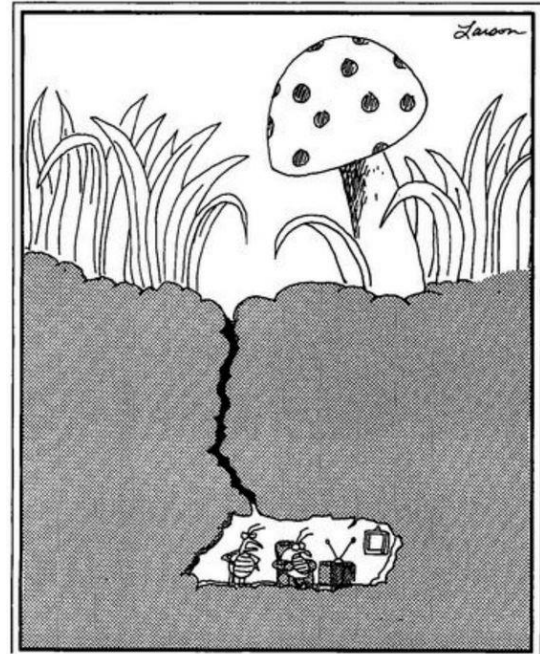


ZOO 6927: Ecological Niche Modeling Spring 2017 Syllabus

INSTRUCTOR INFORMATION:

Dr. Hannah Owens
Postdoctoral Fellow, FLMNH
Office: Rm 359 Dickinson Hall
Office Hours: Tuesdays, 1 pm to 2.30 pm
Telephone: (352) 294-2086
Email: howens@flmnh.ufl.edu

Dr. Rob Guralnick
Assoc. Curator, FLMNH
Office: Rm 358 Dickinson Hall
Lab: Rms 359,288,289 Dickinson
Office Hours: Wednesdays, 1.45 to 2.30 pm
Telephone: (352) 273-1980
Email: rguralnick@flmnh.ufl.edu



“You call this a niche?”

CLASS LOCATION

CHE 0316

CLASS DATE & TIME

Wednesdays, 12:50 to 1:40 pm (6th Period)

COURSE OBJECTIVES

At the conclusion of the course, students will be able to:

- Explain basic niche concepts and how they relate to observed species' distributions
- Design and implement niche modeling analyses according to best practices in the discipline
- Identify applications for niche modeling methods in ecology and evolutionary biology

FORMAT

Class periods will be a mix of lectures, exercises, and discussions. Students are advised to bring laptops on which they can run R, QGIS or ArcGIS, and Maxent, among others. We will cover acquisition and installation of programs during the first meeting of the course.

REQUIRED TEXTBOOK¹

Peterson, AT *et al.*, 2011. Ecological Niches and Geographic Distributions. Princeton University Press, Princeton, New Jersey. 314 pp.

ATTENDANCE AND MAKE-UP ASSIGNMENTS

Requirements for class attendance and make-up exams, assignments, and other are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

¹ We will discuss how to obtain a copy of this book in class on the first day.

SCHEDULE

<u>Date</u>	<u>Topic</u>	<u>Preparation Required</u>
Jan 2	Introduction, program & package installation	Read syllabus, bring laptop
Jan 9	What is a niche?	Text pp. 7-22
Jan 16	What are you modeling, exactly?	Warren, 2012; Text pp. 23-47 ²
Jan 23	Getting and cleaning data	Text pp. 62-95; Install R
Jan 30	Algorithms (Presence-only)	Install Maxent
Feb 6	Algorithms (Presence-absence)	Install MASS R package
Feb 13	Projections	Owens <i>et al.</i> , 2013
Feb 20	Validations	Text pp. 150-180
Feb 27	Modeling changes through time	Maiorano, <i>et al.</i> 2012
Mar 6	SPRING BREAK	Nothing!
Mar 13	Project prospectuses due	1 p written, 1 min. oral précis
Mar 20	Future of niche modeling	Current paper TBD
Mar 27	Niche modeling and comparative phylogenetics	Budic and Dormann, 2015
Apr 3	Niche modeling and disease ecology	Escobar and Craft, 2016
Apr 10	Student Project Presentations Pt. 1	5 min. oral presentation
Apr 17	Student Project Presentations Pt. 2	5 min. oral presentation
Apr 24	Finals Week	Nothing!

EVALUATION

Participation: 35%
Homework: 25%
Project Prospectus: 15%
Final Project: 25%

GRADING SCALE

A: 90-100
B+: 88-89.9
B: 80-87.9
C+: 78-79.9
C: 70-77.9
D: 60-69.9
E: <60

COURSE EVALUATIONS

Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at:

<https://evaluations.ufl.edu/> Summary results of these assessments are available to students at:
<https://evaluations.ufl.edu/results/>

DISABILITY ACCOMMODATION

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

RELIGIOUS OBSERVANCE

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. The instructors will discuss accommodations on a case by case basis. Reasonable requests will almost always be granted.

² Text assignment optional, but potentially helpful.

STUDENT INTEGRITY

UF students are bound by the Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.” On all work submitted for credit by students 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.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor(s).

TOLERANCE POLICY

The University of Florida policy on Discrimination and Harassment (<http://hr.ufl.edu/manager-resources/policies-2/sexual-harassment/>) will be adhered to strictly. Any student who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status can make a formal complaint report to the Institutional Equity and Diversity officer and/or to the Dean of Students Office/Student Conduct and Conflict Resolution (DSO/SCCR). Resources and reporting options can be found online at <https://www.dso.ufl.edu/sccr/resources/victims/>

U MATTER, WE CARE

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

ADDITIONAL RESOURCES

Health and Wellness

Counseling and Wellness

Center:

<http://www.counseling.ufl.edu/cwc/Default.aspx>

Telephone: 392-1575

Sexual Assault Recovery

Guide:

http://www.ufsa.ufl.edu/uploads/ufsa/STRIVE_Sexual_Assault_Recovery_Guide_Brochure_Fall_2014.pdf

University Police

Department:

392-1111 (or 9-1-1 for emergencies)

<http://www.police.ufl.edu/>

Academic

Technical support:

E-learning:

Telephone: 352-392-4357 (select option 2)

Email: Learning-support@ufl.edu

Web: <https://lss.at.ufl.edu/help.shtml>

Library Support:

<http://cms.uflib.ufl.edu/ask>

Skills help:

Teaching Center (General study skills and tutoring)

Broward Hall, 392-2010 or 392-6420.

<http://teachingcenter.ufl.edu/>

Writing Studio (Help brainstorming, formatting, and writing papers)

302 Tigert Hall

846-1138

<http://writing.ufl.edu/writing-studio/>

Career Resource Center:

Reitz Union

Telephone: 392-1601

Web: <http://www.crc.ufl.edu/>

Student Complaints:

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf