
Obispoensis

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



March 2021

About the cover

The cover shows a photo by E.C. Cunningham of the Ojai lily, *Fritillaria ojaiensis*. It is found in semi-shaded, seasonally damp, rocky serpentine outcrops such as found in Reservoir Canyon, Cypress Mountain, Prefumo Canyon and on the Boy Scout Trail at Cerro Alto. The ratio of red to green in the flower varies. The other *Fritillaria* species found in SLO County are shown below.



Top Left: *Fritillaria biflora* var. *biflora* (Chocolate lily or Mission Bells) prefers clay soils in the western Coast Ranges, with large populations in Morro Bay State Park on the bluffs near San Simeon and north of Arroyo de la Cruz. The flower can show a range of variation between brown-purple and green. Those on the north coast bluffs are often dwarfed. Photo by E.C. Cunningham.

Bottom Left: *Fritillaria affinis* (Checker Lily) lives in shaded woods such as those on the unpaved portion of Santa Rita Road west of the summit. Photo by David Chipping.

Top and Bottom Right: *Fritillaria agrestis* (Stinkbells) resembles *F. biflora*, but has grey-green basal leaves and is found as an uncommon plant in the arid eastern county on calcareous clay soils. It has been found along Highway 58 west of the junction with La Panza Rd., along the crest of the Caliente Mts and Temblor Range within Carrizo Plains National Monument. Photos by George Butterworth from Chimineas Ranch west of the Carrizo Plain.

Chapter Zoom Meeting 7 pm March 4, 2021

Northern California Black Walnut – A Tree with Many Stories



All photos: Heath Bartosh

Please join us for our March presentation, with Heath Bartosh, co-founder and Senior Botanist of Nomad Ecology, based in Martinez, California. Despite previous research and study - the original distribution, subsequent radiation, and genetic identity of the northern California black walnut (*Juglans hindsii*) remained a source of considerable perplexity and debate. This confusion was confounded by the perception that some northern California black walnut trees may be hybrids with other native or non-native *Juglans* species. To get a clearer understanding of the northern California black walnut's historic and current distribution as well as the rate of hybridization throughout a larger portion of its range, researchers, including our speaker Heath Bartosh, inventoried specimens in a number of counties and performed genetic testing on the trees. With information from the study, an informed decision was made on the conservation status of this native tree, which was formerly recognized as rare. Heath will summarize what we know about northern California black walnut's past, present, and future, focusing on work done by a collaborative group of people interested in this mysterious native tree.

In addition to being a consulting botanist, Heath is also a Research Associate at the University and Jepson Herbaria at UC Berkeley. After graduating from Humboldt State University, Heath began his career as a professional botanist in 2002 and has been an earnest student of the California flora for the past 15 years. In 2009, he also became a member of the Rare Plant Program Committee for CNPS. His role on this committee is to ensure the rare plant program continues to develop current and accurate information on the distribution, ecology, and conservation status of California's rare and endangered plants, and help promote the use of this information to influence plant conservation in California.

