

## **ANBI 133: Evolution and Ecology of the Great Apes**

WLH 2122 MWF 2:00-2:50pm, Spring 2018

Professor: Dr. Marni LaFleur ; Email: [marni.lafleur@gmail.com](mailto:marni.lafleur@gmail.com)

Office: Social Sciences Building 297

Office hours: Mondays

**Final Exam: Monday March 19, 3:00-5:59pm**

TA: Elizabeth Clausing ; Email: [eclausin@ucsd.edu](mailto:eclausin@ucsd.edu)

**Please note:** some aspects of the syllabus may change through the term. I will keep you updated as we progress.

Course Description: the great apes are our closest living relatives and their ecology and evolution provide insights for human evolutionary history and perhaps ideas about how to co-exist with them. The course examines the natural history, behavior, ecology, and life history of each of the great apes including: orangutans, gorillas, bonobos, and chimpanzees. We will also consider conservation issues facing wild great apes, the welfare of apes in captivity, and ethical debates on ape "personhood". **Prerequisites:** upper-division standing.

The course will include lectures, discussion periods (in class time), documentary films, and field trips to the San Diego Zoo. You will have weekly background readings, and additional readings to complete before discussion periods. There will be short quizzes on readings before discussion periods. You will also need to complete reports following field trip assignments- these require a significant time investment to complete well. You will also complete a group term project and present your work to the class. You can come to my office hours or contact me (Marni) throughout the term as needed. *I can help you!* To do well in the course, you need to come to class, participate, keep up with readings, attend field trips, and complete all assignments and exams. I will post all lecture slides on TritonEd and podcasts will also be available for lectures.

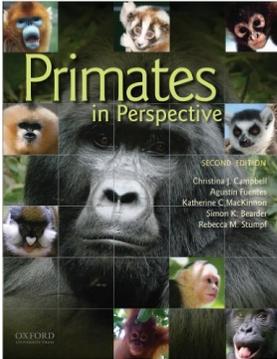
Part of this course includes conducting behavioral observations of the primates at the San Diego Zoo. For this you need to purchase an "annual pass" and there are a couple of options for how to do this. If you purchase the 'one adult' annual pass, do this in person (not online) and show your student ID to get the 10% discount. This way the pass will cost \$111 (less 10%). Alternatively, you can buddy up with a class mate and purchase a 'two adults same household' pass. You cannot get the student discount for this one and have to say that you live at the same address. The cost for this is \$166.50 (but you split the cost between two people). You can purchase this online or in-person.



Remember to take current student ID and proof of residence in zip codes 91900-92899 in order to purchase the pass.

If purchasing the pass presents a significant financial hardship for you, please come talk to me or send me a message.

## Textbook:



*Since you already have to purchase a Zoo membership, you will not have to purchase a textbook.*

Readings will be places on TED or be available through library reserves.

Several readings will come from the following edited volume: Campbell, C., Fuentes, A., Mackinnon, K., Bearder, S., and Stumpf, R. 2011. *Primates in Perspective*, 2<sup>nd</sup> edition. Oxford University Press.

## Coming into and leaving class

Please try to be on time. If you can't be at class when it starts, please come in quietly and try not to be disruptive. Also, PLEASE try not to start rustling around and packing up before class is over. This drives me bonkers. In return, I promise not to hold you captive or go overtime. Ever.

## Academic Integrity

The office of Academic Integrity provides guidance for students and faculty (<https://students.ucsd.edu/academics/academic-integrity/index.html>). In order to avoid lengthy sanctions with the office of Academic Integrity, please just hand in original work with appropriate citations for your term project and use no aids during examinations (i.e. notes, your neighbor's exam, your cell phone, etc), and collect and hand in your own data for Zoo assignments.

## Students with disabilities

I will happily make accommodations for students with documented disabilities. Please come see me if you need something.

## Students with athletic commitments

Please give me your schedules as soon as possible. I am happy to accommodate, so please provide documentation.

## LGBT(-qia) students

Welcome! I always want you to feel safe in my class and/or office. Please let me know if you have a preferred name and/or pronoun that you would like me to use, if this is different from what my class list says or what I may inadvertently assume. I am terrible with maps/directions, but here is the link to single-occupancy restroom locations on campus <http://blink.ucsd.edu/facilities/services/general/personal/restrooms.html>.

