SPRING 2021

WILDLIFE ECOLOGY AND CONSERVATION BIOLOGY

WLDL 458/658

Urban Ecology Center, Milwaukee, WI

A UWSP student photo of a hummingbird during a field course to Costa Rica. Ecotourism is popular in Costa Rica.

Students will be able to:

1. Discuss concepts in conservation biology as they relate to local, national, and global issues.
2. Analyze problems encountered in the field of conservation biology.
3. Design, conduct, and present a wildlife ecology project on squirrels.
4. Collaborate with a team in an online environment.
5. Discuss conservation biology issues with your peers.

Men argue.
Nature Acts.

Voltaire

Course Description and Objectives

Welcome the WLDL 458/658, Wildlife Ecology and Conservation Biology. This course will introduce you to the relatively young science of Conservation Biology and the issues that conservation biologists engage. From its roots conservation biology was developed as a deeply collaborative discipline and as such the approaches used and the tools needed are widely varied. However, if there is a central theme that unifies conservation biology, it is the preservation of biological diversity and ecosystem function. To accomplish this, many stakeholders including scientists, corporations, governmental agencies, private land-owners, and others are invited to participate in the design and success of the various programs and studies.

Wisconsin was home to some of the founders of the field as we know it today. In fact, we are about an hour's drive from both the homestead of John Muir near Portage and the famous shack of Aldo Leopold near Baraboo. In addition to these western pioneers of the preservationist and conservationist ethics, the Native Americans in Wisconsin had already been practicing sustainable development through the principles of honorable harvest, which teaches to take only one you need, never more than half, and always leave a gift in return. Although this class will be 100% online, we will have Live Zoom meetings as an attempt to foster an interpersonal dynamic. I do understand that individual students may have obligations that restrict them from attending these meetings.

DR. CHRISTOPHER YAHNKE

OFFICE TNR 346
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715-346-2455

LIVE ZOOM TR 9:00-9:50, W 14:00 – 15:50 (RECORDINGS AVAILABLE)

ZOOM-OH BY APPOINTMENT

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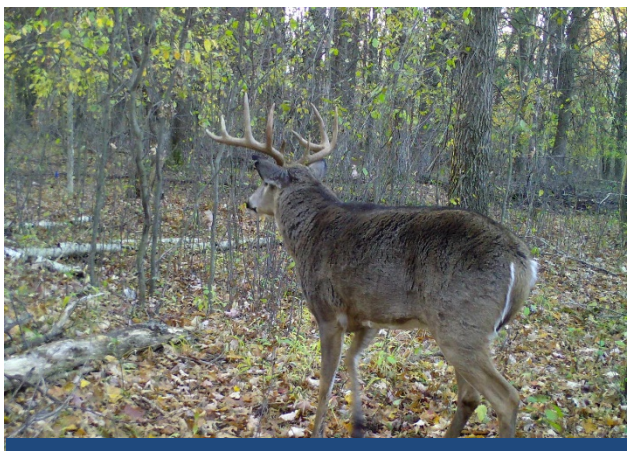
I HAVE A FEELING THAT I MAKE A VERY GOOD FRIEND, AND I'M A GOOD MOTHER, AND A GOOD SISTER, AND A GOOD CITIZEN. I AM INVOLVED IN LIFE ITSELF-ALL OF IT. AND I HAVE A LOT OF ENERGY AND A LOT OF NERVE.

