Many animals have independently evolved small body size for a number of ecological reasons. However, these reasons and the effects of miniaturization are still poorly understood. Stingless bees, a diverse group of highly social bees found throughout the world’s tropical regions, have evolved miniaturized bodies in several lineages; yet tiny bees must learn and perform many of the same behavioral feats as large bees. They are an ideal group of organisms for studying how evolutionary changes in body size can impose limitations on physiology and behavioral ecology. Current research is aimed at documenting body size differences among stingless bee species and determining how eye and antennal sensory structures scale with body size. This will be combined with assessment of brain anatomy, metabolism, and behavioral analysis to determine if and how very small organisms are limited by their size.

Applicants should have a general background in biology and an interest in physiological, evolutionary, and/or behavioral ecology research. Student responsibilities will potentially include bee identification, morphological measurements, dissection, and video behavioral analysis. We’re looking for someone who is excited to learn about bee behavior and insect evolution as well as microscopy methods. You will have the opportunity to contribute to peer-reviewed publications and may be given the opportunity to assist with field work and collections in the future. You are expected to work 10-12 hours per week but should also do some background reading in addition to lab work. There is potential for development of longer term work on a particular aspect of the project of student interest. It is also possible to receive course credit for your contributions.

Interested students should send a one page statement about your academic goals, interests, and research experience with a resume by email to one of the following people:

Meghan Duell
Animal Behavior Ph.D. Student
School of Life Sciences
meduell@asu.edu

Dr. Brian Smith
Professor & Director
School of Life Sciences
BrianHSmith@asu.edu

Dr. Jon Harrison
Professor
School of Life Sciences
j.harrison@asu.edu