



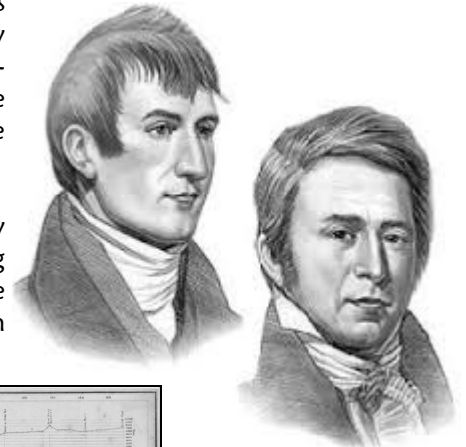
GOLD FIELD NOTES

EL DORADO CHAPTER ☼ CALIFORNIA NATIVE PLANT SOCIETY ☼ January-February 2017

JANUARY 24TH PROGRAM SCIENTIFIC BOTANICAL EXPLORATION OF THE PACIFIC

Join local naturalist/arborist John Kipping for an evening devoted to honoring those who endured great hardships in exploring our vanished landscapes. This program traces the history of scientific botanical exploration of our region from the mid-1700s through the 1850s. We follow both the ship-based journeys of Cook, Vancouver and others, and the land-based explorations of Lewis and Clark, Douglas, Fremont, and more as they encounter and introduce so many of our botanical treasures to the world. Many of our favorite native plants bear specific names honoring these early explorers/scholars.

This program will be held on Tuesday, January 24 (fourth Tuesday), at 7 PM at the Planning Commission Room, Building C, 2850 Fairlane Court, Placerville. The program is free to both members and the public.



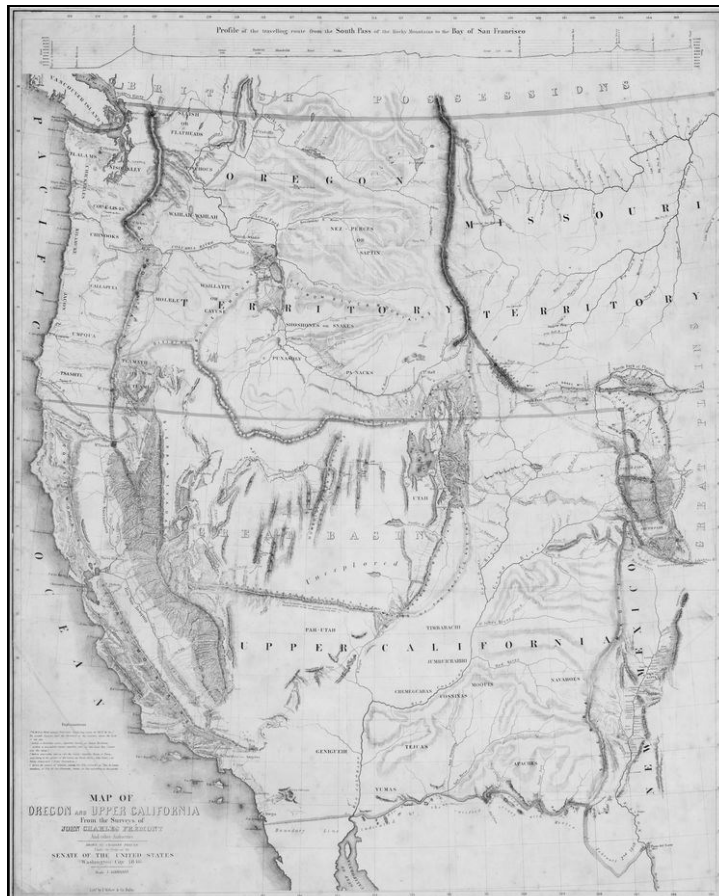
Meriwether Lewis (1774 -1809) and William Clark (1770-1838)



John Charles Fremont (1813-1890)



David Douglas (1799 – 1834)



Map of Oregon and Upper California from the Surveys of John Charles Frémont. Drawn by Charles Preuss 1848.

