

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

New BFS Director

A new BFS director, Wallace (Marty) Meyer has been hired! The announcement of his appointment stated: "Marty gained his PhD from the University of Hawaii at Manoa in 2009 in Ecology, Evolution and Conservation Biology. He brings to this position a wide range of field research experiences, most recently involving determinants of insect community structure as a post-doctoral researcher at the University of Arizona. His doctoral research focused on interactions between introduced gastropods and the endemic *Achatinella* land snails, and their importance in effective conservation management. With Marty's hire, the position is changing from the 3/4-time BFS Manager to a full-time position, the BFS Director, incorporating a 1/4-time teaching commitment at Pomona College". A big "Welcome!" from us all!

Robert Redford Conservancy to be located on BFS

Excerpts from the LA Times November 19, 2012:

The new program will preserve and occupy a historic infirmary on nearly 12 acres next to the Claremont college campus. The infirmary was built in a coastal sage scrub ecosystem, one of the most endangered. The rare habitat will be used as a living library for students participating in the conservancy.

"We tend to ship students off to rain forests and more exotic places to look at our environmental predicament, but what a magnificent natural laboratory we have at our disposal right at Claremont," said Pitzer environmental analysis professor Paul Faulstich.

During a news conference at the Steve Allen Theater in Hollywood, Redford reminisced about growing up in a community just east of Santa Monica and "how beautiful it was, how clean the air was." Brentwood, Westwood and Santa Monica were all separated by green space, he said. "Suddenly I felt that the city I was

born in no longer felt that way. It no longer felt like home," he said. "This giant machine that was made up of buildings and concrete and pavement, it ultimately became skyscrapers and freeways. That machine was slowly pushing the city that I loved into the ocean." As urban sprawl consumed and changed the landscape, Redford said he too began to change. "As long as there is an inch of possibility [for conservation efforts] then I think we have to give it everything we have to do something about it," he said.

(Editor's note: let's hope this helps the Colleges see the value of saving the rest of the BFS).

Sightings

- ✓ Harvester ant nests surrounded by a ruff of dried russet buckwheat petals
- ✓ Flights of Yellow-rumped Warblers and White-crowned Sparrows, winter residents
- ✓ Painted Ladies, sulphurs, Western Pygmy-blues
- ✓ Hawks circling, rabbits scurrying
- ✓ Trusses of small red fruits on the toyon
- ✓ Sagebrush summer-dormant
- ✓ Crispy, brown stems of spring annuals and tall telegraph weed in the east field
- ✓ Native bees: brown & white, black, metallic green, yellow and brown, large, small, furry, sleek
- ✓ Monarch caterpillars on the milkweed
- ✓ California asters, airy gray stems with purple daisies
- ✓ Lizards basking in the sun, doing pushups
- ✓ Volunteers waging war on invasive exotics like the infamous, clonal Tree of Heaven
- ✓ Baseball-sized gourds on the calabazilla vines
- ✓ Prickly fruits on Jimson weed, exploding seeds
- ✓ Hover flies on bright yellow pinebush daisies
- ✓ Ripples on the surface of pHake Lake and under the water, autonomous vehicles cruising below, sending data to nearby laptops
- ✓ More lake visitors: Great Blue Herons, Green Heron, Great Egret, Double-crested Cormorant
- ✓ Western Gary Squirrels, burying acorns

Pomona College buys 50 acres of hillside for a field station and retreat

Pomona College (<http://www.pomona.edu/news/>) just announced that it has purchased the 50 acre Trails End Ranch in the Claremont hills to be a field station and retreat. The property contains chaparral and oak forest. These habitats complement the more rare coastal sage scrub of the BFS. Although it is not in walking distance or fenced, the ranch will provide more opportunity for Claremont undergraduates to carry out field work and learn about environmental issues. In addition, the purchase preserves more of our local natural habitat which is a great thing.

We'd like to be able to send out newsletters by email rather than snail mail. If you'd like to get yours electronically, please send a note to bfsfriends@earthlink.net

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 send an email to the BFS (909-398-1751, wallace.meyer@pomona.edu).

Favorite Quote:

"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."

Aldo Leopold, A Sand County Almanac

BFS Volunteer Days

The BFS has regular volunteer workdays on the first Saturday of every month, usually from 10:00 a.m. until noon, followed by a tasty pizza lunch for the volunteers. This year, volunteers removed invasive plants, picked up trash and cleared trails. You can see photos of the hardy volunteers on the BFS blog (click "News" at www.bfs.claremont.edu).

Announcements of upcoming workdays will be sent to the Friends email list. If you have any questions or would like to be added to the BFS volunteer list, please contact the BFS Volunteer Coordinator, Nancy Hamlett (hamlett@hmc.edu) or 909-964-2731.

Thoughts on "natural areas"

First, what are they?

Here's the definition on the Sustainable Claremont website: "Natural areas around and in Claremont might more accurately be called 'semi-natural areas' in that all of them are influenced and to various degrees altered by human activities.

"A natural area retains sufficient naturally-occurring populations of plants, animals, and other organisms such that its overall physical and biological properties are more like those of a place unaltered by human activity (wilderness area) than like an area dominated by human actions. A natural area contains sufficient populations of native species of plants and animals such that interactions between species are similar to those that have evolved naturally. A natural area is not heavily reliant on human management to retain its properties, although it may require and receive management such as removal of invasive species or restrictions on human activities in order to be maintained over the long run."

