AN INTRODUCTION TO FIELD ENTOMOLOGY
BIOL F145-F01, One Credit
UAF Campus, Summer

COURSE INFORMATION
Title: An Introduction to Field Entomology
Number: Biology F145-F01
Credits: 1 with P/F grading
Prerequisites: none
Location: University of Alaska Fairbanks Campus and Vicinity, Murie 302
Meeting Times: 6-9 p.m. Fri, & 9a.m.-6 p.m. Sat. & Sun.
Meeting Dates: 26, 27, 28 June 2015
Lecture / Lab: 10h lecture, 9h lab

INSTRUCTOR: Dr. Derek S. Sikes, Curator of Insects, Associate Professor of Entomology
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Office hours available by appointment


ISBN 978-0-939431-38-0

COURSE DESCRIPTION: An introduction to field entomological techniques. Emphasized will be professional procedures to collect and process (sort, mount, georeference & 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 and specimen preparation techniques
   - net types and uses
   - aspirators and vials / killing jars
   - trapping methods, e.g. pitfall traps, Malaise traps, Berlese / Winkler funnels
   - pin, point, paper, pen, glass vial types, sources, preservation dry vs wet
2. To understand the roles insects play in Alaskan ecosystems
   - trophic levels
   - ecological relationships (predators, herbivores, parasites, pollinators, decomposers, anthropophilic, etc.)
   - habitat preferences (terrestrial, aquatic, soil, etc.)
3. To contribute to Alaskan Entomological research endeavors
   - provide professionally mounted & georeferenced specimens to the UA Museum Insect Collection
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**
- Introductions and enrollment
- Lecture (3 hours)
- Insect Evolutionary Diversity
  - Introduction to major insect groups
  - Non insect arthropods – Arachnida, Myriapoda
  - Apterygota
  - Pterygota
    - Paleaoptera
    - Neoptera
      - Polyneoptera
      - Paraneoptera
      - Endopterygota
- Insect Ecological Diversity, Aquatic Insects, Herbivores, Predators, Fungivores, Parasites, Parasitoids, Detritivores
- HOMEWORK: read Collet & be prepared to ask questions, discuss

**Saturday**
- UAF LAB 9AM - 10AM – lecture on label data & geocoordinates
- MUSEUM 10-11AM tour of Insect Collection
- Lunch – on your own, 11-12
- **FIELD TRIP: noon – 3PM, UAF campus overlook**
  - Field gear – tools of the trade lecture
  - Leaf litter sifting & Winkler / Berlese extraction
  - Malaise trap, Lindgren funnel, FIT, pitfall trap, pollinator cups
- UAF LAB: 3:15-6:15, mounting and identification of specimens caught
  - Field labeling vs. final labeling
  - Collection care and maintenance

**Sunday**
- UAF LAB: 9AM – 10AM- lecture on aquatic insects
- Lab work 10AM – 11:30
- Lunch: 11:30 – 1:00
- **FIELD TRIP 1PM-3PM,**
  - “Peat Ponds” Goldstream x Murphy Dome Rd
- UAF LAB: 3:15-6:15, mounting and identification of specimens caught
- Course evaluations 5:50PM
COURSE POLICIES: Preferably students will attend 100% of the 19 hours of instruction. To receive a pass for this course students must attend at least 60% of the 19 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 attendance and participation in laboratory and field settings in addition to the completion of a small insect collection that will demonstrate ability to prepare, 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.