

Expense-Paid Summer Internships: Productivity and Nutrient Cycling at Hubbard Brook and Bartlett Experimental Forests

Undergraduates seeking research experience in forest ecology are invited to apply for a 10-week expense-paid internship at Bartlett, Jeffers Brook, and Hubbard Brook Experimental Forests in the White Mountains of New Hampshire.

About the Project: Multiple Element Limitation in Northern Hardwood Ecosystems (MELNHE) is an NSF funded collaboration between researchers at the State University of New York (SUNY ESF), Cornell University, Miami University, the University of Michigan, and the Marine Biological Laboratory. The MELNHE project seeks to examine the limits to forest productivity through the lens of resource optimization theory. This is being studied through replicated, large-scale nutrient additions of nitrogen, phosphorus, and calcium in stands of different ages at three sites. Treatment results will be used to help develop the Multi-Element Limitation (MEL) model and assess nutrient limitation in northern hardwood forests. More information on the project is available at <http://www.esf.edu/melnhe>, including a blog from previous field crews.

Internship Description: Interns will be guided in the design of their research projects and will interact closely with graduate students and senior research scientists. Research projects include tree and understory growth response to nutrient addition, soil respiration, soil parent material identification, leaf litter production, fine and woody litter production, water use (sap flow and soil moisture), and nutrient uptake and mycorrhizal root colonization. Interns will gain a wide variety of skills by assisting in all ongoing projects. Interns have the opportunity to present their results at the annual Hubbard Brook Cooperators Meeting in July.

Interns are provided with shared housing at Bartlett Experimental Forest; tenting is optional. Work days typically begin at 8:00 AM and end at 4:30, but may be shorter or longer depending upon the day's activities. Food is prepared communally by the interns and graduate student researchers, and costs generally run between \$5-6 per day. A stipend of \$100 per week is provided for living expenses.

Desired Qualifications: Ideal applicants will have a strong interest in forest biology, ecology, or biogeochemistry. Undergraduate students and recent graduates will be considered. A positive attitude is important and a sense of humor is a plus. Willingness to work and live in a communal setting is critical. Candidates should be able to perform repetitive tasks with attention to detail in a field setting under adverse conditions. Applicants should be flexible in their expectations, but an estimated breakdown of the summer is: 60% fieldwork, 15% lab work, 10% data management, 15% research proposals and reports of independent projects.

To Apply: Please send a letter of interest, resume, and contact information for three references to Jerome Barner <jcbarner@syr.edu>. Applications will be reviewed in the order by which they are received. The field season will begin on June 1 and ends on August 7; let us know if your availability differs from the given dates. Interviews will be conducted after March 6th.