

President's Message

Springtime! It's been an interesting one so far, with the combination of high winds, unseasonably warm weather and freezing cold nights in between. Here in Independence the national weather service measured winds up to 78 mph. Unfortunately, a substantial number of trees toppled, including some old, wellloved giants. Mature trees are such a great luxury in the Owens Valley, losing even a few is distressing. And so, I've been reflecting on the importance of plants in our daily lives—how they bring us not only sustenance, but also joy, comfort, and beauty.



A bee visiting a Salvia dorrii. Photo by Kelly Bahr.

Between windstorms, I've been wandering on the alluvial fans west of town. While not widespread, the random patches of wildflowers have been delightful to discover. Surprisingly, despite the drought, many of the bushes are exceptionally green. I suspect the flowers and greenery in the lower elevations will be

Dedicated to the Preservation of California Native Flora The California Native Plant Society

Bristlecone Chapter Newsletter

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short-lived, so I hope that you have a chance to get out and experience that fleeting beauty.

Speaking of wildflowers... the Mary DeDecker Native Plant Garden in Independence is a wonderful place to observe wildflowers and learn about local native vegetation. Plants currently in bloom include purple sage (the bees are so happy!), desert penstemon, showy goldenbush, Inyo bush lupine and prince's plume. It's exciting to me that a variety of annuals appeared this year! Wild animals are benefiting from the garden as well—lizards, songbirds, insects, and small mammals.

Attending one of our field trips is another excellent way to learn about native plants. Keep an eye out for information about field trips coming up in the next couple of months. Slow down, observe, discover, and appreciate!

—Kelly Bahr

General Meeting—ONLINE Wednesday, May 25, 2022, 7:00 p.m.

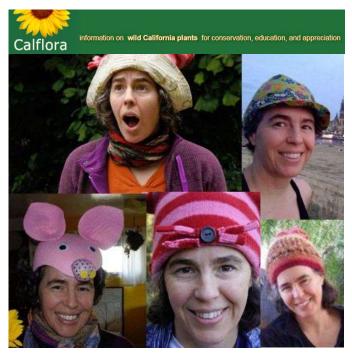
New Calflora Tools for Your Native Plant Ventures and Adventures by Cynthia Powell

Please join us to learn from Calflora's Executive Director Cynthia Powell about new Calflora tools for CNPS native plant professionals, gardeners, and enthusiasts! Calflora aggregates millions of plant observations across the state from dozens of sources (www.calflora.org/occ/about-data.html) and serves them to the public free of charge. These data sources include CCH2 (a worldwide plant information portal from the California Consortium of Herbaria), iNaturalist, and CNPS plant checklists from around the state. How can you better use this incredible resource to learn more about regional plants? At this presentation, Cynthia will cover Calflora's planning your garden tool

(www.calflora.org/entry/palette.html), specimens and other plant observations used in this tool, detailed plant ranges now available on Calflora's species pages (for example, *Grindelia stricta* [www.calflora.org/entry/dgrid.html?crn=3967]), population monitoring tools, and email alerts (www.youtube.com/watch?v=1P0LbP7YsyY). She will also go over the important role CNPS members play in submitting and commenting on Calflora observations and checklists.

Also, Bryophytes (<u>https://conta.cc/3u7AsGB</u>) are now in Calflora, and Calflora needs help from CNPS Bryophyte lovers to improve distribution information.

Cynthia Powell's bio: After three years as Calflora's GIS Project Manager, in 2016 Cynthia became Calflora's Executive Director. She graduated with her MS in GIS (Geographic Information Science) in 2010 forecasting Mokelumne River water supply based on MODIS remote sensing snow pack images. She's been examining what was under that snow—plants—ever since. She coordinates all Calflora programs, research, outreach, and advocacy, as well as fundraising and project management. Cynthia wears many hats:



Conservation Updates

This article describes why management of groundwater resources in Owens Valley is complex. The article summarizes what agencies manage what sub-basins and how to follow the splintered management of groundwater resources in the Owens Valley. The result is that Owens Valley groundwater resources are managed by political entities, not by geologic and hydrologic definitions. Public participation is important as to how sustainable groundwater management in Owens Valley is accomplished.

The Owens Valley groundwater basin as defined by California Department of Water Resources (DWR) extends from Benton and Round Vallev south to below Owens Lake. The Sustainable Groundwater Management Act (SGMA) directs local governments to plan for groundwater management based on prioritization of basins from very low to high. The Owens Valley groundwater basin has been categorized by DWR as low. This means local governments are not required to form a Groundwater Sustainability Authority (GSA) or to prepare a Groundwater Sustainability Plan (GSP). An amendment to SGMA supported by the Inyo Board of Supervisors removed two-thirds of groundwater resources at the start by declaring lands owned by Los Angeles Department of Water and Power and covered by the Long-Term Water Agreement to be considered as adjudicated groundwater resources.

