



# GOLD FIELD NOTES

EL DORADO CHAPTER ☉ CALIFORNIA NATIVE PLANT SOCIETY ☉ MAY-JUNE 2020

## MAY 26 PROGRAM *CEANOTHUS* AND *ARCTOSTAPHYLOS* OF THE SIERRA NEVADA

### New Format! Online Zoom Presentation

The El Dorado Chapter is pleased to host Jeff Bisbee's presentation on *Ceanothus* and *Arctostaphylos* of the Sierra Nevada. Jeff is a nature photographer and self taught botanist whose photos have been featured in many books, such as the "[Field Guide to Manzanitas](#)" where he took most of the photographs, and "Conifers Around the World" - a two volume encyclopedia of all the conifers of the world's temperate zones that he photographed in their native habitats.

Jeff is well acquainted with the Sierra foothills as he was raised in Grass Valley and currently he has a large collection of *Arctostaphylos*, *Ceanothus* and Mexican Conifers in his yard in Colfax, Placer County.



Field Guide to Manzanitas  
California, North America, and Mexico

Michael Kaufmann, Tom Parker, and Michael Vasey  
Photographs by Jeff Bisbee

While this presentation is open to the public and free of charge it will only be accessible through a Zoom link invitation sent via email several days prior to the event. The message will contain instructions on how to RSVP and join the teleconference. Those who are NOT on our email list should write to [web.eldoradocnps@gmail.com](mailto:web.eldoradocnps@gmail.com) and ask to be added.

To access the talk, you do not need an account as CNPS has purchased the Zoom license, but you will need to install Zoom ahead of time – a free download. We recommend you install Zoom on your computer to appreciate the many photos that Jeff will share, although it can also be installed on a smartphone. Out of respect for the speaker, during the talk please keep your microphone muted, video off, and avoid using the chat feature. We will invite questions at the end. Unfortunately, we will likely not be able to address individual technical difficulties during the talk, but please email [web.eldoradocnps@gmail.com](mailto:web.eldoradocnps@gmail.com) if you experience difficulties so that we can address them for next time.

**EDITOR'S NOTE** The CNPS chapter leadership hopes that you and your families are safe and healthy. We are in the midst of an extraordinary time, and we have decided to respond with some extraordinary measures to help us all keep connected with the plant world around us. This month we plan to host our monthly program online. We will also be distributing the next issues of the newsletter electronically. Read more about this change inside. You will also notice we are including more images and links to resources online to help us all remain engaged and learning as we stay closer to home. The online links can be accessed by clicking or touching the blue text in your electronic newsletter.

#### CALENDAR

#### May 26 (Tuesday)

Chapter program.  
Ceanothus and manzanita with Jeff Bisbee. Zoom meeting online—details to the right.

#### July 24 (Tuesday)

Chapter program.  
To Be determined.

*Do to the requirements of social distancing, many of our events are on hold.*

## FIRE: A BENEFICAL DISTURBANCE UNDER THE RIGHT CONDITIONS

Here are a few videos about how to use fire to benefit people and the ecology of fire-adapted landscapes. Click on or touch the link below to see the video.

[Tending the Wild: Cultural Burning](#)

[Good Fire: Prescribed Burning](#)

[TREX giving forests the prescribed fire they need](#)

[Black-backed Woodpeckers and Fire](#)

[Fire Followers - Yosemite Nature Notes](#)



Prescribed burn at Blodgett Forest.  
(Photo: S.L. Stephens)

## NEWS FLASH: PINE HILL FLANNELBUSH SEEDLINGS FOUND AFTER FIRE

Pine Hill Flannelbush, *Fremontodendron decumbens*, is the rarest and most endangered plant in El Dorado County, only occurring on Pine Hill and in the immediate vicinity. Seedlings were last observed in December 1983 to April 1984 immediately following a 2.5-acre experimental burn on the top of Pine Hill in October of 1983 that burned down 38 mature flannelbush shrubs (Boyd 2001). Boyd (2001) marked and followed over a 1100 seedlings for 13 months post-fire; 93% were killed by rodents, drought, or shading from flannelbush shrubs that resprouted from roots after the fire. Survival of seedlings was 2.4 times higher in the gaps between the former shrubs than under their canopies (11.5% vs 4.7) indicating the importance of dispersal away from mature shrubs



