CALIFORNIA NATIVE PLANT SOCIETY
MARIN CHAPTER

November 2023 Newsletter

Heteromeles arbutifolia - toyon berries near McInnis Marsh Photo by Stacey Pogorzelski

Marin Chapter November 2023 Meeting

Raillardella pringlei - showy raillardella
Photo by Julie Kierstead

"Stark Beauty: Klamath-Siskiyou Serpentines"

Guest Speaker: **Julie Kierstead**

Monday, November 13 @ 7:30 pm

Tedoc Mountain serpentine
Photo by Julie Kierstead

The Klamath-Siskiyou Mountains of northwest California and southwest Oregon are the largest serpentine area in North America. We will look at three distinct areas of serpentine geology in NW California: the Josephine ophiolite, the Rattlesnake Creek Terrane, and the Trinity Ultramafic Sheet, and learn about their similarities and their differences. We will take a landscape level look at each of these areas, and touch on their endemic plant species, many of which are rare. For a preview, see https://www.fs.usda.gov/wildflowers/beauty/serpentines/

Bio: Julie served as Forest Botanist for the Shasta-Trinity National Forest from 1989-2019, conducting rare plant surveys and managing the botany program for that 2.2-million-acre federal property. She received a B.S. in Botany from Oregon State University a long time ago and an M.S. in Biology from Northern Arizona University. She then served as the first Curator for The Berry Botanic Garden - Seed Bank for Rare and Endangered Plants of the Pacific Northwest, in Portland, Oregon.

Sedum rubiginosum
Tedoc stonecrop
Photo by Julie Kierstead

Focusing on the Klamath Range flora of NW California, she has collaborated on publishing new taxa and biogeographical/floristic info; older papers are under the name Julie Kierstead Nelson. She recently coauthored the book, *Wildflowers of California's Klamath Mountains*. Julie is a California certified consulting botanist and serves on the Calflora board of directors, as well as the CNPS rare plant program advisory committee . She teaches field workshops in NW California for the Jepson Herbarium workshop series, with co-teacher Heath Bartosh and others. Her interests are in floristics of the Klamath Ranges and to a lesser extent, the southern Cascades. Genera of particular interest include: *Sedum, Adiantum, Neviusia, Silene, Vaccinium, Allium, Phacelia, Erythronium.*

Register for this Zoom meeting here.

Marin Chapter Field Trips

Field Trip Guidelines:

- Email Carolyn Lonstreth cklongstreth@gmail.com to sign up for a field trip, as participants are limited.
- Electronically sign the CNPS Liability waiver for the trip (Carolyn will provide the link.)

Kirby Cove 2005: Ken Howard, Bob Soost, ?, Wilma Follette, ?, ?, ? (Know more names?)

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Adiantum aleuticum - five finger fern and *Polystichum californicum* - CA sword fern in Samuel P Taylor State Park photo by Ann Elliott

Pioneer Tree Trail at Samuel P. Taylor State Park

Sunday, **November 19, 2023** - 10 am to 2 pm

Leader: **Carolyn Longstreth**

This relaxed forest amble will explore the lush Pioneer Tree Trail and part of the Cross Marin Trail. We will look for foliage of such Interesting herbaceous species as coast trillium, elk clover, fairy bells, clintonia, anemones, mission bells, and violets. Trees include redwoods, oaks, alders, maples, Oregon ash and California nutmeg.

The walk is fairly gentle, with a few hundred feet rise and drop over 1.5 miles and then 0.5 miles level. This hike is especially suitable for beginning plant enthusiasts.

Directions: Go west on Sir Francis Drake Boulevard through Fairfax and Lagunitas into Samuel P. Taylor State Park. (There is a parking fee, however, public libraries in Marin loan parking passes for State Parks.

Reserve a pass in advance.) Park at the far end of the main picnic area. Walk along the road and cross the bridge to the "group picnic area". Meet at the far end of that parking lot, where the Pioneer Tree Trail starts.

Bring: Water, a snack and rain gear.White alder

Rain cancels: email Carolyn Longstreth if in doubt.

Unfortunately, the renowned Pioneer Tree itself caught fire in March 2022 and is no longer standing.

CNPS Marin Board – Call for Nominations and Chapter Election

Our December meetings are also official annual meetings during which our members vote on a slate of officers for the Marin Chapter Board of Directors. We have space on the Board for one more member.

If you are interested in serving, please contact Kristin at 650-608-1274 or akristinjakob@gmail.com before Nov 25.

The tentative proposed slate for 2024 is:

Co-President: David Long
Co-President: Kristin Jakob
Vice-President: Open
Treasurer: Bonnie Gosliner
Recording Secretary: Woody Elliott

Directors:

Eva Buxton	Harriet Casserly
Paul da Silva	Bayley Elenzweig
Ann Elliott	Carolyn Longstreth
Laura Lovett	Stacey Pogorzelski
Eddie Robertson	Kate Wing

Scirpus microcarpus - panicled bulrush
Rush Creek OSP Photo by Ann Elliott

Eriogonum latifolium - coast buckwheat near historic Pt. Reyes Life-saving Station by Ann Elliott

Marin CNPS Micro Grants 2024

The Marin Chapter of CNPS is accepting applications for our 2024 Micro Grants, intended to assist with projects that advance our mission.

