
Obispoensis

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



April 2019

(Cover)

Dudleya sp.

The plant profiled in this issue is from the genus *Dudleya*, in the *Crassulaceae* family. Two recent events make a discussion of the genus, timely. The first is the permission from SWAP and CNPS member, Heather Johnson, to use another of her beautiful paintings as basis for my ramblings. The second will be expanded later.

Heather's beautiful illustration is of a species in the genus *Dudleya*; I actually don't know which species of *Dudleya* it is. I know that I should have asked Heather, but I wanted to discuss trying to ID plants from illustrations or photographs. I'm going to use the genus name as the common name, which according to the rules, shouldn't begin with a capital letter or be italicized. I'll be simply calling it dudleya. The *Crassulaceae* is one of the more easily recognized plant families in our area. All of the *Crassulaceae* produce succulent leaves, which are clearly visible in Heather's painting. That said, Heather's painting is definitely a dudleya because it has the succulent leaves in a basal rosette, but the clincher is the origin of the flower stalk (inflorescence). In Heather's painting the young inflorescence appears to come from the underside of the leaf rosette. It comes out horizontally and then curves upward before branching and producing the first flower buds. It is actually arising from a bud in the angle between the stem and the upper base of a leaf (axil). All of our other local native succulents either don't have basal leaf rosettes or their inflorescences arise out of the top and center of the plant (apical). So it's definitely a dudleya! Why not take it to species? There are at least two very good reasons for being cautious about trying to identify plants from illustrations or photos no matter how great and accurate the representation. In most cases the actual characteristics required to distinguish species in a relatively large genus like *Dudleya* are missing. I'm relatively certain that the pictured dudleya is not a local plant even though it's very likely a California native dudleya, because California hosts most of the species of *Dudleya*. The second reason for not attempting to identify the species of this particular dudleya is that the painting appears to be a garden plant. It's very large and healthy, the kind of traits associated with garden grown plants. If it is a garden dudleya then another problem in its identification to species can come into play. We humans don't like to leave our domestic plants and animals as they are found in nature; we want to 'improve' them. We selectively breed them for the traits we deem worthy of us. We do this not only by being selective of breeding pairs within a species but we will also do our best to mate individuals of different species. So, garden plants can often hide their original species (singular or plural) easily.

The second event that led me to do a dudleya again is a series of news articles which caused a flurry of web activity among members of our local and state California Native Plant Society. The story that set us off was the arrest of couple of people who were traveling down the west coast POACHING dudleyas. The poachers were apparently interested primarily in *Dudleya farinosa* which does occur in our County north of Morro Bay. Since they were caught in Northern California there is no evidence that any of our local dudleyas were taken. Many members of our chapter went out and checked. Why were they stealing dudleyas? It turns out that China has a growing middle class and being a member of the middle class they feel entitled you to possess better of everything. One of the 'betters' is to have enough space for a succulent garden. And dudleyas would be a great addition to any garden. It turns out the poachers were ultimately discovered not by police work but by citizens like us just observing changes in our environment. They noticed holes in the cliffs and a dearth of dudleya plants. One person in a long line at a post office complained loudly about the large number of poorly sealed cardboard boxes that were taking excessive time to process, and the postal inspectors who noticed packages leaking soil. Ultimately all this was reported to California Fish and Wildlife and U.S Fish and Game who were able to track down the poachers. So, I hope I've given everyone a reason to visit our wild lands regularly and to be observant. Recently, I heard a commentator on TV report that it's not the authorities who prevent wrong doers from mischief (in this TV case it was a potential shooter) but ordinary people noticing even minor changes in our surroundings and reporting or even just discussing them. **DIRK WALTERS**



