BZ 430 Animal Behavior and Conservation, Spring 24 *TR 9:30-10:45 Yates 206*

Instructor: Dr. Lisa Angeloni, lisa.angeloni@colostate.edu

Office hours: Tues 10:45-11:45am or by appointment, Biology 318

Course objectives: We will study the interface between animal behavior and conservation biology by reviewing major topics in animal behavior and how this research may contribute to solving conservation problems. Goals are to 1) evaluate whether/when behavioral research can be applied to biodiversity conservation; and 2) critically evaluate and synthesize literature at the behavior-conservation interface.

Canvas: Check regularly for info, lecture slides, assignments, grades, and announcements.

Optional textbook: *A Primer of Conservation Behavior* by Blumstein & Fernández-Juricic. Can be downloaded from the library course reserve system or our Canvas site.

Grading:

Participation	22 pts
Discussion lead	35 pts
Weekly reading questions	40 pts
Research paper	50 pts
Research presentation	30 pts
Midterm exam	80 pts
Final exam (not cumulative)	80 pts
Total:	***337 pts***

Grading scheme: A=90–100%; B=80–89%; C=70–79%; D=60–69%; F=below 60%. *Plus/minus grades will be given within these intervals.*

Participation: You are expected to actively participate in discussions. You'll receive 1 pt for attending each discussion and 1 pt for contributing to each discussion (x11 discussions = 22 pts). Please let me know if you cannot attend class because of illness, and we'll make other arrangements.

Discussion Lead: Each Thursday a team of students will lead an in-class discussion of a scientific article. The lead students will submit to me via email 3–5 discussion questions on the article no later than the class period before the discussion, so they can be posted on Canvas. At the start of the discussion, the lead students will summarize the article in a 10-minute Powerpoint presentation (please bring the presentation on a USB drive and also e-mail it to me before class). The summary should: 1) review the introductory material of the paper, including major problems, questions, or hypotheses addressed in the paper (beginning the presentation with ideas that are broader than the study organism), 2) briefly describe methods used, 3) explain the results, and 4) summarize the discussion/conclusions (ending with ideas that are broader than the study organism). The lead students will then actively facilitate discussion of the study. Each non-lead student will use their written answers to the discussion questions in order to contribute ideas during the discussion.

Your score on the discussion lead will be based on the elements below. Note that I would like to see a critical evaluation of the article. This means you should ask the class their opinions of the paper and encourage discussion of positive and negative aspects (e.g., novel methods; important results; problems or limitations with methods, interpretation, or conclusions).

<u>Presentation summary (20 points)</u>

- Coverage of main points with appropriate depth & length of presentation (10 min)
- Organization (including beginning and ending with ideas broader than the study organism)
- Slides (clarity, visual aids, legible text) & verbal description (clarity, volume, pacing)
- Knowledge of paper

<u>Discussion lead (15 points)</u>

- Written questions (clear, appropriate, thoughtful; not just fact-based questions)
- Facilitation of discussion
- Elicit critical (positive/negative) evaluation of paper

Weekly Reading Questions: Each Thursday (excluding the week you lead the discussion), you'll turn in answers to the discussion questions on the assigned article via Canvas, and you should have these answers in front of you for the weekly discussion. Read the questions carefully, answer thoroughly, and check for spelling/grammar. Answers will be graded for content and clarity (4 pts x 10 sets = 40 pts).

Research Paper: You will select a topic at the interface of animal behavior and conservation biology to research. Ensure that you pick a topic with substantial *primary literature* (articles that report on research results; not review papers, books, reports, news articles, websites). Turn in a 1-paragraph summary of your topic and 3 key primary references by Feb 27. You will then prepare a brief term paper summarizing the scientific literature on the topic. Your paper should be written in a scientific style, double spaced, 1200 words (excluding title and literature cited), and include a word count. You will not use traditional sections of a scientific research paper (Introduction, Methods, Results, Discussion, etc.), but it should be divided into a few sections with headings for organization (e.g., Introduction, Subtopic A, Subtopic B, Conclusion). Your Literature Cited section must have at least 8 references from the "primary" scientific literature; other references that are not "primary" (review papers, books, reports, news articles, websites) may be included but will not count as the 8 required primary references. The paper is due April 23. There is a document on Canvas with more info about this assignment and a sample paper from a former student.

