Obispoensis

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

May 2023

Manroot, Wild Cucumber
Marah fabacea

The cover this time is the common plant, *Marah fabacea*. It is commonly known as "wild cucumber" or "man-root" or "man-under-ground." The common names are rather descriptive. Wild cucumber refers to its botanical family affiliation. It is a member of the Cucurbitaceae, or the family of the cultivated cucumber (*Cucumis),* watermelon (*Citrulus*), squash and pumpkins (*Cucurbita*), and gourds *(Lagenaria* and *Luffa*). All members of this family have unisexual (imperfect) flowers that are borne on herbaceous vines. The vines possess tendrils, and their leaves are palmate veined and lobed. In fact, if one sees this set of characteristics on a plant growing over shrubs in our county coastal scrub, chaparral, or riparian, it is unlikely to be anything else. The male or staminate flowers are produced in clusters called racemes or panicles that arise from many of the leaf axils. The female or pistillate flower is solitary and is found at the base of some of the male clusters. The ovary is very prickly and can be found just below the white to cream colored petals. All this is evident in Bonnie's drawing. The species certainly grows wild. There are very occasional references to it being cultivated. Essentially all horticulture books ignore it. I suspect its flowers are too small and it's too aggressive to be suitable for any garden. In older plant books, species now included in *Marah* were part of the genus *Echinocystis*.

The second name, man root or man-under-ground, also refers to a physical trait of the plant. Species of *Marah* produce a very large underground tuber that can weigh on the order of a hundred pounds. This tuber often is produced approximately 4-6 feet underground. and since the tuber is approximately the weight of a human being and is produced at a depth corresponding to the typical depth a casket is buried, it is logical for it to be called man root or man-under-ground. I might note that the tendency to produce large tubers of this description is found in several genera in a diversity of plant families. For example, one of our weedy bindweeds (*Convolvulus*), produces one and it's apt to grow in our croplands unlike our *Marah,* which tends to stay in fencerows and wild land edges. Any weed with a large underground tuber is very difficult to eradicate once it gets established. This is because, in order to get rid of it, you must first "starve out the man-under-ground".

The fruit of *Marah* is a large, irregularly dehiscent capsule. Its seeds are large enough to contain enough edible meat to have made it worthwhile for early Californians to use it for food or medicine. On one of my visits to Rancho Santa Ana Botanic Garden, I observed several unripe *Marah* fruits that had been ripped apart and their hulls deposited outside rodent burrows. So, it is obvious that rodents, at least, find the seeds worthy of consumption, but what about humans?

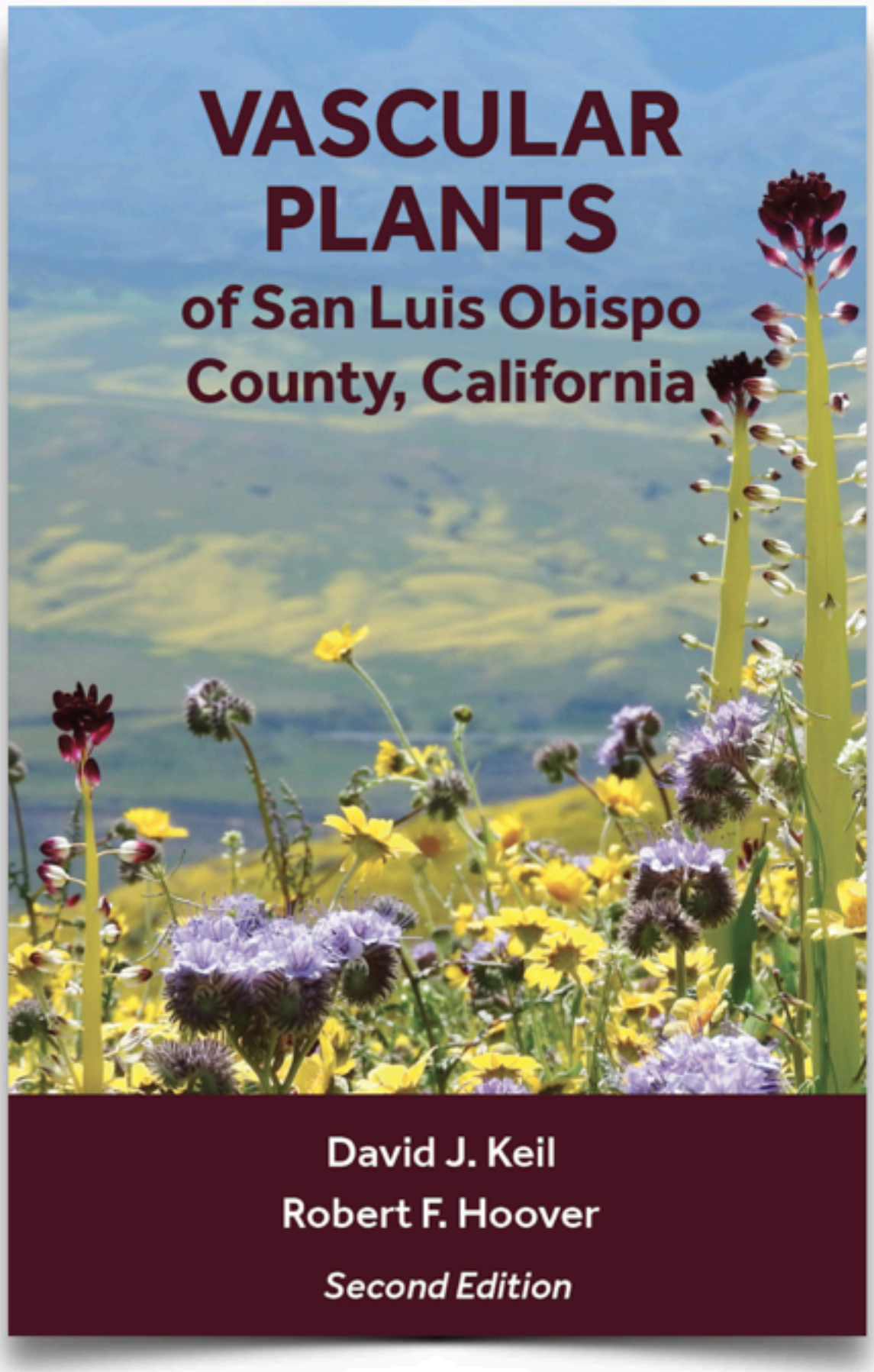
"I was unable to find any reference to their use by people in any of my books on edible, medicinal, or poisonous California plants. One reference did refer to a red dye that can be from the seeds of one of the seven or so species of *Echinocystis* and/or *Marah*". After writing the last two sentences, Mardi Niles brought to my attention a number of references. These references first referred to it as a plant taken by some Native Americans to commit suicide. Others referred to the ground seeds being used to stupefy fish. Both of these would imply that it is extremely poisonous. However, remember, a poison in the correct dosage is a medicine. So, as would be expected, several Native American peoples reportedly used concoctions of it for a diversity of ailments. Personally, I find it a plant that is best (and safest) enjoyed as we find it growing in nature. -- Dirk Walters

ON A FIELD TRIP AND FORGOT THE PLANT LIST?

