COURSE INFORMATION
Title: Entomology in Field and Lab
Number: BIOL F040
Credits: 0
Prerequisites: None
Location: University of Alaska Fairbanks Campus and Vicinity, Murie 302
Meeting Times: 6-8 p.m. Fri, & 1-6:15 p.m. Sat. & Sun.
Meeting Dates: July 7-9, 2017
Lecture / Lab: 3h lecture, 9h field/lab – NOTE: you will need your own transportation

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

COURSE READINGS / MATERIALS: Recommended (most should be available in the UAF bookstore, Gulliver’s Books, or the UA Museum bookstore):


ISBN 978-0-939431-38-0


COURSE DESCRIPTION: An introduction to building an insect collection. Emphasized will be collection and processing methods needed to build an insect collection. The skills necessary to identify most groups to Order will be taught. Students will create a collection which will broken into three groups: specimens the student can take home, specimens for the University of Alaska Museum Insect Collection, and specimens for 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 (6 – 8 PM)
   Lecture (2 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

Saturday
   FIELD TRIP: 1 – 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
   FIELD TRIP 1 – 3PM,
   “Peat Ponds” Goldstream x Murphy Dome Rd
   UAF LAB: 3:15-6:15, mounting and identification of specimens caught