

Amphibians and Reptiles of Oregon (BIOL 468/568)

Instructor: Tom Titus, 318 Huestis Hall, titus@uoregon.edu

Lecture: 10:00-10:50 M-Th, 111Huestis

Office hours: 10:50-11:50 M-Th, 111 Huestis

TA: Krystal Young, krystal@uoregon.edu

Course Schedule

Week 1:

- 6/23 Course introduction, animal diseases, handling
- 6/24 Introduction to amphibians and reptiles
- 6/25 Introduction (cont.); Cascades: physiography, climate, habitats, diversity
- 6/26 Cascades: physiography, climate, habitats, diversity
- 6/27-28 Cascades Field Trip: Hidden Lake/HJ Andrews, meet 8:30AM, return about 5PM 6/28

Project Proposals due

Week 2:

- 6/30 Amphibian life history; diversity and evolution
 - 7/1 Amphibian and reptile adaptations to altitude;
 - 7/2 Great Basin: physiography, climate, habitats, diversity; **Reflection #1 due.**
 - 7/3 Thermal ecology of Great Basin lizards
- BI568 week 2 reading summary due**
- 7/4 NO CLASS, Fourth of July Holiday

BI568 Reading: Morrison and Hero. 2003. Geographic Variation in Life-History Characteristics of Amphibians: A Review. *Journal of Animal Ecology* 72:270-279.

Week 3

- 7/7 Great Basin amphibians: Adaptations to an arid environment
- 7/8 Land use impacts on Great Basin herpetofauna
- 7/9 Coast Range/Willamette Valley: physiography, climate, habitats, diversity
- 7/10 Coast Range/Willamette Valley (cont.)
Meet 2PM for Great Basin field trip.

Project Outline due

BI568 week 3 reading summary due

- 7/13 Return from Great Basin, approximately 6PM.

BI568 Reading: Sinervo et al. 2010. Erosion of Lizard Diversity by Climate Change and Altered Thermal Niches. *Science* 328:894-899.

Week 4

- 7/14 Herpetofauna and forest management
- 7/15 Aesthetics and Science in amphibian and reptile conservation.
- 7/16 Review
- 7/17 Final exam
- 7/18 Coast Range Field Trip: Wildcat Creek, meet 8:30AM, return about 5PM (bring lunch, water, heavy shoes and/or rubber boots, collecting gear, field journal).

Course projects due

Field Journals due

BI568 week 4 reading summary due

BI568 Reading: Todd et al. 2014. Effects of timber harvesting on terrestrial survival of pond-breeding amphibians. *Forest Ecology and Management* 313 (2014) 123-131.

Field Trips: Field trips are required (not to mention fun!). Participation is non-negotiable. Be at the designated meeting place ON TIME. The vans will leave once seating has been arranged. Handling of rattlesnakes is absolutely forbidden in this course.

Course Websites: The “Oregon Amphibians and Reptiles” website can be accessed at <http://blogs.uoregon.edu/bi468titus/>. The checklist has links to a set of digitized photographs for most Oregon species. Please use the website as a supplement for identification of amphibians and reptiles that you will encounter on the field trips and elsewhere. A Blackboard site will include syllabus, lectures, Field Guide to a Field Journal, BI568 readings, field trip lists, and old exams.

Required Texts:

Jones, L.L.C., W.P. Leonard, D.H. Olson (eds.). 2005. Amphibians of the Pacific Northwest. Seattle Audubon Society.
St. John, A. 2002. Reptiles of the Northwest. Lone Pine Publishing.

Additional Helpful Books:

Nussbaum, R.A., E.D. Brodie, Jr., and R.M. Storm. 1983. Amphibians and reptiles of the Pacific Northwest. University Press of Idaho.
Storm, R.M., and W.P. Leonard. 1995. Reptiles of Washington and Oregon. Seattle Audubon Society.
Corkran, C.C., and C. Thoms. 1996. Amphibians of Oregon, Washington, and British Columbia. Lone Pine Publishing.

Course Project:

The course project will be worth 30% of the course grade. The effort on your project should reflect that of any 4-credit/10-week course that you might take during the regular academic year. However, our class is a mere four weeks long, so YOU MUST BEGIN ORGANIZING YOUR PROJECT IMMEDIATELY! NO LATE PROJECTS WILL BE ACCEPTED.

Topic: Choice of topics is open, but the primary focus must be on some aspect of the biology of Oregon amphibians and/or reptiles. Original research is acceptable but probably not realistic given our time constraints. Past projects have covered the gamut from standard research papers to original music and poetry.

Project checkpoints:

Project Proposal (Week 1): On or before Friday, June 27 you will present a brief project proposal (not to exceed one page) for instructor approval. Include a short narrative outlining the nature of the project and its significance. Also include a list of criteria by which you would like the final version to be graded.

Project Outline and Resources (Week 3): By Thursday, July 10 you will have completed a detailed outline of your project and a list of project resources, including literature. Graphics oriented projects should include a diagrammatic sketch of the project layout.

Final Version (Week 4): The final version of your project will be due on Friday, July 18. Please submit a **hard (paper) copy and a disk with the electronic version**. Grading will be based on the criteria you submitted and we agreed upon during the first week of class. 10% of your project grade will be based on your adherence to the schedule outlined above.

Field Journal

You are required to maintain a detailed field journal during this course, which will be worth 20% of your final grade. The journal will be composed primarily of notes taken during the three field trips. Please see the guide to keeping a field journal posted on Blackboard. Field journals will be due immediately following our last field trip on Friday, July 20.

Reflections

There are many ways to know things and many ways to relate to the natural world outside the norm of scientific methodology. You will have an opportunity to explore this with two small writing assignments from our field trips to Hidden Lake/HJ Andrews Forest. These will be approximately 500 words. Longer is NOT better. Find a place to be alone. I'm flexible on the structure, but if you need an organizational starting point, a suggestion would be three paragraphs. Spend one paragraph describing the place you have chosen in excruciating detail. In the second paragraph describe your own state while you are in this place (internal and external if you like). The last paragraph could contain any insights from your human experience of that place into what an amphibian or reptile might also experience there. The fieldwork (the "data" that you collect) for these writings should be taken alone in your field notebook. You are free to consult with one another during the writing process if you wish, but your words are likely to be so individualized that collaboration will be unnecessary. **Type up Reflection #1, due July 2. Reflection #2 may remain hand-written in your field journal.**

BI568 Reading Assignments

For BI568 students, weeks 2-4 will include a weekly reading assignment. For each paper write a one paragraph summary of the paper, including 1) the hypothesis that was tested (Was an hypothesis tested? If not, what was the purpose of the paper?), 2) How was the hypothesis tested, or the data gathered and analyzed? 3) What was/were the conclusion(s)? 4) What is a logical next study based on these results?

Grading: You have the option of a letter grade or pass/no pass. BI468 grades will be based on 30% for the final exam, 30% for the course project, and 20% for the field journal, and 20% for writing reflections. BI568 grades will be based on 30% for the final exam, 30% for the course project, 20% for the field journal, and 10% for reading summaries, and 10% for writing reflections.
NO INCOMPLETE GRADES WILL BE GIVEN.