Dr. David Keil has created a large number of plant lists to areas all over the county, including Shell Creek and the Carrizo Plain. These can be accessed through our web page. The files are all free PDFs, and also are mirrored on the CalFlora website which also gives you a picture of each plant from their collection. **https://cnpsslo.org/resources/finding-plants-in-the-wild/**

Cover Photo:*Marah fabacea* Marlin Harms

It's Here... Big and Beautiful!



Vascular Plants of San Luis Obispo County, California

$55.00
Building on the earlier work of Robert Hoover, botanist Dr. David Keil created an updated second edition of **Vascular Plants of San Luis Obispo County, California,** now with over 2,000 plant species described and 600 color photos of plant communities and native plant species. This complete botanical reference book covers over 3,600 square miles of San Luis Obispo County, California—a biodiversity hotspot with complex geology, varied topography, and nearly one hundred miles of coastline. The county is home to a remarkable diversity of plant life, now all referenced in the user-friendly identification keys, botanical descriptions, and detailed range statements found in *Vascular Plants of San Luis Obispo County, California*.

Written by **David Keil and Robert Hoover**
Publication Date: April 8, 2023
Flexi Case Cover—904 pages, 6 x 9.5
Color photos and maps
ISBN: 9780999896082

"One of California's richest and most distinctive floras receives the treatment it deserves in this beautifully comprehensive, accessible, and definitive work. Keil, one of California's most knowledgeable and accomplished botanists, has taken Hoover's long-renowned flora to the next level to produce a gorgeously illustrated, stand-alone, and fully up-to-date resource for identifying and celebrating the spectacular diversity of wild plants and natural habitats."

—Bruce G. Baldwin, W.L. Jepson Professor & Curator, UC Berkeley

"This rich and diverse flora of San Luis Obispo County, meeting place of many plant communities from seacoast to arid mountain peaks and desert, is beautifully illustrated and described."

—Peter H. Raven, President Emeritus, Missouri Botanical Garden

Obispoensis Editor's Note

This book was published by Pacific Street Publishing, owned and staffed by our own Dr. Matt Ritter. We congratulate Matt on producing this beautiful book. One interesting note is that the many color photos in this book were chosen to be different from those in the Wildflowers of San Luis Obispo book, so that the two books complement each other.

https://pacificstreetpublishing.com/nonfiction-books

Chapter Monthly Program
May 4th San Luis Obispo Vets Hall

(corner of Mill St. and Grand Ave)

Social Gathering 7pm, Chapter Business, Awards: Program Starts 7:30pm. Sales Table Will Be There.

Dr. Scott Armbruster
Mysteries in the California Wildflower Genus *Collinsia*, the Blue-Eyed Marys

Scott Armbruster is a renowned 'boots on the ground' evolutionary biologist, who's work spans diverse wildflower clades in California (*Collinsia*), Australia (*Stylidium*), the tropical Americas (*Delephampia*) and more. Scott was born and raised in California, receiving a BA from the University of California, Santa Barbara and an MS and PhD from the University of California, Davis with committee members including Grady Webster, Robbin Thorp and Herbert Baker. His work focuses on plant-pollinator relationships to understand floral evolution, speciation, and the process of community assemblage in flowering plants. He currently has a joint appointment at the University of Portsmouth, UK and University of Alaska, Fairbanks. Scott is motivated as a biologist by a desire to inspire others to be informed citizens about the environment and to have a love of the natural world. He spends part of each spring in San Luis Obispo County, exploring our wildlands with friends, family, colleagues, and students old and new.

Photo Credit: Mark Egger

Does Pollinator Thermal Ecology influence the Evolution of *Collinsia* (Plantaginaceae) Flower Size and Mating System?

The Collinsieae clade of the Plantaginaceae comprises two genera and more than 25 species of spring-blooming annuals. All but three of these are restricted to the Pacific drainage of North America, with a center of diversity and endemism in the California Floristic Provence.

Flowers in Collinsiae range in size from ca. 2 mm to over 20 mm in length. Mating systems range from largely autonomously self-fertilizing to largely outcrossing, depending on species, population, and year. There is a weak correlation between flower size and mating system at the population and species levels, but much of the variance in mating is explained by site-to-site and year-to-year differences.

Pollinators are mostly megachilid bees, which drink nectar and collect pollen from the papilionoid-like flowers, especially numerous species of *Osmia*. Larger flowers are also visited by members of the Apidae (*Bombus*, *Anthophora*, *Tetralonia*, etc.). Indeed, the positive correlation between flower size and pollinator size is one of the strongest relationships to emerge from comparative studies. In light of this relationship, I suggest a new, (non-mutually exclusive) hypothesis for evolution of the "selfing syndrome" (selfers have small flowers, outcrossers have large flowers). Large bees have good thermoregulatory abilities, which are lacking in small bees. Large bees thus provide reliable pollination in a wide range of poor weather conditions, as often occurs in early spring and at higher elevations. In contrast, small bees cannot forage when it is cold or wet, and protracted periods of poor weather in the blooming season select for selfing ability. Thus, because small-flowered Collinsieae attract only small bees, they are selfers in years and sites of inclement weather. In contrast, large-flowered species attract medium-sized to large pollinators, which can forage to some extent in inclement weather, resulting in higher, more consistent outcrossing in large-flowered populations and species.

In conclusion, I suggest that a lot can be learned about floral evolution in a geographical context by taking an integrative, comparative approach to bee thermal ecology, pollination ecology, floral morphology, and mating system.

