NORTHERN CALIFORNIA BOTANISTS

BOTANICAL LEAFLETS

ISSUE 32 **SPRING 2024**

PRESIDENT'S MESSAGE

We've had a great spring so far with lots of wildflowers from the abundant rain this winter. I hope all of you have been able to get out and enjoy them! My extended family lost our cabin in the Dixie Fire in 2021 and we now have a new cabin on the property! Over the winter there has been Tyveck on the sides and Icedam on the roof. Next we need to put the siding and the roof on the new cabin and finish the interior. Once that is all done then we will work on the outbuildings. So, our new cabin and outbuildings are happening!

We had a very successful symposium in January 2024. We filled the auditorium to capacity with 310 people attending in person. We also had 65 people online. 47 students were in person and 5 were online. Thanks to the board, our sponsors and all the folks who helped put on the symposium. It was wonderful to be able to see others in person – we haven't had an in-person symposium since January 2020. The talks were great with something for everyone! If you'd like to watch videos of the talks and see links to the posters, they are available under the 2024 Symposium on the website. Abstracts of the talks and posters are available in the 2024 Symposium program on the website.

Student poster winners were: First place, Charlotte Miranda, San Jose State University; Second Place, Amy White, UC Merced; and Third Place, Daniel Toews, UC Merced.

We are planning to have our next symposium in January 2025. Our board is starting to plan the sessions now. We will keep you informed as we develop this upcoming symposium.

We have awarded four people the Dean W. Taylor Botanical Exploration Memorial Award for the third year. This award is to honor Dean Taylor's goals of finding unknown botanical diversity in northern California. Each of these four people received this award of $500.00 each. Each of these awardees will be able to add to the botanical diversity in northern California.

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MYSTERY PLANT

Typically just a couple inches tall, not only is this diminutive early bloomer tough to find in the wild, you won't find it in the Jepson Manual or Jepson eFlora either (hint, it's in the current Oswald Selected Plants of Northern California and adjacent Nevada…). This ephemeral perennial blooms while its rocky soil habitat is damp from recent snowmelt, then quickly disappears as the soil dries. This CRPR 4.3 species is known from the Klamath-Siskiyou region of northwestern California in the North Coast Ranges to southwestern Oregon where its primarily associated with open areas in cismontane and subalpine forest habitats.

Answer on Page 4

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INSIDE THIS ISSUE:

From the Editor

With this issue of Botanical Leaflets, we are experimenting with making this newsletter digital only. This means that our newsletter will be available only as a pdf file available at the Northern California Botanists (NCB) website and emailed to the members. Many other organizations seem to be taking this direction with their newsletters and journals, both to save the costs of printing and mailing, and to reduce their carbon footprint. Of course, you can still print out a copy if you prefer to have a paper copy in your hands for reading (that is what I do, since I prefer reading newsletters and magazines as hard-copy rather than on a computer or tablet screen). However, we are interested in your thoughts about this change, pro or con, so please email us about it if you are so inclined, at ncbotanists@gmail.com. –Lawrence

2024 Dean W. Taylor Botanical Exploration Awards

In 2020, we lost Dean William Taylor, a giant of the Northern California botanical community. He had an irrepressible enthusiasm for everything botanical, a genius for teaching, and an unparalleled understanding of the mechanisms driving plant speciation and distribution. His record of outstanding collections and discovery of new taxa speaks for itself. Dean was a champion of the unexplored botanical diversity of California and frequently took the stage at our symposia to encourage people to collect specimens and work to define that diversity. In the absence of his electrifying speeches and reliable advice, we hope that our material support of this Award will help a new generation of botanists fill his shoes.

The aim of the Dean W. Taylor Botanical Exploration Memorial Award is to cover costs associated with botanical exploration in Northern California. This award is open to all people with an interest in the native plants and wildland ecology of Northern California, including students, practicing botanists, land managers, and dedicated herbarium collectors. We encourage projects that echo Dean Taylor's goals of finding unknown botanical diversity in California, namely collecting in under-collected areas, work to explore the habitat and range of known taxa, and efforts to discover and define new taxa.

See below and on pages 4 and 6

Lynn Breithaupt, University of California, Merced.
Documenting California's Central Valley Biodiversity with Campus Collaboration, UC Merced Vernal Pool and Grassland Reserve, Merced County, California.

The UC Merced Vernal Pool and Grassland Reserve (MVPGR) is large and under-collected, totaling 6,500 acres of intact, unique, threatened wetland habitat, and is a regional biodiversity hotspot. There are hundreds of native, endemic plants in the reserve, but, shockingly, the vast majority of species lack herbarium representation from this reserve. Moreover, the list of what is known to be in the reserve has much more room to grow, and with this project I aim to complete the flora of the reserve.

As in past community science efforts at the MVPGR, I will coordinate students in scientific exploration and documentation from the UC Natural Reserve Systems Field Studies Program and the Student Naturalist Training Program at UC Merced. Additionally, I will collaborate with undergraduate classes at UC Merced and CSU Stanislaus focused on California native plants education. The reserve's proximity to both campuses offers accessible learning opportunities about these ecosystems, fostering collaboration among individuals with diverse backgrounds in an educational setting.

