CALIFORNIA NATIVE PLANT SOCIETY
MARIN CHAPTER

May 2022 Newsletter

Marin Chapter Meeting

"San Bruno Mountain State and County Park: Wild in the Midst of the San Francisco Bay Area"

Monday, May 9 @ 7:30 pm

Guest Speaker: **David Nelson**, Co-Author of upcoming natural history of San Bruno Mountain

Doug Allshouse and Dave Nelson, co-authors of upcoming *San Bruno Mountain: A Guide to the Flora and Fauna* photo by B. Acres

San Bruno Mountain is a wild oasis in the midst of the highly urbanized San Francisco Bay Area. It was the first Habitat Conservation Plan and Congress used it as a model when it re-authorized the Endangered Species Act in 1983. While only 30 minutes on the other side of the Golden Gate Bridge, it has different geology from Marin, so it hosts different plants. The 4 square mile nature preserve hosts four endemic manzanitas and a newly described hybrid huckleberry. The underlying geology is formed of the San Bruno Mountain terrane, composed of a hard sandstone called greywacke, which partially accounts for the unique plants.

Come join us for an hour of science, history, and magnificent photography.

The speaker, David Nelson, along with Doug Allshouse, has written a new, authoritative natural history of San Bruno Mountain, to be published by Heyday Books in November of 2022. Doug Allshouse and David Nelson will lead a hike on San Bruno Mountain Saturday, May 14, 2022.

As a followup to this presentation, there will be a field trip on May 14, 2022 to San Bruno Mountain State and County Park. See the "Field Trips" article for full information.

About the Authors:

Doug Allshouse was originally a birder back home in Ohio, doing line drawings and taxidermy. When the family moved from the rural Ohio countryside to the city streets of Santa Clara in 1964, he was eager to get back out in nature. He was like a salmon swimming in the ocean, longing to get home again. He found his new nature home when he discovered San Bruno Mountain. He bought a home 100 feet below the Saddle Trail of San Bruno Mountain State & County Park and started running the hills of the Park. Suddenly, nature was back in his life. A serendipitous meeting with a retired firefighter prompted him to expand his nature interests to include botany. Eventually he became enchanted with the idea of starting a botanical garden. He was a founding member and officer of Friends of San Bruno Mountain in 1995. This led to the establishment of the Mission Blue Nursery in 2001. He became involved with habitat conservation and planning and was chosen to serve on the San Bruno Mountain Habitat Conservation Plan Technical Advisory Committee. He led his first field trip in 1996 with Friends of San Bruno Mountain and continues leading field trips for the Yerba Buena chapter of the California Native Plant Society (CNPS).

David Nelson met Doug on a winter field trip in January 2013. They hit it off immediately: Doug was struck by David's inquisitive questions and desire to know as much as possible about the plants and the conservation work that was the subject of this field trip. David inadvertently reminded Doug of himself. David was impressed by Doug's ability to eloquently teach without talking down to the audience. Doug showed David his very dog-eared copy of the prior book,

The Flora of San Bruno Mountains, by Elizabeth McClintock, which was both out of print and without any color photographs. An updated, more inclusive, and color flora was clearly needed. Within a week, David propositioned Doug about doing a full-color and updated book on San Bruno Mountain, without knowing that Doug was already engaged in precisely that very project. Doug thought that David might make a good co-author: he had written three prior books, for the Federation of Fly Fishers, a conservation organization dedicated to preserving cold and warm water species. He had a scientific background (BS Engineering, MA Philosophy of Science, MD degree, two years of scientific bench research experience, and more than twenty years of experience performing hand surgery and hand research), so he seemed like a good candidate. David knew that Doug was the right person to head up the book, since he already knew all the plants on the Mountain and also a great deal of interesting facts about them.

Together they formed a compatible team with both botanical expertise and scientific experience. Doug is now the CNPS Yerba Buena Chapter's chair for San Bruno Mountain Committee, and David is the CNPS Yerba Buena Chapter's chair for the Locally Rare Plant Committee. They have jointly given papers at the triennial CNPS statewide conference on the history of the Park and its rare plants, given lectures to conservation and general audiences, and wrote an article for Bay Nature magazine on the San Bruno Mountain endemic manzanitas.