Applications are due Dec 16, 2023 and recipients will be announced in February 2024. Please see details about eligibility and application process here.

Read more. . .

Future site of diverse pollinator garden near Neil Cummins Elementary School by Refugia Marin

December Program:
Botanical Highlights of 2023
Call for Presenters

Abronia latifolia - yellow sand verbena
near North Beach Pt. Reyes NS by Ann Elliott

Do you have photos from botanical excursions that you would like to share via Zoom at CNPS Marin's December 11 public meeting? With the generous winter rains and subsequent floral displays, we expect that many of you experienced and documented botanical wonders!

We seek 4 or 5 presenters with about 20 images each - these could be simply a selection of pictures, or even better, Powerpoint programs with captions so viewers can easily see the plants' names.

If you would like to participate, please contact Kristin Jakob by phone or text at 650-608-1274, or via email at akristinjakob@gmail.com before December 5.

Botanical Tidbits *by Eva Buxton*

Maple (*Acer sp.) outside my window*
Photo by Eva Buxton

Leaves

For many years I was lucky to have a spectacular view of San Francisco Bay and the East Bay Hills while living in Tiburon. Now I have a view of trees – two horticultural maples (*Acer* sp.), a crabapple (*Malus* sp.), and a native coast live oak (*Quercus agrifolia*). I have learnt to really like the trees and the birds that occasionally take a rest on their branches. When I first moved in, the leafless crabapple was covered in pink blossoms and the maples were just leafing out in sheer greenery. The crabapple got its bronze-colored leaves, and the maples grew a dense crown of deep green leaves. The evergreen coast live oak remains green all year. Now the maple leaves are turning colors and dropping from the branches, reminding me that autumn is here.

We know that without leaves or other green plant parts and algae (plus Bryophytes and some bacteria), there would be no life as we know it on Earth. I was a Bay Shore Study Guide at the National Audubon Sanctuary in Tiburon a long time ago. The volunteer "teachers" took 4 to 6 graders in schools from all over the Bay Area and talked about the ecology of the Bay. While looking at all the critters attached to the rocks, hiding under the rocks, buried in the sand, or floating in the water, I would tell the students that they all need oxygen and food, and green plants and algae, some microscopic, are the only organisms that can produce oxygen and make their own food and then feed the rest of the world. Invariably, some kid would say: "But my mom can make food!" I always hoped that my answer would make a lasting impression: "Your mom can prepare food, but she cannot make food, only plants and algae can make food."

Some Leaf Morphology and Anatomy

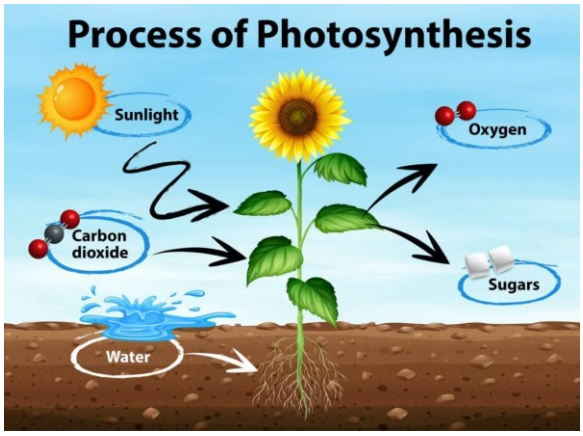
Leaves come in many shapes and arrangements on plants. Most leaves of higher plants are thin and blade-like and most often attached to a stem or twig with a small stalk called petiole. The outermost layer

of cells of a leaf - the epidermis - contains 1000's of microscopic pores called stomata, which make possible the passage of gases in and out of the leaf, as well as the regulation of transpiration (water loss). Coniferous leaves such as those on pines and firs, for example, are needle-shaped, an adaptation to growing in cold, snowy climates. The thin needle has a reduced surface area, which reduces transpiration; the dark color of the needle absorbs heat from the sun; and needles do not accumulate much snow, thus reducing weight on a tree branch.

European silver fir (Abies alba)
Photo by Zoya Akulova

Photosynthesis and Respiration

Leaves conjure up photosynthesis and respiration for me! Plants manufacture their own food through photosynthesis mainly carried out in the leaves. Plants are green because that color is the part of the light spectrum that is reflected by a pigment in the leaves called chlorophyll. Photosynthesis is the process by which plants in the presence of chlorophyll a use sunlight, water (H_2O), and carbon dioxide (CO_2) to create oxygen (O_2) and glucose ($C_6H_{12}O_6$). Intricate processes within the cells of the leaf (mesophyll) transform the raw products into oxygen that is released into the air and chemical energy that is stored within the glucose molecules. (In case you care to remember, the chemical equation for photosynthesis is $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6CO_2$.) The process of respiration in plants is the opposite of photosynthesis; it involves using the glucose (sugar) produced during photosynthesis plus oxygen to produce energy used by the plants to carry out various life processes including growth. Plants produce their own "food" to grow and survive! Herbivores then obtain this energy by eating plants, carnivores by eating herbivores, and omnivores, like humans, by eating both in addition to plants!