Where are Claremont's natural areas?

The Sustainable Claremont website has a GIS map of many of our current natural areas.

How well can EIRs assess habitat?

Given the limited time available to them, when consultants look at an area for an environmental impact report, they look for the larger animals and the obvious plants, and they concentrate on those that are known to be rare. However, a habitat also depends on the fungi, bacteria, soil invertebrates, tiny insects, annual plants, lichens, and so on that live within it. Each interacts with others. We know enough to realize that these interactions are much more complex than we currently understand. If you destroy an area, you destroy all these connections. We have little idea of just how low a population can go before it will become extinct since we don't know everything that is important to its survival. The cumulative impact of successive development projects is therefore very important to consider, and very difficult to assess.

Can 'disturbed' habitat recover?

Many ecosystems will regenerate after significant disturbance if given the chance. Our native coastal sage scrub has evolved to recover after floods. The chaparral ecosystem relies on occasional fires. Even quarries can once again bloom and provide food and shelter for native wildlife.

Meet the Inhabitants



Mexican Cactus Fly and Pinebush
Copestylus mexicanus, Ericameria pinefolia

Flies form one of the largest groups of insects with over 80,000 species, and come in an astonishing variety of sizes, colors, shapes, and life styles, from gnats to fruit flies to houseflies. The name of the group, Diptera (di=two, ptera=wing), refers to their having only one pair of functional wings, unlike most other insects. The second pair evolved into small, drumstick-shaped organs called ‘halteres’. These act like gyroscopes and help the insect to maintain balance and execute all those fancy aeronautic maneuvers that keep them out of reach. Some flies can attain speeds of 60 miles per hour for short periods, and some beat their wings 1000 times a second, creating a vibration that we hear as a buzz (and yes, mosquitoes are flies).

Fly eggs generally hatch into small, wormlike ‘maggots’, the equivalent of butterfly caterpillars. However, fly larvae don’t make cocoons; their outer surface hardens and protects them from damage and drying out, something like the husk of a seed protects the plant embryo. Inside of this “puparium”, the cells rearrange themselves into the form of an adult fly. This “complete metamorphosis” is useful because having different shapes and lifestyles reduces competition between adults and offspring for food and living space.

Although adult flies don’t have jaws to bite, larvae do and they can chomp plant material or animals. Some hover fly larvae do a good job of eating aphids, which endears them to gardeners! Because they have sucking mouthparts, adult flies need liquids, such as animal body fluids, liquid from rotting organisms, or plant nectar.

The Cactus Fly is a large, elegant hover fly, just under 3/4" long, with a shiny, dark body and dark markings on its wings. It is common in the Southwest and in Mexico. It is a giant member of the Flower Fly Family (Syrphidae). The large, pale larvae feed on the soupy interior of rotting cactus tissues where they are protected from the heat and low humidity of the surrounding environment. The adults feed on nectar from many flowers.

Pinebush is one of the most interesting plants at the BFS. It grows into a shrub about 6 feet tall by 6 feet wide. It’s bright green, thin, cylindrical leaves about 1" long look like pine needles and give it its common name. The amazing feature of this plant is that it blooms in October and November, a very long time after the last of the spring rains. It produces hundreds of small, yellow daisies when not much else is around for nectar feeders. Consequently, it’s abuzz with constant insect activity and helps maintain viable populations of our native insects like the Cactus Fly. You can see great photos of both Cactus flies and pinebush on the BFS website.

Note: There is now a Sustainable Claremont Garden Club, open to everyone interested in any type of gardening. Meetings are on second Wednesdays. For more info, go to sustainableclaremont.org or email gardenclub@sustainableclaremont.org.

The BFS website news page

showcases plants, animals, and volunteers with terrific photos and entertaining descriptions—go take a look (www.bfs.claremont.edu) !

You’ll be glad you did!

Recent post:

Video of students at the BFS!

Claremont McKenna College made a great video showing students working at the BFS!



“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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 and the Environment”***

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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?

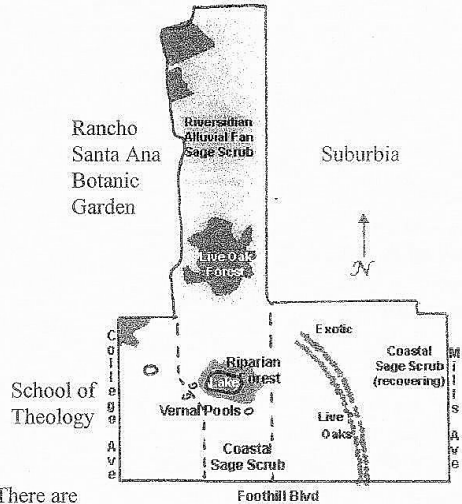
The BFS is used by Claremont Colleges faculty and hundreds of students every year, as well as by many schoolchildren from Claremont and the surrounding areas. It has also been used by college classes from as far away as Long Beach, by scout troops, and by members of the public.

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.



There are 3 parts to the BFS:

Owned by HMC	←	Owned by CUC	→
Temporary protection		No protection	

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