

Westminster College
Department of Biology
Fall, 2000

Tropical Ecology, Belize

INSTRUCTOR

Dr. Ann Throckmorton, Associate Professor of Biology

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Office Hours: Monday, Friday 11:40 - 12:30
Thursday 11:00 - 12:00
or by appointment

COURSE DESCRIPTION

This is a classroom and field course on the ecology, natural history, geology, history, and culture of Belize, Central America. It is clustered with History 171, Latin America to 1825, and includes 20 days of travel from December 30th to January 18th, 2001. In the classroom, basic ecological principles will be studied to see how they apply to tropical ecosystems and organisms, concentrating on important tropical ecosystems such as rainforests, coral reefs, mangroves, and savannas. In Belize, information from the classroom will be used to understand the biological, geological, and cultural observations that are made as we travel throughout the country. In addition, culturally significant places in Belize and Guatemala will be studied and the ethical and cultural dilemmas of life in a developing tropical country will be discussed.

LECTURE

Wednesday 6:30 - 9:00

166 Hoyt Science Center

Attendance in lecture is expected. If you miss class, it is your responsibility to find out what you have missed and to make arrangements for getting lecture notes and making up assignments. If you know ahead of time that you will be absent, you should contact me so that we can make arrangements for making up what you will miss.

REQUIRED MATERIAL

A Neotropical Companion by John Kricher, 1997, 2nd edition, Princeton University Press

A Naturalist's Guide to the Tropics, by Marco Lambertini, 2000, 2nd edition, University of Chicago Press

GRADING

You will be given separate grades for Bio 520 and Bio 521. For Bio 520, grades will be based on lecture exams, assignments, and an individual presentation and paper, weighted as follows:

lecture exams	70% of final grade
assignments	10% of final grade
individual presentation	20% of final grade

Your final grade will be based on the following scale:

Above 93%: A	87% - 90%: B+	77% - 80%: C+	67% - 70%: D+	Below 60%: F
90% - 93%: A-	83% - 87%: B	73% - 77%: C	63% - 77%: D	
	80% - 83%: B-	70% - 73%: C-	60% - 73%: D-	

You will receive more information about the requirements for Bio 521 prior to leaving for Belize.

METHODS OF INSTRUCTION

1. Lectures and discussion: This will follow the tentative schedule printed below. I expect you to attend class, pay attention, and participate actively in discussions by answering questions, asking questions, and making comments. You will get more out of the lecture if you have read the material in the textbook ahead of time.
2. Reading: The textbook that I have chosen provides a good general introduction to tropical ecology. *A Neotropical Companion* will serve as your primary textbook. Most of the topics that we will approach in the class are covered by the book. Thus, it will serve to augment lecture and to provide material for discussion. The second book, *A naturalist's guide to the tropics*, is more general and less scientific. We will use readings from it to supplement the other book. In addition, everyone will carry this book with them when we go to Belize.
3. Assignments: Occasionally, you will be given small assignments. In most cases, these will relate to the material that we will be discussing in class next week. Their purpose is to prepare you for the discussion or to give you more information or a different viewpoint on the material that is covered in the book.
4. Individual presentation and paper: Each person in the class will be responsible for preparing an in-class presentation on a plant or animal that we expect to see in Belize. Essentially, each person will become *the* class expert on one particular organism so that when we observe the plants and animals in Belize, at least one person in the group will know everything there is to know about each organism. In addition, you will write a paper (minimum eight pages) that will be due at the end of the semester. During the second week of class, you will receive a list of organisms from which to choose. After everyone has selected their organism, I will schedule the talks, matching the organisms to appropriate lecture topics.

COURSE POLICY ON EXAMS AND ASSIGNMENTS

Unless otherwise stated, assignments should be turned in by 5:00 p.m. on the day that they are due. Occasionally, assignments will be due before class. Late assignments will be accepted but a late penalty will apply; the number of points subtracted will vary in proportion to the time elapsed since the due date.

There are three ways that assignments may be submitted: 1) a hard copy given to me or placed under my office door; 2) an attachment on e-mail; 3) saved in the Assignment folder on the course r-drive. If you choose to save an assignment to the r-drive, the name of the file must include your name and the name of the assignment (e.g., John Smith, Assignment #1). Options #2 and #3 are preferred.

All quizzes and tests should be taken at the scheduled time. You will not be allowed to take a make-up test unless you have notified me of your absence prior to the test.

I expect students to work independently on exams and assignments that are not specifically labeled as group assignments. Plagiarism on written exercises or cheating on exams will earn you an automatic 0 for that particular assignment.

TENTATIVE SCHEDULE OF TOPICS

DATE	TOPIC	TEXTBOOK READING
08/30	Introduction to the course Defining the tropics	Kricher: pp. 3-6 Lambertini: chapter 1
09/06	Tropical climates, ecosystems, and soils Rainforest structure and diversity	Kricher: chapter 1 Lambertini: chapter 2 and 3 Kricher: chapter 2 Lambertini: pp. 33-41
09/13	Rainforest structure and diversity (continued) How a rainforest functions	Kricher: chapter 2 Kricher: chapter 3
09/20	How a rainforest functions (continued)	Kricher: chapter 3 Lambertini: chapter 7
09/27	Coral reefs	Kricher: pp. 247-250 Lambertini: chapter 8
10/04	Mangroves and seagrass beds	Kricher: pp. 239-246 Lambertini: chapter 6
10/11	Savannas and dry forests	Kricher: chapter 10 Lambertini: chapter 9
10/18	Exam #1	
10/25	Rivers	Kricher: chapter 8
11/01	Evolutionary patterns in the tropics	Kricher: chapter 4 Lambertini: pp. 41-48
11/08	Coevolution	Kricher: chapter 5
11/15	The neotropical pharmacy	Kricher: chapter 5 and 6 Lambertini: pp. 48-53
11/29	Deforestation and conservation of biodiversity	Kricher: chapter 14 Lambertini: chapter 11
12/06	Deforestation and conservation of biodiversity	Kricher: chapter 14
12/12	Reading Day	