## First generation, non-traditional, and transfer students

Also, welcome! I too am first gen, non-traditional, and back in the day, was a transfer student. I find that you all often feel like you are missing something, lacking background, or in some instances not as deserving to be at UCSD. This is not true! Please, make yourself comfortable here, in my class and on campus, and own your successes.

### Important Resources:

- **CAPS** (Counseling and Psychological Services). Please know that CAPS is available to all students 24 hours per day. If you ever need someone to talk to, or are considering hurting yourself or others, please reach out immediately. It is never too late to get help.
- **CARE** at the Sexual Assault Resource Center. Let's hope you never need this, but if you do, help is available. As an academic employee, if you tell me about a sexual violence or harassment, I am legally required to report this to a "Title 9 Officer". There are confidential resources available, and although I am not one of them, I could potentially help you find on.

### Discussion of grades or scores

PLEASE NOTE: I will not in any way discuss your exam or project *scores* on the same day that I hand them back to you. If you have questions or concerns regarding your scores, please 1) leave class, 2) read over any comments I've written on your materials, 3) wait 24 hours, and 4) send me an email outlining your question/concern. After this, we can arrange to meet and discuss your scores. I generally write many comments when I return assignments, so you need time to read these over and think about what I've said before we can discuss anything.

### Don't forget, I CAN help you!

Finally, I want you to do well in my class! If I can help you throughout the term, please ask or let me know what's up, in advance. I'll do my best to accommodate, but can't help if you don't talk to me or give me time to problem solve.

### **A few other things to note:**

1. Please consider checking the syllabus or Google before emailing me. If you've done these and are unable to answer your question, email away!
2. If you cannot attend the Zoo field trips at the same time as the class, you need to let me know ahead of time.
3. It drives me crazy when you are on your phone or the internet during class. Please try not to drive me crazy. If you are distracting me, I will tell you to stop.
4. Once posted, final grades are final. I cannot and will not change final grades for any reason other than an error in entry.

### **Grades**

#### In class assignments (several) (10%)

Assignments will be done in-class, generally on days with discussion periods, but these are at my discretion. Depending on time constraints, these may be due immediately following the class period, or at the next class. I will make this clear to you when necessary.

#### Field trip reports (4) (20%)

For these assignments you will need to attend the field trip outing, collect required data, and generate a report (which is due at the start of class on the Monday following the field trip). I will accept late assignments, but you'll lose 10% per day. These assignments require a significant time commitment to do well. *You absolutely must collect and submit your own data.*

Quizzes (7) (10%)

For these, you need to read the assigned journal articles before class. In order to encourage you to do the readings ahead of time, there will be a short quiz at the start of class on discussion days. If you are late to class, sorry, but you missed the quiz and cannot make it up.

Tests (2) (test 1 10%; final exam 25%)

There will be two tests throughout the term. Test 1 will be on Monday February 12 (during class) and the final exam will be on Monday March 19 (3:00-5:59 pm). The final exam will be cumulative, although weight towards materials covered after Test 1.

“Inspired” group term project (short proposal 2.5%, project and presentation 20%, peer review of projects 2.5%)

Short proposal due Sunday February 4<sup>th</sup> 11:59pm.

Project Presentation due Saturday March 10<sup>th</sup> 11:59 pm.

Please see the specific hand-out about the term projects for more information.

*Adding late: please note that if you add or join the course late, you cannot make-up for the content that you have missed.*

Letter	Percent	GPA	Meaning	P/NP
A+	97 – 100	4.0	Excellent	Pass*
A	93 – 96.9	4.0		
A-	90-92.9	3.7		
B+	86-89.9	3.3	Good	
B	83-85.9	3.0		
B-	80-82.9	2.7		
C+	77-79.9	2.3	Fair	
C	73-76.9	2.0		
C-	70-72.9	1.7		
D	60-69.9	1	Poor	No Pass*
F	< 60	0	Fail	

CARTA (2%) Optional

Every quarter, the Center for Academic Research and Training in Anthropogeny (CARTA) hosts a symposium. This term's symposium examines the role of hunting in anthropogeny. You can attend the symposium in-person or live-stream the content, BUT you cannot watch the talks after they stream, so you must be able to attend/watch at the time that it happens (March 2<sup>nd</sup>, 1:00-5:30 pm). Before attending or streaming, you must register with CARTA. All the information is available on the website:

<https://carta.anthropogeny.org/>

If you attend, you have the option of writing short synopses from three of the talks (you choose which 3) and submitting these to me by Sunday March 4<sup>th</sup> at 5pm. This will earn you up to a 3% bonus in your final grade. Please create a word document and name the file your first and last name and "CARTA". Please also use



name as the subject of your email. If you cannot attend or miss the talks for any reason, you cannot make up these bonus points. This is the only bonus opportunity. CARTA symposia are very interesting and this is a good way increase your final score in the course- it usually makes the difference of a letter grade!

