

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

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www.fbbfs.org

Past Issues of the Newsletter

When you suddenly have a question about pink glow worms or elderberry and can't locate the right past issue of the newsletter, what can you do? Now you can log on to our website and find the info there.

Folk Music Festival!

This event is one of Claremont's little known treasures! Spend a couple of hours on Saturday, May 1st at our children's activity booth and listen to great music. Email to bfsfriends@earthlink.net if you can help. Even if you can't help, do plan to stop by. Events start at Larkin Park at 11am and tickets can be purchased at the Folk Music Center or on site.

Community use!

If your school class, scout troop, or similar insured group would like to visit the Station, please phone the manager, Stephen Dreher (909-624-6661)

Winter Visitors at the BFS

The field station is used by many different birds in winter. There are usually large numbers of yellow-rumped warblers and white-crowned sparrows and quite a few northern flickers. Large flocks of cedar waxwings and American robins can often be found feeding on the toyon berries along the BFS driveway. There are also ruby-crowned kinglets, blue-gray gnatcatchers, fox sparrows, and hermit thrushes. Winter visitors to the lake this year have included small flocks of ruddy ducks, bufflehead and gadwall, as well as a few ring-necked ducks. Sharp-shinned hawks are also winter visitors. In some years, kestrels and merlin have occasionally been around.

Our most notable winter visitor this year is the brown thrasher (*Toxostoma rufum*). This species is common in the eastern U.S. but rare west of the Rockies. There are usually only 1 or 2 reports a year of brown thrashers turning up in So Cal. (one spent last winter at the Eaton Canyon Nature Center in Pasadena) so we are lucky to have attracted this bird.

✓✓✓ Sightings

- ✓ Golden currants unfolding cheerful yellow trumpets, flowers turning red as they age.
- ✓ Hummingbirds flashing red and black chins as they sip nectar from the currants.
- ✓ Cascades of white-flowering currant blossoms.
- ✓ Fluffy catkins on the willows.
- ✓ Sara orangetip butterflies dotting the brush.
- ✓ Long branches of wild cucumber climbing up the oaks, looking elegant with starry white flowers and bright green tendrils.
- ✓ Toyons laden with red berries, irresistible to birds.
- ✓ Wildflower seedlings, reveling in the rain.
- ✓ Wild mustard, making its annual take-over bid.
- ✓ Scrub Jays scolding visitors.
- ✓ A few tall, yellow telegraph weeds, having missed the usual fall blooming, making up for lost time.
- ✓ Small green flowers of dwarf stinging nettle, nestling in the shade of the oaks.
- ✓ Sweet alyssum, tough, non-native, naturalized all over southern California.
- ✓ Tight groups of the fluffy little balls of acacia flowers near the infirmary.
- ✓ Nocturnal dusky-footed woodrats who build wonderful large nests under oak trees, at nightfall climbing up through oaks and down onto hanging bird feeder trays. Clean and thorough at eating everything and extremely wary of the slightest sound or movement.

College Master Plan

The Colleges are continuing to work on a master plan which will include their vision for the future of the golf course, the quarry, and of course the BFS. Nothing has been brought forward to the City yet, but some surveying has taken place, presumably in order to prepare a tentative tract map, which must be approved before permission for any building can be given. It is quite likely that the master plan will be submitted within the next year. This will be the document that determines the future of the field station.

Meet the Inhabitants



Yerba Santa

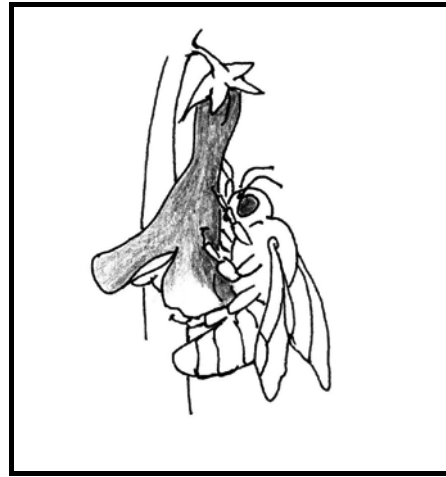
(*Eriodictyon trichocalyx* and *E. californicum*)

Yerba Santa is a perennial found in coastal sage scrub and chaparral, and is found all over the field station. It grows about 3 ft x 3 ft, but can grow up to 5 ft tall. The sticky, leathery leaves have some teeth along the edge and are bright green when young. Older leaves are dark green above, lighter below, 4-6" long and often discolored with patches of a black fungus. Creamy white bell-shaped flowers, less than half an inch long, appear in spring, and are held in loose groups at the ends of branches. The sepals are hairy.

Soon the hills of "Tovangar", as the Tongva called their world, will be green and filled with sweet, bitter, thick, and subtle scents. Food plants, medicine plants, sacred plants and basketry plants are everywhere, including Huherhetchut (Yerba Santa), one of the Tongva's most important medicinal plants.

