Course information
Tues and Thurs, 3:45-4:45, 201 Irving I
2 credits

Instructor
Diane Wagner
diane.wagner@alaska.edu; 474-5227, 163 Arctic Health Research Bldg
Email is the best form of contact
Office hours Mon 1 - 3

Prerequisites
Graduate standing, an undergraduate or professional background in biology, or permission of instructor

Readings
There are readings, chiefly journal articles, required prior to each class meeting. Readings will be handed out in class and/or made available through Blackboard.

Course description
A survey of theory and empirical patterns related to the interactions between animals and plants, with an emphasis on ecology and evolutionary biology. Readings will focus on herbivory and pollination.

Course goals
The goal of the course is to a) gain background knowledge and perspective about the ecology and evolution of animal-plant interactions, and b) develop critical reading and analysis skills. Both goals will be met by reading, presenting, and discussing classic and modern literature on the animal-plant interactions.

Student learning outcomes
At the end of the course, students should be able to:

• Deliver a concise and accurate summary of a paper from the scientific literature.
• Critique thoroughly and fairly the theoretical context and methodology of a scientific paper.
• Effectively lead a class in discussion.

Instructional methods
Although the instructor will lecture occasionally, most class meetings will be devoted to discussion. Students and instructor will prepare for class by reading one or more journal articles, assigned in advance. Some of the articles we discuss will be chosen by the instructor; others will be chosen by students. The instructor will guide students in their choice of articles. Students will take turns leading the discussion. The number of classes lead by any one student will depend on class size.

Course policies
Students are expected to attend all scheduled class sessions, to have prepared for class thoroughly, to alternate in leading the class in discussion, and to participate in all class activities.
Expectations of discussion-leaders
When it is your turn to present a paper and lead the discussion, you should read the paper or papers you are presenting at least twice. If there is background information that the class will need to understand the work or the context of the work, you are responsible for doing that reading as well, and should come to class prepared to explain the background clearly. Here are some questions to ask yourself as you read:
- What was the overall goal of the study?
- What hypotheses or questions were addressed?
- What approach was taken?
- Do the methods and results truly address the hypotheses and study goals?
- Are there significant methodological weaknesses?
- What is the significance and usefulness of the study?
- Will the class require additional background to understand the study, and if so, am I prepared to give the background?
- What does it tell us, or fail to tell us, about animal-plant interactions?

When leading a discussion, begin by summarizing the study goal and hypotheses. Give a summary of the approach and results, focusing on points directly relevant to the larger goal rather than the details (unless details are relevant to a point you wish to make). Then lead the class in a discussion of the merits of the paper. You should come to class with an opinion about the strengths and weaknesses of the paper, and you will no doubt express that opinion at some point, but your main job is to stimulate critical and creative thinking in others by posing questions and keeping the discussion on track.

We will read some excellent papers in this course, but we will probably also encounter some papers that are not so excellent. Be critical of what you read. Not all published studies are well-designed, and not all authors reach reasonable conclusions from evidence. One of the goals of the course is to learn to appreciate well-constructed paper and recognize a weak one.

Grading
Grades will be based entirely on the quality of student participation in the course. Letter grades will be assigned on the basis of the percentage of total points earned. Only whole letter grades will be given (no +/-).

A Excellent participation. Excellent participation includes attending class regularly (1-2 excused absences are acceptable), being on time, completing all readings in advance, coming to class prepared with questions and comments about the readings whether you are the leader or not, contributing profitably to the class discussion, and leading discussions in an organized and knowledgeable fashion, encouraging others to share their ideas.

B Above average participation. Any of the following are basis for a B grade:
- missing 3 class sessions
- occasionally attending class having read the papers but not having engaged in careful or critical analysis
- occasionally failing to contribute to class discussions
- effectiveness at leading discussions very good on average but variable

C Average participation or engagement. Any of the following are basis for a C grade:
- missing 4 -5 class sessions
• occasionally attending without having completed the readings
• often attending class without having thought fully and critically about the papers
• often failing to contribute to class discussions
• discussion leadership good on average but generally variable in quality

D  Poor participation or engagement. Any of the following are basis for a D grade:
• missing more than 6 class sessions
• often attending class without being fully prepared
• discussion leadership variable and generally poor

F  Very poor participation or engagement. Any of the following are basis for an F:
• missing more than 6 class sessions
• regularly attending class unprepared
• discussion leadership consistently poor

Missing class
If you miss class due to an excused absence, you may receive credit for the class you missed by completing a written assignment. Excused absences are absences that have been cleared with the instructor beforehand, and may be due to reasons such as illness or pre-professional opportunities (e.g., attending a professional conference or workshop). You must request to make up the class (and please do not wait until the last 2 weeks of the semester to do so). To receive make up credit, you will read the paper or papers that you missed and summarize the major hypothesis tested, approach, and results in your own words. Then discuss the paper’s strengths and weaknesses and explain what it taught you, if anything, about animal-plant interactions. The length of the assignment will vary with the paper, but I anticipate it should be possible to do a good job in 1-2 pages per paper. I will accept a maximum of 4 make-up assignments during the semester. "A" assignments will be well-organized, demonstrate a command of the paper’s content, and express your critical opinions clearly.

Academic Dishonesty
UAF students are subject to the Student Code of Conduct. Plagiarism, which is presenting someone else’s ideas or text, is a serious violation of the Code. Instances of plagiarism include failing to cite your sources properly and copying someone else’s work. Note that making small alterations to someone else’s text to obscure the resemblance still constitutes plagiarism.

Disabilities Act
The Office of Disabilities Services implements the Americans with Disabilities Act (ADA) and insures that UAF students have equal access to the campus and course materials. The instructor will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to students with disabilities.
Tentative Schedule*
* Topics and readings are flexible and will be altered according to student interest.

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<th>Subject and Readings</th>
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<td>R</td>
<td>30 Aug</td>
<td>Organizational business (no readings)</td>
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| 2    | T   | 4 Sep  | Introduction to herbivory (lecture)  
| 2    | R   | 6 Sep  | Herbivory and fitness. Reading:  
| 3    | T   | 11 Sep | Plant defense theory. Reading:  
| 3    | R   | 13 Sep | Induced defenses. Reading:  
| 4    | T   | 28 Sep | Plant-to-plant communication and defense ("eavesdropping"). Reading:  
| 4    | R   | 20 Sep | No class |
| 5    | T   | 25 Sep | Indirect defenses. Reading:  
| 5    | R   | 27 Sep | Indirect defenses, cont. Reading:  
| 6    | T   | 2 Oct  | Diversification and Coevolution. Reading:  
| 6    | R   | 4 Oct  | Diversification and coevolution, cont. Reading:  
| 7    | T   | 9 Oct  | Student-chosen papers |
| 7    | R   | 11 Oct | Student-chosen papers |
| 8    | T   | 16 Oct | Student-chosen papers |
| 8    | R   | 18 Oct | Student-chosen papers |
| 9    | T   | 23 Oct | Student-chosen papers |
| 9    | R   | 25 Oct | Student-chosen papers |
| 10   | T   | 29 Oct | Student-chosen papers |
| 10   | R   | 1 Nov  | Student-chosen papers |
| 11   | T   | 6 Nov  | Pollination – lecture. Reading:  
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