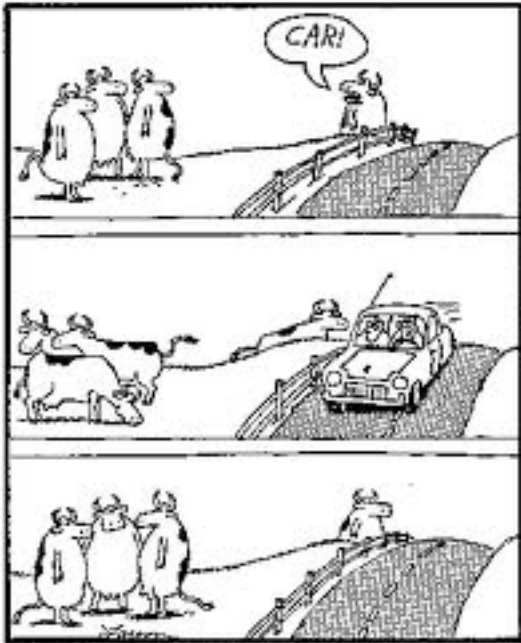


Introduction to Animal Behavior Summer 2012

Instructor: Ann Petersen, Ph.D.

email: annp@uoregon.edu

office hours: KLA 5 from 12-1 M-Th



Class time (PAC 16):

10-11:50 M-Th

Lab times (KLA 5):

Section 1 M/W 1-3:50

Section 2 T/TH 1-3:50

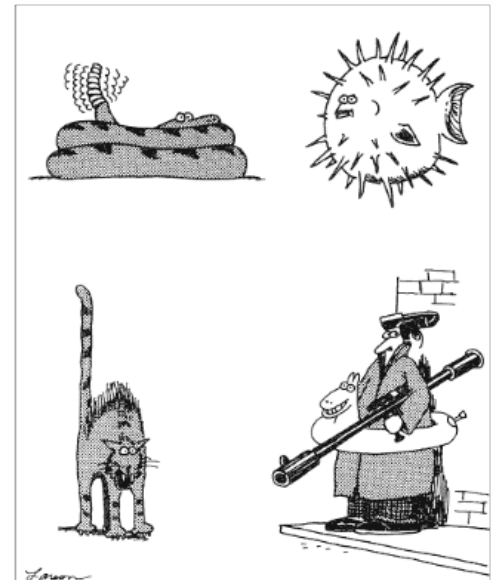
Text: Exploring Animal Behavior, 5th edition. By Sherman and Alcock.



"Matthews ... we're getting another one of those strange 'aw blah es span yol' sounds."



Donning his new canine decoder, Professor Schwartzman becomes the first human being on Earth to hear what barking dogs are actually saying.



How nature says, "Do not touch."

Date	Lecture Topic	Lecture activity	Lab	HW
M 8/19	L1: Doing Science and studying Animals	Lecture & Worksheet	hermit crabs and ethology and terrestrial ethograms	Read: 1-17 76-85 Write: 1 summary
T 8/20	L2: Sexual Selection and Reproductive Behavior	Lecture & Discussion	hermit crabs and terrestrial ethograms	Read: 41-50; 290-298 Write: 1 summary
W 8/21	L3: Altruism, Game Theory Kin Selection	Lecture & Discussion	stickleback fish behavior: aquatic ethograms	Read: 232-244; 260-268 Write: 1 summary
Th 8/22	L4: Predator-Prey Interactions	Quiz Lecture & Discussion	stickleback fish behavior aquatic ethograms	Read: 197-206 165-175 Write: 1 summary
F 8/23	Field Trip	Ethograms & Report Notes		Aquarium report due Monday 8/26
M 8/26	L5: Movement: Finding Food and Great Migrations	Lecture & Discussion	Crayfish and the neural basis of behavior	Read: 175-185 Write: 1 summary
T 8/27	Midterm	Midterm Video- chimps	Crayfish and the neural basis of behavior	Read: 224-232 Write: 1 summary
W 8/28	L6: Communication	Lecture & Discussion Dogs and tail wagging	Alton Baker statistics in Animal Behavior	Read: 59-68; 290-308 Write: 1 summary

Date	Lecture Topic	Lecture activity	Lab	HW
Th 8/29	L7: Neurons and Hormones	Lecture & Discussion	Alton Baker statistics in Animal Behavior	Read: 101-109; 68-76 Write: 2 summaries
M 9/2	Labor Day	No Class	No Lab	No Lab
T 9/3	L8: Social Behavior in Animals: Insects & Mole Rats	Quiz Lecture & Discussion The human animal I	Presentations	Read: 308-323 Write: 1 summary
W 9/4	L9: Social Behavior in Human Animals	Lecture & Discussion Review for Final	Presentations	Study for Final
Th 9/5	Final Exam	Final Exam		

Grade Breakdown

Midterm 20%

Final 20%

Aquarium report 15%

Independent project 15%

Labs 7.5%

2 class worksheet activities 2.5%

Nightly HW 5%

Clickers/attendance 5%

Discussion participation 5%

3 Quizzes 5%

Notice to Students with Disabilities

The University of Oregon is working to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your participation, please notify me as soon as possible. You may also wish to contact Disability Services in 164 Oregon Hall at 346-1155 or disabsrv@uoregon.edu

Nightly Writing Assignments

Researchers evaluate data from scientific articles from the literature and seminars on a daily basis. I cannot overemphasize the importance of analytical and critical reading and listening skills for a successful scientist. These tools lie at the core of what we do—discover the unknown!!