What is photosynthesis - Courtesy of httpswwwscience sparkscom

Deciduous trees

Deciduous trees, like the maples outside my window, drop their leaves in the fall and remain leafless until new leaves form in the spring. The leaves drop in response to decreasing temperatures and day length. When those changing conditions happen in fall in the Northern Hemisphere, they trigger a hormone that sends a chemical message to the leaf, which in turn produces a layer of cells at the base of the petiole. This layer is called an abscission layer, and it will eventually cut the petiole from the twig and make the leaf fall. The reason leaves turn yellow, orange or red before falling is that they contain other pigments in addition to chlorophyll such as carotenes and xanthophylls and also produce anthocyanins in the fall to slow down photosynthesis. These pigments are masked by chlorophyll during the growing season, but when chlorophyll starts breaking down in response to colder temperatures and shorter day lengths, the other pigments become visible.

Quaking aspen (Populus tremuloides)
photo from Wikipedia

Forests, Groves, and Stands

Walking through a deciduous forest somewhere in the north-eastern part of the U.S in the fall was at one time on my bucket list, but I gave up viewing the colors from the ground

once I had seen the unforgettable color display from an airplane on my way to New York, NY. Common native species turning vibrant colors in the eastern deciduous forests are oak (*Quercus*), maple (*Acer*), beech (*Fagus*), birch (*Betula*), and hickory (*Carya*). California does not have deciduous forests like those found on the east coast. Providing the most fall color in California – a bright golden color - is quaking aspen (*Populus tremuloides*). This tree, sometimes growing on several acres but more commonly in smaller groves, is found in canyons mostly on the eastern side of Sierra Nevada. My favorite area is Hope Valley just south of Lake Tahoe, where I first saw a breathtaking display many years ago. I have, however, never seen a more magical stand of aspen than the one I saw near the northern rim of Grand Canyon, AZ.

Big leaf maple (Acer macrophyllum)
Photo by Peter Stevens

Big leaf maple (Acer macrophyllum) - Peter Stevens Marin County woodlands display no spectacular fall colors! However, the leaves of our native bigleaf maple (*Acer macrophyllum*) and black oak (*Quercus kelloggii*), both species occurring mostly singly or in small stands, turn golden or orange in the fall. Black oak is also unusually beautiful in early spring, when the new foliage is purple due to an anthocyanin pigment protecting the young leaves from sun damage.

Black oak (Quercus kelloggii
Photo by Neal Kramer

American sweetgum
(Liquidambar styraciflua) -
Panter Nursery

If you want to see trees in spectacular fall foliage, walk down some streets in our Marin towns! Some of the most colorful horticultural trees in developed areas are American sweetgum (*Liquidambar styraciflua*) and maidenhair tree (*Gingko biloba*)

Maidenhair tree (Gingko biloba)
Photo by Doreen Smith

Upcoming Marin Chapter Events

- **11/13 7:30 pm** Chapter Meeting: "Stark Beauty: Klamath-Siskiyou Serpentines", Guest Speaker: **Julie Kierstead**

- **11/19 10 am - 2 pm** Field Trip: Pioneer Tree Trail at Samuel P. Taylor SP, Leader: **Carolyn Longstreath**

Aralia californica - elk clover
Samuel P. Taylor State Park Photo by Ann Elliott

Other Activities in Marin and Nearby

Salcornia pacifica - pickleweed
Rush Creek OSP Photo by Ann Elliott

- **11/4 9 am - noon** Broom Busters of Old St. Hilary's
- **11/5 9 am - 1 pm** CNPS Garden Ambassador Seasonal Garden Visits
- **11/5 10 - 11:30 am** Senior Stroll: Hamilton Wetlands
- **11/9 7:30 pm** What is a mushroom anyway? Yerba Buena Chapter (virtual)
- **11/13 7 pm** Arranging CA Native Plants in Bouquets, Garlands, and Wreaths for the Holidays N. San Joaquin Valley Chapter (virtual & later on YouTube)
- **11/15 10 am - 2 pm** Devil's Gulch, Samuel P. Taylor SP
- **11/15 7:20 pm** Native Gardens in Two Schools - Challenges & Rewards Orange County Chapter (in person and virtual)
- **11/19 9 am - noon** Restoration at Hal Brown Park
- **11/21 7:30 pm** Evolving Horizons at Sonoma Botanical Garden Milo Baker Chapter (in person and virtual)
- **11/28 6:30 pm** Mt. Tamalpais Florilegium - panel presentation Fairfax Library, exhibit 11/7 to 1/6/24

Be sure to periodically check CNPS.org/events for interesting talks and field trips sponsored by CNPS Chapters and staff throughout the state.

Got Photographs?

Consider sharing you best plant photographs with the chapter in our newsletter. Also please send me information on events and other items to be included.

Ann Elliott, Newsletter Editor

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Arctostaphylos manzanita ssp. *manzanita* - common manzanita in Rush Creek OSP Photo by Ann Elliott