Technician: Plant-Soil Feedback Effects on Light Gradient Partitioning

Position Announcement Field Experiment Technician: Plant-Soil Feedback Effects on Light Gradient Partitioning

Position description: The Field Technician will co-manage a large NSF-funded field transplant experiment that is focused on interactions among soil pathogens, light availability, and tree species life histories. This project’s main goal is to link two seemingly unrelated and competing mechanisms that have been proposed for tree species coexistence (e.g. how tree species respond to light availability and how tree species respond negatively to increasing density or nearness of other individuals of the same species). Research will incorporate both field and laboratory work. Specifically, the Field Technician would work collaboratively with a graduate student to oversee a large project with 4-5 undergraduate students, 2 high school students, and others.

Some of the tasks include the collection of intact soil cores from particular tree species in a forest, planting of seedlings into these cores and heeling them into the field plots. Additionally, seedlings will be monitored for health and survivorship in the field and seedlings that are harvested will be assessed for a variety of functional traits in the laboratory, including: assessment of mycorrhizal colonization on seedlings roots, the use of DNA extraction kits to isolate fungal organisms that have colonized seedlings roots, quantifying lignin and phenol concentration in plant cells. The division of oversight responsibilities between the field technician and graduate student will depend on the respective skills that they bring to the project. Preference will be given to individuals with experience in supervision / project management and both ecological field and laboratory work with plants. Position is available for 1 field season (April - August 2017), with the potential for extension, contingent on satisfactory progress and funding.

Qualifications:

- Experience in supervising a field crew and working in a collaborative environment
- Project management experience
- Significant coursework in ecology, plant biology, or related field
- Strong written and verbal communication
- Experience with Microsoft Excel
- Follow protocols precisely, attention to detail
- Problem solving skills/creativity
- Ability to work independently for full days
- Ability to manage multiple tasks and meet deadlines
- Ability to mentor undergraduate research assistants (April-August)
- Willing to occasionally work long hours, and weekends
- Ability to work in hot and humid conditions, with biting insects
- Interest in both outdoor and laboratory settings

Preferred Qualifications:

- Bachelor’s degree in natural sciences, or related field
- Research experience involving fieldwork in biology, environmental science, or related fields.
- Research experience involving laboratory work in biology, environmental science, or related fields.
- Data management and analysis skills
- Experience with ArcGIS
• Experience working/repairing small engines (e.g., lawnmower, leaf blower, chainsaw) for maintenance and trouble-shooting in-field repairs of soil sampling machines.

Working Conditions:
The position will be both field (including some hot and humid weather) and laboratory based. Field conditions include the need for carrying up to 40 lbs. for short distances, likely getting quite dirty when extracting soil samples, exposure to uneven terrain, insects and allergens. There is a field station with air-conditioning, bathroom with shower and kitchen within 10 minutes of all experimental field plots.

Location:
Fieldwork is located at Alma College Biological Station, Vestaburg, MI. Neumann lab location: Department of Biology at Alma College in the DOW Sciences building in Alma, MI.

Compensation:
Wage is $15/hour for 40 hours per week from April-August, with potential for extension, based on performance and funding.

Apply:
Email as one PDF: 1) a 1-page letter of interest detailing qualifications for the position and the dates/times of availability, 2) resume/CV with contact information for 2 references, 3) unofficial transcripts. Email: Dr. Sarah Neumann, Department of Biology, Alma College: neumannsm@alma.edu

Deadline:
Applications will be considered until March 24, or until the position has been filled. Applicants are encouraged to apply as early as possible.