Marin Chapter Field Trips

Field Trip Guidelines:

- Email Susan Schlosser at scschlosser52@gmail.com to sign up for a field trip, as we are limiting participants to 20.
- Electronically sign the CNPS Liability waiver for the trip (Susan will provide the link.)

****

Erythranthe nasuta - shy monkeyflower
By Terrence Gosliner

Kent Pump Road

Sunday, May 8, 2022 - 10 am to 1 pm

Leader: Marin botanist **David Greenberger**

Kent Pump Road offers a beautiful, gentle, and biodiverse hike through the Lagunitas Creek Watershed and the upper reaches of Kent Lake. We'll amble along this riparian corridor and enjoy the diverse flowers, butterflies, and birds of the area. Highlights will include forest understory plants, mossy rock outcrops, a rare lichen, and two undescribed wildflowers known from nowhere else in the world.

Vancouveria planipetala - inside out flower
By Ann Elliott

The hike is a mostly shady out-and-back on a dirt surface with an easy difficulty level. We'll go as far as we can in the allotted time, perhaps 2 miles each way at maximum.

Bring layers, lunch, and water.

Meet at **Alpine Dam** at the beginning of the Kent Pump Road.

Parking is limited but there are several nearby pullouts along Bolinas-Fairfax Road open for use.

****

San Bruno Mountain: Saddle and Bog Trails

Saturday, May 14, 2022 - 10 am to 1 pm

Leaders: **Doug Allshouse and David Nelson**

Lupinus albifrons - silver lupine with Mission Blue butterfly photo by Patrick Kobernus

"The location of this field trip, the San Bruno State and County Park, is the subject of the May 9, Marin CNPS chapter meeting."

This field trip is an easy walk with East Bay, Marin, and San Francisco views. We will walk the Saddle and Bog Trails. The Saddle covers 300 acres of grasslands, a eucalyptus forest, and the headwaters of Colma Creek. Several past and present restoration projects offer vivid examples of success and failure and will be the center of discussion. As an example, parts of the Saddle have been transformed due to a recent wildfire and a gorse (Ulex europaeus) mastication project. The Saddle Trail is a wide fire road that is rich in plant species and its eastern grasslands share plant species common to the southeast portion of the mountain such as coast iris (Iris longipetala) and purple needlegrass (Stipa pulchra). We should see silver lupine (*Lupinus albifrons*), the host plant for the endangered Mission Blue butterfly. The Bog Trail traverses a rare upland wetland with sedges, rushes, cow parsnip (*Heracleum maximum*), arroyo willow (Salix lasiolepis), and creek dogwood (*Cornus sericea* ssp. *sericea*). Bring layers because the exposure to the ocean may influence cooler weather. There is a $6 fee (cash or credit/debit card) for park admission payable at the pay station. Meet in the main parking lot, which is just beyond the ranger kiosk. Contact Doug or call/text him at 415-269-9967 for questions or directions.

Directions: San Bruno Mountain State and County Park From the Golden Gate Bridge take 19th Avenue south and then take 280 south to Sullivan Avenue, which is about a half-mile south of the 280 merge. Bear right (Civic Center) and turn right onto Sullivan, turning right onto Washington Street by the Arco station and In-N-Out. Take Washington until it dead-ends and turn left onto San Pedro Road. Stay on that street about 1.5-2 miles until it becomes Guadalupe Canyon Parkway. The Park entrance is on the left, about 1.5 miles from a school and ball field. The address of the park is 555 Guadalupe Canyon Parkway, Brisbane, CA.

Carpooling: If anyone is interested in car-pooling, please let Susan Schlosser know when you sign up. We'll meet at the Manzanita Park and Ride in Mill Valley at 8:30 am.