Continued from page 1

We have solicited students to apply for our Barbara Castro Student Research Scholarships and received many great applications. Twelve scholarships were awarded by Northern California Botanists this year. Two of these were awarded with money provided by the Shasta and the Sacramento Valley Chapters of the California Native Plant Society. Thank you very much to both of those chapters for providing money for scholarships! The twelve scholarships were awarded at $1,000.00 each! Hopefully a new batch of botanists doing vital work in Northern California will develop from those scholarships.

Take care and enjoy the wonderful displays of wildflowers seen this year!

–Linnea Hanson, NCB President

Northern California Botanists in Action

Jim Belsher has been a Forest Service botanist for over 25 years. He started on the Siskiyou National Forest, spent a few years working for the Forest Inventory and Analysis program sampling plots across Oregon and Washington, was on the Plumas NF in Quincy, California for over 20 years and recently moved into the Forest Botanist position on the Shasta-Trinity NF. In addition to surveying for rare plants and developing project mitigations, he has focused on the design and implementation of rare plant habitat enhancement projects and monitored populations post-wildfire. His most memorable field season was the year he spent sampling old growth redwood plots across Jedidiah Smith and Del Norte Coast Redwoods State Parks. He is looking forward to mentoring new Forest Service botanists and botanical explorations across the diverse landscapes of the Shasta-Trinity NF.

Robin Carter-Ervin is an Environmental Scientist who works for the Department of Water Resources (DWR) at the Oroville Field Division. With 16 years of experience, she specializes in botany, rare and invasive plants, and environmental permitting. The Oroville Field Division includes land around Lake Oroville, the Thermalito Diversion Pool, the Thermalito Forebay and Afterbay, and the Oroville Wildlife Area. One of her favorite work activities is the annual vernal pool surveying in the springtime when the vernal pools in Butte County are in full flower. There are over 500 protected vernal pools within the Oroville Field Division boundary, and Robin takes great pleasure in being surrounded by the vast array of flowers.

Gabrielle Rosa is a Museum Scientist at the University and Jepson Herbaria. Her primary focus is working with the collections management team and supervising work-study students in the digitizing lab. In 2015, she earned her B.S. in Environmental Studies from the University of Central Florida. Soon after graduating she pursued an opportunity as an Herbarium Specialist at the New York Botanical Gardens (NYBG). There she focused on collection management and collaborated with the National Science Foundation's digitization research project: Mobilizing New England Vascular Plant Specimen Data to Track Environmental Change. She helped enhance their data with geo-referencing, habitat, and phenological information. This research project was a cornerstone to developing her career in the botanical sciences. Gabrielle next relocated to California and began working at the University and Jepson Herbaria. Gaining this experience has been fascinating and rewarding for her. Being able to facilitate research in a natural history collection has given her the opportunity to explore world flora and collaborate with visiting researchers from all over the world. Herbaria contain many valuable and unique collections that can last for centuries. Some people prefer to be in the field; however, Gabrielle prefers to be in Herbaria because she can explore the world around her while being in the collections.

2024 DEAN W. TAYLOR AWARDS (CONTINUED)

Garret Goodrich, California Botanic Garden & Claremont Graduate University.
A Flora of the Boulder Creek Watershed, Jennie Lakes Wilderness, and Evans Grove Complex, Fresno and Tulare Counties, California.

My master's program, of which my flora is the most essential component, began in August of 2023 and will continue through the spring of 2026. I will conduct two seasons of field work for this flora beginning in 2024 and continuing through 2025. At the end of my program, I intend to have spent over 120 days at my study site during 25 trips. I will collect and identify over 1,400 of my own specimens and annotate relevant historical specimens from multiple collections. The resulting flora and annotated checklist of species will be published. In addition to collecting vascular and non-vascular specimens for herbaria, I intend to curate an iNaturalist project for my study site to increase the accessibility and impact of my project. During my fieldwork, I will actively recruit field assistants who are interested in pursuing graduate research in botany to offer them the same opportunity which drove me to pursue floristic research in my home state of California.

Matthew Yamamoto, California Botanic Garden
& Claremont Graduate University.
Flora of the McGee Creek Watershed, Mono County, California

Despite being a place of high botanical interest, the McGee Creek watershed is vastly under-documented, with fewer than 250 historical collections compared to over 1,700 in a similar area in the more accessible Convict Creek watershed. Most of the McGee Creek collections were made along a single trail, few of them are from alpine habitats, and almost none are from the marble and limestone substrates that are likely to host edaphic specialists. Given the lack of exploration of alpine areas and the site's unique geology, range extensions and new state or county records are likely discoveries. Moreover, the McGee Creek watershed is an ideal location for a floristic study because it will be part of a larger concerted effort to survey drainages along the eastern Sierra to better understand the north-south distributions of Sierra Nevada plants. Filling a gap in our understanding of alpine plant diversity as the planet warms produces baseline data to understand the impacts of climate change, provides information on the distribution of rare plants to enable direct conservation action, tests hypotheses on how edaphic factors affect plant distributions, and yields many herbarium specimens which are invaluable for botanical research.

