Obispoensis

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



January 2024

Coastal Silk Tassel Bush (Garrya elliptica)

Alice Meyer & Dr. Dirk Walters

The silk tassel bush is one of 17 species in the silk tassel family. Coast Silk Tassel Bush (*Garrya elliptica*) is one of three species found in the county, and is limited to the seaward side of the Coastal Ranges from Ventura County to the central Oregon coast. This evergreen shrub is usually 5 to 8 feet tall but occasionally becomes a small tree. In shape, the leaves are suggestive of the coast live oak: thick, glossy green on top, white and woolly underneath.

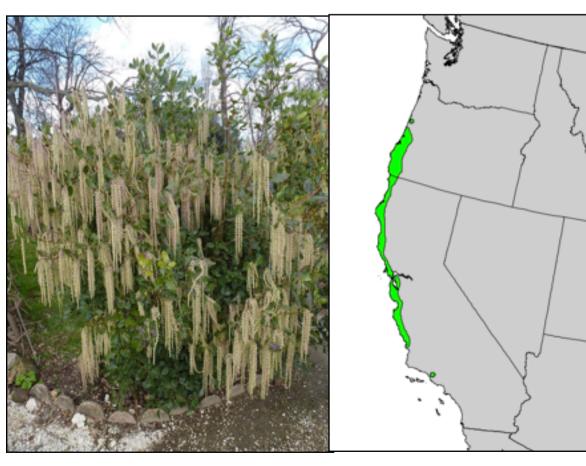
The 'silk tassels' are pale gray-green catkins, produced as clusters at the tips of the previous year's growth. Plants are either male or female (dioicous), with flowers borne on separate catkins. Both the male (staminate) and female (pistillate) catkins are 2 to 7 inches long.

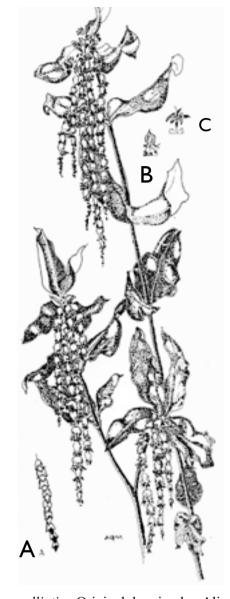
The bracts that enclose the flowers are joined at the top in pairs around the supporting stem (rachis), and the opposite pairs alternate at right angles to those above and below them. This gives the unopened catkin a scaly appearance. Alternate pairs have been shaded in the drawing to show separation of the pairs of bracts. See Alice Meyer's 1972 drawing labeled 'A'.

None of the flowers have petals. When the flowers open, they slip down below the bracts on fine hair-like stems (pedicels), 3 flowers on each side. The female flowers (pistillate) remain covered by their downy calyxes, with only their 2 stigmas exposed (drawing, labelled 'B'). The 4 sepals of the male flowers lift outward, and the 4 stamens hang down (drawing, labeled 'C'). The windblown pollen turns the surrounding leaves pale yellow.

Silk tassels bloom from December till March, and the illustrations are of a plant growing on West Cuesta Ridge during the first week in January, 1972.

In the trade, there is a selected male form labeled 'James Roof' which has catkins up to 12 inches or more in length. They are very abundant and decorative, and the vigorous plant grows to 10 feet tall. Propagation is from semi-hard cuttings. This shrub is so outstanding and well worth cultivating and would serve handsomely as a 'specimen' tree.





Garrya elliptica Original drawing by Alice Meyer

A LITLE HISTORY

This article and drawing is based on the original hand typed mimeographed article that appeared in the Morro Coast Audubon Newsletter back in the 1970s. It was written and illustrated by Alice Meyer. We know she did at least a dozen for them. This was in addition to the tremendous amount of work she was doing for our Chapter. She and her husband Bud Meyer shared the first Hoover Award in 1972.