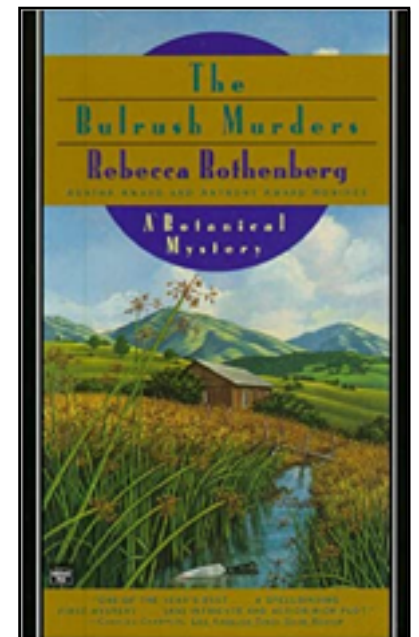
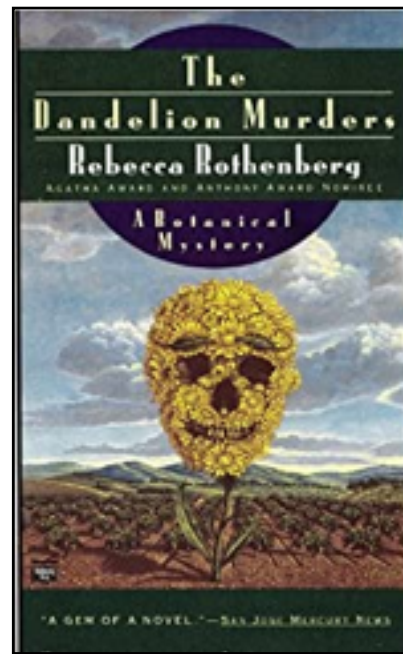
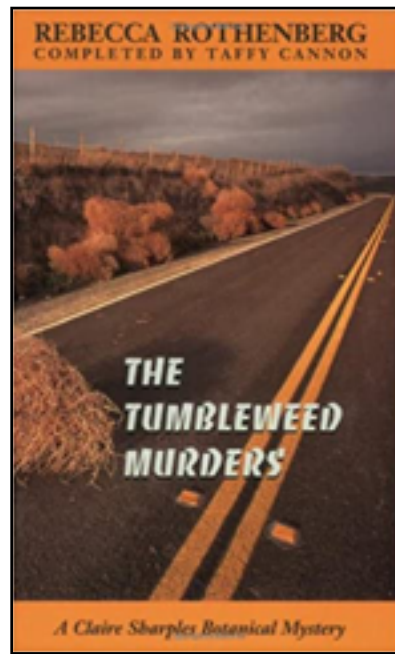
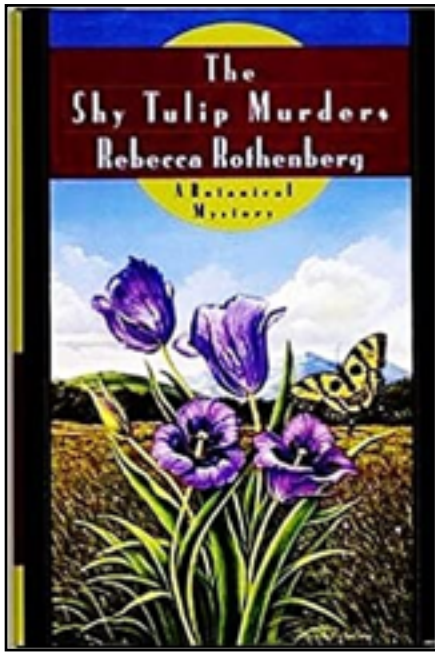
Get Planting

With Spring just around the corner, it is a great time to get plants (especially California natives) into the ground. Hopefully, rains will keep falling through April and your plantings will reap the benefits for years to come. Even though our November plant sale has been an opportune time to purchase plants going into the "wet" season, we are now offering Cal. Native plants throughout the year (March, May, September and November). With each sale, we find new natives to sell, so keep checking in. **Our local CNPSSLO chapter is offering plants for purchase starting at the end of February, 2021.** Order online at <https://cnpsslo.org/bookstore/> and pick up your plants March 20 from 9am to noon at the CNPS pickup location off Broad Street in SLO. (There is no actual address for this location. It is at the east end of Francis Street in San Luis Obispo behind Rizzoli's Auto Repair.) Please park on Francis Street while picking up plants. A sign will be posted on the street. GPS coordinates for Pick-up location: Lat: 35.266967 degrees, Long: -120.651302 degrees. Please only place your order if you are able to pick up your plants on March 20 between 9 am and noon. There are no options for other pickup times or dates or for shipping of these live plants. Order early as quantities are limited! Thanks for supporting our chapter and the CNPS!

JOHN DOYLE

More followup on our Books Issue

Karen O’Grady would like to recommend some murder mysteries. Rebecca Rothenberg (1948-1998) was a writer, musician, epidemiologist, amateur botanist, and president of the San Gabriel chapter of the California Native Plant Society. She wrote a botanical mystery series before her untimely death at age 40: *The Bulrush Murders*, *The Dandelion Murders*, *The Shy Tulip Murders*, and *The Tumbleweed Murders*. Available online.



Editor’s Note: I still am looking for the “*Taxonomist Who Changed The Plant Name For The Third Time Murders*”.

It was great getting reader feedback, and I would love to hear from readers about what they liked, disliked, or want to suggest for future issues. dchippin@calpoly.edu

Missed a Meeting? Catch up on our YouTube Channel

We now have a YouTube channel where you can view chapter meetings you may have missed or revisit programs you enjoyed.

https://www.youtube.com/channel/UCNjrsrrwy14IzB3-tMn_7nw

When fieldtrips resume, we may add a playlist for videos created in the field and the same with workshops. If you have video skills and would like to help me manage the YouTube channel, send a note to info.cnpsslo@gmail.com.

Judi Young

It's Pussy-willow time!