Maya Angelou

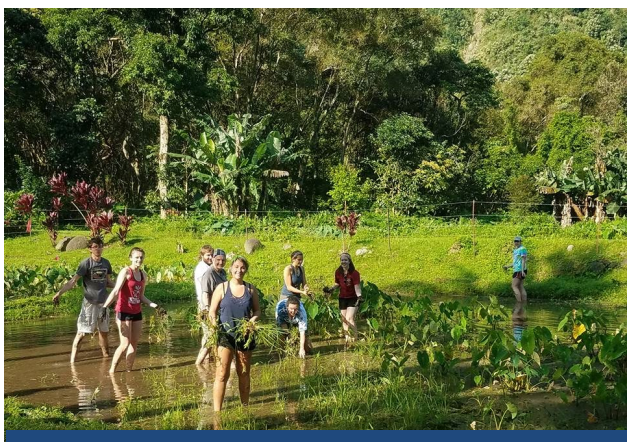
Grading

There will be 400 points in this class. There will a 50-point team oral presentation on a national collaborative squirrel behavior research project using Squirrel-Net. Each week you will be expected to read the portions of the textbook we will be discussing during the Live Zoom meetings. You will write down some notes from the readings and upload these to Canvas. Each of these will be worth 5 points. There will be 20 of these due throughout the semester (100 point). You will get 5 points for turning them in and 0 points for not turning them in. While the point is to complete this prior to the Live Zoom, you can continue to turn these in for full credit until the last day of the semester. There will be weekly midterm exams in this course. Each exam will consist of two essay questions worth 10 points each. There will be a 30-minute time limit for these exams and you will only get one attempt. These exams are designed to evaluate your understanding of the concepts. There will be 10 of these worth a total of 200 points. If you do the math, this is equivalent to having a 100-point midterm and a 100-point final. The other 50 points will consist of a series of challenges for you to complete based on the material we are covering. Assignments are spaced throughout the semester so it is important to get into a rhythm. There are due dates, but I will accept assignments through the last day of the semester on May 14th. Since this is my first semester teaching this course, I will be developing new lectures throughout the semester but will try and have assignments available early for those students who'd like to work ahead.

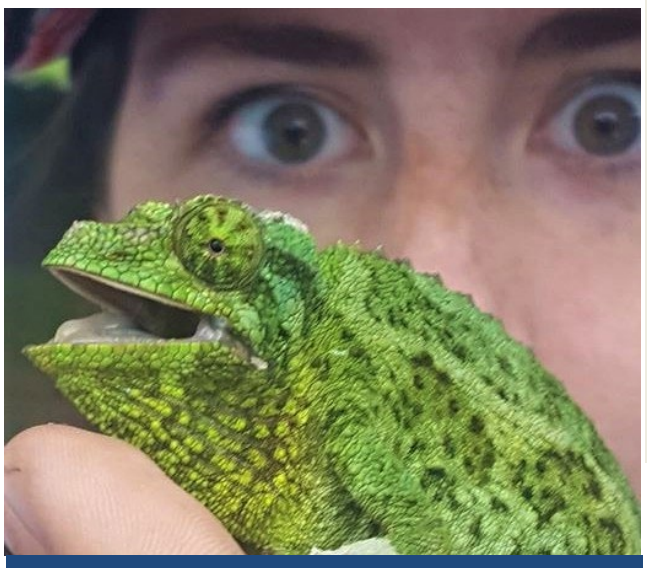
93–100 A
90–92 A-
88-89 B+
83-87 B
80-82 B-
78-79 C+
73-77 C
70-72 C-
68-69 D+
60-67 D
<59 F



Snapshot Wisconsin: There are more than 1000 trail cameras throughout the state hosted by citizen volunteers. The data is used by the WDNR for species management plans. This buck was captured by the camera in Schmeeckle Reserve in 2019.



UWSP students work in a taro patch in the Waipio Valley during a field course to Hawaii in 2017. Your effectiveness as a wildlife biologist will be improved if you are willing to work together with the stakeholders. Sometimes that means getting in the muck.



UWSP student holds a Jackson's chameleon, an invasive species in Hawaii. Biosecurity is a priority in delicate island ecosystems.

Teamwork

ONE MAN ALONE CAN BE PRETTY DUMB SOMETIMES, BUT FOR REAL BONA FIDE STUPIDITY, THERE AIN'T NOTHIN' CAN BEAT TEAMWORK.

