

## Environmental Issues

Phil 2500, 2007 M,W,F 11:00 – 11:50 (ENV 110)

Office hours: W,F 10-11am at ENV 320 E (or ENV 334)

Professor Ricardo Rozzi, Ph.D. (rozzi@unt.edu)

Invited Professor Kurt Heidinger, Ph.D. (kurtheidinger@yahoo.com)

### Objective

To explore, and to understand central concepts about the inter-relations between ecological sciences and ethics, societies and their environments, biological and cultural diversity, services that biodiversity provides for human society, environmental and social problems determined by losses in biocultural diversity, theoretical principles and ongoing initiatives for conservation and sustainable development focusing on two levels:

- a conservation initiative involving the partnership of UNT and Chile: the Cape Horn Biosphere Reserve, at the southern tip of the Americas
- an international perspective.

### Textbook

Primack, R. 2006. Essentials of Conservation Biology. Sinauer Associates, Inc.; 4<sup>th</sup> edition)

### Requirements

1. 30% Quizzes and assignments
2. 20% Test (10% each)
3. 20% Final exam
4. 10% Short power-point presentation\*
5. 20% Group Presentation + individual research paper on the subject (8 doubled spaced pages, plus references)

The following scale will determine the letter grade: A = 100-90, B = 89-80, C = 79-70, D = 69-60, F = less than 60.

***\*Each class will include one or two short presentations by students.*** For approximately 10 minutes, each student will present concepts or case studies based on assigned readings, proposing 2 or 3 central ideas for a 10-minute class discussion. For the short presentations, you will prepare a concise power-point illustrating the points you want to make, that familiarizes your audience with the subject. Each student will perform at least one presentation during the course.

## Tentative Schedule

### **Unit I: Introduction to Conservation Biology** *Interdisciplinarity and the UNT-Omora Initiative*

**Jan 17 First Week** *Introduction to conservation biology*  
Primack's textbook Chapter 1

*Introduction to course topics, illustrated by the case study of the Omora Ethnobotanical Park.*

**Jan 22 Second week** *From ecological knowledge to praxis, discussion of the Deep Ecology movement*

#### **Quiz 1**

*Reading:* Naess, Arne. 1973. The Shallow and the Deep, Long-Range Ecology Movements. *Inquiry* 16: 95-100.

**January 29 Third week** *Introduction to the epistemological and ethical approach of the course*

*Reading:*

The reciprocal links between evolutionary-ecological sciences and environmental ethics. *BioScience* 49 (11): 911-921. (Rozzi 1999)

Foltz, B. 2003. Inhabitation and Orientation: Science beyond disenchantment. *I Earth Matters* (R. Frodeman, ed.), pp. 25-34. Prentice Hall.

### **Unit II: Biodiversity**

#### *Hotspots of Biodiversity and the Miniature Forests of Cape Horn*

**February 5 Fourth week** *Biodiversity I: Components, Structure and Processes*

#### **Quiz 2**

*Readings: Chapters 2 & 3 Primack's book.*

**&:**

“Indicators for Monitoring Biodiversity: A Hierarchical Approach” (Noss 1990)

\*“Kelp Forests and Sea Otters: Shaping an Ocean Ecosystem” Box 3 (Primack's book)

Biodiversity II: *Taxonomic Chauvinism*

*Readings: Chapters 2 & 3 Primack's book.*

**&:**

\* “Taxonomic Bias and Vulnerable Species” (Stein et al. 2002. *Science* 297: 1807)

\*“Taxonomic Bias in Conservation Research.” (Clark & May 2002. *Science* 297: 191-192), and “Response to Stein et al.” (Clark & May 2002. *Science* 297: 1807)

- \*“Taxonomic Chauvinism” (Bonnet et al. 2002. TREE 17: 1-3);
- \*“Taxonomic Chauvinism and the Methodologically Challenged” (Pawar 2003. BioScience 53: 861-864);

Biodiversity III: *Hotspots*

Readings: Chapters 2 & 3 Primack's book.

&:

- \*“Biodiversity hotspots for conservation priorities” (Myers et al. 2000, Nature 403: 853-858);
- \*“Biodiversity hotspots revisited” (Myers 2003, BioScience 53: 916-917);

Summary of Biodiversity, and the *Miniature Forests of Cape Horn*

Readings: Chapters 2 & 3 Primack's book.

