SYLLABUS

Instructor: Paul C. Johnson  
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Office hours: Wed 10:00-12:00 AM; Thu 1:00-3:00 PM

Lectures:  TR 8:10-9:30 AM, DeMeritt Hall 240

Labs:  
Section 01 – W 2:10-4:00 PM, James Hall 140  
Section 02 – W 5:10-7:00 PM, James Hall 140

Required Texts:


General Education Program:  Group III (Biological Sciences)

Discovery Program:  BS DLAB

COURSE ORGANIZATION

Insects & Society serves as a general introduction to the insects with an emphasis on their impact on human society, including our culture. Topics include:

Evolution

Arthropods are among the oldest complex organisms, and insects and related arthropods were the first terrestrial animals. Important points in their evolution and adaptive radiation into terrestrial habitats will be discussed relative to that of the vertebrates. Basic concepts of evolutionary theory will be presented, and the controversy between evolutionary theorists and scientific creationism will be examined.
Life History

The growth and development of insects from eggs to reproductive adults will be examined. An overview of internal structure and function will compare the insects approach to homeostasis to that of vertebrates. Metamorphosis and molting will be emphasized. Dispersal and migration, reproduction, dormancy, and feeding behavior will be included in a general study of insect life history.

Behavior

Armed with a brain with less neural capacity than the average home computer, insects have managed to invade and survive in habitats ranging from the interior of a single seed to pools of crude petroleum. The advantages and disadvantages of instinctive and learned behavior will be explored. Communication (especially visual and chemical), and social behavior will receive particular attention.

Ecology

Insects play critical roles in virtually all terrestrial, and most aquatic, ecosystems. They are also excellent experimental subjects for basic ecological studies, and our attempts to manipulate economically important species depend on application of ecological principals. We will focus on population and community ecology, including general principals and specific examples using insects.

Diversity

There are more species of insects than all other complex life forms combined. They play critical roles in virtually all terrestrial ecosystems from both poles to the equator, and in most aquatic systems. We will examine the nature of this incredible diversity, its origin, and its importance in the success and survival of the insects. General issues of biodiversity will be addressed.

Control

Application of technology and applied ecology to insect control has received both praise and criticism over several decades. The impact of the environmental movement on pest control strategies, combination of tactics into integrated pest management programs, and the economic impact of pests in agriculture, industry and the home will lead to a discussion of risk assessment and the dangers associated with pesticides.

Last modified on October 21, 2015.
**GRADING**

The final course grade will be the percentage of total points that each student earns, based on the following point schedule:

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<th>Points</th>
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<tr>
<td>Exam I</td>
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<td>Exam II</td>
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<td>Exam III</td>
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<td>Lab</td>
<td>100</td>
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<td>Journals</td>
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<td><strong>Total</strong></td>
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**EXAMS**

Two one hour exams are scheduled during regular class meetings, with a third scheduled during our final exam slot. Exams will consist of vocabulary review and short discussion questions. Spelling counts. Discussion questions are designed to allow you to integrate facts into a meaningful presentation of a topic. Your discussion should be concise but thorough, and should consist of several well conceived paragraphs. Illustrations are encouraged where appropriate, but they should not be substituted for text.

**LAB QUIZZES & REPORTS**

Laboratory exercises will supplement lecture material and are an integral part of the course. Grading instruments will include lab quizzes and written reports. Quizzes will test objective knowledge of the material covered in the lab, while reports will test your ability to summarize materials, methods and results of laboratory experiments and demonstrations. Note: Your performance in lab is 20% of your final grade.

**JOURNAL**

Each student will keep a journal of their activities related to NR 410. The journal is intended to encourage regular thought about course material, to reinforce concepts in a non-threatening format, and to foster creative speculation regarding insects and their role in the natural world.

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Your journal will include a variety of dated entries related to course material. Possible entries will include:

1) Essays - Informal essays on topics assigned by the instructor or initiated by the student.
2) Observations - Personal comments on topics related to entomology. These may include summaries of concepts you find particularly difficult, questions you may want to ask the instructor, speculation about the role of insects in our society, etc.
3) Critiques - Critiques of written or visual materials assigned by the instructor or selected by the student. These should include critiques of individual class sessions and teaching techniques (what worked for you; what didn't ...).
4) Trivia - Entomological trivia gleaned from TV, newspaper articles, books, etc. Drawings are encouraged. Your journal WILL NOT be used for taking class notes.

Journal Grading

Specific content of the journal will not be graded, although the quality and appropriateness of your observations, clarity of expression, and number of entries will all be considered in assigning a grade for each of 12 grading periods (10 points per period ... note that this allows for 20 points extra credit).

Your journal pages are due each Thursday at the beginning of the class period, exclusive of examination days. Failure to submit your journal pages for review will result in a zero for that grading period. If absent (excused), you are expected to turn the journal in at the earliest possible opportunity. Graded journal pages will be returned by the next class period.

Journal Format

Record your entries on single sheets (hole-punched, not spiral bound) to facilitate submission for grading. Purchase a loose-leaf notebook to keep your journal pages organized. Each entry will be labeled with the date of entry in the right margin of the page. Title each entry on the left margin of the page with the type of entry being made (Essay, Trivia, Observation, Critique) and note parenthetically if it was assigned in class. You may make multiple entries per page, but use only one side of the paper. Typical entries might look like this.

OBSERVATION 9/25
Crickets are nice in the woods at night, but in your bedroom at 2:30 am they are a pain! Why do they sing? How do you get rid of them?

ESSAY (Assigned) 9/26
Sociobiology attempts to approach the study of social structure in organisms at various levels of complexity from an objective biological point of view. This works well for the "lower" organisms, but when applied by humans to human society...
DISABILITY SERVICES FOR STUDENTS

The University is committed to providing students with documented disabilities equal access to all university programs and facilities. If you think you have a disability requiring accommodations, you must register with Disability Services for Students (DSS). Contact DSS at (603) 862-2607 or visit them in Smith Hall 201. If you have received Accommodation Letters for this course from DSS, please provide me with that information privately so that we can review those accommodations.