NR 300 Biological Diversity Syllabus

Fall 2023

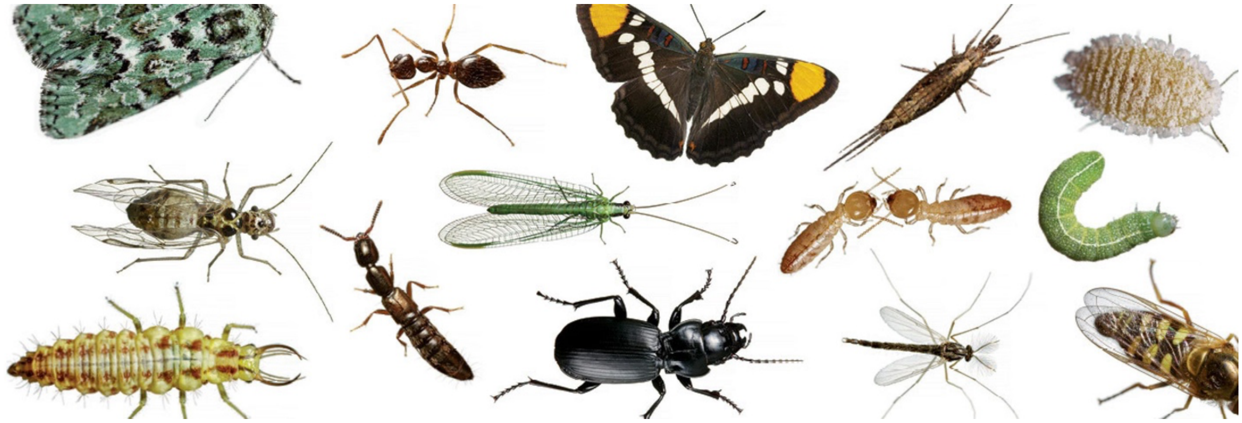

Photo: David Liittschwager

Meeting Times: T/Th 12:30-1:45pm
Meeting Place: NR 140

Instructor:

Dr. Caitlin Wells
Fish, Wildlife, and Conservation Biology
Caitlin.Wells@colostate.edu
Student/Open-door office hours Thursdays 3-4pm, and by appointment
Wagar 239
OR via Zoom

Course Objectives

This course focuses on conserving the diversity of life on earth. We will explore diverse species and ecosystems, review major threats to biodiversity and discuss approaches for overcoming these threats in ways that balance the needs of people and nature. Students will gain a greater understanding of classic principles and contemporary topics in Conservation Biology, and how these can be applied to the stewardship of natural communities. We will work in a partial flipped-classroom format, with both in-person and recorded lectures, readings outside and in class, and class-based discussions. Student involvement and participation are strongly encouraged through in-class and student/office hours discussion.

Format

This is an in-person course, with online supplementary material. We will use a partially flipped classroom model, with lecture days on Tuesdays and group-based discussion and in-class activities on most Thursdays. Material will be posted on Canvas, including some pre-recorded lectures, links to other videos, readings, and discussion-session assignments.

Communication

I hope to get to know each of you, and there are several ways of communicating that will make that possible. Before or after class (or during! especially on discussion days) and during my student/open-door office hours are the best times to ask questions or chat with me. Otherwise, I am available to answer questions throughout the week by video or email. If you need to meet by video (zoom or teams) we can schedule a time, and this can be very informal: your family, roommates, pets, etc. are fine, you don't have to have video on if you don't want to, etc. I have 2 small kids at home who may accidentally make an appearance. In terms of email, sometimes I get overwhelmed with the volume of messages, and can't reply right away. So, if you don't hear back from me within about a day during the week (9-5pm M-F), please just email again.

Required Reading

Each module (week) will have two or more readings relevant to the topics in the module. There is no required textbook, but Sodhi & Ehrlich's Conservation Biology for All is a good reference if you want more background and detail for any particular topic. It is available free online to download from the linked site.

