

2003 Piedmont Project Write-Up
Anthropology 302: Primate Behavior & Ecology
Benjamin Z. Freed

The 2003 Piedmont Project helped me identify several issues that affected the extent to which I could discuss in Anthropology 302 topics related to ecology, conservation, and sustainability:

- 1) Students who enrolled in the course were largely interested in behavioral issues that revolved around questions in psychology & neuroscience and behavioral biology. As one student reviewer put it, “This is supposed to be a course on primate BEHAVIOR and ecology.”
- 2) These students were either bored or failed to see any relevance to discussion about specific plants and the behavioral and dietary adaptations that primates have for them. Simply lecturing and using videos did not “hit it” with these students.
- 3) The few ENVIS & anthropology students who were genuinely interested in the interaction between behavior & ecology were never given the opportunity to engage before all of their senses aspects of coevolution between flowering plants and primates. I have many experiences from my own field work, so I could discuss how these issues related to ethnobotany and conservation. Yet students had no such experiences; they simply could not relate these topics to everyday life.

The course was successful, as all students enjoyed collecting and analyzing the behavior of real primates. Working at ZooAtlanta was a highlight. Several of these students have since worked abroad on field studies of free-ranging nonhuman primates. Most of these students have taken more primate and conservation-related courses in anthropology and ENVIS.

Largely as a result of the interaction with the Piedmont Project, I realized that I must incorporate even more HANDS-ON work with the students. I have decided to continue with a ZooAtlanta behavioral project, as the Zoo staff is short on observers for their golden-lion tamarin project. From discussions with the Piedmont Project’s Eloise Carter, I have decided to incorporate more botany into class material. I have established a relationship with curatorial, conservation, and education staff of Atlanta Botanical Gardens (ABG). ABG is a fairly young resource in Atlanta; very few people from Emory have incorporated this resource into course activities. In particular, ABG has a unique set of greenhouses that allow students to see plant adaptations in a variety of habitats, including mountain forest, lowland rain forest, and desert. ABG also possesses most major plant families from those regions covered in the primate course, including the Neotropics, Africa, Madagascar, China, India, and Southeast Asia. For example, ABG’s Madagascar collection includes most of the unique plant families found on the island’s dry southwest region, where Emory Anthropology’s Dr. Pat Whitten works each summer. My own research involved plant-animal interactions in a northern Madagascar mountain rain forest. ABG has the depth of a collection necessary for this course; its staff is eager to fulfill its own educational mission. They have offered to lead a lecture on plant adaptations; I have offered them lectures on primate-plant interactions in Madagascar. ABG is also interested in seeking interns.

The behavioral component of this course will continue to include work at ZooAtlanta. I have

also decided to include free-ranging ringtailed lemur populations within a six-hour radius of Atlanta. Based on class enrollment and student interest, I will take a group of four students to either the Duke University Primate Center or St. Catherine's Island, Georgia.

Funds from the Piedmont Project will help support transportation and logistics with each of these behavioral field experiences. Funds will also be used to help ABG develop educational materials for exhibits, such as their Madagascar desert exhibit.

Students learn through behavioral data collection. I also believe that students value working with local institutions such as ZooAtlanta and ABG. Ultimately, the inclusion of additional local and regional resources into Anthropology 302 should provide students with a set of experiences that they can use to generate questions in further course work. More importantly, by interacting with these local institutions, students will gain a set of contacts and research experience that they can parlay in their own future work. Two recent honors students who returned from primate field work in Nicaragua and Indonesia lamented on the lack of ecological training they received here. Both commented that they received good training from 302, but they wished they could have had some hands-on ecological experience. I now have two students ready to work on primates in Argentina and China. I do not know how many others want to study primates abroad. Based on my own field experiences, my dialogue with ZooAtlanta and ABG, and the thoughts of my first two honors students, the botanical component and even more hands-on work with primates is essential.

As Eloise Carter and Tong Soon-Lee showed us in the Piedmont Project, the most effective learning comes when one uses all the senses. That was what was missing the last time I taught Anthropology 302. I hope that the incorporation of local resources from ABG, ZooAtlanta, and elsewhere will help further the study of ecology, conservation, and sustainability at Emory Anthropology. Hopefully no students will bemoan the ECOLOGY part of this course!

ANTHROPOLOGY 302

Syllabus, Fall 2003

Primate Behavior and Ecology, TuTh 1130-1245

Emory University, Dept. Anthropology

Dr. Benjamin Z. Freed Phone: (404) 727-4021 e-mail: bzfreed@learnlink.emory.edu
Office Hours: Geosciences 213, W 12 - 1, Th 1-2 and by appointment

NOTE: This syllabus is a WORKING document. The schedule and readings may change due to course size, activities, and student participation.

Readings selected from:

Fuentes, A., and Dolhinow, P. 1999. *The Nonhuman Primates*. Mayfield: Mountain View, Ca.
ISBN: 0-55934-974-3. Appx. Cost: \$35 [Required]

Strier, K.B. 2000. *Primate Behavioral Ecology*. Allyn & Bacon: Boston. ISBN: 0-205-20019-2

[Suggested/Optional; many of the subjects we discuss have companion sections in Strier.]

