

CALIFORNIA NATIVE PLANT SOCIETY MARIN CHAPTER

October 2021 Newsletter

Marin Chapter Meeting: "Climate as a Driver of Divergence in Soil-Specialist Plants"

Guest Speaker: **Nicole Ibañez**, Masters candidate, University of San Francisco. Ibañez, recipient of one of the CNPS Marin 2021 Educational Grants, will share the results of her research. **Mon. Oct. 11 @ 7:30 pm**

[Register for this meeting here.](#)

Ibañez studied differing phenology (the timing of flowering) of *Antirrhinum vexillocalyculatum* (wiry snapdragon) in populations growing on nearby serpentine and non-serpentine habitats in areas of lower and higher precipitation. Knowing their phenological and associated genetic differences can help us understand how rare, fragmented plant communities may be affected by stressors such as more frequent drought caused by climate change.

The global climate is changing rapidly, and stochastic events like droughts are becoming increasingly frequent and severe. It is important to understand how communities are affected by climate, especially in rare, fragmented habitats. Serpentine soil occurs as fragmented 'islands' across California, and provides unique habitats, characterized by harsh abiotic conditions that are stressful for plants. Plants that are found on and off serpentine soils in sympatry are a model system for studying local adaptation via stress-tolerant traits. These plants have adaptations to tolerate abiotic stress, which often trade off with competitive ability. One such trait is accelerated phenology, or the timing of flowering, a response to low soil moisture. Phenology can affect gene flow and reproductive isolation between populations. Previous studies have found correlations between precipitation gradients and biogeography of serpentine specialists. Here, I leverage heterogeneous landscapes to study how climate mediates local adaptation and reproductive isolation in plants within specialized habitats. I discuss how certain environmental stressors are more divergent between serpentine and non-serpentine habitats in regions with higher precipitation. As a result, I predict more divergence of traits associated with the drought-competition tradeoff in wetter regions. I predict that nearby serpentine and non-serpentine populations will have more phenological divergence and higher genetic differentiation in wetter regions. These results would suggest that climate is a driver of divergence via local adaptation to specialized habitats. This is important to understanding how soil specialists evolved, and how climate change will affect different plant communities in the future.

Nicole Ibañez is a nature enthusiast, born and raised in the Central Valley of California. She completed her Bachelor's of Science in Field and Wildlife Biology at Cal Poly San Luis Obispo in



Nicole Ibañez and *Antirrhinum vexillocalyculatum* - wiry snapdragon at a field site in Marin County

2016. Here, she grew her passion for conservation ecology, and developed a strong interest in California native plants. After college, she moved to Sacramento and began a career in environmental consulting, furthering her knowledge of California native plants and wildlife, and providing guidance on natural resource and special-status species avoidance and mitigation. Closely studying the ecology of rare plants sparked an interest in species that grow in specialized habitats, such as serpentine. In 2019, she moved to San Francisco to begin a Master's degree program in Biology at the University of San Francisco. She is co-advised by Dr. John R. Paul and Dr. Sevan Suni, whose labs study botanical evolution, and plant-pollinator relationships, respectively. With the help of her advisors, Nicole has conducted a novel research project on the effects of climate on local adaptation to serpentine soils.

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 15.
- **Electronically sign** the CNPS Liability waiver for the trip (Susan will provide the link.)



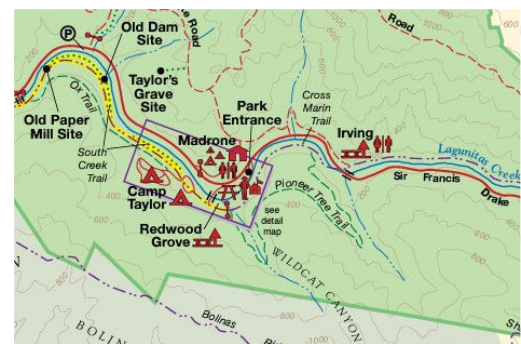
Helenium puberulum - sneezeweed
by Ann Elliott

Pioneer Tree Trail at Samuel P. Taylor State Park **Sunday Oct. 17 9:30 am**

Enjoy this cool, forest amble on the Pioneer Tree Trail following a redwood-lined tributary of Lagunitas Creek into a mixed evergreen forest, then back along part of the Cross Marin Trail. The walk is fairly gentle, with a few hundred feet rise and drop over 1.5 miles and then 0.5 miles level. The trail is fully open, but the park reports a few downed trees that we may have to scramble over.

