training will be Friday, May 21 beginning at 6 p.m. Sample collection will be on your own time Saturday and Sunday, May 22 and 23. We will add a field training session Saturday morning (location and time TBD) for anyone who would like additional training prior to collecting. A bin in a central location (likely San Luis Obispo) will be set up for sample drop off by 6 p.m., Sunday, May 23. Additional information will be posted on our chapter website (cnps-slo.org) and in the May newsletter, or you can contact Lauren for additional information (lbrown805@charter.net, 805-460-6329).

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



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California Native Plant Society*

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Field Trips

Saturday, April 2, 2016, Malcolm McLeod Annual Field Trip Meeting to Shell Creek co-lead by Dirk Walters and David Chipping. This is our monthly meeting for April. Meet at the San Luis Obispo Veterans Hall, 801 Grand Avenue (corner of Grand & Monterey Boulevard) at 8:30 a.m. and/or the Santa Margarita Park & Ride (intersection of Hwys. 101 and 58) at 9:00 a.m. Bring your "Wildflowers of Highway 58" plant guide by Dr. Malcolm McLeod or plan to purchase one for \$10 on the trip. For more information call Dirk Walters at 543-7051 or Dave Chipping at 528-0914.

Sunday, April 3, 2016, 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 good 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.

Saturday, April 9, 2016, 9:00 a.m. Drive and Stroll Tour of Figueroa Mountain

The Santa Lucia District, Los Padres National Forest will hold one of its thirteenth annual Wildflower Weekends on Figueroa Mountain in conjunction with the California Native Plant Society. Meet at 9 a.m. at the Fire Station on Figueroa Mountain Road. Turn left at the SR 154-Figueroa Mtn. Rd. intersection near Los Olivos, and proceed to the Fire Station parking lot. This will be a "drive and stroll" tour of this year's hopefully abundant display. Sturdy shoes, lunch and liquids, and camera and binoculars recommended. Call Helen Tarbet at 925-9538 ext. 246 or Charles Blair 733-3189 for details.

Requesting Native Plant Lists: If you have a list of native plants, observed in a specific area, e.g., Morro Bay St. Park, or along a trail, e.g., Hazard Peak Trail at Montaña de Oro, CNPS wants to receive a copy. CNPS member Madeline Fay has volunteered to review the lists and bring the taxonomy up to date using the latest scientific names. With permission, the corrected copies will be placed on the Chapter website. Please contact Madeline by e-mail at madfay@charter.net, and she will be happy to work out the details with you. Thank you.