Unfortunately, the very grainy appearance of her drawing is due the natural appearance of the plant as well as the primitive duplication used at the time, but it's still very accurate. The only addition I might make is to note that one can find catkins on the plant all year long. It's always a treat to find them along the trail in Coon Creek Canyon. Chapter photographers must have scores of pictures of them. DRW

(left) Garrya elliptica 'James Roof' is found in botanic gardens throughout the world, including the Jardin des Plantes in Paris, France. (right) Garrya elliptica range. (Wikipedia)

Chapter Monthly Program January 4th San Luis Obispo Vets Hall

(corner of Mill St. and Grand Ave)
Manzanita Workshop 6-7 pm (Open to All), Social Gathering 7pm;
Business and Program Starts 7:30pm.

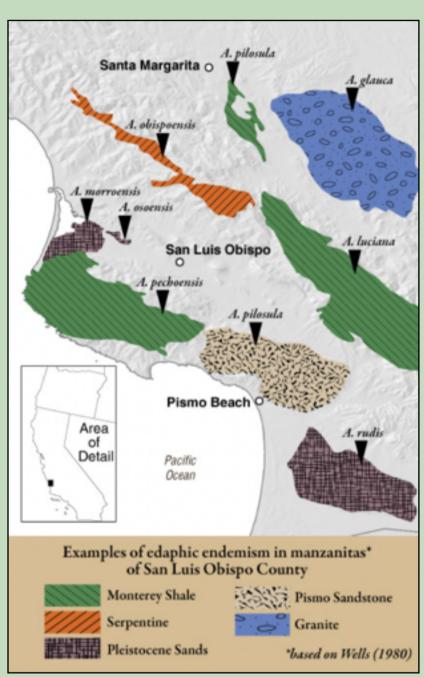
Bill Waycott Manzanitas (*Arctostaphylos*) – Gifts that Keep on Giving

The California Floristic Province (CFP) is the center of diversification for the genus *Arctostaphylos*. Out of 107 taxa, only one subspecies has a restricted distribution outside of the CFP (in Guatemala). Most manzanitas occur in specialized micro-habitats presenting adaptations to nutrient-poor soil types, diverse micro-climates, and differing elevations. The great majority of local endemics occur along the California coast, typically within or adjacent to the summer marine fog zone. In several coastal areas, clusters of species and local endemics are found in uplands around urban areas, such as San Francisco Bay, Monterey Bay, and in San Luis Obispo Co. (Morro Bay and the Guadalupe area). We will discuss manzanita diversity, adaptation, their intriguing genetic components, and why we should all visit them in the wild.

Bill is co-owner/operator (along with his wife, Diana) of Nipomo Native Seeds, where they produce vegetable seeds, along with CA native seeds. Bill has a PhD in plant genetics from UC Santa Cruz and has worked most of his career in agriculture. Bill's involvement in CNPS dates back to his college days, and over the years has served ax SLO Chapter president, and as vice-president on the State Board.



(Above): Diana visiting an aggregation of manzanita species at Point Sal.



(Above): The distribution of manzanita species that are limited to particular bedrock substrates around San Luis Obispo.

We recommend the book "Field Guide to Manzanitas, California, North America, and Mexico" by Michael Kauffman, Tom Parker, and Michael Vasey



Saturday, January 20, 2024. 10:00 am, Mushroom Walk (The Fungal Foray) on Fiscalini Ranch, Cambria

We will look for mushrooms growing in the Monterey pine forests of Cambria while enjoying the beauty of the Fiscalini Ranch Preserve.

Meet at the corner of Tipton Street and Warren Road in Cambria at 10:00 AM. 35.55107283053567, -121.08961500328455

How to get there: Travel north on Hwy 1 to Cambria. At the first stoplight, turn left onto Ardath Drive. Follow Ardath and turn right onto Tipton Street. Continue to the intersection with Warren Road (2 blocks) and find a parking place.

Bring water and field guides. Dress appropriately for the weather. Be prepared for poison oak. The hike will be easy, about a 2-3 hour stroll through the woods.

For additional information, email, text, or call David Krause: dkincmbria@aol.com, (805) 459-9007.