This hike is especially suitable for beginning plant enthusiasts; as we will be identifying trees, shrubs, and foliage. The Pioneer Tree at 1.25 miles is a massive hollowed-out redwood.

Directions: Go west on Sir Francis Drake Boulevard through Fairfax and Lagunitas into Samuel P. Taylor State Park. Take a left into the main camping/picnic area (Camp Taylor) a couple of miles after entering the park. State Park day use fee is collected. Park and walk across the bridge past the group picnic area in majestic redwood trees. Meet at the Pioneer Tree Trailhead at the far end of that parking lot. The parking lots can fill on the weekends, so we will start at 9:30 am. Bring a small snack, but we will be back in time for a picnic in the redwoods. Rain cancels; contact Ann if in doubt.



Leaders: Woody and Ann Elliott, Woody.Elliott@gmail.com; annonfire@gmail.com; 530-521-4402

Fall Native Plant Sale

With the shortening of days and the arrival of rain (we hope), the fall months are the perfect time to think about planting native shrubs. The cooler weather enables shrubs to start developing the deep root systems they need to survive long summers without rain. Once summer bloomers are done and their dried stalks removed, it will be easier to get new plants into the ground.



Volunteers packing orders at Home Ground Habitats
by Laura Lovett

Order online at cnpsmarin.org: Thurs. Oct. 7 @ 7 pm to Sun. Oct. 10 @ 7 pm

Pickup: Sat. Oct. 16 between 10:30 and 1:30 at Bon Air Shopping Center in Greenbrae

Volunteers are needed! Many hands make the work go quickly! On Friday Oct 15 between 10 and 1, at Home Ground Habitats (HGH) growing grounds in Novato we need:

- people to help pack plant orders
- people with cars to collect orders and deliver them to Greenbrae at 10 am on Saturday Oct 16.
- small and medium-sized boxes

Text Kristin Jakob at 650-608-1274 or email her kristinjakob@att.net if you can help.

BOARD NEWS - Call for Nominations

We invite Chapter members to step forward to help run the Marin Chapter by serving as officers and board members. If you are interested in running, or have another member to suggest, please contact Kristin Jakob as soon as possible.

Board meetings are currently held via Zoom, on first Monday evenings.

The elected officers are: President, up to two Vice Presidents, Secretary, Treasurer, and up to 11 additional board members. A slate of nominees will be presented in the November chapter newsletter and voted on at the November membership meeting. Please consider volunteering in a leadership role—it can be very rewarding, and Marin CNPS needs you!

Contact information: Kristin Jakob, Tel 650-608-1274, email kristinjakob@att.net.



Symphotrichum chilense - California aster
by Ann Elliott

Native Plants - the Basis for All Terrestrial Life

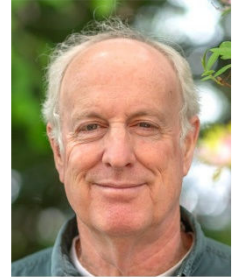
Over a half-century ago, CNPS was founded to fill a conspicuous hole in the conservation landscape. At that time, there was no organization dedicated to protecting our native plants. Since 1965, CNPS has filled its niche very well and now occupies a respected place along much older conservation organizations.

Now a new opportunity has appeared. This is the promotion of native plants as the foundation of all terrestrial biodiversity. People are beginning to look beyond the individual plants to the links that connect them to the rest of their ecological communities. This expansion of view needs more encouragement if we are to have a hope of meeting our biodiversity crisis. Perhaps no one has helped us to visualize and appreciate these key links better than Dr. Doug Tallamy of the University of Delaware.

