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# The Robert B. Gordon Natural Area for Environmental Studies

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## **THE ROBERT B. GORDON NATURAL AREA FOR ENVIRONMENTAL STUDIES**

Erika Szonntag (Biology, 2010), Editor of Gordie News

The Robert B. Gordon Natural Area for Environmental Studies (GNA) is West Chester's finest ecological treasure; it is the last public land link to Penn's Woods and is home to 500 identified plant, fungal and animal species. The GNA, located on the university's South Campus, stands as a monument to West Chester University's stewardship of the environment and its commitment to a sustainable future.

The areas which are now the GNA were first considered for preservation in December of 1971 by the WCU Board of Trustees after they heard a student's research presentation on the forest. It was formally recognized and dedicated on November 10, 1973 by the Board. The 150 acres (proposed) of land, named in honor of WCU Professor Robert B. Gordon, serve for the purposes of education, research, and the protection of biodiversity.

The GNA is a significant piece of land to Chester County, a region that has lost 25% of its total tree cover in the last 15 years. In addition to being a haven for so much flora and fauna, the GNA provides many ecosystem services. For example, the area is considered a *carbon sink* – any forest or ecosystem that absorbs carbon dioxide from the atmosphere like a sponge, potentially offsetting CO<sub>2</sub> emissions- and helps retain and purify ground water.

Since being established in 1973, the preserve received no formal funding until October 2006. General upkeep was done by the WCU Grounds Department but was otherwise neglected; signs of ecosystem degradation became apparent because of the ever-increasing deer population, non-native invasive plant species, trail bikers, and excessive storm water runoff. Thus, in 2004 the WCU Biology Department received a President's Initiative Grant to identify threats and create the framework for a science-based management plan. Parts of the GNA were divided into management units, and some of the activities were funded by the WCU Environmental Council. From January 2002 through September 2006 volunteers assisted in the maintenance of the GNA, and in October 2006 the Administrative Budget Committee funded a pilot project to implement the management plan. The pilot project has been renewed for a second year and will expire in July 2008. The goal is to have the GNA program become a permanent budget line item so that protection, restoration, and enhancement of this rich natural area preserve can continue well into the future.

Although funding and attention for the natural area have increased, the threats to species and ecosystem composition have not been completely ameliorated. Too many deer, too many non-native plant species, and excessive storm water runoff are still main concerns. Vegetation and other animals competing for the same space cannot keep up with the large deer population, for example. Some "area sensitive" bird species include the oven bird, scarlet tanager, and wood thrush; the four-toed salamander is also in decline. If non-native/invasive plants are left to thrive, it is projected that 75 years from now they will

choke out virtually all the native vegetation, leaving perhaps as few as 20 plant species (most of which will be non-native).

For years, the GNA has been an important site for several research projects, including a long-term (35 years) plant succession study and several Masters' theses. The fresh support from WCU and the recent surge in external funding, however, have catalyzed new research programs to handle the mounting threats to the GNA. These programs including studies on forest health (funded by the USDA Forest Service), deer's impacts on vegetation (in cooperation with Henderson High School and funded by the Chester County Conservation District and the Audubon Society), stream quality assessment (Pennsylvania Sea Grant Program), effects of garlic mustard on native vegetation (The Center for Invasive Plant Management at Montana State University), salamander ecological study (Provost Office) and deer/non-native invasive plant demonstration areas (funded by the PA DCNR, Wild Resources Program). Also, two work days per year are scheduled during which volunteers do trail maintenance, trash clean up, removal of invasive plants, and other labor-intensive activities to improve the GNA. With continued research and involvement, it is very possible to prevent further ecological decline, reverse the effects of non-balanced species populations, and maintain the Gordon Natural Area's intrinsic beauty and ecological value.

In addition to being "an outdoor teaching laboratory", the GNA is a popular place for outdoor recreation for students, faculty, staff, and local residents alike; the Kenyan running team frequently uses the trails to train! The Robert B. Gordon Natural Area is an idyllic alcove for those who seek a retreat from the daily hustle and bustle of West Chester, and it is our hope to continue preservation of this ecological treasure for years to come.

**Web site:** <http://darwin.wcupa.edu/gordon/>

**Official Newsletter:** Gordie News

See us on the Billion Tree Campaign Site:

<http://www.unep.org/billiontreecampaign/photoGallery/indexNorthAmerica.asp>

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