



The **CALYPSO**

Volume 2024 Apr.- June

NEWSLETTER OF THE DOROTHY KING YOUNG CHAPTER
CALIFORNIA NATIVE PLANT SOCIETY

WILDFLOWER SHOW

Saturday, May 25 and Sunday, May 26

10 a.m. — 4 p.m.

Coast Life Support District Bill Platt Training Center

38901 Ocean Drive in Gualala

(across from the Redwood Coast Medical Services and behind the fire station)

This may be a fabulous wildflower season! Find out what is out there this year. There will be hundreds of flowers to see, your wildflower-loving friends to talk with, and great books and posters for sale. Great parking, lovely views there from the top of the hill. We need volunteers to collect plants, help with setting up, taking down, and being at the show to answer questions. Please contact Nancy Morin, president@dkycnps.org, if you can help.



Castilleja mendocinensis. Photo by K. Pye

WILDFLOWER EXHIBIT

April 1 — May 31, 11 a.m.--4 p.m.

Ford House 45035 Main Street, Mendocino

Featuring:

“Flora Abunda”

Wildflower Photography by Katy Pye
and

Cut flower display by Mario Abreu

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President's column:

From government agencies to college classrooms, California relies on the CNPS Rare Plant Inventory for the science-backed information we need today, to protect rare and endangered plants for tomorrow.

Since 1974, CNPS and a trusted network of partners have reviewed more than 3,500 species, creating the gold standard for rare plant review and actionable data. Today, more than 35% of California flora receives some form of protection thanks to the [Rare Plant Inventory](#). **You will find a wealth of information on our local native plants in the Rare Plant Inventory.**



Many conservation efforts in the last 50 years have been focused on protecting or restoring rare native plants and animals. The work of the rare plant staff at CNPS and rare plant committees in individual chapters is critical to developing a baseline of knowledge to inform managers where, what, and how to protect rare plants. Restoration of plant communities, usually referred to as vegetation, has tended to be focused on protecting rare animals and insects. Locally, thousands of plants of *Viola adunca* were planted in order to help the Behren's silverspot butterfly to recover. Thousands of native plants were planted along the P'da hau (Garcia River) to stabilize the banks in order to help salmon recover. As California has experienced massive wildfires and floods, the need to restore plant communities decimated by these events has received more attention. This is restoration in order to recreate the balance found in healthy plant communities, which benefits both plants and animals.

An initial challenge to restoration efforts is determining what to restore *to*. In the absence of fossil records, or, for more recent history, early documents or knowledge of earliest people as handed down through oral history, the best we can do is extrapolate from plant communities that seem to be naturally occurring in similar climates/soils/water regimes/exposure. This is one of the reasons the work being done by Teresa Sholars and her team to map and assess vegetation in our area is so important. We may need to temper our concept of what the desired result is in light of anticipated change in climate. Then it is necessary to determine the best methods for achieving the desired result--in some of our areas, simply removing invasive plants and protecting from trampling by people and cows might be sufficient. In some areas it may be necessary to return the landscape to a healthier, probably earlier, configuration. If installing seeds or plants is going to be the best method, where do you get those seeds and plants? That is another huge challenge, and one that the Plant Conservation Alliance, now in BLM, and its cooperators, have been strategizing for about 20 years. I was at the first meeting in 2001 to discuss this issue. By 2015 the BLM had developed an extensive program to collect seeds from throughout the U.S. by contracting with local botanists, who would use carefully designed protocols. The National Academies of Science published a report in 2023 ([An Assessment of Native Seed Needs and the Capacity for Their Supply: Final Report | The National Academies Press](#)) detailing recommendations for how to proceed. By the end of 2021, Seeds of Success had accessioned 27,000 seeds of 5,800 taxa, now stored in local and national seed banks. There are still a multitude of issues to be considered: how to replenish seeds, especially ones that do not store well; how to bulk up seed; how to grow plants in sufficient number to be meaningful in large-scale recovery. The meeting in 2001 also addressed questions about how to encourage people to use native plants in home and commercial gardens, and some of the same problems arise: how to collect enough regionally appropriate seeds, how to ensure a steady demand to be economically viable for nurseries to grow and sell local native plants.

