CSU The California State University

Biological Field Stations and Marine Laboratories

California has some of the most richly diverse natural environments in the United States—ocean, seashore, foothills, mountains, forests, and deserts. The spectrum of flora, fauna, geology, and geography make the state an ideal field study laboratory for students, faculty, and researchers to enhance their educational experience.

Campuses of the California State University have taken advantage of the state's natural resources by developing numerous outdoor education laboratories and research facilities to augment on-campus instruction. Many of these facilities are operated in cooperation with other organizations such as the U.S. Forest Service, the U.S. Bureau of Land Management, and the Nature Conservancy. These sites serve an educational role as well as preserve important ecological areas.

Many sites offer residential accommodations and extensive on-site laboratories, while other sites are simply nature at its best, with few or no man-made structures. These sites lend themselves to numerous disciplines—anthropology, agriculture, marine science, biology, chemistry, geography, geology, natural resource management, art, photography, education, and more.

1. Environmental Studies Area/F.A.C.T.

www.csub.edu/fact/about.htm

F.A.C.T. is a unique project of California State University, Bakersfield whose purpose is to promote the conservation of wildlife through the rehabilitation of nongame species of native animals and through educational activities. This project emphasizes the rehabilitation of endangered or protected species, particularly birds of prey. Sick or injured animals are treated and retrained so they can be reintroduced into their natural habitat. F.A.C.T. is licensed with the U.S. Fish & Wildlife Service and the California Department of Fish & Game as a rehabilitation and educational facility and is located within the Environmental Studies Area (ESA) of the CSU Bakersfield campus.

2. Eagle Lake Biological Field Station

www.csuchico.edu/biol/EagleLake/eaglelake.html

The Eagle Lake Biological Field Station (ELFS), located 26 miles northwest of Susanville in Lassen County, California, is a 10-building facility on the eastern shore of Eagle Lake. The field station is administered by California State University, Chico (CSUC) and the CSUC Foundation, with support from the University of California Natural Reserve System and the University of California, Davis. The ELFS is open to any individual or group whose purpose is primarily academic, and whose activities are consistent with the isolation and natural setting of the station.

3. Bidwell Environmental Institute

www.csuchico.edu/bei

The purpose of the Bidwell Environmental Institute is to conceptually put under one roof all of California State University, Chico activities related to the natural environment: reserve management, education, and research. The Institute approach recognizes the many faculty and staff involved in such issues and projects and supports their autonomy. The Institute strives to support ongoing projects and facilitate communication between environmental projects within the university and with external constituencies.

4. California Desert Studies Consortium

http://biology.fullerton.edu/facilities/dsc/zzyzx.html

The Desert Studies Center, field station of the California State University, provides opportunity for individuals and groups to conduct research, receive instruction, and experience the desert environment. Established in 1976 under a cooperative management agreement with the Bureau of Land Management, the Center is operated for the CSU by the California Desert Studies Consortium, an organization of seven southern California CSU campuses: Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, and San Bernardino.

5. Southern California Marine Institute

www.scmi.us

The Southern California Marine Institute (SCMI) represents a strategic alliance of 12 major universities in Southern California. Ten universities from the California State University system representing the Ocean Studies Institute (Bakersfield, Channel Islands, Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, San Bernardino, and San Marcos) combined their marine resources with those of the University of Southern California, Wrigley Institute for Environmental Studies, and Occidental College. These marine resources include the research vessels *R/V Yellowfin* and *R/V Seawatch*. Other resources include scientific equipment and buildings (offices, laboratories, storage facilities, machine and wood shops) valued at over $1.3 million. The facilities and docking space for the vessels are located on Terminal Island in the heart of Los Angeles Harbor.

6. Moss Landing Marine Laboratories

www.mlml.calstate.edu

Since establishment in 1966, Moss Landing Marine Laboratories (MLML) has grown an international reputation for excellence in marine science research and education, and is the second oldest marine lab on Monterey Bay. MLML is operated by a consortium of seven California State University campuses (Fresno, East Bay, Monterey Bay, Sacramento, San Francisco, San José, and Stanislaus), with consortium undergraduate and graduate students taking courses or pursuing their master of science degrees at MLML. The lab is situated in an excellent location for the study of the marine world. The Monterey Submarine Canyon, the largest such feature on the west coast of North America, begins within a few hundred meters of the Moss Landing harbor and the MLML research fleet. To the east of MLML is the Elkhorn Slough, one of the largest unspoiled estuarine wetlands off the West Coast of the United States, and an important site for shorebirds and fish. To the north and south are sand dunes, sandy beaches, and extensive kelp forest habitats along the rocky shoreline. Some of the most productive kelp forests and intertidal areas can be found in this region. MLML also is located between two large upwelling centers, which provide nutrients that stimulate an incredible amount of productivity but also provide a wealth of opportunities to study coastal oceanic processes.

