Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Investigation of Nematode Diversity using Scanning Electron Microscopy and Fluorescent Microscopy[1] TAYLOR SEACOR, CARINA HOWELL, Lock Haven University — Nematode worms account for the vast majority of the animals in the biosphere. They are colossally important to global public health as parasites, and to agriculture both as pests and as beneficial inhabitants of healthy soil. Amphid neurons are the anterior chemosensory neurons in nematodes, mediating critical behaviors including chemotaxis and mating. We are examining the cellular morphology and external anatomy of amphid neurons, using fluorescence microscopy and scanning electron microscopy, respectively, of a wide range of soil nematodes isolated in the wild. We use both classical systematics (e.g. diagnostic keys) and molecular markers (e.g. ribosomal RNA) to classify these wild isolates. Our ultimate aim is to build a detailed anatomical database in order to dissect genetic pathways of neuronal development and function across phylogeny and ecology.

[1]Research supported by NSF grants 092304, 0806660, 1058829 and Lock Haven University FPDC grants

Taylor Seacor
Lock Haven University

Date submitted: 09 Nov 2012 Electronic form version 1.4