What does this have to do with us? CNPS is now working on a strategy to increase the production and availability of native seed. You can find more information here: <https://bit.ly/3O696u4>. The California Native Seed Strategy has four main goals :

1. Identify Native Seed Needs and Ensure the Reliability of Genetically Appropriate Seed
2. Improve Guidelines and Identify Research Needs for Native Seed Production and Use
3. Develop Tools that Enable Native Seed Producers and Users to Make Timely, Informed Decisions
4. Develop Strategies and Tools for Communication

This might open the door to large-scale plant-growing efforts on the coast, an idea that was discussed some years ago as a potential economic driver in the region. Millions of dollars will be available for restoration in California, some targeting the coast. How can we help make this effort a success?

--Nancy Morin

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HELP MONITOR SUDDEN OAK DEATH INFECTIONS

Our Chapter will have sampling kits available on Friday, May 31; they may be returned on Monday, June 3. If you are willing to sample, please watch the training video, <https://nature.berkeley.edu/matteolab/?p=3314>. Contact Nancy Morin (president@dkycnps.org; 707-684-0277) to confirm time and place to pick up your kit.

Sudden Oak Death, a syndrome caused by the water-mold *Phytophthora ramorum*, which kills many species of shrubs and trees, was first noticed in the 1990s. In 2008, Dr. Matteo Garbelotto, a researcher at U. C. Berkeley, developed a citizen scientist project to engage people throughout California to collect materials from potentially infected plants and send it to his lab for analysis. He and his colleagues assemble sampling kits, schedule times for people to pick them up, post training videos to show people what to do, and report back to the entire community about the results. At least 1000 volunteers have participated each year. The results have appeared in more than 100 scientific publications. The virus responds to water availability and humidity and spreads most often on infected California bay laurel leaves, but it also occurs on tanoak and rhododendrons. It has been found in 14 counties in coastal California from Monterey to Humboldt. The lowest count of infected samples was in 2022, after years of drought. In 2023 more than 10,000



California Bay Tree, *Umbellularia californica* (Hook. & Arn.) Nutt., one of the hosts of *Phytophthora ramorum*. Photo by K. Morse

trees were sampled over 145,000 acres. Despite the significant amount of rain, increases in infection increased in only a few locations. **Southern Mendocino and northern Sonoma coast and Anderson valley experienced outbreaks in areas where SOD was previously detected.** This year, 2024, may see a significant increase in our area, making it even more important that we participate in sampling. Samples that test negative are as important as positive ones.

Mendocino Environmental Partners Potluck Dinner



Sunday, April 14, 12 - 2:30 p.m.
32430 N. Harbor Drive, Fort Bragg

DKY members are invited to join their environmental colleagues at the Annual Potluck Dinner of the Mendocino Environmental Partners, which will be hosted by the Noyo Center for Marine Science at their Marine Field Station in the Noyo Harbor. The potluck begins at noon, followed by annual updates from each organization at 1 p.m. and the presentation of the Matthew Coleman Environmental Service Award. This year's awardee is Sue Coulter, the Noyo Center's Education Program Coordinator. Sue has taught and inspired the region about environmental education for over 25 years. One of Sue's biggest influences was her former partner, Matt Coleman, the remarkable being for whom this award is named.

Please bring your own plate, utensils, beverage, and a potluck dish to serve eight.

Parking is limited in Noyo Harbor, so carpooling is strongly suggested. There are a few spaces in front of the Marine Field Station. You can also use the large, dirt parking lot that is about 100 yards down North Harbor Drive from the Field Station and on the right-hand side.

