Internship Focus: Monitoring New England forests in a changing world - establishment of a Smithsonian ForestGEO plot at the Yale-Myers Forest

Collaborating Institutions/Academic Departments:

- Yale School of Forestry & Environmental Studies
- Smithsonian Forest Global Earth Observatory (ForestGEO)

Advisors:

- Marlyse Duguid, Liza Comita, Mark Bradford, Mark Ashton, Simon Queenborough (Yale)
- Stuart Davies, Sean McMahon (Smithsonian)

Internship type: Graduate

Internship Description:

Forests provide critical ecosystem services upon which humans depend, including carbon storage and biodiversity. Climate change is projected to increase temperatures, shift precipitation patterns, and alter disturbance regimes in northeastern forests of the United States. Understanding how these changes will alter forest composition and function is critical for managing and restoring forest resources. Long-term data on tree growth and survival is essential for predicting and mitigating effects of global change on forest ecosystems, as well as for answering theoretical questions in ecology. We are in the process of establishing a large, fully-mapped forest plot at the Yale-Myers Forest, a 3200-ha research and teaching forest that contains major forest types representative of the region. The goal of this collaborative project is ultimately to add the Yale-Myers site to the Smithsonian’s Forest Global Earth Observatory (ForestGEO) network of forest plots. This network includes research sites and scientists from around the world dedicated to the study of forest function and diversity. Sites in the network all use standardized protocols, which allows for cross-site comparisons and has resulted in multiple, high-impact scientific publications that have greatly advanced both theoretical and applied forest ecology. The graduate student intern will assist with the establishment and monitoring of this new forest plot during a 10-week summer internship. In addition to overseeing data collection in the field, the graduate intern will assist with data management and data analysis. The intern will also have the opportunity to develop and lead scientific papers using the plot data and/or use the data as part of their thesis or dissertation.

Internship Learning Objectives:

1. Become proficient in ecological field research methods, including protocols used by the Smithsonian ForestGEO network
2. Gain experience with database management
3. Learn statistical analysis of spatial data to answer questions about ecological communities and dynamics
4. Gain experience mentoring and managing a field team of undergraduate researchers

Length: 10 weeks in summer

Stipend: $650/week, plus a $300 stipend for travel; Total = $6,800

To apply: Please send an email to Dr. Marlyse Duguid at marlyse.duguid@yale.edu with your name, degree program and expected graduation year, a short paragraph explaining your interest in the internship, and a copy of your CV.

Application deadline: April 1, 2019