EDWARD ABBEY

Research Presentation

The team presentation will be a challenge given the online format this semester, but I believe that it is a marketable skill to solve problems exactly like this. We will work on a national study of squirrel behavioral ecology. I will go over the details during the discussion sections where we can also put together teams. Last semester students effectively solved the problem of which platforms worked best for both synchronous and asynchronous collaborative projects. Some teams presented live while other teams recorded Zoom presentations using PowerPoint and Google Slides. Finally, teams embedded audio in PowerPoint and Sway, a solution that worked well when team members had a hard time synchronizing their schedules. Employers will ask what you did during the pandemic. This will be a story to share.

WILDLIFE ECOLOGY AND CONSERVATION BIOLOGY

UPDATED SYLLABUS 21 DECEMBER 2020

Week		Topic	Pages in Conservation Biology
1	January 26th	Welcome "Back???"	
	January 28th	The Rise of Conservation Biology	26-45
2	February 2nd	Biodiversity Concepts I	54-66
	February 4th	Biodiversity Concepts II	67-77
	February 5-7	Midterm 1	
3	February 9th	Global Patterns of Biodiversity I	82-91
	February 11th	Global Patterns of Biodiversity II	92-113
	February 12-14	Midterm 2	
4	February 23rd	Values of Biodiversity	118-137
	February 25th	Biodiveristy and Ecosystem Services I	141-158
	February 26-28	Midterm 3	
5	March 2nd	Biodiveristy and Ecosystem Services II	159-180
	March 4th	Ecological Economics I	181-194
	March 5-7	Midterm 4	
6	March 9th	Ecological Economics II	195-210
	March 11th	Extinction I	215-229
	March 12-14	Midterm 5	
7	March 16th	Extinction II	230-245
	March 18th	Habitat Loss I	249-276
8	March 20-28	Spring Break	Stay Safe!!!
9	March 30th	Habitat Loss II	277-289
	April 1st	Overexploitation	293-326
	April 2-4	Midterm 6	
10	April 6th	Invasive Alien Species	329-368
	April 8th	Climate Change I	369-391
	April 11th	Google Earth Challenge	
11	April13th	Climate Change II	392-400
	April 15th	Species-level Conservation I	405-422
	April 16-18	Midterm 7	
12	April 20th	Species-level Conservation II	423-440
	April 22nd	Community and Ecosystem Conservation I	445-460
	April 23-25	Midterm 8	
13	April 27th	Community and Ecosystem Conservation II	461-474
	April 29th	Landscape-scale Conservation	477-515
	May 2nd	R Challenge	
14	May 4th	Ex Situ Conservation I	521-540
	May 6th	Ex Situ Conservation II	541-551
	May 7-9	Midterm 9	
15	May 11th	Conservation and Sustainable Development	555-583
	May 13th	Presentations (Live or Canvas)	
	May 14-16	Midterm 10	

WILDLIFE ECOLOGY AND CONSERVATION BIOLOGY

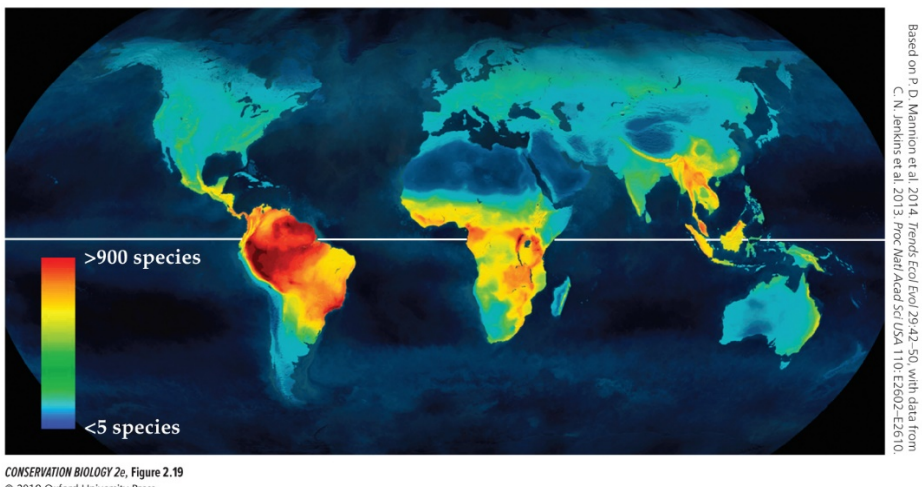
UWSP RELEASES COVID-19 CAMPUS GUIDELINES