Environmental Partners: Noyo Center for Marine Science, Mendocino Land Trust, Mendocino Area Parks Association, Mendocino Coast Audubon Society, California Native Plant Society, Dorothy King Young Chapter, Mendocino Coast Botanical Gardens. Questions? Contact Michael Hicks at michael@noyocenter.org

Celebrating the Coast by Julia Larke Saturday, May 18, 10 am to 3:30 pm

This year's Celebrate the Coast event is the 10 - year anniversary of the formation of the Point Arena-Stornetta Public Lands as the first land-based unit of the Bureau of Land Management's (BLM) California Coastal National Monument (CCNM). Activities will take place on Saturday, May 18 from 10 am to 3:30 pm (with the exception of a 7:30 am bird walk) at the Point Arena Lighthouse, Mendocino College Field Station, Point Arena City Hall, and at the Point Arena-Stornetta Public Lands (PA-SL). Don't miss this...from 1:00 to 2:00 pm at the Lighthouse Stage, everyone is welcome to join the Friends of the Point Arena-Stornetta Public Lands in commemorating President Obama's 2014 Proclamation that created the first onshore unit of the CCNM. Special guests include Congressman Jared Huffman, CCNM Manager Leisyka Parrott, former Mayor Leslie Dahlhoff, and others instrumental in protecting these lands. This yearly event that celebrates and shares our beautiful coastal lands and seashore, with wildflower walks (DKY chapter), bird walks (Rich Trissel), whale watching (Scott & Tree Mercer), shorebird nesting (Doug Forsell), a harbor seal program (Sara Bogard), a native culture and local archaeology walk (Isaac Rios and Chris Lloyd), and a walk and talk about the rocky inner tidal zone (Brianna Zuber). Beach Watch of the Greater Farallones National Marine Sanctuary provides information about its surveys, the Noyo Center discusses its Help the Kelp program, and there will be demonstrations by the Stream Team about water quality, and by the Bodega Bay Marine Lab about ocean currents. The Marine Mammal Center will have its truck on display, Arena

Cove Stewards will discuss their trailhead project, and Acorn Partners in Education offers a family walk at the Lighthouse and a trail ID bingo card that's fun for all ages. This year for the first time, the DKY chapter will set up a self-paced wildflower walk that labels coastal prairie plants located along the Discovery Trail from City Hall to the Field Station. Come check it out! Free parking will be available at City Hall, and a free shuttle bus service will travel between City Hall, the Field Station, Bend in the Road, and the Lighthouse from 10 am to 4 pm. As always at this event, there will be delicious food from local vendors and the Point Arena Merchants Association. Look for details closer to May when the Celebrate the Coast brochure will be available online at various sites, including:
<https://www.blm.gov/visit/point-arena-stornetta-unit>
<https://www.pointarenalighthouse.com/>
<https://pointarenastornetta.org>



Local dignitaries applaud President Obama signing the Proclamation in 2014, the result of years of work by local activists..

Mendocino Land Trust obtains title to Saunders Landing!

CalTrans acquired 12 acres of land between Hearn Gulch and a CalTrans vista point south of Point Arena for Mendocino Land Trust. CalTrans will restore the coastal prairie by removing invasive plants such as ice plants, which cover most of the western headlands. MLT obtained title to this land recently, and will be moving forward with the planning of a new trail, adding approximately 0.4 miles of new coastal trail across the Landing. The State Coastal Conservancy funded the required environmental studies, including archaeological and biological surveys. The Conservancy also supported the staff time needed to prepare permit applications and establish trail layout and designs. The property will continue the state's and MLT's work to connect publicly accessible trails. In this case, it will add to the California Coastal Trail in southern Mendocino County, connecting Hearn Gulch to the Caltrans vista and, eventually, Schooner Gulch State Beach. The Landing includes a perennial, class II stream—Hearn Gulch—and associated high-quality riparian habitats. It is three-quarters wetlands and contains sensitive upland plant communities that include coastal terrace prairie, northern bishop pine, northern coastal scrub, and coastal bluff scrub. It is also habitat for sensitive animal species, including the Sonoma tree vole (*Arborimus pomo*), shoulderband snails, and cormorant species. Owning Saunders Landing will help MLT deliver its mission of conserving and restoring habitat, protecting scenic areas, and providing public access.

