



California Native Plant Society

MARIN CHAPTER NEWSLETTER

Tiburon Mariposa Lily (Calochortus tiburonensis)

Marin chapter established 1973

Monday, January 13, Marin Chapter Meeting

CNPS Members' Photos from 2019 Botanical Adventures

January's program will feature highlights from last year's excursions, near and far, by our members, including Terry Gosliner, Eva Buxton, Doreen Smith, and Vernon Smith.

Please join us for a botanical trip around the world!

Terry Gosliner, PhD, is the Senior Curator at the Department of Invertebrate Zoology. Terry will present images from Namibia, as well as rare and unusual plants of Northern California.



Calochortus venustus (butterfly mariposa lily) at Del Puerto Canyon—Vernon Smith

Eva Buxton, our Chapter's Conservation Chair, will share images from her visit to Scotland and Sweden last year. An especially fascinating portion of her trip, both biologically and culturally, were the windswept islands in the Inner Hebrides.

Doreen Smith is our Chapter's irreplaceable Rare Plants expert, and Vernon Smith, our AV volunteer, is also a mainstay of the website team. Together, they will share images from places they visited in 2019, including Mines Road and the Del Puerto Canyon area.



Rhododendron ponticum (common rhododendron), a problematic weed in the UK—Eva Buxton

January and February Meetings:

5:30 p.m. Join friends for a no-host dinner at The Cantina, at 651 East Blithedale Ave. at Camino Alto. Please call Kristin Jakob at 650.608.1274 at least one day ahead to be assured of a seat with our group.

7 p.m. Meet at the The Redwoods Retirement Community, at 40 Camino Alto, Mill Valley. Books, posters, and cards will be for sale before and after the meeting. **Presentations start at 7:30 p.m.**

Monday, February 10, Marin Chapter Meeting

Laura Cunningham on “The Ecological History of the Bay Area and California”

What was California like 500 years ago—with native bunchgrasses, wildflower fields, vernal pools, giant grizzlies, herds of tule elk and pronghorn antelope, rivers filled with salmon, and condors soaring overhead?

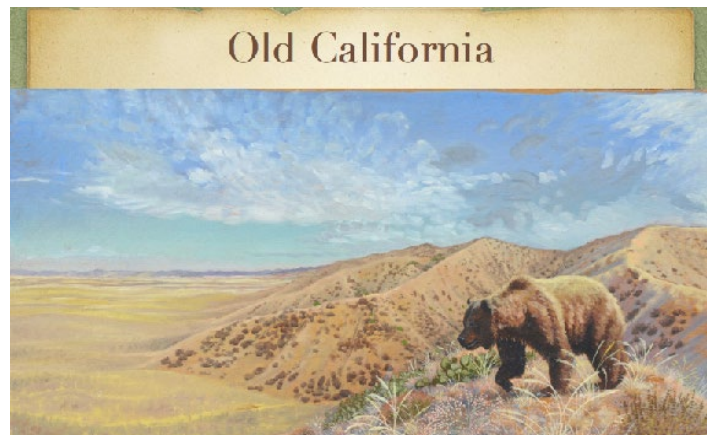


San Francisco Bay Area 500 years ago, East Bay looking westward towards Marin; oil on panel—Laura Cunningham



Central Valley vernal pools through the seasons; oil on cotton rag paper—Laura Cunningham

Join Laura Cunningham on February 10 for a presentation on art and science about the ecological history of the Bay Area and California to find out! Based on twenty years of research for her 2010 book *A State of Change: Forgotten Landscapes of California*, Laura will present an hour-long slideshow of her artwork, reconstructing what cities looked like before European arrival, as well as oak woodlands, grasslands, Native American culture, and fire ecology.



Giant southern California grizzly next to San Fernando Valley, 2,300 years ago; oil on panel—Laura Cunningham

Chapter meetings continued on page 3



Wildflowers of long ago in the Coast Range, Contra Costa County; oil on paperboard—Laura Cunningham

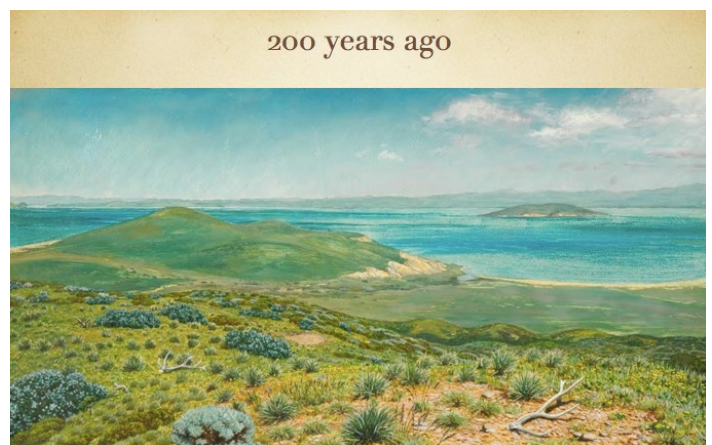
Laura Cunningham studied paleontology at the University of California at Berkeley, then went on to do graduate study in Natural Science Illustration at UC Santa Cruz.

