

Syllabus
PRIMATE BEHAVIORAL ECOLOGY
Anthropology 348
Fall, 2017

Nothing in biology makes sense except in the light of evolution.

— Theodosius Dobzhansky

- Instructor:** Dr. Ryne A. Palombit
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<http://www.rci.rutgers.edu/~palombit/>
- Office Hours:** Tuesday, 2-4 pm or by appointment
- Sakai Website:** PRIMATE BEHAV ECOLOG 01 F17. This site will have lecture outlines, readings, announcements, etc. **You must use the Sakai site (not emails) to send me questions about course material, schedule, etc.** Note: post your questions in the “Questions” section of the “Discussion and Private Messages” area of the Sakai site.
- Time & Place:** Tues/Fri 12:35 - 1:55 pm in BIO 206
- Prerequisite:** Anthropology 212 (can be co-requisite) or permission of instructor
- Textbook:** Mitani, J.C., Call, J., Kappeler, P.M., Palombit, R.A., & Silk, J.B. *Evolution of Primate Societies*, University of Chicago Press, Chicago.

Course Description & Objectives

Behavior is an evolved biological phenomenon. In this course, we will explore *why* nonhuman primates behave as they do. Our emphasis will be on understanding the adaptive significance of the diversity of primate social behavior within an ecological context. The objectives of the course are: (1) to understand how to think “functionally” about problems in Biology; (2) to appreciate the great variation in ecology and behavior in primates; (3) to apply the functional approach—Darwin’s concept of natural selection—to explain that variation.

Requirements

1. Term Paper Topic Assignment (5%): due on or before **October 6** (see below)
2. Midterm (25%) on **October 17**
3. Term Paper (35%): Due **December 8** (see below)
4. Final Exam (30%) on **December 21, 8 am - 11 am**
5. Class Discussions (5%)

Classroom etiquette

Attend all lectures. Reading, talking, eating, text-messaging on cell phone, leaving or packing up to leave before the professor has dismissed the class are inappropriate classroom behaviors & disruptive to other students. If for some reason you know that you will need to leave lecture early, let me know before class begins, *sit at the rear of classroom, and exit* quietly & unobtrusively through back door. If you come to class late, be sure to enter quietly through back door & take care not to disturb the class in progress. Also, please make sure that your cell phones do not go off during class.

Policy Regarding Missed Exams

Generally, makeup examinations are not given. If you would like to be considered for a makeup examination, the following three conditions must be met:

1. You must have a legitimate excuse for missing the original exam, e.g., illness, family emergency.
2. You must inform me by phone or in person within **48 hrs** before or after the scheduled exam date that you cannot take the exam. My phone has voice mail, so you can leave a message.
3. Within a **week** of the missed examination, you must provide me with a Physician's letter (for cases of illness) or Dean's Letter of Absence (for other cases) confirming that you had a legitimate reason to miss the examination. Note: Deans do *not* provide letters for minor problems. Thus, you need to have a major reason for missing the exam.

If all 3 of the above conditions apply, then you can do a makeup exam (either written, oral, or both)

Midterm & Final Exams

The questions for each exam will be handed out in lecture one week before the exam date. They will not be emailed or posted on the internet. You will then have the intervening week to prepare your answers. You'll write them in a blue book. You can bring one sheet of paper with notes on one side to assist you in writing the essays. You'll hand that sheet in with your blue books.

It's ***your responsibility to note the date & time of all exams, including the final, & to plan accordingly.*** The dates & times are on the University webpage for Schedule of Final Exams (<http://scheduling.rutgers.edu/>). If you miss the exam, or any part of it, because you thought it was given on a different day or at a different time, you will not receive extra time or a make-up exam. So, take note now & mark your calendar, iPod, Blackberry, mobile phone, etc.

The **Term Paper** will be on a subject of your choice, but must have both a *topical* and an *organismal* focus (e.g., "Why are marmosets polyandrous?"). The paper employs **evolutionary theory to interpret** some **social or ecological phenomenon** (e.g., sexual dimorphism, polyandry, monogamy, folivory, polyspecific associations, etc.), and it must cover the literature on some **taxonomic subset of nonhuman primates** (a species [e.g., orangutans], or genus [e.g., *Pan*], or subfamily [e.g., Callitrichinae], etc.). You are expected to use the library's reference tools to ensure use of the recent literature & also to learn to do scholarly work. A handout dealing with the term paper will be distributed. The paper should be about **10 pages, double-spaced**. **Email** me a **"why" question about a specific phenomenon in a particular taxon to me on or before October 6** (5% of your course grade for this; for full credit, you must email the question by the deadline). I will then provide feedback. You are welcome to discuss the question with me verbally, but you *must later email* it to me. Likewise, paper (hardcopy) submissions of *your topic* will *not* be accepted. Some topics (e.g., locomotion, cognition) don't work well. Students cannot duplicate topics & taxa: topics are allocated on "first come, first serve" basis (so email as soon as you have your topic, but be prepared to switch if someone else is already doing it). The **hardcopy of the final paper** is due in lecture



"Well, well—another blond hair. ... Conducting a little more 'research' with that Jane Goodall tramp?"