Saturday January 27, 2024 (weather permitting); 9:30-11:30 am, Native Plants in Winter - Family Sketch Hike at Three Bridges

Winter is not just bare sticks in the woods, but fallen leaves (some are huge!), nuts and seeds, and textures of bark and lichen. Here's an upcoming opportunity for us to slow down and look at nature closely. This easy wintertime hike at Three Bridges in Atascadero is an entry-level introduction to both native plants and drawing; no experience in either is necessary. The hike is aimed at kids aged 5-10 years and their families; however, all are welcome. The hike route is stroller-accessible and will be two hours in length. Sketchbooks and pencils included! Free! If you wish to attend, please contact Judy Johnson-Williams to sign up: judy j-wATixDOTnetcomDOTcom

Sunday, January 28, 2024, 10:00 am, Santa Margarita Lake. Manzanita Field Trip #9.

Join us to study the manzanitas that are adapted to the interior areas of San Luis Obispo County: big berry manzanita (*Arctostaphylos glauca*) and Eastwood's manzanita (*A. glandulosa*). Meet at the River Road (Blinn Ranch) entrance to Santa Margarita Lake County Park (35.315849, -120.417921). Total hike distance is 4 miles with an elevation gain of 500 ft., and a duration of 3.5 hours. From San Luis Obispo, the trailhead is 40 minutes' drive. For those wanting to carpool, meet at the Park & Ride area, just east of the Santa Margarita Exit off of Hwy 101 on Hwy 58 (35.383409, -120.626885). Bring adequate water, snacks and/or a lunch, and dress in layers for the weather; a hat and sturdy shoes is advised. Contact Bill, 805-459-2103. Rain or the threat of rain cancels.



Photo Bill Waycott:: Big-berry manzanita A. glauca

Saturday, February 10, 2024, 10:00 am. San Simeon Creek Bike Ride, Cambria, CA (details in next issue)

Sunday, February 25, 2024, 9:30 am, Coon Creek Trail, Montaña de Oro State Park

Join us for a spring walk through Coon Creek Canyon, a lush riparian habitat, for a glimpse of spring fanfare. Total hike distance is 3 miles with an elevation gain of 200 ft., and a duration of 2.5 hours. Meet at the Coon Creek parking area in Montaña de Oro St. Park (35.258084, -120.886969). Bring adequate water, snacks and/or a lunch, and dress in layers for the weather; a hat and sturdy shoes is advised.. Contact Bill, 805-459-2103. Rain or the threat of rain cancels. The link to the CNPS plant list for this area is located here https://cnpsslo.org/wp-content/uploads/2013/03/Coon-Creek-2013-Plant-List.pdf

LOOKING BACK: WHAT THE OLD JANUARY NEWSLETTERS TELL US

Actually... nothing. January was the month of the annual banquet, and instead of a newsletter, members got a flyer on the banquet arrangements. So here are some past banquet programs:

January 2014: David Myers of the Wildlands Conservancy spoke on Conservancy projects such as Wind Wolves Preserve.

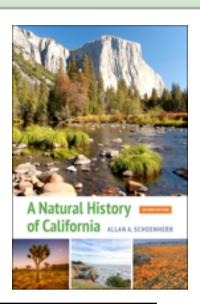
January 2004: Emily Roberson, CNPS Conservation Analyst, spoke about CNPS conservation issues.

January 1994: Allen Schoenherr, author of 'A Natural History of California', presented on the making of this excellent book.

January 1984: Dr. Joseph Madeiros spoke on Alpine plants.

AND LOOKING BACK (ABOVE) reminds us of one of the best natural history books you can buy. Allen Schoenherr, the author, recently passed away but leaves us this 632-page masterpiece. It is available from U.C. Press for \$44.95.

U.C. Press says "In this comprehensive and abundantly illustrated book, Allan A. Schoenherr describes the natural history of California—a state with a greater range of landforms, a greater variety of habitats, and more kinds of plants and animals than any area of equivalent size in all of North America. A Natural History of California focuses on each distinctive region, addressing its climate, rocks, soil, plants, and animals. The second edition of this classic work features new details about parks reclassified by federal and state agencies, new stories about modern human and animal interaction, and a new epilogue on the impacts of climate change".



