

WFS 444 - ECOLOGY AND MANAGEMENT OF WILD MAMMALS

Fall Semester 2004

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Prerequisites: FWF 317 (Principles of Wildlife and Fisheries Management) AND EEB 250 (General Ecology)

Course Description:

A general introduction and overview of the biology, ecology, and management of mammals. This course will include the identification, classification, distribution, evolution, life history, ecology and management of selected North American mammals.

Lecture Times:

Monday and Wednesday 1:25-2:15 Ellington Plant Science (EPS) 114 (Head Room)

Lab Times:

Monday **OR** Wednesday 2:30-5:30 EPS 114 (Head Room)

Course Texts:

Burt, W. H. and R. P. Grossensheider. 1980. A field guide to mammals. Houghton Mifflin Co., Boston, Massachusetts, USA.

OR

Kays, R. W. and D. E. Wilson. 2002. Mammals of North America. Princeton University Press, Princeton, New Jersey, USA.

AND

Feldhamer, G. A., L. C. Drickamer, S. H. Vessey, J. F. Merritt. 2004. Mammalogy: adaptation, diversity, and ecology. McGraw-Hill Co., Boston, Massachusetts, USA.

Martin, R. E., R. H. Pine, and A. F. DeBlase. 2001. A manual of mammalogy with keys to families of the world, McGraw Hill, Boston, Massachusetts, USA.

Whitaker, J. O., Jr., and W. J. Hamilton, Jr. 1998. Mammals of the eastern United States. Cornell University Press, Ithaca, New York, USA.

Additional readings will be assigned throughout the course.

Supplemental Texts:

- Brown, L. N. 1997. A guide to the mammals of the Southeastern United States. The University of Tennessee Press, Knoxville, Tennessee, USA.
- Feldhamer, G. A., B. C. Thompson, and J. A. Chapman., eds. 2003. Wild mammals of North America: biology, management, and conservation. Second Edition. Johns Hopkins University Press, Baltimore, Maryland, USA.
- Demarais, S., and P. R. Krausman. 2000. Ecology and management of large mammals in North America. Prentice Hall, Upper Saddle River, New Jersey, USA.
- Hall, E. R., and K. R. Kelson. 1959. The mammals of North America. Ronald Press Company, New York, USA.
- Lowery, G. H., Jr. 1974. The mammals of Louisiana and adjacent waters. Louisiana State University Press, Baton Rouge, Louisiana, USA.
- Nowak, R. M. 1999. Walker's mammals of the world. Sixth edition. Johns Hopkins University Press, Baltimore, Maryland, USA.
- Schwartz, C. W. and E. R. Schwartz. 1981. The wild mammals of Missouri. University of Missouri Press, Jefferson City, Missouri, USA.
- Vaughan, T. A., J. M. Ryan, N. J. Czaplewski. 2000. Mammalogy (4th edition). Harcourt, Inc., Orlando, Florida, USA.
- Wilson, D. E., and S. Ruff., eds. 1999. The Smithsonian book of North American mammals. Smithsonian Institution Press. Washington, D.C., USA.

Important Dates:

**18-22 September 2004: The Wildlife Society Annual Meeting
(Calgary, Alberta, Canada).**

**November 2004: Deer Check Stations TBA. Definitely 20 November, maybe 6
November.**

Grading:**Examinations:**

1 st Lecture Exam	100 points (20%); 6 October 2004 (W)
1 st Lab Exam	75 points (15%); 13 October 2004 (W)
Review Paper	50 points (10%); 8 November 2004 (M)
2 nd Lecture Exam	100 points (20%); 15 November 2004 (M)
2 nd Lab Exam (comprehensive)	75 points (15%); 17 November 2004 (W)

FINAL EXAM (comprehensive)	100 points (20%); Monday 6 December 2004 (12:30-2:30)

Total	500 points (100%)
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Exams will be short-answer, multiple-choice, and/or essay questions. Lecture exams will cover both the lecture material and assigned readings. Lab exams will cover material from lab meetings. **Some material may be in both lecture and lab.**

Grading:

A	450-500 points	90 -100%
B+	425-449 points	85 - 89
B	400-424 points	80 - 84%
C+	375-399 points	75 - 79%
C	350-374 points	70 - 74%
D	300-349 points	60 - 69%
F	0-300 points	0 - 59%

Class Attendance:

Students are encouraged to attend all classes. There will be no make-up examinations without prior approval of the instructor.

Review Paper:

A research paper is required. Pick a mammal of interest. You will review their biology and discuss management implications. Possible considerations for integrating biology research results into management include:

- What are habitat features or physical traits of the animal that would be critical for the species?
- How do behaviors affect ecology and, therefore, management?
- How could the physiology of the species affect management activities?
- What human activities would be most disruptive to the species and Why? (e.g., lumbering, construction, recreation, ...)

It should be typewritten and double-spaced. Papers should be 5 pages long with a minimum of 5 peer-refereed citations from the primary literature (more would be great). Format for literature cited must follow Journal of Wildlife Management (JWM) or Journal of Mammalogy (JM) style.

Lecture Outline (Readings from Feldhamer et al. 2004):

1. Course Introduction – The Study of Mammalogy (Chapter 1)
2. Methods and Techniques for Studying Mammals (Chapter 3)
3. Evolution and Dental Characteristics (Chapter 4)
4. Integument, Support, and Movement (Chapter 5)
5. Foods and Feeding (Chapter 6)
6. The Nervous and Endocrine Systems, and Biological Rhythms (Chapter 7)
7. Environmental Adaptations (Chapter 8)
8. Reproduction (Chapter 9)
9. Adaptive Radiation and Diversity of Mammals
 - A. Monotremes and Marsupials (Chapter 10)
 - B. Insectivora, Macroscelidea, Scandentia, and Dermoptera (Chapter 11)
 - C. Chiroptera (Chapter 12)
 - D. Primates (Chapter 13)
 - E. Xenarthra, Pholidota, and Tubulidentata (Chapter 14)
 - F. Carnivora (Chapter 15)
 - G. Cetacea (Chapter 16)
 - H. Rodentia and Lagomorpha (Chapter 17)
 - I. Proboscidea, Hyracoidea, and Sirenia (Chapter 18)
 - J. Perissodactyla and Artiodactyla (Chapter 19)
10. Communication, Aggression, and Spatial Relations (Chapter 20)
11. Sexual Selection, Parental Care, and Mating Systems (Chapter 21)
12. Social Behavior (Chapter 22)
13. Dispersal, Habitat Selection, and Migration (Chapter 23)
14. Zoogeography (Chapter 26)