- Crockett, C. 1987. Diet, dimorphism, and demography: perspectives from howlers to hominids, in *The Evolution of Human Behavior: Primate Models*, W. Kinzey (ed), St.Univ. New York: Albany.
- Crompton, R. 1984. Foraging, Habitat Structure, and Locomotion in Two Species of *Galago*, in *Adaptations for Foraging in Nonhuman Primates*, P. Rodman and J. Cant (eds), Columbia University Press: New York, pp.73-111.
- Garber, P. 1984. Use of Habitat and Positional Behavior in a Neotropical Primate, *Saguinus oedipus*, in *Adaptations for Foraging in Nonhuman Primates*, P. Rodman and J. Cant (eds), Columbia University Press: New York, pp.112-133.
- Kinzey, W. 1997. *New World Primates: Ecology, Evolution, and Behavior*. de Gruyter: New York.
- Oates, J. 1994. The natural history of African colobines. In *Colobine Monkeys: Their Ecology, Behaviour and Evolution*. A. Davies & J. Oates (eds.), pp.75-128, Cambridge U: New York.
- Richard, A. 1977. The feeding behaviour of *Propithecus verreauxi*, in *Primate Ecology: in Studies of the Feeding and Ranging Behaviour in Lemurs, Monkeys, and Apes*, T.H. Clutton-Brock (ed.), Academic Press: New York, pp.72-96.
- Richard, A. 1985. *Primates in Nature*. W.H. Freeman: New York. (selected sections)
- Sterling, E. 1993. The social organization of the aye-aye (*Daubentonia madagascariensis*) on Nosy Mangabe in Madagascar, in *Lemur Social Systems and Their Ecological Basis*, J Ganzhorn and P Kappeler (eds.).

Grading: Primate taxonomy quiz (7.5% total), plant family quiz (7.5%), 1st exam (25%, take-home), zoo & botanical project (25%), 2nd exam (25%, take-home) and class participation (10%). Class participation is a composite score derived from both your attendance and questioning (including LL, in-class, & out-of-class discussion). End-of-month class participation evaluations will be sent via LL.

Course Objectives

Students review how primates: 1) feed, use space and time, and locomote in particular habitats; and 2) interact with individuals, groups, and other species within the same habitat. By taking this course, the student should be better able to address questions concerning primate and human ecology, social behavior, morphology, and conservation.

Students will practice methods that researchers use to collect, analyze, and interpret data on primate behavior and ecology. The instructor will use several formats: 1) lecture; 2) on-line discussion & interaction; 3) video & audio review; and 4) local field work. Students will collect data on primates at Zoo Atlanta. Pending interest, transportation, and lodging issues, a select number of interested students will collect behavioral data on free-ranging lemurs in one of two locations: St. Catherine's Island or the Duke University Primate Center. Students will also investigate primate-plant interactions at Atlanta Botanical Gardens. **THIS IS A HANDS-ON COURSE.** Students should be prepared to devote time to collect data outdoors each week.

Zoo & Botanical Project

Each student will collect data on interindividual differences in diet and behavior among the primates in one of the above locations. The species and topic that you study will be based on discussion with the instructor. Each student will be responsible for data collection, data entry, analysis, and interpretation. Data will be compared with results from field studies. Students will also examine botanical specimens relevant to work on the primates they study.

The species to be examined include (but are not limited to): ringtailed lemurs, golden-lion tamarins, red-ruffed lemurs. Although a written summary will be required, the interpretation of results may also involve the production of a professional-quality set of posters or Powerpoint lectures.

Class Schedule

Date	Readings	Topics
Aug 28		Primates in the Field; Weekend: Zoo Visit
Sep. 2-4	DF:p9	Taxonomy, Anatomy, & Adaptations Weekend: Zoo Visit
Sep. 9		Quiz (Primate Taxonomy)
Sep. 9-11	DF:Fedigan&Strum	Data Collection: Primate Ecology & Behavior
Sep. 16-18	Strier (168-191); DF: Ray; Ray Richard (1985) (427-463)	Weekend: Botanical Gardens Visit Video: Congo: The Forest Primeval
Sep. 23-25	Richard (1985) (16-21, 44-69) Strier (302-319)	Ecosystems and Habitats Primate Communities/Species Interactions Video: India: Land of the Tiger: Monsoon Forests
Sep. 25		Quiz (Plant Family)
Sep. 30	DF:Fuentes	Social Structure & Organization
Oct. 2	Crompton*	African Lorises and Bushbabies Asian Lorises: Bumps in the Night
Oct. 7-9	Sterling DF: Freed	Nocturnal Malagasy Primates: Small Guys Lemurids: Not Quite Monkeys Video: Last Edens: Madagascar
Oct. 16	Richard (1977)* DF:Gursky	Weekend: Road Trip to study free-ranging lemurs Indriids: Vertically-challenged Prosimians
Oct. 21-23	Garber*	Tarsiers: Carnivorous Primates New World: Tamarins and Marmosets
Oct. 28-30	DF:Strier; Kinzey* Crockett*	Video: Gremlins: Faces in the Forest Cebids
Nov. 4		Video: Last Edens: Manu
Nov. 4-6	DF: Chism	1st Take-Home EXAMINATION Due before class Africa: Mangabeys, Drills, and Mandrills
Nov.11-13		Africa: Guenons (African Lemurs)
Nov.18-20	Oates* DF:Bercovitch&Huffman DF:Wheatley DF:Kirkpatrick, Dolhinow DF:Lippold, Yeager	Africa: Down in the 'boon docks African Colobines: Primate Cows Macaques: The Weed Species
Nov.25		Asian Colobines: The Langurs Asian Col's: The Odd-nosed Colobines PROJECT DUE BEFORE CLASS
Dec.2-4	DF:Bartlett; Knott; Eudey DF:Goldsmith	Video: Borneo: Creatures of the Mangrove Apes: Gibbons: The True Monog's?
Dec. 9	DF:Fruth et al.	Orangutans, Gorillas Apes: Bonobos & Chimpanzees

2nd EXAMINATION DUE BEFORE BEGINNING OF SCHEDULED FINAL