The women would gather its sticky dark leaves and add sweet berries to make a cool refreshing drink. The bitter leaves, ameliorated by the berry juices, were made into a soothing tea for use both as refreshment and as a spring tonic. Toward summer, women gathered small quantities to dry and store for winter colds and coughs. During the hot summer months, leaves would be chewed as a thirst quencher. But the virtues of this plant were not limited to that of a mild tea. Huherhetchut was a prime medicinal for the Tongva. Everyone knew its power and both medicine people and the common folk gathered and used this wonderful plant. The leaves, both fresh or dried, were boiled into strong teas for coughs, sore throats, stomach aches, diarrhea, asthmatic problems, and as a blood purifier. A thick brew was boiled and used as an expectorant. Fevers and rheumatic pain were alleviated by a liniment made of leaves and stems. Fresh leaves were pounded into poultices for sores, swellings, insect bites, and even for poison oak rashes. Such poultices were applied to exhausted limbs and to fractured bones to reduce swelling. Bronchial spasms were soothed by smoking dried huherhetchut leaves. And branches of this aromatic evergreen shrub were hung in "sweat

houses" for general purification. The heat and steam combined with the bitter-sweet odor of the "holy herb" to raise the spiritual values of a family sweat. No modern Tongva home botanic is complete without the sticky dark green and silvered leaves of huherhetchut.



Bees

There are many different species of bees on the BFS, some of them quite rare. Bees are related to wasps and ants and most feed their young on pollen and nectar. The common, non-native European honeybees have the most highly developed social structure of all the bees, but some of the natives live alone, or form smaller groupings without the caste system seen in honeybees. Three BFS bees are:

Leaf cutter bees (Family Megachilidae) look much like honeybees but the species in the LA basin are all dark-bodied. They are solitary and the females seek out small, natural tunnels in the ground to use as nests. They cut semi-circular pieces out of leaves and use them to line the tunnels. Roses are a favorite source of leaf cuttings for suburban bees, much to the annoyance of many gardeners. The bees stock the nest with pollen and honey and lay their eggs inside. Pollen sticks to the hairs on these bees and is carried back to the nest on the underside of the abdomen rather than in "pollen baskets" on the legs as in honeybees.

Metallic sweat bees (Family Halictidae) are stunningly beautiful. These small bees are only about 3/8" long, but are a bright, metallic green, and not very hairy. The males in one species have yellow abdomens with black rings as well. They are attracted to perspiration, hence the name. They are solitary and make underground nests, often in clay banks, but the nests are often so close together that several bees may use the same entrance tunnel.

Carpenter bees (Family Anthophoridae) are large bees, up to 1" in length. They are not related to bumble bees. Carpenter bees have no stripes and are all black or steely blue-black (although the males of one species are a warm brown). These bees bore into wood to make their nests: fence posts, logs, telephone poles are all fair game. One even made a nest in the cross-section of a redwood tree on display at the Figueroa St. office of the Automobile Club! Females put pollen and nectar at the far end of the tunnel, lay an egg, and seal it off with a wall of chewed wood pulp. They repeat this five or six times so there is a row of cells, with the most recent in front. Larvae emerge in about a week and eat the pollen and nectar. Adult bees emerge in about 6 weeks, the one closest to the entrance first. Females hibernate over the winter and start their own nests in the spring. Although the bees tend to "buzz" people, they are unlikely to sting. The one in the picture is chewing a hole in the penstemon to get to the nectar. These bees are a lot of fun to watch!

A Few BFS Rarities

Stephen Dreher, BFS Manager

Any regular visitor to the BFS can point to a few plant and animal species that dominate the landscape. California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), Golden Currant (*Ribes aureum* var. *gracillimum*) and the California ground squirrel (*Otospermophilus beecheyi*) immediately come to mind. All are numerous and none are at risk of immediate extinction. However, it is worth bearing in mind that even “common” species are at risk for long-term survival as the last wildland remnants of Southern California are relentlessly bulldozed by urban land speculators. For example, California sagebrush clearly dominates the coastal sage scrub plant community. By that measure, it is “common”. Yet California’s entire coastal sage scrub landscape is considered one of the most endangered habitats in North America, with up to 90% of it estimated to have been lost so far. Laws like the Endangered Species Act provide a somewhat false sense of security – only species at their last gasps have a chance of making it onto that list and, if populations occur entirely on private land, there are no enforcement mechanisms. The Act also does little to protect landscape level habitat, in which rare species exist. Rare species are those that were rare even before habitat destruction reduced the places they could live even further.

There are rarities right here on the BFS, not necessarily “endangered species” list candidates, but taxa represented by only a few individuals with populations that are becoming increasingly fragmented and rare in the inland “empire” landscape as a whole (open spaces outside the mountains are disappearing weekly). Here are several:

Leymus condensatus – giant wild rye. This species is distributed through coastal southern California and is the only native grass found on the BFS. The grass expands from rhizomes and grows up to 6 feet tall. Two small colonies remain on the entire station.

