

Insect Collection Requirement

Goals:

1. To promote the ability of independent collection, curation, and identification (to a taxonomic level below family for part of the samples) of insect specimens.
2. To promote the ability of independent scientific work and inquiry. It is possible that the collection could help to formulate new research questions in the student's area of interest.

Description:

The scope, format, and theme of the collection are open and subject to the creativity of each student in consultation with major advisor. Students will have to submit a short expose (1/2 page) outlining their plan for the collection that has to be approved by the instructor of the taxonomy portion of the insect diversity course. There will be no fixed minimum number of taxa as there will be a trade-off between taxonomic depth of identification and number of taxa. A suggested number for a general synoptic collection would be 20 Orders and 100 families.

Some possible themes:

1. Detailed collection of taxonomic group of particular interest to student (e.g. tephritid flies)
2. Description of the insect community that is associated with a particular host plant (a student who works with a particular insect/plant interaction might be wondering about other insects feeding on the same plant)
3. Comparative collection of insects with adaptations to a particular environment (e.g. different ways of oxygen uptake in aquatic environments).
4. Collection of biocontrol organisms.
5. An overview of insect diversity for teaching purposes.

Each collection should be accompanied by a written description of the results, describing the biological significance of the findings.

Suggested Timetable:

1. Beginning Fall, 2006, all students can take the Insect Field Ecology and Natural History course, which is taught the week prior to Fall classes. Students may start their collection during this course and are taught the basics of collection, preservation, and curation techniques, in addition to taxonomy at the order and some major family levels. We also require a team project that requires collection of arthropods associated with given systems, host plants, etc.

2. The new core course includes a taxonomy lab during the first Fall Semester that students are enrolled, where the specifics of the collection can be chosen.
3. Students have the remainder of the academic year and the following summer months to build their collection.
4. Students may elect a second course in Insect Community Ecology and Biodiversity Assessment be taught Fall Semester of the second year where insect taxonomy to family level will be stressed. This provides a reinforcement of taxonomic knowledge in a problem solving setting and will provide additional opportunities to build collections in the chosen system.
5. Collections will be due for grading at the end of this Fall semester. The taxonomy course instructor and the teaching team of the Insect Field Ecology course will evaluate the collections along with major advisor if they so choose.
6. For students currently enrolled under the old core series, their collections can be due for grading anytime prior to the completion of their degree program. Submitting collections in sync with those of other students would assist with timely evaluations.
7. Students who enter our graduate program with a collection made prior to coming here may use these specimens as part of their collection requirement, even if opting (testing) out of the taxonomy portion of the core course.

This timetable provides a calendar year to complete the collection and provides an equitable solution to all students who enrolled under the previous core requirements.

12/6/06