

## **Ecology of Reptiles and Amphibians**

University of Pittsburgh Biosc 1180

Pymatuning Laboratory of Ecology, Summer 2008

**PROFESSOR: Dr. Peter V. Lindeman**

B.S. Zoology, Eastern Illinois University 1985

M.S. Zoology, University of Idaho 1988

Ph.D. Environmental Biology, University of Louisville 1997

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**TEXTBOOK: Herpetology, 2<sup>nd</sup> edition**

Zug, Vitt, and Caldwell; 2001

Reptiles and Amphibians of the Eastern and Central United States

Conant and Collins; 1998

**COURSE DESCRIPTION:** Students will make field collections and identifications of reptiles and amphibians, and learn about aspects of ecology, morphology, physiology, taxonomic diversity, systematic practice, evolutionary biology, and conservation biology as they relate to these animals. Grades for this course are based on a standard 60-70-80-90 scale, with **550** total points as follows:

**Two 125-Point Lecture Exams**

**250 points**

Exams will be entirely short-essay format.

**Laboratory Practical Exam**

**150 points**

The laboratory practical will include taxonomic identification of specimens representing the local herpetofauna and naming of diagnostic features of external anatomy on local specimens.

**Three 50-Point Reviews of Original Herpetological Research**

**150 points**

Each student or pair of students will choose three articles from recent issues of *Journal of Herpetology* to review. Topics may include Systematics, Morphology, Ecology, Conservation, Behavior, or Physiology, but each topic area may be used only once per student.

Under the standard scale, 492.5 points are necessary for an A, 484 for a B+, 437.5 for a B, 429 for a C+, 382.5 for a C, 374 for a D+, and 327.5 for a D. In five previous sections of this course, with 50 total students, grades have been 42% A, 40% B+/B, 10% C+/C, 6% D+/D, and 2% F.

**Attendance:** Attendance at all class periods is absolutely required. *Students who must miss an exam period or a date when a paper is due must notify me in advance*; otherwise, no make-up exam will be given. Make-up exams for students whose absences are excused must be taken on an arranged basis within two days of the absence. Papers must be turned in as soon as possible if an excused absence is granted.

## COURSE SCHEDULE

Students are expected to do assigned readings from the text prior to each lecture. Field and laboratory activities are subject to changes in schedule.

<b>Date</b>	<b>Lecture Topic (Text Reading)</b>	<b>Laboratory Activity</b>	<b>Field Activity</b>
M, 23 June	Fossils and Phylogeny (3-21; 80-87; 96-104)		Snakes Turtle trapping set-up
T, 24 June	Systematics and Biogeography (21-32; 331-333)	Discussion of Article Reviews	Turtle trapping
W, 25 June	Amphibian Functional Morphology and Life Cycles (47; 66-68; 71-72; 113- 121; 128-133; 257-266)	Begin Taxonomic Survey	Turtle trapping
R, 26 June	Reptile Functional Morphology and Life Cycles (47-48; 121-124)	Taxonomic Survey	Snakes
F, 27 June	Physiology and Ecology (144-153; 168-175; 177- 191) <b>Paper I Due (8:30 a.m.)</b>	Taxonomic Survey	Trip to Jennings Prairie
M, 30 June			Trip to Presque Isle State Park and Elk Creek
T, 1 July	Ecology and Conservation Biology (245-247; 319-330)	Taxonomic Survey	Nighttime Amphibians
W, 2 July	Polyploidy, Parthenogenesis, Hybridogenesis, and Sex Determination (124-127; 138-140)	Taxonomic Survey	Set-up in French Creek
R, 3 July	<b>LECTURE EXAM I</b>		French Creek Herps
F, 4 July	INDEPENDENCE DAY—NO CLASSES		

M, 7 July	Taxonomic Survey of Salamanders and Caecilians (367-387) <b>Paper II Due (8:30 a.m.)</b>	Taxonomic Survey	Linesville Creek amphibians Dusky salamanders
T, 8 July	Taxonomic Survey of Frogs and Toads (389-433)	Taxonomic Survey	Trip to Erie National Wildlife Refuge
W, 9 July	Taxonomic Survey of Tuataras and Lizards (465-501)	<b>LAB PRACTICAL EXAM</b>	
R, 10 July	Taxonomic Survey of Snakes, Crocodilians, and Turtles (435-464; 503-531) <b>Paper III Due (8:30 a.m.)</b>		
F, 11 July	<b>LECTURE EXAM II</b> (Begin at 10:00 a.m.)		