

ANTH 130

Primate Behavioral Ecology

Spring 2008

Class time: TR: 11:50-1:35
Location: O'Connor 205

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Office Hours: Tuesday 2-4

Course Description: In this course, we will explore fundamental concepts related to the study of primate behavior and ecology. We will focus on the theoretical frameworks that guide primate behavioral studies including in-depth empirical exploration of adaptation, comparative primate behavior, ecology, field studies, and classification. Our approach will focus on a 'how do we know what we think we know?' perspective to critically evaluate core concepts in primate behavioral ecology. We will evaluate data collection, presentation, and interpretation in primate field studies.

Academic Misconduct: The University's policy on academic honesty will be observed in this class. <http://www.scu.edu/studentlife/resources/academicintegrity/index.cfm>

If you use a fact, idea, or quotation from your reading, you must attribute it. If you have any doubt about the meaning of plagiarism, or how to define the boundary between legitimate information sharing and cheating, please talk to me.

Disability Accommodation Policy: To request academic accommodations for a disability, students must contact Disability Resources located in The Drahnmann Center in Benson, room 214, (408) 554-4111; TTY (408) 554-5445. Students must provide documentation of a disability to Disability Resources prior to receiving accommodations.

Readings:

Required Text:

Campbell CJ, Fuentes A, MacKinnon KC, Panger M, Bearder S. 2007. *Primates in Perspective*. Oxford University Press.

Selected papers listed on schedule and posted on ERes.

Optional:

Rowe, N. 1996. *The Pictorial Guide to Living Primates*. East Hampton NY: Pogonias Press.

Course Requirements and Grades: Course requirements include two exams (250 points), Assignment I (150 points), and Assignment II (100 points).

Students are required to attend all lectures, discussions, and films. Readings are to be completed before the class period on which they are scheduled.

Assignments: There are two assignments required in this class. The first involves observation of animal behavior. The second assignment will allow you to ‘evolve a primate’ given your knowledge of primate traits, primate environments, and natural selection.

Assignment I: Part 1 (50 points) Behavioral observation of nonhuman primates in the classroom. Part 1 should be no longer than 2 pages and can be either single- or double-spaced.

Watch the 25-minute video on nonhuman primates. Collect *ad libitum* notes on all aspects of behavior and answer the following questions in short essay form. Provide subtitles for each section and write an essay that describes the following within each section. I realize that all of this was not directly shown in the video but describe what you saw and make interpretations from your notes.

- 1) Describe the sociosexual features troop size, troop composition (age and sex), and features of particular individuals observed in this nonhuman primate group.
- 2) Describe the nature of the physical environment including resources (food and water), forest structure, climate, and predators.
- 3) Describe the social environment. What is the nature of social interactions? What is the activity budget (time devoted to various activities—describe a typical day)?
- 4) How did *ad libitum* sampling help or hinder you from answering these questions?

Assignment I: Part 2 Due May 1 (150 points): This assignment will involve visits to a local zoo. Behavioral Observations: Spend 1 hour observing your chosen nonhuman primate. When this session is completed, consult with me to design a research plan. Then you will spend 6-10 hours observing your chosen primate using systematic data collection techniques. Part 2 should be no longer than 10 pages and can be either single- or double-spaced.

- 1) Define your research questions and construct an ethogram following guidelines in the *Behavioral Sampling* handout.
- 2) Observe your selected animal(s) for six to ten additional hours using either focal animal or scan sampling and continuous or instantaneous methods.
- 3) Complete the following sections.
 - A. Provide the scientific and common names of your chosen nonhuman animal and summarize your *ad lib* (first hour observations) data. Provide a brief background statement about your chosen animal (life history features, sociality, etc.).
 - B. What was your research question or questions? State your methods why you have chosen these methods. What categories of behavior did you define in order to answer your research question or questions? Provide the behavioral definitions that you used when collecting your data.
 - C. Describe the environment in which your animal(s) lives. Focus on biological and behavioral contexts that are relevant to your research questions.

- D. Using your data, answer your research questions in terms of frequencies (percentages), durations, sequences, and/or rates of behaviors.
- E. Interpret your data and summarize your findings.
- F. Did you answer your questions? How would you improve upon this project? I realize that more time is always a factor, think about improvement of the overall research design.

Guidelines: Creativity, complete and thorough answers, and considerable investment into the exercise are of key importance. Please type your responses and write in complete sentences. Organize and label all sections to facilitate reading ease.

Illustrations, photographs, tables, and figures add to your response. Please submit all field notes.

Assignment II: Evolve a primate: Due May 29.

In this assignment, you will have the opportunity to evolve a primate species that is currently unknown to science. Guidelines will be provided in class.

Community Involvement: An important aspect of primate field studies and conservation is interaction with the community about your discoveries. One requirement in this class is to share knowledge with the community. This can be accomplished individually or in small groups. We will discuss different ways of accomplishing this goal during the first weeks of the course.

Grades:

Exam 1: 100 points

Exam II: 100 points

Assignment 1: 150 points

Assignment 2: 100 points

Evolve presentation: 50 points

Total Points: 500 points

Lecture and Reading Schedule:

DATE	LECTURE TOPIC	
April 1	Introduction/ Framework Film	
April 3	Primate Evolution, Phylogeny, and Classification	PIP: Chapter 2: Primate evolution
April 8	What does it mean to be a primate? History of field studies	PIP: Chapter 1: A brief history of primate field studies
April 10	No class	
April 15, 17	Theoretical Frameworks Behavioral Observation Assign. 1 NhP survey	PIP: Chapter 20: Research questions PIP: Chapter 28: The New Era of Primate Socioecology: Ecology and Intersexual Conflict Handout: Behavioral observation and research design PIP: Chapter 3: The Lorisiform Primates of Asia and Mainland Africa
April 22	NhP survey	PIP: Chapter 4: Lemuriformes PIP: Chapter 5: Tarsiiformes
April 24	NhP survey	PIP: Chapter 7: The Cebines PIP: Chapter 10: The Atelines
April 29	NhP survey	PIP: Choose 1 of the following chapters: 11, 12, 13, 14, 15 PIP: Choose 1 of the following chapters: 16, 17, 18, 19
May 1	Group living Social Structure	PIP: Chapter 37: Social Organization.
May 6	Life history Juvenescence/ 'phenotypic limbo' Primate locomotion	PIP: Chapter 26: Reproductive Cessation in Female Primates. PIP: Chapter 35: Social Beginnings
May 8	Exam I	
May 13	Competition and Aggression	PIP: Chapter 39: Cooperation and Competition in Primate Social Interactions PIP: Chapter 34: Social Mechanisms in the Control of Primate Aggression
May 15	Tool use and tradition Social learning and cognition: the role of experimental field studies	PIP: Chapter 41: Tool Use and Cognition in Primates Garber PA, Paciulli L. 1997. Experimental Field Study of Spatial Memory and Learning in Wild Capuchin Monkeys (<i>Cebus capucinus</i>).
May 20	Geographic variation/ Do nonhuman primates have culture?	PIP: Chapter 40: Social Learning in Monkeys and Apes: Cultural Animals?
May 22	Community ecology	PIP: Chapter 31: Primate Seed Dispersal: Linking Behavioral Ecology with Forest Community Structure
May 27	Primate conservation	PIP: Chapter 30: Conservation PIP: Chapter 43: Ethnoprimateology
May 29	Evolve a primate presentations	PIP: Chapter 44: Where We Have Been, Where We Are, and Where We Are Going: The Future of Primateological Research
June 3	Evolve a primate presentations	
June 5	Exam II	