Moving into the field of wildlife biology, Laura worked for the California Department of Fish and Wildlife, US Geological Survey, and as a contract biologist in the Sierra Nevada, California desert, Point Reyes National Seashore, and Death Valley National Park.

After her many years researching and travelling around the various plant communities of California, Laura wrote the children's book, *Bay Area Through Time* in 2013, in addition to the aforementioned 2010, *A State of Change: Forgotten Landscapes of California*.

Laura is a self-taught artist and lives with her husband in the Death Valley region. She works for the conservation nonprofit Western Watersheds Project as their California Director.

Time and location for this event are included on pages 1 and 6.



San Francisco 200 years ago with coastal prairie, California sagebrush, and blue-blossom ceanothus, looking eastward towards Nob Hill, downtown, and the Oakland-Berkeley Hills; oil on panel—Laura Cunningham



GARDENING IN HARMONY WITH NATURE

by Charlotte Torgovitsky

It's hard to find the time to get a good start on all the garden work between the drizzly, dreary weather and the shortened days; thankfully that will start to change leading up to and after the winter solstice! When I'm out there, cleaning up my milkweed stands, I'm reflecting on the many ways over the last twenty years of my involvement with this plant, and the fascinating creatures that are so dependant on it.

With dismally low numbers of monarch butterflies again this year at the Marin overwintering sites, it could be that migrational patterns that are endangered and may change dramatically. It is interesting to note that there are no records of overwintering sites on the California coast before the twentieth century.

The monarch butterfly is a tropical species, and it most likely co-evolved with *Asclepias curassavica* (tropical milkweed), which is native to Mexico. I saw a few adults flying and had only one or two larvae in my garden, and they were feeding on the tropical milkweed.

Monarch Migrations

Monarch butterflies are famous for their seasonal migrations and the vast numbers that congregate at specific overwintering sites. People noticed these movements, and congregations were suspected, so during the 1960s, biologists began to tag adult butterflies in the eastern population; and hoped to recover them and discover where they went. Canadian biologist Fred Urquhart and his wife enlisted lots of "citizen scientists" to assist with tagging monarch butterflies. A monarch tagged in Minnesota was not discovered until 1976—1,750 miles away in Mexico! The specific overwintering sites in the Sierra Madre Mountains, along the spine of central Mexico, were kept secret for several more years. By 1986 at least one of the five overwintering sites in the Oyamel forests, Cerro Altamirano, was officially protected. Monarchs also exist in Australia, and there they simply live out their life cycles in areas close to the coast where the milkweeds grow. In Florida and parts of Mexico, there are also non-migratory populations. Monarchs exist in Hawaii also, where there is a rare pure white variant form!

As there is no genetic difference between the east and west coast populations in the US, it is possible monarch butterflies will repopulate our state with individuals from colonies in Mexico.



The east coast population of monarch butterflies has not been suffering; this photo was taken outside of Austin, Texas this last fall—Treva McCarty

The Pioneering Stage

The adult form (technically called the imago) is the pioneering stage of the species, and during the spring dispersal, they seek out new territories and new stands of host plants. Breeding sites can vary from year to year, probably to avoid or confuse predators and parasitoids, but somehow the females "seem to know" where the herbaceous milkweeds will reappear. Monarch butterflies can fly at temperatures above 55 degrees, and they make use of thermals to cover long distances. Much like many hawks and turkey vultures, these butterflies will spiral up on a thermal and then

Gardening in Harmony with Nature continued on page 5

glide effortlessly to the next thermal, covering long distances without expending much energy. During the northward dispersal in spring, these small creatures (each butterfly weighs less than one gram) can fly for ten hours a day and cover about 45 miles. During approximately one hundred and thirty-five days of entropy at the overwintering sites, they build up a store of lipids, and after that energy is all used up, the butterflies will pause to “refuel,” mate and search for their larval host plants.



A monarch nectaring at a Zinnia flower; a habitat garden provides extensive resources for all sorts of creatures—Bob Watkins

A Creature Protected by Toxicity

About the same time as the Urqharts were studying the phenomenon of the monarch migration, Dr. Lincoln Brower, a research professor of Zoology, and his wife, were also investigating the monarchs. They were very interested in the shared toxicity of the butterflies and the plants their larvae fed on. They worked with birds, which are primarily visual predators, to understand more about how the chemical toxicity protected the butterflies. They discovered that it is a learned response; food aversion learning, so it does not necessarily protect an individual but offers protection to the whole population. Other butterfly species evolved to take advantage of the monarch coloration patterns, including Batesian mimics, such as the red admiral (a non-toxic species), and as a complex of Müllerian mimics—similar-looking toxic species like the queen and the soldier butterflies (not found in our area).

