

COURSE SYLLABUS

FORS 4050/6050 FIELD MAMMALOLOGY Fall 2005

Instructor: Steven Castleberry

Office: Forest Resources 3-322

Phone: (706) 542-3929

E-mail: scastle@forestry.uga.edu

Office hours: MTuWF 9-5 or by appointment

Teaching Assistant: Michael Schirmacher

Office: Forest Resources 4-226

Office hours: By appointment

E-mail: schirmacherm@owl.forestry.uga.edu

Time and Location

Lecture: Monday, Wednesday, Friday 8:00 – 8:50

1-303 Forest Resources

Lab: Tuesday 2:00 – 4:45

1-101 Forest Resources

Course Description and Objectives

A study of mammals with an emphasis on diversity, distribution, life history, behavior, ecology, and field techniques. Laboratory emphasis on the identification, taxonomy, and natural history of southeastern mammals. Upon completion of this course, you should:

1. Be familiar with mammalian characteristics and the evolutionary and biogeographic history of mammalian groups.
2. Know the mammalian orders and families and the anatomical, morphological, behavioral, and ecological features that characterize each.
3. Have a general knowledge of mammalian anatomy, physiology, behavior, and ecology.
4. Know the identifying characteristics, specific nomenclature, and natural history of mammals in the southeastern United States.
5. Be familiar with mammalian field studies, including methods of collection, marking, and specimen preservation.

WebCT

Course information will be posted on WebCT under the course listing “FORS 4050 (Castleberry).” Course materials, including the syllabus, lab and lecture schedules, handouts, species lists, and your grades will be accessible through the course site. You may be asked to print materials from the WebCT for class.

Required Course Materials

Text: Feldhamer, G. A., L. C. Drickamer, S. H. Vessey, and J. F. Merritt. 2003. *Mammalogy: Adaptation, Diversity, and Ecology*. Second edition. McGraw Hill, New York.

Field Guide: Burt, W. H., and R. P. Grossenheider. 1990. *A Field Guide to the Mammals of North America*. Third edition. Houghton Mifflin Company, Boston.

Optional Course Materials

Specimen Preparation Materials: Includes a dissecting kit (must include sharp-tipped surgical scissors, scalpel handle with replaceable blades, hemostat, fine-point forceps, and mall probe), sewing needle, and thread. These materials are not provided by the instructor.

Hand lens: Useful for examining characteristics of small specimens, such as skulls of bats and shrews

Course Requirements

Lecture Exams.— Two lecture exams and a final exam will be given covering lecture notes, reading assignments, and handouts. The final exam is *cumulative* (~1/3 previous material and 2/3 new material) and will be given on 12 December from 8:00-11:00. Make-up lecture exams will only be given to students with a legitimate written excuse. Without an excuse, missed lecture exams will be recorded as a grade of zero.

Lab Exams.— Three lab exams will be given covering material presented during labs. Lab exams are *partially cumulative* with representative specimens of most families covered on all subsequent lab exams. Because of the time required to prepare lab exams, make-up lab exams will be considered only for students with serious and well-documented excuses. Without an excuse, missed lab exams will be recorded as a grade of zero.

Quizzes and Lab Exercises.— Short quizzes will be given during lab or lecture periodically throughout the semester. Quizzes may or may not be announced in advance. For some labs, there will be an exercise due at the end of lab.

Specimen Preparation.— Each student will be required to prepare 3 mammal study skins during the course of the semester and enter the data into a specimen catalog. Specimens may be provided in lab, collected during class field exercises, or collected on your own. You will be graded on the quality of your study skins (noting improvement) and the accuracy and neatness of your catalog entries. Study skins will be due periodically throughout the semester on the following schedule:

- Specimen 1 – due at the end of lab on 6 September
- Specimen 2 – due at 5:00 pm on 26 October
- Specimen 3 – due at 5:00 pm on 8 December

Project.— You will be required to complete a special project related to mammalogy. Projects may include one of the following, or another project idea approved by the instructor.

- Mammalian Species-style report
- Skull/skin collection
- Photo collection
- Mammal-related research project
- Mammal-related community outreach project

You must discuss your project idea and have it approved by the instructor by Tuesday 13 September. The project is due no later than 5:00 pm Friday 2 December. There will be a 10-point per day deduction for projects turned in late. All materials submitted with projects become property of the WSFR collections. **Note:** Students that complete a mammal skin/skull collection for their project are not required to do the 3 required study skins.

Extra Requirements for Graduate Students.— Graduate students will have additional requirements in the course, to be assigned by the instructor after consultation with the student. Additionally, grading standards will be higher for graduate students on all tests and assignments.

Course Grading

Your grade in the course will be determined by the following:

Lecture exams (2 @ 10% each)	20%
Final lecture exam	15%
Lab practical exams (3 @ 10% each)	30%
Project	15%
Quizzes and lab exercises	15%
Specimen preparation	5%

Final grades in the course will be determined by the total percentage accumulated from the above list according to the following criteria: 90-100% = A, 80-89% = B, 70-79% = C, 60-69% = D, 59-0% = F. **Note:** No extra credit will be given and grades are final.