Face Coverings:

- At all UW-Stevens Point campus locations, the wearing of face coverings is mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts their use of a face covering should contact the Disability and Assistive Technology Center to discuss accommodations in classes. Please note that unless everyone is wearing a face covering, in-person classes cannot take place. This is university policy and not up to the discretion of individual instructors. Failure to adhere to this requirement could result in formal withdrawal from the course.

Other Guidance:

- Please monitor your own health each day using this screening tool. If you are not feeling well or believe you have been exposed to COVID-19, do not come to class; email your instructor and contact Student Health Service (715-346-4646).
    - As with any type of absence, students are expected to communicate their need to be absent and complete the course requirements as outlined in the syllabus.
- Maintain a minimum of 6 feet of physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.



CONSERVATION BIOLOGY 2e, Figure 2.19
© 2019 Oxford University Press

Figure 4.8 in our textbook perfectly illustrates the implication of Rapoport's Rule known to many conservation biologists. With smaller species ranges near the equator, more species can coexist and therefore you find higher biodiversity as you move from higher latitudes to lower latitudes.

SCIENCE

EDUARDO RAPOPORT: HE SHOULD BE IN OUR BOOK

Eduardo Rapoport (1927-2017) was an Argentinian ecologist known widely for his work in soil biology, invasive species ecology, urban ecology, and biogeography, and is best known for Rapoport's Rule. Rapoport's Rule states that latitudinal ranges of plants and animals are generally smaller at lower latitudes (i.e. near the equator) than at higher latitutes (i.e. closer to the poles). As a professional you may have the opportunity to attend national and international meetings and listen to a variety of presentations and speakers in your field. In my professional career, two of these among the hundreds stand out as truly special. In 1995, at the Annul Meetings of the American Society of Mammalogist in Burlington, Vermont, I heard Ernst Mayr (he was 91 at the time), one of the greatest evolutionary biologists of the 20th century, give an intimate talk on his career. In 2007, at the International Mammalogical Congress in Mendoza, Argentina, I heard Eduardo Rapoport (he was 80 at the time) give a talk in Spanish on his career as an ecologist, much of it living in exhile in Venezuela. In both cases you could hear a pin drop. In both cases the audience hung on every word and understood that this was a once in a lifetime moment. I hope each of you have those moments in your careers.

HTTPS://WWW.UWSP.EDU/REGREC/PAGES/STUDENT-SCHEDULE.ASPX

JOBS

Top 10 Skills Employers Want in College Graduates in 2020

NATIONAL ASSOCIATION OF COLLEGES AND EMPLOYERS

Career services practitioners should advise their college students seeking full-time employment after graduation to craft a well-written resume. Why? In part, because employers responding to NACE's Job Outlook 2019 survey said they will seek evidence of solid written communication skills on their candidates' resumes.

When NACE asked employers participating in its *Job Outlook 2019* survey which skills and qualities—beyond a strong GPA—they most want to see on students' resumes, more than four out of five indicated written communication skills, making it the most sought-after attribute this year. (See Figure 1.)

Problem-solving skills and an ability to work as part of a team are also highly desired.

Attributes showing more significant movement this year are initiative and leadership. Initiative, which was eighth on the list last year, has rocketed to fourth. Nearly three-quarters of respondents are seeking it on resumes this year.

Leadership, on the other hand, has dropped from the fourth most sought-after attribute last year to the seventh this year (tied with verbal communication skills). Other highly valued attributes that employers want to see evidence of on resumes this year include analytical/quantitative skills and a strong work ethic.

Graduation Day: It's weird. You've been in school since you were six and now you have to get a real job. You've been practicing skills the entire time you were in college, but can you communicate those to a potential employer?