Milkweeds—of which there are about 100 species in America—produce toxic cardenolide compounds, with varying levels between species. The toxicity of the larvae also varies, depending on which milkweeds they feed on. These toxins are only ingested in the larval stage and then passed on to the adult form during the pupal stage.

Scientists can do “cardenolide fingerprinting” tests to determine which milkweed species the larvae were feeding on and if these host plants are geographically consistent. I have a lot of faith in the balance of nature. Boom and bust cycles, especially with insect species, are not unnatural. If and when the monarch populations resurge again in California, these tests may well help scientists determine where the butterflies have come from.

To read more about butterflies and habitat gardening, please visit my website: <https://www.homegroundhabitats.org>



PLANT ID WORKSHOPS HAVE ENDED At San Francisco State University

Due to the fact that there are no botany graduate students (in a morphological / ecological sense) currently in the program at San Francisco State University, plant ID workshops have regrettably come to an end. December’s workshop was the last one. Many people have benefitted from these workshops and have found them both informative and educational. It’s been a joy, over these many years, to coordinate this program and to spend time with young, enthusiastic botanists. Each and every one of them has been very special. I wish to thank all the graduate students who contributed to the program and for their dedication in educating people about native plants, plant families, and keying with the impressive but formidable Jepson Manual. Questions? Please contact Mila Stroganoff at milastroganoff@sbcglobal.net.



BOARD NEWS

Congratulations and welcome to the 2020 Chapter Board members elected at the November membership meeting!

Continuing board members are Paul da Silva, Rob Katz, Carolyn Longstreth, Laura Lovett, Eddie Robertson and Charlotte Torgovitsky, along with Treasurer Kate Wing, and Co-Vice Presidents (and Acting Co-Presidents) Kristin Jakob and David Long.

Thank You to retiring board members David Greenberger, who will join Doreen Smith as Rare Plants Committee Co-Chair, and to Ashley Eastman Dumbra, who has done a terrific job as Recording Secretary. We are actively seeking a new Recording Secretary.



NEED TO BORROW A WRENCH OR SIX?

It's that time of year again—the rain has softened the ground making broom and other invasive shrubs easy to pull out with their roots. Given the disastrous fires north of Marin County recently, it is especially important to consider clearing your property and adjacent land of flammable shrubs. Borrow up to six broom wrenches for two weeks at a time from Marin CNPS! *Genista monspessulana* (French broom) and *Cytisus scoparius* (Scotch broom) are both prevalent, particularly the former.



Mini and light wrenches

Removal of invasive shrubs that pose a fire danger is needed. The shrubs act as a “ladder” from a ground fire to a tree canopy. Land managers and fire agencies in the county are currently focusing on preventing wildfires from starting at the wildland-urban interface (WUI), by creating “defensible space.” With the help of a broom wrench, you can create defensible space around your home and even take the battle to adjacent wildlands. The wrenches will work on virtually all woody plants, even on previously cut plants, if a section of the original stem is accessible. CNPS owns six wrenches in two different sizes:

- Two light-jaw capacity up to 1.5 inches, 11.5 lbs, and
- Four mini-jaw capacity up to 1 inch, 5.25 lbs.

Please contact Eva Buxton (conservation & invasive species chair) at evabuxton@sbcglobal.net to arrange for pick-up. Your name, address, phone number and a small refundable deposit per wrench will be required.



CALENDAR OF EVENTS

- * **Sunday 1/5, 10 a.m.–3 p.m. (rain date 1/12)**
Lagunitas Creek Walk with SPAWN
- * **Monday 1/6, 7 p.m. (also 2/3)**
Chapter Board Meeting, Marin Community Foundation offices, 5 Hamilton Landing, Suite 200, Novato
- * **Friday 1/10, 1–3 p.m. (also 1/12, 2/9, 2/14)**
Zen of Weeding; Habitat Restoration at Samuel P. Taylor Park with Nancy Hanson
- * **Monday 1/13, 7 p.m.–9 p.m.**
January Marin Chapter meeting, CNPS Members' Photos from 2019 Botanical Adventures
- * **Thursday 1/16, 9.30 a.m. (also 2/20)**
Third Thursday Weeders Workday with Carolyn Longstreth
- * **Monday 2/10, 7 p.m.–9 p.m.**
February Chapter Meeting: Laura Cunningham on “The Ecological History of the Bay Area and California.”
- * **Thursday 2/27, 10 a.m.–2 p.m. (rain date 3/3)**
Chapter Field Trip: Cascading Creeks with Kurt Rademacher
- * **Saturday 2/29, 8:30–4 p.m.**
All-day Symposium, “Home Landscaping in a Changing Climate: Fire Smart, Water Wise, Biodiverse” at Marin Art & Garden, Ross
- * **Sunday 3/8, 10 a.m.**
Chapter Field Trip: Lower Steep Ravine and Rocky Point with Terry Gosliner
- * **Saturday 4/18, 9 a.m.–1 p.m.**
Spring Native Plant Sale at Falkirk Cultural Center Grounds, San Rafael

MARIN CNPS FIELD TRIPS

WINTER 2020

There is no better way to learn your wildflowers and other native plants than to join chapter members and others in the field! All hikes are free and open to the public, so please invite your friends. Beginning plant enthusiasts are particularly welcome on all walks. Dress in layers, wear non-slip footwear, and come prepared for cold, fog, rain, and wind, just in case. Bring water, lunch, and snacks as well as binoculars, hand lenses, and your favorite field guides. Contact hike leaders with any questions about individual hikes. Full plant lists for many locations are available to download at the Marin Chapter CNPS website (www.cnpsmarin.org/plant-science/plant-lists/item/6-marin-county-plant-lists). Check out our event listings at www.cnpsmarin.org/events/events-calendar.

Lagunitas Creek Walk with SPAWN

Sunday, January 5, 10 a.m.–12 p.m. (Rain date January 12) \$10 donation is requested

When the first hard rain hits the ground, streams swell, and coho salmon begin their spectacular homeward migration. CNPS will team up with the Salmon Protection and Watershed Network (SPAWN) for a Creekwalk Tour to witness a tradition that goes back thousands of years. After swimming hundreds of miles from their ocean feeding grounds, the fish return to their birthplace and continue the survival of their species.

As we watch for spawning coho and river otters, we'll learn about the ecology of our endangered coho salmon and their ancient connection to our iconic coast redwoods and the riparian plant community.

After an introduction, the group will visit several sites throughout the State Park and the larger watershed. These different legs of the tour are a combination of short walks or drives to ideal viewing sites. While we will be standing in search of salmon for most of the trip, the combined distance walking at different locations is no more than 1-2 miles.

The walk will occur despite light rain on January 5. However, if heavy rain is forecast, please email audrey@tirn.net to RSVP and confirm the trip is going ahead. In the event of a strong storm, the walk will take place on the following Sunday, January 12.

Please dress in warm layers, as it can be cold in the redwoods. We also recommend bringing waterproof jackets or an umbrella, hiking boots, and snacks.

The tour will meet near the entrance kiosk for Samuel P. Taylor State Park at 8889 Sir Francis Drake Blvd, Lagunitas—look for the group at the bathrooms in the picnic area. Parking at Samuel P. Taylor State Park will be waived; as you enter the park, please stop at the kiosk and say that you are joining a creek walk led by SPAWN.

Leaders: Audrey Fusco and Harry McGrath of SPAWN. A \$10 donation to SPAWN is required to join in.

Cascading Creeks

Thursday, February 27, 10 a.m.–2 p.m. (Rain date March 3)

The Harry Allen, Tucker, and Bill Williams trails on the lower slopes of Mount Tamalpais go through a variety of habitats plus two cascading creeks. The field trip is a 1.8-mile loop, with a gentle 300-foot descent and ascent. We'll see chaparral with silk tassel bush, (*Garrya elliptica*), oak-madrone woodlands, north-facing California bay laurel (*Umbellularia californica*) groves, chain fern (*Woodwardia fimbriata*) and elk clover (*Aralia californica*) in riparian areas, crashing brooks and redwood forest—there will be a variety of plants to discuss!

We will meet across from 123 Crown Road, Kentfield. If you search this address in online map applications, you'll find the beginning of the Harry Allen Trail. There is plenty of parking; Crown Road is wide at this trailhead overlooking Phoenix Lake. As trails are narrow along steep slopes, a hiking stick can be useful. Heavy rain cancels, and the rain date is March 3.

Leader: Kurt Rademacher

Lower Steep Ravine and Rocky Point

Sunday, March 8, 10 a.m.

Lower Steep Ravine trail and the Rocky Point Road down to the Steep Ravine cabins can be quite incredible in early March. To the east of Route 1 are a botanically rich riparian habitat that is the home to *Trillium chloropetalum* (sessile-flowered wake-robin), both species of *Maianthemum* (Solomon seal), *Fritillaria affinis* (mission bells) and *Disporum smithii* (smith's fairy bells). After seeing those, we'll cross Route 1 and explore the "soft chaparral" as we look for a picnic site overlooking the ocean, passing such colorful gems as *Lasthenia californica* (goldfields), *Layia platyglossa* (tidytips), *Castilleja subinclusa* ssp. *Franciscan* (Franciscan Indian paintbrush), and, if we're fortunate, we'll get to smell the heavenly

Marin CNPS Field Trips continued on page 8

scent of the rare (for Marin) yellow *Erysimum franciscanum* (wallflower). Meet at the lower trailhead to Steep Ravine, located on Highway 1, a mile or so south of Stinson Beach. If you're unfamiliar with the area, look for the large and visible gate that's the entrance to the Steep Ravine Cabins and park at one of the small parking areas or pullouts nearby. The hike will start across the street from the gate.

