

Bi 410/510: Neotropical Ecology
Information Sheet and Syllabus for Spring Term 2016
Instructor: Peter Wetherwax
(2 credits, graded only)

Class time/location: Tuesdays from 4:00-5:50 in 112 Huestis

Office hours: by appointment

Course Goals

This first course in the Neotropical Ecology Program will prepare us for work in Ecuador during the summer (June 19th - July 5th). During this term we will:

- read, discuss and write about the material from books and articles on neotropical ecology and conservation.
- learn some natural history of groups of organisms we are likely to see in Ecuador.
- develop a research proposal for a short field study to be conducted in the Amazon basin at the Tiputini Biodiversity Station.
- develop field identification skills for birds, plants, insects and mammals that we will see in Ecuador.
- prepare for field work by setting up a field notebook and learning how to use field guides that will be used while in Ecuador.
- discuss logistics for travel in Ecuador.

Readings

- *Tropical Nature: Life and Death in the Rain Forests of Central and South America*, Adrian Forsyth and Ken Miyata.
- *Birds of Ecuador, Vol 2: Field Guide* by Ridgely, Greenfield and Gill.
- *Plants of Mindo* by Tobias Policha (alumnus of the 2006 Neotropical Ecology Program and current UO graduate student).
- Various handouts and article on tropical ecology and biodiversity. Most will be posted on Canvas.

Tentative Schedule

The exact timing of the schedule is not known since this is the first time that this course has been taught in this format. Also, I would like to keep some flexibility so that we can respond to the needs and interests of the group.

- **Weeks 1-5:** there will be lectures, discussions and additional readings based on the readings from the book *Tropical Nature*. Along the way we will learn about and apply many ecological and evolutionary concepts as they relate to the neotropics. *Tropical Nature* is a collection of essays about the natural history of the neotropics. It is a wonderful introduction to the neotropics, but it is written for a general audience. We will use this book as a jumping off to more technical and specific readings. The book will also help introduce you to some potential research topics for your own research project.
- **Weeks 5-9:** We will form research groups by the fifth week and then work on the research

proposal during the next several weeks.

- **Weeks 6-7:** we will spend several weeks learning about the diversity of plants, insects, birds and mammals that we are likely to encounter while in Ecuador. We will learn how to identify major groups and focus on some interesting specific aspects of the ecology and evolution of these groups. Some potential topics for inquiry include: lekking behavior in *Andean Cock-of-the Rock* birds, characteristics and behavior of neotropical mixed-species flocks, ecology and conservation of *Polylepis* forests, the evolution of *Páramo* plant communities, and the behavior and ecology of the primates of *Yasuní*.
- **Weeks 7-8:** we will read, discuss and learn about several environmental and conservation issues that are important in the areas that we will be visiting in Ecuador. Of particular interest are concerns related to the preservation of biodiversity in *Yasuní National Park* and the *Huarani Ethnic Reserve* (areas with the highest measures biodiversity for several groups of organisms). This is an area where there has been major impacts from oil exploration and questions about indigenous sovereignty.
- **Week 10: exam**

Evaluation

Attendance at all meetings, for the entire class period, is mandatory. Please contact Peter prior to class if you are going to be absent.

- **Participation/Contribution (20%)** attendance and discussions (quality and quantity) for all classes, completion of other requirements in a timely and adequate manner.
- **Quizzes/Homework (20%)** announced and unannounced. Some quizzes will be short (for a few points, unannounced) on the readings. These are mainly to ensure that everyone comes to class prepared. Other quizzes will be longer, announced and worth more points. Occasionally there will be homework assignments. The total points for all of the quizzes and homeworks will be totalled at the end of the term and used to calculate the 20% portion of the final grade.
- **Research Proposal (20%)** each group (about 2-4 students) will develop a research project to be conducted in Ecuador. Grades will be based on an annotated bibliography and a written research proposal.
- **Exam (40%)** There will be a two-part exam given during week 10. One will be a written exam covering readings, lectures and discussions. The second will be a lab practical (both slides and specimens) on field identification of animals and plants we will likely encounter in Ecuador.

The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in disability related barriers to your participation. You are also encouraged to contact the Accessible Education Center (formerly Disability Services) in 164 Oregon Hall at 346-1155 or uoaec@uoregon.edu.

We all have crises now and then. If you are having a problem that interferes with your ability to do the work in this class, please tell me about it as soon as you can. I am willing to make some kinds of special arrangements when the need is real and when you have done your best to deal with the situation and let me know about it in a timely manner.