****

Old Stage Road to West Point Inn

Saturday, May 21, 2022 - 10 am to 3 pm

Leader: **Terry Gosliner**

The route from Bootjack requires a short climb to the relatively level Old Stage Road. We pass through mixed evergreen forest into a chaparral area that alternates between serpentine rock and greywacke sandstone with sharp contrast between the different rock and soil types. We will continue on about a mile and a half to the West Point Inn, before we head downhill via the Nora Trail to the Matt Davis trail. We return back to Bootjack along the Matt Davis Trail. Interesting plants we may see include many serpentine endemics such as

Rhododendron occidentale - western azalea
By Terrence Gosliner

Silene laciniata ssp. *californica - cardinal catchfly*
By Terrence Gosliner

Jepson's Ceanothus (*Ceanothus jepsonii*), the Mt. Tamalpais manzanita (*Arctostaphylos montana* ssp. *montana*). We will also see chaparral pea (*Pickeringia montana*) and yerba santa (*Eriodictyon californicum*) as dominant bushes and pass through the unique serpentine Sargent cypress forest (*Hesperocyparis sargentii*). At a wonderful serpentine spring we should see blooming western Azalea (Rhododendron occidentale) and seep monkey flower (*Erythranthe nasuta*). Many other chaparral species are evident such as the bush poppy (*Dendromecon rigida*) and we even pass by a small second growth grove of redwoods (*Sequoia sempervirens*). Numerous other surprises await us as we hit this area of Mt. Tam's rich diversity.

Meet at the Bootjack parking/picnic and campground area. There is an $8.00 parking fee.

Trail length round trip is approximately 3.5 miles with a short initial steep climb and some downhill and switchbacks along the Nora Trail.

From US 101 take the Stinson Beach exit at Mill Valley towards Stinson Beach on CA After 2.6 miles, veer right and up on to Panoramic Hwy towards Mt. Tamalpais and Muir Woods. Continue on Panoramic Hwy past the Muir Woods turnoff. Continue 4.1 miles to the Bootjack picnic area and campground parking lot. Proceed to the kiosk to pay your parking fee. Exact change is required. A bathroom and water are available at the parking lot.

Volunteer Opportunities:

Remove Yellow Star Thistle on Mt Burdell, Saturday May 14, 2022 9:30 am to 11:30 am

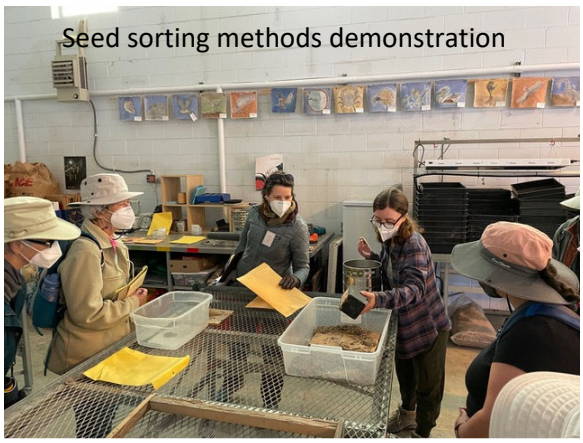
Join Marin CNPS and Marin County Open Space District in the first of our new monthly invasive plant removal events in Novato. Meet at the San Carlos Way gate on Mt. Burdell (nearest intersection: San Carlos Way and Verdad Way). We will be removing the invasive *Centaurea solstitialis*, Yellow Star Thistle, by hand. The area is a short walk from the trailhead, slightly uphill. Bring layers, sunhat, sunscreen, water and wear long pants. Marin County Open Space will provide gloves and other tools as necessary.
Read more about yellow star thistle. . .
Check here for more volunteer opportunities.

Centaurus solsitlatus - yellow starthistle
flower and seedling plant Photos by Bob Case

Field Trip Reports

By: **Susan Schlosser**

Novato Baylands Nursery and Hamilton Wetlands Restoration
March 5, 2022 Field trip leaders: Stacey Pogorzelski and Alycia Matz



Seed sorting methods demonstration

We enjoyed an extensive tour of the Novato Baylands Stewards facility and adjacent seasonal wetlands: the agricultural and military history of the area; seed collection and processing; plant nursery; recent plantings; weed management; and wildlife usage.

