

SOP 08: Lab Instruction for ENT 432

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Introduction

This SOP document outlines the (primary) responsibilities of the teaching assistant (TA) for Insect Biodiversity and Evolution (ENT 432). The main purposes of the lab in this course are to:

1. Teach students basic insect morphology
2. Teach students insect preparation techniques
3. Teach students how to diagnose insect specimens to family
4. Provide opportunities for students to observe specimens

Lab Workflow

Here is an example workflow for a typical taxon/specimen-oriented lab:

1. TA spends several hours familiarizing him-/herself with material in the lab handout prior to lab.
2. Prior to the start of lab the TA makes sure all materials, supplies (see appendix), and specimens are assembled and ready. Students are responsible for setting up their microscopes and arranging their workspaces.
3. TA opens the lab with 15 minute introduction to the lab. For each taxon covered the TA should mention the natural history (1–2 sentences), the important diagnostic characters, and any special considerations that need to be made with our specimens (e.g., how they're prepared, how they should be handled). Use the whiteboard or a slideshow to explain characters we anticipate will be difficult for students to understand.
4. TA and other instructors avail themselves for the duration of lab, in case students have questions. Expect to walk around the room engaging each student at least once during the course of the lab.
5. As the lab comes to a close the TA reminds students to take 5 minutes to put their microscopes away and to clean their work stations (NOTE: Glycerin is a nuisance but can be cleaned up with water and paper towels!)
6. At the end of lab, the TA inspects specimens, reports any issues to the instructors, and puts them away. All materials and supplies are put away.

Rules

The TA is expected to explain and enforce the rules of the lab:

- Lab starts on time
- No shorts/skirts/exposed legs (lab safety issue)
- No open-toed shoes (lab safety issue)
- No eating or drinking (lab safety issue)
- Microscope must be carried with both hands
- Don't leave early! If a student finishes the lab material early s/he is advised to work on his/her collection or study for the next lab practical
- Any damage or other issues must be reported to the instructors immediately
- No Deans Lab or Frost Museum equipment and supplies can be used for ENT 432. No exceptions!

Appendix. Materials and Supplies Required

1. Ethanol - at least 4 squirt bottles of 80% ethanol should be provided (and properly labeled); a waste ethanol container should also be available
2. Glycerin - a jar of glycerin, along with eye droppers or other means of dispensing
3. Tools - soft and hard, fine-tip forceps, as well as probes or insect pins
4. Dishes - Petri dishes and/or watch glasses should be provided, at least one per group
5. Foam blocks - for pinned specimen handling; avoid cork!
6. Cleaning supplies - at least 4 squirt bottles of distilled water should be provided, alongside a cornucopia of paper towels. These supplies will facilitate the removal of glycerine and other residues.