Research Presentation: In the last two weeks of the semester, each student will give a brief Powerpoint presentation summarizing the topic of their research paper. Please bring the presentation on a USB drive and e-mail it to me before class. Your score will be based on these elements:

Content (15 points)

- Focus on topic at behavior-conservation interface
- Appropriate depth and length (7 min)
- Effective translation/synthesis of scientific literature

Presentation quality (15 points)

- Slides: clarity, legible text (not too much, and large enough to read), visual aids (figures, images)
- Verbal description: clarity, volume, pacing
- Organization, including clear introduction and conclusion

On the day of your presentation, you will submit 2 questions on your topic for possible use on the final exam. All questions and slides will be posted on Canvas prior to the exam.

Exams: The midterm (Mar 7) and final exam (May 9) may include matching, multiple choice, true/false, short-answer, and brief essay questions. Exam questions will be taken from lectures (including guest lectures), readings, and student presentations. Make-up exams are not allowed without proof of extenuating circumstances.

Academic integrity/plagiarism: We will adhere to the to the CSU Student Conduct Code. For more info: https://resolutioncenter.colostate.edu/academic-integrity/. Your writing should be your own work; if you are summarizing ideas of someone else, use your own words and cite the original author. Plagiarism will result in no credit. For more info: https://www.plagiarism.org.

Students with Disabilities: Students who need special accommodation for taking exams should consult with the Student Disability Center: https://disabilitycenter.colostate.edu.

Need help? If you are struggling with drugs, alcohol, depression, anxiety, overwhelming stress or thoughts of hurting yourself or others, Mental Health Services has trained professionals who can help. Contact 970-491-7121 or go to https://health.colostate.edu/about-mental-health-services/. If you are concerned about a friend or peer, tell someone by calling 970-491-1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources http://supportandsafety.colostate.edu/tellsomeone.

Schedule of weekly topics and readings:

WEEK	***TOPIC***	***READING***
Jan 16	Class cancelled because of weather	
Jan 18	Course logistics & conservation behavior	Primer Ch 1
Jan 23	Intro to animal behavior & conservation biology Guest lecture: Dr. Kevin Crooks	
Jan 25	Disc 1: The conservation-behavior interface	Buchholz 2007; Caro 2007
Jan 30	Mechanisms & evolution of behavior	Primer Ch 2, 3
Feb 1	Disc 2: Ecotoxicology & fish behavior	Brodin et al. 2013
Feb 6	Captive breeding & assessing animal preferences	Primer Ch 4
Feb 8	Disc 3: Migration training of reintroduced cranes	Teitelbaum et al. 2018
Feb 13	Habitat selection & conservation	Primer Ch 5
Feb 15	Disc 4: An ecological trap for nesting birds	Imlay et al. 2019
Feb 20	Foraging behavior & conservation	Primer Ch 6
Feb 22	Disc 5: Effects of tourism on foraging ibex	Tadesse & Kotler 2012
Feb 27	Antipredator behavior & conservation ***Submit 1-paragraph summary of research paper topic listing 3 primary references***	Primer Ch 7
Feb 29	Disc 6: Effects of dingoes, dogs & cats on bandicoots	Carthey & Banks 2012
Mar 5	Impacts of noise pollution on behavior	Primer Ch 8
Mar 7	***MIDTERM*** (covering material through Feb 29)	
Spring Break		
Mar 19	African elephants as a case study Guest lecture: Dr. George Wittemyer	
Mar 21	Disc 7: Effects of motorboat noise on fish	Simpson et al. 2016
Mar 26	Wildlife-human conflict & animal personality Guest lecture: Dr. Stewart Breck	Primer Ch 9
Mar 28	Disc 8: Personality in translocated tortoises	Germano et al. 2017
Apr 2	Social behavior & conservation	Primer Ch 10
Apr 4	Disc 9: Neighborhood translocation of kangaroo rats	Shier & Swaisgood 2012
Apr 9	Reproductive behavior & conservation	Primer Ch 11
Apr 11	Disc 10: Mate choice in captive pandas	Martin-Wintle et al. 2015
Apr 16	Human disturbance of behavior & protected areas	Primer Ch 12
Apr 18	Disc 11: Effects of jogging on bird behavior	Lethlean et al. 2017
Apr 23, 25	***Research papers due Apr 23; Presentations***	
Apr 30, May 2	***Presentations***	
May 9	***FINAL EXAM*** (covering material Mar 5–May 2): Thu 2–4 PM, Yates 206	

Important dates:

Wed, Jan 31: Last day to drop course

Fri, Apr 12: Last day to withdraw (W) from course