(Left) Chalk dudleya (*Dudleya pulverulenta*) has a cover of white powder

(Right) *Dudleya lanceolata*'s distinctive coloration in certain coastal locations

photos: David Chipping



14th Annual Cambria Flower Show

Sat. afternoon (12-5) Apr. 13 and Sun. (10-4) April 14
at the Cambria Veteran's Memorial Building (1000 Main Street).
Admission is free for students, otherwise it's a \$3 donation to this worthy
cause that supports The Friends of the Fiscalini Ranch Preserve - ...
www.ffrpcambria.org/ - (805)-927-2856 - ffrpcambria@sbcglobal.net

This year's show, "Early Spring Treasures," will put the spotlight on the remarkable display of Central Coast wildflowers and other flora that present themselves earlier than many in our traditional late April show. Also, this year there will be more information on Edible, Medicinal, Rare, Invasive and Poisonous plants with botanists on hand to answer questions.



photo David Chipping



Seed Collection of Early Bloomers by Marti Rutherford



I am enjoying the bloom on my buttercups and violas. I actually have several blue dicks blooming this year for the first time. It turns out patience is necessary for some of our natives, especially the bulbs. My ceanothus (what is the plural of ceanothus) are in various stages of bursting forth. Most of mine have been grown from seed and are showing their variation in behavior and color. All of this means that in several weeks, or months, I will be checking for seed development. So this is a reminder to all of you who enjoy gathering seed...the time is coming.

It's not just the blooms that I enjoy, or the gathering of the seeds. It is watching what happens to those seeds when they begin to grow. Some of the wildflowers are pretty reliable. I have had success with several of the clarkias and gilies. Buttercups usually germinate. So does columbine though it takes a bit longer. But there is true excitement when something like a sycamore or ceanothus shows a bit of green above the soil. Then I cross my fingers that I can get that little seedling to a large transplantable size.

Planting from seeds has made me much more aware of the cycles and timing of many of our native plants. It has given me reason to be more observant of what goes on with the plants. And it has filled my yard with many, many native plants that would have been very costly at the nursery.

Membership Corner by Holly Sletteland

As most of you are aware, your membership in CNPS supports the work of both the state office and local chapters. The two levels of the organization, while independent in many respects, also share information and resources on a continual basis. The state office maintains all membership information, with input from the local chapters. The state recently upgraded their membership system to provide members with more options to update their information and their communication preferences. You can now easily update your profile in the event your address, email or phone number changes. You can also manage your preferences for statewide electronic communications, such as upcoming workshops, gardening tips or rare plant treasure hunts.

I encourage each of you to explore these new options and verify your email contact information is current. This will ensure that you receive important updates, but that you control the kinds of information you want to receive from us. The best place to start is by reviewing Frequently Asked Questions (FAQ) about profiles at <https://www.cnps.org/membership/membership-center/profile-faqs>.

Last, but absolutely not least, many thanks to all of our renewing members from last month: **Holly Sletteland**, Membership chair

Kathy Cinowalt
Patricia Cullinan
John Doyle
Madeline Fay

David Fross
Cynthia Gaulin
Suzette Girouard
Christopher Hauser

Neil Havlik
Lionel Johnston
Michael Keeshen
Wallace McCray

Mardi Niles
John Pierszalowski
Cate Uccel
Kristie Wells

Moving? No Newsletter? Please Let Us Know Your New Address. Contact <hslettel@calpoly.edu> or write us at P.O. Box 784, San Luis Obispo, CA 93406



Ethnobotany Notes: Yarrow (*Achillea millefolium*)

by Cathy Chambers

I remember learning about Yarrow as a medicinal native plant when I was very young. It smelled good and was easy to identify. I was also fascinated by its broad distribution across the northern hemisphere. The anthropology student in me theorized that early humans moved it around between continents as they migrated because of its medicinal usefulness. Now I am also interested in it as a landscape plant for its beauty, drought tolerance and value as a foraging plant for native bees, butterflies and other insects.

