



Westminster College
Department of Biology
Spring, 2004

Tropical Ecology: Australia

Biology 520

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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, and geology of Australia. It is paired with Bio 521 - the travel portion of the course - which includes 18 days of travel from May 26th to June 12th, 2004. In the classroom, basic ecological principles will be studied and applied to tropical environments, concentrating on important tropical ecosystems such as coral reefs, rainforests, dry forests, and mangroves. We will also study some important groups of Australian plants and animals, discussing adaptations of these unique organisms, biodiversity, and some of the threats that Australian creatures face. While we are in Australia, information from the classroom will be used to understand the biological, geological, and cultural observations that are made as we travel throughout the country.

You will receive details about Bio 521 prior to our departure.

LECTURE Wednesday 6:30 - 9:00 p.m.
152 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 Naturalist's Guide to the Tropics, by Marco Lambertini, 2000, 2nd edition, University of Chicago Press

RECOMMENDED MATERIAL

In a Sunburned Country, by Bill Bryson, 2001, Broadway Books

You are not required to buy this book, but you will probably want to. The bookstore has a few copies and it is also available on-line.

ADDITIONAL MATERIAL

A Natural History of Australia, by Tim M. Berra, 1998, Academic Press

You will read several chapters from this book. A copy is on reserve in Mack library.

Lonely Planet Queensland, by Joseph Bindloss, et al., 2002, Lonely Planet Press

This is a good travel guide that describes many of the sites we will visit. It covers the history, culture, government, and plants and animals of Queensland and includes many useful hints for travelers to the area. You may want to buy a copy to take along with you on the trip.



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 (2)	60% of final grade
assignments	20% of final grade
individual presentation	10% of final grade
research paper	10% of final grade

Your final grade in Bio 520 will be based on the following scale:

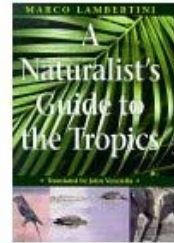
Above 93%: A	87% - 90%: B+	77% - 80%: C+	67% - 70%: D+	Below 60%: F
90% - 93%: A-	83% - 87%: B	73% - 77%: C	63% - 77%: D	
	80% - 83%: B-	70% - 73%: C-	60% - 73%: D-	

You will receive information about the requirements and grading for Bio 521 prior to leaving for Australia.

At the end of the semester, you will receive a letter grade for Bio 520 and an "I" (incomplete) for Bio 521. Once we have returned from Australia and you have completed all of the requirements for that course, I will change the "I" to a regular letter grade.

METHODS OF INSTRUCTION

1. Lectures and discussion: These 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 done the reading ahead of time. Part of each class will probably be devoted to discussing the travel portion of the course (requirements, destinations, what to expect, what to pack, etc.)
2. Reading: The textbook that I have chosen provides a good general introduction to tropical ecology. 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. Everyone will carry this book with them when we go to Australia. In addition to the textbook, I will place materials for you to read on reserve in the library.



The recommended book, *In a Sunburned Country*, provides a humorous, mostly non-scientific look at the culture, history, politics, and nature of Australia. Although you're not required to buy this book, you'll probably want to read it anyway, to get one view of what Australia's like before we get there.

>> [Read reviews of *In a Sunburned Country*](#)

The Natural History of Australia, on reserve in Mack library, will serve as a supplement to the textbook. You will be required to read some of the information in it. In addition, it will be a valuable resource for you to use in completing assignments and in preparing your individual presentation and research paper.



3. Assignments: In most cases, assignments in the class will relate to the material that we will be discussing the 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 reading.
4. Exams: there will be two exams in the class, a mid-term and a final. The final will be cumulative and will also include questions related to student presentations. You should expect multiple choice, short answer, and essay questions on the exams.
5. Individual presentation and paper: Each person in the class will be responsible for preparing an in-class presentation on some aspect of Australian ecology, history, or culture. Essentially, each person will become the class expert on one topic so that during our travels, at least one person in the group will know everything there is to know about that particular thing. In addition, you will write a paper (minimum eight pages) that will be due on the day of the final exam. The paper and the presentation are each worth 10% of your final grade.