Sorting out the 3 most commonly found willows in SLO County

Of the seven willow species found in the county, three are widely distributed and should be considered common. They are, however, very similar to each other in general appearance, and are *Salix laevigata* (Red willow), *Salix lasiandra* (Pacific willow), and *Salix lasiolepis* (Arroyo willow). All three share a feature of long, narrow, pointed leaves with a deep green upper (adaxial) surface, and a paler lower (abaxial) surface, which eliminates two of the other willows (*S. goodingii* and *S. exigua*) where both sides of the leaf are similar.

We can pick out *S. lasiolepis* from the other two as it has lateral veins that stand out with relief against the abaxial side of the mature leaf, which may be smooth or hairy. The tree develops catkins before the leaves emerge, whereas the other two develop catkins and new leaves at the same time. Both *S. laevigata* and *S. lasiandra* have minutely toothed edges to the mature leaves, but those of *S. lasiandra* have glands on the teeth and glandular stipules at the base of the leaf that are not present in the other two species.



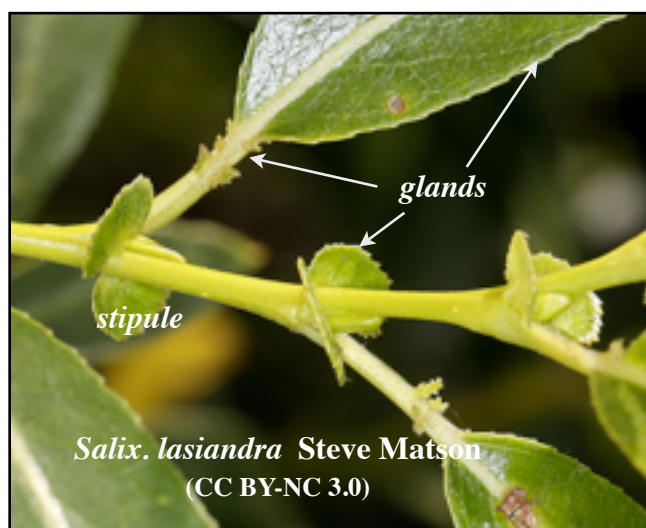
Salix lasiolepis David Chipping



Salix laevigata George Butterworth



Salix lasiandra Hoover Herbarium



Salix lasiandra Steve Matson
(CC BY-NC 3.0)

The willow catkins also differ. There are 5 stamens on staminate flowers of *S. laevigata* and *S. lasiandra* but 1-2 stamens on *S. lasiolepis*.

There are bracts at the base of a catkin which are tan to red-tinged in *S. laevigata*, tan in *S. lasiandra*, and brown in *S. lasiolepis*.



5 stamens on
staminate flowers

Salix laevigata Steve Matson
(CC BY-NC 3.0)

Willow Poem

[William Carlos Williams](#) - 1883-1963

It is a willow when summer is over,
a willow by the river
from which no leaf has fallen nor
bitten by the sun
turned orange or crimson.
The leaves cling and grow paler,
swing and grow paler
over the swirling waters of the river
as if loath to let go,
they are so cool, so drunk with
the swirl of the wind and of the river—
oblivious to winter,
the last to let go and fall
into the water and on the ground.

Why a poem on willows? Why not? I found that the major poetry web sites have a lot of poems about willows, but almost all seem to refer to the Weeping willow (*Salix babylonica*) which is a tree that likes a lot of water and has very attractive branches that droop downward in a sad, weepy sort of way. Poets have latched onto the weepy part, and the poems are all about death, burial under willow trees and generally depressing. The poem by William Carlos Williams also places his willow by a river, but does not mention weeping. *Salix babylonica* has been planted at Laguna Lake and on the Cal Poly campus, and is often found in residential plantings.



Weeping willow on the south side of Laguna Lake
Photo: David Chipping

President's Notes, March 2021

With the advent of these warm sunny days and the huge amount of rain we received in late January, I have found it's time to go in search of mosses, included in the division of organisms known as Bryophytes. Last month I signed up for a UC Jepson workshop that focused on one moss genus in particular, *Syntrichia*. Individuals of this genus are often called "star mosses" because of the tiny little hair point on the tip of the spatulate leaf. When you see lots of the leaves together, they resemble little stars (see Photo 1). I was blown away by what I learned. These tiny little non-vascular plants have an amazing ability to rehydrate right before your eyes with one or two tiny drops of water. From dried little stems to beautiful green leaves, all in a minute or two. They do this because the leaves have only one cell layer and water moves very quickly through them. Mosses reproduce both sexually and asexually, but water is needed for sexual reproduction, because of all things, they have swimming sperm!

