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FOR 595.01: Insect & Fungal Interactions

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FOR 595 – Insect/Fungal Interactions

Fall 2001

Instructor: Diana L. Six

Prerequisites: A prior or concurrent course in entomology or mycology is strongly recommended.

3 credits: 1.5 hours lecture and 3 hours lab per week

Class objective:

Insect/fungal associations range from obligate symbioses to diffuse relationships and greatly impact forest insect population dynamics and ecosystem biodiversity. The lecture portion of the class is designed to provide an overview of fungi and the diversity, complexity, and importance of their interactions with insects. The laboratory portion of the class will introduce students to techniques and methodologies used to investigate such relationships and provide an opportunity to develop and execute a study involving insect/fungal associations.

Recommended text: Fungi, MJ Carlile and SC Watkinson, 1997. Academic Press

Lecture schedule:

1	Sept. 5	Intro to class/grading/objectives. Intro to fungi – The Basics
2	Sept. 12	Intro to fungi – Diversity of Fungi, Ascomycetes
3	Sept. 19	Intro to fungi – Basidiomycetes and Deuteromycetes
4	Sept. 26	Intro to fungi – Yeasts, Parasexuality, Genetic Variation
5	Oct. 3	Intro to fungi – Growth, Competition, Dispersal
6	Oct. 10	Introduction to Symbioses: The good, the bad, and the moderately ugly
7	Oct .17	Midterm exam
8	Oct. 24	Associations
9	Oct. 31	Associations
10	Nov/. 7	Associations
11	Nov. 14	Associations
12	Nov. 21	THANKSGIVING
13	Nov. 28	Project presentations/discussion
14	Dec. 5	Project presentations/discussion
15	Dec. 12	NO CLASS
16	Dec.	Final exam: ½ = material presented after 1 st midterm. ½ = 2 synthesis style questions

Lab schedule:

1	Sept. 7	Introduction / microscope use and slide preparation
2	Sept. 14	Media preparation, culturing procedures for filamentous fungi and yeasts
3	Sept. 21	Isolation, subculturing, and hyphal tip procedures
4	Sept. 28	Use of keys and determinative testing for identification of fungi – project outline due

5	Oct. 5	Begin projects
6	Oct. 12	Continue working on projects
7	Oct. 19	Continue working on projects
8	Oct. 26	Continue working on projects
9	Nov. 2	Continue working on projects
10	Nov. 9	Continue working on projects – project rough draft due
11	Nov. 16	Continue working on projects
12	Nov. 23	THANKSGIVING
13	Nov. 30	Continue working on projects
14	Nov. 7	Project due – Fungus brunch!

Lab projects:

Lab projects will consist of an investigation into an area of fungal/insect interactions that has not been previously studied or within an area which possesses significant gaps of knowledge. Students will work on these projects singly or in pairs. The students will be responsible, with help from the instructor, for conducting a literature review of the subject, and for developing and implementing a study plan. Each student or pair of students will present their project to the class during lecture near the end of the semester after which the class will discuss their approach and findings. A final well written paper on the project will be required.

Grading:

100-90	A
89-80	B
79-70	C
69-60	D
59-0	F

Evaluation:

Midterm	100 points
Final	100 points
Presentation	50 points
Project	100 points
Total	350 points