Leader: Terry Gosliner, 415.379.5269, tgosliner@calacademy.org



Save the date!

SPRING NATIVE PLANT SALE

Saturday, April 18, 9 a.m.–1 p.m.

Falkirk Cultural Center Grounds
San Rafael



WILD IN MARIN

Second Annual Fungus Festival of the Mycological Society of Marin

Saturday, January 4, 10 a.m.–5 p.m.

Mill Valley Community Center, 180 Camino Alto, Mill Valley

Admission \$10 Adults, \$5 for 18 years and younger
Mushroom displays, cooking demonstration, cultivation class, art & vendors. For tickets and more info, visit <https://www.mycomarin.org/event/wild-in-marin-fungus-festival-2/>



SIGN UP FOR E-BULLETINS TO KEEP UP WITH CNPS MARIN NEWS!

Periodic e-bulletins are sent out to members and others who wish to be reminded of upcoming events and activities or notified of schedule changes. To sign up, visit the CNPS Marin website at www.cnpsmarin.org and provide your email address in the "Sign up for our E-Bulletin" section of the home page.

ZEN OF WEEDING

Habitat Restoration at Samuel P. Taylor Park
Friday, January 10, 1 p.m.–3 p.m. (also 1/12, 2/9, 2/14)



Endangered coho salmon in Lagunitas Creek—Harry McGrath

The rains of November and December washed the dust of summer from the forest and brought the salmon home from the sea. Hatching three years ago, these fish have spent the first half of their lives in Lagunitas Creek, and the second half in the Pacific Ocean. The joy of watching their powerful bodies surge upstream and create redds is tempered with knowing this means the end of their lives. In the new year, we can start to look for their offspring as they begin the next three-year cycle. Our work weeding Taylor park supports the native plants that feed the insects that help provide these magnificent beings with a future in Marin.

Please meet me just before 1 p.m. at the far end of the main picnic area near the bathroom. Look for my red Honda Accord, bring gloves or borrow from the park's supply, and wear work gear with long sleeves and pants. Layer up as it will be chilly under the big trees. We'll work in the drizzle with rain gear, but not in heavy rain. Get a free parking pass at the entry kiosk when you volunteer. **Please email me if you are coming so that I know whom to expect.**

Contact: Nancy Hanson at nphanson@comcast.net



LEARN ABOUT MARIN MANZANITAS

Stuck indoors on a rainy day? Prepare for the next time you're outside!

Our chapter's Bruce Homer-Smith has developed an online interactive guide to Marin manzanitas, which shows key characters that distinguish our manzanitas and presents a photo essay for each of our Marin taxa.

After you've studied them, take the interactive quiz to see how you do at identifying them.

Then get out in the field to start searching for burls, checking out leaf textures, and examining nascent inflorescences.

Have fun!

<https://PlantID.net/?PlantList=Marin+Manzanitas>



Arctostaphylos montana (Mt. Tamalpais manzanita)—Jeff Bisbee



HANDS-ON NATIVE GARDENING PROJECTS

Around the County

Native Hedgerow at the COM Indian Valley Campus Organic Farm and Garden

CNPS promotes planting native plants in horticultural conditions, in both home landscapes, and on farmlands. A Habitat Hedgerow is a densely growing association of natives, small trees, shrubs, vines, perennials, and grasses that provide sanctuary and habitat for all sorts of creatures beneficial to an organic, sustainable, and regenerative landscape and farming operation.

Marin CNPS is collaborating with the Organic Farm managers to create a hedgerow at the front perimeter of the farm. We plan to do a section at a time during each rainy season: while we plant one area, we'll sheet mulch the adjacent area to prepare it for planting the following season. Our chapter will donate the plants and work with other groups and volunteers to plant and maintain this educational installation.

Watch for email announcements or contact Charlotte if you wish to be involved: 415.892.9148

torgovitsky@comcast.net

Bay Model Pollinator Garden

This garden is now vigorously growing into its second year. It requires regular maintenance, which our chapter's "Gardening with Natives" co-chairs oversee on a regular seasonal basis. We'll be scheduling a work session soon to do some light pruning, divide some herbaceous plants, sow seeds and plant wildflower seedlings, and bring in a bit of mulch.

The garden is of a very manageable size, tools and materials are provided, and the work is light and relaxed in the company of friends! Please watch for an E-bulletin announcing the work parties.

CNPS' Gardening with Natives' co-Chairs:

Charlotte T: torgovitsky@comcast.net

Laura Lovett: llovett@earthlink.net

Milkweeds and Monarchs: a collaborative Project with Marin Audubon Project

This is the second year that our chapter is teaming up with Marin Audubon Society at a site on their Simmons Slough preserve in Novato to create habitat for the Monarch butterfly. Marin CNPS will be providing plants and seeds of several native species to provide essential nectar sources, and, of course, the larval host plant *Asclepias fascicularis* (narrow-leaf milkweed).

