

SCHEDULE OF LECTURES AND LABORATORIES - EEB 286  
Fall Semester, 2007

- Aug. 28    Introductory: scope of course; characteristics of and survey of arthropods.  
            Lab 1: Survey of arthropods.
- Aug. 30    Basic characteristics, origin, and adaptive radiation of insects; survey of insect  
            relatives and primitive insect orders.  
            Lab 2: Apterygota, Paleoptera and Neoptera.
- Sept. 4     Survey of higher Neoptera (Hemimetabola) and Endopterygota (Holometabola).  
            Lab 3: Holometabola.
- Sept. 6     Insect integument 1: basic features, structure, and chemistry; segmentation;  
            molting.  
            Lab 4: Nature of insect integument: segmentation.
- Sept. 11    Insect integument 2: modifications and derivatives; insect colors.  
            Lab 5: Insect integument, continued: histology and outgrowths.
- Sept. 13    Head of insects: origin, morphology, functional significance of eyes and antennae.  
            Lab 6: Ingrowths of integument (tentorial dissection); external structure of head.
- Sept. 18    Mouthparts and feeding adaptations.  
            Lab 7: Head, continued: eyes and antennae.
- Sept. 20    Basic morphology of the insect thorax.  
            Lab 8: Insect mouthparts.
- Sept. 25    Evolution of the thorax in higher insects.  
            Lab 9: Insect thorax: Apterygota.
- Sept. 27    Legs of insects: locomotory and food-gathering specializations.  
            Lab 10: Insect thorax: basic Pterygota.
- Oct. 2     Origin, function, and ontogeny of insect wings.  
            Lab 11: Insect thorax: modified Pterygota.
- Oct. 4     Thoracic wing-beating mechanism.  
            Lab 13: Wing articulation.
- Oct. 9     MIDTERM HOUR EXAM (tentative date)  
            Lab 12: Legs of insects.
- Oct. 11    Wing morphology: form, articulation, and venation.  
            Lab 14: Wing venation and morphology.
- Oct. 16    Abdomen: external, internal, and evolution.  
            Lab 15: Insect abdomen.

- Oct. 18 Alimentary system: morphology and histology.  
Lab 16: Alimentary tract: internal dissection.
- Oct. 23 Insect foods and digestion.  
Lab 17: Histology of the digestive tract.
- Oct. 25 Excretion and respiration (ventilation).  
Lab 18: Excretory and respiratory systems.
- Oct. 30 Aquatic respiratory adaptations; introduction to circulatory system.  
Lab 19: Circulatory system.
- Nov. 1 Hemolymph and its derivatives, including fat body.  
Lab 20: Insect blood and muscle.
- Nov. 6 Muscular and central nervous systems.  
Lab 21: Central nervous system: internal dissection.
- Nov. 8 Visceral nervous system and neurosecretory processes.  
Lab 22: Histology of the nervous system.
- Nov. 13 Sense organs and associated behavioral patterns.  
Lab 23: Sense organs.
- Nov. 15 Insect songs: Acoustical and vibrational communication  
Lab 24: Sound production and reception

THANKSGIVING BREAK

- Nov. 27 Vision; reproductive system, introduction.  
Lab 25: Reproductive system: internal dissection.
- Nov. 29 Reproductive behavior and fertilization.  
Lab 26: Histology of the reproductive system.
- Dec. 4 Oviposition and embryonic development.  
Lab 27: Embryology and development.
- Dec. 6 Post-embryonic development and metamorphosis.  
Lab 28: Metamorphosis
- Dec. xx FINAL EXAM (tentative date)

READING ASSIGNMENTS -- EEB 286, Fall 2007. In Gillott, C. (1995).

**Complete readings before the approximate date given below:**

- Aug. 30 The Evolution of the Arthropods and Insects.  
Chapter 1 (all); Chap. 2 (1, 2, 4).
- Sept. 4 The Insect Orders: Classification.  
Chap. 2 (3); Chapters 5, 6, and 7 (skim).
- Sept. 6 Insect Orders, continued.  
Chapters 8, 9, and 10 (skim).
- Sept. 11 Structure of the Integument and Coloration.  
Chap. 3 (1, 2); Chap. 11 (all).
- Sept. 18 The Insect Head and Feeding Adaptations.  
Chapter 3 (3); Chap. 16 (1, 2).
- Sept. 25 The Thorax.  
Chap. 3 (4).
- Oct. 4 Locomotory Adaptations: Legs, wings, and insect flight.  
Chap. 14 (3); Chap. 2 (3.1).
- Oct. 11 Migration and Dispersal.  
Chap. 22 (all).
- Oct. 23 The Insect Abdomen: morphology, digestion, and excretion.  
Chap. 3 (5); Chap. 16 (3, 4); Chap. 18 (all); Chap. 23 (2).
- Nov. 1 Respiratory and Circulatory Systems.  
Chap. 15 (all) and 17 (all).
- Nov. 8 Muscular and Nervous Systems; Learning.  
Chap. 14 (2); Chap. 13 (1, 2, 3, 5).
- Nov. 13 Insect Senses and Communication.  
Chap. 12 (all); Chap. 13 (4).
- Nov. 25 Reproduction and Oviposition (including Courtship and Mating).  
Chap. 19 (all).
- Nov. 29 Development, Metamorphosis, Diapause and Hormonal Control.  
Chap. 20 (all) and 21 (all); Chap. 2 (3.3).
- Dec. 4 Offense and Defense; Territoriality; Insects and Plants.  
Chap. 23 (3, 4).