

Date: 10 October, 2018

Author: Archbold Biological Station

What is a biological field station?

"What is a biological field station? That is one of the commonest questions I am asked before I give a presentation about Archbold Biological Station. It doesn't matter if I am in Highlands County, elsewhere in Florida, or around the country, it's the same question", said Dr. Hilary Swain, Director of Archbold. "Most people are curious as they have never heard of a biological field station. I like to tell them they are special places which provide everything that students, researchers, and the general public would want to better understand the natural environment. I say that field stations combine four vital ingredients for science, conservation, and education. First, they are located in a 'natural outdoor laboratory'—meaning there are species and habitats for study, and protected key ecosystems for science and conservation. Second, they have great facilities ranging from analytical equipment, places to stay and eat, libraries, environmental sensors, and hi-technology and communications. Third, they house a community of scientists, students, educators, and land managers with whom to share information and discuss emerging ideas. Fourth, field stations are a critical repository of knowledge, combining data, scientific publications and long-term monitoring to tell us how the natural world works and how it is changing over time."

Field stations vary greatly in form and purpose. Inland field stations such as Archbold Biological Station encompass uplands and wetlands dedicated to science and conservation. They are different from marine laboratories such as Mote Marine Laboratory in Sarasota or Harbor Branch in Fort Pierce, where the focus is coastal and offshore. In a recent study in 2016, it was estimated that there are about 1,268 field stations and marine laboratories around the world. Field stations vary in size from a few urban acres to thousands of acres spread across a remote landscape and their facilities range from simple trail networks to state-of-the-art laboratories. In North America the majority of field stations are operated by universities and colleges: one example would be the Ordway Swisher Biological Station, east of Gainesville, which is part of the University of Florida. Many university field stations focus on summer field courses for students, as well as extensive scientific research. Some stations are run jointly by universities and government agencies. A few field stations and ecosystem research centers, such as the Rocky Mountain Biological Laboratory in Crested Butte Colorado and the Jones Research Center in southwest Georgia are like Archbold Biological Station, independent and reliant on public support, grants, and in-house endowments and funding to operate.

Most of the field stations in North America belong to a not-for-profit group called the Organization of Biological Field Stations or OBFS. This collaboration helps member stations increase their effectiveness in supporting critical research, education, and outreach. Dr. James Layne, Archbold's first Executive Director was one of the founding directors that helped form the organization in the late 1960s. Nowadays there are more than 160 members. The organization holds an annual meeting to facilitate exchange of ideas and these have been held at Archbold three times 1979, 1998, and 2012. The 2018 meeting was held this September at the Schoodic Institute at Arcadia National Park, a beautiful setting in Maine. There were 150 attendees and Archbold was well-represented. Dr. Mary Hufty, Chair of Archbold's Board, has been a steadfast OBFS meeting attendee for years and she mentioned, "Attending the OBFS annual meetings, and serving as the organization's historian, has given me great insight into the role of Archbold on the national stage, and provides me with a network of like-minded people to assess our progress and mission."

Schellie Archbold, Archbold Board member attended this year's in-depth strategic planning session and said, "It was intensive, informative, and interactive. We were presented with helpful strategic financial planning ideas, and discussed our own issues amongst ourselves. It made me realize what a comparatively strong position we're in at Archbold."

Gabe Kamener, who got a special award this summer from the National Science Foundation's Environmental Data Initiative to work on data management at Archbold, was invited to give a presentation. He said, "It was wonderful to join data managers from around the country and describe how I published several of Archbold's plant, climate and water datasets online. I learned a lot about converting data for archiving and publishing." Kamener added, "Getting Archbold data online allows us to combine our data with data from multiple other field stations and participate in national and international science networks addressing questions of global significance like cycles of water, carbon and nutrients."

Swain concluded, "Around the country field stations are often located in rural areas, far away from major universities and research centers. We are proud to provide up-to-date science and a better understanding of the environment to help sustain lives, lands, and waters in the regions where we live and work."

Photo 1: Field trips are a fun feature of every field station meeting: this year Archbold staff got to visit Mount Desert Island and Duck Island, both operated by the College of the Atlantic in the Gulf of Maine.



Photo 2: Field stations of North American: green dots are members of the Organization of Biological Field Stations and blue dots are non-members. Source: www.obfs.org