The project is supported by both paid labor and volunteers helping with the lighter, more straightforward tasks necessary to complete and maintain the restoration site. All materials and tools are provided; we only need some helping hands!

The first workday, sometime in January, will be scheduled depending on the weather and conditions of the soil; please watch for a Marin CNPS email announcement or contact MAS members:

Ed Nute: 415.669.7710

Lowell Skyes: 415.388.2821



TED KIPPING—Remembered



Ted in the mountains—location and photographer unknown

We are saddened to announce the passing on November 24, 2019, of one of the most beloved horticultural personages in the San Francisco Bay Area and well beyond.

Ted, who gave CNPS Marin many illustrated programs over several decades, was renowned for his tree pruning arts and photographic skills, but most of all for his warm, many-faceted personality and unmatched generosity.



Eriogonum heermannii (heerman buckwheat) from the base of the White Mountains, California—Ted Kipping



Ted at the Sea of Cortez on Don Jose in March, 2011—John Kipping

Professionally, after working for the City of San Francisco in Golden Gate Park, then Strybing Arboretum, he founded Treeshapers, which provided knowledgeable and aesthetic pruning to clients throughout the Bay Area. Ted kept his staff employed when business was slow while donating pruning services to various botanical gardens and parks. He also gave the use of his stunning plant and garden photography to numerous publications and lectured throughout the country on a broad range of botanical subjects.

A life member of many plant societies, Ted traveled widely to satisfy his appetite for appreciating plants of all kinds in the wild and gardens, and enthusiastically shared what he learned with many grateful audiences. He will be sorely missed!



PLANT OF THE MONTH

Marin's early-flowering yellow-flowered Sanicles, *Sanicula*



Sanicula arctopoides (footsteps-of-spring)—Vernon Smith

Sanicula arctopoides, footsteps-of-spring, is a coastal plant that decorates coastal grasslands each year, mostly on Point Reyes, and sometimes seen near Nicasio Reservoir. While the plants look attractive, their "perfume" is like cow-dung to attract their fly pollinators.



Sanicula laciniata (coast sanicle)—Vernon Smith

Sanicula laciniata—coast sanicle; or lace-leaf sanicle—is an early-flowering woodland plant, common in much of Marin. The laciness of the leaf varies by population; those on Mount Tamalpais are the laciest.



Sanicula tuberosa (turkey pea)—Vernon Smith

Sanicula tuberosa, turkey pea, has a round tuber root and mostly grows in serpentine areas. Rock Spring rocky barrens are likely places to find plants. The foliage, if gently crushed, smells like cilantro.



Save native plant habitat at Point Reyes with the...

THIRD THURSDAY WEEDERS

Thursday 1/16, 9.30 a.m. (also 2/20)

Spend a companionable day at beautiful Point Reyes and help us protect precious plant habitat.

The Weeders meet regularly on the third Thursday of every month, either in the Seashore or at other sites in West Marin. We consult with Seashore staff on the location of each work party.

To sign up and receive notification of forthcoming meeting places, please send an email to Carolyn Longstreth at cklongstreth@gmail.com or call 415.669.7514.

Be sure to let Carolyn know if you plan to attend, so we bring enough tools and can wait for everyone before heading to the work area.

Also, bring plenty of water, lunch and snacks, warm and wind-stopping layers, sturdy shoes, and work clothes: no shorts or open-toed shoes. The Park provides tools and gloves.

Hope to see you there!



ALL-DAY SYMPOSIUM

Saturday, February 29, 8.30 a.m.–4 p.m.

Home Landscaping in a Changing Climate: Fire Smart, Water Wise, Biodiverse

Marin Art & Garden Center

30 Sir Francis Drake Blvd, Ross, CA 94957

magc.org

cnpsmarin.org

As the climate warms and the weather becomes less predictable, Bay Area home gardeners find themselves facing contradictory directives from public agencies that are each trying to address one part of the looming problem. It seems we may be facing a lot of hard choices—can we find a way to work with nature, to have home landscapes that are resilient to fire and drought, yet still thrive and offer beauty and habitat both for us and other creatures?

We are putting on this symposium because we believe we can have it all.

Taking an integrated and diversified approach simplifies maintenance, produces healthier living spaces, and creates natural resilience to temperature swings. Hear a gathering of experts tell of methods to manage water, enrich the soil, and build fire-wise landscapes with thriving plants that encourage biodiversity. Go home re-energized, full of nature-affirming ideas you can apply to your land. Renewal can happen anywhere. Why not start with your favorite place?

This event is co-sponsored by the California Native Plant Society and Bee Audacious. Watch our website for information on registration! The cost is \$75 and includes continental breakfast and box lunch, plus snacks and coffee.

