Organization of Biological Field Stations

180 LIVING LABORATORIES AND MUSEUMS SERVING AMERICA

A network of biological research centers ready to lead the nation in "***sensing of the environment***."

The OBFS network is a consortium of field stations and marine labs dedicated to supporting and facilitating modern field science. Member stations are found in almost every state and provide resources for research, teaching and outreach in ecological and environmental sciences. OBFS programs emphasize K-12 education, university research and education, agency and government fieldwork, policy and decision-maker workshops, and citizen science.

Field Stations serve public heath:

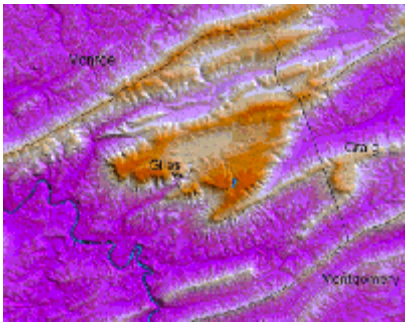
Disease Ecology & Epidemiology - Scientists at the Sevilleta Field Station in New Mexico discovered the relationship between Deer mice populations, El Niño, and the Hanta virus epidemics.

Field Stations serve policy:

Ecosystem Response and Climate Change - Researchers working at the Jasper Ridge Biological Preserve, Rocky Mountain Biological Lab, the Sky Oaks Field Station, and other field stations have been at the forefront of identifying how ecosystem services and process are likely to respond to continuing global climate change.

Field Stations are where "sensing the environment" will happen first:

Sensor and Network Technology - The Santa Margarita Ecological Reserve and James San Jacinto Mountains Reserve lead the nation in building wireless networks to remote field data and deliver integrated instrumentation output (field sensor readings from water, climate, atmospheric, seismic, outdoor images, etc.) to a variety of users in real-time via the Internet. Field Stations are often the site of rapid prototyping for new environmental sensor technology.



Field Stations often make important, unexpected contributions:

Echolocation of bats aided development of sonar and radar technology - Fieldwork on bats in the 1930's at the E.N. Huyck Preserve led to the development of sonar and radar technology in World War II. This field station research resulted in one of the most important military applications of new technology during the 20th century.

Field Stations curate and archive environmental data:

Long-Term Environmental Change - For over 100 years America's field stations have served as stewards of a national treasure - priceless data on our nation's health. Without historical data, predictions about the future become unreliable.

Field Stations serve their communities:

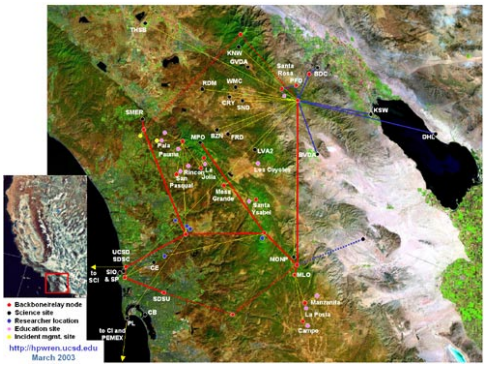
Local Environmental Change - Field Stations track potential threats to the environment. Without experienced scientists in the field, many important environmental changes would go unnoticed. For instance, long-term studies at Hubbard Brook Experimental Forest resulted in the discovery of acid rain, its origins and impacts on local and regional forest and aquatic resources. Field stations are strategically positioned as environmental early warning and reaction systems.

The Hope of Science:

In the 21st century biological science extends beyond campus classrooms and into the very living planet it seeks to explain, predict, and manage. Breakthrough research – encompassing the environment along with technology, health, and public policy, is now the hallmark of current and future field station programs. Once just "windows" into the natural world, field stations are now modern, sophisticated multidisciplinary research and teaching laboratories serving the scientific community and the public at large. OBFS field stations can serve as frontline centers for ecosystem sensing and are poised to serve as nerve centers for ecological research.

Field Stations need networked infrastructure:

Today field stations are models of cooperation and ingenuity. But informal academic collaboration is no longer enough. For decades field biologists have worked alone and made due with meter sticks and butterfly nets. With the development of a nationally networked infrastructure, field stations will be poised to serve as regional sentinels, serving local, state and national interests. Cutting edge science in all disciplines requires global collaboration and modern, highly sophisticated equipment and facilities. To meet regional and global challenges, field stations need support to upgrade facilities, enhance infrastructure and expand research, education and outreach programs.



Field Stations need support:

Field stations are working hard to network facilities, databases, and scientists. Field stations, and the biologists they serve, rely heavily on the ***National Science Foundation*** for research and facilities support opportunities. No other agency or organization facilitates field-based environmental and biological science to the degree NSF does. NSF initiatives, from the National Ecological Observatory Network (NEON) to competitive grant-supported activities enabled through programs such as Field Stations and Marine Laboratories, will form the backbone of field-based biological research in this country. Congress can support Field Stations by improving funding for the NSF's Biology Directorate and related facilities programs. We encourage you to support NSF and invite you to visit an OBFS member station in your state.

To find OBFS member stations in your area visit:

www.obfs.org

obfs@sciences.sdsu.edu