Purdue University
Department of Entomology
Undergraduate Capstone
Project Summary

Name of Student:

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Project Title:

Inventory of Arthropod Fauna of Wetland Moss

Project Summary:

While there are numerous studies of arthropods found in the soil, decaying vegetation, forest floor duff, and other similar habitats, little information exists on the arthropod fauna associated with moss. Thus, this study was conducted to provide preliminary information on the arthropods found in moss. The study site was a marsh located at Purdue Wildlife Area located west of campus on S.R. 26. I collected four samples of moss from the edge of the marsh, each sample was approximately the size of the palm of my hand, roughly 8 cm x 10 cm. I took two samples in late fall, Oct. 30, 2007 and Nov. 5, 2007, and two samples taken in late spring, June 6 and 25, 2008. Samples were returned to the laboratory and were placed in a berlese funnel for three days to extract arthropods and other organisms. Fauna collected from the samples were sorted, grouped, and identified to specific taxa. Many individuals were cleared with lactophenol and mounted on glass microscope slides using polyvinyl alcohol (PVA) medium. Each individual was identified to family; some individuals were identified to subfamily. An inventory was made of all individuals and documented using Excel spreadsheet.

There was much diversity in this microhabitat. The dominating fauna are the Acarina, which made up roughly >50% of all samples extracted. Other herbivores and detritivores were the second most abundant fauna which were Heteroptera and Collembola. Fauna present in this microhabitat exhibit low mobility and low sclerotization because of environmental restrictions. This habitat may also serve as an overwintering habitat for some fauna. For example, Aphididae were present in large numbers in the fall and were almost absent in the spring samples. Future studies should include identification of specimens to species level and to collect additional samples throughout the year.