Field Trips and other Events

Left Photo: Reservoir Canyon. Right Photo: Santa Rita Ranch Bill Waycott

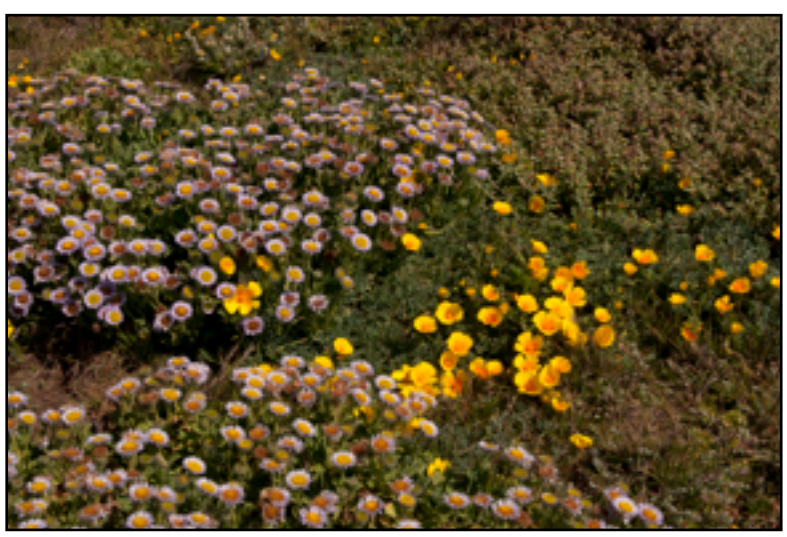
April 29th, 2023, Saturday, Junge Ranch. Join David Chipping on a field trip along the ocean bluffs of the Junge Ranch addition to San Simeon State Parks. This is the same day as the wonderful Cambria Wildflower Show that supports the Fiscalini Ranch Preserve. Carpools can start from the Spencers Grocery Store Parking Lot at 8:30 (35.38966,-120.85817), or assemble at Junge Ranch. Meet at 9.15 at the ocean end of Vista Del Mar Ave, at the southern end of the San Simeon Commercial District (35.60959,-121.14376). After the field trip consider visiting the wonderful wildflower show, where CNPS will also have a well-stocked sales table. Rain or threat of rain cancels. Contact David Chipping (805) 528-0914 dchippinATcalpoly.edu

April 29th, Saturday(12pm-5pm) and April 30th Sunday, (10am-4:00pm), Cambria Wildflower Show **(see page 9)**

May 13th, 2023, Saturday, 10:00 am, Santa Rita Ranch, located near the intersection of Old Creek Rd. and Hwy 46, west of Templeton, CA. Meet at the ranch at 10:00 am, or join in a carpool from San Luis Obispo at 9:15 am. David Keil and Lindsey Roddick will be our guides. Santa Rita Ranch is one of the land holdings of the Land Conservancy of SLO Co. A link to the LCSLO ranch webpage is :https://lcslo.org/santarita/ A link to the CNPS plant list for this location is: https://cnpsslo.org/resources/finding-plants-in-the-wild/ Bring adequate water, snacks, and dress in layers for the weather; a hat and sturdy shoes are advised. Participants will need to RSVP by May 7th to be included in this outing. Email bill.waycott@gmail.com to reserve a spot (please put "Santa Rita Ranch" in the subject line), 805-459-2103. Further information will be available during the first week of May. Rain or threat of rain cancels.

May 21st, 2023, Sunday, 9:00 am, Reservoir Canyon, City of San Luis Obispo, Ranger Led Hike – Bilingual. Spanish and English: Join CNPS and the City of San Luis Obispo Rangers for a morning walk in nature. We will meet at the trailhead at 9:00 am and walk for 2 hours, talking about the plants and animals, while observing the beautiful views of the landscape. Come join us as we study and learn about the many facets of nature that surround our city and provide us with the air we breathe and the water we drink. Everyone is welcome.

Español: Acompañen a los líderes de esta caminata, representantes de la ciudad de San Luis Obispo y la Sociedad de Plantas Nativas de California (CNPS), para disfrutar una mañana juntos en la naturaleza. Nos encontraremos al inicio del camino a las 9:00 horas y caminaremos por 2 horas revisando las plantas y animales, mientras observado las hermosas vistas del paisaje. Vengan y únanse con nosotros para estudiar y aprender los aspectos de la naturaleza que rodean nuestro pueblo y que nos provee el aire que respiramos y la agua que tomamos. Todos son bienvenidos.



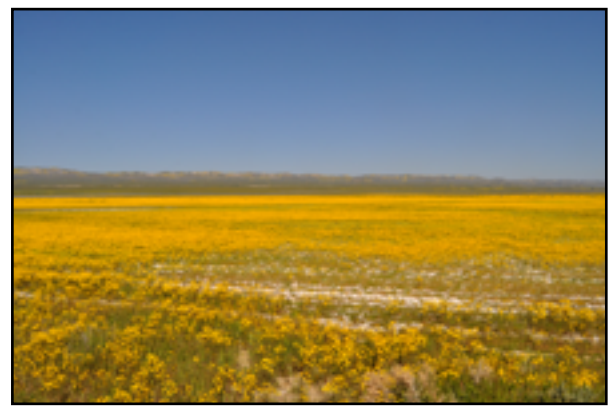
Junge Ranch: Left Photo: *Erigeron glaucus* and *Eschscholzia californica* Right Photo: *Calochortus uniflorus* David Chipping

Carrizo Plain April 15th Field Trip Mini-Report

Bill Waycott led the group straight to Simmler Road, which crosses the valley south of Soda Lake. The flowers were absolutely spectacular, a solid carpet reaching from the lake shore into the southern distance. Dodging the numerous cars, as the superbloom has had good publicity, we climbed east to Elkhorn Rd, and then went south past Wallace Creek until the road turned south into the hills. There we saw numerous flowers, including desert candle. Note that the Bidart Ranch has closed access in this are, so we went south until close to Panorama Road, where we had lunch amidst lupines. The Temblors are starting to show a lot of color, but much is still in bud. We finished the trip looking at the sea of Jared's lepidium along Panorama Road. An incredible visual treat everywhere we went. Thank you Bill. David Chipping





(Field Trip Photos David Chipping).