Seedling with shriveled cotyledons (Photo: D. Ayres)

On May 4, 2020, we found 4 seedlings within three fire scars from shrub piles that burned in March 2019 on the south perimeter. Shriveled seed leaves, cotyledons, were present on each seedling plant. The closest flannelbush shrubs were at least 6 m away. No seedlings were found in cleared and regrowing chaparral vegetation that was not burned as the seeds are cued to germinate by fire's heat (Boyd 2001). Ant dispersal is likely how the seeds got to the burn scars (Boyd 1996; Boyd 2001). The seeds have protein-rich elaiosomes attached to the tough-



Seedling is 13 cm wide. (Photo: D. Ayres)

walled seed coat; native harvester ants, *Veromessor andrei*, can



Fire scar where seedling was found (Photo: D. Ayres)

carry these seeds up to 12 m from the mature plant to their nests where they eat the elaiosomes and then deposit the seeds on their midden piles. The seedlings were large; spreading up to 13 cm, growing up to 8 cm tall, and with many true leaves suggesting they germinated with the 2019-2020 fall-winter rains, and grew rapidly during the spring. There were likely many more seedlings that were eaten by rodents at the cotyledon stage (Boyd 2001). Will these new seedlings survive the summer drought and herbivores? We will see as we continue to monitor their survival and growth. Pile burning within 12 m of flannelbush shrubs may be an effective strategy to ensure the long-term survival of the species as its survival will depend on the establishment of new plants due to the eventual mortality of the mature shrubs (as yet unknown).

To read more about ants and seed dispersal check out Robert Boyd's research publication (touch or click on this link): [Boyd, R.S., 2001. Ecological benefits of myrmecochory for the endangered chaparral shrub \*Fremontodendron decumbens\* \(Sterculiaceae\). \*American Journal of Botany\*, 88\(2\), pp.234-241.](#)



Flowering on nearby plant (Photo: D. Ayres)

## NEWSLETTER TO GO ELECTRONIC FOR MAY AND JULY

After much thoughtful discussion, our Chapter board on Tuesday, April 21<sup>st</sup>, decided that our newsletter should be issued only in electronic format for the next two issues - May and July 2020. There are two main reasons for this change. First, because we did not hold our usual spring Plant Sale, our revenues will be lower for this budget cycle. Second, the state CNPS is struggling to maintain critical programs, such as the Rare Plant and Conservation Programs, and our board would like to support these important state-wide programs with do-

nation from our chapter. This will be made possible by the reduction in costs from issuing printed, hard copy of our newsletter, and by savings in our conference attendance, since we will not be funding member participation in conferences this year. The newsletter will be sent via email as a PDF file, and, as always, will be posted on our Chapter website, again, as a PDF file. This file will be in color and printable, should you wish to download the newsletter. We ask for your understanding with this change.

## THE BEAUTY OF THE FOUND LANDSCAPE

With our plant sale cancelled this year, many of us are really missing the chance to infuse new native plants into our gardens.

But don't despair! Consider the "found" landscape, which might be sitting right in front of your nose. We're used to planting things in our garden, but what about the plants that might have already planted themselves?

All this time home comes with a silver lining- it gives us a chance to really get to know our property, watching it grow and change day by day and week by week. Have you tried removing an area of weeds by hand, and looked for little native plants that might be struggling there to survive? I've lived in my house for 35 years, and can still find plants that I didn't know were there. This week it was a lovely tiny little bedstraw (*Galium*)- I removed the non-native vetch and grasses hiding it from sight, and now have a pretty little area of groundcover, just starting to bloom with adorable tiny lavender flowers. It's the 3<sup>rd</sup> or 4<sup>th</sup> species of bedstraw I've discovered, and it's so fun to have "found" it! Calflora.org is a great tool for identifying your findings, and seeing if they are native or not, and where they grow statewide.

Or maybe you have a large shrub that you've overlooked because it's messy. This year we removed the dead limbs from our toyon, and a little more to give us a nice sitting area underneath. (The dry weather helped reduce the pruning's

chance of disease) After that work and removing the weeds there too, suddenly we have our own wonderful "nature nook" to enjoy, a pleasant shady spot with birds to watch and small understory critters and plants to get to know.