Calendar

January 24 (Tuesday)

Chapter program.
Scientific Botanical Exploration of the Pacific presented by John Kipping. Details to right.

January 28 (Saturday)

Workshop
A Natural Dye Workshop With Sasha Duerr: Natural Dyes From Native Californian Plants (9 am to 4 pm). Held at the Chico State Herbarium and hosted by Friends of the Chico Herbarium; contact (530) 898-5381 for details.

March 11 (Saturday)

Workshop
Introduction to Fern (and Lycophyte) Biology and Evolution led by Carl Rothfels, curator of ferns at UC Berkeley's University Herbarium. Held at the Chico State Herbarium and hosted by Friends of the Chico Herbarium; contact (530) 898-5381 for details.

March 28 (Tuesday)

Chapter program.
Sustainable Gardening with California Natives presented by Mahala Guggino. See details inside this newsletter.

April 4 to 6 (Tuesday-Thursday)

Workshop
Introduction to Plant identification. CNPS workshop held at Placer County Land Trust in Auburn, CA. See www.cnps.org/workshops for more details and to sign up.

Evening programs are held on the fourth Tuesday of January, March, May, July, September, and November. The program begins at 7 PM at the Planning Commission Room, Building C, 2850 Fairlane Court, Placerville.

CONTEMPORARY EXPLORATIONS: THE SEARCH FOR THE TYPE LOCALITIES OF *PACKERA LAYNEAE* AND *WYETHIA RETICULATA*

For all named species there was an original specimen that was the basis of the formal species description and naming; these “type” specimens are highly valued by taxonomists. The location where the first collection took place is referred to as the type locality.

In the early spring of 2014 as the waters of Folsom Lake receded to historical lows, local botanist Annie Walker proposed we conduct a rare-plant treasure hunt to find the type locality of one of Pine Hill’s rare species – *Packera layneae*, Layne’s Butterweed. According to the Federal Register in 1996, the type locality was thought to have been inundated during the filling of Folsom Lake in the 1950s – could we find evidence of this long gone population along the newly exposed shoreline?

The species was first collected in May 1883 by Mary Katharine Layne Curran Brandegee (hereafter Kate). The species

was described by E. L. Greene in 1883, and given the species name layneae to honor Kate. As to the type locality, Greene writes “El Dorado County, Cal. on Sweetwater Creek, not far from Folsom” (the town). As this earliest report did not specify a location that would have been flooded in 1950, our goal became to find the type locality of *P. layneae* along Sweetwater Creek. Further, in her trek through the county in the summer of 1883 Kate was the first to collect another of the rare species of Pine Hill, El Dorado Mule’s Ears (*Wyethia reticulata*). Greene also described this species and reported it was



Fig. 1b. 1866 map showing the Zentgraff's Wine Cellar on Deer Valley Road (the house is still there) and Upper Sweetwater on (unlabeled) Starbuck Road. Surveyor General's Office, San Francisco May 29, 1866.

“Collected on Sweetwater Creek, in El Dorado County, Cal. by our most zealous and successful Mrs. Kate Layne Curran”. So we expanded our search goals to find the type localities of both these rare plants.

Sweetwater Creek arises north of Pine Hill in Rescue, flows SW for 4 miles following Starbuck and Deer Valley roads, turns NW near Green Valley Road and empties into Folsom Lake four miles downstream. Where along this 8 mile creek did Kate venture in 1883?

We reasoned that she would have traveled along established roads as the habitat of these plants is chaparral. To determine what roads existed in 1883 near Sweetwater Creek we turned to local historian Doug Walker who provided detailed maps from

1873 and 1866 (Fig. 1a & 1b). The Coloma Road leading from Folsom to the gold fields of Coloma mostly followed the route of the current Green Valley Road. Georgetown Road ran just to the west of the Creek to the south fork of the American river at Salmon Falls Road; a part of this road lines up with the current Hickok Road, which now dead-ends far short of Salmon Falls (Fig. 1a). Deer Valley and Starbuck Roads paralleled easterly portions of the Creek from its origin at Pine Hill to its intersection with Green Valley Road (Fig. 1b).