Despite being categorized as a low-priority basin, Inyo and Mono Counties and several local water management agencies decided to create a GSA to manage groundwater resources outside of the adjudicated lands. Over time, seven entities produced a GSA for the Owens Valley groundwater basin, excluding lands owned by LADWP. The five agencies and two interested parties were representatives from Inyo and Mono County Board of Supervisors, Indian Wells Westridge Community Service District, Big Pine Community Management District, Lone Pine Paiute Shoshone Tribe and Owens Valley Committee.

Effective July 1, Mono County will withdraw from the Owens Valley Groundwater Authority (OVGA) due to concerns expressed by Tri-Valley Groundwater Management District (TVGMD). The Owens Valley GSP now covers only non-adjudicated lands in Inyo County. However, management of groundwater resources under Owens Lake remain in dispute. ICWD and LADWP are in disagreement about whether the LTWA covers groundwater under Owens Lake. Alternatively, OVGA considers Owens Lake to be under its authority. LADWP in the meantime is conducting a feasibility study of pumping groundwater under Owens Lake.

TVGMD and Mono County are beginning the process of creating two GSAs with the intent to produce GSPs. The TVGMD GSA plan to include Fish Slough to the Mono/Inyo County line. However, many months will be lost before those plans are complete and concrete actions can be taken to protect Fish Slough. The boundaries for a GSA for remaining Mono County lands have yet to be described.

As a result of this history, the Owens Valley groundwater basin is managed by the following entities. Contact information and current status are summarized below.

• Groundwater resources owned by LADWP in Inyo County are managed pursuant to the LTWA. These resources are managed by the Inyo County Water Department (ICWD) and LADWP. In April, LADWP releases its pumping plan for LADWP lands. Public comment can be made at meetings of the Technical Group and Standing Committee. Information about the LTWA is available at <u>www.inyowater.org</u>. To receive notices of meetings of the Water Commission, Technical Group, and Standing Committee, contact Laura Piper at <u>lpiper@inyocounty.us</u>. There is also an interesting ARC/GIS program tracking mitigation projects—location, status, guiding documents, etc.

• Groundwater resources outside of adjudicated lands in Inyo County are overseen by OVGA. The immediate plans are to fill in data gaps and implement monitoring wells and other goals. Information about the process and the draft GSP is available at <u>https://OVGA.us</u>. The next meeting of OVGA will be in August. Contact Laura Piper at <u>lpiper@inyocounty.us</u> to be placed on their notification list.

• TVGMD was formed in 1987 to manage groundwater in the Tri-Valley area in Mono County. TVGMD meets every fourth Wednesday of the month at 6:30. TGVMD also has an Advisory Committee representing other water users in the Tri-Valley area. Information is available at <u>www.TVGMD.org</u>. The Tri-Valley Water Management District plans to distribute a quarterly newsletter to keep residents informed about water issues in the Tri-Valley area. If you are interested in being on the distribution list, please email: <u>secretary@tvgmd.org</u>.

• Contact with any of the above organizations should lead to future information about actions involving Owens Valley groundwater resources in Mono County (including Fish Slough) and Owens Lake.

—Edie Trimmer

Mary DeDecker Botanical Grant, Recipient Final Report

Initial changes in forest stand structure and understory diversity following fuels treatment at Valentine Reserve

Ashley Grupenhoff PhD Candidate, Environmental Science and Policy, University of California Davis

Decades of fire suppression and timber harvesting in the Sierra Nevada have resulted in structural changes, leading to high surface fuel loads, high densities of small stems, and an increasing proportion of fire-intolerant species. Unlike historic fires, these fire events cause larger and more homogeneous high severity burn patches which pose enormous threats to biodiversity (Steel et al. 2019).



Field site at Valentine Camp UC Natural Reserve. Photo courtesy of Ashley Grupenhoff.

Restoring disturbance patterns in historically frequent-fire forests with mechanical thinning can increase forest heterogeneity and species diversity while simultaneously decreasing fire risk. This study examines the effectiveness of two thinning

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approaches at Valentine Camp UC Natural Reserve in altering vegetation structure and reducing future fire behavior.