BOTANICAL GEMS--by Peter Baye
***Barbarea orthoceras* Ledeb.**
AMERICAN ROCKET, AMERICAN WINTERCRESS

Some of our native flora is visually masked by similar but invasive non-native species that also falsely train our botanical curiosity away from whole genera. Widespread weedy roadsides and pastures full of non-native yellow-flowered mustards (particularly black mustard, *Brassica nigra*) can overwhelm our motivation and search images for anything resembling them. But in some disturbed habitats where Eurasian mustards thrive, we also have an infrequent, and probably under-detected native yellow-flowered mustard relative: the native wintercress, *Barbarea orthoceras*, a short-lived



perennial near-edible twin of the European wintercress, *B. vulgare*.

Barbarea orthoceras is effectively a biennial herbaceous plant, almost completely hairless except along the tips of the sepals of the flower, and the tips of the basal leaf lobes – diagnostic traits that distinguish it from the non-native *B. vulgare*. Its size is variable, depending on the

harshness or fertility of the habitat it occupies, and the competition it endures: it can be a nearly unbranched slender plant less than 15 cm high when tightly packed with weedy neighbors, or a robust branched plant a meter or more high in stream gravels, detritus deposits of streams, or moist, disturbed roadside soils. The leaves are pinnately lobed, up to 12 cm long at the base of the plant, reduced towards the flowering branches. Leaves are dark green, often thick and somewhat glossy, with a terminal ovate lobe much larger than the pairs of lateral lobes.



The bright, rich yellow flowers have petals up to 7 mm long, born in long. They are produced over a long period, from late winter to summer, depending on the individual plant's developmental history and soil moisture. The branched inflorescences resemble those

of mustards, but the fruits, siliques, are slender and only 4 cm long. Individual plants can produce thousands of tiny brown seeds, up to about 40 per fruit.

Like the European wintercress, our American wintercress is edible, with a sharp, bitter to hot flavor that intensifies as the plant transitions from vegetative to bolting into flower. There are, however, few early historic anthropological records of its specific use by Native Americans, outside of Alaska. Perhaps the overwhelming abundance of edible weedy annual non-native mustard and wintercress species during the early years of European agriculture and ranching triggered a pragmatic adoption of the more abundant equivalent greens. *Barbarea orthoceras* growing in drift-lines along the Gualala River lagoon's terminal freshwater marsh, February 2024.

The habitats of *Barbarea orthoceras* range from riparian to ruderal to montane. In the Mendocino County flora, Smith and Wheeler somewhat underestimated the ecological



Barbarea orthoceras growing in drift-lines along the Gualala River lagoon's terminal freshwater marsh, February 2024.

bandwidth of the species as "a plant of wet places, mostly high montane," based on the specimens available to them at the time from interior Mendocino County. It also grows at least in the coastal watershed of the Gualala River, as an uncommon riparian colonizer of moist sand and gravel bars of tributary streams and occasionally the main forks. It is infrequently found also in small colonies along disturbed edges of forestry roads, in gaps with some sun. It rides the river all the way to the lagoon near sea level at the mouth: drift-lines of detritus along the high floodwater line of the Gualala Point marsh have colonies of it some years, like this year, where it grows concealed among non-native mustards. Infrequent though it is in our flora, it is widely distributed in almost all California floristic provinces, and across much of North America. But the apparent gap in its distribution along our coast is probably another illusion of under-detection or under-collection. It's yet another reason to make sure the too-familiar weeds in our flora don't dull our botanical curiosity or block our discovery of native plant gems.

Look for these Phlox Family Beauties--by Nancy Morin

I am in the process of editing Polemoniaceae, the phlox family, for Flora of North America Volume 15, so it is on my mind. The family is one the showiest of the desert bloomers, so there are lots of photos of polemons being posted on social media during this superbloom. We have four genera reported from the DKY region, out of 18 genera and 380 species worldwide. The ones in our area are good examples of the different kinds of rarity that the CNPS Rare Plant Inventory documents.