According to Las Pilitas nursery, Common Yarrow (*Achillea millefolium*) is an erect, herbaceous, perennial plant that produces one to several stems 0.2–1 m (0.66–3.28 ft) in height, and has a spreading rhizomatous growth form. It produces clusters of small white flowers, and attracts butterflies and moths. It is drought tolerant. It also tolerates alkaline soil and deer. It will grow under oaks, or in full sun at the coast. It is a forage plant for many small native bees as well.

Yarrow is considered an especially useful companion plant, repelling some pest insects while attracting good, predatory ones. It attracts predatory wasps, which drink the nectar and then use insect pests as food for their larvae. Similarly, it attracts ladybirds and hoverflies, but essential oil made from its flowers kills mosquito larvae.

The Chippewa used the leaves in a steam inhalant for headaches. The Cherokee drank a tea of common yarrow to reduce fever and aid in restful sleep. *A. millefolium* has seen historical use as in traditional medicine, often because of its astringent effects. The Chumash used it for toothaches, sores, or to staunch the bleeding of a wound. The Miwok in California use the plant as an analgesic and head cold remedy. The herb is purported to be a diaphoretic, astringent, tonic, stimulant and mild aromatic. It contains isovaleric acid, salicylic acid, asparagine, sterols, and flavonoids.

The genus name *Achillea* is derived from the mythical Greek character, Achilles, who reportedly carried it with his army to treat battle wounds. I think that it is a beautiful, easy to grow herb which feeds the tiny flying fauna of my garden. And maybe one of these days I will try using the tea when I have a bad cold or make a salve for a first aid cream, perhaps adding a little *Usnea* lichen to it as well.



photo David Chipping

Yarrow on coastal dunes, Shark Inlet,
Montana de Oro State Park

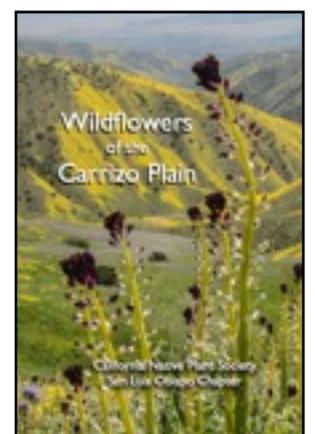
Save The Date: Annual Sudden Oak Death (SOD) Blitz

The San Luis Obispo County Sudden Oak Death (SOD) Blitz will be the week-end of May 3 to 5, 2019. Training (including pick-up of sample packets and sign-up for survey locations) will be Friday, May 3, 6:30 pm at the Atascadero Library, or Saturday, May 4, 10 am at the University of California Ag. Extension Auditorium in San Luis Obispo. Sample collection will be on your own time Saturday and Sunday, May 4 and 5. Additional information will be posted on our chapter website (cnpsslo.org), or you can contact Lauren for additional information (lbrown805@charter.net, 805-460-6329).

We have had abundant and frequent rain this year, which means this spring will be an important time to survey and collect samples. There have been positive samples of SOD at the SLO/Monterey County border and we need to stay vigilant. Thank you all who have surveyed in the past, we look forward to seeing you and anyone who is just learning about this destructive disease at one of the trainings as well as in the field collecting on Saturday and Sunday. **Lauren Brown** 805-460-6329 (home); 805-570-7993 (cell)

New Chapter Publication Available

We are pleased to announce a complete revision of Malcolm McLeod's little booklet on the *Wildflowers of the Carrizo Plain*. We have replaced all the photographs and text, and feature 72 of the most commonly seen wildflowers. It makes a great little gift, and can be found at the CNPS sales table, the Carrizo Plain National Monument Visitor Center, and Crushed Grape (opposite Bed Bath and Beyond at San Luis Obispo Promenade)



California Native Plant Week is Third Week in April
CHAPTER MEETING April 18th 2019 - Thursday - 7:00 pm
7:00 social 7:30 program Veteran's Hall, Grand Avenue at Monterey, San Luis Obispo



**Wildflowers and Wildflower Places of San Luis
Obispo County**

Dr. David Keil: CNPS Fellow

To celebrate **California Native Plant Week**, Dr Keil will reveal to us both well known, and little known places to see native plants in flower. He is a great photographer, and has been just about everywhere in the County, collecting for the Cal Poly Herbarium and gaining information on his Flora of San Luis Obispo County, which is close to being available. In the photo, he is placing a collection for the herbarium in a plant press, layering plants in sheets of newspaper to protect and dry them.