Topics and Speakers

Opening Remarks—Katie Rice, Marin County Board of Supervisors

Using Native Plants for Fire Resistant Landscapes

Greg Rubin, Founder, California's Own Native Landscape Design

Greg Rubin owns one of the largest native landscape contractors in the state—California's Own Native Landscape Design in Escondido, near San Diego. Major firestorms have hit this area in recent years, yet the homes surrounded by landscapes his company had installed did not burn. Greg's years of experience

as an aerospace engineer enabled him to understand the thermodynamics of fire in the landscape and to develop a landscape design technique that provides beauty, greenery, and some fire protection. He'll share how he does it.

Defensible Space, Vegetation Management, and Home Hardening to Reduce Wildfire Impacts

Todd Lando, FireSAFE Marin Council Coordinator

Todd will discuss the interrelationship between wildland vegetation and landscaping installed in the built environment, and how wildfires can ignite structures. He will describe best practices for vegetation management, installation and maintenance of fire-resistant landscaping around your home, and preferred design and material choices for structures that might be exposed to wildfires.

Biodiversity and Climate Change: The Missing Links

Paul da Silva, Professor, Life and Earth Sciences, College of Marin

We are faced with two environmental crises today: One is climate change; the other is the global loss of biological diversity. Both are driven by human activity, and both threaten future human wellbeing and survival. Fires, floods, food shortages, and epidemics all attract our attention, but they must lead to more holistic considerations of ecosystems if we are to make progress in bettering our situation. Fortunately, we've learned much about how plants, insects, birds, and other organisms are linked in food chains and food webs. We also know that disturbances and succession are linked in cycles that repeat over time and space. With a little creativity, ingenuity, and resolve, we can use this information to improve the landscapes around us and, at the same time, make the whole world a better place.

Creating Healthy Habitat in the Urban Environment: Low Input, High Impact

Patricia Algara, ASLA, Co-founder, BASE Landscape Architecture

Learn about the complicated relationship between pollinators, plants, and people. Patricia will talk about her experience transforming an underutilized space in a very prominent and heavily trafficked area in San Francisco into a pollinator demonstration garden. She will share their research on soil transformation, plant survival, and bee counts under those conditions, and why a pollinator habitat may depend as much on a maintenance agreement as on the initial landscape design.

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A Less Toxic Approach to Gardening

Suzanne Bontempo, IPM Educator, Our Water Our World

Learn how to put the pesticides away and still enjoy a lush garden. Suzanne will describe how to approach pests and diseases from a more holistic perspective, and how a garden ecosystem works through the lens of Integrated Pest Management, with a focus on supporting our pollinators. Get nature on your side; discover how you can grow what you love and see it flourish without resorting to the use of harmful chemicals.



Pollinator garden in San Francisco—Patricia Algara

The Worst Is Yet to Come, But So Is The Best: Pollinator Gardening, Biodiversity, and Our Role in Building 21st Century California

Dan Gluesenkamp, Executive Director, CNPS

For over 50 years, our community has worked to save and restore California’s celebrated wild gardens. During those decades, the human population has doubled, and biodiversity conservation in the state has been dramatically transformed. Against all the odds, using a growing diversity of conceptual and technical approaches, we have somehow managed to save most of what makes California special. As we look to the future, we see new threats and wonder how to save California for those to come. Dan will speak about places, priorities, and projects. How will new generations of Californians, with new ideas and diverse voices, leverage the incredible successes of past struggles to build a future we all can love? Together, we will explore a vision for how we can learn and work to make a real and lasting difference, to transition California to shared systems that secure our treasured biodiversity, and inspire the rest of the world to do the same for their unique lands.

The Soil Sponge

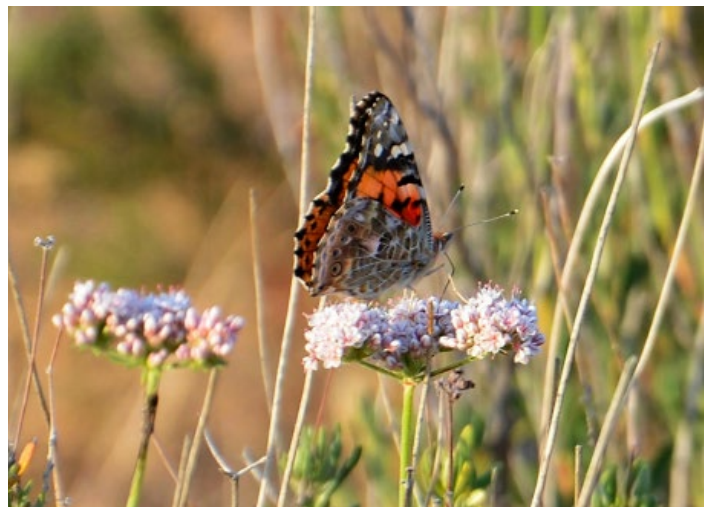
Diana Donlon, Director, Soil Centric

Soil is an ecosystem—one that, like all ecosystems, needs the basics of food, shelter, air, and water to live. There’s a single solution that provides these needs for living soil: organic matter. Organic matter is, essentially, the sponge of the soil. It captures and holds onto resources like water and nutrients. It changes soil structure and builds friable, loose soils. It provides basic food to plants and living organisms. AND it stores water—huge amounts of it. Even a small amount of organic matter in the soil can greatly increase the amount of water your soil can hold. Why is this important? Plants manage water, and in managing water, they manage heat. The opportunity to cool our planet comes through influencing the hydrological cooling processes, for which plants and the soil carbon sponge are critical.