The Novato Baylands Stewards have been growing and planting native plants for the Hamilton Wetland Restoration project since 2013. The Stewards are a well-organized group of 30 – 40 volunteers with an excellent facility for their restoration work. A large building is used for presentations, cleaning and storing seeds, and field gear storage and maintenance. Colorful artwork of wetland plants and animals, created by students and volunteer,

is all around you. Our field trip began here with Alycia Matz describing the agricultural and military history of the site. Around the turn of the 20th century, the extensive tidal wetlands along the western edge of San Pablo Bay were diked and drained for agriculture. During the Depression, the Army purchased a large area of these agricultural lands and developed the Hamilton Army Airfield. In 1999 the US Army Core of Engineers and California Coastal Conservancy entered an agreement to restore the Hamilton Army Airfield to a tidal wetland system. After years of planning, design, permitting and construction, the bay-side levee was breached in April 2014. After nearly a century, the Hamilton Wetlands were reconnected to San Francisco Bay. A mix of seasonal and tidal wetlands, uplands,and wildlife corridors with a beautiful section of the San Francisco Bay Trail path are now enjoyed by residents and visitors.

The Novato Baylands Stewards have been responsible for providing and planting appropriate species to restore the wetlands. Seeds for restoration are collected at fresh, brackish and salt marshes from the Petaluma River to China Camp State Park. We saw a demonstration of methods used to clean and store seeds.


Baylands Stewards shaded nursery

Then we went to the outdoor, shade-cloth covered growing area. Here flats of small plants grown from collected seed were along one side of the shade house and in the middle area, plants that had grown sufficiently were transplanted to small tubes. Outside the shaded growing area, larger plants in pots, were grown, watered with fresh or salt water, and kept until ready for planting. Among the plants we saw in the growing area were Gum Plant (*Grindelia stricta*), Salt Grass (*Distichlis spicata*), Mugwort (*Artmesia douglasii*), Bull Rush (*Bolboschoenus maritimus*), Farewell to Spring (*Clarkia amoena)*, and Alkalai heath (*Frankenia salina*).

The Hamilton Wetlands Restoration includes innovative and experimental aspects. The site subsided 7 to 10 feet during the years of agricultural and military use. From 2007 to 2010, dredge material from the Port of Oakland harbor and ship channel deepening project was used to raise the elevation of the Hamilton Wetland Project site to above mean tide level. Since then, tidal exchange has brought in sediment and began shaping complex channel networks characteristic of tidal wetlands. And of course, all those wetland plants grown by the Novato Baylands Stewards have been planted in various area of the project.


high intertidal mudflats and mid intertidal area of the northern wetlands photo by Susan Schlosser

High intertidal mudflats and mid intertidal area of the northern wetlandsThe Hamilton Wetland Restoration Project is about 800 acres. Designated habitats within the site include northern seasonal wetlands, tidal wetlands, tidal panne, south seasonal wetland, the levee breach, the Bay Trail and a wildlife corridor. We visited the northern seasonal wetlands on our field trip. This wetland system and the southern wetlands are another innovative aspect of the Hamilton Wetlands Restoration Project. Both are high elevation salt marshes that include an upland area on their periphery. The northern seasonal wetlands are actively managed. A levee surrounds the area and a tidal gate controls tidal inflow. In the southern seasonal wetland, passive management occurs in the constructed high elevation areas by passive inundation from the adjacent tidal basin and includes a berm to reduce wave fetch and erosion. The transitional upland area adjacent to both seasonal wetland areas includes a wildlife corridor to support wildlife movement. In the northern seasonal wetlands we saw recently planted nursery plants and discussed one of the biggish challenges to restoration projects, invasive species. Right now, the


Upland wildlife corridor of northern wetlands

main invasive species at this site are Brass Buttons (*Cotula coronopifolia*), an Asteraceae naturalized from South Africa, Russian Thistle (*Salsola soda*), a native of southern Europe that grows well in open areas of salt marshes and mudflats, and Yellow-star thistle (*Centaurea solstitialis*), a native of the Mediterranean region.

The field trip leaders pointed out the wetlands adjacent to the site we visited. This is the 1600-acre, Bel Marin Keys Wetlands Restoration Project started in 2014. This access to this site was not suitable for our field trip.

Overall this was a fascinating field trip. Novato Baylands Stewards contributed to the discussion as did many local residents, some of whom worked at the Hamilton Army Airfield or lived nearby since the 1960's. We also enjoyed seeing many species of migratory waterfowl and shorebirds on our walk to the northern seasonal wetlands. There is still much to be learned from this restoration project. There are many documents online if you are interested in more information about the Hamilton Wetlands Restoration Project.