So let's all celebrate the native plants that are living in our midst- the ones that are supporting life around us. Maybe this slowing down time will help us really see the beauty and diversity surrounding us! Grab a piece of ground, or go for a walk straight from your house, and see what you can find!

*Alice Cantelow  
Chapter President*



## JULY 28 PROGRAM

Stay tuned for what's to come in July. This may be another Zoom program meeting. We will have more details about that in the July newsletter.

## NEW FACEBOOK GROUP: INVASIVE WEED GROUP - EL DORADO CHAPTER CNPS

The El Dorado Chapter announces a new Group (sub-group) associated with the Chapter's main facebook page. This group will focus on Invasives in El Dorado County, and will provide information and reference photos of local invasive weeds; and will assist in the identification of other weeds submitted by members. At this time it is visible to the public and open to join by Chapter members upon request. People interested in looking it over may search by **Invasive Weed Group - El Dorado Chapter CNPS**.

We must say that not all the kinks are worked out, so bear with us.

## RESEARCH: SURVIVAL OF PACKERA LAYNEAE (LAYNE'S BUTTERWEED)

Chaparral is a shrub dominated plant community where plants survive periodic fires by re-sprouting from underground structures, such as rhizomes and burls, or by buried seeds that germinate in response to fire's heat or chemicals. The chaparral and oak woodland that grows upon the gabbro soils around Pine Hill is a plant biodiversity hot spot that includes five federally listed plant species. To conserve these rare species, documenting their occurrence and understanding how they survive fire are critical.

The El Dorado Chapter has been collaborating since 2016 with the California Department of Fish and Wildlife (CDFW) in their efforts to establish a 70' fuel break around the perimeter of Pine Hill. Hand clearing by chainsaw-wielding crews of all shrubs taller than 2', followed by pile burning, was finished in 2019. The perimeter, land-locked by private property, had never been botanically surveyed due to impenetrable chaparral and lack of access. Volunteers from the Chapter completely surveyed the newly passable perimeter and mapped the occurrences of federal and state listed species. The survival strategies of one of the listed species we mapped, *Packera layneae*, were largely unknown. Chapter members Debra Ayres and Ginna Meyer, and Lauren Fety, previously of the Bureau of Land Management, combined forces and data to understand "Survival of



*Packera layneae* resprouting the spring following a 2008 wildfire (Photo: Lauren Fety)

the rare *Packera layneae* (Asteraceae), under chaparral and after fire", a paper which will be published in a special issue on fire by California Department of Fish and Wildlife (DFW) this summer.

**Abstract:** Conservation of rare plants requires an understanding of how the species responds to natural and artificial disturbance dynamics. For chaparral species this includes the natural disturbances of fire and shrub canopy closure during the interfire period, and the effect of shrub clearing for fuel reduction. *Packera layneae* is a federally listed herbaceous perennial subject to all these disturbances; its center of distribution is upon the gabbro soils surrounding Pine Hill in western El Dorado County, CA. Combining genetic data with mapping following a 2008 wildfire in Shingle Springs, we found that the species survives fire and chaparral overgrowth due to underground rhizomes and caudices that resprout after fire and enable its persistence under dense chaparral canopies; as well, multiple recruitment of new genetic individuals occurred within discrete patches. Seedlings were not found the spring following the 2008 fire, suggesting fire killed the soft-walled seeds. From our mapping around the perimeter of Pine Hill in Rescue, CA we found the species resprouted from plants growing under the dense chaparral canopy on the southern, eastern, and western aspects but did not occur on the northern exposure or under dense oak canopy. As the seedling regeneration niche is unknown, preservation of established populations is vital to the long-term persistence of the species.



*Packera layneae* flowering plant (Photo: Steve Perry)

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## WEED UPDATE: STINKWORT ON THE RAILROAD TRACKS

I was invited to attend the March 11th meeting of the Railroad Board. Mary Cory of the Museum is the President of that Board, and is 'in charge' of the railroad. I had mentioned stinkwort infestations to the railroad group in Folsom, and cc'd to Mary.