A network of 50 0.1-acre permanent sample plots were established prior to thinning to monitor changes in species composition, tree health, and fuel loading. Last summer, all plots were resurveyed to assess initial changes to tree structure, vegetation cover, species composition, and fuel loading. Firstyear responses to thinning show slightly altered forest structure through the reduction of basal area and tree density, leading closer to the ecological conditions of this forest type pre-European settlement (NRV). A primary goal of ecological thinning is to favor large-diameter trees and reduce small-diameter trees that allow fire to get into the canopy. Initial results show that thinning pushed tree density to be closer to NRV with treatment removing mostly small diameter individuals and favoring largediameter individuals. We found a slight increase in species richness and Shannon's diversity after thinning treatments, which correspond to findings found in Wayman and North (2007). However, this increase was quite minimal. Many studies have shown that prescribed fire plays a critical role in restoring species diversity and herbaceous cover. Mechanical thinning is vital for reducing tree canopy and canopy cover but thinning alone fails to reintroduce other processes that benefit understory plant communities, such as the reduction of litter and surface fuels.

Looking Out for Our Rare Plant Neighbors

As part of a conservation seed-banking effort, I have been getting to know the McGee Meadows lupine (*Lupinus magnificus* var. *hesperius*)—a stout, woolly plant with relatively large, violet-blue flowers. The type locality (the location of the botanical collection referenced when first formally describing a species) is just a few miles west of Bishop and there are only a handful of other locations where it is known to occur. One day, as I squinted through my hand lens trying to discern whether the flower's keel was straight or curved—a diagnostic character for this variety—I was overcome with a deep sense of gratitude to be able to look after this rare plant species that lives so close to home. At the same time, I wondered if there were other species of conservation concern that people encounter in their everyday lives, perhaps without knowing their importance.

According to the CNPS Rare Plant Inventory, there are 387 rare plant taxa (species, subspecies and varieties) that occur in Inyo and Mono counties. Some plant populations, especially those that are highly threatened, are regularly monitored by professionals while others have been the focus of volunteer efforts like CNPS Rare Plant Treasure Hunts. However, given the sheer number of rare plant populations, some haven't been revisited in decades. Most populations are presumed to be still in in existence, but threats such as invasive species, development, wildfire, trampling, groundwater extraction, and climate change can have serious impacts.

One way to help fill in these knowledge gaps is through community science platforms such as Calflora and iNaturalist. For instance, the California Natural Diversity Database (CNDDB) has a project on iNaturalist that allows users to share observations to help track species of conservation concern. You can read more on the project's homepage at https://www.inaturalist.org/projects/californianatural-diversity-database. You can also use Calflora and iNaturalist to do a little research to see if you might encounter any rare plant species on your future outings. If you aren't familiar with all the tools in Calflora, then you should definitely attend our May meeting to learn more from Executive Director Cynthia Powell!



Inflorescence of Shockley's prickleleaf. Photo by Maria Jesus.

Below are just a few rare plant species that have been calling my attention lately, but there are many others that could be added to the list. Let us know if you have any rare plant species you'd like us to feature in

future newsletters at <u>conservation@bristleconecnps.org</u>.

Alpine jewelflower (*Streptanthus gracilis*; Brassicaceae) is a California endemic mostly found near the Kings-Kern divide. Most occurrences haven't been revisited in over 20 years and some are threatened by trampling from recreational use.

Dedecker's clover (*Trifolium kingii* subsp. *dedeckerae*; Fabaceae) is a perennial herb endemic to California and located in pinyon woodlands to alpine crests. Threats include grazing, invasive plant species and road maintenance.

Nevada oryctes (*Oryctes nevadensis*; Solanaceae), is a smallish annual herb that is limited to northern Inyo County and parts of Nevada and is the only species in the genus. While several populations have been observed in recent years, threats such as OHV use are ongoing and it is unclear whether the seed bank was impacted by the Airport Fire.

Shockley's prickleleaf (*Hecastocleis shockleyi*; Asteraceae) is a distinctive shrub with singleflowered heads in dense clusters surrounded by spiny-margined bracts. There are several populations in the northern Mojave that are visited regularly, but botanists who study these plants have not been able to locate viable seed. Therefore, any observations of seedlings would be very helpful in understanding whether populations are successfully reproducing.

—Maria Jesus

Greenhouse and Native Plant Sales Updates

We have had three volunteer planting days so far and have filled the greenhouse with plant starts for the August plant sale. Everything is growing well so far, and we haven't had any rodent damage as of yet. A few years ago, when Pete Anderson and I replaced the plastic on the hoop house, we put metal window screen along the bottom of the hoop house and over any vents—since then I haven't had any mice activity in the greenhouse (knock on wood).

