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Fall 9-1-2000

### FOR 332.01: Forest Entomology

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# Forest Entomology 332      Fall 2000

3 units. 2 hours lecture, 2 hours lab.

Instructor: Diana L. Six  
Office: SC 412  
Telephone: 243-5573  
Office hours: By appointment

**Required texts:**

Berryman, A. A. 1986. Forest Insects: principles and practice of population management. Plenum Press.

Borror, D. J. and R. E. White. A field guide to the insects of America north of Mexico. Petersen field guide series. Houghton Mifflin.

**On reserve in library:** Forest Entomology by Coulson and Witter.

<b>Grading:</b>	90-100	A
	89-80	B
	79-70	C
	69-60	D
	59-0	F

	<u>Points</u>	<u>Percentage of grade</u>
Midterm 1	200	20%
Midterm 2	200	20
Final	250	25
Term paper	100	10
Lab		
Collection	200	20
Field notes	10	1
Lab exam	40	4
Total	1000	100

**Field trips:** Two Saturday field trips TBA

# Forest Entomology 332- Lecture outline

Lecture	Date	Topic
1	9/6	Introduction to Entomology
2	9/11	Insect morphology
3	9/13	Insect development
4	9/18	Insect behavior
5	9/20	Orders
6	9/25	Orders
7	9/27	Influence of climate and weather on forest insects Part 1
8	10/2	Influence of climate and weather on forest insects Part 2
9	10/4	Biotic factors affecting forest insects Part 1
10	10/9	Biotic factors affecting forest insects Part 2
11	10/11	MIDTERM I
12	10/16	What is a pest? Intro to forest insects guilds
13	10/18	Trees as food Part 1
14	10/23	Trees as food Part 2
15	10/25	Forest insect population dynamics Part 1
16	10/30	Forest insect population dynamics Part 2
17	11/1	Forest insect population dynamics Part 3
18	11/6	Management: Monitoring and forecasting
19	11/8	Management: Risk assessment
20	11/13	MIDTERM II
21	11/15	Management: Outbreak prevention
22	11/20	Management: Outbreak control/ Decision systems and economics
	11/22	Holiday
23	11/27	Case study: Tussock moth Part 1
24	11/29	Case study: Tussock moth Part 2
	12/4, 12/6	lab catch-up days
25	12/11	Case study: Mountain pine beetle Part 1
26	12/13	Case study: Mountain pine beetle Part 2
27	12/19	8-10 AM FINAL EXAM

# TERM PAPER

**Topics:** Turn to pp. 236-245 in your text (section 11.4). Choose an insect that interests you. If you wish to write about an insect that is not listed, check first with the instructor. The Douglas-fir Tussock Moth and the Mountain Pine Beetle are not options as I will cover them in depth in class.

**Form and length:** The paper should have the following form:

Introduction

Life history of the insect

Impacts of the insect on the forest (good and bad)

Management (explain how the management strategies tie in to the ecology of the insect).

References (follow the form of a journal article). Use the references given in the text as a starting point. You will also be expected to find recent articles on your topic, as well. You must have at least 10 references. Most should be from scientific journals. Only one internet address will be accepted as a reference!

The paper should be 6-10 pages long, typed, and single or double-spaced. Proper spelling, grammar, and neatness are required. Plagerism will result in an F grade in the class so make sure you reword information taken from books and papers.

Grading: 50% content, 50% writing (write professionally!)

**Due date:** December 11, 2000. No late papers accepted!

# **Insect Collections:**

## **1. General collection**

Except for aquatics, specimens should be adult insects. Immature terrestrial insects are difficult to identify and are beyond the scope of this class. Very soft-bodied insects should be preserved in alcohol, others should be pinned or pointed. All specimens must be labeled correctly or they will not be graded.

### **Minimum requirements:**

Orders must include:

Orthoptera  
Hemiptera  
Homoptera  
Neuroptera  
Coleoptera  
Diptera  
Lepidoptera  
Hymenoptera

40 families  
200 species

Collection must be well organized, NEAT, and curated correctly.  
Collection due on: Dec. 11

### **Collection grading:**

Orders	10 points each
Families	5 points each
Subfamilies	1 point each
Species	1 point each
Individuals	1 point each (for up to 5 individuals per species)

**Warning!!!!!! – Your collection is worth a substantial portion of your grade.  
Collect as many insects as you can as soon as you can in the semester.  
Once a killing frost occurs it will be very difficult to collect!**