# El Dorado Chapter - CNPS Rare Plant Treasure Hunt at Pine Hill

And CDFW Fuel Reduction Project

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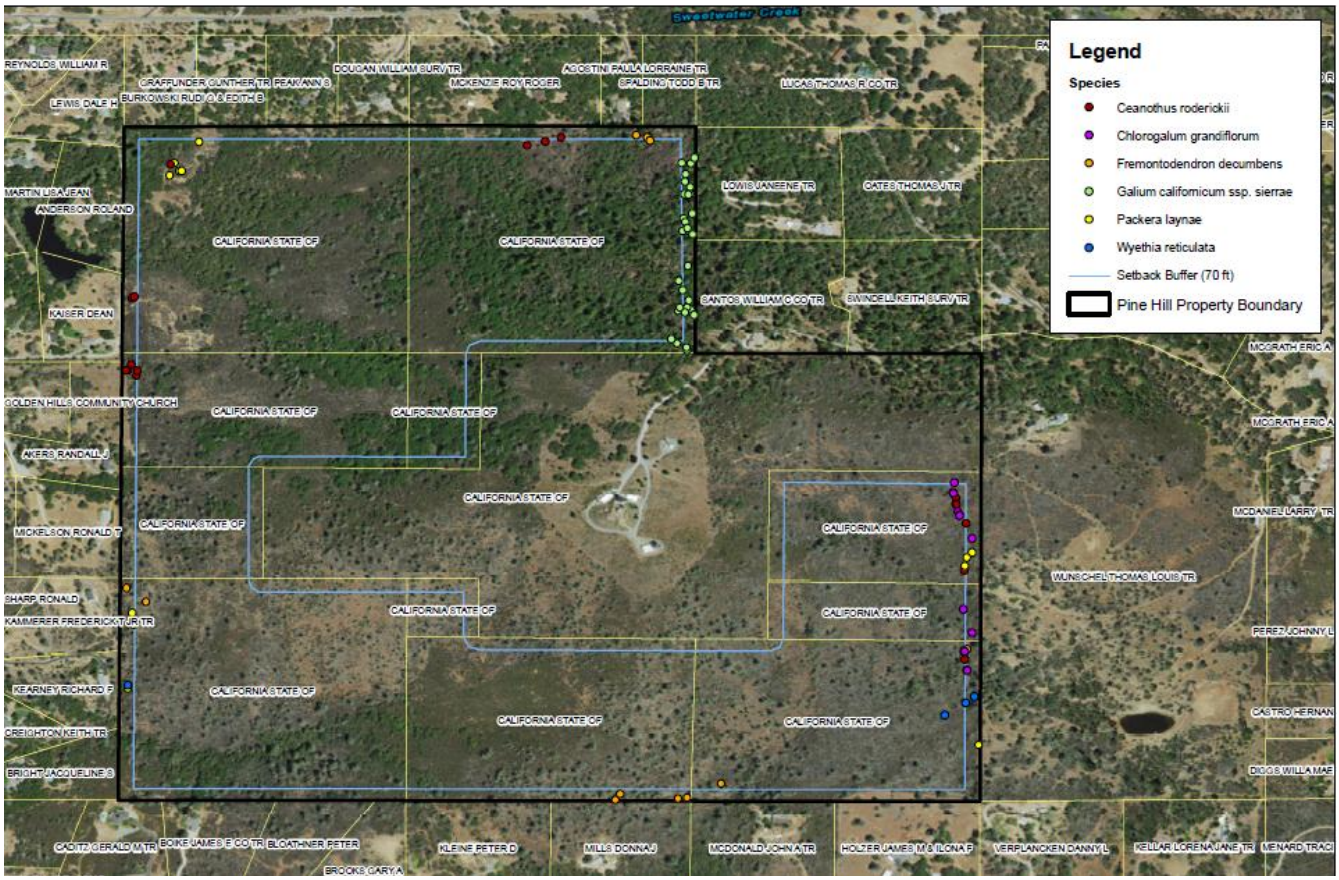
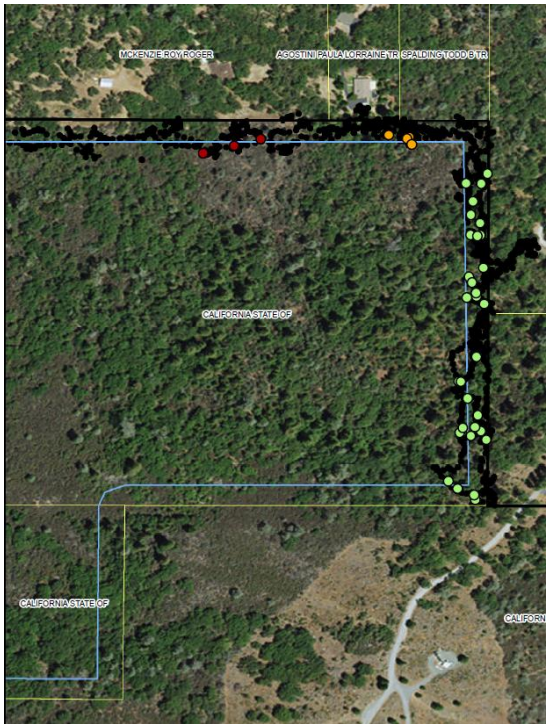
This year and last our Chapter worked with the California Department of Fish and Wildlife (CDFW) on a fuels reduction project around the perimeter of the State owned lands of the Pine Hill Preserve in Rescue. The Chapter's tasks for this project were to survey the perimeter of Pine Hill to locate and flag rare Pine Hill plants and to delimit burn areas where these plants were absent. After we did our part, chain-saw wielding crews from Calfire cut down the chaparral shrubs ("fuels") and placed them on the burn sites to eventually reduce the shrubs to ash. As the perimeter of Pine Hill is land-locked by private property, this was a unique opportunity for our Chapter to conduct a Rare Plant Treasure Hunt (RPTH) on 8.5 acres of incompletely or never surveyed areas on the lower slopes of Pine Hill. In 2017, we spend 200 person-hours creeping along narrow paths carved by Calfire crews through the thick brush, and 80 hours compiling and mapping data, and writing-up our findings. Chapter botanists located about 70 unreported and 20 reported occurrences of *Ceanothus roderickii* (Pine Hill Ceanothus), *Fremontodendron decumbens* (Pine Hill Flannel Bush), *Galium californicum* ssp. *Sierra* (El Dorado Bedstraw), and *Packera layneae* (Pine Hill ragwort); these species are federally listed as threatened or endangered. Another federally listed species, *Calystegia stebbinsii*, not known to occur on Pine Hill was NOT found. We also designated 100s of burn sites where the federally listed species were absent. After the shrub thickets have been removed the Chapter anticipates future RPTHs along the Pine Hill perimeter to completely map these species along with other rare plants of Pine Hill; i.e. *Wyethia reticulata* (El Dorado Mule's Ears), *Chlorogalum grandiflora* (Red Hill Soap Plant), and *Crocanthemum suffrutescen*s (formerly *Helianthemum suffrutescen*s, Bisbee Peak Rush Rose).