One of two upcoming plant sales are happening soon. There will be an in-person only plant sale at the Eastern Sierra Land Trust's "Gardenfest" (see pg. 5). Our annual August sale will be a hybrid format with the online sale going on from the 16–19th and pickups of purchases on the 20th. Leftover plants from the online sale will be available to buy on the 20th. Current members will be able to access the online sale a day earlier after receiving by email the link to the site. So, members, make sure your membership is not expired come August to be ensure you'll get that email in time. (Go to <u>www.CNPS.org</u>, log in or set up your profile to confirm your membership status of being opted in to receive emails from CNPS.)

—Katie Quinlan

GardenFest, May 7, 11:00 a.m.–2:00 p.m. at Eastern Sierra Land Trust, 250 N. Fowler St., Bishop



Katie Quinlan speaking at ESLT's Pollinator Garden workshop last month. Photo courtesy of Katie Quinlan.

April 9th was a lovely day; warm, sunny, no wind. About 35 people gathered at the Bishop Community Garden to participate in the Eastern Sierra Land Trust's (ESLT) Pollinator Garden workshop. Participants were treated to a plethora of topics from attracting wildlife to the garden to landscaping in a fire environment.

If you missed the workshop and would like to talk gardens or buy native plants, head on over to ESLT's GardenFest Celebration. Local Master Gardeners will be there to answer questions, CNPS will have a selection of native plants for sale, one of the nurseries will have vegetable starts for sale, and a demonstration pollinator garden in front of the ESLT office at 250 North Fowler Street is open for all to peruse. This family-friendly community event also features wood-fired pizza and games for all kids in the backyard. And conveniently, there is a free parking lot next door.

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Come celebrate spring with ESLT because what's not to love about spring? The birds are singing, flowers are blooming, and the days are getting longer and warmer! Check out <u>www.eslt.org/events</u> for updates and email <u>claire@eslt.org</u> with any questions.

—Katie Quinlan and Claire Marvet



Attendees happy with their plant starts from a previous year's GardenFest. Photo courtesy of Claire Marvet.

Up-Coming Events (For updated information, visit www.bristleconecnps.org/events)

Saturday, March 7, 11:00 a.m.–2:00 p.m. Eastern Sierra Land Trust's GardenFest 250 N. Fowler, Bishop

Visit <u>www.eslt.org/events</u> for updates or email <u>claire@eslt.org</u> about this family-friendly community event. Details on pg. 6.

May 14, Saturday, 8:00–11:00 a.m. Eastern Sierra Land Trust's Celebration of World Migratory Bird Day

Come bird at Black Lake Preserve, a rare desert wetland north of Benton in Adobe Valley and an important stopover site for migratory birds. Join ESLT for a guided bird walk or use ESLT's selfguided birding materials on May 15th to bird on your own. ESLT will also provide info. for selfguided birding at Bishop Paiute's Conservation Open Space (COSA). This event will also be a community science effort—so let us know which birds you observe or use the eBird app. RSVP by email to <u>claire@eslt.org</u> for the guided birding.

Up-Coming Events

(For updated information, visit www.bristleconecnps.org/events)

May 18, Wednesday, 6:00 p.m. Chapter Board Meeting Location TBD

All members are welcome to join. We'll update the location on our website.

May 21, Saturday, 8:00 a.m.

Field Trip at Sherwin Hill, Leader: Jerry Zatorski. Along Lower Rock Creek Rd or Old Sherwin Grade just south of the Swall Meadows turn off is Sherwin Hill. This is actually a series of six or so hills between the road and Rock Creek Canvon. Situated within the Great Basin flora, this hilly ridge has a surprising high diversity. The habitats range from open flats to typical Great Basin shrubs, and especially rich are the wild buckwheats (Eriogonum species), both shrubs and forbs. If the late winter or early spring rains come, we should also see an assortment of geophytes and other herbaceous forbs. There will be up to a few miles of crosscountry hiking and scrambling at a botanist's pace which should take us a half day or so. As this is a dry hike, participants should bring a day pack capable of holding water or other drinks, lunch and snacks. Dress for the weather conditions: hat, sunscreen, hiking shoes, appropriate clothes. Bring field guides, hand lens, binoculars, topo maps, and a willingness to explore. We will meet at 8:00 a.m. at the large pullout about a mile downhill from Swall Meadows Rd or 1.9 miles uphill from the Paradise Fire House, and if need be, there are additional pullouts toward Swall Meadows Rd. For more information contact Jerry at jerryzat@gmail.com

May 25, Wednesday, 7:00 p.m.