Discussions

You will be part of a small (4person) group for in-class discussion and activities; you will keep this group throughout the semester. Each week you will have an assigned topic, prompt, reading, and/or question to discuss with your group. These will be due at the end of class on Thursdays (1:45pm). If you cannot come to class (e.g. emergency, Covid symptoms/diagnosis, etc.), please contact me *by the end of class that day* if you want to do the discussion assignment on your own and turn it in later.

Because I will drop the lowest discussion score, there will be no make-up discussions after their scheduled day.

Quizzes

There will be timed online quizzes each week throughout the semester (except for weeks with or following an exam) that draw on the assigned reading and the material from the previous week. Please prepare for these quizzes by being sure to read the assigned articles and reviewing your notes. Quizzes will be available on the previous week's material from 1:45pm on Tuesdays – 12:30 Thursdays. Because I will drop the lowest quiz score, there will be no make-up quizzes.

Exams

There will be two timed midterms and one timed final (optional). Please see the schedule below for the dates. Exams will be a combination of multiple choice and short answer/essay questions. My expectation is that everyone can do well on these if they put in the effort to prepare. If you don't do well on the first quizzes or exam, please come see me so we can talk about strategies for studying (including watching this series on how to study by cognitive psychologist Stephen Chew), or resources that might help get you to where you want to be.

Poster Assignment

In pairs (2 people), you will prepare a professional scientific poster on a topic of your choice related to the conservation of biological diversity. Your topic for this poster will be due in the third week of class, and poster presentations will be held mid-October. More information on the assignment, including a rubric, will be available on Canvas.

Grading

	Points	Percent
Discussions (10 X 12pts each)	120	24%
Quizzes (8 X 10pts each)	80	16%
Poster	100	20%
Midterm 1	60	12%
Midterm 2	60	12%
Cumulative Final (optional)	80	16%
TOTAL	500	100%

Letter grades will be calculated according to the CSU grading scheme: A+ = 96.7-100%, A = 93.3-96.6%, A- = 90-93.2, B+ = 86.7-89.9%, B = 83.3-86.6%, B- = 80-83.2%, C+ = 76.7-79.9%, C = 70-76.6%, D = 60-69.9%, F = <60%.

I am happy to answer questions regarding grading of quizzes and exams. Please adhere to the following guideline: If you would like to have a question re-graded, submit a written explanation of your arguments along with the exam/quiz within a week after it was originally graded. After this period, no grade changes will be considered, although I am always happy to discuss the material.

Academic Integrity

I take academic integrity very seriously. Please note that this course adheres to the CSU Academic Integrity Policy as found on the Student' Responsibilities page of the CSU General Catalog and in the Student Conduct Code. At a minimum, violations will result in a grading penalty and a report to the Office of Conflict Resolution and Student Conduct Services.

Principles of Community

In all of our discussions and course interactions, please keep in mind the Principles of Community that we each have the responsibility to uphold: inclusion, integrity, respect, service and social justice. If I fall short of these, please let me know directly, or ask a friend in the course to pass on your constructive criticism anonymously. I encourage and appreciate any suggestions on how to improve the course for all backgrounds and perspectives.

Accommodations

It is my intention to make the course content accessible to all students. If something is not working for you, and/or you need additional accommodations for the course, please let me know as soon as possible.

Updating Your Name and Gender

The Pride Resource Center has instructions for how to add/change a preferred name on RamWeb, and how to update CSU on legal name or gender changes. However, please feel free to update me anytime if your preferred name or pronouns change – no need to wait until next semester! Also, the Smith NR building has an all-gender restroom on each floor; the closest one is nextdoor to our classroom, first floor NR 135.

Health

Your mental and physical health are more important than any specific course or its content. This semester we are experiencing the intensification of effects of ongoing climate change, increasing political polarization, and probably another wave of the Covid-19 global pandemic. It's a lot. Please let me know if you get to a point where you feel you can no longer keep up with the course, and we can try to work out the best path forward.

