

AN INTRODUCTION TO FIELD ENTOMOLOGY

BIOL F195, One Credit
UAF Campus, Summer 2009

COURSE INFORMATION

Title: An Introduction to Field Entomology
Number: Biology F195
Credits: 1 Sem. Hr. with P/F grading
Prerequisites: none
Location: University of Alaska Fairbanks Campus and Vicinity, Bunnell 302
Meeting Times: 6-9 p.m. Fri, & noon-6 p.m. Sat. & Sun.
Meeting Dates: July 24, 25, 26th, 2009

INSTRUCTOR: Dr. Derek S. Sikes, Curator of Insects, Assistant Professor of Entomology
University of Alaska Museum, 907 Yukon Dr., UAF
Tel. (907) 474-6278 email: dsikes@alaska.edu
Office hours available by appointment

COURSE READINGS / MATERIALS: Required: Collet, D. 2006. Insects of South-Central Alaska. Kenai Watershed Forum.

Recommended (optional) text/manual: Gibb, T. J. & C. Y. Oseto. 2006. Arthropod collection and identification: Field and laboratory techniques. Academic Press, 311 pp.

COURSE DESCRIPTION: An introduction to field entomological techniques. Emphasized will be professional procedures to collect and process (sort, mount, database & label) non-marine arthropods. The skills necessary to identify most groups to Order will be taught. Students will create a collection from which specimens will be chosen for the University of Alaska Museum Insect Collection and the Teaching Collection.

COURSE GOALS & STUDENT LEARNING OUTCOMES:

1. To learn basic collection techniques
 - net types and uses
 - beating sheets
 - aspirators and vials / killing jars
 - trapping methods, e.g. pitfall traps
2. To understand the roles insects play in Alaskan ecosystems
 - trophic levels
 - ecological relationships (predators, herbivores, parasites, pollinators, etc.)
 - habitat preferences (terrestrial, aquatic, soil, etc.)
3. To contribute to Alaskan Entomological research endeavors
 - provide professionally mounted specimens to the UA Museum Insect Collection
 - barcode and database representative specimens

INSTRUCTIONAL METHODS: An introductory lecture covering insect diversity will be combined with hands-on, instructor-lead, field work to learn methods of sampling insects in the wild. Field captured insects will be brought back to the lab and processed (mounted and identified). The instructor will be constantly available to answer questions during the course.

COURSE CALENDAR:

Friday 24 July 2009

Introductions and enrollment, UAF 302 Bunnell
Lecture
Insect Evolutionary Diversity
 introduction to major insect groups
 Non insect arthropods – Arachnida, Myriapoda
 Apterygota
 Pterygota
 Paleoptera
 Neoptera
 Polyneoptera
 Paraneoptera
 Endopterygota
Insect Ecological Diversity
 Aquatic Insects
 Herbivores
 Predators
 Parasites
 Parasitoids
 Detritivores

Saturday 25 July 2009

FIELD TRIP: noon – 3PM, Creamer’s Field
 field gear – tools of the trade
 leaf litter sifting & Berlese extraction
UAF LAB: 3:15-6:15, mounting and identification of
specimens caught
 field labeling vs. final labeling
 collection care and maintenance

Sunday 26 July 2009

FIELD TRIP: noon – 3PM, place TBA
UAF LAB: 3:15-6:15, mounting and identification of
specimens caught

COURSE POLICIES: Preferably students will attend 100% of the 15 hours of instruction. To receive a pass for this course students must attend at least 60% of the 15 hours of instruction and produce high-quality prepared insect specimens that will be donated to the UA Museum. Knowingly falsifying data (on specimen labels) will result in an automatic “F” for the class.

EVALUATION: Evaluation will be based on mandatory attendance and participation in laboratory and field settings in addition to the completion of a small insect collection that will demonstrate ability to identify and describe the basic ecology at least 20 Insect orders and/or families.

SUPPORT SERVICES: The instructor and course assistants will be available outside of class to help any students seeking additional time with the material.

DISABILITIES SERVICES: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. We will work with the Office of Disabilities Services (203 Whit., 474-7043) to provide reasonable accommodation to students with disabilities. Realize, however, that this is a “field” course and all students must be prepared to meet those challenges.