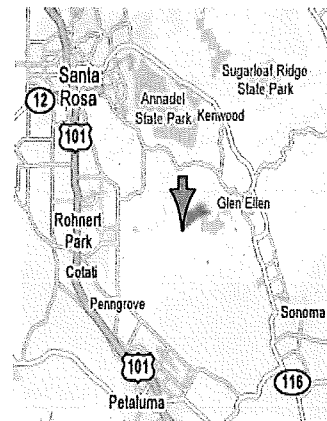


FAIRFIELD OSBORN PRESERVE



About the Preserve

Fairfield Osborn Preserve lies on the western slope of Sonoma Mountain, just east of campus. The 421-acre Preserve includes diverse habitats, including oak woodlands, a vernal pool, ponds, a marsh, and grasslands. The Preserve was established to protect the upper reach of Copeland Creek, a perennial fishless stream with remarkable aquatic insect diversity. Students, faculty members, and the community use facilities for environmental education, outreach, and research. Tours and workshops are offered in Fall and Spring.



Fairfield Osborn Preserve was created in 1972 through the generosity of William and Joan Roth in honor of Joan's father. It was originally administered by the Nature Conservancy and was donated to Sonoma State University in 1997.

Fairfield Osborn Preserve

Sonoma State University



Preserve Boundary



Hiking Trail



Lichau Road



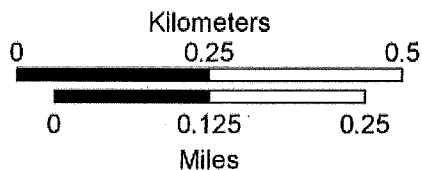
Restricted Trail



Streams

Contour Interval: 40 feet

Scale: 1:9,500



Data Sources: USGS, Digital Elevation Model & Digital Raster Graphic
Cartography: David Young & Leonard Miller,
Sonoma State University - Geographic Information Center 08/04



Upper Gate

Education Center

Lower Gate

The Marsh Trail

Creek Trail

Douglas Fir Trail

Chaparral Loop

Fescue Trail

Lattspur Trail

Turtle Pond

Stone Circle

Moving Mt. Trail

Madrone Trail

Slink Alley

View Pt

Vernal Pool

Opal Alley

Mariposa Trail

Ridge Loop Trail

Kelly Pond

Frog Heaven

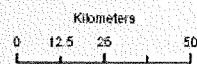
Nicas Creek

High Voltage Lines

Private

Fairfield Osborn Preserve

San Francisco



BM 1916

A FIELD STATION....WHAT'S THAT?

What's a field station? Many people do not readily recognize the term, often confusing these sites with other types of natural areas, public lands, or parks.

Field stations are natural areas that support the education, research and outreach missions of a university. At these sites, university expertise in teaching, learning and study serves as the foundation for field station program and activities. At their best, field stations create dynamic learning community composed of faculty, students and community members who work collaboratively expand the frontiers of knowledge about the natural world.

Many landmark environmental issues were first identified at field stations. The complexity of old growth forest development and its role in supporting biodiversity were first studied at the Angelo Coast Range Reserve in California and Andrews Experimental Forest in Oregon. Acid rain and its effects on aquatic life in northeastern United States were first identified at Hubbard Brook Experimental Forest in New Hampshire. And the spread of Sudden Oak Death pathogens were first studied at SSU's Fairfield Osborn Preserve in California.

What is it About Field Stations that Encourages Discovery?

1. It's About Place

Field stations lands are hands-on, first-hand – The most valuable resource at a field station is the environment itself. Each site provides a unique complement of species and processes for study. They are classrooms without walls for learners of all ages, and outdoor laboratories for investigators who uncover new and sometimes transformational discoveries.

Field stations protect lands, processes, and species - The delicate balance between study and protection is a management priority at field stations. Field stations not only manage the amounts and types of activities that occur on their lands, but also undertake management planning and specific projects that protect the diversity of environmental processes on site. Typical types of management activities include invasive species control, habitat connectivity, water quality, and long-term monitoring.

