Biology 425 - Mammalogy  
Fall 1995 - Schedule

Instructor  R. Dale Guthrie  
Office: Room 106 Irving  
Phone: 7142

Scheduled Office Hours:  
M 2-5  
R 8:30-12

TA: Paul Matheus

LECTURE AND EXAM OUTLINE

Sept. 11 - Oct. 2

Mammalian evolution, dentition, digestion, locomotion and reproduction.

*First Hour Exam - Oct. 2*

Oct. 4 - Oct. 25

Ethology-Zoogeography

*Second Hour Exam - Oct. 25*

Nov. 1 - Nov. 20

*Third Hour Exam - Nov. 20*

Nov. 27 - Dec. 13

*Fourth Hour Exam - Dec. 13*

Short Lab Practicals:

1. Nov. 8
2. Dec. 11

These last two sections and their exams will cover the mammalian orders and their life histories.

There will be three panel discussions held during lab - each person will be expected to participate in one. These will be scheduled during a normal lab period. Each person will be responsible for a modest term paper (due Nov. 20).

A one-day field trip (Probably during the first Saturday of November) is required, but if some circumstance prevents you from going, you may substitute a five page review of Dall sheep reproductive behavior.
Panel Discussions

I use these to get you into the original literature and to see how science works. These will be 1.5 hours in length, followed by a normal lab (that is, discussion 2:00-3:30, lab 3:30-5:00). I'll put the relevant literature on reserve 2-3 weeks before the discussion. There are usually conflicting ideas in most biological issues, but these are especially controversial:

1. **(Nov. 8)** Causes of the K-T boundary extinction and the rise of mammals.
   (a) asteroid       (b) non-asteroid

2. **(Nov. 15)** Causes of the Late Pleistocene megafaunal extinctions.
   (a) human overkill (b) ecological events

3. **(Nov 29)** Causes of periodic density cycling among small mammals.
   (a) intrinsic       (b) extrinsic

I expect the (a) and (b) “teams” to use the best evidence in advocating their positions. They will presented in “debate” format. **The representatives should meet prior to the discussion and plan their approach.** I will be the moderator. We will sit around a big table with pop and snacks and hopefully have some fun discussing these issues.
Grades

Grades will be determined in this manner:

- 80% lecture exams
- 10% lab quizzes
- 5% general attendance and panel discussion participation
- 5% term paper

Hour exams will cover (a) appropriate chapters in text, (b) lecture, and (c) assigned readings, in that order.

About half of the lecture exams will be more objective (...What is the difference between a mandrill and a drill?) and the other half, more interpretive (...What do you think is the evolutionary origin of low strength display in ungulates?).

Term Paper

A topic of your choice (topic discussed with me before Sept. 27). Don’t be too broad. Try something like: Do black bears hibernate?...A comparison of the reproductive behavior of two zebra species. Do something which would interest you! I give a 5%. (see above) for reasonable papers, so don’t fret over this and make it a chore - use it as an important occasion for learning. Papers must be original for this course and not “management” related. If your stuck for a topic, I recommend browsing the mammal section in the library, or look thru the Journal of Mammalogy, pick a subject, use thier current references. Feel free to give your own interpretations. I have allowed people to substitute small projects for term papers...any good ideas? Use the format of the Journal of Mammalogy. Shoot for somewhere between 10-15 double-spaced pages. Use this as a guide: 1) one evening in library to find references, 2) one-two evenings for reading, 3) one day to write, edit, and clean copy the ms. This is an opportunity to exercise organizational and writing skills about mammals. If you are really stuck for topic choice, thumb through the text until you find something of interest.