Dr. Tallamy, a compelling and dynamic presenter, will speak in Marin on Wed. Oct. 27 @ 7 pm at Dominican University. His talk is co-sponsored by Book Passage, Marin CNPS, and the Marin Biodiversity Corridor Initiative (MBCI). A flat fee of \$40 includes admission to the talk a copy of Dr. Tallamy's new book, *The Nature of Oaks: The Rich Ecology of Our Most Essential Native Trees*.



Quercus douglasii - blue oak
by Ann Elliott



Doug Tallamy
by Rob Cardillo

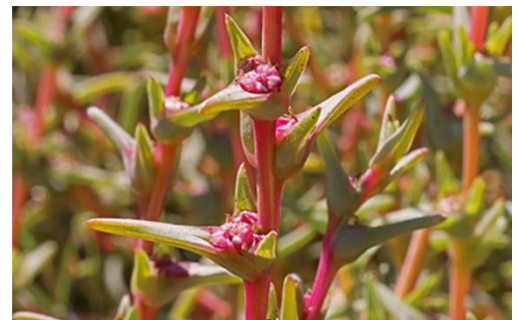
Reflections on and Opportunities for Stewardship in the Anthro/Pyrocene

by Carolyn Losée-Meade, Secretary Marin CNPS

This morning I went to Greenbrae to pluck heaps of *Salsola soda*, an invasive plant, from the banks of Corte Madera Creek. I set out to get a good dose of medicine — “the work of restoration and re-creation.” This is the kind of medicine that sustained ethical forager Finisia Medrano, one of the “outcasts and visionaries” Lisa Wells explores in her new book *Believers: Making a Life at the End of the World*. Medrano declared, “If I cannot have this [work], my life is worthless and a forfeiture.”

Without weeding my life would not be “worthless” or a “forfeiture,” yet it would surely and sorely be missing one of its primary *raison d'être*, to restore and re-create the Earth.

Salsola soda, an estuarine marsh invasive plant, (aka. oppositelaaf Russian thistle, glasswort, living tumbleweed) is easy to pick. The persistent plant is thirsty and contains a great deal of water, which makes it heavy to lug up the stairs out of the park. Ideally, we would have left the invasive heaps until they evaporated and restored moisture to the air. However, the plants had already started fruiting, and we knew countless seeds could still be produced.



Salsola soda - oppositelaaf Russian thistle
by Vernon Smith

When it comes to restoring the Earth, my team was good company – supportive and sensitive toward each other and the neighboring environment. Social status, age, gender, ethnicity, and belief barriers evaporated. There was an exact 30-year gap among the half a dozen of us, from 90 to 60. I put the larger number first because 90 is a startling age to still be effective in the field! Surrounded by hearty, hardy teens most likely sleeping in their condominium beds, we oldsters were bending, stooping, pulling, lifting, and dragging literally dozens if not hundreds of pounds of the pervasive, persnickety Salsola from their creek landing. If they knew how much we cared about their future, they would probably join us.

We were silent heroes. We lost ourselves in the moist quiet of the marsh, plucking away and smiling confidently at the beauty of our mascot, Mount Tam. Her majesty is not only eternal, but maternal. Clearly nonhuman life matters too.

Aside from getting a good feeling of accomplishment, unexpected rewards abounded. I looked up and witnessed an elegant flock of white pelicans take off from shore—their effect, primordial. When the pelicans landed on the opposing side, four white egrets and herons flitted on the flock’s tails. To me, the behavior of these two achromatic species appears more rhythmic than symbiotic.

More fistfuls of thistle went in my bag. I heard another disturbance, and not one or two, but three boats of young women rowers glided alongside the park. I rejoiced, witnessing how far their sports have come in my lifetime. (In our little work party, women outnumbered men two-to-one.) White birds and white uniforms in and on the water reminded me that water birds are ancient symbols of the divine feminine. The morning was topped off by the music of live bagpipers coming from upstream.

I have always loved Marin. Now, through active stewardship, I am taking the time to restore and re-create both the land and myself.