All of ours are annual plants. The leaves can be simple or deeply divided. The flowers are often in a dense head, often with a translucent membrane connecting the calyx lobes. All of ours have trumpet-shaped corollas. And the plants sometimes have dense hairs and glands.



← *Allophyllum divaricatum* (Nutt.) A.D. Grant & V. E. Grant, purple false gilia, is common elsewhere in California but known from only one report in Jackson Demonstration State Forest, Dunlap North in our area. The translucent membrane between the calyx lobes is flat, not forming a little spout. It has pinkish corollas that are 8--22 mm long, the lobes about 4 mm, and really long hairs on the plant and inflorescence. Photo by K. Morse.

In *Collomia* Nutt., the membrane between the sepals is narrow and forms a little spout at the top. *Collomia heterophylla* Hook., variable leaved collomia, is scattered in our area--possibly quite common--but rarely reported; it is common in northern and central California. The stems have long, translucent glandular hairs. The flowers are 10--14 mm long, corolla tube reddish purple, transitioning to broadly yellow banded in throat, the lobes light pink to white.



Collomia heterophylla. Photo K. Morse



← *Collomia grandiflora* Douglas ex Lindl., grand or large-flowered collomia, has one report from near Little River Airport, another made in 1914 in Fort Bragg; it is common in the mountains of northern California and throughout the Sierra Nevada. Flowers are 10--33 mm long, although some or all may be cleistogamous (with just remnants of pistil and stamens) and very small. The tube is yellow or yellow-salmon-orange, throat and lobes salmon to white or fading to white, uncommonly with purple streaks in throat, glandular puberulent externally. Peter Baye found the cleistogamous form on a gravel bar in the Garcia River. He grew plants from those seeds and they produced pale peach flowers. Photo J. Game.

Navarretia has 47 species, almost all in the American west. *Navarretia squarrosa* (Eschsch.) Hook. & Arn. has an apt common name, because the plants really are stinky. Mephitic is the technical term, and you smell it before you realize you are standing on it--although you probably feel the prickles, too. The inflorescence is a tight ball, very glandular and hairy, with the small blue flowers poking out. *Navarretia squarrosa* is pretty common along the coast, mostly in disturbed areas. We have records from The Sea Ranch and south fork of the Gualala River, the Stornetta lands, Albion, Caspar, Mendocino, Fort Bragg.



N. squarrosa. Photo A. Spade

Gilia Ruiz & Pav. is a large, complex genus, with 41 species, also mostly in the American west. We have two species in our area.



Gilia millefoliata Fisch. & C.A. Mey., with a very limited distribution, is nonetheless the best known of our local gilies because it has been carefully studied and the target of a number of restoration projects. *Gilia millefoliata*, CNPS 1B.2, is separated by 7000-km from *G. valdiviensis* Griseb., a rare Chilean coastal endemic; the two are morphologically and ecologically similar, and both resemble the South American species *G. laciniata* Ruiz & Pav. Researchers have concluded that a *G. millefoliata*-like ancestor was dispersed to South



America, and gave rise to *G. valdiviensis* and the widespread *G. laciniata*. *Gilia millefoliata* occurs on coastal sand dunes mostly from the Bay Area north to central Oregon, but along our part of the coast it has been found at Bodega Bay and then in the dunes around MacKerricher State Park/Cleone, then nothing until the Mattole dunes in Humboldt County. It seems odd that it isn't at Manchester dunes. Photos by Zoya Akulova.

Gilia capitata Sims is common throughout the California floristic province. It is distinguished from other gilies in having flowers in spheric balls, with more than 8 flowers per head, the corollas pale to deep blue. We have two, possibly three, subspecies, out of the 8 total.