Saturday, March 30th, 2019, 8:30 am, Malcolm McLeod Annual Field Trip to Shell Creek and Environs, one of the outstanding spring wildflower destinations in California. Meet at the Santa Margarita Exit Park and Ride at 8:30 am. Bring plant guides or plan to purchase one during the trip. Also bring adequate water, food, and dress in layers for the weather; a hat and sturdy shoes are advised. For more information contact Bill Waycott, (805) 459-2103, bill.waycott@gmail.com.

Saturday, April 6th, 2019, 8:30 am, Carrizo Plain National Monument and Temblor Range. We will visit some of the best wildflower areas in the Monument, including some vernal pools, with an option to travel up into the Temblor Range. Meet at the Santa Margarita Exit Park and Ride at 8:30 am. Bring plant guides or plan to purchase one during the trip. Also, bring adequate water, food, and dress in layers for the weather; a hat and sturdy shoes are advised. For more information contact Bill Waycott, (805) 459-2103, bill.waycott@gmail.com.

Saturday, April 20th, 2019, 8:30 am, Caliente Ridge, Carrizo Plain Natl. Monument. We will drive through the Monument towards the Selby Camp and up Caliente Ridge (high clearance vehicle recommended). Meet at the Santa Margarita Exit Park and Ride. Bring plant guides or plan to purchase one during the trip. Also, bring adequate water, food, and dress in layers for the weather; a hat and sturdy shoes is advised. For more information contact Bill Waycott, (805) 459-2103, bill.waycott@gmail.com.

BIG THANKS TO PACIFIC STREET PUBLISHING AND MATT RITTER

During the March meeting in Atascadero, Dr. Matt Ritter presented CNPS-SLO with a \$2,000 check for the **Malcolm McLeod Scholarship Fund**. The money behind this check were generated from the sale of *California Plants*, the hugely popular publication authored by Matt, describing more than 500 species of plants in this state.

This chapter is extremely appreciative of the generosity expressed by Matt and Pacific Street Publishing and is committed to putting these funds towards the education and training of future generations of California native plant botanists!

Thank you, Matt!

WANT COLOR? The latest edition of our monthly newsletter *Obispoensis* is available for download as a PDF file from the link below. Find out about upcoming events, field trips, local issues impacting native plants, invasives to be on the watch for, horticulture tips for growing natives, contact info and more in each issue:

<http://cnpslo.org>

Having trouble opening the file? You need to have Adobe Acrobat Reader installed on your device. It can be downloaded here:

<https://get.adobe.com/reader>

The Garden Corner

Spring is close at hand and with all the rain so far this season it can mean only two things, lots of wildflowers and lots of weeds, such as mustard and ripgut brome. As we get closer to the fire season, it will become time to weed whack. However, before you jump on your John Deere, you may want to locate native plants hidden out there in the weeds.

Here where I live in Los Osos, I have found oaks, buckwheat, California coffeeberry, and even *Ceanothus* and Manzanitas growing amongst the weeds. These seedlings germinated when the soil achieved the right combination of rain and cold weather. Some of these seeds such as oak and *Ceanothus* are fresh from last year. Others such as Lupine can lay dormant for years.

So what can you do to prepare your yard for fire abatement? March is the perfect time to inspect your property for desired California native plants. The grasses are still low and spotting California natives is still easy. I like to use marking flags that can be purchased at your local hardware store. Simply mark desired plants with the flags as needed.

