

News from the Friends of

# The Bernard Biological Field Station

Of the Claremont Colleges

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P.O. Box 1101, Claremont, CA 91711

bfsfriends@earthlink.net

[www.fbbfs.org](http://www.fbbfs.org)

## Sightings

- ✓ Bees sipping water from the lake
- ✓ Bird song surrounding you everywhere
- ✓ Rushes with brushes of rusty red flowers
- ✓ Masses of lacy white buckwheat blossoms seeming to float like magic carpets
- ✓ Drought causing the poison oak to blush
- ✓ Tall stalks with penstemon seeds, evoking memories of a brilliant purple spring
- ✓ Tiny white flowers on the laurel sumac, ending each branch like punctuation
- ✓ Coots swimming along, pecking at the algae, then diving without warning
- ✓ Dragonflies darting
- ✓ Highly-decorated spotted lizard, walking boldly until seen, then scurrying
- ✓ Silvery California asters preparing to break into bloom

**\*Let us know if you can help staff our 4<sup>th</sup> of July booth \***

## Tours of the BFS

Community and school groups can take tours of the BFS. If you are interested in bringing your group up to learn about what is there, please call or email (909-398-1751, [wallace.meyer@pomona.edu](mailto:wallace.meyer@pomona.edu)).

## BFS Volunteer Days

First Saturday of the month, 10:00 a.m. until noon, followed by a tasty pizza lunch for the volunteers. You can see photos of some of the hardy volunteers on the BFS blog (click "News" at [www.bfs.claremont.edu](http://www.bfs.claremont.edu)).

For questions or to be added to the volunteer list, please contact the BFS Volunteer Coordinator, Nancy Hamlett ([hamlett@hmc.edu](mailto:hamlett@hmc.edu)) or 909-964-2731.

## Meet the Inhabitants!

### White-lined sphinx moth

*Hyles lineata*



(Moth photo: <http://bugs.adrianthysse.com/>)

This common moth, also called the "hummingbird moth" is found throughout the United States. It has a wingspan of up to 4 inches. Because it is a heavy-bodied moth, it needs to beat its wings much faster than butterflies in order to stay aloft. This speed allows it to hover over flowers, collecting nectar. Adults are sometimes active during daytime but are most usually seen at dusk and dawn. The adults have a very long proboscis which they use to suck nectar from many flowers, including honeysuckle, thistles, petunias,

phlox, lilacs, verbena, and Jimson weed. They are especially attracted to scented flowers, and to light-colored ones which show up well at night. A video at <http://www.youtube.com/watch?v=IiznGtYnOt> shows a very busy moth making the most of a blooming hosta.

Moths seek out their caterpillar host plants and each female may lay hundreds of eggs on them. The large caterpillars are quite variable in color, from a discrete green, through dark brown, to the brilliant yellow seen above, but all have a large, pointed horn on their posterior. They eat many plants including four o'clocks, evening primrose, apple, elm, grapes, and tomatoes. When the caterpillars are mature, they bury themselves a few inches deep in the ground and pupate. There are usually two generations a year.

The caterpillars do not usually cause significant damage, but occasionally there will be a population explosion. In the past, when there was a caterpillar invasion, Native Americans living in the deserts would collect nearly mature caterpillars, remove the head and guts, and then roast them on skewers. Extras were dried and stored.



**California Four O'Clock**  
*Mirabilis laevis var crassifolia*

Also called "wishbone flower", possibly because of the forked branching pattern, this native Californian beauty is found in a number of places at the BFS, including in the lower East Field where the photos of the caterpillars were taken. It is a small perennial

plant, forming a dense mound about 1 ft tall and 2-3ft in diameter. Very drought tolerant, good in sun or part shade, tolerates poor soil. Bright purple-pink funnel-shaped blossoms cover the plant primarily in spring. The leaves are a bit fuzzy and arranged in pairs along the stems. It is a favorite host plant for white-lined sphinx moth caterpillars. The roots and seeds are poisonous, although Native Americans used the plant to treat stomach problems.



**Wild Canterbury Bells**  
*Phacelia minor*

This gorgeous plant is another California native and was also photographed in the East Field at the BFS this spring. An annual that blooms in spring, plants are usually fairly small at the field station, but the ones like this that came up in the burned area were twice the ordinary size. The ash from the burned wood probably acted as fertilizer, returning nitrogen to the soil. Lovely purple bell-shaped flowers up to 1 ½" long nod on tall stems above 3 to 5" hairy leaves. The flowers provide nectar for hummingbirds and butterflies.

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### **Sustainable Claremont Garden Club**

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Free and open to everyone interested in any type of gardening. Meetings are on the second Wednesday of most months at 7pm at the Napier Center at Pilgrim Place. There is a monthly email newsletter. More info at [sustainableclaremont.org](http://sustainableclaremont.org) or email [gardenclub@sustainableclaremont.org](mailto:gardenclub@sustainableclaremont.org).