## SCHEDULE

### WEEK 1

Topics: History of ape studies, the trimates, and principals of primate behavioral ecology.

Reading: 1

**January 8:** Syllabus, instructions for getting a San Diego Zoo membership, and history of great ape research.

**January 10:** the "Trimates"

**January 12:** Socioecology and principles of primate behavioral ecology.

### WEEK 2

Topics: Method for collecting animal behavior data; Zoo trip 1

Readings: 2 & 3

**January 15:** NO CLASS. MLK Day.

**January 17:** Reading quiz (on readings 2 & 3); Methods

**January 19:** Zoo trip 1

### WEEK 3

Marni away this week. Elizabeth to show Virunga in class.

Take-home assignment based on Virunga and the Robbins et al. (2011) article due at the start of class on Monday Jan 29<sup>th</sup>.

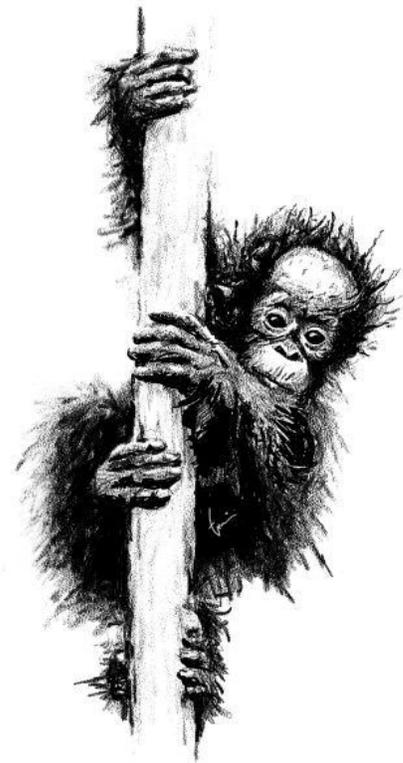
Topics: Virunga

Reading: 4

**January 22:** Reading quiz (on reading 4), Virunga 0-45 min

**January 24:** Virunga 45-90 min

**January 26:** Virunga 90-100 min; in-class discussion, take home assignment handed out.



WEEK 4

Topics: Orangutans, Zoo trip 2

Readings: 5-9

Items DUE: Virunga assignment and Zoo trip 1 report due at the start of class on Monday Jan 29<sup>th</sup>. By the END of this week (i.e. Sunday February 4<sup>th</sup> 11:59pm) you must have submitted a group proposal for your term project.

**January 29:** Orangutan 1

**January 31:** Reading quiz (on readings 6-9), Orangutan 2

**February 2:** Zoo trip 2

WEEK 5

Topics: Orangutans, Gorillas

Readings: 10-13

**February 5:** Orangutan 3

**February 7:** Gorilla 1

**February 9:** Reading quiz (on readings 11-13), Gorilla 2

WEEK 6

Topics: Gorilla, Bonobos, Zoo trip 3

Readings: 14

Items DUE: Zoo trip 2 Report due at start of class on Monday Feb 12<sup>th</sup>.

**February 12:** Gorilla 3

**February 14:** Bonobo 1

**February 16:** Zoo trip 3

WEEK 7

Topics: Bonobos

Readings: 15-17

**February 19:** NO CLASS. Presidents' Day.

**February 21:** Reading quiz (on readings 15-17), Bonobo 2

**February 23:** Bonobo 3

WEEK 8

Topics: Chimpanzees

Readings: 18-21

Items DUE: Zoo trip 3 Report due at start of class on Monday February 26.

**February 26:** Chimpanzee 1

**February 28:** Reading quiz (on readings 18-20), Chimpanzee 2

**March 2:** NO CLASS, CARTA 1:00-5:30 pm.



## WEEK 9

Topics: Diseases in ape ecology and evolution.

Readings: 22-23

Items DUE: Project Presentation due Saturday March 10<sup>th</sup> 11:59 pm.

**March 5:** Chimpanzee 3

**March 7:** Reading quiz (on readings 21-22), Topics in Ape evolution and ecology

**March 9:** Zoo trip 4



## WEEK 10

Topics: Student presentations, wrap-up

Readings:

Items DUE: Zoo trip 4 Report due at start of class on Friday March 16<sup>th</sup>.