Mow or weed whack one foot away from marked plants. At the end of March, if needed, dig up your desired plants and relocate them to a better location or into a container for future planting. With the loss of habitat, even saving one plant is worth it. Remember you might have to mow twice so be prepared to leave marking flags for several months in your garden.

Hope that you are having fun collecting rainwater. Until next month, Happy Gardening;

John Nowak, Plant Sale co-Chairperson.



PRESIDENT'S NOTES FOR APRIL, 2019



In early March, CNPS-SLO was invited to tour the Santa Barbara Botanic Garden. During our visit to that impressive California native garden, we were treated to a seminar on lichens. Here are some of my notes from a lecture given by Dr. Rikke Reese Næsborg, a recent hire at the garden, with a life-long fascination of lichens. Lichens are composite organisms made up of a fungus that “farms”, i.e., which has a symbiotic relationship with a photosynthetic organism, either a green alga or a cyanobacterium. This symbiosis alters the fungal morphology by providing the alga/bacterium (called a photobiont) with a greater habitat diversity and protection, while giving the fungus nourishment. Some of these photobionts can also survive on their own without the fungus, and some lichen have both blue-green algae and cyanobacteria in the same fungus.

Lichens are found from sea level up to high alpine elevations. There are at least 350 species in Antarctica alone, where only two plant species currently subsist. Lichens have been taken into space, later to be returned to Earth, where they successfully regrew. Their ecological contribution is significant. With more than 20,000 lichen species worldwide, lichens are known to produce at least 600 novel chemical compounds. They provide food for other species, soil mineralization, shelter, fiber for bird nests, dyes for fabrics, human medicines and food, as well as ingredients in the manufacture of soaps and perfumes.

Lichen nomenclature is based on the fungal naming system and is classified into three broad categories based on morphology:

1. Foliose lichens have leaf-like structures. 2. Fruticose lichens are branched and shrub-like. 3. Crustose lichens lie flat, like peeling paint, being strongly attached to their substrate. Other types include: Pin or calicoed lichens, with tall fruiting structures similar to a dressmaker’s pins, leprose lichens that are covered with powder, squamulose, which are scale like, and often combinations of two or more types.

With the structural component being fungal in nature, lichens reproduce by releasing spores similar to fungi, where the alga/bacterium is absent. Their fruiting bodies are either apothecia (a dish-like body) or perithecia (an urn-shaped body), which are typical spore-bearing structures found in fungi. Once the spores germinate and begin to elongate, the photobiont will be absorbed into the fungus where it is established for life. Lichens can also reproduce via asexual cloning where the photobiont is already present. Uptake of water and nutrients in the lichens is passive via absorption. Their size is often pretty small, where as many as 50 different species can be found on one leaf. They occur on all types of surfaces, even metal and plastic. They are considered “pioneer” organisms, moving into new areas, assisting in the degradation of surfaces, such as rocks, and paving the way for higher organisms to colonize later.

Now-a-days, lichens are used as biological indicators in ecological studies, to monitor pollution, as well as in global warming studies, and research of old-growth forests, to name a few. For instance, their location and numbers are counted in and around urban areas. When the indicator species are absent, researchers study the effects of the ambient chemicals in the atmosphere that might limit and/or kill lichens, indicating a degraded environment. Because lichens depend on very specific environmental components, even a small chemical change can cause the lichen to disappear from that area.

Bill Waycott

California State Parks threaten Oso Flaco Lake

David Chipping- Conservation

The SVRA is developing a Master Plan with several components, and the conservation community has suddenly noticed that they intend great damage to the Osos Flaco Lake area. The plans are for a large campground catering to the OHV community in the prime agricultural lands surrounding the existing parking area, and then presenting two ways to connect with the OHV sand highway across the high dunes. The two possible routes from the campground cut through native plant communities that were thought to be protected as mitigation for the damage to native habitat though OHV activity. John Chesnut has noted the following impacts from these road alignments:

(a) Federally Endangered *Arenaria paludicola* has extant populations (verified 9/2018) on the west and east shores of Oso Flaco Lake (northern half). Improvements in the causeway, and the riding area extension trail will destabilize the hydrology of the northern half which supports this population.