## Invasive grasses

One of the most problematic invasions of our natural areas is that by non-native annual grasses. These grow very quickly at the first hint of spring, outcompeting our native wildflowers for water, light, and living space. In the areas of the BFS that burned last fall, the grasses seem to have received a setback and more of our native annuals have surfaced. The continued drought conditions could also have been a reason for this. Even so, there were plenty of grass seeds to collect for one of the Keck Science Introductory Biology classes. Three of the species that the students are working with are pictured here. If you let an area of your garden grow wild, you might see these too.

***Bromus madritensis*** (above left) has pointed seeds about an inch long arranged in a distinctive clustered brush at the top of the stem. The inflorescence may be all green or may have a lot of russet red in it.

***Bromus hordeaceus*** (above right) has an inflorescence about the same size as *B. madritensis*, but the seeds are short and wide and arranged closely together forming clusters with a clear V-shaped pattern to the seeds.



***Bromus diandrus*** (far left) is the most common of these grasses and is generally much taller than the other two. The seeds are much larger, up to 3 inches long, and small groups are spaced widely along the stem.

## Update on plans to build on the BFS

Not much information is forthcoming, but Pitzer, Scripps, and Harvey Mudd are working to raise the money needed to buy the parts of the East Field that they have been allotted (see proposed divisions at <http://www.fbbfs.org/about.html#map> ). It seems that all of them need to purchase their 12 acre parcels at the same time. Rumor has it that the sale is planned to go through in the summer of 2015 when college is not in session.

## Earth Day



(Photo by Nancy Hamlett)

For the first time in quite a while, the BFS celebrated Earth Day with events open to the public. There were tours showcasing wildflowers, birds, aquatic robots that monitor fish populations, family activities, and bats and other night flyers. The people who came had a great time and it looks like this will become a regular activity. Be sure to sign up for one of the tours next year!



*“A tour of the property readily convinces visitors of the importance of keeping such a beautiful expanse of land, shrubs, and trees for scientific purposes .”*

Robert J. Bernard in “An Unfinished Dream” pg 708

Friends of the Bernard Biological Field Station  
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www.fbbfs.org

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and the Environment”***

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P.O. Box 880, Claremont, CA 91711 City Clerk: 399-5460  
**Claremont Colleges:** www.claremont.edu  
**The Claremont Courier :** 1420 N. Claremont Blvd., Suite 205B,  
Claremont, CA 91711 Phone: 621-4761  
**Inland Valley Daily Bulletin:** 2041 E. Fourth St, Ontario CA 91764

### How big is big enough?

A field station is land left in its natural state for use in the study of complex interactions between plants and animals. The usefulness of such natural laboratories depends on size and shape. Extinctions occur frequently in small areas, due to smaller populations. The current 85 acres is just large enough to maintain reasonable stability in the existing ecosystems. Narrow shapes increase the amount of pollution by noise, air, water, and pesticides from surrounding areas, and increase the chances of competition from exotic (non-native) species, so the center bit of the BFS alone would not be sustainable.

### Who uses it?

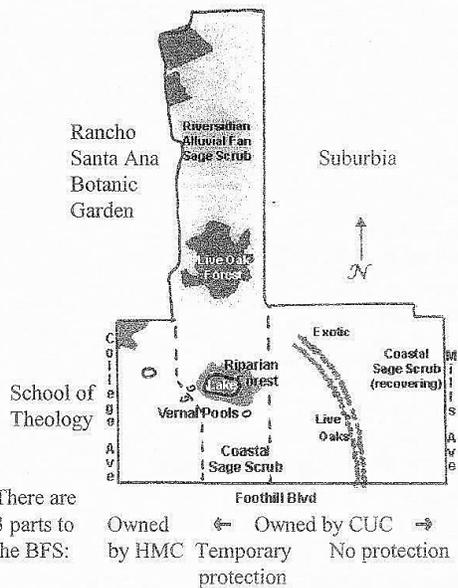
The BFS is used by Claremont Colleges faculty and hundreds of students every year, as well as by many schoolchildren from Claremont and the surrounding areas. It has also been used by college classes from as far away as Long Beach, by scout troops, and by members of the public.

### What's there?

There are over 30 acres of the fast-disappearing coastal sage scrub community along with a number of species of state or federal concern.

*Since much of Claremont was originally covered with coastal sage scrub, it is a fascinating window into our past.*

There is a stand of oak woodland in the north where water wells up along an earthquake fault, there is annual grassland slowly returning to coastal sage scrub in the east, and there is a one-acre, man-made lake excavated in 1978 which is a sanctuary for western pond turtles displaced by development.



**Note:** west part now owned by CGU and HMC; eastern part to be sold to Pitzer, HMC and Scripps

See fbbfs website for map showing divisions