

Global Change and Insect Declines

(ENY 4932/6934 & ZOO 4926/6927)

Spring 2024

General Class Information:

Course Description

This course will introduce undergraduate and graduate students to the global impacts of anthropogenic change on insect diversity and abundance. Each week students will read pertinent papers on important topics such as pollution, pesticides, and climate change, followed by group discussions on how these factors are impacting insects in Florida and globally.

Course Learning Objectives

Students that complete this course will be able to critically assess new developments in science policy, in the context of how these policies address the problem of insect declines. They will also be more equipped to develop research projects that further investigate the impacts of insect declines, or to incorporate studies of insect declines into existing projects. Finally, they will be able to effectively perform outreach activities with the public and citizen scientists, demonstrating the importance and implications of insect declines and having a direct impact on the development of ecologically beneficial policies at the local level and beyond.

Credits:

2-credits

Course Personnel

Dr. Akito Kawahara (Co-instructor)
Associate Curator of Entomology
Florida Museum of Natural History
Email: kawahara@flmnh.ufl.edu
Office hours: By appointment. Office: 218 McGuire Hall

Dr. Lawrence Reeves (Co-instructor)
Assistant Professor
Entomology and Nematology Department
Florida Medical Entomology Laboratory
Email: lreeves@ufl.edu
Office hours: By appointment.

Dr. David Plotkin (Co-instructor)
Kawahara Lab Project Manager
Florida Museum of Natural History
Email: dplotkin@ufl.edu
Office hours: By appointment. Office: 130 McGuire Hall.

Chelsea Skojec (Teaching assistant)
PhD Candidate
Department of Biology
Email: chelseaskoj@ufl.edu
Office hours: By appointment.

Course Meetings

Monday and Wednesday, Period 5 (11:45 am – 12:35 pm).

The course will meet twice each week, Mondays and Wednesdays over Zoom. Monday classes will be a lecture format followed by Wednesday student presentation and discussion. Each student will be expected to lead one discussion, which means most Wednesday classes will begin with a student-led presentation on the assigned reading. The remaining classes will begin with a short lecture on the topic by one or more instructors, followed by a group paper discussion.

Textbooks

There are no required or recommended textbooks associated with this course. A list of citations of the assigned readings is on page 4 (See Course Schedule); instructors will provide students with free access to all assigned readings at the beginning of the semester.

Grading:

Students will be graded based on their presentation (30% of final grade), their weekly participation (30% of final grade), weekly discussion questions (20% of final grade) and a final exam (20% of final grade). The final exam will take place at the date and time scheduled by the university (<https://registrar.ufl.edu/courses/final-exam>).

The student-led presentations should include a short (~10 minute) summary of the paper assigned for that week's discussion, using Powerpoint. The student leading the presentation should also prepare to initiate further discussion by asking a few open-ended questions about the paper, or questions about topics closely related to the paper. A list of papers will be provided at the start of the semester, and students will sign up to present one of those papers on a specific class. If a student wants to present a different paper on a similar topic related to insect declines, they may be permitted to do so at the discretion of the instructors. Any student interested in presenting a different paper must send a

.pdf of this alternate paper to the instructors, by e-mail or Canvas, for approval a minimum of *two weeks* before they are scheduled to present.

Class participation implies attendance and active participation in all classes. Students will be expected to read assigned course materials before each class. Each week, students will be expected to submit three substantive questions or comments about the assigned paper for Wednesday discussion. These three questions/comments should be sent to the instructors over Canvas, by 5:00 PM Eastern every Tuesday, the day before the class discussion. Students are not required to submit questions/comments the same week they have signed up to lead the presentation.

Attendance Policy:

Students are expected to attend all classes, unless an acceptable reason for absence is provided, in accordance with university-wide attendance policies (<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>).

Course Schedule

Week	Date	Topic	Lecturer / Discussion Leader	Reading
1	Mon. January 8	Intro – Importance of insects	Kawahara	
	Wed. January 10	Discussion		Wagner et al. (2021)
2	Mon. January 15	<i>No class (MLK day)</i>		
	Wed. January 17	Discussion		Henen (2016)
3	Mon. January 22	Evaluating and addressing declines	Kawahara	
	Wed. January 24	Discussion		Wilson (1987)
4	Mon. January 29	Habitat destruction	Guest Lecture (Sarah Steele Cabrera)	
	Wed. January 31	Discussion		Polus et al. (2007)
5	Mon. February 5	Pesticides – vector control	Reeves	
	Wed. February 7	Discussion		Salvato (2001)
6	Mon. February 12	Pesticides 2 - bees	Guest Lecture (Chase Kimmel)	
	Wed. February 14	Discussion		Tallamy et al. (2020)
7	Mon. February 19	Water pollution	Plotkin	
	Wed. February 21	Discussion		Martine et al. (2017)
8	Mon. February 26	Light pollution	Guest Lecture (Yash Sondhi)	
	Wed. February 28	Discussion		Owens et al. (2020)
9	Mon. March 4	Noise pollution	Kawahara	
	Wed. March 6	Discussion		Dominoni et al. (2009)
10	Mon. March 18	Global warming	Reeves	
	Wed. March 20	Discussion		Harvey et al. (2022)
11	Mon. March 25	Global warming 2	Plotkin	
	Wed. March 27	Discussion		Deutsch et al. (2018)
12	Mon. April 1	Invasive species	Plotkin	
	Wed. April 3	Discussion		Ward & Masters (2007)
13	Mon. April 8	Droughts and rainfall impacts	Reeves	
	Wed. April 10	Discussion		Meyer et al. (2015)
14	Mon. April 15	Environmental change and FL insects	Reeves	
	Wed. April 17	Discussion		Reece et al. (2013)
15	Mon. April 22	Over-collecting	Kawahara	
	Wed. April 24	Discussion		Kawahara et al. (2021)

University of Florida Policy Statements

Grades and Grade Points

Numerical grades will be converted into letter grades in accordance with the standard grading scale adopted by the Department of Entomology and Nematology.

A: 93 - 100%
A-: 90 - 92.9%
B+: 87 - 89.9%
B: 83 - 86.9%
B- 80 - 82.9%
C+: 77 - 79.9%
C: 73 - 76.9%
C- 70 - 72.9%
D+: 67 - 69.9%
D: 63 - 66.9%
D- 60 - 62.9%
E: below 60%

For information on current UF policies for assigning grade points, see:
<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Absences and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:
<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at:
<https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-results/>.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the

highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

In-Class Recording

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests,

exams), field trips, private conversations between students in the class or between a student and the faculty or guest lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator.

Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library
 - Training Programs
- U Matter We Care, www.umatter.ufl.edu/
- Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>
- Student Success Initiative, <http://studentsuccess.ufl.edu>.
- Student Complaints, Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>
- Student Complaints, Online Course: <https://pfs.tnt.aa.ufl.edu/state-authorization-status/#student-complaint>

Additional Health and Wellness Resources

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or [visit the Student Health Care Center website.](#)

University Police Department: [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website.](#)

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the [GatorWell website](#) or call 352-273-4450.

Additional Academic Resources

E-learning technical support: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: [Visit the Student Honor Code and Student Conduct Code webpage for more information.](#)

On-Line Student Complaints: [View the Distance Learning Student Complaint Process.](#)