I've taken moss workshops before – most notably right here in Poly Canyon back in 2017, led by a member of the CNPS Bryophyte Chapter, Paul Wilson. We probably saw at least 12 different species that day: members of the genus *Bryum* (silvery *Bryum* is known from our area), *Scleropodium* (tufted feather moss), *Brachythecium* (also known as feather mosses), *Didymodon* (beard moss), *Funeria hygrometrica* (bonfire moss), *Tortula muralis* (wall screw-moss), and of course, *Syntrichia*. But with the lack of rain recently, I had forgotten to look for mosses close to home.

And so I went in search of mosses in my "back yard," the Morro Dunes Ecological Reserve in Los Osos. It's not as diverse as Poly Canyon, but there are mosses to be found. The most prevalent in the coastal scrub that I could see is *Didymodon vinealis*, soft-tufted beard moss, which forms greenish-yellow clumps when wet, but dries to reddish-brown. This moss (and others), along with several lichens, are very important in forming and retaining the biological soil crusts in the Morro Dunes. These crusts are critical to maintaining the good ecological condition of this area, as they regulate water input by capturing fog, dew and vapor; they aggregate soils and resist erosion; and they also build and maintain soil fertility.

During my walk I also found a teeny, tiny *Fissidens*, a pocket moss, growing on the steep, moist, sandy sides of the deep, well-eroded trails east of Broderson. This genus is very unique, as noted by Robin Wall Kimmerer in her book "Gathering Moss," where she describes an east coast species of *Fissidens*:

"Fissidens is a small moss. Each shoot is only 8 mm high, but it is tough and wiry. The whole plant is flat, like an upright feather. Each leaf has a smooth thin blade, atop which sits a second flap of leaf, like a flat pocket on a shirtfront. This envelope of leaf seems to function in holding water."

The *Fissidens* I saw was a mere 2-3 mm high. If I hadn't had my hand lens to check it out to see the flat growth form referred to above, I would have passed right by. And back home under the microscope, those folded leaves with the pocket come right into focus, and viola! A new genus for me.

I encourage you to get out after the next storm and look closely at those little green carpets with your hand lens. If you care to read some beautiful essays about the natural and cultural history of mosses, read "Gathering Moss," by Robin Wall Kimmerer, published by Oregon State University Press, 2003.

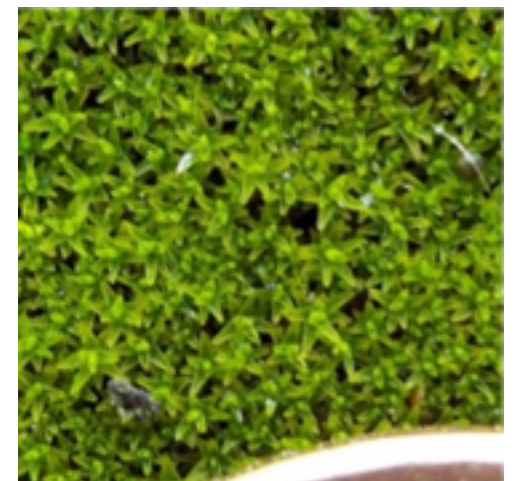
CNPS has a Bryophyte Chapter; check it out at www.bryophyte.cnps.org; our Chapter liaison is Joe Flynn (flyjoak@gmail.com). The link to the Jepson California Moss eFlora is www.ucjeps.berkeley.edu. Here, there are keys to many of the California genera, and if you look under "Mosses for the Masses" you can find videos, handouts, and all sorts of goodies for the beginner.

MELISSA MOONEY

Top Photo: Star mosses in Poly Canyon, *Syntrichia* sp. (Photo Melissa Mooney)

Middle Photo: *Didymodon* on soil. (Courtesy Bryophyte Chapter, CNPS)

Bottom Photo: *Fissidens* growing on soil banks. (Courtesy Bryophyte Chapter, CNPS)



Morro manzanita, Coast live oak, climax plant association, and subsurface geology at Morro Dunes Ecological Reserve

A climax plant association or community is an ecological community in which populations of plants or animals remain stable and exist in balance with each other and their environment. A climax community is the final stage of succession, remaining relatively unchanged until destroyed by an event such as fire or human interference.

The photo shows an overstory, almost closed canopy of oak, with dead Morro manzanita on the oak-shaded ground. A few living manzanita have stretched branches upward into the canopy, which is an unusual form in the manzanita monocultures that exist elsewhere in the area. The indication are that a closed-canopy oak woodland is the climax vegetation in these areas, such as can be seen in the far eastern entry into the Reserve from Calle Cordoniz.



Dead Morro manzanita branches under the canopy of Coast live oak; David Chipping

If you take the trail into Morro Dunes Ecological Reserve from Calle Cordoniz in Los Osos, you will find several different habitats defined by the substrate. A little way up the trail is a small clone of Indian Knob mountain balm (*Eriodictyon altissimum*). This prefers a semi-consolidated older dune sand that was deposited a long time before the soft, more recent Baywood Fine Sand that covers most of the urban area to the north. Below the older dune sand is an older alluvial deposit of white shale fragments, and muddy sands that appear to have originated as alluvial fans coming from the hills to the south before the current valley was created. Both the newer and older sands support Morro manzanita (*Arctostaphylos morroensis*) which is almost always found in sand, but the gravels support Brittle-leaved manzanita (*Arctostaphylos crustacea subsp. crustacea*). Where there is a thin sand cover over the gravels, the two manzanitas sit side-by-side, but as they have different flowering times they do not seem to hybridize. If you continue west to the open quarry area you can see the gravels, which are overtopped by the older dunes sand along the trail that runs downhill from the quarry. This substrate has sustained a monoculture of Morro manzanita which forms a tunnel of branches until the trail opens up into a coastal scrub as Baywood Fine Sand becomes the dominant substrate. DC



(Left) The gravels that underlie the dune sands (Right) The two manzanitas growing side by side. *A. crustacea* on the left, *A. morroensis* on the right; David Chipping

Just for fun, I made a YouTube 17 minute Virtual Field Trip of this area: The URL is <https://youtu.be/CVhzfVSK8Jc>
(Note that this is my first attempt at doing this, so video is a little rough)

Invasive Species Report

Big Periwinkle *Vinca major*



Photos: David Chipping

Vinca major is in the Apocynaceae family (from Apocynum, Greek for "dog-away") or Dogbane family. This herbaceous and attractive perennial groundcover has lavender blue flowers. It is about 3ft wide and 1.5 ft tall. The leaves are a dark glossy green, 2 inches long and oval.

Vinca major is native to the Mediterranean region and was introduced to the US in the 1700s as a garden plant and for medicinal uses. It grows in disturbed places and grows best in shady riparian areas, floodplains, woodlands and willow groves. It is very invasive in riparian zones: fragments of periwinkle can break off, wash downstream and infest. It is invading in most coastal counties, foothill woodlands, the Central Valley and desert areas. The foliage with its milky latex is toxic. Periwinkle lowers species diversity and disrupts native plant communities.

To control it non-chemically it is best to pull it. Cutting, grazing, or burning does not work. There are no biocontrol agents. Effective chemical treatments include Triclopyr, glyphosate and Imazapyr.

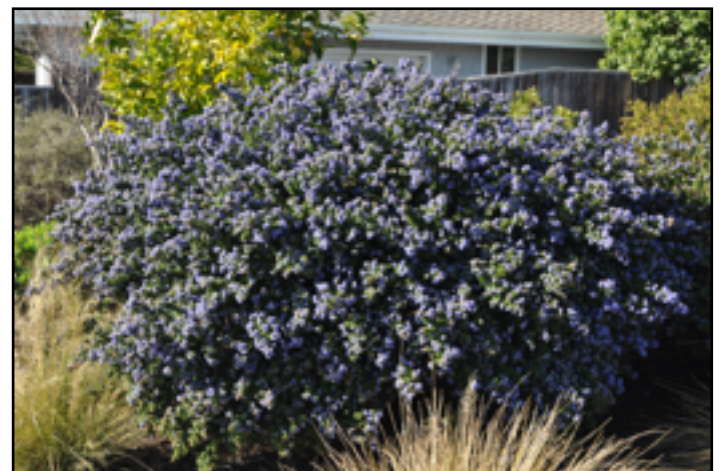
MARK SKINNER

OUR CHAPTER WOULD LIKE TO ADD YOUR HORTICULTURAL PHOTOGRAPHS TO OUR COLLECTION

As native plant gardening is a favorite pastime of our members, we are building a library of photos of native plants from your collections, especially plants bought at our plant sales that are now thriving in your yards. You should send photographs to David Krause (dkincmbria@aol.com) and David Chipping (dchippin@calpoly.edu). We will give credit to the photographers.



Vinca clogging understory in Los Osos Creek Ecological Reserve



Ceanothus 'Dark Star' Photo: David Chipping

THANK YOU NEW AND RENEWING CHAPTER MEMBERS

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WE ALWAYS NEED PEOPLE TO HELP OUT. OUR MISSION IS VITAL AND OUR FLORA IS AT RISK
CNPS SLO Chapter gratefully acknowledges French Hospital and the Copelands Health Education Pavilion
for the use of their facilities for our Board meetings.

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, *Fremontia*; 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
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