CNPS-SLO Mini-Keying Workshop:

Manzanitas!

- Free pre-meeting plant keying workshop
- Facilitated by Bill Waycott and Dr. Dena Grossenbacher
- January 4, 2024, 6-7 pm*
- Learn about key characteristics to identify manzanita species
- Practice keying manzanitas collected from our area
- Bring "Vascular Plants of San Luis Obispo County", "Field Guide to Manzanitas", a 10x hand lens, narrow pointed dissection tool, and headlamp**
- * Please arrive a few minutes early so we can start promptly
- ** Bill and Dena will provide some loaners resources

Photo: Terry LePage, CANativeGarden.blogspot.com. Used by permission



LET'S HEAR IT FOR THE INSECTS

90% of all insect species that eat leaves (such as caterpillars of butterflies) can eat only native plants. For working ecosystems, we need native plants because they are the foundation of the food web. (Douglas Tallamy's "Bringing Nature Home")

- Insects convert leaf matter to protein; most non-domesticated land animals birds, lizards, mammals -- depend on insects in some way for survival.
- Insects are essential to our well-being as pollinators, food for other insects and animals, decomposers, and population regulators of other organisms.
- Everything is connected: Most caterpillars can only eat a few types of native plants. Without native plants on which to lay their eggs, most butterflies and moths go extinct. Butterflies and moths are important because they're pollinators and because their caterpillars are the main food of baby birds. Without caterpillars, our bird populations crash.

Thanks to Theodore Payne Foundation for these factoids

CHAPTER BOARD ELECTION: RESULTS AND CONGRATULATIONS

Thanks to all members who participated in our Election of Officers during the December 7th General Meeting. The elected slate of officers is Vice President Dena Grossenbacher, Recording Secretary Cindy Roessler, and Chapter Treasurer Dave Krause. Our gratitude especially goes to David Chipping who will continue to serve as Acting President in the absence of a nominee. He is quite willing to hand the position over if you would like to try. We owe a depth of gratitude to these four valuable people who make our chapter function. It is not a small task.

Susi Bernstein

Juncus textilis (Basket Rush): A Very Useful Plant

In acknowledging the October 2023 edition of Artemisia, which deals with traditional Indigenous Peoples' uses of the land and its plants, we offer *Juncus textilis*, the basket rush, as an example of a plant of many uses. It is found only in California's southern coast and coastal mountains, always close to water. The cylindrical stems can grow as high as 6 ft, but are bendable and not brittle. The stems can easily be woven into basketry, and as the stems can take on different colors according to when they were picked, they can be a variety of shades from deep red to tan. Historically, the rush was dyed with other plant dyes, and could even be dyed black using *Suaeda*.

The rush has a bushy inflorescence, with seeds like those of grains. During hard times the tender, white base of the stem can be eaten. As the rush is rhizomatous, judicious removal of individual stems would not affect the long term viability of the rush patch.

If you would like to see the plant, which most people scarcely notice, drive up Stenner Creek Road (first right west bound 101, after CalPoly), drive into the hills, under the historic railroad trestle and through the rock canyon up to a bridge. There is a nice patch of the rush around that bridge.

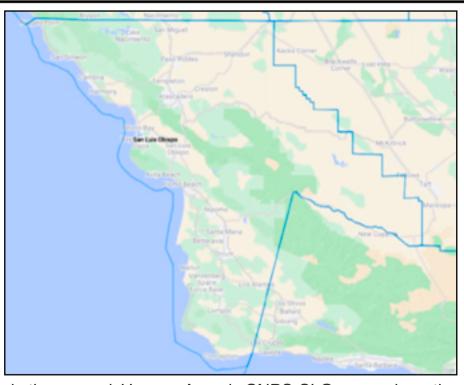


What Geographic Area is Covered by our CNPS-SLO Chapter?

