

**Academic Job Description  
Department of Entomology  
Post Doctoral Associate**

**Position Function**

This is a postdoctoral associate appointment in the Soil Arthropod Ecology Lab within the Department of Entomology, Cornell University, Cornell AgriTech, Geneva, NY 14456. Anticipated start date for the position is Summer-Fall 2018.

Soil dwelling arthropods are diverse, and their populations are distributed heterogeneously. Current methods for detecting and monitoring of soil arthropods are expensive and labor intensive for pest managers and scientists alike. The primary objective of this position will be to develop a method for using bioacoustic techniques for detecting soil-dwelling invertebrates and for distinguishing acoustic signals generated by root-feeding pests, ecosystem engineers, and decomposers. The project will entail working in the field and lab with bioacoustics equipment to characterize acoustic signals from field populations and to establish laboratory soil arenas with distinct arthropod composition to evaluate how acoustic signals change under changing soil animal structure.

**To apply for the position, forward a CV and list of three references to Kyle Wickings, kgw37@cornell.edu.**

**This is a one year term appointment with possible extension for a second year dependent upon successful performance.**

**Anticipated Division of Time**

**Field and Laboratory Research Support: (70%)**

- Conduct independent and collaborative research support under the general direction of PI, to design and carry out experiments on bioacoustics monitoring of soil animals
- Conduct analyses of soil animal composition and distribution along with measurements of bioacoustics signals from experimental lab arenas and field soils
- Contribute to ongoing field and lab experiments where appropriate.
- Collect and analyze data.
- Write manuscripts as lead and co-investigator.
- Publish results in peer reviewed journals

**Lab, Greenhouse and Growth Chamber Support/Equipment Operation and Maintenance: (20%)**

- Operate and maintain analytical laboratory equipment.
- Assist with maintaining sanitary conditions in lab space.
- Assist with the overall efficiencies and organization of the lab.
- Carry out greenhouse and growth chamber-based experiments on soil dwelling insects.

**Temporary Staff Support: (5%)**

- Provide general training and assistance to temporary service technicians in lab including helping technicians find supplies and ensure that technicians are following research and safety protocols.

**Safety Requirements and Personal and Professional Development: (5%)**

- Strictly adhere to all safety protocols, in compliance with prescribed safety standards, including attending all required safety training. Direction and training are provided by the Cornell Office of Occupational & Environmental Health in the College of Agriculture & Life Sciences.
- Ensure disposal of greenhouse/laboratory waste in strict compliance with safety protocols.
- Keep areas free of safety hazards.
- Continuously seek out and obtain training to enhance position performance.
- Regularly take advantage of workshops and programs to further develop experience and skill level.
- Through staff meetings provide input into research projects based on observations and experiences in the greenhouse, laboratory and field.
- Various other duties as assigned.

**Requirements**

Ph.D. in entomology, ecology or related discipline. Experience working with invertebrates (preferably soil invertebrates) in field and laboratory settings. Demonstrated experience and strong publication record in entomology, ecology or related field.

Background and interests in bioacoustics, soil ecology, biogeochemistry, plant-insect interactions, and managed ecosystems is also desired. Candidates with experience applying bioacoustics techniques in any natural system are strongly encouraged to apply.

**Supervision Exercised**

Provide general training and assistance to temporary service technicians in lab including helping technicians find supplies and ensure that technicians are following research and safety protocols.