All photos by Susan Schlosser.

****

Jepson Prairie Preserve

April 16, 2022 Field Trip Leaders: Charlie Russell and Russ Huddleston, Solano Land Trust

Figure 1. Group photo on shore of Olcott Lake

In late Fall vernal pool plants start to grow in the inundated areas of the Jepson Prairie pools. By early March a succession of wildflowers start blooming in large masses along the edges of evaporating vernal pools providing a colorful and beautiful site. A succession of flowers will bloom as the pools dry down, through the end of May. In the vernal pools, aquatic invertebrates hatch from eggs and cysts to complete their life cycle in a few months. California Tiger Salamanders crawl from their burrows on dry land back to the pools to reproduce. We enjoyed this beautiful and delightful ecosystem on a cool and cloudy day with our field trip leaders, Charlie Russell and Russ Huddleston. The Solano Land Trust owns Jepson Prairie Preserve and manages it with the University of California Natural Reserve System. The primary goal is to maintain the native species and their habitats. Vernal pools used to be a very common habitat in the Sacramento/ San Joaquin River Delta and in the Central Valley. They are now rare and few are protected.

Figure 2. Tadpole shrimp (live, in aquaria)

We started out sitting on picnic benches facing Olcott Lake, the largest pool at Jepson Prairie. Much research on the vernal pool ecosystem has been completed over the last few decades. We heard a fascinating introduction to vernal pools, the soils that created them, the adaptations of plant and animals that live here, and their seasonal ecosystem.

An impenetrable layer of clay, about 1 foot below the surface now, washed down from the nearby Inner Coastal Ranges over the preceding millennia. Rain fills the pools in winter and they dry out by evaporation through summer. The visible water of the vernal pools is an exposed water table. There is also a large "playa" vernal pool here that receives some runoff from the watershed. Jepson Prairie is relatively flat with some small hummocks called 'mima mounds' that are not inundated and whose origin is still being studied.

A succession of plants and animals grow and reproduce in the vernal pool habitat. Plants tend to be annuals that grow, flower and produce seeds that are dropped and dry in place. Animals such as shrimp and salamanders have complex life cycles that utilize the wet, winter phase to grow and reproduce. M any invertebrates produce cysts that survive over summer in the in bottom of the pool and hatch out when the rains start. California Tiger Salamanders, crawl to burrows on land within 100 days of hatching. When winter rains start when mature adults return to the pools to start their cycle again.


Figure 3. Juvenile California Tiger Salamander (live, in aquaria)

At Olcott Lake. Russ Huddleston gave an outstanding presentation with live animals he had netted that morning. Isopods, aquatic insects, fairy shrimp, tadpole shrimp and juvenile California Tiger Salamanders were shown individually, in small clear plastic aquaria that were passed around for each participant to see while Russ described their life history. It was extremely fascinating and interesting to see the fauna living right there in Olcott Lake. Many of these animals live here as their predators, fish, cannot survive in such seasonal waters.


Figure 4. D. insignis

As we stood learning about the aquatic life at Olcott Lake, at our feet were many of the flowers we came to see. Right there, just inside the gate of the public trail, were *Lasthenia fremontii*, one of the seven *Lasthenia* species found here and keyed before the field trip by Charlie. These species require a microscope to dissect the flower and then determine the species. Other wildflowers within feet of where we stood, included two species of Downingia:


Figure 5. D. concolor var. concolor and Navarretia leucocephala ssp. bakeri

Dwarf Downingia, *D. pusilla* and Cupped Downingia, *D. insignis*, field owl's clover (*Castilleja campestris* ssp. *campestris)*, Baker's navarretia (*Navarretia leucocephala ssp. bakeri*), semaphore grass (*Pleuropogon californicus* var. *californicus*), pale spikerush (*Eleocharis macrostachya*), and on the nearby mima mounds: alkalai-meadow mallow (*Malvella leprosa,*plant only), Purple needle grass (*Stipa pulchra*), gold nuggets (*Calachortus luteus*, Charlie commented they were blooming 2 weeks earlier than he had ever seen in 10 years of leading tours), dwarf brodiaea (*Brodiaea terrestris*) and many non-native grasses.