According to our CNPS-SLO operating guidelines, our Chapter covers San Luis Obispo County and portions of Northern Santa Barbara County." A map of the specific geographic range, taken from the CNPS State website, is shown below

(https://www.cnps.org/chapters/map).

As you can see, the geographic range covers only the far western part of Santa Barbara County, although our activities have been limited to areas north of the Santa Ynez Mountains.



Does our Chapter's range really matter? Yes it does. Through the annual Hoover Award, CNPS-SLO recognizes the distinguished service of a local member who has made a significant impact on the Chapter in various ways, including by contributing to the appreciation and understanding of the flora of San Luis Obispo County and/or Northern Santa Barbara County. Similarly, CNPS-SLO occasionally honors the significant contribution that a local individual/organization/business has made in promoting native plants or the natural environment within San Luis Obispo County and/or Northern Santa Barbara County through the Community Award. In both cases, this is our Chapter's stated range, although the attached map is likely the best tool for describing our coverage area. Susi Bernstein



Our largest native orchid Epipactis gigantea: Santa Rita Road

NIPOMO — Join the Five Cities Orchid Society at Orchid Fest 2024. Discover the beauty of orchids at Nipomo High School on February 3 & 4, 2024, from 10 am to 5 pm on Saturday and 10 am to 4 pm on Sunday. Admission is only \$5, and parking is free.

Explore a variety of orchids from vendors like Orchid Design, CalCoast Orchids, Sunset Valley Orchids, and more. The event takes place at Nipomo High School, 525 N. Thompson Ave, Nipomo, CA 93444. For additional details, visit www.fcos.org or contact Jeffrey Parham, FCOS President, at 360-271-3971. Don't miss this orchid extravaganza!



We have a small change to make to our Chapter's existing Operating Guidelines, and we need the membership's help in making it official. We will be asking CNPS-SLO members attending the January 4 2024 General Meeting for their approval of the following change (in red font) with regard to the way the Chapter's Community Award is selected:

Sec. 5 The Chapter Board's Ad Hoc committees, which are temporary and charged with a specific short-term task, may include, but are not limited to:

A. Nominations: Select a slate of officers for election.

B. Awards: (1) Hoover: The committee shall consist of previous Hoover Award recipients who will meet to select a person to receive this annual award. (2) Community: The makeup shall be the same as The Hoover Committee. The Committee shall develop criteria for selection of awardees. The committee shall consist of current-term voting members of the Chapter Board who will select the awardee.

C. Publications: Prepare and edit publications for printing

D. Photography: Maintain a library of photographs of the County's flora on the Chapter website.

Lichen of the Month-Polycaulina candelaria



Photo: D. Chipping

The corticolous Polycaulina candelaria was photographed on oak branches at Shell Creek. It is bright orange to yellow in color. and is a species of corticolous (bark-dwelling) lichen in the family Teloschistaceae. It was one of the first lichens formally described by Swedish naturalist Carl Linnaeus in his 1753 work Species *Plantarum.* Since then, the taxon has acquired a long and extensive synonymy. It was finally transferred to the genus Polycauliona by Ulf Arup and colleagues in 2013, as part of a molecular phylogenetics-based restructuring of the family Teloschistaceae. In North America, one vernacular name is shrubby sunburst lichen. (Wikipedia).

