

Bio 195-02 –Topics in Field Endocrinology Spring, 2006 – Stress in Wild Animals

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Class Hours: Barnum 113, Thursday, 1:30-4:00

Course Expectations & Grading

This is a seminar course, so it involves a small group of students engaged in advanced study of a topic, meeting weekly to exchange information and hold discussions based on readings of review papers and current original research.

- **Discussion leading :** 30% of grade. Each week, 2-3 students will lead a discussion of the papers assigned for that week. Each student will co-lead discussions twice during the semester.

The week before a presentation. I will handout 1 or 2 papers that provide an overview of the topic (or a subset of the topics). In addition, each presenter will provide sufficient copies for the class of 1 paper from the recent primary literature (this century) relevant to the topic for the class to read.

Come to class prepared to lead a discussion of your paper. Assume everyone in the class has read the paper. Come to class with a 5 minute (maximum) oral summary of the paper you provided to the class. Include: the hypothesis, overall approach, basic methods, results, and implications. Then, be prepared to pose 3-5 specific questions to the class for discussion. Examples of the sorts of things you might bring up include (just examples, there are others): evaluating the logic of the arguments, evaluating methods, results, or conclusions, are all the issues raised?, are there implicit assumptions in the methods or the implementation that you don't like?, etc. I encourage you to read related material from the literature – you can bring in examples or case studies, or ideas from papers that have different methods or conclusions. (For example, do other studies contradict these findings – how do they differ and which is best?) You are welcome to challenge the audience with 'who cares/what does it matter' type questions, but be prepared with answers yourself. You are welcome to use overheads, powerpoint, or handouts if you want, but it is NOT required. Factors affecting discussion grades include the quality of discussion questions you prepare for the audience and how well you handle questions and discussion from the audience.

- **Weekly participation:** 45% of grade. It is critical that we all do our part to exchange ideas in a seminar. Everyone is expected to initiate, and participate in, discussion of the papers. You are encouraged to actually think about the material, not just read it. Ask critical questions, but be prepared with answers to them. From a professional perspective, you will get more out of this course if you put more into it. (Remember, if you leave the presenters hanging in the discussion, they might hang you later!)

- **Surprises:** 25% of grade. Each week every student will hand in a page that states 1 thing that surprised you about each of the papers assigned for that day and why you were surprised. The surprise must focus on the methods, results, or interpretation of the results. This can be done in 2-3 sentences / paper. For presenters, turn in your 3-5 questions for your paper, plus surprises for the other papers. I do not want a summary of the paper.

Date	Topics	Leaders
January 19	Introduction to course; Finding Sources	Romero
26	What is Stress? – Background and Behavior	
February 2	What is Stress? – Glucocorticoids	
9	Stress in Free-Living Vertebrates	
16	What is Stress? – Allostasis	
23	No Class	
March 2	Life History Theory	
9	Techniques for Measuring Stress in Wildlife	
16	No Class	
23	No Class	
29	Stress and Conservation	
April 6	Stress as a Bioindicator	
13	Applying Biomedical Concepts to the Field	
20	Transgenerational Effects	
27	Chronic Stress – Does it Occur in Wild Animals?	

Sources to get you started: Use scientific journals, electronic databases (BioAbstracts/BIOSIS, through Tufts Library Web Page in Web of Science).

Scientific journals Tufts or I get that often have articles on stress in wild animals:

Auk
Biological Conservation
Comparative & Biochemical Physiology Part A
Condor
Ibis
Journal of Avian Biology
Hormones & Behavior
General & Comparative Endocrinology
Physiological Zoology
Proceedings of the Royal Society - London

A Really Good Source of Articles:

I read journals almost every week, and I collect hard copies of articles that I find interesting. You are welcome to search my files for relevant and interesting articles as well.