

Research and Teaching

(Greenwoods Conservancy and the SUNY Biological Field Station)

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Greenwoods Conservancy is located south of NYS Rt. 80 on Zachow Road in the Town of Burlington, NY. The conservancy comprises 1170 acres of hardwood forests, conifer plantations, wetlands and old meadows surrounding the Cranberry Bog, a 70 acre pristine wetland supporting a unique flora including multiple alkaline fens, a *Sphagnum* mat and bog community, marsh and open water. Elevation varies from a low of 1460 feet above sea level on Butternut Creek to the west to over 2000 feet on five different hilltops. Owned by the Peterson Family Charitable Trust (PFCT) but jointly managed by the SUNY Biological Field Station, and protected by conservation easements, much of the wooded lands are managed for forest products under NYS 480a forestry management plans. Infrastructure on the site includes a conference center, classroom space, a wet laboratory, handicapped access bathroom facilities, trailhead shelter and storage areas. Offices, a conference room and a graduate student living space are available in a renovated 1850's farmhouse. A small log cabin, provided with full utilities, is available for short stays for student and faculty researchers.

The Cranberry Bog is the centerpiece of the Conservancy, surrounded by large areas of forested land, old meadows and agricultural lands available for a diversity of educational and research activities. There are more than twenty-five ponds, streams and wetlands of various sizes. These range from beaver impoundments to manmade ponds with maintained dikes. Collectively they form a diverse mosaic of more than 125 acres of wetlands. Cooperative efforts with the US Fish and Wildlife Service, Ducks Unlimited, Trout Unlimited, the Delaware Otsego Audubon Society, the USDA Natural Resource and Conservation Service, NYSDEC and PFCT are in progress to improve and protect existing wildlife and plant habitats.

SUNY Oneonta (SUCO) is a public four-year liberal arts institution with an enrollment of approximately 5,600 full and part-time undergraduate students, offering 69 undergraduate majors and 64 minors, four pre-professional programs and 16 cooperative programs with other institutions. Master's degrees in lake management, biology, earth sciences, history museum studies and education are offered (total graduate enrollment of 151 in Fall 2011); however, SUNY Oneonta serves primarily undergraduates. For fall 2011 admissions, 12,341 freshman applications were received; the acceptance rate for the 2011/12 incoming freshman class was 43 percent; the incoming class had a mean high school GPA of 91 and combined SAT scores of 1130. SUNY Oneonta enjoys success within its tier of SUNY colleges in competing for high school students with an interest in biology or environmental sciences. Over the past decade,

undergraduate enrollment in these programs (including secondary education majors, who are required to major in both education and biology), all of which heavily utilize the Biological Field Station has more than doubled (from 197 in spring 2000 to 565 in fall 2011).

The SUNY Oneonta Biological Field Station is located approximately 13 miles east of Greenwoods Conservancy in Cooperstown. It integrates teaching, research and public service by providing research opportunities for students, faculty and visiting researchers; advanced training for science teachers; programs for school children; and preservation of several natural areas that contain a rich diversity of habitats and ecosystems. The BFS originated in 1967 with a 365 acre gift from the Clark Foundation, plus a site for the Main Laboratory on Otsego Lake, which was built in 1971. Since then additional properties, including the privately owned but jointly managed *Greenwoods Conservancy*, have grown to encompass 2,600 acres in five parcels. All the latter are protected from further development with utilization restricted to a planned program of research and education in perpetuity through conservation easements. All have been posted and have had trail systems developed for access of those involved in research programs and educational offerings. Some parcels have a long history of utilization for the benefit of the liberal arts academic programs at the SUNY College at Oneonta. They have been, and continue to be, under various management regimes for those purposes. They include activities to take advantage of unique natural and culturally impacted attributes of these sites and to protect their ecological character and biotic diversity for the benefit of the College and the community.

The partnership between Greenwoods and the Biological Field Station is designed to protect and sustain the character and quality of the environmental resources and to conduct research and education to support both the missions of the Conservancy and the Field Station. In order to protect native biodiversity in Cranberry Bog we are attempting to reduce disturbance in the watershed by maintaining undisturbed forested buffers adjacent to it. Personnel are restricted to chiefly upper level undergraduates, graduate students and faculty. Access to the Bog is restricted to small watercraft maintained on site to preclude the incidence of exotic introductions.

In general, research, while focusing primarily on understanding natural processes, also contributes to advances in technology and its application, leading to solutions for environmental problems. We encourage a wide range of basic research in ecology, animal behavior, systematics, biological diversity, exotic species management and control and other areas. Long-term research, some projects spanning decades, is possible because study sites are in conservation easement protected areas. Through such comprehensive research, scientists can distinguish human disruption of ecosystems from natural conditions. Natural areas that contain a rich diversity of natural habitats and ecosystems are maintained so that flora and fauna, including rare and endangered species, are maintained for future generations.

Education at Greenwoods provides students with “hands-on” training in all phases of research, valuable problem-solving skills, and a greater appreciation for environmental problems. The relaxed atmosphere and informal interactions between students and scientists enhance the

learning process. Our students participate in actual research activities that are carried on by our staff and visiting researchers. This approach is designed to integrate our research and instructional functions into a single coordinated effort addressing environmental problems of regional concern.

At Greenwoods, the Biological Field Station and SUCO faculty have the laboratory space, equipment and supplies necessary for a wide variety of research projects. We look forward to an even greater intensity of utilization of these unique natural resources in the future.