During the second week of class, you will receive a list of possible topics. You may choose a topic from the list or come up with one of your own. After everyone has selected their topic, I will schedule the talks to coincide with related information in the lecture schedule.

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 (usually the Tuesday 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.

You may turn in assignments in three ways:

1. hard copy: the least desirable method. Hand the paper to me, slide it under my office door, or give it to my secretary to deliver to me. *Do not use campus mail.*
2. in the Assignments folder on the course r-drive: if you save a file to the r-drive, the name of the file must contain your name and some indication of what it contains (e.g., the name of the file could be "Smith, Assignment 5"). Remember, you must save the file to another drive, then copy it to the r-drive. If you try to save directly to the r-drive, the network will only write a blank temporary file and you will lose all of your work. Once you have saved something to the Assignments folder you will be unable to retrieve it, open it, or delete it.
3. as an e-mail attachment. Again, the name of the file must contain your name and some indication of what it contains. To send an e-mail attachment, open a new message and fill in the address and subject. Then hit the attach button (marked with a paperclip): an "attach file" box will come up. Locate and select the file that you want to attach. Hit OK and send the message as usual. You can find out if I have received and opened the message by looking in the Sent Items folder in your mailbox.

You must take the exams at the scheduled time unless you have talked to me prior to the exam and been excused. Valid excuses include such things as serious illness or injury and personal and family emergencies. I will give make-up exams only if you have notified me before the day of the test.

STATEMENT OF ACADEMIC INTEGRITY

Academic integrity is central to the purpose and pursuit of any academic community. In this class, I expect you to adhere to the principles of academic integrity stated in the [Westminster College handbook](#) and to maintain the highest standards of academic honesty and integrity, in keeping with the philosophy and purposes of the College.

"Academic dishonesty is a profound violation of this expected code of behavior. It can take several forms, including, but not limited to, plagiarism, cheating, purposely altering the work of another (without that person's permission), misrepresentation of attendance in class or at a College event, misrepresentation of work, facts or experimental results, unauthorized use of or intentional intrusion into another's computer files and/or programs, intentional damage to a computer system, unauthorized use of library materials and privileges, or engaging in any activity which attempts to alter or harm another's academic standing."
(Westminster College Handbook, p. 84)

I expect students to work independently on exams and assignments. Plagiarism on assignments or cheating on exams will result in a failing grade on that particular assignment or exam.

TENTATIVE SCHEDULE OF TOPICS

DATE	TOPIC	TEXTBOOK READING
01/21	Introduction to the course Defining the tropics	Lambertini: chapter 1
01/28	Tropical climates, ecosystems, and soils	Lambertini: chapter 2 and 3
02/04	Continental drift and biogeography	Lambertini: pp. 1-15 Berra: chapter 2
02/11	Tropical plants	Lambertini: pp. 33-41 Berra: chapter 4
02/18	Rainforest structure and diversity	Lambertini: chapter 7
02/25	Savannas and dry forests	Lambertini: chapter 9
03/03	Mangroves and seagrass beds	Lambertini: chapter 6
03/10	EXAM #1	
03/24	Optional movie: <i>Rabbit-proof fence</i> McKelvey theater, 6:30 - 8:00	
03/31	Coral reefs	Lambertini: chapter 8 Berra: pp. 87-96
04/07	The Great Barrier Reef	
04/17	Tropical animals	Lambertini: chapter 5
04/21	Australian animals	Berra: pp. 125, 149, 187, 217-226 Lambertini: p. 14
04/28	Marine animals	Berra: pp. 96-111
05/05	Threats to tropical biodiversity	Lambertini: chapter 11 Berra: pp. 251 - 256
05/11	Reading Day	
05/12 - 05/15	Final period	
05/22	Commencement	
05/26 - 06/12	Travel to Australia	
06/30	All assigned material for Bio 521 is due	

Lambertini, *A Naturalist's Guide to the Tropics*

Berra, *A Natural History of Australia*