

USDA Forest Service, Northern Research Station Philadelphia Field Station – Sustainable Science Fellowship Application 2015

Purpose

The fellowship program is intended to promote environmental literacy and collaborative learning activities while increasing the number of new scientists and promoting career opportunities in urban forestry.

During 2015, the Philadelphia Field Station in partnership with the University of Pennsylvania and Pennsylvania Horticultural Society will be awarding three fellowships to currently enrolled students interested in exploring research in collaboration with Forest Service scientists and local organizations. Fellows will be expected to be stationed at the Philadelphia Field Station between April and August 2015 while working on the project in collaboration with Forest Service scientists. The fellowship projects listed below are part of larger research projects and are intended to complement and support long-term research agendas.

Applicants with a broad range of disciplinary backgrounds will be considered, including geography, entomology, anthropology, ecology, plant pathology, forestry, horticulture, environmental sociology, planning, and natural resource management. The fellowship is a one year program but most of the work is expected to happen during the summer. Fellows are expected to work at the Field Stations for 12 weeks, though there is flexibility based on the awardees' schedule and the project. During the remainder of the year, students will continue any remaining data analysis or writing required to meet their goals (e.g. publication or poster presentation). For most of the projects, fellows will not be required to have a car but they will need to have a valid driver's license and be able to drive safely.

The fellowships are open to currently enrolled undergraduates and graduate students. Applications are due by April 3rd, 2015.

2015 Fellowship Projects

Land Use Change and FRAME

1. Landscape legacies for forest fragments in urbanized areas

How do biophysical and socioeconomic forces shape urban forest canopy cover and forest structure over time scales of decades to centuries? This research project is about the development of urban forests through time, specifically, forest fragments in suburban Delaware and Pennsylvania (the FRAME sites). The student would be responsible for compiling and analyzing historical records (including aerial photointerpretation, development records, and landscape plans) to describe how and why the landscape changed over many decades. This project would be appropriate for students interested in GIS, landscape ecology, and landscape architecture, and may involve a mix of quantitative and qualitative

analysis. This student would need to spend some of his/her time at the University of Delaware in Newark.

2. Monitoring effects of emerald ash borer in Philadelphia

The student will help design a research project to evaluate the impacts of emerald ash borer (EAB) in Philadelphia. The city's Department of Parks & Recreation has an inventory of ash trees focused on those trees expected to become hazardous to targets in the watershed parks (e.g., trees along major trails) as well as developed parks (e.g., neighborhood parks, recreation centers). The management plan calls for removal of many trees, as well as treatment of some specimen trees. The student will help design a project that looks at the natural regeneration occurring at the different site types. This student will be expected to travel throughout the city to look at plot locations. Study objectives and methods will be finalized in consultation with local park managers. Relevant skills include field ecology experience and plant ID.

3. Urban Youth Engagement in Nature

This project focuses on evaluating the impact of different kinds of environmental education activities in natural spaces on urban youth. We are interested in knowing how a person's perspective impacts their experience in nature, whether different kinds of activities have different outcomes (e.g. structured vs. unstructured play), and how family attitudes about nature impact the experience students have in nature. This student would be assisting with interviews and literature searches. Relevant skills include ethnographic methods and writing.

4. Fellows Choice

While several of the fellowships being offered are for specific research projects, one Fellowship may go towards supporting a student's independently developed project. This student will be expected to spend some time at the Philadelphia Field Station between April and August 2015 to benefit from mentoring and partnership opportunities. As part of the application, students interested in this open fellowship will need to write a two page project proposal describing the research question and the need for the research.

Application Requirements

Applicants must be currently enrolled in an academic institution. Undergraduates and graduate students are welcome and encouraged to apply. Applicants need to submit:

1. A CV or resume,
2. Two letters of recommendation (one of which should be from a faculty member at your institution who can provide guidance during this fellowship),
3. A statement of interest describing which project you would like to apply for, what you hope to learn from this fellowship, why you are interested in this topic, and how this fellowship fits into your professional or academic goals.

4. If you are submitting an application for a project other than one of the existing projects include a project proposal describing a research question, an explanation of the need for this research, and a description of how the funds will be spent.
5. A brief description of how you will communicate your work to others (e.g., blog, twitter, presentation, poster, publication) and what kinds of outreach efforts could be applied to the project (e.g., work with high school teachers and students, present at a conference, present at public a forum, create a web tool).

Your application must be submitted by e-mail to sclow@fs.fed.us or by mail or in person at the Philadelphia Field Station at 100 N. 20th Street, Philadelphia, PA 19103 by midnight on **April 3rd, 2015**.

Expectations for Fellows

- *Exploring* – Each fellow should expect to conduct and provide a literature review related to their project.
- *Researching* - Develop your own research questions and project within the framework of an existing project. Fellows are expected to spend time at the Philadelphia Field Station and to attend occasional field station team meetings.
- *Contributing* – Each fellow is expected to spend some time working with their mentors on data collection. This may vary considerably for each project, but students should expect to commit up to 100 hours over the course of one year working with Forest Service scientists and partners. These interactions will serve as an opportunity for fellows to develop relationships with researchers and practitioners in their area of interest.
- *Sharing* – Develop a poster presentation for use at conferences and Field Station programs. We encourage students to try to publish their results and we will help support that if your results lend themselves to publication.

What you can expect from USDA Forest Service and our partners?

- *Funding* - \$5,000 Fellowship award (most of which to be dispersed between June and August of 2014 and 10% to be held until the completion of a poster).
- *Mentoring* - Mentorship from Forest Service scientists and help with project visibility and career development. Mentors will also help with developing research questions and communicating your experience and work to others.
- *Linking* - Access to local organizations, community groups, and practitioners.