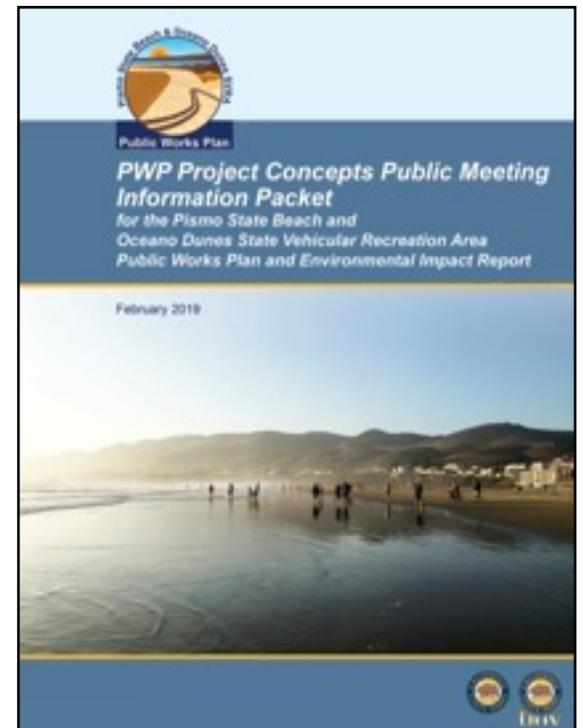
(b) *Nasturtium gambelii* has populations immediately north and south of the causeway, and any "traffic capacity" improvement in the causeway would directly impact those locations.

(c) Federally Endangered *Lupinus nipomensis* is found growing within the refinery waste pipe right-of-way, and using that ROW, as envisioned in the Concept 1 plan, threatens this core population.

(d) *Cirsium scariosum var. loncholepis* was recorded growing in damp swales south of the Refinery ROW in the OHV trail drawn in the Concept 1 plan.

(e) The locally significant stand of *Leptosyne gigantea* (aka *Coreopsis*) is found on the west side of Osos Flaco lake, and within the redline OHV route shown in the Concept 2 plan.

In view of the long history of labor and resources that has taken place in the protection of these species, and of the integrity of the dune scrub ecosystems, we believe that a southern entrance to the SVRA should be removed from future development plans.



CNPS NEEDS VOLUNTEERS FOR SANTA MARIA EVENT

Sunday, March 31, 2019 11:00 a.m. – 5:00 p.m.



Local chapter member Kathy Sharum is organizing a CNPS booth for the Santa Maria Open Street event. Main Street from Broadway to Blosser will become a 1 mile public park for the day and transform into a celebration of people-power to promote better health, flexibility, exploration and fun. NO cars or traffic! We'd greatly appreciate your help if you can volunteer for an hour or two to bring native plant appreciation into their lives and gardens. Go to their web site for more information about parking and the wide range of activities <http://sbopestreets.org/>. **CONTACT KATHY AT ksharum@me.com**

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

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Vice President Melissa Mooney mjmoon@charter.net	Chapter Wholesale Contact Linda Chipping (805) 528-0914 lindachipping@yahoo.com	Retail Sales Manager June Krystoff-Jones (805) 471-5353 junemkj@gmail.com	Legislation David Chipping (805) 528-0914 dchippin@calpoly.edu	 John Doyle (805) 748-7190 doyle5515@sbcglobal.net
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WE ALWAYS NEED PEOPLE TO HELP OUT. OUR MISSION IS VITAL AND OUR FLORA IS AT RISK

California Native Plant Week is Third Week in April

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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