Hexavalent Chromium and the High School Fire

A 12/12/23 article in "The Hill" reported on Sharon Udasin's article in the journal "Nature Communications" that demonstrated that California wildfires could be transforming natural metals into cancer-causing compounds. This should be of some interest to the residents of the City of San Luis Obispo following the recent High School Fire on the east side of the city. This research by Alandra Lopez and others showed that the benign isotope chromium-3 is converted to chromium-6 (hexavalent chromium) through wildfire heat. Chromium-6 is highly toxic and the subject of the cancer outbreak described in the movie "Erin Brockovich." Australian research in 2019 showed that the conversion of chromium-3 to -6 takes place when soils are heated, so Lopez's team checked dust levels in four Northern Sierra fires on serpentine-derived soils. Serpentine has relatively high amounts of chromium-3, which was mined in the Irish Hills and Cuesta Ridge in San Luis Obispo County. They found that chromium-6 levels were elevated 6.5 times over that of unburned areas. Lopez summarized: "Our study suggests far more attention should be paid to wildfire-modified chromium, and we presume additional metals as well." Doing so, she added, is necessary "... to more thoroughly characterize the overall threats wildfires pose to human health." As far as these potential threats are concerned, the authors said they believe that fire-induced toxic chromium exposure has the most acute impacts on first responders and people who live near the blazes. Residents living near the High School Fire site should not panic. The researchers also noted that burning grassland does not produce much chromium-6, unlike shrublands and forests which achieve higher toxic load, and that the first big rainfall can wash a lot of the metal underground. DHC

Nipomo Regional Park 2023 Manzanita Surveys

Mindy Trask

Our chapter is so fortunate to have Bill Waycott as a field trip coordinator, educator, enthusiastic native plant lover, conservationist, and active member of CNPS. Fueled by his concern for the loss of local flora on the Nipomo Mesa, Bill organized a small group to inventory the sand mesa manzanita (*Arctostaphylos rudis*; California Rare Plant Rank 1B.2) and other rare plants and natural communities at the Nipomo Regional Park in early December this year. Many of the local endemic and rare plants on the Mesa are either at risk or have already been extirpated due to development. As one of the last areas with relatively undisturbed habitat on public land remaining on the Mesa, understanding and responsibly managing native plants at the Park is vital to the persistence of our local flora.

Bill invited students from the Cal Poly Botany Department and Nipomo's Central Coast New Tech High School to assist with the plant surveys, to educate our future scientists about the natural history of Nipomo Mesa and provide some firsthand training on what field botanists and citizen scientists can do to help with conservation. "I was so glad to have the opportunity to complete research with California Native Plant Society and Cal Poly Botany students" said Leila Zavala, one of the Central Coast New Tech High School students. "The assessment gave us an idea of how few sand mesa manzanitas are truly left in Nipomo, which shows the need for our advocacy and education in our community."

We performed rapid assessments in two shrub stands to characterize the natural communities where sand mesa manzanita grows. and inventoried the sand mesa manzanita and other rare plants in the park. We located and mapped 37 more sand mesa manzanita plants than Bill previously had mapped, resulting in a total population size of approximately 60 plants. However, our search for other rare species yielded disappointing results. We were not able to find any Nipomo Mesa ceanothus (*Ceanothus impressus* var. *nipomensis*; California Rare Plant Rank 1B.2) or sand almond (*Prunus fasciculata* var. *punctata*; California Rare Plant Rank 4.3) plants, two species historically present on the Nipomo Mesa. Since the Park is surrounded by residential development, this population of sand mesa manzanita represents a trace of its historic range in our County, a true relict, and a highly valuable resource for the Nipomo Mesa.

Preliminarily, we determined that the sand mesa manzanita within the Nipomo Regional Park occurs in the Chamise Chaparral (*Adenostoma fasiculatum*) Shrubland Alliance. However, this community might be considered a Burton Mesa Chaparral (*Arctostaphylos (purissima, rudis*)) Shrubland Special Stand, which is more commonly represented around Vandenburg Air Force Base, in Santa Barbara County. We need more vegetation community data from the area and consultation with experts at the Vegetation Program of CNPS (the State program) to know for sure.

Come to the January 2024 meeting for more information from Bill Waycott on manzanitas in our County, as well as a pre-meeting keying workshop.



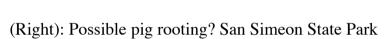
Bill Waycott's vegetation survey crew at Nipomo Regional Park, December 2023. Photograph by Mindy Trask

The Case of the Forgotten Mimas: No Conflicts with Tree Plantings Claimed

In our last issue we described how many years ago the California Department of Fish and Wildlife purchased a large acreage of land across San Simeon Creek Road from the campground entrance. The purchase was intended to protect a very unusual topography called mima mounds, and the associated wetland swales. We asserted that there seemed to a possible conflict as it appeared that the planting of what appears to be Monterey pine on the property. However, both State Parks and Greenspace claim that the plantings were on parts of the property that do not have mima mounds. We concur that the trees closest to Santa Creek Road are not on mima mounds, but it would be nice if we got some GPS readings on any pine plantings west of Van Gordon Creek Road and then superimpose those on Google Earth images.