Attendance Policy

Class attendance in lecture and lab is required and will be assessed at the instructor's discretion throughout the semester using roll call and quizzes. A letter grade will be dropped from a student's final grade for every unexcused absence after the fourth absence (any combination of lab and lecture). Students who miss roll call or quizzes due to tardiness will be counted as absent. Missed work (e.g., exams, quizzes, or exercises) due to absence or tardiness cannot be made up without a legitimate written excuse.

Weekend Field Trip

We will be taking a three-day weekend field trip to the Jones Ecological Research Center 4-6 November 2005. As weather permits, activities may include trapping for mesomammals, small mammals, fossorial mammals, and bats, assisting graduate students in various mammal related projects, and preparing study skins. Attendance is not required, but the field trip is an opportunity to see and apply what you have learned in lecture and lab. You will get the most out of the class if you attend.

Academic Honesty and Plagiarism

All academic work must meet the standards contained in the University's academic honesty policy (see "A Culture of Honesty"; www.uga.edu/ovpi). All students are responsible for informing themselves about those standards before performing any academic work. The penalties for academic dishonesty are severe (see "Sanctions for Dishonesty"; www.uga.edu/ovpi), and ignorance is not an acceptable defense. Use of a cell phone, PDA, video phone, or other electronic communication device during a test or quiz shall be considered a violation of the University's academic honesty policy and dealt with according to the stated policy of the University.

Cell Phones

As a courtesy to your classmates and instructor, please turn off cell phones and other electronic devices before coming to class.

Changes to the Syllabus

The course syllabus is a general plan for the course. Deviations to the class by the instructor may be necessary. Changes, if necessary, will be announced in class or lab. It is the responsibility of the student to be in attendance when changes are announced or to find out about changes from the instructor or classmates.

Lecture Outline (approximate number of lectures for each topic in parentheses)

I. Introduction (1)

A. Mammalogy introduction and history

II. Evolution of Mammals (3)

A. Characteristics of modern mammals

B. Evolutionary transformations

C. Mammalian radiations

III. Mammalian Distributions (3)

A. Faunal regions

B. Origins of continental faunas

C. Origins of American faunas

IV. Diseases and Human Health Risks (2)

A. Terms and concepts

B. Zoonotic diseases with relevance to mammalogists

Exam 1

V. Structure and Function (6)

A. Integument and integumentary derivatives

B. Skeletal system and musculature

C. Locomotion

D. Dentition

E. Feeding

VI. Reproduction and Mating Systems (3)

A. Reproductive anatomy

B. Reproductive variations

C. Mating systems

Exam 2

VII. Sensory Systems and Environmental Adaptations (3)

A. Sensory systems

B. Biological rhythms

C. Thermoregulation

D. Water regulation

VIII. Behavior (3)

A. Communication

B. Social behavior

C. Home range and territoriality

D. Dispersal and migration

IX. Community Ecology (3)

A. Ecological scale

B. Species interactions

C. Community assembly rules

D. Habitat interactions

Final Exam

Laboratory Schedule

Lab	Date	Topic
1	Aug 23	Introduction; Monotremata, marsupials; keying exercise
2	Aug 30	Insectivora; small mammal preparation demonstration
3	Sept 6	Specimen preparation
4	Sept 13	Quiz ; Chiroptera, Dermoptera; bat capture and survey techniques
5	Sept 20	LAB EXAM 1
6	Sept 27	Bat netting @ 5:00 pm, location TBA
7	Oct 4	Rodentia, Lagomorpha; capture and marking methods for rodents
8	Oct 11	Cetacea, Sirenia, Proboscidea, Hyracoidea
9	Oct 18	Quiz ; Xenarthra, Pholidota, Tubulidentata; skeletal anatomy
10	Oct 25	LAB EXAM 2
11	Nov 1	Carnivora; capture and marking methods for large mammals
12	Nov 8	Primates, Scandentia, Macroscelidea; museum collections tour
13	Nov 15	Small mammal trapping
14	Nov 22	Quiz ; Artiodactyla, Perissodactyla
15	Nov 29	LAB EXAM 3

Lab Rules and Specimen Care

The specimens that you will use in this course are fragile, and many are old and difficult or impossible to replace. Some of the specimens are on loan from the research collection of the Georgia Museum of Natural History. All specimens are available for your benefit and mishandling will not be tolerated.

You will be shown the proper way to handle each group of specimens. Proper handling techniques should be used every time the specimens are examined. Cavalier handling of the specimens may result in the lowering of your course average. Repeated offenses may result in dismissal from the course.

Most specimens will be left in the lab for you to study at your convenience. Specimens may not be removed from the lab under any circumstances. If inappropriate handling or damage to the specimens becomes frequent, this privilege will be revoked and you will only be allowed limited opportunities to view the specimens under supervision.

It is University policy that smoking or use of any tobacco product is forbidden in any building at any time. It is my policy that food and drink are not permitted in the laboratory at any time. Both rules will be strictly enforced.