**March 12:** Student presentations

**March 14:** Student presentations

**March 16:** Future of great apes and class wrap-up.

### Readings:

1. Primate Behavioral Ecology Chapters (Strier) Ch 1-2. (Skim these to get some background on primate studies, behavioral ecology, sociobiology, and primate traits.)
2. Primates in Perspective, Behavioral data collection in primate field studies, Chapter 21. (pay most attention to the ethogram section through data collection before electronic data recorders)
3. Measuring Behavior (Martin and Bateson) Ch 5
4. Robbins, Martha M., et al. "Extreme conservation leads to recovery of the Virunga mountain gorillas." *PloS one* 6.6 (2011): e19788.
5. Primates in Perspective, Orangutans, Chapter 18
6. Nater, Alexander, et al. "Morphometric, behavioral, and genomic evidence for a new Orangutan species." *Current Biology* 27.22 (2017): 3487-3498.
7. Nijman, Vincent. "Orangutan trade, confiscations, and lack of prosecutions in Indonesia." *American Journal of Primatology* (2017).
8. Banes, Graham L., Biruté MF Galdikas, and Linda Vigilant. "Male orang-utan bimaturism and reproductive success at Camp Leakey in Tanjung Puting National Park, Indonesia." (2014).
9. Hardus, Madeleine E., et al. "Behavioral, ecological, and evolutionary aspects of meat-eating by Sumatran orangutans (*Pongo abelii*)." *International journal of primatology* 33,2 (2012): 287-304.
10. Primates in Perspective, Gorillas, Chapter 19
11. Shutt, Kathryn, et al. "Effects of habituation, research and ecotourism on faecal glucocorticoid metabolites in wild western lowland gorillas: Implications for conservation management." *Biological Conservation* 172 (2014): 72-79.
12. Lukas, Kristen E. "A review of nutritional and motivational factors contributing to the performance of regurgitation and reingestion in captive lowland gorillas (*Gorilla gorilla gorilla*)." *Applied animal behaviour science* 63.3 (1999): 237-249.
13. Bekoff, M. "Why was the gorilla Harambe killed at the Cincinnati Zoo? Shooting Harambe must be carefully scrutinized. <https://www.psychologytoday.com/blog/animal-emotions/201605/why-was-the-gorilla-harambe-killed-the-cincinnati-zoo> (click on link for this one)
14. Primates in Perspective, Chimpanzees and Bonobos, Chapter 20

15. Miller, Lance J., and Jennifer R. Tobey. "Regurgitation and reingestion in bonobos (*Pan paniscus*): Relationships between abnormal and social behavior." *Applied Animal Behaviour Science* 141.1 (2012): 65-70.
16. Tokuyama, Nahoko, et al. "Cases of maternal cannibalism in wild bonobos (*Pan paniscus*) from two different field sites, Wamba and Kokolopori, Democratic Republic of the Congo." *Primates* 58.1 (2017): 7-12.
17. Surbeck, Martin, et al. "Male reproductive skew is higher in bonobos than chimpanzees." *Current Biology* 27.13 (2017): R640-R641.
18. Wilson, M. L., Boesch, C., Fruth, B., Furuichi, T., Gilby, I. C., Hashimoto, C., ... & Lloyd, J. N. (2014). Lethal aggression in *Pan* is better explained by adaptive strategies than human impacts. *Nature*, 513(7518), 414-417.
19. Phillips, Caroline A., Richard W. Wrangham, and William C. McGrew. "Non-dietary analytical features of chimpanzee scats." *Primates* (2017): 1-10.
20. Ross, Stephen R., Vivian M. Vreeman, and Elizabeth V. Lonsdorf. "Specific image characteristics influence attitudes about chimpanzee conservation and use as pets." *PLoS One* 6.7 (2011): e22050.
21. O'Neill, Matthew C., et al. "Chimpanzee super strength and human skeletal muscle evolution." *Proceedings of the National Academy of Sciences* (2017): 201619071.
22. Leendertz, Siv Aina J., et al. "Ebola in great apes—current knowledge, possibilities for vaccination, and implications for conservation and human health." *Mammal Review* 47.2 (2017): 98-111.
23. Rushmore, Julie, et al. "Screening wild and semi-free ranging great apes for putative sexually transmitted diseases: Evidence of Trichomonadidae infections." *American Journal of Primatology* 79.4 (2017): 1-2.