Citizen Science and Urban Tree Monitoring Concentration

Purpose

The fellowship program is intended to promote environmental literacy and collaborative learning activities and increase the number of new scientists, as well as promote career opportunities, in urban forestry. This fellowship program is a result of a partnership with Pennsylvania Horticultural Society and the University of Pennsylvania. Additional partnerships have been involved in the development of these projects and will play key roles in supporting the selected fellows.

The student selected for the “Citizen Science and Tree Monitoring” Fellowship will be expected to work at the Philadelphia Field Station from approximately early June through late August of 2014. During this time, the student will be expected to do some of the following (the details will be adjusted depending on the student’s interests):

- The student will assist in the pilot testing of urban tree monitoring protocols for practitioners and citizen scientists. The project will analyze the accuracy and consistency of urban forestry field observations by individuals of varying training levels, and quantifying error rates for various components of field data (e.g., species, stem diameter). Pilot testing will also involve recording the length of time required for field work, and making suggestions for quality assurance and data validation procedures to minimize field observation errors. The student will collect field data on public trees, coordinate minimally trained volunteers to collect the same data, and compare consistency and accuracy of the observations.

- The student will evaluate the various mobile apps currently available for urban tree data (including TreeMapPhilly, rePhoto, and others) and assist in the planning and development of new technologies for urban tree monitoring by citizen scientists.

- The student will conduct an exhaustive literature and web search on observation error and data collection platforms in citizen science data for ecological monitoring. These references will then be compiled into a reference matrix, which will be used by researchers in writing a literature review. This reference matrix is an organized table documenting common themes, methods, and results across the studies. Depending on the students’ level of experience, s/he could also potentially contribute to the writing of the literature review. Many relevant articles have already been identified, and the student will find additional candidate articles by exploring the citations within those articles, as well as employing bibliographic search engines and investigating websites of prominent citizen science projects.
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 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. 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 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 11th, 2014.

Important Dates

- Application Announcement: March 3rd
- Application Due: April 11th
- Applicants Interviewed: Week of April 14th
- Applicants Notified: April 18th
- Start Date: late May or early June
- Completion Date: The fellowships are expected to be complete by May 30th, 2015, but most of the project is expected to be completed by the end of August 2014

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. In addition, we expect each fellow to share the work that they have done either through a regularly maintained blog, twitter feed, webinar, PowerPoint presentation, or paper.

**What you can expect from USDA Forest Service?**

• **Funding** - $5,000 Fellowship grant (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