In addition, even though the mima mounds do not appear to have a matching set of vernal pools, there are wetlands between some of the mounds that should be checked out for possible species of interest. Project anyone?

One more thing... in the 2021 Google Earth image of the area, there are some weird surface features. They are situated on the west side of the abandoned old highway trace. and about 270 feet northwest of the junction with Van Gordon Creek Road. It is in an area of mima mounds, but the textures cannot be seen in earlier or later images. It could be massive rooting by pigs. Whatever it is, it cannot be found on other Google Earth images.





DROUGHT AND THE CALIFORNIA FLORA

Native plants know how to deal with drought because the plants evolved with drought. Thirty seven of the last forty centuries in California have been dry; the 20th century was one of three wet centuries in the last 4,000 years. California's growth was predicated on the expectation of an uncharacteristic amount of water. Drought is normal. ("Introduction to Water in California," by David Carle, U.C. Natural History Guides, 2009).

Thanks to Theodore Payne Foundation for this factoid

Waiting for the first flowers of the year? Here are the plants that can flower in January, according to Dr. Keil's new flora

Native Species

Alnus rhombifolia
Anthoxanthum occidentale
Arctostaphylos cruzensis
Arctostaphylos glandulosa
Arctostaphylos glauca
Arctostaphylos luciana
Arctostaphylos morroensis
Arctostaphylos osoensis
Arctostaphylos pechoensis
Arctostaphylos pilosula
Arctostaphylos rudis
Blennosperma nanum
Camissoniopsis cheiranthifolia
Cardamine californica

Camissoniopsis cheiranthifo Cardamine californica Cardamine oligosperma Ceanothus cuneatus Ceanothus oliganthus Ceanothus spinosus Ceanothus thyrsiflorus Claytonia perfoliata
Clematis lasiantha
Dendromecon rigida
Dichelostemma capitatum
Diplacus aurantiacus
Erythranthe grandis
Fragaria vesca
Garrya elliptica
Leptosyne gigantea

Paeonia californica
Pedicularis rigginsiae
Plantago ovata
Quercus agrifolia
Rhamnus crocea
Ribes malvaceum
Ribes speciosum
Salix lasiolepis
Salvia spathacea

Umbellularia californica

Tauschia arguta

Introduced Species

Acacia longifolia
Brassica rapa
Brassica tournefortii
Calendula arvensis
Capsella bursa-pastoris
Cardamine hirsuta
Cistus incanus
Cotula australis
Delairea odorata
Dimorphotheca ecklonis
Genista monspessulana

Dimorphotheca ecklonis Genista monspessulana Lamium amplexicaule Lobularia maritima Oxalis pes-caprae Polycarpon tetraphyllum

Romulea rosea Viola odorata

HORTICULTURE NOW

Welcome to Horticulture Now, a column featuring articles about gardening with California native plants. Some of these articles are newly written and others, will have been previously published. This month we feature features two previous published articles from *Obispoensis*. One was written in December 2019 about seed planting and the other in December 2018 about gopher management. Hope you enjoy reading them.

<u>December 2019</u>: It's time to start thinking about planting your wildflower garden with the winter rains coming soon. As in years past, we are beginning our rainy season late with a dry Fall so far. This doesn't mean we will have a dry winter, but this dry pattern is important when it comes to sowing our wildflower garden.

The best gardens start with the onset of rain. But if we put out our seeds too soon, the birds will eat them and the sun will bake the rest. So, keeping this in mind, we can still prepare the site to be planted by raking the area smooth. Soil amendment is not necessary.