Additional evidence for where Kate may have traveled comes from the Berkeley Mapper that recorded collection locations (cont. p. 3)



Figure 1a. Amos Bowman, 1873 map, showing Sweetwater Creek (in blue) and the Coloma and Georgetown roads, and Deer Valley Rd labeled. Note partial label “Upper Swe” that referred to “Upper Sweetwater” to the east of Deer Valley Road suggesting it was an accepted place name in 1873. Unfortunately, the map legend blocks out the critical portion of the map showing Starbuck Road and the mining camp.

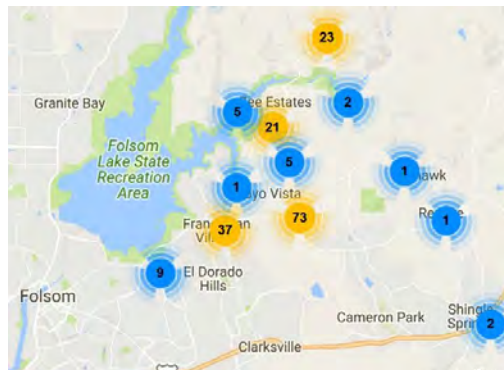


Fig. 2. Mary (“Kate”) Brandegee’s collections near Pine Hill in El Dorado County in 1907. #73 in the yellow circle is Green Valley Road near Sweetwater Creek.

THE SEARCH...

(from p. 2)

in 1907 for Kate. Although she was somewhat notorious for her vague geographical references, from this map with locations plotted a century later (Fig. 2), we saw she had collected extensively near the Green Valley Road/Sweetwater Creek intersection (gold 73 circle), and along the Georgetown Road (gold 21 circle) which lead to the Layne Ranch near Pilot Hill where she also collected heavily. Travelling from Folsom to the family ranch would have taken her along the south fork of the American River to the town of Salmon Falls (no longer extant), and from there north to Pilot Hill (Fig. 1a), meaning the type locality could have been near the confluence of Sweetwater Creek and the American River. Inundation in the 1950s would have indeed flooded the type localities if it was on this journey that she discovered these new species.

During nine field trips in the spring of 2014 Annie and I, along with CNPS co-member Tripp Mikich, searched along Sweetwater Creek wherever we could get road access and permission from current land owners. Our first success came early on when we discovered a healthy population of *W. reticulata* growing along Sweetwater Creek near Folsom Lake but we failed to find *P. layneae* there. As we did not assume the type localities of the two species would be close to one another, we kept looking in other areas but did not find a population of *P. layneae* close to Sweetwater Creek.

During the winter I was able to obtain images of the herbarium sheets of the type specimens of both species. Close inspection of the faded labels revealed that *W. reticulata* was NOT found on Sweetwater Creek as Greene reported in 1884 but rather at "Sweetwater, Cal." (Fig. 3). During mid-late 1800s there was a mining camp named "Sweetwater" just east of Starbuck Road where the

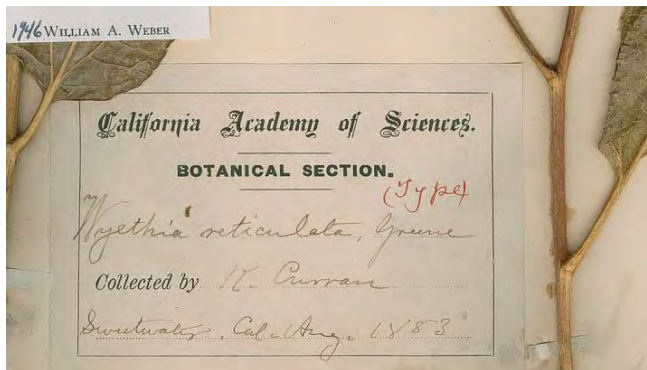


Fig. 3. Herbarium label from the type specimen of *W. reticulata* showing it was collected at Sweetwater, Cal.

