AVIAN BIOLOGY AND MANAGEMENT

ENR 5364.02; 3 units; Spring 2024
Lecture: M,W 0800-0855am Kottman Hall 333
Lab: Th or F 0730-1015 Heffner Wetland Research and Education Building

Instructor:
Dr. Christopher M. Tonra, Associate Professor of Avian Wildlife Ecology
Email: tonra.1@osu.edu
Office location: 125 Heffner Wetland Research and Education Building
Office hours: By appointment

Teaching Assistant: Zoe Korpi
E-mail: korpi.11@osu.edu
Office hours: By appointment

Course Description: In this class, we will seek to answer the following questions: 1) what are birds, 2) how do birds work, and 3) how do we manage and conserve bird populations? After completion of the course we will achieve the following goals and objectives:

Course Goals	Learning Objectives
1) Have an appreciation for what makes birds unique (from other animals and from one another)	• Be able to identify most common eastern N American species and families • Have the skills to learn taxonomy of species/Families/Orders not covered in this class
2) Develop an understanding about the diverse ways birds complete their life cycles	• Be able to define the various life history strategies of NA birds. • Be able to explain how bird life histories are shaped by their environment and evolution. • Be able to describe how birds are unique from other vertebrates, and how they are similar (both organismally and ecologically).
3) Grasp the fundamental principles behind conserving and managing bird populations	• Be able to explain different forms of population limitation in birds. • Be able to describe the decision process for applying a management action in birds. • Be able to articulate the challenges of bird conservation, particularly of migratory and endangered species. • Be able to evaluate a management plan
4) Appreciate the role birds play in different types of ecosystems and in society	• Be able to describe different types of ecological roles birds can play, and ecosystem services they can provide. • Be able to explain the laws that regulate how birds are managed and conserved in NA.

Required Texts:
The Sibley Field Guide to Birds of Eastern North America by David Allen Sibley
Edition: 2nd
ISBN # 978-0679451204
Publisher: Knopf
**** While other field guides are acceptable to use, I highly recommend this one, as it is what I will base my lab teaching off of (i.e., will only expect you to know what is in this particular guide). There is also an app available for phones and tablets, which is the full North American version of the guide.*

Recommended Texts:
Ornithology by Frank B. Gill
Edition: 3rd or 4th
ISBN # 978-0716749837 or # 978-1464184369
Publisher: W. H. Freeman

Population Limitation in Birds by Ian Newton
Edition: 1st
ISBN # 978-0123884824
Publisher: Academic Press

Other strongly recommended equipment:
- I have enough good binoculars to loan out and use for class field trips and labs. Please treat these with care, as your fellow students also rely on them. I do recommend, if you are pursuing a career in the natural resources that you invest in a good pair of roof prism binoculars (8X42, 10X50). We will binocular recommendations in our first lab.
- A field notebook (e.g. Right-in-the-rain) small enough to carry in your pocket

Course Grading:

Graded item	**Points**
Lab Quizzes/Homework (30pts each)	150
Midterm I	125
Midterm II	125
Lab Practical	150
Class Project (Participation/Write-up)	150
Final	200
Participation	100
Total Points	**1000**

Letter Grades

93-100%	A	73-75	C
89-92	A-	69-72	C-
86-88	B+	66-68	D+
83-85	B	60-65	D
79-82	B-	<60	E
76-78	C+		

Attendance: Student attendance is critically important to success in this course. The university policy on attendance is such that attendance is not only a privilege but is required. **I will take attendance at on some days at random to assess your attendance patterns.**

Timeliness: Despite the early start times, **you are expected to arrive on time to all class meetings**. This is to prevent from distracting the instructor and your classmates. If there are extenuating circumstances which prevent this, you must inform the instructor and provide documentation where appropriate. **Repeatedly arriving late without instructor approval will negatively affect your participation grade.**

Exams: All exams will be delivered online via CRAMEN and must be taken within the designated time window, unless otherwise approved by the instructor. Exams are intended to be closed book.

Material on Exams: While I do post my lectures, as your attendance in class is required, **any material I cover in lecture is fair game for the exams (i.e. even if it is not explicitly spelled out on the PowerPoint slide).** So, take good notes!!

Lab Quizzes and Practical: These will test your ability to identify bird Orders, Families, and species from photographs. You will also be tested on identification of anatomical and morphological features. The quizzes and practical will be administered via CARMEN (**species ID portion of the quizzes is open book; Family and Order ID portion is closed book**). The Lab Practical will be cumulative. Your lowest quiz score will be dropped.