7. Tucker Wildlife Sanctuary

www.tuckerwildlife.org

Tucker Wildlife Sanctuary is a 12-acre nonprofit nature preserve, located in the heart of Modjeska Canyon adjacent to the Cleveland National Forest. It is owned and operated by California State University, Fullerton and its College of Natural Sciences and Mathematics. In addition to serving as a research center for CSU Fullerton students, faculty, and others, Tucker is open to the public to enjoy and learn about the local wildlife and natural habitat in the Southern California canyon area.

8. Center for Coastal Marine Sciences (CCMS)

www.marine.calpoly.edu

The mission of the Center for Coastal Marine Sciences is to promote and facilitate basic and applied interdisciplinary studies of coastal marine systems for the purpose of addressing environmental concerns and fostering hands-on student learning through discovery and outreach.

9. L.W. Schatz Demonstration Tree Farm

www.humboldt.edu/~treefarm

The L.W. Schatz Demonstration Tree Farm started off as a generous donation to Humboldt State University from L. W. Schatz on November 12, 1987. This was the largest gift in the school's history. The farm is administered by the HSU Forestry Department and serves as a field experiment station for forestry researchers, an outdoor classroom for educators, and a demonstration area for forestry extension professionals. Professors, students, private tree farmers, and community members interested in specific, timber-land-based projects will find a myriad of potential uses available to them at the Tree Farm.

10. Humboldt State University Natural History Museum

www.humboldt.edu/~natmus

Humboldt State University Natural History Museum, through its collections, exhibits, and programs, inspires in North Coast residents and visitors of all ages an understanding and appreciation of the dynamic natural world and provides a learning laboratory for Humboldt State University students.

11. Wright Wildlife Refuge

www.humboldt.edu/~tlg2/08

In 1989 the estate of Ellen Wright deeded a small parcel of land to be used as a wildlife refuge to the Humboldt Area Foundation. In her will, Ellen Wright envisioned an "Urban Wildlife Refuge" that would serve the community by providing shelter and habitat for wildlife native to the Eureka area, enhancing wildlife values for the surrounding urban landscape and providing opportunities for wildlife education. These principles provide the guidelines and objectives for the future management and administration of the Urban Wildlife Field Station. The property is managed under a joint agreement between the Humboldt Area Foundation, the Department of Wildlife at Humboldt State University, and the Humboldt State University Foundation. Consistent with Ellen Wright's will, several research and education programs have been established at the refuge.

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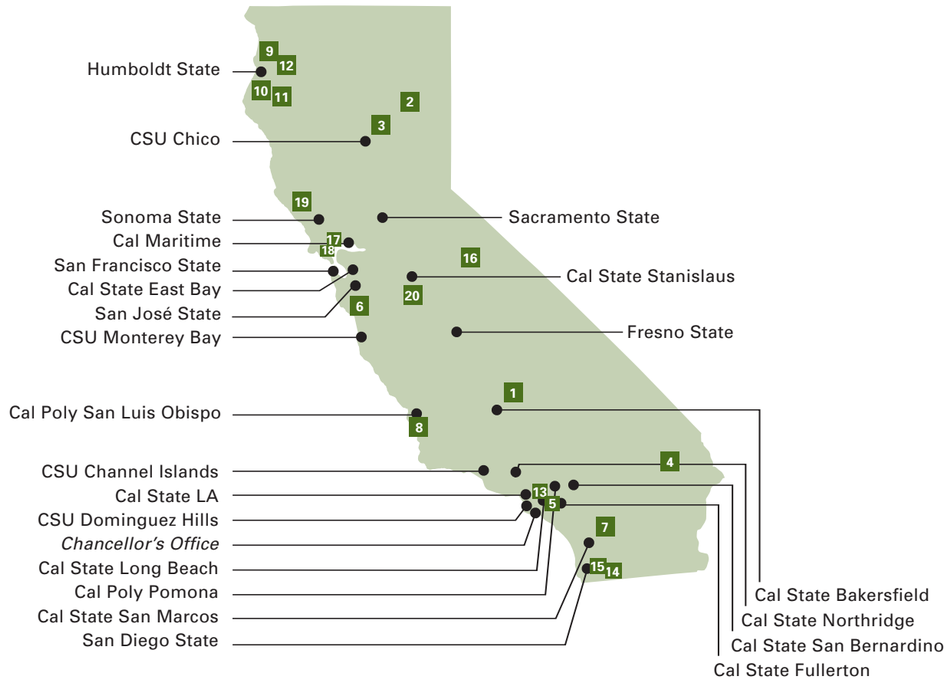

12. Telonicher Marine Laboratory

www.humboldt.edu/~marinelb

The Humboldt State University Marine Laboratory provides a center for marine and environmental science teaching and research. The primary emphasis of the laboratory is teaching; however, student and faculty research is active. Additionally, the laboratory provides public displays that focus on interpretation of marine science and the marine environment.