road was close to and ran parallel to the Creek that matched up with the location of "Upper Sweetwater" on our maps from the 1800s. The town does not exist today. In the spring of 2015 Annie and I found a large population of *W. reticulata* where Sweetwater once existed. On a later trip, we found a small population of *P. layneae* on the side of Starbuck Road 180 paces from Sweetwater Creek (Fig. 4). We are of the strong opinion that these two places are the type localities of the two species collected by Kate in the summer of 1883 while she stayed at Sweetwater. Given the long life spans of these clonal perennials, it is possible that the plants we found in 2015 were the same plants (=genetic individuals) Kate found on her explorations. If so, genetic analyses comparing the herbarium specimens to living plants might confirm these as the type localities and perhaps even the original plants she collected over 130 years ago.

Deb Ayres
Chapter Vice President

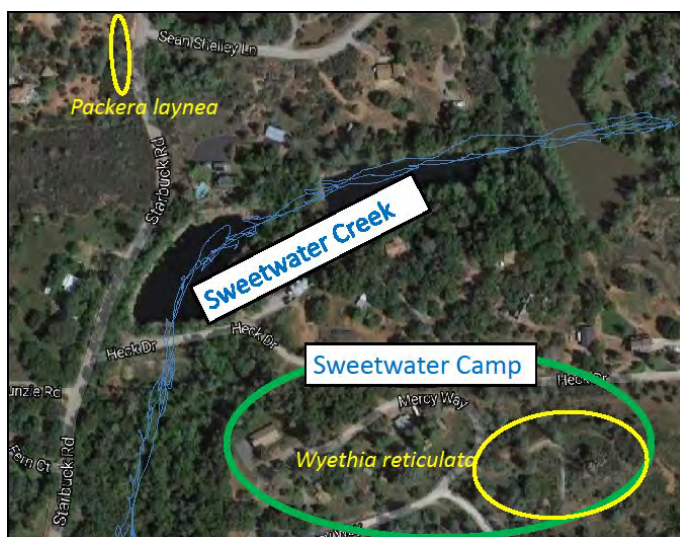


Fig. 4. Map showing Sweetwater Creek (in blue), the Sweetwater Mining Camp (in green) and the proposed type localities of *W. reticulata* and *P. layneae* (in yellow).

MARCH 28 PROGRAM SUSTAINABLE GARDENING WITH CALIFORNIA NATIVES

California native plants are a wonderful complement to many landscapes and provide a wide range of benefits. The current drought is a reminder that resources are precious. Incorporating the right California native plants can help significantly reduce water use while providing food and cover for many species of birds and pollinators. The evening's talk by Mahala Guggino, owner of the native plant nursery Flourish, will go over a few basics to keep your California native plantings flourishing and highlight some of her favorite native plants for two sustainable gardening applications, hedgerows and permaculture.

Hedgerows, aka living fences, have a long tradition in agricultural settings. Beyond acting as physical boundaries, the hedgerow was used to maintain biodiversity and help with the support and dispersal of beneficial insects. Modern native hedgerows blend function and aesthetics, creating an attractive garden amenity that provides habitat for birds, pollinators, and insects that prey on pests. Applications range from prominent screening between properties to mini rows delineating different garden spaces.

Permaculture is a sustainable-living practice that focuses on the integration of natural ecosystems with systems for growing food. Natural systems work together - bees helping to pollinate, birds providing natural pest control, plants fixing nitrogen in the soil for other plants to share, etc. Native plants are well suited to any permaculture design and can be added to build soil, create shade, and provide food and medicine.

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El Dorado Chapter
 California Native Plant Society
 P.O. Box 1948
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January-February 2017

For Updates Visit Us on the Web
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 quarterly journal, *Fremontia*, the quarterly *Bulletin*, 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 to join online.

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