Gary Larson, *The Far Side*

at the **beginning** of class **December 8**. An electronic submission does **NOT** count as a replacement for hardcopy submission.

A useful website for conducting literature searches is **PrimateLit**. To access:

1. Go to <http://www.libraries.rutgers.edu/>
 2. Put cursor on "Find Articles" then click "Indexes and Databases" on items that appear to right.
 3. Look at letters of alphabet arranges under "By Title." Go to "P". There is PrimateLit.
- You can also use the library's other search engines ("Find Articles" link on Library HomePage, then "Indexes and Databases" link). **Plan to read materials physically kept in the library & unavailable electronically!**

Bill Gates Ate My Homework

Computer glitches (such as computers that die, hard disks that crash, flash drives that are lost, etc) will *not* be accepted as excuses for failure to do assignments on time, to study for exams, etc. It is *your* responsibility to ensure that everything you do on a computer is **properly & frequently backed up** so that failure of a computer has *no* effect on your academic performance.

Cell Phones

Phones must be **turned off before entering** lecture & exams. Phones that are on during exams potentially constitute an academic integrity issue.

Academic Integrity (<http://academicintegrity.rutgers.edu/>)

Rutgers has zero tolerance for cheating, plagiarism, etc. Consult the above webpage to learn more about what constitutes a violation of academic integrity and what sanctions are taken against violators. Since a term paper is an assignment, read the section on plagiarism and citing others' work especially carefully.

SCHEDULE OF MEETINGS & READINGS

Although I will try to keep to this schedule, the dates on which particular topics will be covered in class are subject to change. The dates of the exams will not change.

The Sakai site for this course is **01:070:348:01 S15**. I will post the following:

1. **Lecture Outlines:** these will be posted in a folder entitled "Lecture Outlines" in the "**Resources**" folder. I will post an outline right after the lecture is given.
2. **Readings:** Isolated page numbers or chapters refer to your text book. Additional readings listed below will be posted in the folder "Readings" in the "**Resources**" folder a week ahead of lecture.

Topics and readings may be modified slightly as the semester progresses.

DATE	SUBJECT	READING
Sept. 5	Introduction to the course	
Sept. 8	Biomes & Biogeography I (& a review of African primates)	pp. 17-19, pp. 65-67, 91-92; 113-115; Taxonomy: pp. 8-16 Richard, A.F. 1985. <i>Primates in Nature</i> . W.H. Freeman, New York. Excerpt (pp. 44-65) from Chapter 2, "Primate Distribution: Past and Present." Kamilar, J.M. 2017. Biogeography and primate biogeography. In: <i>The International Encyclopedia of Primatology</i> (A. Fuentes, ed.), DOI: 10.1002/9781119179313.wbprim0413. John Wiley & Sons, Inc., New York.

DATE	SUBJECT	READING
Sept. 12	Biomes & Biogeography II (& a review of the rest of the primates)	<i>Same as above</i> , with addition of pp. 43-44 Ayres, J.M. 1990. Scarlet faces of the Amazon. <i>Natural History</i> , 99 (3): 32-41.
Sept. 15	Behavioral Ecology: Basics	pp. 21-28, 55-58, 70-71, 80-89, 92-99 Hinde, R.A. 1975. The concept of function. In: <i>Function and Evolution in Behavior</i> (G. Baerends, C. Beer & A. Manning, eds.), pp. 3-15. Clarendon, Oxford. Krebs, J.R. & Davies, N.B. 1987. <i>An Introduction to Behavioural Ecology</i> , 2nd ed. Blackwell, Oxford. Chapter 1, "Natural Selection, Ecology, and Behaviour."
Sept. 19	Nutritional Aspects of Primate Foods	Chapter 7, "Food as a Selective Force in Primates"
Sept. 22	Body Size, Metabolism & Feeding	pp. 20-21 (diet & metabolic rate), p. 47, 95-96, 115-117 Bonner, J.T. 2006. Matters of size. <i>Natural History</i> , 115 (9): 54-59. Bell, R.H.V. 1971. A grazing ecosystem in the Serengeti. <i>Sci. Amer.</i> , 225 (1):86-93.
Sept. 26	Primate Feeding Specializations	Altmann, S.A. 1989. The monkey and the fig: A Socratic dialogue on evolutionary themes. <i>American Scientist</i> , 77: 256-263.
Sept. 29	Economics of Ranging	Burt, W.H. 1943. Territoriality and home range concepts as applied to mammals. <i>J. Mammal.</i> , 24:346-352. Klegarth, A.R. 2017. Home range. In: <i>The International Encyclopedia of Primatology</i> (A. Fuentes, ed.), DOI: 10.1002/9781119179313.wbprim291. John Wiley & Sons, Inc., New York.
Oct. 3	Economics of Territoriality	<i>Same as above</i>
Oct. 6	Primate Niches & Communities	Richard, A.F. 1985. <i>Primates in Nature</i> . W.H. Freeman, New York. Excerpt: Chapter 10, "Sympatry, Competition, and the Niche" Marshall, A.J. 2017. Niche. In: <i>The International Encyclopedia of Primatology</i> (A. Fuentes, ed.), DOI: 10.1002/9781119179313.wbprim0090. John Wiley & Sons, Inc., New York. Macho, G.A. 2017. Niche partitioning. In: <i>The International Encyclopedia of Primatology</i> (A. Fuentes, ed.), DOI: 10.1002/9781119179313.wbprim0366. John Wiley & Sons, Inc., New York. Last day to email me: Term Paper Topic & Taxon
Oct. 10	Open	
Oct. 13	Theory: sexual selection & reproduction	Gould, J.L. & Gould, C.G. 1989. <i>Sexual Selection</i> . Scientific American Library, New York. Excerpt: "The Discovery of Sexual Selection"
Oct. 17	Midterm	
Oct. 20	Male-male Competition I: Precopulatory (canines, competition & coalitions)	Petersdorf, M. 2017. Mating systems. In: <i>The International Encyclopedia of Primatology</i> (A. Fuentes, ed.), DOI: 10.1002/9781119179313.wbprim0212. John Wiley & Sons, Inc., New York. Chapter 17, "Mating, Parenting, and Male Reproductive Success" Chapter 18, "Magnitude and Sources of Variation in Male Reproductive Performance"