Go through the seeds you have acquired, which of course you bought at the plant sale. Get everything ready so that when the storms start to line up you are ready to sow your seeds.

Two days in advance of a rain event, complete the following steps: first, rake the top one inch of soil to loosen it. Second, using a light hand, spread seeds over the area that is to be your wildflower garden. Third, using your rake, go over the area once again to ensure there is soil to seed contact. Finally, and the best part, 'do the stomp' by walking all over the area to compress the soil. Then wait for the rains to come.

It's important to provide extra water, if necessary, at least every two weeks. Otherwise, if the rains come, sit back and watch your wildflowers grow! Until next time, happy gardening!

<u>December 2018</u>: Last month we discussed California ground squirrel problems. This month I will focus on the gopher, aka Botta's pocket gopher (*Thomomys bottae*). For most of us, gophers can sometimes be a headache but a livable one. They come and go between you and your neighbor's yard, and you only lose a couple of plants a year. For yards like these I recommend using gopher root baskets. These baskets are designed to last for years and will allow the plants some long-term safety against limited attacks. The wire baskets come in different sizes to fit whatever you plant; 1 qt., 1 gal., 3 gal., 5 gal., and 15 gal. Place the wire baskets around the roots before planting. I prefer to never use gopher poison, as the likelihood of some non-target animal eating the dead gopher is not acceptable.

For those who have a severe problem with gophers, I recommend using a gopher gasser. The gassers will travel down the tunnel and the gopher will succumb to carbon dioxide. The most important thing in using gopher gassers is the soil must be well irrigated. The water will help trap the smoke inside the soil particles allowing the gasser to be more effective.

Lastly, I have to mention gopher trapping. There are many traps to choose from; it's up to you to consider trapping. I do trap gophers but only in those yards that have severe infestations. If you have any direct questions, you can always contact me at gritlys@gmail.com. Until then, Happy Gardening.

Suzette and I hope you enjoyed reading these previously written articles. It's interesting that what was important then is still relevant today, even after 4 and 5 years. Also of note, 2018-2019 was an El Niño year whereas 2019-2020 was below average rain fall; therefore, a poor year to start a wildflower garden. However, I have high hopes for this year's rainfall totals. Now is the time to plant your wildflower seeds. Happy New Year and Best Wishes for your garden.

John Nowak and Suzette Girouard.

LAST MINUTE ADDITION

INVITATION TO A PISMO PRESERVE HIKE- DECEMBER 26th, 9:00 am

Come work off that holiday eating and avoid the post-holiday crowds by hiking at the Pismo Preserve. The Pismo Preserve is an 880-acre area with 11 miles of trails, operated by the Land Conservancy. This hike will take us through chaparral and oak woodland habitats and offers dramatic ocean views. Total distance: 2.5 miles, Elevation gain: 600 ft., Hike duration: 2.5 hours.

Bring the usual water, snacks, hat, sturdy shoes, and dress in layers for changing weather. A plant list for nearby Pismo Preserve can be found at https://cnpsslo.org/wp-content/uploads/2019/07/Pismo-Preserve-checklist-07Jun19.pdf. There are bathroom facilities at the parking lot where the hike will start and end. Rain or threat of rain cancels this trip. Also, if recent rains have been heavy trails may be closed. Check the Land Conservancy updates online www.lcslo.org/pismopreserve (look at upper right corner for trail status). Located off Mattie Road in Pismo Beach (35.151919, -120.654416).

Driving directions to Pismo Preserve: Take Exit 191B from US Highway 101. Pismo Preserve entrance and parking lot are located on the east side of the freeway at the very southern end of Mattie Road. From the north exit, turn right onto Price street, right onto Mattie (curves left), entrance is on your right. From the south, turn right at end of exit and right into parking lot. If parking lot is full, overflow parking is under the freeway to the left. A map of the Pismo Preserve trails is available from the Land Conservancy of San Luis Obispo website.

For more information about this trip, contact Peggy atpegisuzATaoIDOTcom

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

Newsletter Editor David Chipping (805) 528-0914 dchippinATcalpolyDOTedu

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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