Syllabus

Fall 2005

INSECT ECOLOGY
(Ent. 8500/8500L)

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Objective: Highlight insect ecological roles in natural and managed habitats.

Useful References (none required):

Speight, M. R., M. D. Hunter, and A. D. Watt. 1999. Ecology of Insects: concepts and applications. Blackwell Science, London.

Price , P. 1997. Insect Ecology. Wiley, New York.

Schowalter, T. D. 2000. Insect Ecology: An Ecosystem Approach. Academic Press, New York.

Schedule

Wk 1, Aug 22	Introduction
Aug 24	Abiotic Influences
Wk 2, Aug 29	Herbivory 1
Aug 31	Discussion 1, Batzer
Wk 3, Sept 5	Holiday
Sept 7	Herbivory 2
Wk 4, Sept 12	Population Ecology
Sept 14	Discussion 2, _____
Wk 5, Sept 19	Competition 1
Sept 21	Discussion 3, _____
Wk 6, Sept 26	Competition 2
Sept 28	Discussion 4, _____
Wk 7, Oct 3	Predation 1
Oct 5	Discussion 5, _____
Wk 8, Oct 10	Predation 2
Oct 12	Discussion 6, Batzer
Wk 9, Oct 17	Mutualisms, Co-evolution
Oct 19	Discussion 7, _____

Wk 10, Oct 24	Multi-trophic interaction, Community ecology
Oct 26	Discussion 8, _____
Wk 11, Oct 31	Ecosystem Ecology
Nov 2	Discussion 9, _____
Wk 12, Nov 7	TBA
Nov 9	Discussion 10, _____
Wk 13, Nov 14	Exam
Nov 16	Discussion 11, Batzer
Wk 14, Nov 21	Lab presentation prep
Nov 23	Thanksgiving
Wk 15, Nov 28	Lab presentations
Nov 30	Lab presentations

Student led study discussions

Each student will be required to lead 2 paper discussion sessions. For a session, you should select two insect-oriented research papers published in either 2004 or preferably 2005 from the following journals only: Ecology; Oecologia; Oikos; Ecology Letters; or Ecological Entomology (i.e., the latest and the greatest). Provide copies of your papers to the rest of the class one week before your scheduled session. Discussion for each paper should address the following issues:

1. What was the theoretical foundation for the study?
2. What hypothesis was tested or explored?
3. In terms of testing that hypothesis, what were the strengths and weakness of the research approach used?

After addressing those 3 questions, discussion will be open (total of 25 minutes for each paper).

Laboratory

You (independently) will design and implement a manipulative field experiment on any aspect of insect ecology.

Examples:

Predator exclusion
Manipulate resource levels
Alter abiotic regime

A research proposal outlining your hypotheses and methods is due **September 7**.

A 25 minute Power-point talk about your project will be presented on **November 28 or 30**. As part of that presentation, the same three questions posed for discussion papers (above) should be addressed for your study.

Grading:

Lecture

Exam (essay format)	40%
Participation in discussion	30%

Lab:

Proposal	5%
Presentation	25%