DATE	SUBJECT	READING
Oct. 24	Male-male Competition II: Precopulatory: vocal signals Postcopulatory: sperm competition	Review Chapter 17 Harcourt, A.H. 1995. Sexual selection and sperm competition in primates: What are male genitalia good for? <i>Evolutionary Anthropology</i> , 4:121-129.
Oct. 27	Female Choice I: Theory & Precopulatory Female Choice: Runaway Selection	Chapter 16, "Mate Choice" Fisher, R.A. 1958. <i>The Genetical Theory of Natural Selection</i> , 2nd ed., Dover, New York. (Excerpt)
Oct. 31	Female Choice II: Precopulatory Indicator Mechanisms	Review chapter 16
Nov. 3	Female Choice III: Postcopulatory: cryptic female choice	Eberhard, W.G. 1990. Animal genitalia and female choice. <i>Scientific American</i> , 78:134-141.
Nov. 7	Primate behavioral ecology film TBA	TBA
Nov. 10	Predators of Primates: A survey: what eats primates?	Chapter 8, "Predation" also: pp. 69, 72-73, 96-97, 119-120
Nov. 14	Social Evolution I Anti-Predator Models	Chapter 9, "Ecological and Social Influences on Sociality" Hamilton, W.D. 1971. Geometry for the selfish herd. <i>Journal of Theoretical Biology</i> , 31:295-311. Also: pp. 648-655 (on vocal communication)
Nov. 17	Social Evolution II Resource Defense Model & Female-Bonded Groups	Chapter 9, "Ecological and Social Influences on Sociality" Chapter 15, "Magnitude and Sources of Variation in Female Reproductive Performance" Chapter 24, "The Adaptive Value of Sociality" Also: pp. 23-30, pp. 49-55, 81-83, 98-100, 102-105
Nov. 21	<i>No lecture</i>	<i>This is day designated for Thursday classes</i>
Nov. 22	<i>Pan-Pongo Comparison</i>	Chapter 6, "The Apes", primarily content dealing with <i>Pongo</i> and <i>Pan</i> Emery Thompson, M. & Machanda, Z.P. 2015. Chimpanzees. In: <i>The International Encyclopedia of Human Sexuality</i> (P. Whelehan & A. Bolin, eds.), DOI: 10.1002/9781118896877.wbiehs088. John Wiley & Sons, New York. Aureli, F. & Schaffner, C.M. 2017. Fission-fusion. In: <i>The International Encyclopedia of Primatology</i> (A. Fuentes, ed.), DOI: 10.1002/9781119179313.wbprim0114. John Wiley & Sons, Inc., New York.
Nov. 24	<i>Thanksgiving Holiday</i>	
Nov. 28	<i>Open</i>	
Dec. 1	Social Evolution III: Anti-Infanticide Models	Chapter 19, "Infanticide: Male Strategies and Female Counterstrategies"
Dec. 5	A Special Case: The evolution of Monogamy	Riechard, U. 2017. Monogamy. In: <i>The International Encyclopedia of Primatology</i> (A. Fuentes, ed.), DOI: 10.1002/9781119179313.wbprim0352. John Wiley & Sons, Inc., New York. Morell, V. 1998. A new look at monogamy. <i>Science</i> , 21:1982-1983.
Dec. 8	Sexual Conflict: Sexual Coercion	Term paper due Hosken, D.J. & Stockley, P. 2005. Sexual conflict. <i>Cur. Biol.</i> , 15:R535-R536. Smuts, B.B. 1995. The apes of wrath. <i>Discover Magazine</i> .
Dec. 12	Cognitive Strategies of Behavioral Ecology	Chapter 27, "Solving Ecological Problems" <i>And: reading to be announced</i>

DATE	SUBJECT	READING
Dec. 21	<i>Final exam, 8 am - 11 am</i>	

NOTE: Although I will try to keep this schedule, the dates on which particular topics are covered may change (but exam dates won't change)