Gilia capitata subsp. *capitata* was collected by Lewis Rose in 1939 on ocean bluffs at the mouth of the Navarro River. It was collected by Barbara Ertter in 1990 on Mountain View Road 8.2 miles east of Hwy 1; her collection was identified by Alva Day, the expert in the genus. Further inland collections were made on the banks of the Noyo River in 1920 and near Comptche in 1906. H. N. Bolander collected it in



Gilia capitata subsp. *capitata* photo S. Matson



Gilia capitata subsp. *pacifica*, photo A. Spade



Gilia capitata subsp. *tomentosa*, photo A. Spade

Anderson Valley in 1866. Subsp. *capitata* has glabrous or sparsely hairy heads and fewer than 10 seeds per capsule. The membrane between the sepals is colorless, although this is pretty hard to see.

Gilia capitata subsp. *pacifica* V.E. Grant also has glabrous or sparsely hairy heads, 10--22 seeds per capsule, and the membrane between the sepals is pale purple. It is scattered on bluffs along the coast from Stewart's Point to southern Oregon. It is listed as CNPS 1B.2.

Gilia capitata subsp. *tomentosa* (Eastwood ex Brand) V.E. Grant has flower heads densely hairy at the base, 3-10 (to 24) seeds per capsule, and the membrane between the sepals is white. It was found east of Salmon Creek Bridge; south of Caspar; and then no populations until The Sea Ranch and Stewart's Point, continuing south on the coast to Bodega Bay. It is listed as CNPS 1B.1.

CONSERVATION NEWS BRIEF--by Peter Baye

Salmon Creek Bridge toxic soil cleanup project. DKY is preparing comments, due on Earth Day, April 22, for a CEQA Initial Study for a soil cleanup, or "Remedial Action Plan (RAP)" under the jurisdiction of the California Department of Toxic Substances Control (DTSC; 'ditsy'). The RAP is related to a Caltrans bridge replacement project that is currently scheduled for construction in 2030, one of two in Albion. The Albion bridge replacements are controversial, but DKY's current principal concern is the possible extirpation of the only known Mendocino population of hairy or woolly-headed blue field gilia, *Gilia capitata* ssp. *tomentosa* (see above) discovered by Alison Gardiner. Advance propagation and seed amplification of this population years ahead of construction disturbances, in addition to in-place protection and management, could reduce the risk of extirpation and support establishment of multiple sub-populations and sites. The Public Outreach coordinator of the project for DTSC, Asha Setty, has direct experience with rare coastal plant conservation from past work at Parks Conservancy, a nonprofit restoration organization working with The Presidio Trust and National Park Service in San Francisco.

**DOROTHY KING YOUNG CHAPTER
OFFICERS 2023**

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**MEMBERSHIP APPLICATION
DOROTHY KING YOUNG CHAPTER**

Membership in the California Native Plant Society is open to all. The task and mission of the Society is to increase awareness, understanding, and appreciation of California native plants. The challenge is to preserve their natural habitat through scientific, educational, and conservation activities. Membership includes subscriptions to *Fremontia*, *Flora* and the chapter newsletter, *The Calypso*.

Name _____
 Address _____
 City _____ Zip _____
 Tel. _____ E-mail _____

Please choose the chapter you wish to join; CNPS will make the assignment if none is specified by applicant.

I wish to affiliate with the DKY Chapter _____
 or, other chapter _____

MEMBERSHIP CATEGORY

Student/Fixed Income	\$25
Individual	\$50
Plant Lover	\$120
Supporter	\$500
Patron	\$1,000
Benefactor	\$2,500

Make check to: **California Native Plant Society** & mail
 to: Bob Rutemoeller, Membership Committee
 DKY Chapter, CNPS
 PO Box 577
 Gualala, CA 95445

Next Board Meeting: contact Nancy Morin at president@dkycnps.org. All members are welcome to attend meetings.
Calypso newsletter: please send items to editor@dkycnps.org. If you choose to receive the emailed pdf version of the newsletter, contact Bob Rutemoeller at 884-4426 or brutem@mcn.org. View issues of Calypso at www.dkycnps.org.



Come celebrate the beautiful wildflowers growing along our coast this spring!

Photo by N. Morin