

Biol 119 - Herpetology

Course Syllabus

Fall 2013

Instructors

Instructor: Dr. Philip J. Bergmann

Office: Lasry 331

Phone: 508-793-7553

e-mail: pbergmann@clarku.edu

Office hours: Tuesday 10:15-11:15

TA: Allegra Mitchell

Office: TBA

e-mail: amitchell@clarku.edu

Office hours: By Appointment

Lecture and Lab

Lecture: Tuesday & Thursday 9:00 - 10:15 pm Lasry, room 124

Laboratory: Tuesday 1:25 - 4:10 pm Lasry, room 150

* There are also two mandatory field trips that will take place on weekends.

Textbooks

Required:

Pough, F.H., Andrews, R.M., Cadle, J.E., Crump, M.L., Savitsky, A.H., Wells, K.D. 2004.
Herpetology, 3rd Edition. Pearson Prentice Hall.

Conant, R., Collins, J.T., Conant, I.H., Johnson, T.R., Collins, S.L. 1998. Peterson Field Guide:
Reptiles and Amphibians of Eastern & Central North America, 4th Edition. Houghton
Mifflin Harcourt.

Learning Objectives

During the herpetology course, students will be introduced to the diversity and biology of amphibians and “reptiles”. The lecture component will have a global and diverse focus, covering topics of phylogenetics, the origin and evolution of amphibians and reptiles, the global diversity of these taxa, and their biogeography, biology, ecology and conservation. In the laboratory component, students will learn to identify amphibians and reptiles, the anatomy of these taxa, and some field techniques that are useful for studying them. In the laboratory students will also learn to use field guides and use taxonomic keys to identify and distinguish similar species. The course assumes that students are familiar with basic evolutionary theory and general biology.

Course Website

<http://www.clarku.edu/faculty/pbergmann/herpetology/>

The course website, also linked through Moodle, is where you can find instructor contact information, the syllabus, any announcements, lab and lecture schedules, and PDFs of course handouts and Powerpoint presentations. Check the website regularly – it contains almost all of the information and materials you will need for this course.

Grading, components and expectations

Biol 119 will be graded based on the following components:

Lecture (50%)

Midterm 1	100 pts.	10% of grade	September 19
Midterm 2	100 pts.	10%	October 17
Midterm 3	100 pts.	10%	November 14
Final Exam	200 pts.	20%	Scheduled by Registrar

Research Topic (15%)

Topic Selection	10 pts.	1%	September 27
Bibliography	40 pts.	4%	November 1
Next Logical Step	50 pts.	5%	December 6
Presentation	50 pts.	5%	November 24, 26

Laboratory (35%)

Lab Exam 1	100 pts.	10%	October 8
Lab Exam 2	100 pts.	10%	November 19
Lab Activities	100 pts.	10%	Ongoing
Course Participation	50 pts.	5%	Ongoing

Total **1000 pts.** **100%**

Lecture Exams

Lecture midterms will take place during lecture time, so will have a 75 minute time limit. The final will be scheduled during the exam period and will be 2 hours long. All of these exams will consist of a combination of fill-in-the-blank, short answer (1-2 sentences), and long answer (up to 1/3 page) questions. There will be no multiple choice or true/false questions. Questions can be about any material presented in the lecture or in readings specifically assigned in class. Some questions will concentrate on specific facts imparted during the course, like definitions of terms. Other questions will be synthetic, requiring that students apply knowledge gained during the course to new situations. Please read the course study guide for tips on how to study the large amount of material covered in this course. Also, always feel welcome to come to Dr. Bergmann or the TA for help with the material.

Research Topic

The Research Topic is an assignment with three components that will give students a taste of how to research a topic of their choosing that relates to herpetology. The first component is the Topic Bibliography. Students will select a topic that they are interested in, describe their topic, and gather a bibliography of papers related to that topic. The second component is the Next Logical Step. Students will select one article from their bibliography, paraphrase the article and describe a study that they think of that would answer a question that is unanswered by the article. The third component is a short, 10 minute presentation about their topic - here they get a chance to teach the class about their topic. Detailed information on each of these components is given in the Research Topic Guide, available on the course website, and further discussion of what is expected will be given during the semester.