Watershed Approach to Landscaping

Keith Bancroft, Water Conservation Supervisor, Marin Municipal Water District

To have landscapes that are truly resilient to the effects of a changing climate, we need to go beyond water-wise principles and manage each property as though it were a mini-watershed. By paying attention to the design of the garden, building soil, keeping rain on site, selecting climate-appropriate plants, and managing supplemental irrigation, our landscapes transform into ones that conserve valuable natural resources while supporting diverse plants and insects.



Painted Lady on buckwheat plant—Pete Veilleux



CNPS MEMBERSHIP

The mission of the California Native Plant Society is to conserve California native plants and their natural habitats, and increase understanding, appreciation, and horticultural use of native plants. Membership is open to everyone.

Join CNPS Now!

Membership benefits include informative publications, field trips, monthly programs, and discounts on books and posters. Also included are *Fremontia* (a journal with articles on all aspects of native plants published three times/year), the *Bulletin* (a quarterly statewide report of activities and schedules), and the chapter newsletter.

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Yes! I wish to affiliate with the Marin chapter.

New Member Renewal

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Note dues changes as of April 1, 2019!

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If you wish to receive only the newsletter, please make a \$10 check payable to **CNPS Marin** and mail to: Marin CNPS, 58 Redwood Dr., Kentfield, CA 94904.

Newsletter Subscription only \$10

The IRS considers dues in excess of \$12.00 per year and all gifts to CNPS Tax Deductible.

Tax-Deductible Contributions

Tax-deductible contributions to the Marin chapter are always welcome, either as memorial or honorarium donations or regular contributions. You may designate your contribution for a specific purpose of your choice. Unless otherwise designated, all contributions will be placed in the general fund, which will enable the chapter to extend our efforts to plant conservation and education. Our regular, ongoing program and operating expenses are largely covered by our plant sales and book and poster sales.

A contribution of \$_____ is made in honor of:

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58 Redwood Dr., Kentfield, CA 94904.

MARIN CNPS FACEBOOK GROUP



Our chapter's Facebook group (<https://www.facebook.com/groups/MarinNativePlants>) is a wonderful way to keep up with "what's blooming where," chapter events, and volunteer opportunities! You don't need to have a Facebook account to view the page, but you do need one if you'd like to post and comment.

GET YOUR MARIN CHAPTER CNPS NEWSLETTER ELECTRONICALLY

Help the Marin Chapter reduce unnecessary costs and use of paper for the chapter *Newsletter* by receiving the color version of the *Newsletter* by email instead of by snail mail. Write to deliveriesmarincnps@gmail.com with "Email Newsletter" in the subject line and your name and address in the body of the email. Many thanks!

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Newsletter Mailing: Paul Kryloff

Contact information has been removed from the online version of this newsletter.

WE'D LIKE TO HEAR FROM YOU!

If you would like to make a suggestion for a chapter meeting program, field trip, plant identification workshop, outreach program for schoolchildren, or anything else that could help us improve our service to the public, please contact us via our website: <https://www.cnpsmarin.org/contact>



SHOP & GIVE TO CNPS MARIN AT MILL VALLEY MARKET

Family-run Mill Valley Market gives 2% of your total receipt to CNPS Marin. No registration necessary, no membership card, no overhead; just mention the donation code #7048 at the beginning of the transaction to benefit native plants!



NEWSLETTER AVAILABLE ONLINE!

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SHOP & SAVE AT GREEN JEANS GARDEN SUPPLY

Family-run Green Jeans Garden Supply in Mill Valley offers a 10% discount to card-carrying members of CNPS! The nursery is located at 690 Redwood Hwy, the east-side frontage road alongside Hwy 101, south of the Strawberry Shopping Center.

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The 2007 revised edition of John Thomas Howell's classic *Marin Flora* (originally published in 1949) is available at chapter meetings and at the chapter website (www.cnpsmarin.org). We are now offering both the hard cover and soft cover books at sale prices!!

Prices:	Hard cover	Soft cover
Retail	\$35 (plus \$2.89 tax)	\$25 (plus \$2.06 tax)
CNPS members (20% off)	\$28 (plus \$2.31 tax)	\$20 (plus \$1.65 tax)

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www.cnps.org (state) The state CNPS site offers a wealth of materials, including promotional materials such as banners and posters.

Facebook www.facebook.com/groups/MarinNativePlants
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