References and Notes

Well, Lisa (2021). *Believers: Making a Life at the End of the World*. Black Inc. Available at Pt Reyes Books ‘Thinking Like a Mountain’ subscription club.

Salsola soda: <https://www.cal-ipc.org/plants/profile/salsola-soda-profile/>

Anthro/Pyrocene: Our current geological epoch is called the Holocene which began after the last glacial period. Anthropocene (influenced by humans) and Pyrocene (influenced by fire) have been proposed to be names for the succeeding epochs.

Stewardship Opportunities in Marin County:

- Friends of Corte Madera Creek Watershed https://friendsofcortemaderacreek.org/new_site/
- Marin Audubon Society <https://marinaudubon.org/>
- Marin County Parks and Recreation <https://www.parks.marincounty.org/>
- One Tam <https://www.onetam.org/>
- Richardson Bay Audubon <https://richardsonbay.audubon.org/>

For a more complete list see http://www.muirpress.com/marin_guide.html

"Landscape Transformation in the Corte Madera Wetlands"

Using historic maps and aerial photos, Dewey Livingston and Richard Torney offer a unique before-and-after visual history of the Corte Madera Creek marshes, including the long-lost Richardson's Island and the once-threatened and still-thriving Greenbrae Boardwalk. The geography & landscape of the area will transform before your eyes, through comparisons and overlays of historic maps, aerial photographs and current satellite images. The program will also focus on changes to Corte Madera Creek between 1871 and 1971, and will include a short all-new look at landscape changes in the lower Mill Valley area.



Wed. Oct. 6 @ 7 pm via Zoom This program is a partnership between the Mill Valley Historical Society and the Anne T. Kent California Room, Marin County Free Library.

[Read more...](#)

Celebrate California in Your Own Yard

CNPS promotes native plant gardening throughout California with *Naturehood* and *Bloom California*. By growing native plants, we have the power to support wildlife, save precious resources and connect more deeply with our local environment – all while creating beautiful landscapes that celebrate California.



Erigeron glaucus - seaside daisy
by Ann Elliott

Check these links for upcoming CNPS Chapter native plant sales and participating nurseries; find the perfect native plants for your location.

<https://www.cnps.org/naturehood> <https://bloomcalifornia.org/> <https://calscape.org/>

Watch these webinars for support and inspiration. Next up: **Planting 101** Thurs., Oct. 7 @ 5:30 pm

<https://www.cnps.org/gardening/webinars>

Protection for Dudleya

Governor Gavin Newsom has signed the first piece of California legislation to specifically address plant poaching, making it illegal to remove dudleya from state and private lands. In recent years, law enforcement officials have documented an alarming increase in the large-scale harvest of these precious native succulents from California wildlands. Dudleya being sold online and through social media may have been illegally harvested.



Photo by Kyle Nessen

Authored by Assemblymember Chris Ward, this bill, AB 223, is an important step in furthering California's commitments under Executive Order N-82-20 to protect biodiversity, including protecting 30 percent of California by 2030.

[Read more...](#)

Hispanic Heritage Month through Oct. 15 and Indigenous Peoples Day Oct. 11

Latino Outdoors SF Bay Area

[Road Ride](#) Oct. 10 @ 8:30 am Point Isabel Bay Trail (biking)

Hispanic Access Foundation

[Our Heritage, Our Planet](#) Film Week. Oct. 12 - 15 Free, online

KCET [Tending the Wild](#) documentary series

Mt. Lassen Chapter CNPS October Meeting

[Climate Change Adaptation: What We Can Learn from Traditional Ecological Knowledge](#) (TEK) By: Ali Meders-Knight Wed. Oct. 6, 2021

@ 7 pm via Zoom

Redbud Resource Group

[Going Beyond Land Acknowledgment](#) Masterclass Oct. 13 @ 10 AM



Me-Wuk (Coast Miwok)
<https://native-land.ca/>

State of Drought



Bay Curious, a podcast series by KQED produced six episodes on drought in California. *The State of Drought Series* contains: *Facing Our Hotter, Drier Future*; *Where Our Water Comes From*; *What's a MegaDrought, and Are We in One?*; *Conservation at Home*; *How Local Water Agencies Are Planning Ahead*; *Statewide Solutions To Survive Megadrought*.