&:

- “Conserving a World Unknown: Hydrothermal Vents and Oil Plumes” Box 4 (Primack's book)

**Unit III: Environmental Ethics**  
***Environmental Education and Direct Encounters***

**February 12 Fifth week** *From environmental ethics to conservation biology*

**Quiz 3**

Readings: Chapter 6 Primack's book.

&:

*Thinking Like a Mountain* (Aldo Leopold).

- \*Living with the Land Ethic (Leopold C. 2004. BioScience 54: 149-154)

*Environmental ethics: the Land Ethic*

Readings: Chapter 6 Primack's book.

&:

The Land Ethic (Aldo Leopold)

**February 19 Sixth week** *Environmental ethics, values and education*

Readings: Chapter 6 Primack's book.

&:

The Land Ethic (Aldo Leopold)

“Religion and Conservation” Box 11 (Primack's book)

Issues and trends in higher education biology fieldwork. By: Smith, Debbie. *Journal of Biological Education*, Winter2004, Vol. 39 Issue 1, p6-10,

*Summary of environmental ethics, and direct encounters*

“from knowledge to action,” as illustrated by the case of the women primatologists (Jane Goodal, Dian Fossey, and Birute Galdikas),

“Three Primatologists Who Became Activists” Box 19 (Primack's book).

**Unit IV: Ecological Economics**  
***Ecotourism: Tourism with a Hand-Lens***

**February 26 Seventh week** *Ecological Economics and Direct Values*

**Quiz 4**

Readings: Chapters 4 & 5 Primack's book.

**&:**

“Mighty Multitude of Microbes” Box 7 (Primack's book)

“Industry, Ecology, and Ecotourism in Yellowstone Park” Box 5

**March 5 Eighth week** *Ecological Economics and Ecotourism.*

Tourism and flagship species in conservation (O. Krüger. 2005. Biodiversity and Conservation 14: 579-600)

The role of ecotourism in conservation: panacea or Pandora's box?

(Walpole & Leader-Williams. 2002. Biodiversity and Conservation 11: 543-547

Summary Ecological Economics, and Tourism with a hand-lens

**March 12 Ninth week** *Revisiting the UNT-Omora Initiative in Cape Horn*

**Test 1**

Film *Homage to the Yahgans: The Last Indians of Tierra del Fuego and Cape Horn* (Anne Chapman 1990, CNRS-Audiovisual; 40 mins.).

Discussion on: “*Ten Criteria for Biocultural Conservation at the Southern Tip of the Americas: The Approach of the Omora Ethnobotanical Park*”

**Spring break March 19 - 23**

**March 26 Tenth week** *The UNT-Omora Nature Writing Program at the southern tip of the Americas*

**Unit V: On Biocultural Diversity**

**April 2 Eleventh week** *Biocultural Diversity*

Introduction to biocultural diversity and the film *The Hawks and the Sparrows* (*Uccellacci e uccellini*), 1964, by Pier Paolo Pasolini (1922-1975)

Alice Walker “Why the Balinese Chicken Crossed the Road”

Edward Abbey “Serpent of Paradise”

**April 9 Twelfth week** *Biocultural diversity: Language crisis*

**Quiz 6**

Readings: *On Biocultural diversity* Introduction (pp. 1-50), Maffi:2001

\*“The world's languages in crisis”, Krauss 1992, Language 68: 4-10

**Unit VI: Conservation and Human Societies**  
***Sustainable Development and Flagship Species***

**April 13 Thirteenth week** *Sustainable Life I*

**Quiz 7**

*Readings: Chapters 20, 21, & 22 Primack's book.*

**&:**

“Environmental Activism Confronts Opposition” Box 31

“People-Friendly Conservation in the Hills of Southwest India” Box 28

**April 20 Fourteenth week** *Sustainable Life II*

*Readings: Chapters 20, 21, & 22 Primack's book.*

**& Flagship Species as Conservation Drivers**

“Love Alone Cannot Save the Giant Panda” Box 31

**April 27 Fifteenth week** *Sustainable Life III: Conservation and Human Societies*

*Readings:*

“Jumbos or bust: do tourists' perceptions lead to an under appreciation of biodiversity?” (Kerley G, B Geach & C Vial. 2003. South African Journal of Wildlife Research 33: 13-21)

Conservation of biodiversity in Scandinavian boreal forests: large carnivores as flagships, umbrellas, indicators, or keystones? (*J. Linnell, J. Swenson & R. Andersen, 2000 Biodiversity and Conservation 9: 857–868, 2000*).

**April 30 Sixteenth week** *Overview of the course*

**May 7 Seventeenth week** *Final Exam*