Froom Creek Trail is Really Pretty

For those of you who don't want to drive as far as the Carrizo Plain, we suggest the Froom Creek Trail. Accessed from the southern end of Madonna Road, or more quickly from a informal trail at the southeast corner of the Costco Gas Station area, the flowers start in earnest once you reach the stream. The prettiest areas are the lower part of the canyon up to a point where transmission lines cross the valley. The big 'color-makers' were *Streptanthus glandulosa* subsp. *glandulosa* *Gilia achilleifolia*, *Plagiobothrus nothofulvus*, *Phacelia imbricata*, and masses of *Eschscholzia californica*.



Shell Creek and Red Hill Road April 2nd Field Trip Report

Photos: Steve Schubert

Over 40 people gathered at the Santa Margarita Park and Ride, and made their way to Shell Creek. For the first, time for this annual trip, the Calf Canyon area had almost no flowers, and so was bypassed in favor of an early arrival at Shell Creek. As the photo shows, the CNPS group generally kept to existing paths to minimize damage to the plants, and we were happy to see other visitors being equally careful. We stopped at the first meadow, and then went on to the sandy road cut at the northern end of the flower fields. The high flow in Shell Creek did not allow for a visit to the white sandy fan on the east side of the valley. Red Hill Rd. was interesting and the soils there were saturated. Flowers were abundant. At both Shell Creek and Red Hill Road, flowers that are usually blooming at this time were still in bud.

Going to the Carrizo Plain? Take the Butterworth eBook on your phone or tablet.

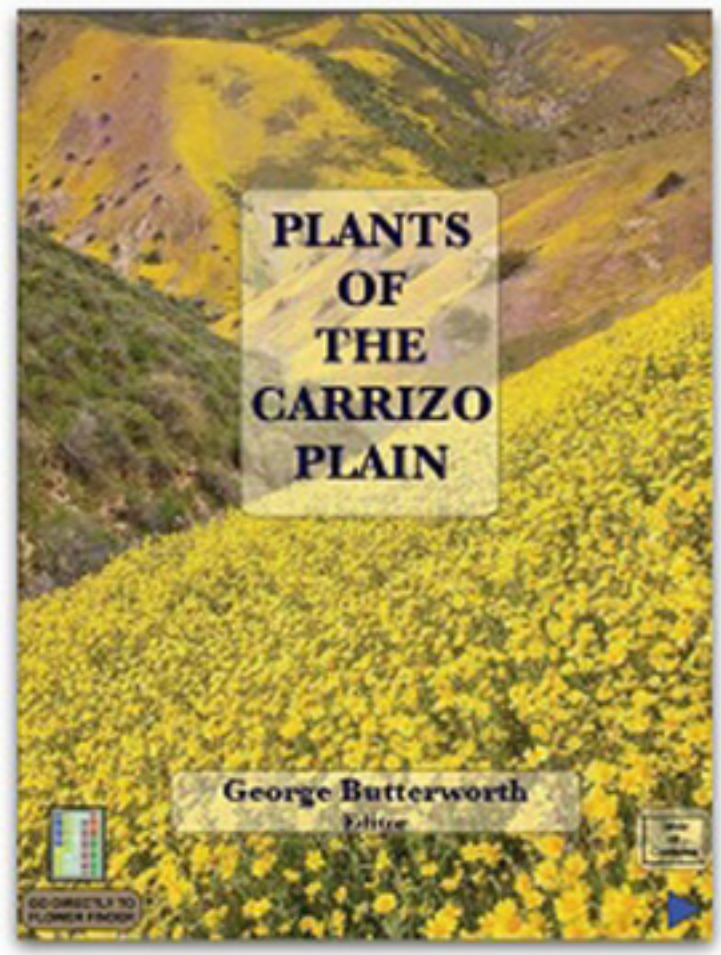
George Butterworth has been the principal author of this version, designed for plant identification in the field. The main body of the book includes over 300 plants, which is most, but not all, of the species on Carrizo Plain.The plants are organized into categories: Endangered, California State Rank 1B (rare), and California State Rank 4 (uncommon).

The plants are arranged first by color, then by flower type, then by family, then by genus, and last, by species name. They can be reached from a “Flower Finder” at the start of the book.Some plants have variable color and might occur in more than one color section.

There is one species per page, with photos and text. The text has (1) a brief Description; (2) Habitat, or where the plant is likely found, with respect to both plant community and location; (3) Flowers, which gives the flower size, and sometimes other information; and (4) Blooming Period.

Plants are native unless noted. If a plant is rare, that notation is at the bottom of the page.

https://cnpsslo.org/shop/plants_of_the_carrizo_plain/



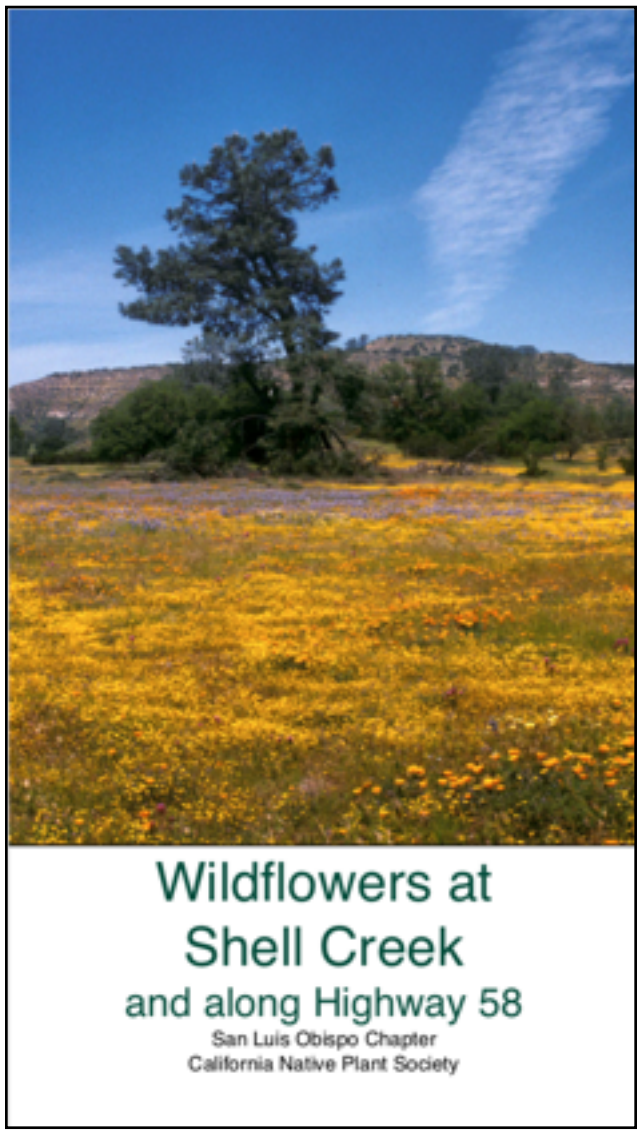
Wildflowers of the Carrizo Plain Reprinted

At the urging of Carrizo Plain National Monument, we have reprinted the revised version of this little booklet. The 16-page booklet shows the most common wildflowers on the plain, and has 72 species arranged by color. It is not as comprehensive as our digital book which can be downloaded from our website It will be available for purchase at Chaprer meetings or on Carizzo Plain field trips.