Field stations help with logistics – The logistics of field work can be difficult and environmental educators and researchers need utilities, lab space and equipment (e.g., dissection scopes, balances, centrifuges etc.), plant and animal collections, and computer databases to make investigation and study possible. To nurture activities in the field, field stations do as much as they can to remove the challenges of living, learning and studying in remote areas.

Field stations are regional gateways – Many field stations become an information resource for communities, agencies and organizations in their region. They enhance

research and educational activities in areas surrounding the field station, serving as a gateway for faculty and students who are interested in conducting work in the region.

2. It's About Vibrant Diverse Research Activities

The most productive successful field stations support a diverse researcher community, whose activities are fully integrated with education and outreach programs. Research creates information that serves as the basis for learning, provides students and community members with opportunities for engaging in research, and creates a body of knowledge and data that allows long-term perspectives on environmental change.

Protecting Research - Field stations are outdoor laboratories where researchers can study natural processes, much as a chemist studies reactions at a lab bench. Removing test tubes, destroying labels, or tipping over beakers, especially without the knowledge of the chemist, would certainly change the results of the experiment. In much the same way, researchers at field stations have confidence that their plots, tags, and research equipment will be secure for the duration of the study. Researcher undertaking long-term studies (sometimes spanning decades) are especially dependent on field stations. These studies are particularly important for providing relevant information about ecological processes and land management policies: short-term studies cannot address long-term processes.

The protection afforded on field station lands also decreases the confounding effects of other types of human activities. A chemist needs to avoid contaminants in a test tube; a biologist needs some assurance that ecological processes are unaltered by human intervention. Recreational activities have been shown to decrease populations of some species of vertebrates, change the nesting locations of birds, and increase soil erosion. Researchers at field stations know that the numbers of factors affecting the organisms or processes they study are minimized.

Building a Body of Research - Field stations are a repository for site-based information, building both libraries of publications and data bases of on-site information. The Osborn Preserve has supported 21 publications and 6 theses or dissertations since its affiliation began with SSU in 1994.

Something important happens when a wide variety of research focuses in an area for a long time. The data sets deposited at the reserve, the diversity and quantity of information accumulated become a stepping stone for more detailed investigation and a resource themselves. For example, just recently at a 100-year old field station at Flathead Lake Biological Station in Montana, researchers building on data previously collected discovered a new ecosystem below the lake surface. At the Granite Mountains Desert Research Center in California, characterization of soil types and ages in the Provident Mountains by UC researchers have become an international attractant to geologists and biologists interested in understanding how desert biomes develop. Similarly, we anticipate that the Galbreath Preserve's long history of logging will serve as an important informational resource for future studies.

3. It's About Exceptional Learning Environments

University field sites create unique opportunities for learning by allowing us to merge our passion for natural places with our intellectual curiosity about the earth's processes. This combination of emotional and intellectual engagement is essential for engaging people in exploration of the natural world. Often trips to field stations are life-changing experiences for students and community members, who return as volunteers, graduate students, land managers, or teachers.

The use of environmental sites to enhance academic learning has been addressed in variety of studies. Students exposed to natural environments have better cognitive skills and fewer behavioral problems. In an attempt to address low scores in science skills and knowledge in US high school students, national and state reports highlight field experiences as one of the most effective tools in teaching science.

4. It's About Meet, Greet, Communicate, Collaborate

Field stations are places of innovation, cooperation, and interaction, -- where biologists and geologists rub elbows with computer scientists, physicists and artists, -- where interactions spark new collaborations that lead to transformational ideas, -- and where discovery is a shared endeavor by faculty, students and the community.

It is important not to underestimate the role the field stations play in enhancing connections among people. At field stations, educators meet researchers meet managers meet scientists meet artists. At these sites, everyone starts from a shared emotional connection to "this place." From this common place, members of a learning community find it easier to pursue new ideas and solutions with persons of differing backgrounds and interests. It was at a field station (Andrews Experimental Forest and Hatfield Marine Science Center in Oregon) where conversations between researchers and managers led to the concept of "ecosystem management" which has become a central management policy governing federal land.

Field stations are miraculous places.

Claudia Luke

Director, SSU Field Stations & Nature Preserves
August 2009