We as a class will discuss an article from the primary (experiments) or secondary (reviews) literature on a daily basis. It is imperative to your success in this class that you show up on ready to talk, listen, and hopefully argue about the finer details of the assigned articles from Sherman and Alcock. To help you prepare for such sessions, I am assigning you the following nightly task for these readings. Read the assigned paper and underline questions, problems, or confusing elements you come across, then:

- Re-read the paper to try to answer your own questions, and make note of any problems you cannot figure out on your own. I bet your classmates will have similar questions.
- Prepare a **1-page** critique with the following elements:

Identify the following key aspects to a scientific article, you can use bullets:

- **Goals:** Identify the goals of the article and the problem the authors wish to solve in one or two sentences.
- **Specific aim.** What was the specific question(s) or hypothesis the authors addressed?
- **Action And Result** What did the authors do to answer the question? What was the result?
- **Retrospective significance.** How does the work move the field forward?
- **Prospective significance.** What does the result mean for future work?
- **Critique on approach.** Did the authors perform the best experiments for the problem?
- **Critique on interpretation.** Did the authors over- or misinterpret their results?

Next, clearly identify the following 2 discussion points:

- **Questions.** Write 3 questions about the paper. Your questions can be probing, critical, or just plain being at a loss to understand a finding/ analysis/ interpretation.
- **Outside source:** Make a connection to an outside article-- **use this outside source to answer one of the questions you pose in the above section.** The article may be from the main articles lit cited, from supplemental reading I give you, or from your own search. Use this as a chance to briefly explore some aspect of the paper that was especially interesting to you. It will also help you appear really super smart to your classmates if you can casually toss in an outside reference to back up an outrageous claim you want to make about the paper ☺

You will turn in each nightly journal at the beginning of class each day for a grade.

Independent Projects:

A major component of the laboratory will be your designing, carrying out, and presenting the results of your own independent study, on the final days of class. This independent research project will give you the opportunity to pick an animal or an aspect of animal behavior that is especially interesting to you. Each research team will pick an animal (found locally) or an aspect of animal behavior of interest, and will design an experiment to test a particular hypothesis regarding that behavior.

You are free to choose your own topic but it must be something that you can test in a 2.5 week period with the resources that we have available. I will meet with each research team at the beginning of the projects to help you with ideas and experimental design. After each group begins collecting the data and I will meet with each group to discuss appropriate ways to analyze and present the data.

At the end of the term, each group will present their results in a 15 minute presentation and hand in a single written report for the independent project for the entire group. I will ask you to provide grades for each other, as well, to ensure that all members carry their weight.

Each student should start journaling about ideas immediately, and start doing reconnaissance for field sites and animals that are easy to find in the area. I am requiring that you go on a field trip at a location of your choice. It would be efficient to do some of your observations for the project while on the field trip.

Each group must hand in a research proposal for their project. This research proposal should include:

- 1) A title for your project
- 2) An introduction section providing:
 - a) Introductory material on your topic (you will need to research the literature and present background theory from the scientific literature).
 - b) Your hypotheses and predictions. What hypotheses do you plan to test? Depending on your question, you may have one hypothesis that you will test or you may have several hypotheses.
- 3) A methods section outlining the methods you will use. This should be very detailed and written as it would be in a scientific lab report. You should also include a paragraph or two carefully explaining: what data you will collect and how you will statistically analyze the data.
- 4) A results section with your data presented in at least two ways, plus use of one statistic to test the significance of your findings.
- 5) Conclusions: what did you discover about the animal's patterns of behavior or the occurrence
- 6) A literature cited section.

Suggested sources for finding topics and information for your projects

Books: You may need to refer to books for some background information so that you will be able to understand the terminology in the journal articles.

Alcock, Animal Behavior

Krebs and Davies, An Introduction to Behavioral Ecology, and Behavioral Ecology and Evolutionary approach

Search the library catalog for other animal behavior and behavioral ecology books. Also search for books providing background information on the system/species you are covering (for example if you are doing a fish foraging topic you may need to refer to a fish biology book to get background information on fish so that you can understand the terminology in the literature).

Journals: Animal Behavior
Behavior
Behavioral Ecology
Behavioral Ecology and Sociobiology
Ethology and Sociobiology
Ethology
American Naturalist
Ecology
Oikos
Oecologia
Evolution

Birds: Auk, Condor, Ibis, Wilson Bulletin

Mammals: J. Mammalogy, Mammalia

Herps: Herpetologica, J. Herpetology

Fish: Canadian Journal of Fisheries and Aquatic Sciences, Environmental Biology of Fishes