Two New eBooks on the Web Site

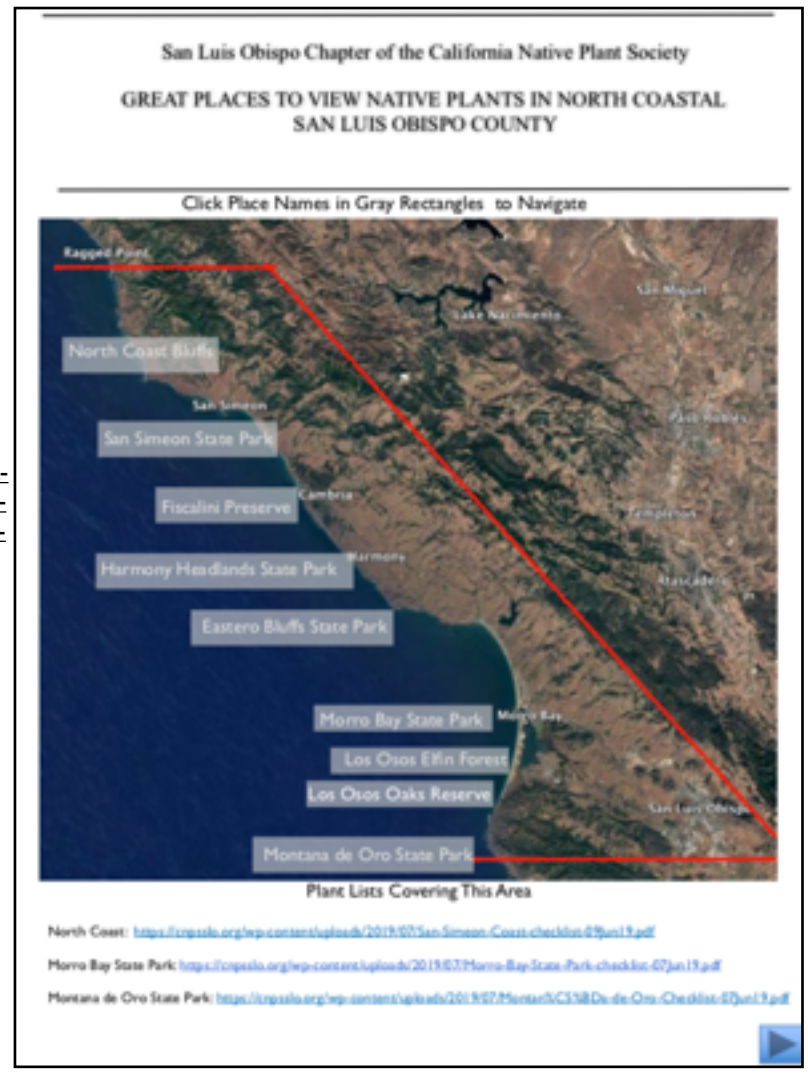
We are happy to announce “Wildflowers at Shell Creek and Along Highway 58” has been placed on the ebook page. It contains over 270 photos of plants found along Highway 58 between Santa Margarita and the Carrizo Plain, with particular emphasis on the Shell Creek area. It is a $10:00 download and designed to fit on the elongated screens of cell phones

The other ebook is a free download from the right side of our web page that carries all of Dr. Keil’s plant lists. It describes where to go to see flowers on the North Coast, and, while not a wildflower guide, does list some of the flowers to be seen at each location.



https://cnpsslo.org/shop/great-places-to-see-native-plants-in-north-coastal-san-luis-obispo-county-ebook/

https://cnpsslo.org/shop/wildflowers-at-shell-creek-and-along-highway-58-ebook/



Invasive Species Report

Purple star-thistle *Centaurea calcitrapa*

Photo: D. Chopping.

Purple star-thistle is in the Sunflower (Asteraceae) family. The name Asteraceae comes from Aster, the Classical Latin word for "star", which came from Ancient Greek ἀστήρ (astḗr), "star." Compositae, the original name for Asteraceae, were first described in 1740 by Dutch botanist Adriaan van Royen. The genus name *Centaurea* is said to be in reference to Chiron, the centaur of Greek mythology who discovered medicinal uses of a plant eventually called "centaury." The species name *calcitrapa* comes from the word caltrop, a type of weapon covered in sharp spikes that was dropped on the battlefield to injure advancing troops and horses. *Centaurea calcitrapa* grows as an annual, biennial or perennial. The stems are hairless and grooved. It sometimes takes the shape of a mound, and it is finely to densely hairy to spiny. The leaves are dotted with resin glands. The phyllaries (phyllaries are reduced leaf-like structures that form one or more whorls immediately below a flower head) are green or straw-colored and tipped in tough, sharp yellow spines. The head contains many bright purple flowers. It flowers from July until September, and the seeds ripen from August to October. It is native to southern Europe. Here, it is found on trails, fields, roadsides, disturbed open sites, grasslands, and overgrazed rangelands in northern and central coast ranges of California. Purple star-thistle can inhabit a wide range of environmental conditions and replace native species. Hand pulling or digging can be used to control small infestations. Effective herbicides include *Milestone, Transline* and glyphosate.

MARK SKINNER

The Chapter's Seedy Side

It was very fun to have so many of you drop by the seed table at the plant sale. With the wonderful organizer that Judy Johnson-Williams made we did not have to chase seed packets that were being blown around the parking lot, so we had a lot more time to visit with some of you. That is always enjoyable though at times I don't feel competent to answer the questions. But it is fun to try, and I learn as I try to search out the answer.

I am pleased that we are gradually increasing the number of people willing to collect for the seed exchange and sales. I encourage more to join in. There are some of the seeds, like lupine, that just don't grow for me, but they are popular at the sales. When others contribute, we can increase the diversity of seeds that we offer.