Laboratory Components

Detailed descriptions of all laboratory components can be found in the lab introduction, and will be discussed in the lab. Briefly, there will be two lab exams that will focus on material learned in lab, particularly taxonomy, identification, anatomy, natural history, and phylogenetics. Lab exams will also include questions about material from field trips. During the semester, students will be given short worksheets to complete and hand in for grades - this is the lab activities section. Students will also be graded on their participation in the lab and course. Students are expected to attend **all labs, field trips, and lectures**. Students are expected to participate in class discussions and do the assigned tasks in each lab.

Field Trips

There will be two field trips during the semester, but during the weekend. Both are mandatory; if you have a conflict talk to Dr. Bergmann during the first week of classes about make-up possibilities. Details about field trips will be given in class. Basic information is as follows:

- Sunday, September 15: Westboro Wildlife Management Area
- Sunday, October 20: Museum of Comparative Zoology, Harvard University

Students With Disabilities

Every effort will be made to accommodate the needs of students with disabilities. Students should meet with Dr. Bergmann at the beginning of the semester to discuss these accommodations.

Course Rules for Late Assignments and Missed Exams

- All components of the course are mandatory to receive a passing grade. Late assignments will be assigned a grade of zero.
- Missed exams can only be made up if accompanied by documentation of a valid excuse (*e.g.* doctor's note, funeral certificate, etc.). Every effort will be made to accommodate these situations. However, it is very difficult to make up lab exams because of their format, and this option may not be available.

Academic Integrity, Honesty, and Plagiarism

Academic dishonesty includes any effort to circumvent the evaluation procedures of the course to improve a grade for yourself or other students ("cheating"). Academic dishonesty includes but is not limited to unauthorized examination of written materials (*i.e.*, notes, neighbor's paper during an exam), misrepresentation of the cause of an absence during an exam or laboratory, submitting the work of another (partially or entirely) as one's own, alteration of an exam answer to be submitted for regrading, and alteration of data. You are encouraged to report academic dishonesty. Anonymity will be protected if requested. If I believe that academic dishonesty has occurred and I have supporting evidence, I will report the case to the College Board immediately after informing the student that I am doing so, and why. I will recommend that a grade of F be given for the course. All students are expected to adhere to Clark University's rules of Academic Integrity, available at: <http://www.clarku.edu/offices/aac/integrity.cfm>.

Course Schedule

Date	Lecture Topic	Textbook	Lab
Aug 27	Introduction	Chapter 1	No Lab
29	Phylogenetics 1	N/A	
Sep 3	Phylogenetics 2	N/A	Intro, Field Guides
5	Evolution of Tetrapods	Chapter 2	
10	Evolution of Amniotes	Chapter 2	External Anatomy, Local Herps
12	Amphibian Diversity 1	Chapter 3	Westboro Field Trip (Sun, Sep 15)
17	Amphibian Diversity 2	Chapter 3	Amphibians 1, Phylogeny exercise
19	Midterm 1	N/A	
24	“Reptile” Diversity 1	Chapter 4	Amphibians 2, Taxonomic keys
26	“Reptile” Diversity 2	Chapter 4	Using the library
Oct 1	"Reptile" Diversity 3	Chapter 4	Amphibian Anatomy, Review
3	Evolution of Body Shape	N/A	
8	Biogeography	Chapter 5	Lab Exam 1
10	Phylogeography	Chapter 5	
15	Fall Break – No Lecture	N/A	Fall Break – No Lab
17	Midterm 2	N/A	MCZ Field Trip (Sun, Oct 20)
22	Convergence	N/A	Reptiles 1: Lizards & Crocs
24	Temperature & Water	Chapter 6	
29	Energetics & Performance	Chapter 7	Reptiles 2: Snakes & Turtles
31	Body Support & Locomotion	Chapter 10	
Nov 5	Movement, Communication	Chap 12, 13	Reptile Osteology
7	Reproduction	Chap 8, 9	
12	Mating Systems	Chapter 14	Reptile Soft Anatomy
14	Midterm 3	N/A	Review
19	Feeding	Chapter 11	Lab Exam 2
21	Diets and Foraging	Chapter 15	
26	Predators	Chapter 15	Topic Presentations
28	Thanksgiving – No Lecture	Chapter 15	
Dec 3	Species Assemblages	Chapter 16	Review for Final Exam
5	Conservation	Chapter 17	

Note: This schedule can be modified as the course progresses. Check the course website regularly.