Postdoctoral Fellowship in Soil Insect Biogeochemistry and Microbiology

The Soil Insect Ecology Laboratory at Purdue University seeks a postdoctoral fellow to advance ongoing research focusing on the biogeochemical dimensions of the invasive, soil-dwelling larval stage of the Japanese beetle (JB). The successful candidate will work as part of an interdisciplinary team of scientists exploring the impact of insect invasion on soil C/N cycling, microbial communities and soil organic matter dynamics as part of a USDA-NIFA-AFRI funded collaboration between Purdue University and the University of Wisconsin. This is a full-time, 2-year appointment based in West Lafayette, IN.

The objectives of the project are to:
1) Quantify the impact of JB on soil CO2 and N2O flux and explore how JB influences the quantity and quality of soil organic matter.
2) Explore linkages between soil organic matter and JB feeding strategy using a microscale forensic organic geochemical tool to examine JB gut contents and soil particulate organic matter.
3) Quantify changes in soil microbial diversity (bacteria, archaea, and fungi) associated with JB invasion, and quantify microbial genes associated with soil C and N cycling.

The successful candidate will work with Drs. Douglas Richmond, Michael Scharf, Ronald Turco, and Timothy Filley at Purdue University, and Dr. Chris Williamson at the University of Wisconsin.

Responsibilities:

- Work with Principle Investigators to establish field sites and sampling regimes in Indiana and Wisconsin.
- Lead field and laboratory efforts to related directly to objectives 1 and 3
- Develop and present (written and oral) products suitable for scientific audiences explaining the purpose and results of project.
- Create scientific manuscripts based on research that are suitable for publication in soil ecology and entomology journals.
- Participate in scientific meetings and engage with colleagues and collaborators pursuing related research questions.
- Provide guidance and assistance to technicians, students, and others carrying out related work.

Preferred Qualifications:

- A Ph.D. in Entomology, Microbiology, soil Ecology or related fields (Ph.D. required).
- Experience designing, organizing, and managing ecology projects involving insects, soil or microbes.
- Expertise and experience in high throughput sequencing of microbial genes, shotgun metagenomic analysis and other bioinformatics approaches.
- Strong interpersonal and communication skills and the ability to work with a large interdisciplinary
Preferred start date is early Summer 2018 or sooner. The salary is set at $48,900 per year plus benefits. Interested applicants should submit a single pdf composed of cover letter, CV, and names and contact information for 3 references to drichmond@purdue.edu by March 1, 2018. Please use the subject header “JB Post-Doctoral Fellowship”. The cover letter should include (1) a summary of the applicant’s research and analysis experience (2) the applicant’s earliest possible start date.