Seed collecting time may be upon us by the time this issue arrives in your inbox. I have actually started collecting from my *Claytonia*. Just remember that we need mature seed. That sometimes means leaving a bit of a messy look in your yard as those seeds get those last nutrients and ripen to the point of harvest. For those inflorescences with seeds that ripen gradually, if I cannot collect easily by taking one seed head at a time, I aim to collect when they are about half ready. You can put them in a paper bag (remember seeds are alive and need oxygen exchange, don't use plastic) and the ripe seeds may fall out. Some plants may continue to ripen seeds once cut but I suspect the majority do not (no scientific knowledge from me here).

Seeds ripen throughout the year. Winter is about the only time I am not doing seed collecting or cleaning. There may be seeds that are appropriate to collect at that time but I take a vacation. It's a bit of a relief to finally have everything cleaned up and put away for a few months after the flurry of cleaning and packaging in the fall. But I am now about ready to begin having seeds collected in my brown paper lunch sacks and accumulating on countertops. I enjoy it, obviously. It also makes me learn so much more about the plants that I collect from as I watch them through their cycles.

Do label those paper bags. It's amazing how easy it is to forget what it is you put in that bag once several months have passed. Yep, looks familiar, but what is it really? Label with Genus and species and note the location. Some are concerned with planting only true local plants. They need to know where the seeds were collected. And this is a reminder that these seeds are not advised for restoration purposes unless you are familiar enough with the plant to know it won't cross. Many plants will hybridize and since we often have several of the same genus in our gardens they may do so.

Now for the standard reminders for those who are new to these newsletters. Do not collect from property that is not your own without permission. It is not legal. Do not collect from rare plants. We will leave that to those who are collecting for seed banks or research.

Enjoy this beautiful spring. Even if you aren't interested in seed collecting, enjoy the wonderful diversity and beauty of our native plants.
Marti Rutherford

15th Annual Cambria Wildflower Show
Saturday, April 29, 12:00-5:00 Sunday, April 30, 10:00-4:00

The combination of rains and warm weather is bringing out wildflowers early and it is predicted to be a super bloom year in many places! You can enjoy hundreds of wildflowers all under one roof on Saturday, April 29 from noon to 5 pm and Sunday, April 30 from 10 am to 4 pm at the Cambria Vet's Hall, 1000 Main St. You will see a display of fresh wildflowers collected from the Monterey County line to the Morro Bay Estuary and from the coastal bluffs to the ridge of the Santa Lucia Mountains.
There will be:

- Hundreds of bouquets of fresh flowers labeled with botanical names along with common names arranged by plant family.
- Rare and endangered, invasive and poisonous plants will be identified.
- Plants displayed in antique and interesting bottles and vases.
- Botanists will be on hand to answer your wildflower questions.
- Great treats and light fare at the wildflower Café.
- Helpful books, plant lists, wildflower seeds, Native Plant Society and Fiscalini Ranch Preserve merchandise.

The 15th Annual Cambria Wildflower Show is free to students of all ages, but we will be asking others for a $5 donation at the door to help cover costs. A reference list will be provided to everyone attending and a species list will be available for purchase.

Volunteers are still needed to help with the show – If you'd like to help with show set up, identifying and displaying flowers on Firday, April 28, or sitting the entry on Saturday, April 29 or Sunday, April 30, please contact Jo Ellen at 805-395-1193.
Photos: David Krause

Save the Date: May 20, 2023: CNPS-SLO Field Plant ID Workshop

Local botanists Kristen Nelson and Dena Grossenbacher will lead a field workshop aimed at helping biologists improve their plant keying skills. Participants will key plants in the field to family, genus and species using either the Jepson Manual or the new edition of the *Vascular Plants of San Luis Obispo County, California* by Dr. David Keil. This is an intermediate-level workshop aimed at biologists who have experience and/or training in plant taxonomy and keying. Class size will be limited and advance registration required. Go to cnpsslo.org to register and for more information.

Photos: Kristen Nelson

Cal Poly Celebrates Dr. Keil and the New Plant Conservatory

In three days of field trips and an evening celebration at the beautiful new Plant Conservancy, a large crowd celebrated both the brand new building and the release of Dr, Keil's new county flora (see page 3). For the field trips small convoys of Cal Poly buses took botanists to the North Coast's Fiscalini Ranch and the coastal bluffs north of Arroyo de la Cruz on Thursday, and Shell Creek on Saturday when Steve Sinton joined the group to give a little history on the ranch. The Friday field trip was to local serpentine habitat.

The evening celebration also gave strong recognition to Dr. Matt Ritter, who started the original conservatory in a small greenhouse adjoining the Fisher Bioscience building. Dr. Keil was lauded (by Zoom) by the world famous botanist Peter Raven from Missouri Botanic Garden. The university provided an excellent Greek-themed buffet.

(Top Left) Dr. Keil presenting his flora (Kristen Nelson); (Top Center) Serpentine field trip (Marti Rutherford); (Top Right) Dr. Matt Ritter watching Dr. Keil's presentation (Marti Niles); (Center) Steve Sinton and Dr. Keil at Shell Creek (David Chipping); (Bottom Row) Shell Creek fiield trip (David Chipping).

"CA Native Plants for the Garden" Presentation Draws a Crowd

There was an excellent turn-out for the March 15 native garden presentation put on by our chapter and the Atascadero Land Preservation Society at the Atascadero Library. An audience of more than 40 interested people mid-day on a Wednesday even surprised the librarians! For the CNPS portion of the talk, Zach Tanner prepared the slideshow with Bill Waycott's input, which included great photos and features of recommended native plants for SLO County gardens north of Cuesta Grade. John Doyle and Susi Bernstein gave the presentation, and were so pleased by the many questions and comments from the audience – which continued for another hour after the presentation concluded! There is definitely an interest in knowing more about the maintenance of natives in the garden, so we'll schedule another talk in the future when Zach is able to attend. And we'll make sure to have a microphone available the next time we do this. Please contact Susi if you weren't able to get the handout of plants mentioned in the talk, and she'll email it to you; susi.slo.cnpsATgmailDOTcom

From the Carrizo Conservancy

April 8th saw a visit by our local Congressman Salud Carbajal, who is reintroducing his **Central Coast Heritage Protection Act**, which will add three areas in Carrizo Plain National Monument to the National Wilderness System, as well as adding to existing Wilderness areas in Los Padres National Forest. Congressman Carbajal and his wife greeted visitors to the Monument, themselves enjoyed the beautiful views of a full Soda Lake and the wildflowers coloring the landscape, and generally elevated the experience of everyone who got a chance to meet them.

Enjoy your outing to Carrizo Plain, and be sure to add your voice to those speaking out for more protection for this special place! Thanks. Neil Havlik

Neil Havlik, Michael Khus-Zarate from the Northern Chumash Tribal Council, and Congressman Salud Carbajal at Soda Lake to celebrate the reintroduction of the Central Coast Heritage Protection Act

Conservation Update

Just like last month we are STILL waiting for the release of the Dana Reserve EIR, so nothing new to add on this issue. CNPS is supporting Congessman Carbajal's **Central Coast Heritage Protection Act**, which will add three areas in Carrizo Plain National Monument to the National Wilderness System, as well as adding to existing Wilderness areas in Los Padres National Forest. David Chipping

What's Happening? The Event Calendar

https://cnpsslo.org/events/

NASA Landsat 9 Image of all the yellow flowers on the Carrizo Plain. April 11. 2023
Insert: The large purple *Phacelia* patch opposite Traver Ranch in the southern part of Carrizo Plain.

LOOKING BACK. WHAT THE OLD MAY NEWSLETTERS TELL US

Looking Back 10 years to May 2013, we had a manzanita identification workshop. Michael Simpson from SDDU spoke to us on *Cryptantha,* and showed beautiful photomicrographs of the seeds.

Looking back 15 years to May 2008, we were working with Los Padres National Forest on increased OHV damage on West Cuesta Ridge and Red Hill Road.

Looking back 20 years to May 2003, we were protesting poorly designed mitigation plans for Pismo clarkia habitat proposed for destruction in the Meadow Creek project in Arroyo Grande, checking progress on the Los Osos Habitat Conservation Plan, and working with Atascadero Native Tree Association on projects, with SLO County on the Morros Plan, and with Los Padres National Forest on its forest-wide OHV Plan.

Looking back 25 years to May 1997, we hosted Wildflower Weekend with 41 guests. A proposed extension of Cabrillo Estates into Morro manzanita habitat was of great concern, and we were working on fending off multiple attacks on endangered species protection at the state level.

Looking back 30 years to 1993, we were working to help SWAP secure protection of the Elfin Forest in Los Osos. and addressing the problems of Cape Ivy infestations.

Looking back 35 years to 1988, we were were addressing the rise of Regional Habitat Conservation Plans.

And in every one of these newsletters, we see drawings by Bonnie Walters illustrating a plant description by Dirk Walters.

Our Book and T-shirt Sales Table Needs a Manager

Many of you are familiar with our Book and T-Shirt Sales Table that makes items available at our plant sales and a few other events. Its success has been its offering of hard-to-find books about native plant gardening and California-centric natural resources. Our beautiful T-shirt continues to be a best seller.

The chapter is in need of a person(s) to fill the Sale Table Manager position. This is an opportunity to share your love of books with a large receptive group of people. The general responsibilities include selecting and ordering books and T-Shirts, doing some basic bookkeeping, and managing the sales table. There is flexibility with this position and how it moves into the future is dependent on a new manager's decisions. It is also potentially a role filled by two people; one for books, the other for T-Shirts.

Our former sales manager and other volunteers are more than willing to help orient, answer questions, and assist a new Manager(s). Want to experience the sales table in action? Join us for our next chapter meeting at the Vets Hall, and at the Cambria Wildflower Show.

Want to know more? Please contact Linda Chipping (805) 528-0914, (lindachippinATyahooDOTcom) with any questions or interest.

Lichen of the Month: *Parmotrema periatum*

The foliose *Parmotrema periatum* was photographed on a bridge railing in the Coon Creek Trail in Montana de Oro State Park. It is widely spread in temperate climates, and is used as a spice in India. There its common name is Black Stone Flower. It apparently has very little taste or fragrance when raw, but adds an earthy flavor when heated in oil. We do not recommend trying this because there is always a possibility this is misidentified. It is usually on hardwood trees in open habitats, occasionally on rocks and common on oaks and other trees and shrubs in coastal woodlands of California.

Photos: D. Chipping

Horticulture Now

Welcome to Horticulture Now. A new column featuring articles about California native plants in the garden setting. Some of these articles are newly written and others will have been previously published. Some months the column may feature a guest author. This month's article features *Ceanothus cuneatus* (Buckbrush). Hope you enjoy it.

Gardening with California Natives

With plumes of blooms rising above its dense green foliage, it is like clouds of smoke coupled with a delicate fragrance which no bee can resist. This month's article features *Ceanothus cuneatus* commonly known as Buckbrush, Mountain Lilac or just *Ceanothus*. The genus *Ceanothus* is found within the very large family Rhamnaceae, and there are about 40 species of *Ceanothus* found in California. Here in San Luis Obispo County and especially within the coastal zones, *Ceanothus cuneatus* can be the dominant representative of its genus.

Ceanothus cuneatus is found within the Maritime Chaparral plant association and grows happily alongside *Adenostoma fasciculatum* (chamise), *Artemisia californica* (California sagebrush), *Diplacus aurantiacus* (sticky monkey-flower) and *Rhamnus californica* (California coffeeberry). As mentioned earlier, *Ceanothus* is highly attractive to both native and European bees. The lush growth of its flowers also attracts insects such as aphids, which feed upon the tender flowers by ingesting sap. In turn, the aphids attract small birds like the Oak titmouse (*Baeolophus inornatus*) who dine upon the plump, juice-filled aphids. These aphids also encourage Argentine ants, which herd the aphids like cattle to collect honeydew (a secretion from aphids) as a food source.

With sturdy trunks and branches reaching heights of 5-7 feet, *Ceanothus cuneatus* provides protection for ground birds like the California quail (*Callipepla californica*) and the California Towhee (*Melozone crissalis*). Mammals, including rabbits, raccoons and deer also find cover amongst its hanging branches. On western facing slopes it can become the dominant plant type and covers whole hillsides. This winter it would have been hard to miss the glory of its splendor.

Early uses of *Ceanothus cuneatus* by native Chumash peoples indicates its use as a soap, as all parts of the plant are rich in saponins. When crushed and mixed with a little water it produces a fine lather which is good at removing dirt. Perhaps early European settlers to our area also noted this. I have experimented with this myself and have found the cleansing properties to be that, or better than, modern soap. However, I would not recommend washing one's hair as it would be hard to rinse out the small flowers.

