



TROPICAL ECOLOGY
BIOL 2803
SUMMER 2004

Course Objectives: To introduce you to tropical ecology in Costa Rica through study of a variety of habitats including: tropical rain forests, cloud forests, dry forests, mangrove forests, and coral reefs. To compare the ecology of prominent groups including: plants, birds, insects, primates, and corals. To understand the functioning of tropical ecosystems, how populations interact to form communities, the role of biodiversity, and the need for conservation.

Prerequisites: BIOL 1510 (Introductory Biology) or equivalent with consent of professor

Text: Kricher, J. 1997. A Neotropical Companion. 2nd edition, Princeton University Press, Princeton, NJ.

Course Format: Course will be primarily laboratory and field work conducted in natural habitats. After introductory lectures, we will travel to selected habitats to make observations and conduct experiments. Experienced guides will point out the important features of each habitat and the relationships among plants and animals.

Grades: There will be three forms of evaluation: a field notebook (20%); two in-depth research projects including experimental design, data collection, analysis, and presentation (40%); and two exams (40%). Make-up exams will be given at the discretion of the instructor only when there is an acceptable excuse for missing an exam. Your conduct in this course is expected to conform to the GT Student Honor Code (<http://www.honor.gatech.edu/>). I urge you to consult this for a full definition of your rights and responsibilities. Grades will be assigned according to the following scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, below 60 F.

Professor:

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Course Web Site: webct.gatech.edu

DATE	TOPIC	Reading Assignment*
May 31	Introduction to Tropical Biodiversity - INBio Park morning - park tour afternoon - 1 h lecture: bioinventory, 2 h taxonomy lab (plants, insects, fungi, molluscs), 1 h lecture: bioprospecting	Chapt 1, appendix
June 1	INTA 4803 Environmental Politics	
June 2	Tropical Forest Ecology - lecture: Dr. Terry Snell afternoon - field trip to Clodomiro Picado Institute: snakes	Chapt 2
June 3	INTA 4803 Environmental Politics	
June 4	Field trip: morning - Volcano Irazu National Park afternoon - Lankester Botanical Garden	Chapt 3
June 7	Insect Biodiversity & Ecology - lecture: Dr. Paul Hansen, UCR afternoon - INTA 4803 Environmental Politics	Chapt 4
June 8	Field trip: La Selva - tropical rain forest - Project 1	Chapt 5
June 9	La Selva - Project 1	Chapt 6
June 10	La Selva - Project 1	
June 11	La Selva - Project 1	Chapt 12
June 12	La Selva - Project 1	
June 14	INTA 4803 Environmental Politics, afternoon lecture: Conservation Issues in Costa Rica, Dr. Gerardo Alvalos UCR	Chapt 11
June 15	INTA 4803 Survey Day	
June 16	Tropical Ecology Midterm Exam , INTA 4803 afternoon	
June 21	INTA 4803 UCR	
June 22	Manuel Antonio National Park	
June 23	Manuel Antonio National Park	
June 24	Manuel Antonio National Park	Chapt 13
June 28	Field trip: cloud forest, Ecolodge San Luis, Monteverde	
June 29	Ecolodge San Luis - Project 2	Chapt 7
June 30	Ecolodge San Luis - Project 2	
July 1	Ecolodge San Luis - Project 2	Chapt 8
July 2	Ecolodge San Luis - Project 2	
July 5	Volcano Arenal field trip, INTA 4803	

July 6 Volcano Arenal
July 7 Volcano Arenal
July 8 **Final Exam**

Chapt 14

*Reading Assignment refers to A Neotropical Companion by J. Kricher, 1997

Useful Web Sites:

Ecology Journals: <http://www.ng.hik.se/~nmato/>
Costa Rican rainforests: <http://people.clarityconnect.com/webpages3/dross/default.html>
<http://jrscience.wcp.muohio.edu/html/tropecocostarica.html>
Monteverde: <http://192.211.16.13/individuals/nadkarnn/monteverde/mvhome.html>
Living Edens - Manu, Peru (good pictures): <http://www.pbs.org/edens/manu>
INBio: <http://www.inbio.ac.cr>
Tropical Biology: <http://www.ots.ac.cr/>
Costa Rica maps: http://www.lib.utexas.edu/Libs/PCL/Map_collection/costa_rica.html
<http://www.interknowledge.com/costa-rica/>
Coral Reefs: <http://www.reefnet.org>
<http://www.uvi.edu/coral.reefer/index.html>
Ants: www.antweb.org, www.evergreen.edu/ants/AntsofCostaRica.html
Parasites: <http://www.biosci.ohio-state.edu/~parasite/home.html>
Climate Data: <http://www.worldwatcher.nwu.edu/>
Biodiversity & Conservation: <http://darwin.bio.uci.edu/~sustain/bio65/Titlepage.htm>
Botany Virtual Library: <http://www.ou.edu/cas/botany-micro/www-vl/>
<http://www.ou.edu/cas/botany-micro/idb/>
Phylogeny: <http://phylogeny.arizona.edu/tree/phylogeny.html>
Keys to Animal Diversity: <http://animaldiversity.ummz.umich.edu/>
Assessing Ecosystem Health: <http://www.us-ecosystems.org/>