

**COURSE SYLLABUS: PRIMATE ECOLOGY AND CONSERVATION
ANTH 4/58835
KENT STATE UNIVERSITY: FALL 2008**

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COURSE HOURS: MW 0915 - 1030
OFFICE HOURS: MW 2-4 and after class

ABOUT THE COURSE:

“A goal of conservation biology is to determine which types of species are most susceptible to habitat disturbance and which types of disturbed habitats can support particular species” (Onderdonk & Chapman, 2000:587). This quote underscores the importance of understanding both the ecology of the organism and characteristics of a habitat if conservation is to be effective. The goal of the course is to provide you with an overview of wild primates, their geographic distribution and their ecological requirements, as well as the conservation strategies and tactics that, in many cases, will be key to their survival. Topics will include theoretical issues on speciation and extinction, as well as practical issues on population size, use of a geographical area, schedules for growing up and reproduction, diet and nutrition. I will take ecological issues first and then integrate conservation issues as the course progresses.

The conservation portion of the course will be both biological and issue-driven. There must be some way to quantify and project species numbers in order to understand how best to approach their conservation. A recent study showed that park size alone is not a good predictor of species extinction. Extinction of large mammals was 14 to 307 times higher than expected in West African parks, but if human population density was taken into account, it explained 98% of the variance in extinction rates (Brashares et al., 2001). It is something of an understatement, but conservation has both biological and (human) social components to it.

It is important that you gain some basic information about the c. 250 species in the primate order in the first two weeks of the course. I will divide the primates into 10 groups based on the evolutionary relationships (taxonomic family level for the most part). Your first task will be to become familiar with the characteristics of these groups – and no matter how you look at it, it will require some work and memorization on your part. This will also require familiarity with the geography of the tropics: Central and South America; Africa and Madagascar; mainland and insular Asia. This is where the primates live, and this is also where a lot of people live – hence the link to conservation and a source of much controversy about how development and conservation should or should not be integrated. The latter is the topic of your paper, required by both undergraduate and graduate students (see below). To help motivate you to learn the primates, the primate/geography a quiz is scheduled for the third week of classes..

BOOKS FOR THE COURSE:

Cowlshaw, G., and Dunbar, R. 2000. Primate Conservation Biology. Chicago & London: The University of Chicago Press.

Terborgh, J., van Schaik, C., Davenport, L., and Rao, M. 2002.. Making Parks Work: Strategies for Preserving Tropical Nature. Washington: Island Press.

Readings may be assigned from other sources as appropriate. Those will be made available to you electronically as PDFs.

EVALUATION: (graduate students will be asked to write an additional paper on a topic of their choice – please discuss the topic with me by the time of the midterm exam)

- 1) primate identification & geography quiz (Sep 15th): 10%
- 2) midterm exam Oct 15th (short answer, matching, essay) – : 25%
- 3) research paper due on or before Nov 19th (see below): 25%
- 4) presentation of research paper/project (last week of classes): 15%
- 5) final exam (short answer, matching, essay) during final's week 25% (1015-1230, **Monday, Dec 8th**)

ATTENDANCE: I expect you to be in class for every lecture. Missing more than three classes will lower your grade by 10%

CONSERVATION STRATEGIES RESEARCH PAPER: about 7 pages double-spaced, submit electronically in MS Word) to my email address: mnorconk@kent.edu.

Grad students please write an additional short 4-5 page paper on an ecological topic of your choice. Due on Oct 27th.

Pick an area of the world where a **primate** conservation problem exists (that shouldn't be hard to do!) and write about two aspects of it: a] what the problem is and b] how the problem is being resolved/addressed. That is, pick a site that is receiving assistance or attention by some conservation (governmental or non-governmental) organization. In your paper, address characteristics of the habitat and species involved, nature of the problem, which organization is trying to solve the problem, how they are approaching it (do they include indigenous people, does it involve re-introductions, etc), and provide some assessment about how they are doing or some sort of time-line indicating where they are in the process. You will also need to cover socio-economic and political aspects affecting the area. Write as if you were providing a progress report on the conservation effort.

As you start to look for possible sites, you will probably find it easiest to use the web and there are many sites that could be useful to you: (Conservation International, NRDC's BioGems (www.savebiogems.org), ParksWatch (Duke University), Wildlife Conservation International (Bronx Zoo), Nature Conservancy, National Geographic, IUCN: World Conservation Union (www.iucn.org)). However, don't assume that there are no professional publications on your research site.