13. Voorhis Ecological Preserve

www.csupomona.edu/%7Ebiology/docs/voorhis.html

The Voorhis Ecological Reserve is located in the northwest part of the California State Polytechnic University, Pomona campus. It was established informally in the 1970s, and formally dedicated on June 29, 1983. It is named for Jerry Voorhis, a former congressman with a long connection to Cal Poly Pomona. The Reserve consists of 31 hectare of coastal sage scrub and a small amount of coast live oak woodland. These communities are shaped by fire, and the Reserve has burned several times. The two most significant events were on August 21, 1981, when Box Canyon burned, and July 28, 1989, when virtually the entire Reserve burned. Baseline data were gathered after the 1981 fire, and studies continued after the 1989 fire. The Reserve contains four amphibian species, 12 reptiles, 100 birds, 38 mammals, 167 vascular plants, and unnumbered insects. A vegetation survey conducted before the 1989 fire was published in 1990.

14. Coastal Sage Scrub Habitat Preserve

http:/edweb.sdsu.edu/cab/florafauna

For millenia, the Southern California coast, foothills, and western slopes have been home to scrub and chaparral. Unlike plant and animal relatives found in the mountains and deserts, coastal sage scrub species have adapted to an ecosystem that rarely freezes in the winter and only occasionally experiences temperatures over 90 degrees Farenheit during the dry California summer. Southern California's coastline, once covered by coastal sage scrub, is now largely developed. Only scattered pockets remain. One such pocket is the Point Loma Ecological Reserve, an area of 840 acres protected under the joint management of the U.S. Navy, Cabrillo National Monument, and other federal agencies.

15. San Diego State University Field Stations Program

http://fs.sdsu.edu/kf

Since 1962 with the first field station in the network, the Santa Margarita Ecological Reserve, San Diego State University has managed off-campus natural areas as living laboratories and outdoor classrooms. Like San Diego State campus classrooms, field stations are natural areas supporting the mission of the university: to provide well-balanced, high-quality education for undergraduate and graduate students and to contribute to knowledge and the solution of problems through excellence and distinction in teaching, research, and service.

16. Sierra Nevada Field Campus

www.sfsu.edu/~sierra

The Sierra Nevada Field Campus is dedicated to promoting an understanding and appreciation of geology and the ecological diversity of life through the study of the many Sierra Nevada ecosystems by means of education, research, and applied ecology.

17. Romberg Tiburon Center (RTC)

http://rtc.sfsu.edu

The Romberg Tiburon Center is San Francisco State University's marine field station located 30 minutes north of San Francisco on the Tiburon Peninsula. The Center is the only academic research facility situated on San Francisco Bay, the largest estuary on the West Coast of the United States. The Center's mission is to perform basic scientific research and educate and train the next generation of scientists. RTC scientists pursue their research in their laboratories at the Center, at field sites around the world, and through collaborations with colleagues at other universities and institutions. As an affiliate of San Francisco State, the Center provides its students with graduate and undergraduate level courses as well as practical experience gained through research conducted in the laboratories of RTC scientists.

18. San Francisco Bay National Estuarine Research Reserve (NERR)

www.sfbaynerr.org

San Francisco Bay once supported 190,000 acres of highly productive tidal marsh, nearly 90 percent of which has been destroyed or altered. In the past, these wetlands provided essential habitat for commercially important fish and crabs, filtered mud from the bay's murky waters, and protected the shoreline from flooding. Two of the most pristine wetlands left in the estuary are protected as part of the San Francisco Bay National Estuarine Research Reserve (San Francisco Bay NERR). San Francisco Bay NERR promotes scientific research of these remaining wetlands to better manage and successfully restore these important habitats.

19. Fairfield Osborn Preserve

www.sonoma.edu/org/preserve

Fairfield Osborn Preserve was established by The Nature Conservancy in 1972 through the generosity of William and Joan Roth in honor of Joan's father, Fairfield Osborn. The Nature Conservancy is an international, nonprofit membership organization that preserves plants, animals, and natural communities representing the diversity of life on Earth by protecting the land and waters they need to survive. The Preserve was donated to Sonoma State University in 1997. The Nature Conservancy retains a conservation easement of the property stipulating its use as an educational and research site. The Preserve is dedicated to protecting and restoring natural communities and to fostering ecological understanding through education and research.

20. BioAg Field Site

http://arnica.csustan.edu/Biology/resources.htm

The BioAg Field Site on the California State University, Stanislaus campus is used for the application of and experimentation with permaculture, biointensive gardening techniques, and associated research studies by faculty and students.