Personally, I have been managing depression and anxiety for several decades now, and I find time in nature can help. There is some good research to back this up, too. When I can't get outside, I will sometimes put on one of the following wildlife cams: Panama Fruit Feeder Cam (tropical rainforest birds), Sapsucker Woods Feeder Cam (North American birds), Brooks Falls Alaska (water, bears & salmon), Miami's Urban Coral Reef Cam , or Aqualink's Hawaii Coral Reef Cam. If things are feeling temporarily overwhelming or you can't focus, it might be worth trying. **However, this is no substitute for professional help. If you need help connecting with campus medical or mental health resources, please let me know.**

Covid-19 Reporting (Language from CSU's Covid-19 site)

All students are expected and required to report any COVID-19 symptoms to the university immediately, as well as exposures or positive tests (even home tests).

- If you suspect you have symptoms, or if you know you have been exposed to a positive person or have tested positive for COVID (even with a home test), you are required to fill out the COVID Reporter.
- If you know or believe you have been exposed, including living with someone known to be COVID positive, or are symptomatic, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you.
- If you do not have internet access to fill out the online COVID-19 Reporter, please call (970) 491-4600.

- You may also report concerns in your academic or living spaces regarding COVID exposures through the COVID Reporter. You will not be penalized in any way for reporting.
- When you complete the COVID Reporter for any reason, the CSU Public Health Office is notified. Students who report symptoms or a positive antigen test through the COVID Reporter may be directed to get a PCR test through the CSU Health Network's medical services for students.

For the latest information about the University's COVID resources and information, please visit the **CSU COVID-19 site**: https://covid.colostate.edu/.

Course Schedule

Module/Week	Date	Topics
1	T Aug 22	What is Biodiversity?
	Th Aug 24	Discussion: Patterns of Biodiversity
	Assignments	*Discussion*
2	T Aug 29	Extinction & Rarity
	Th Aug 31	Discussion: Defaunation of Earth
	Assignments	*Discussion, Quiz*
3	T Sept 5	Valuing Nature
	Th Sept 7	Discussion: Ecosystem Services
	Assignments	*Discussion, Quiz, Poster Topic Due*
4	T Sept 12	Foundations of Conservation Biology
	Th Sept 14	Discussion: Reserve Design (Start of Hispanic Heritage month!)
	Assignments	*Discussion, Quiz*
5	T Sept 19	Threat: Invasive Species
	Th Sept 21	Discussion: Novel Ecosystems
	Assignments	*Discussion, Quiz, Poster Bibliography Due*
6	T Sept 26	Guest Lecture
	Th Sept 28	MIDTERM 1
	Assignments	*None*
7	T Oct 3	Threat: Climate Change
	Th Oct 5	Discussion: Assisted Migration
	Assignments	*Discussion, Annotated Bibliography Due*
8	T Oct 10	Threats: Overexploitation and Pollution
	Th Oct 12	Discussion: Pollution
	Assignments	*Discussion, Quiz*
9	T Oct 17	Threat: Habitat Loss and Fragmentation
	Th Oct 19	Discussion: Habitat Loss
	Assignments	*Discussion, Quiz*

10	T Oct 24	Small Populations I - Problems
	Th Oct 26	Poster Session
	Assignments	*Posters Due, Quiz*
11	T Oct 31	Film Screening: *Kiss the Ground*
	Th Nov 2	Discussion: Conservation Optimism (Start of Native American Heritage month!)
	Assignments	*Discussion, Quiz*
12	T Nov 7	Small Populations II - Captive Breeding and Reintroductions
	Th Nov 9	Discussion: Rewilding
	Assignments	*Discussion*
13	T Nov 14	Guest Lecture
	Th Nov 16	MIDTERM 2
	Assignments	*None*
14	T Nov 21	FALL BREAK
	Th Nov 23	FALL BREAK (Happy Thanksgiving!)
	Assignments	*None*
15	T Nov 28	From Parks to Cities
	Th Nov 30	Discussion: Redlining
	Assignments	*Discussion*
16	T Dec 5	Agricultural & Restoration Ecology
	Th Dec 7	Class Summary and Reflection
	Assignments	*Quiz*
17	W Dec 13 6:20-8:20p	Final Exam

*course schedule and topics are subject to change