Once you identify a site you want to investigate, go onto Ohio Link's "electronic journals" and search for publications that cite the location. If you need help, let me know. There are also several conservation journals (e.g., *Biotropica*, *Conservation Biology*, *Journal of Tropical Ecology*). There will probably be some articles that you can download as PDFs. Also check *International Journal of Primatology* for primate-specific sources. That is, your paper should not be entirely web-driven for reference information.

Source citations in your paper: Please cite the web sources in the following way: in the body of your paper, cite the web site (for example: www.ci.org) as you would cite any reference. In the

bibliography, alphabetize your web sites separately from your text sources and include (in the website information) the site name and a one-sentence description of the site. For published sources, cite them in the body of your paper with last name of author and date like this . . . (Kirkpatrick, 1994). For two authors, include both: (Cowlshaw and Dunbar, 2001). For more than two authors, do this. . . (Mittermeier et al., 1999).

Be sure to give complete references in the bibliography, sorted alphabetically by last name of first author. You can use any journal for an example of citation style, but be consistent!

PRESENTATION OF RESEARCH PROJECT: I set aside two days for you to give a PowerPoint lecture to the class on the topic of your research paper (see above). I will have more to say about this as we get closer to those dates.

SCHEDULE OF LECTURES AND READINGS:

Mondays are C&D readings; Wednesdays are T et al. readings

Date	Topic	Reading: C&D = Cowlshaw & Dunbar; T et al. = Terborgh et al.
Week 1- Aug 25 & 27	Intro to Primates; Intro to Ecol & Evolution; Adaptive radiations	C&D: 1 & 2.1; T et al. 1-2
Week 2 - no class on Labor day; Sep 3	Intro to continental regions; biomes; Pleistocene refugia concept; recent climatic effects	T et al. 3-4
Week 3 - Sep 8 & 10	Primate diet, body mass, life histories; effects of predation	C&D: 2.2-2.3; 3.1-3.2
Week 4 - Sep 15 & 17	Primate mating strategies; social org; species area curves; community richness.	Primate & geography quiz – Sep 15 C&D: 3.3 to end of chapter & 4.1 (pp. 56-67)
Week 5 - Sep 22 & 24	Plant-animal interactions; influences of primates on plant communities.	C&D: 4.2 & 4.3 to end of chap; T et al. 5,6,7,8
Week 6 - Sep 29 & Oct 1	Primate abundance, rarity and demography.	C&D: 5 & 6 (6.1-6.3); T et al. 10,11,12
Week 7 - Oct 6 & 8	Genetics of inbreeding; heterozygosity, population health; extinctions.	C&D: 6.4 & 7; T et al. 14, 15, 16
Week 8 - Oct 13 & 15	Habitat disturbance, the New World: dams, mining, logging & ranching	C&D: 8 Oct 15: midterm exam

Week 9 - Oct 20 & 22	Habitat disturbance: Old World human population growth, disease, the bushmeat trade.	C&D: 8 & 9
Week 10 - Oct 27 & 29	Conservation strategies	C&D: 10 (graduate student ecology paper due 10/27) T et al. 19-20
Week 11 - Nov 3 & 5	Conservation tools: effectiveness of reintroductions & captive breeding	C&D 11 T et al. 21,22,23
Week 12 - Nov 10 & 12	Private sector, politics and money	C&D 12; T et al. 24, 25, 26
Week 13 - Nov 17 & 19	Monitoring parks and development	(all conservation papers due) T et al. 27, 28, 29, T et al. 30, 31, 32
Week 14 - Nov 24 (no class on Wed of Thanksgiving week)	Student presentations	
Week 15 - Dec 1 & 3	Student presentations & wrap up	
Final Exam		Monday Dec 8: 1015-1230

Brashares, J.S., Arcese, P., Sam, M.K. 2001. Human demography and reserve size predict wildlife extinction in West Africa. Proceedings of the Royal Society of London 268:2473-2478.

Onderdonk, D.A., Chapman, C.A. 2000. Coping with forest fragmentation: the primates of Kibale National Park, Uganda. International Journal of Primatology 21:587-611.