Field Project: We will be covering the requirements for this assignment in our first couple of lab meetings. We will be conducting group field work at the Olentangy Wetlands both independently and during in-person lab meetings. Each student will be expected to participate in collecting data in the field and submitting an individual write-up on the project findings. **This project will require your participation in work outside of class, on-site at the Olentangy Wetlands**.

Participation: At a minimum, to gain a substantial portion of these points you need to be present in class. I will take attendance at random (i.e. not every day) to assess this. Beyond this, participating in class discussions, asking questions, and your overall engagement are all factored in.

Course policies:
1) If you miss a lecture exam or quiz you must present a valid excuse **with documentation** to receive a make-up date.
2) Late assignments will be penalized 10% per day in the absence of a valid documented excuse.
3) If you find a grading mistake or error, please give the original document and an explanation in writing of the mistake to Dr. Tonra within 24 hours of receiving the graded assignment/exam.
4) All email communications will be through your OSU address and CARMEN. Make sure you are receiving your mail from that address, and have CARMEN access. Check CARMEN on a regular basis for updates and announcements.
5) Academic misconduct will not be tolerated – please see policy below

Disability accommodations:
Students with disabilities who need accommodations should see the course instructors during office hours to make arrangements. Special needs must be discussed and arrangements made well in advance (preferably during the first week of classes) of when they are required. Special accommodations may be arranged through the OSU Office of Disability Service, 150 Pomerene Hall, 1760 Neil Ave., Phone – 292-3307, website – https://slds.osu.edu/. Information in alternative formats upon request.

Academic misconduct:
Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's Code of Student Conduct (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to

follow the rules and guidelines established in the university's Code of Student Conduct and this syllabus may constitute "Academic Misconduct."

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's Code of Student Conduct is never considered an excuse for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If the instructors suspect that a student has committed academic misconduct in this course, we are obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.
If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact the instructor.
Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page (go.osu.edu/coam)
- Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)
- Eight Cardinal Rules of Academic Integrity (go.osu.edu/cardinal-rules)

Copyright for instructional materials
The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Take care of yourself
A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the semester are encouraged to contact the OSU Counseling and Consultation Services (614-292-5766; www.ccs.osu.edu) for assistance, support, and advocacy. This service is free and confidential.

Course Schedule (****Note: schedule is subject to change in case of inclement weather or changes to University policy***)**

Week of	Monday	Wednesday	Thurs or Friday (Lab)	Assignments Due
Jan 8	Introductions/ Syllabus/ What are Birds?	What are Birds?/Internal morphology	Lab 1 - External Morphology	
Jan 15	**MLK Day - No Class**		Lab 2 - Anseriformes - Podicipediformes	
Jan 22	Origins, Form, and Function	Avian Life Histories	Project Field Methods	**Quiz 1 (Labs 1&2)**
Jan 29	Breeding Biology I	Breeding Biology II	Field Day –Hoover Reservoir	
Feb 5	Migration - Evolution and Physiology	Migration - Ecology	Lab 3 - Suliformes - Pelecaniformes	**Deadline for Field Project Sign-up at 5:00 PM Fri**
Feb 12	Feathers and Molt	Stationary Non-breeding	Lab 4 - Coraciiformes – Cuculiformes	**Quiz 2 (Lab 3)**
Feb 19	**Midterm 1**	History of Avian Conservation & Management	Field Day – Pickerington Ponds Metropark	**Midterm 1 (Mon)**
Feb 26	Migratory Connectivity and Seasonal Interactions	Population Dynamics I	Lab 5 - Mark-Recapture Analysis	**Quiz 3 (Lab 4)**
Mar 4	Population Dynamics II	Physiological Ecology	Lab 6 - Passeriformes (Tyrannidae-Bombycillidae)	
Mar 11	**SPRING BREAK -NO CLASS**			
Mar 18	Ecotoxicology and Disease	Technological Applications in Avian Research	Lab 7 - Passeriformes (Paridae-Troglodytidae)	**Mark-Recapture Homework (Lab 5) (Due by 11:59 PM Fri)**

Mar 25	Molecular Tools	Stable Isotopes	Lab 8 - Passeriformes (Sturnidae-Passeridae)	**Quiz 4 (Labs 6&7)**
Apr 1	**Midterm 2**	Gamebird Management	Field Day – Batelle-Darby Metropark	**Midterm 2 (Mon)**
Apr 8	Nongame Bird Management and Conservation	Endangered Species Management	Field Day - Bird Banding Demonstration at Wetlands	**Quiz 5 (Lab 8)**
Apr 15	Citizen Science	Urban Ecology	**Lab Practical**	**Project Write-up (Due Monday 11:59 PM)** **Lab Practical (Due Friday 11:59)**
Apr 22	Emerging Challenges in Bird Conservation	**Final Exam: Thursday Apr 25**		