I showed the plant as it looks now; talked

a bit, and handed out the brochures I had printed. They were very interested. They do have an ongoing herbicide program and have sprayed in mid-February. Their permit allows them to spray ten feet each side of center of the tracks. I think the stinkwort sightings should be covered under this, but I'm not sure. I came away with the list of herbi-

cides they use which I provided to our CNPS Board. I encouraged the railroad volunteers to post signs after they spray, though that may not happen. The Museum President will advise me of spray dates so any volunteers can avoid the area.

*Annie Walker  
Invasive Plants Chair*

## CHAPTER PROJECT

# The Nature Nook

A special garden  
at the Placerville library.

The El Dorado Chapter CNPS has been partnering with El Dorado County to create a native plant garden at the Placerville library. The garden is called “The Nature Nook”. A small team of our local CNPS members designed this special garden to replace a xeriscape garden that had fallen into disrepair. The garden showcases many plants that are native to our specific area.

The garden is designed around four main areas, each showcasing a different aspect of the habitat benefits of gardening with native plants. These native plants thrive in our hot, dry, California climate. They require *very* little water, and generally no fertilizer or pesticides.

### VISIT THE GARDEN!

We encourage you to stop by the garden anytime of the day. We can usually be found watering, weeding, pruning and planting at the library on Wednesdays or Thursdays from 10:00 am to 12:00 pm.

[Contact our volunteer coordinator](#) for the most up-to-date volunteer opportunities in the garden.

The garden is located on the South side of the library building at [345 Fair Lane, Placerville, CA 95667](#)

## THE NATURE NOOK GARDEN DESIGN Includes:



### A Shrub Shelter

Native shrubs create protective havens for insects and birds, and provide a critical food source for caterpillars and other insect larvae. They in turn are critical food for nestling birds and other animals.



### A Pollinator Garden

Many native plants provide perfectly timed food for bee, butterfly and hummingbird pollinators. *This garden hums!*



### An Oak Tree Canopy

Oaks offer crucial life support for a large number of insects, birds and other animals in our county. Planting an oak, or protecting the ones we have, is perhaps the single most important thing we can do!



### A Native Meadow

A native meadow replaces lawn; saves water and maintenance, and provides resources for native animals.

## NEXT STEPS I N THE NATURE NOOK GARDEN

New signs will be added as educational tools for the public. Stay tuned for a grand opening event later this year!



## NATIVE PLANT GARDEN BEGUN AT LOCAL HIGH SCHOOL

A great group of Independence High School students lead by CNPS volunteer Chelsea Morgan made the most of winter sunshine by establishing a native plant display in their campus planter. Thanks to our chapter’s Clark Youth Fund and CNPS Elderberry Farms Native Plant Nursery, the students were able to purchase native plants to create a centerpiece to be enjoyed and learned from on campus. The students had helped research which plants would be appropriate for their location.

Chelsea had earlier given them a well received talk on the role of fire in forest ecosystems, fielding thoughtful questions from the students. Our heartfelt thanks go out to Chelsea for helping educate these local high schoolers about native plants.

The image below is the Nature Nook Garden in April 2020. (Photo: M. Frankel)

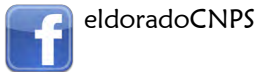




El Dorado Chapter  
 California Native Plant Society  
 P.O. Box 1948  
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May-June 2020

For Updates Visit Us on the Web  
[www.eldoradoCNPS.org](http://www.eldoradoCNPS.org) and



CALIFORNIA  
 NATIVE PLANT SOCIETY

**DEDICATED TO THE  
 PRESERVATION OF  
 CALIFORNIA'S NATIVE FLORA**

The California Native Plant Society is a statewide nonprofit organization of amateurs and professionals with a common interest in California's native plants. The mission of the 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 all.

Membership includes the journal *Fremontia*, quarterly magazine, *Flora*, which gives statewide news and announcements of Society activities and conservation issues, and the chapter newsletter *Gold Field Notes*. To join, call our main office in Sacramento, (916) 447-2677, or visit [www.cnps.org](http://www.cnps.org) to join online.

**CHAPTER OFFICERS AND COMMITTEE CHAIRS**

Contact Chapter Leadership at [web.eldoradocnps@gmail.com](mailto:web.eldoradocnps@gmail.com)

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