Answer to "Mystery Plant":
Claytonia obovata – Rydberg's spring beauty – Montiaceae. Graves Creek watershed, Trinity County, 17 April 2024. Photo by Len Lindstrand III, Sierra Pacific Industries. Split from *Claytonia lanceolata* by Stoughton et al. in 2017, one can separate this species from *C. lanceolata* by the presence of sunken, red veins on the cauline leaves, red to purple coloration on the abaxial leaf surface, shape of the cauline leaf pair, smaller overall size, and by the sub-umbellate inflorescence that generally lacks a peduncle. In the Trinity Mountains where we encounter this species on open serpentine ridges, it's always the first spring arrival and blooms even before the local *Erythronium citrinum* var. *roderickii* that often shares the same habitats.

2024-2025 Barbara Castro Student Research Scholarship Awards

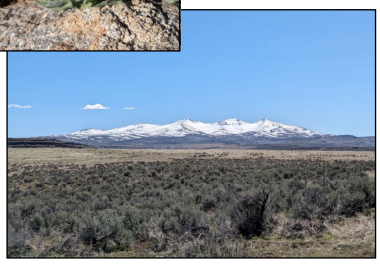
Northern California Botanists (NCB) provides competitive botany and plant ecology scholarships to undergraduate and graduate students attending a college or university. Research scholarships are funded by NCB with the goals of encouraging students to pursue academic endeavors toward a career in botany, promoting undergraduate and graduate botany and plant ecology research, and implementing objectives of the NCB mission. The Shasta and Sacramento Valley Chapters of CNPS generously support this program by funding additional scholarships.

Students from any accredited college or university doing research with the NCB geographic range may apply for the NCB Barbara Castro Student Research Scholarships. Watch for announcements about the 2025-2026 Awards application period starting next fall.

There were many great research projects to choose from. Congratulations to these students and thank you to all that submitted applications!

Recipient	**Degree**	**University**	**Title of Research Project**
Dawson Bell	Masters	Sonoma State University	Assessing aboveground biomass of *Umbellularia californica* basal resprouts post-wildfire using terrestrial LiDAR scanning
Katherine Brafford	PhD	University of California, Davis	Drivers of seed germination and seedling success in medusahead (*Elymus caput-medusae*) dominated grasslands
Garrett Goodrich	Masters	Claremont Graduate University	Flora of the Boulder Creek watershed, Jennie Lakes Wilderness and Evans Grove Complex, Fresno and Tulare counties,
Sierra Jaeger	PhD	University of South Carolina	Reproductive ecology of a charismatic northern California coastal dune wildflower (*Abronia latifolia*)
Cameron Jones *Shasta Chapter Award*	Masters	Cal Poly Humboldt	Species boundaries of the rare Menzies' wallflower (Brassicaceae: *Erysimum menziesii*), an endemic of the northern California coast
Anna Krause	Masters	California State University, Chico	Characterizing drought response of California coastal grassland species
Ryan Li	Undergrad	University of California, Davis	Quantifying differences in floral constancy during pollination of serpentine and nonserpentine asters between *Apis mellifera* and native bumblebees
Gunner Michaelson	Masters	California State University, Chico	Examining prescribed fire: blue oak woodlands and the soil seedbank
David Mitchell	PhD	University of California, Davis	Improving native tree and shrub restoration by amending degraded soils, enhancing mycorrhizal symbioses, and suppressing soil-borne *Phytophthora* disease
Philippa Stone	PhD	University of British Columbia	Systematics and morphology of western false asphodel (*Triantha occidentalis*; Tofieldiaceae) in Northern California
Rachel Tageant	Masters	Claremont Graduate University	A floristic inventory of the Owens River Headwater Area, Mono County, California
Matthew Yamamoto	Masters	Claremont Graduate University	A flora of the McGee Creek Watershed, Mono County, California

2024 DEAN W. TAYLOR AWARDS (CONTINUED)



Logan Phillips, BLM Eagle Lake Field Office, Susanville, CA.
Flora of the Skedaddle Wilderness in Lassen County, California and Washoe County, Nevada.

The Skedaddle Wilderness Study Area (WSA) is a distinct, botanically unique region managed by the Bureau of Land Management Eagle Lake Field Office (ELFO). The flora within this area remains understudied, representing a gap in the botanical knowledge of the region. The Skedaddle WSA stands out compared to other WSAs managed by the ELFO due to the rugged landscape, variety of habitat types, and isolation. The primary goals of this Dean Taylor Award project are to: (1) sample the flora found within the Skedaddle WSA and generate new specimen vouchers for the ELFO herbarium, (2) produce a botanical field guide for the Skedaddle WSA, and (3) determine distributions of plant species and habitat types

A cooperative association of Federal, State, Academic, Consulting, and other Botanists in the Northern California region, **NORTHERN CALIFORNIA BOTANISTS** is an organization with the purpose of increasing knowledge about botanical issues concerning science, conservation, education, and professional development. Our primary objectives are to establish a communication forum via occasional meetings, scholarship funds for student research and special projects related to botanical problems and exploration in northern California, a job forum, and symposia that focus on the botany of northern California.

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