

**Department of Biological Sciences
COLLEGE OF ARTS AND SCIENCES**

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: March 1, 2013

The Department of Biological Sciences is pleased to offer the following research project for the summer of 2013. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and, if possible, develop a timetable for the twelve-week research period.

**PROJECT TITLE: Impact of Plant Species Richness on Plant Productivity
in Green Roof Plots**

**Professor Ishi Buffam
Departments of Biological Sciences/Geography
1405 Crosley Tower
Cincinnati, OH 45221-0006
Tel: (513) 556-9745
Fax: (513) 556-5299
Email: ishi.buffam@uc.edu**

Project Description

The Biodiversity-Ecosystem Function hypothesis states that as the biodiversity of an ecosystem increases, its ecosystem function also increases. There is often increased functionality (measured by increased productivity and increased resource use) as biodiversity increases (measured by species richness). This hypothesis has been tested in natural ecosystems but only a few studies have included testing engineered ecosystems, like green roofs. Our research seeks to determine if increasing the plant species richness of a green roof would increase plant productivity. This project will involve a combination of field work (measuring plant growth, recording plant cover, and taking pictures for analysis) and lab work (analysis of plant cover, weighing plant biomass, and calculating plant productivity). The project will be carried out under the supervision of Kate Johnson, a graduate student in our research group. An organized, responsible, self-motivated individual with analytical skills will be a good fit for this project. Experience with, and interest in, vegetation ecology or botany is also a plus.