

Aquatic Entomology (PLNTS 4720 / 7720)

Instructor: Robert W. Sites

Credit: 3 semester hours (one 1-hr lecture and one 3-hr laboratory per week)

Prerequisites: Background in a biological science. Entomology background is helpful but not required

Objectives:

- 1) To recognize aquatic stages of major families of aquatic insects on sight.
- 2) To have proficiency with keys to identify genera of most aquatic families.
- 3) To be familiar with the literature to know where to find appropriate identification references.
- 4) To gain appreciation for the remarkable morphological and ecological adaptations and diversity of aquatic insects.
- 5) To understand more about aquatic environments and the constraints associated with living there.

Textbook:

Merritt, R. W., K. W. Cummins and M. B. Berg. 2008. An introduction to the aquatic insects of North America. 4th ed. Kendall/Hunt, 1158 p.

Other Useful References:

Lehmkuhl, D. M. 1979. How to know the aquatic insects. W. C. Brown Co., Dubuque, 168 p.

Mason, W. T., Jr. 1968. An introduction to the identification of chironomid larvae. USDI, Fed. Water Pollution Control Admin., Cincinnati.

McCafferty, W. P. 1981. Aquatic entomology. Science Books International, Boston, 448 p.

Pennak, R. W. 1978. Fresh water invertebrates of the United States. John Wiley and Sons, New York, 2nd ed.

Thorp, J. H. and A. P. Covich. 1991. Ecology and classification of North American freshwater invertebrates. Academic Press, San Diego, 911 p.

Weber, C. I. 1973. Biological field and laboratory methods for measuring the quality of surface waters and effluents. EPA-670/4-73-001.

Williams, D. D. and B. W. Feltmate. 1994. Aquatic insects. CAB International, Wallingford, UK, 358 p.

Spring

Collection:

A properly curated aquatic insect collection will be required at the end of the semester. Proper curation techniques and the requirements for this collection will be discussed in class.

Lecture

Biology, ecology, and identification of major aquatic insect groups will be discussed. Lecture exams will consist of short answer essays and definitions of important terms/concepts.

Laboratory

Time will be spent learning to identify major aquatic insect groups. Lab exams will measure your ability to sight identify major aquatic families and to use taxonomic keys to identify specimens to genus.

Grading:

90-80-70 (A-B-C)

3 lecture exams @ 100 pts each

2 lab exams @ 150 points each

collection @ 300 points

Spring

Tentative Course Schedule

ENTOM 4720 /7720 - Aquatic Entomology

Date	Lecture Subjects	Laboratory Subjects
1	Introduction, Background	Morphology, Collecting, Orders
2	Odonata	Odonata
3	Odonata, Ephemeroptera	Odonata, Ephemeroptera
4	Ephemeroptera	Ephemeroptera
5	Orthoptera, Plecoptera	Orthoptera, Plecoptera
6	EXAM 1	Plecoptera
7	Plecoptera, Heteroptera	Heteroptera
8	Heteroptera	Heteroptera
9	Neuroptera, Megaloptera, Adepahaga	LAB EXAM
10	Break- No Class	
11	Adepahaga & Polyphaga	Neuroptera, megaloptera, Adepahaga
12	Polyphaga, Trichoptera	Coleoptera
13	EXAM 2	Trichoptera
14	Trichoptera	Lepidoptera, Diptera
15	Lepidoptera, Diptera	Diptera
16	Diptera	FINAL LAB EXAM
17	FINAL LECTURE EXAM	

Collections are due by 5 pm on May 4

Academic Honesty:

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about academic honesty in any activity, consult the course instructor. The University has specific academic dishonesty administrative procedures. Although policy states that cases of academic dishonesty must be reported to the Office of the Provost for possible action, the instructor may assign a failing grade for the assignment or a failing grade for the course, or may adjust the grade as deemed appropriate. The instructor also may require the student to repeat the assignment or to perform additional assignments.

Assisting Students with Special Needs:

If you need accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. You may visit with me after class or in my office. To request academic accommodations (for example, a note-taker), students must also register with Disability Services (AO38 Brady Commons, 882-4696). Disability Services is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements.