

LAND ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəyəm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

COURSE INFORMATION

Course Title	Course Code Number	Credit Value
Ornithology and Herpetology	BIOL 427	3

PREREQUISITES

BIOL 121 (or equivalent)

COREQUISITES

None

CONTACTS

Course Instructors	Contact Details	Office Location	Office Hours
Prof. Darren Irwin	Canvas message or email at irwin@zoology.ubc.ca (please include "BIOL427" in the subject line; during the term, I will usually respond within 2 business days)	Biodiversity Research Centre, room 209 (but often not there)	Office or Zoom meetings by appointment (arrange via Canvas message or email, or by talking with me after lecture)
Claudie Pageau (TA)	Canvas message or email at claudie.pageau@zoology.ubc.ca		By appointment (arrange via Canvas message or email, or by talking with Claudie during lab sessions)

ABOUT THE INSTRUCTORS

Darren Irwin is a Professor in the Department of Zoology and the Biodiversity Research Centre, where his research group studies evolution (especially speciation), primarily of birds. **Claudie Pageau** received her MSc from Thompson Rivers University, where she did research on moulting strategies and elevational migration of birds. She is now in the PhD program at UBC, studying speciation in White-crowned and Golden-crowned Sparrows. **Ildiko Szabo**, Collections Curator of Tetrapods in the Beaty Biodiversity Museum, will teach the lab on specimen preparation.

LEARNING OUTCOMES & COURSE STRUCTURE

We will discuss a wide variety of topics in ornithology and herpetology, including evolution, ecology, physiology, behavior, and conservation, focusing on species from British Columbia. Students will learn: (a) how to identify species in the field and in the laboratory using prepared specimens; (b) how to conduct field inventories of birds and present results; and (c) general knowledge regarding evolutionary history, taxonomy, ecology, behavior, and conservation. Field research will take place in

areas chosen by students. The practical skills taught in this course will be useful for working as a naturalist, field ecologist, conservation biologist, or environmental consultant. We also hope that this course enriches the lives of students by generating enthusiasm and interest in biodiversity and natural history. Please note that birds are now the primary focus of this course, with amphibians and reptiles covered more briefly.

LEARNING ACTIVITIES

Laboratory ID sessions will be devoted to learning to identify birds of B.C., using museum specimens, photographs, and sound recordings. Your knowledge will be tested by a lab quiz and a final lab exam, covering material from the entire term. You are responsible for knowing all Families and Orders of the species identified on the list provided by the instructors. You are expected to learn either the scientific name or the official English name of each bird species (based on the names used by the American Ornithological Society—although we will have some discussion of the “Bird Names for Birds” movement).

Lectures will discuss selected aspects of evolution, ecology, behavior, physiology, and conservation of birds (and a bit on amphibians and reptiles). Some lecture periods will be devoted to field methods.

Group projects will provide an opportunity for observing live birds directly, as well as working with other students to carry out a research project and present findings to other students and instructors. This component of the course allows students a great deal of flexibility and creativity; the goal is for students to learn through direct observation of nature followed by data analysis and communication of results.

LEARNING MATERIALS

You are required to have a good and somewhat recent field guide to all the birds of western North America. Make sure that you get a guide which includes all species that are likely to be observed in British Columbia. My top recommendation is: ***National Geographic Field Guide to the Birds of North America, Seventh Edition, by Jon L. Dunn and Jonathan Alderfer***. This is the book that is referred to by page number in the list of bird species that you will learn, so is particularly convenient for this course. This is available at the UBC Bookstore (where it costs \$40).

The main course website will be Canvas, accessed through your CWL account. That Canvas site will have links to any Zoom sessions (if needed) and other learning materials.

ASSESSMENTS OF LEARNING

The course grade will be determined from three components, each counting roughly one-third of the course grade:

- 35% Laboratory ID (quiz on Oct. 17th / 18th: 12.5%; exam on Nov. 21/22: 22.5%)
- 35% Group project (presentation: 15%; written report: 20%)
- 30% Lecture midterm exam (Monday, Nov. 7th)

More explanation of each of these will be provided in the first lecture, and throughout the course. Please note that **the above grading plan might undergo some minor adjustment during the course, and dates of assessments might change** (with as much advance notice as possible).

COVID-19 and related policies: We all want this pandemic to be over, but sadly the prevalence of Covid-19 is still high. **Our main goal is to ensure a good learning environment where risk is reduced as much as reasonably possible.** Please wear a mask during our indoor class meetings, for your own protection, and the safety and comfort of everyone else in the class. Furthermore, **if you feel ill in any way or suspect that you may have been exposed to the virus, we expect that you do not come to class; you will not be penalized for missing class, and we will arrange alternate ways to access course materials and/or to assess your learning.**

We are confident the great majority of students don't need to hear this but just in case: Students who are disruptive or do not adhere to UBC safety regulations while attending lectures or labs will receive no credit for the course.

Policy on missed or late assignments: By registering for this course, students agree to accept personal responsibility for taking exams and completing assignments at scheduled times. We provide the schedule at the start of term so that students can plan accordingly. Students who have an unavoidable schedule conflict with an exam or lab session should talk to the instructor well in advance. Students who are experiencing a personal crisis are encouraged to speak with the instructors sooner rather than later, as we can help you find assistance and minimize impact of the crisis on your academic record. **If you have symptoms characteristic of Covid-19 or have other reasons to think you may be contagious, please do not come to exams—you will not be penalized, and we will arrange another date or way for you to demonstrate your knowledge.**

Recordings of lectures: Because of the need to ensure that sick students do not come to class, and to provide those students with acceptable alternatives to in-person learning, **we will do our best to record most lectures.** The goal will be to record only the lecture and slides, but the recording may capture the voices of students who ask questions or otherwise speak in class, and it may be possible that the recording would occasionally include an image of a student (e.g. if they approach the front of the room). **We hereby notify in-class students to be aware of the potential for their voices and/or images to be recorded.** Students should also be aware that in-class recordings of lectures are considered the intellectual property of the instructor who makes those recordings. **Students in the course will be able to view those recordings, but students are prohibited from copying and/or sharing them with people outside of the course (e.g. on social media),** except in the rare case where all parties agree in writing. Lab sessions will however not be recorded—students who miss lab because of illness or risk of having Covid-19 can speak to the instructors regarding substitute learning materials.

UNIVERSITY POLICIES

“UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.”

Details of the policies and how to access support are available on [the UBC Senate website](#).

NOTE ON ACADEMIC INTEGRITY

Science is a social endeavor; knowledge is built up over time by scientists communicating with one another, sharing ideas and results. In this context, **it is essential that scientists give credit where credit is due. You must not take credit for something that you did not produce.** This principal of academic integrity applies to exams, written assignments, and presentations; you must not present someone else's work as your own. This means, for instance, that you should credit the source of photos downloaded from the internet and used in a scientific presentation. When referring to someone else's work, you must give a citation to that work. In this class you will be working on group projects; the concept of academic integrity means that each member of the group must contribute solidly to the project in order to earn authorship on the report. Another component of academic integrity is that the data you present must be valid, and collected in the way you describe. Academic misconduct has serious consequences, including suspension / expulsion from UBC. For details of UBC policy see: <http://www.calendar.ubc.ca/Vancouver/index.cfm?tree=3,54,111,959>

LEARNING ANALYTICS

Learning analytics includes the collection and analysis of data about learners to improve teaching and learning. This course will be using the following learning technologies: Canvas, and maybe Zoom. Many of these tools capture data about your activity and provide information that can be used to improve the quality of teaching and learning. In this course, instructors may use analytics data to:

- Track your progress in order to provide you with personalized feedback
- Review statistics on course content being accessed to support improvements in the course
- Track participation in discussion forums
- Assess your participation in the course
- Detect violations of academic integrity

LEARNING RESOURCES

A wide variety of support for students is available at: <https://keeplearning.ubc.ca/support>

COPYRIGHT

Redistribution of any course materials by any means without permission of the copyright holder(s) constitutes a breach of copyright and may lead to academic discipline.

Some course sessions may be recorded for later reviewing by students in the course, but these are not allowed to be shared more widely without permission of the instructors, and privacy of students participating in the course must be respected.

SCHEDULE OF TOPICS

The schedule below is tentative. **Some adjustments are likely to be needed during the term**, due to the changing pandemic situation or other reasons. We will inform you of any important changes.

Lecture schedule (M & W 9-9:50am)

<u>Date</u>	<u>Topic</u>	<u>Lab topics for the week</u>
Wed. Sept. 7	Introduction to course; Tetrapod biodiversity and its importance	
Mon. Sept. 12	Introduction to bird identification (1)	Field trip: observing birds
Wed. Sept. 14	Introduction to bird identification (2)	
Mon. Sept. 19	Taxonomic methods; Evolution of tetrapods	Lab intro and ID 1
Wed. Sept. 21	Introduction to the field project: Survey methods	
Mon. Sept. 26	Origin of tetrapods, amphibians, and amniotes	ID 2
Wed. Sept. 28	Early bird evolution	
Mon. Oct. 3	Bird diversity and adaptations	ID 3
Wed. Oct. 5	Species, speciation, and biogeography of BC	
Mon. Oct. 10	<i>No class (Thanksgiving)</i>	<i>No labs this week</i>
Wed. Oct. 12	Analytical methods for the field project	
Mon. Oct. 17	Mating systems and sexual selection	Lab quiz
Wed. Oct. 19	Ildiko Szabo: Bird anatomy and specimen preparation	
Mon. Oct. 24	Vocal communication in birds	Wing specimen preparation
Wed. Oct. 26	Visual communication in birds	
Mon. Oct. 31	Bird migration and orientation	ID 4
Wed. Nov. 2	Bird migration and orientation (2)	
Mon. Nov. 7	lecture exam	ID 5
Wed. Nov. 10	<i>No class (mid-term break)</i>	
Mon. Nov. 14	Anthropogenic threats to tetrapod biodiversity	Review
Wed. Nov. 16	Conservation success stories	
Mon. Nov. 21	Genome-wide association studies, hybrid zone analysis	Lab Exam
Wed. Nov. 23	The Greenish Warbler ring species	
Mon. Nov. 28	guest lecture?	No labs
Wed. Nov. 30	Group presentations	
Mon. Dec. 5	Group presentations	No labs
Wed. Dec. 7	Group presentations	

Lab schedule (M 2-5pm or T 3-6pm)

Claudie Pageau will lead most lab sessions

Sept. 12/13	Birding at Jericho: Intro to field observations (led by Darren)
Sept. 19/20	Lab intro (specimen handling, basic morphology); and Identification 1: orders Anseriformes, Galliformes, Podicipediformes (pp. 16-70, NatGeo Birds V7)
Sept. 26/27	Identification 2: orders Columbiformes, Caprimulgiformes, Apodiformes, Gruiformes, Charadriiformes (pp. 72-212, 547, 551, NatGeo V7)
Oct. 3/4	Identification 3: orders Gaviiformes, Procellariiformes, Suliformes, Pelecaniformes, Cathartiformes, Accipitriformes, Strigiformes, Coraciiformes, Piciformes, Falconiformes (pp. 218-324, NatGeo V7)
Oct. 10/11	No labs because of Thanksgiving holiday
Oct. 17/18	LAB QUIZ (on ID labs 1-3)
Oct. 24/25	Introduction to specimen preparation (led by Ildiko Szabo)
Oct. 31/Nov. 1	Identification 4: order Passeriformes, families Tyrannidae to Turdidae (pp. 334-416, NatGeo Birds V7)
Nov. 7/8	Identification 5: order Passeriformes, families Mimidae to Icteridae (pp. 416-544, NatGeo Birds V7)
Nov. 14/15	Review session
Nov. 21/22	LAB EXAM
Nov. 28/29	NO LAB
Dec. 5/6	NO LAB