



# The Shooting Star

SIERRA FOOTHILLS CHAPTER

CALIFORNIA NATIVE PLANT SOCIETY

JULY 2019

## Field Trips

So who could have known that we would have about six inches of rain in May? After the abnormally dry April, it seemed like the blooming season might be shortened or drawn to an early close. Instead, things slowed down and blooming for some species became drawn out as a result of the higher than average rainfall. There are nice wildflowers out there waiting to be viewed. As of press time, the flowers in the vicinity of Calaveras Big Trees were really nice.

We have no field trips scheduled for the month of July. The last field trip of June is repeated here as a reminder to join Bob at this very popular area. Additionally, the first field trip of August is offered up below to entice you to pencil in one of the three field trips offered up.

For all field trips: bring lunch, water, sunscreen and appropriate clothing and footwear. Hiking level varies with each trip. Check the trip description for the need to RSVP. Your trip will be enhanced by bringing field guides and magnifying lenses, although these are optional. Carpooling is encouraged. Call ahead if the weather looks iffy. Our field trips are open to everyone. Bring a friend or two. It is Chapter policy that pets are not allowed on our field trips. We appreciate everyone's adherence to this policy.

Sign up for our field trip alerts e-mails. Send an e-mail with the subject line "Field Trip e-mail List" to Jennie at [jhaas953@gmail.com](mailto:jhaas953@gmail.com). We'll use this mailing list to provide timely information of field trip changes and those impromptu "unscheduled field trips."

**June 23 – Calaveras Big Trees State Park.** Leader: Bob Dean. Hiking Level: easy. Bob will gear this trip toward the botanical novice who wants to learn about the plants without having to know Latin to understand what they're looking at. Calaveras Big Trees is a favorite destination with a lot of plant diversity. Contact Bob to RSVP and for meeting time and place at [goldrushdean@yahoo.com](mailto:goldrushdean@yahoo.com), or 209-754-5887.

**August 8 (Tentative Date) – Carson Pass Meadows.** Leader: Bob Dean. Hiking Level: strenuous due to the very high elevation. The destination of this Thursday hike will be a small meadow with a lot of native plants. The hike starts at about 8,000 feet elevation and rises to about 9,000 feet, with a lot to stop and see along the way including ancient junipers, beautiful scenery and plenty of wildflowers in the snowmelt-fed runnels. RSVPs are necessary in case the date needs to be changed due to a lingering snow pack and to coordinate meeting place and time. To RSVP or for more information, contact Bob at [goldrushdean@yahoo.com](mailto:goldrushdean@yahoo.com), or 209-754-5887.

– Jennie Haas

## Field Trip Report: Red Hills

Doug Krajnovich reports: "Eight people joined this trip, which started at 4 o'clock in the afternoon so that we could see *Chlorogalum grandiflorum* flowers open at dusk. Three wildflower enthusiasts from Oakland happened to be there at the same time, unaware of our field trip. They followed us to the CNPS Plot to see *Brodiaea pallida* [1B.1]. The Oakland folks were looking for a rare *Navarretia* that no one in our group had seen before: *N. paradoxiclara* [1B.3]. They found it closeby and we all got to see it. Back at N. Serpentine Rd., we found specimens of all of the other listed plants that were the principal targets of this trip. Three of us stayed late to conduct the Soaproot Vigil. We thoroughly enjoyed watching 22x flower buds open in real time on one specimen of *Chlorogalum grandiflorum* [1B.2]. We even took some data, which is shared on p. 2 together with pictures."

If you change your mailing or e-mail address, be sure to send a note to Jennie Haas. This will keep your newsletter on time!

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*Dedicated to the Preservation of  
California Native Flora.*

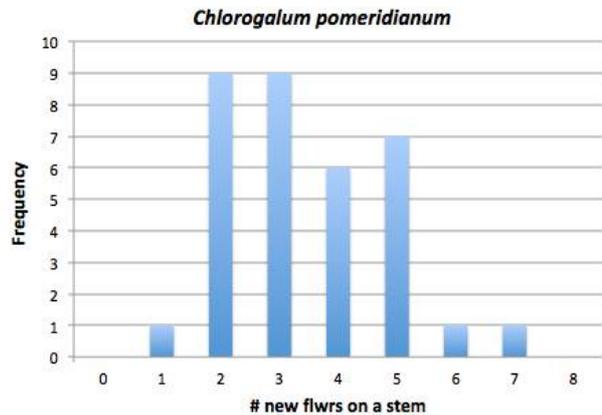
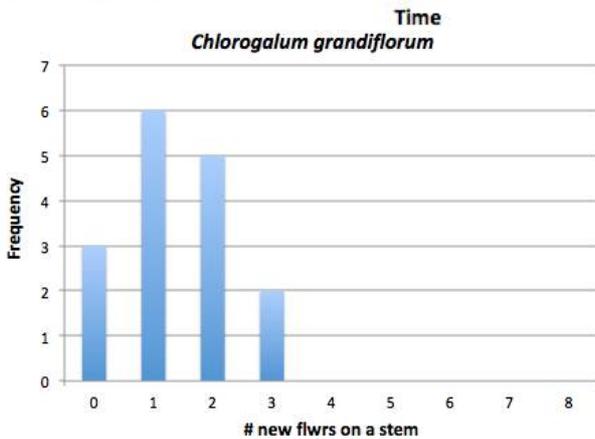
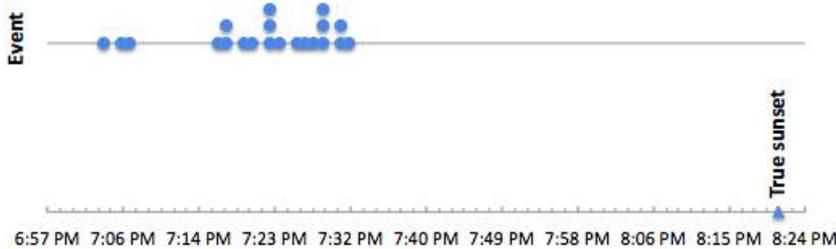


June 8, 2019



Red Hills sunset bordered by six listed plants that we saw on June 8. CCW from upper left: *Verbena californica* [1B.1]; *Senecio clelandii* var. *heterophyllus* [1B.2]; *Brodiaea pallida* [1B.1]; *Eriogonum tripodum* [4.2]; *Trichostema rubisepalum* [4.3]; *Navarretia paradoxiclora* [1B.3]. (Photos © Doug K.)

Time sequence of buds opening on Red Hills Soaproot plant



TOP left = Time sequence of 22x flower buds that opened on one specimen of *Chlorogalum grandiflorum* [1B.2]. TOP right: photo of same. BOTTOM left: Histogram showing how often a given # of flowers opened on a given stem section for *C. grandiflorum*. BOTTOM right: Histogram derived from two specimens of the much more common *C. pomeridianum*, which also occurs at Red Hills. *C. p.* is much taller than *C. g.* and has longer pedicels.

Thanks to Barry Breckling for sharing the following *Primer on Pollination*

**BEETLE POLLINATED**

- Flowers produce large quantities of pollen.
- Little or no nectar produced.
- Mostly large single flowers.
- Fruity smell.

Beetles feed on pollen, not nectar



poppy, cactus, dogwood

**BUTTERFLY POLLINATED**

- Flowers can be fragile and small.
- Large flat landing areas.
- Long tube.

Butterflies are considered "illegitimate pollinators" because they feed on a wide variety of flowers, those with long tubes and those without. Their long proboscis is slick, and pollen doesn't stick well to it.



phlox, linanthus, primroses

**HUMMINGBIRD POLLINATED**

- Flowers with long tubes that allow only hummingbirds access to the nectar.
- Red flowers or occasionally yellow.
- Stamen and stigma stick out. The face of the birds collects and deposits the pollen.
- Birds collect large quantities of thin nectar.
- Flowers usually without scent; hummingbirds have poorly developed sense of smell.
- Flowers without nectar guides.



California fuchsia, sticky monkeyflower, red larkspur, crimson columbine

**BEE POLLINATED**

- Showy flowers.
- Blue, purple, yellow flowers; not red flowers.
- Bees can see ultraviolet and many flowers we see as white are reflecting UV.
- Flowers fragrant.
- Often the plants are found in dry, open areas.
- Reward is nectar or pollen.
- Flowers have nectar guides.

Bumblebees have long proboscises and can feed on flowers with long tubes. Bees sometimes bore a hole in the base of the flower and steal the nectar without pollinating the plant.



peas, lupines, violets

**MOTH POLLINATED**

- Flowers that open at night.
- Flowers white or very light colored so they are visible at night.
- Highly scented; the moth uses its antenna to detect the fragrance.
- Flowers often with simple structures
- Flowers may have long tubes that are the same length as the moth's proboscis.

soap plant, jimson weed, evening snow



**WIND POLLINATED**

- Dull colors.
- No fragrance.
- Stigma large and feathery.
- Separate sexes.
- Fruit single seeded.
- Often lack petals and sepals.
- Oldest form of pollination.



oaks, grasses, pines.

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Chapter Officers and Chairpersons (All phone #'s are 209 area code unless otherwise specified.)				JOIN NOW
PRESIDENT	OPEN			<p>PLEASE INCLUDE ME AS A CNPS MEMBER!</p> <p>Student/Retired/Limited income ...\$25            Individual ..... \$45            Family or Group ..... \$75            Library..... \$75            Plant Lover ..... \$100            Patron.....\$300            Benefactor ..... \$600            Mariposa Lily..... \$1,500</p> <p>As always, donations above the membership level chosen will be greatly appreciated.</p> <p>Name _____            Address _____            City _____ State _____ Zip _____            Telephone _____            e-mail _____</p> <p>(Dues and gifts to CNPS are tax deductible)</p> <p>I Wish to affiliate with the <b>Sierra Foothills</b> Chapter.            Please make your check payable to "CNPS" and send it to:            2707 "K" street, Suite 1, Sacramento, CA 95816 Tel. (916) 447-2677.            Join or renew on-line at <a href="http://www.cnps.org">www.cnps.org</a>.            Membership includes the journal <i>Fremontia</i>, CNPS Bulletin and the Sierra Foothills monthly newsletter, <i>The Shooting Star</i>.</p> <p>E-mail: <a href="mailto:sierrafoothillscnps@gmail.com">sierrafoothillscnps@gmail.com</a></p>
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