Delphinium cardinale – scarlet larkspur. A beautiful scarlet-red flowering perennial, with a basal leaf mat and flowering stalks up to 6 feet tall. Striking when in full bloom, there are again only two small clusters of plants on the BFS, located at different sections of the property. Recently, large populations have been bulldozed for the 210 freeway extension and the accompanying urban sprawl along it.

Delphinium parryi* ssp. *Parryi – Parryi’s larkspur. Another *Delphinium* species, this time with deep purple flowers on a 1-1.5 foot tall plant. I’ve spotted a total of two individuals on the entire field station, both occurring near the wash.

Rumex hymenosepalus – wild rhubarb. This belongs to the buckwheat family and the genus *Rumex* is often referred to as “dock”. The plant has somewhat plantain-type leaves, with a large stalked inflorescence, the sepals being a showy pink. There is only a single small colony on BFS, growing pretty much by itself on a small mound along the wash.

Plant occurrence and distribution is always a bit mysterious. What causes California sagebrush to be so abundant over the station’s 85 plus acres, while the scarlet larkspur makes only a couple of scattered appearances on the same soil type and topography? The Parryi larkspur and wild rhubarb occur along a narrow wash, a channel once connected to the vast San Antonio alluvial system draining water from the nearby mountains. Those species, and a few others, are limited to that wash and perhaps require the type of occasional flooding and disturbance that was once routine. The BFS may simply have a few remnants of that ecological mechanism. The natural alluvial system is now gone, turned into suburbs and concrete channels, but the remaining stretch on the field station provides a small window into what once was a vast network of seasonal streams.

To get info about the BFS:

You can get information about the history and features of the station, as well as about its plants and animals (and some great pictures) at

www.bfs.claremont.edu

General Plan Revision Update

As mentioned in the last issue of the newsletter, Claremont is about to begin a revision of its General Plan which will provide long-term, comprehensive guidance for the physical development of the city and for land outside of its boundaries over which it has control.

As you know, in the fall the City called for volunteers to help in determining what changes should be made. About 40 of the 100 or so who applied are employees of the Claremont Colleges. It was decided to accept everyone who lives in Claremont. However, a number of applicants do not live in Claremont and the City has not yet decided whether or not to appoint them to the committee. It may make a decision at the meeting on Feb 24. Please call or email the City (see back of newsletter) if you think the Citizens Advisory Committee for the General Plan should be restricted to people who actually live here.

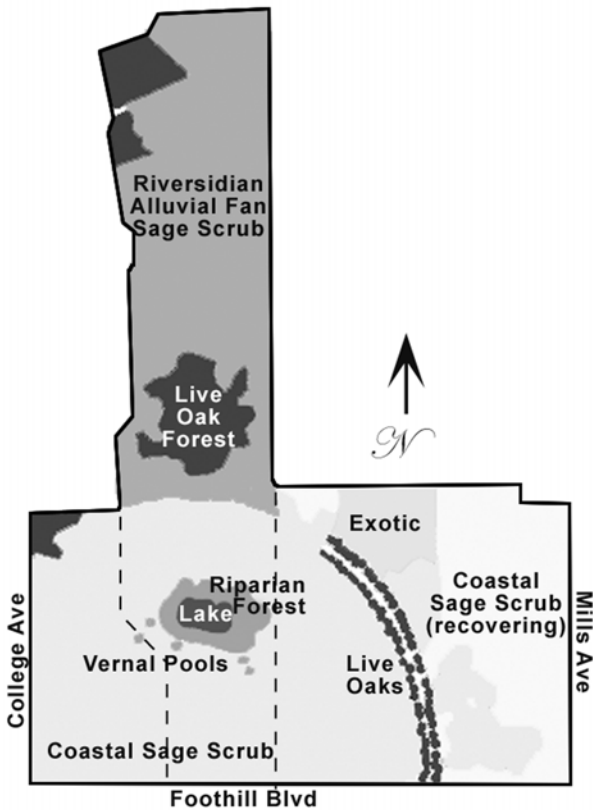


“A tour of the property readily convinces visitors of the importance of keeping such a beautiful expanse of land, shrubs, and trees for scientific purposes .”

Robert J. Bernard in “An Unfinished Dream”

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If you would like to be put on the mailing list, please send an email to bfsfriends@earthlink.net



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Useful addresses	
City of Claremont:	P.O. Box 880, Claremont, CA 91711 www.ci.claremont.ca.us
Claremont Colleges:	www.claremont.edu
The Claremont Courier:	111 S. College Ave, Claremont CA 91711 Phone: 621-4761
The LA Times:	Inland Valley Edition, 5555 Ontario Mills Parkway, Ontario CA 91764
Inland Valley Daily Bulletin:	2041 E. Fourth St, Ontario CA 91761

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.

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 with a number of Species of Special 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.

*“Dedicated to Education
and the Environment”*