Once established in the garden setting, *Ceanothus cuneatus* requires little care. A full sun location, slightly protected from harsh drying winds, will encourage success. It is a large shrub, so care must be taken to allow plenty of room for its arching branches to achieve their glory. When established, after one to three years, it can survive on winter rains. It prefers well drained soils so care must be taken to ensure this occurs for a successful planting. When using a drip system for irrigation it is important to select plants with similar water needs.

(Top) *Ceanothus cuneatus* var. *fascicularis* (Keil) found on dune sands. (Bottom) *Ceanothus cuneatus* var. *cuneatus* (Chipping) found inland.

Ceanothus should be placed on the upper hillside portion of the drip system, when possible, to lessen the possibility of overwatering, which can cause root rot. Pests are not usually a problem except for aphids, and most of the time beneficial insects and birds will keep them at bay. However, if need be, a stiff stream of water from a hose nozzle can wash off aphids. As mentioned earlier, bees, butterflies and hummingbirds are highly attracted to its flowers. Planting near a window or a porch will provide hours of enjoyment.

Ceanothus cuneatus plants have nitrogen fixing nodules on their roots. Fertilizers containing large amounts of nitrogen are not necessary and may be detrimental. Maintenance consists of light pruning to encourage arching branches with a dense canopy. Heavy pruning, especially on older specimens, is not recommended as thick branches are not likely to re-sprout. It is mostly propagated by semi-softwood cuttings, but can be started from fresh, mature seed pods. The seeds will require treatments to mimic what occurs during a fire to scarify them to stimulate germination. *Ceanothus cuneatus* can be hard to locate at your local nursery; however, one can usually purchase it at native plant sales. There are also many other species of *Ceanothus,* including several attractive cultivars that are more common at garden centers throughout the central coast.

In conclusion, with all its wonderful attributes, *Ceanothus cuneatus* has earned its place as our 'plant of the month'. Best Wishes and Happy Gardening, **John Nowak and Suzette Girouard**

Sudden Oak Death Blitz - reminder and final call for citizen scientists.

If you are interested in tracking the health of oaks and California bays in SLO County, join the **SOD Blitz May 5-8, 2023**. No experience necessary, we provide short online training, advice as needed, even recommended places to survey. It's outside, it's fun.

All the information is on the www.sodblitz.org and the SLO County SOD BLITZ https://ucanr.edu/sodblitz2023.
This year the locations to pick up and return packets will be at:

- **San Luis Obispo Agricultural Commissioner's Office – 2156 Sierra Way # A, San Luis Obispo, CA 93401**
- **San Luis Obispo Agriculture Department in Templeton - 350 N Main St, Templeton, CA 93465**

Packets can be picked up any time after 1:00pm on May Friday 5th, packets must be returned at either location by 10:00am on Tuesday May 9th. At the trainings you will be taught the symptoms to look for and how to sample. You will then have the weekend to go and sample bay laurels and tan oaks for symptoms of SOD. You don't need to sample the whole weekend though, one of those days is what most people do and is totally fine. The packets are then turned in to the collection sites, which are collected and mailed off for analysis at UC Berkeley.

LEFT: Yellow/ black/ dead tissue symptomatic banding on California Bay leaf: Photo U.C. California.

RIGHT: Contents of a collector's sampling package. including instructions on collecting protocol and recording site locations.

Membership Corner

Welcome to our new and renewing CNPS-SLO members as of February 2023, and thank you for your support! You are the lifeblood of our Society. For membership-related issues, please contact LynneDee (LynneDee@althouseandmeade.com).

Patricia A., Jeanette A., Jill A., Kathy A., Patricia A., Anne A. & Daniel H., Nicholas B., Jessica B., John B., Laura B., James B., Heide B., Leif B., Susanne B., Shelley B., Melissa B., William B. & Patricia P., Robin B., Linda C., Kathy C., Mattie C., John C., Leigh F., Lynda & Joe F., David F., Sue F., Liz G., Beverly G., Suzette G., Katie G., Lesley G., David G., Dennis H., Kate H., Deborah H., Liana H., Peggy H., Chelsea H., Kathlene H., Michael K., Megan K., Alice K., John-Paul L., Dan L., Lisa L., Diane M., Nancy M., Tim M., Wallace M., Brian M., Robin M., Mardi N., Albert N., Christopher & Jeannett P., Louis & Sandra P., Pamela R., Susan R., Stephen R., Kris R., Teresa R., Peter S., Elaine S., Holly S., Simone S., Monica S., Mary S., Doug T., Rogan T., Bonnie & Chuck T., Greg V., Karen W., Kristie W., Dylan W., and Eleanor W.

Riccia trichocarpa: (a plant you probably stepped on without knowing)

CNPS field trips frequently stop at Red Hill Road to look at the rare *Hooveria purpurea* var. *reducta* (Camatta Canyon amole), or the usually thick stands of shooting stars in late winter. Protected by a steel pipe fence that keeps OHVs away (and which was built because of our chapter's pressure on the Forest Service), people cross into the field in the one low point in the fence, where a faint path can be seen going eastward to the edge of a steep bluff, and so it is the natural path for field trips to follow. The soils are exposed on this path, and when those soils are wet, you can find the tiny liverwort *Riccia trichocarpa*. The plant dries out quickly, and become invisible to the untrained eye as it melds into the biocrust along the little trail. The common name for the plant is Hairy Crystalwort, and this seems to be the only recorded location in SLO County.

LEFT *Riccia trichocarpa* on the Red Hill Rd. footpath: Photo David Chipping.

RIGHT Location of trail at Red Hill Rd. Highway 58 is at the top of the photo (Google Earth)

THE GOOD PEOPLE WHO MAKE THE CHAPTER 'HAPPEN' AND HOW TO FIND THEM

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WE ALWAYS NEED PEOPLE TO HELP OUT. OUR MISSION IS VITAL AND OUR FLORA IS AT RISK.

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Protecting California's Native Flora since 1965

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, *Artemisia;* the quarterly *Flora*, which gives statewide news and announcements of the activities and conservation issues, and the chapter newsletter, *Obispoensis.*

San Luis Obispo Chapter of the
California Native Plant Society
P.O. Box 784
San Luis Obispo, CA 93406

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