Chapter General Meeting—Zoom Presentation: New Calflora Tools for Your Native Plant Ventures and Adventures by CalFlora Executive Director, Cynthia Powell

Prior to the meeting, the link will be emailed to members and posted on the chapter website for public access. Please see our website and page 1 for more details about Cynthia and her talk.

Up-Coming Events (For updated information, visit www.bristleconecnps.org/events)

June 25, Saturday, 9:00 a.m. Field trip to the Masonic Mtn. area, northern Bodie Hills, Leader: Tim Messick

Meet by 9:00 a.m. at Humboldt-Toiyabe National Forest Ranger Station (in Bridgeport, a half-mile south of the intersection of US 395 and SR 182). We'll do a brief orientation and carpool from there. Assume the Ranger Station will be closed, with restrooms not available there. Bring water, lunch, snacks, sunscreen, insect repellant, camera, binoculars, etc. We'll probably return to the Ranger Station around 3:00 p.m.

We'll drive north along US 395 and SR 182 to Masonic Rd. High clearance vehicles with good suspension are recommended. 4WD is rarely necessary on this route, though it is sometimes helpful going up the steep grade east of Lakeview Spring. We'll stop in the Chemung Mine/Lakeview Spring area, then head over the ridge to Masonic Gulch and Masonic Lower Town. We may also botanize the ridge just north of Masonic. Lunch will be at or near Masonic. We'll return to Bridgeport by way of Masonic Rd. (to avoid interfering with sage grouse activity on BLM lands).

Along the way we'll look at the first population of Northwestern paintbrush (*Castilleja angustifolia* var. *flavescens*) to be recognized in California, just north of Chemung Mine. We will see the approximate type locations for Bodie Hills rockcress (*Boechera bodiensis*) and Masonic Mountain jewelflower (*Streptanthus oliganthus*). We should see Bodie Hills draba (*Cusickiella quadricostata*), maybe Mono County phacelia (*Phacelia monoensis*), and with luck, also Masonic Mountain jewelflower. Many other plants of pinyon-juniper, sagebrush, and aspen grove communities should be in bloom.

Tim Messick is a retired

botanist/cartographer/photographer who started compiling a flora of the Bodie Hills more than 40 years ago. The current version of his "Plants of the Bodie Hills" can be downloaded from www.bodiehillsplants.com.

Up-Coming Events (For updated information, visit

www.bristleconecnps.org/events)

August 16–19th, 20th

Bristlecone Chapter Native Plant Sale – Online In-person pick-up at White Mountain Research Center, 3000 E. Line St, Bishop

Purchase native plants for your garden for the fall season. Proceeds from the annual native plant sales provide funding for our Mary DeDecker Botanical Grants. The grant program is a fitting way to remember Mary DeDecker's many contributions to the people and plants of the Eastern Sierra. See pg. 5 for more information.

Please send any submissions to us by June 15, 2022 for the next issue.

Bristlecone Chapter Directory

President: Kelly Bahr kbahr@cnps.org Vice President: Michèle Slaton vicepresident@bristleconecnps.org Secretary: Kathleen Nelson secretary@bristleconecnps.org Treasurer: Sue Weis treasurer@bristleconecnps.org Chapter Council Delegate: Stephen Ingram stephen@ingramphoto.com Conservation/Partnerships: Maria Jesus conservation@bristleconecnps.org Education: Martin Purdy education@bristleconecnps.org Programs: Michèle Slaton vicepresident@bristleconecnps.org DeDecker Grants: Michèle Slaton grants@bristlecone.org Field Trips: Sue Weis treasurer@bristleconecnps.org Bishop Plant Sales: Katie Quinlan plant sale@bristleconecnps.org Publicity: Gaylene Kinzy gkinzyreische@gmail.com Newsletter: Elaine Chow newsletter@bristleconecnps.org Membership: Elaine Chow membership@bristleconecnps.org Website: Maggie Riley webmaster@bristleconecnps.org T-shirt Sales: Katie Quinlan plant sale@bristleconecnps.org DeDecker Gardener: Kelly Bahr kbahr@cnps.org Historian: OPEN Mammoth Plant Sales: OPEN Hospitality: OPEN

The California Native Plant Society Bristlecone Chapter P.O. Box 364 Bishop, CA 93515-0364 <u>RETURN SERVICE REQUESTED</u>

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Membership

The California Native Plant Society is an organization of laypersons and professionals united by an interest in the plants of California. It is open to all. The society, working through its local chapters, seeks to increase the understanding of California's native flora and to preserve this rich resource for future generations. **To join or renew online**: Go to www.cnps.org and select JOIN/RENEW (at the top of the webpage or select it after clicking the menu button) or mail the form below:

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