



SYLLABUS

Introduction to Neotropical Ecology & Field Projects **Course equivalent in Biology Department is *BI410/510: Neotropical Ecology Field Projects***

Instructor: Tobias Policha

Language of Instruction: English

UO Credits: 4 (Graded)

Contact Hours: 40

UO campus & various locations in Ecuador

COURSE DESCRIPTION

The *Neotropical Ecology Program* consists of two courses that provide opportunities for students to learn firsthand about some of the important ecosystems found in the neotropics including: lowland rain forest, middle elevation montane and cloud forests, and the diverse ecosystems of the high elevation shrub lands (páramo). **The first course begins on the UO campus in the spring and prepares students for their studies in Ecuador.** It involves students developing a field project that will be conducted in Ecuador. The completion of this field project is considered part of this graded portion of the program. The second course includes field work in all of the ecosystems mentioned above, as well as lectures lead by an international team of biologists and field guides.

COURSE OBJECTIVES

The goals of this course are to:

- Introduce students to some of the important concepts in tropical ecology, and some of the major groups of organisms that we will encounter while in the field.
- Give students the opportunity to experience and explore some topics of their own while studying in Ecuador.
- Give students the opportunity to produce a project, or group of projects, related to their experiences in Ecuador.

Student Outcomes. Students who successfully complete this course will:

- Understand the major drivers of tropical biodiversity.
- Be able to begin identifying diverse organisms when we get to the field.
- Design a project proposal. This will be turned in to the course instructors before going to Ecuador. Details of the format will be discussed during the spring term course.
- Provide a bibliography that is used to develop and analyze the project.
- Conduct the project while in Ecuador. The type of project is up to the student but it will be developed in consultation with the instructors. The project can be experimental or observational; biological, anthropological or artistic... or better yet, some combination.
- The final projects may require work back at home after the visit to Ecuador. The final deadline will be determined based on each student's plans following the end of the program in Ecuador. All projects will be submitted no later than the end of August.

INSTRUCTIONAL METHODOLOGY

There are four parts to this course:

1. Based on lectures, labs, and assigned readings develop a working knowledge of tropical ecology and organisms.
2. Development of the project proposal before going to Ecuador.
3. Gathering data while in Ecuador. This will occur while participating in group activities as well as when given individual time to work on the project.
4. Producing the final project.

METHOD OF EVALUATION (GRADING)

Students will be evaluated on all four parts of the course: the lectures and labs (through written and practical exams at the UO), the project proposal, data collecting, and the final product. This course must be taken for a grade.

COURSE OUTLINE

The 'Introduction to Neotropical Ecology' portion of this program will occur on the University of Oregon campus during spring term 2020. We will meet for 2 hours every week in the evening after most regularly scheduled classes are finished for the day. This meeting will most likely be on Mondays or Wednesdays from 5:00-7:00pm. Data collection will occur in Ecuador while in the field. Specific field locations and dates are given in the syllabus for the field study course. Final products from the field projects can vary and will be discussed during the spring as the projects are being designed.

COURSE READINGS

There will be little time to read during our stay in Ecuador. **These are required readings to do before arriving in Ecuador.**

Books that students need to purchase

Forsyth, A and K. Miyata. (1987) *Tropical Nature: Life and Death in the Rain Forests of Central and South America*. 248 pages. Touchstone. (This is out of print but there are many cheap used copies available online.)

Ridgely R.S. and P. J. Greenfield. (2001) *Birds of Ecuador, Vol 2: Field Guide*. (Students should read the introduction and bring the colored plates with them to Ecuador to use for identifying birds.)

Other required readings (these will be provided in pdf format)

Excerpts from Jorgensen, P. M. & León-Yanez, S. (eds) (1999) *Catalogue of the Vascular Plants of Ecuador*. Missouri Botanical Garden Press, St. Louis, Missouri. We will be reading 20 pages from the introduction that summarize information about the various ecosystems in Ecuador.

Stilings, P. (2001) *Ecology: Theory and Applications*. Chapter 2 on climate and climate diagrams. 15 pages. Prentice Hall.

Kane, J. (1993) With spears on all sides: letter from the Amazon. *The New Yorker*. Sept 27:54-79.

Kane, J. (1994) Moi goes to Washington: letter from the Amazon. *The New Yorker*. May 2:74-81.

Pitman, N. (2000) *The sadness of loving trees*. An email from Joe Kane shared with a previous Neotropical Ecology student. This is an unpublished essay by Nigel Pitman that Joe Kane sent in an email.

Kimerling, J. (2013) Oil, Contact, and Conservation in the Amazon: Indigenous Huaorani, Chevron, and Yasuni. *Colorado Journal of International Environmental Law and Policy*. 24(1):43-115.

Purcell, J, A. Brelsford and M. Kessler. The world's highest forest. *American Scientists*, 92:454-461.

Kritcher, J.C. (1999) *A Neotropical Companion*. Excerpt from book on leks. Pages 268-279.

Fernandez-Duque E., A. DiFiore and G. Carrillo-Bilbao. (2008) Behavior, Ecology, and Demography of *Aotus vociferans* in Yasuní National Park, Ecuador. *International Journal of Primatology*. 29:421-431.

Optional (but highly recommended) books:

Policha, T. 2012. *Plantas de Mindo: Una Guía de Bosque Nublado del Chocó Andino/ Plants of Mindo: A guide to the Cloud Forest of the Andean Choco*. American Herbal Dispensary Press. Eugene, OR.

Optional books:

Davis, W. 1997. *One River*. Simon & Schuster. New York, NY.

Kane, J. 1996. *Savages*. Vintage. New York, NY.