Check out [Bay Curious - The Newsletter](#) for podcast links and the related article: *How Drought Impacts Wildfires*.

Kids' Corner (for the young at heart)

Understanding Climate Change

Climate is the average weather in a location over many years. There is evidence that human activities are heating up our planet contributing to more extreme weather events (fire, droughts, and storms). As climates change plants, animals, and humans must adjust. Here are some links to help you understand the issue and give you ideas for action.



[Kids Against Climate Change](#) links to resources, videos, ideas for action

[Climate Kids - NASA](#) activities, explanations, careers

[Let's Change Climate Change - Audubon for Kids](#) activities, definitions, example projects

Weed Wrenches to Loan - Continue Fire Prep

Finish up this year's fire preparedness by clearing broom and other fire-prone woody plants on your property. Even though the ground may be dry, it is still possible to pull broom with a weed wrench.

Borrow up to seven wrenches in three sizes, including one large wrench weighing 16.5 lbs. with a jaw capacity of 2.5 inches. Contact Eva Buxton (Conservation & Invasive Species Chair) evabuxton@sbcglobal.net



[Read more...](#)

Upcoming Marin Chapter Events - 2021

10/7 to 10/10, pickup 10/16 [Marin Chapter Fall Online Native Plant Sale](#)

10/11 @ 7:30 Chapter Meeting "[Climate as a driver of divergence in soil-specialist plants](#)" Guest Speaker: Nicole Ibañez

10/17 @ 9:30 am Pioneer Tree Trail in Samuel P. Taylor State Park (see above)

10/27 @ 7 pm "[The Nature of Oaks](#)" by Doug Tallamy, Dominican University

Check CNPSMarin.org for upcoming field trips and events as they are scheduled.

Marin Chapter Board Meetings generally occur on the first Monday of each month. To attend, contact co-President David Long sfdlong@ix.netcom.com

View recorded Chapter Meetings on our [YouTube channel](#)



Lonicera involucrata var. *ledebourii* - coast twinberry
by Ann Elliott

Other CNPS and Related Events

Join these CNPS Events - Statewide & Organized by Other Chapters, etc. Peruse the [CNPS Calendar of Events](#). Here are a few:

9/30 to 10/9 [Willis Jepson Chapter Online Plant Sale](#) - Benicia

10/4 to 10/6 CNPS Plant Science Workshop - [Mitigation Measures & Monitoring](#)

10/6 @ 7:30 pm [Maintaining Your Late Summer / Fall Native Plant Garden, a Panel Talk](#) - Santa Clara Valley Chapter

10/9 [Milo Baker Chapter Plant Sale](#) - Santa Rosa

10/9 & 10/10 [Napa Valley Chapter Plant Sale](#) - Napa

10/12 @ 3 pm [Plant Heist](#) - short documentary on Dudleya poaching at the Mill Valley Film Festival

10/13 @ 7:30 pm [Water Resilience in the Garden](#) - Santa Clara Valley Chapter

10/14 @ 7:30 pm [Using Paintbrushes to Study Species](#) - Yerba Buena Chapter

10/19 @ 7:30 pm [Gardening in Summer Dry Climates: Plants for a Lush Water-conscious Landscape with Saxon Holt](#) - Milo Baker Chapter

10/25 CNPS Plant Science Workshop - [Online Tools for Vegetation Data](#)

10/26 to 10/29 [Cal-IPC Symposium](#) - Expanding Community to Protect Biodiversity - online

11/7 [State CNPS Student Research Grants](#) due

Community Effort

Please send articles, events, photos, art work, literary items to editor Ann Elliott. annonfire@gmail.com



Plantago subnuda - tall coastal plantain- Ann Elliott



Symphoricarpos albus - snowberry
by Ann Elliott



Marin Chapter
California Native Plant Society



CALIFORNIA
NATIVE PLANT SOCIETY

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