Pine Hill is located in the center of a 30,000 acre gabbro soil island in western El Dorado County. For a combination of reasons this gabbro island is home to almost 750 plant species making it one of the most botanically diverse areas on Earth. Among the botanical riches are 8 rare species, a few of which are found nowhere else in the world; five are federally protected under the Endangered Species Act, the only federally protected plant species in El Dorado County. This area and its plants have been of interest to our Chapter since its inception in the 1980s. Our web site contains web pages detailing the preserves, the plants, and our Chapter's work in conserving these plants. For an overview of the area and its preservation see http://www.eldoradocnps.org/plant-places/plant-hotspots/pine-hill; clicking on a species' names brings up the Calflora link for that species. To see the research that has been conducted in this area and on the plants see http://www.eldoradocnps.org/education-and-outreach/science-in-the-county/pine-hill-research - clicking on a plant name brings up the basic biology of the species based on research and a summary of the research that has been done on the species. The bibliography link lists the full citations. This link provides a summary of our Chapter's efforts (legal and advisory) to conserve Pine Hill and other natural resources in the county:
http://www.eldoradocnps.org/conservation/conservation-history

The Pine Hill Preserve, composed of 4 main preserves and managed by the Bureau of Land Management, conducts tours every spring. For this year's schedule see
http://www.pinehillpreserve.org/tours/index.htm

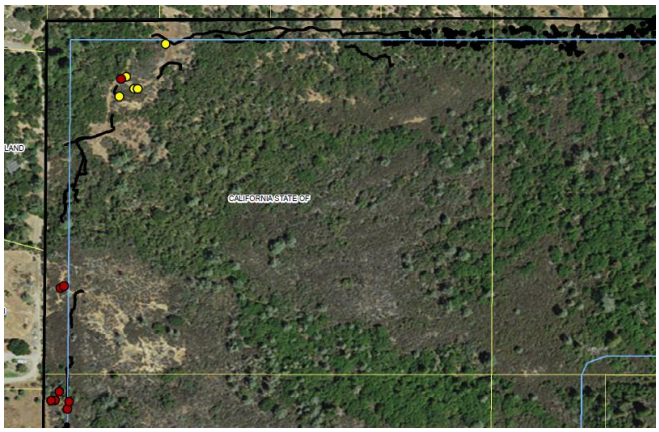


Overview of Pine Hill and surrounding properties showing all rare plant locations found during the Rare Plant Treasure Hunts during the spring of 2017.



We found an extensive population of *Galium californicum* ssp. *Sierra* (green dots), and previously unknown populations of *Fremontodendron decumbens* (orange dots) and *Ceanothus roderickii* (red dots) along the east and north perimeter. The black dots are the tracks the GPS recorded as we walked along the perimeter. The clearing in the lower right is the top of Pine Hill. On the right is pictured the tiny-statured El Dorado bedstraw showing the characteristic whorl of four hairy leaves (note pine needles for scale) April 11, 2017, photo by T. Mikich.

*Fremontodendron decumbens*, May 2016, D. Ayres *Ceanothus roderickii* Steve Perry 2011



West and NW perimeter showing new populations of *Packera layneae* (yellow dots; pictured to the right, photo by Steve Perry 2011) and *Ceanothus roderickii* (red dots).

North-eastern slope of Pine Hill showing cell phone towers- 2017. (D. Ayres)

Northern slope of Pine Hill in 1931 (Weislander, courtesy of UC Berkeley).

*Calystegia stebbinsii*, which was NOT found, showing white morning-glory flowers; the shadow on the flower are cast by the highly dissected leaves characteristic of the species.