

ABIO 516
HERPETOLOGY
SPRING, 2007
4 credit hours

Instructor: Dr. Hugh Hanlin
Office: 101A SBDG

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Classroom/time: Science Building 102; Lecture – T & Th 12:15-1:30 AM
Lab – Th 1:40-4:30 PM

Textbooks: Herpetology, Zug, Vitt & Caldwell
Field Guide to Eastern Amphibians and Reptiles (Peterson Series), Conant & Collins

Laboratory Supplies

A lab coat or apron to protect your clothes is recommended when handling preserved specimens. Gloves, hand lotion, soap, etc. are also recommended. (**Caution:** Exposure to formaldehyde has been linked to cancer in rats. The use of surgical gloves in ABIO 516 is recommended. Any students with special health considerations or conditions should inform their instructor and seek special instructions regarding exposure in labs.)

Dipnets and dichotomous keys to the amphibians and reptiles will be assigned to each student during the first week of class. Each student will be responsible for these supplies for the entire semester. **FAILURE TO RETURN THESE SUPPLIES AT THE END OF THE SEMESTER WILL RESULT IN THE ASSIGNMENT OF THE GRADE OF "I"**. (The student will be required to sign a contract for the "incomplete", and the grade will be changed when all supplies have been returned or replaced.)

Course Description

Systematics, distribution, morphology, life history, behavior, ecology and current literature of amphibians and reptiles with special emphasis on South Carolina species. Field trips and collection required.

Course Content

The biology of the amphibians and reptiles will be studied. Topics will include:

Phylogeny	Life History
Taxonomy	Population Ecology
Morphology	Care and Handling
Special adaptations	Preservation
Distribution	

Competency Goals

By the end of the course students will have demonstrated the ability to:

- use taxonomic keys
- identify selected South Carolina amphibians and reptiles
- describe the morphology, distribution, behavior and life history of selected South Carolina amphibians and reptiles
- describe principles of population ecology, citing amphibian and/or reptiles species in examples
- critically review selected current herpetological literature
- conduct a literature search for one taxon and prepare a written review
- prepare a field notebook
- properly handle selected amphibians and reptiles
- properly preserve selected amphibians and reptiles
- describe the proper care for selected amphibians and reptiles

Method of Evaluation

- 20% - Lecture Exams
- 20% - Lab Exams (Keying Exercises)
- 20% - Collection/ Field Notebook
- 20% - Literature Review/ Report
- 20% - Final Exam

Tentative Lecture Schedule

WEEK	DATES	TOPIC	REFERENCES
1	Jan 16,18	Introduction to Herpetology , Amphibians: Phylogeny	Text 1,3
2	Jan 23,25	Amphibians: Phylogeny, Morphology, Distribution	Text 1,2,3, 15
3	Jan 30, Feb 1	Amphibians: Phylogeny, Morphology, Distribution	Text 1,3, 16
4	Feb 06,08	Amphibians: Phylogeny, Morphology, Distribution	Text 1,3, 17
5	Feb 13	Exam #1	
	Feb 15	Reptiles: Phylogeny,	Text 1,3,
6	Feb 20,22	Reptiles: Phylogeny, Morphology, Distribution	Text 1,2, 3, 18-19
7	Feb 27, Mar 1	Reptiles: Phylogeny, Morphology, Distribution	Text 1,3, 20
8	Mar 06	Reptiles: Phylogeny, Morphology, Distribution	Text 1,3, 21
	Mar 08	Exam #2	
	Mar 09	Last day to withdraw without receiving "WF"	
9	Mar 13, 15	SPRING BREAK	
10	Mar 20,22	Modes of Reproduction and Life Histories	Text 4-5
11	Mar 27,29	Physiological Ecology	Text 6-7
12	Apr 03,05	Movements and Social Behavior	Text 8-9
13	Apr 10,12	Foraging Ecology; Predator-Prey Interactions	Text 10-11
14	Apr 17,19	Community Ecology; Conservation Biology	Text 12-14
15	Apr 24,26	Care and Handling; Preservation Techniques	
16	May 01	Reading Day	
	May 03	FINAL EXAM (11:00 AM)	

Tentative Lab Schedule

WEEK	DATE	TOPIC	REFERENCES
1	Jan 18	Amphibians: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
2	Jan 25	Amphibians: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
3	Feb 01	Lab Exam #1 : Amphibian Keying	
4	Feb 08	Reptiles: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
5	Feb 15	Reptiles: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
6	Feb 22	Lab Exam #2 : Reptile Keying	
7	Mar 01	*Field Exercise – Natural Heritage Preserve	
8	Mar 08	*Field Exercise – TBA	
	Mar 09	Last day to withdraw without receiving "WF"	
9	Mar 12-16	SPRING BREAK (**Okefenokee Field Trip)	
10	Mar 22	*Field Exercise - Flatrock	
11	Mar 29	*Field Exercise - Hitchcock Woods	
12	Apr 05	*Field Exercise - Gopher Tortoise Preserve	
	Apr 6-8	***Highlands Field Trip	
13	Apr 12	*Field Exercise – Aiken State Park	
14	Apr 19	*Field Exercise – TBA	
	Apr 20-22	***Edisto Island Field Trip	
15	Apr 26	*Riverbanks Zoo Trip	

***In-class field exercises** will require appropriate attire for field work/reptile and amphibian sampling. In the event of inclement weather, specimen preservation techniques will be conducted in the laboratory.

**** Optional Field Trip:** Okefenokee National Wildlife Refuge & Cumberland Island – A 7-day trip scheduled during the week of Spring Break (March 11-17, 2007)

***** Required Field Trips:** Appalachian Mtns./Highlands Biological Station – April 6-8, 2007
Coastal Plain/Edisto Island -- April 20-22, 2007

If you have schedule conflicts or are otherwise unable to attend the required field trips, the requirement may be satisfied with a written critique of selected journal articles.

Field Trip Costs

There are no costs associated with local class field trips with the exception of the visit to the Riverbanks Zoo which will cost \$7.00 per student. Although the total cost for the Okefenokee & Cumberland Island trip is not finalized, you can expect a minimum cost of \$150 -\$200 per student. The cost for each weekend field trip (Highlands and Edisto Island) is approximately \$50 per student.

Collection Requirement

A collection of amphibians and reptiles will be required. A point system for the collection will be outlined by your instructor.

Term Paper Requirement

You will be expected to conduct a search of the scientific literature for one amphibian or reptile taxon of your choice and prepare a written review of your findings complete with literature cited. You must select a taxon by **February 13**. A preliminary list of references is due by **March 8**. Your final report is due on the last day of classes, **April 26**.

Additional Comments

- 1) You will be expected to have read the assigned chapters prior to lecture.
- 2) You will be expected to endorse the following HONOR PLEDGE on every quiz:

On my honor as a University of South Carolina at Aiken student, I have neither given nor received any unauthorized aid on this assignment/examination. To the best of my knowledge, I am not in violation of academic honesty.

- 3) No make-up exams will be given except under extreme situations (see Student Handbook).
- 4) You must attend at least 75% of the classes to receive a passing grade in the class.
- 5) You are encouraged to make appointments with your instructor if you are having problems in the course. In general, the following hours are available for appointments:

T 1:40-3:30PM; W 9:30-11:30AM, 1:30-3:00PM

- 6) If you have a physical, psychological, and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disabilities Services Office will determine appropriate accommodations based on medical documentation.