Across the road we traversed large areas of *L. fremontii* and maroon-spotted downingia, *D. concolor* var. *concolor*. Other plants we saw in this alkaline playa pool area included: Coyote-thistle (*Eryngium vaseyi*), blow-wives (*Achyrachaena mollis*), brass-buttons (*Cotula coronopifolia*), smooth goldfields, which is a rayless species (*L. glaberrima*), woolly-marbles (*Psilocarphus brevissimus*), popcorn flowers (*Plabiobothrys* spp., seeds are the definitive characteristic and not visible yet), miniature lupine (*Lupinus bicolor*), winter vetch (*Vicia villosa* ssp. *villosa*), alkali heath (*Frankenia salina*), hyssop loosestrife (*Lythrum hyssopifolia*), purslane speedwell (*Veronica peregrina* ssp. *xalapensis,* plants in seed), salt grass (*Distichlis spictata*), northern barley (*Hordeum brachyantherum* ssp. *brachyantherum*), Sacramento beardstyle (*Pogogyne zizyphoroides*),


Figure 6a. Landscape at Playa Pool


Figure 6b. Identifying plants

white brodiaea (*Tritelia hyacinthina*), lowland cudweed (*Gnaphalium palustre*), and the irresistibly named turkey tangle frog fruit (*Phyla nodiflora* ,plant only).

Jepson Prairie Preserve has many uncommon, rare and endangered plants. This article only touches on a few of them. There is a public trail at Olcott Lake where anyone can view many of these plants from easily visible footpaths. It is well worth a visit to see the plants, enjoy the expansive beautiful landscapes and views of surrounding mountains, and watch herons, egrets, hawks, and many other birds in the pools and surrounding area. All photos by Susan Schlosser.

CNPS Chapter Council Meeting: Saturday June 4, 2022

Marin Chapter is honored to host the first hybrid statewide CNPS Chapter Council Quarterly Meeting since the pandemic. Location: The Dance Palace in Pt. Reyes Station.

Chapter Volunteers needed:

- help with setup and take down of meeting room tables and chairs;
- onsite check-in and collect meal costs;
- setting up continental breakfast, snack breaks, Happy Hour prior to dinner;
- and providing homestays for attendees.

It is fun to attend and meet CNPS members from throughout the state. Learn about Chapter Council activities and information exchanged among Delegates and CNPS staff.
Please **contact Woody Elliott** if you can lend a hand: woodyelliott@gmail.com, 530-588-2555. Thank you!

CNPS 2022 Conference - Rooting Together

Oct. 20-22, 2022 San Jose
Workshops & Field Trips Oct. 18-19
Topics: Plant Science, Conservation, Horticulture, Education
Registration opens in June.
Read more. . .

Other CNPS Events and Issues

- Check out CNPS Spring and Summer Workshops
- Virtual Rally for California's Pollinator Protection Act May 4 @ 9:30 am - 10:30 am Read more. . .
- Advocate for adequate funding for California's 30x30 Initiative. Read more. . .

Point Reyes Nature Website - Check it out!

Point Reyes Nature reveals the vibrant natural world of the Point Reyes peninsula in West Marin California by sharing hikes, classes, seasonal highlights, volunteer opportunities, and events.

Naturalist, photographer, volunteer Lena Zentall's website is a great starting point for exploration of Point Reyes. The site has detailed hiking maps with stunning photos from her excursions. Her website also includes great ideas for activities and hikes suitable for kids. Visit pointreyesnature.com

Upcoming Marin Chapter Events

5/8 10 am Field Trip Kent Pump Road

5/9 7:30 pm General Meeting "San Bruno Mountain State and County Park: Wild in the Midst of the San Francisco Bay Area" Guest Speaker: **David Nelson**

5/14 10 am Field Trip San Bruno Mountain - Saddle and Bog Trails

5/14 9:30 am Yellow Star Thistle Weeding on Mt. Burdell

5/21 10 am Field Trip Old Stage Rd to West Point Inn

Lupinus nanus - sky lupine Emmanuel Serriere

CALIFORNIA NATIVE PLANT SOCIETY

Marin Chapter CNPS
PO Box 1408
Mill Valley, CA 94942-1408

2707 K Street, Suite 1, Sacramento, CA 95816-5130 | Tel: (916) 447-2677