



**Sub-Antarctic Biocultural Conservation Program**  
University of North Texas, Universidad de Magallanes & Institute of Ecology and Biodiversity  
[www.chile.unt.edu](http://www.chile.unt.edu), [www.osara.org](http://www.osara.org) & [www.ieb-chile.cl/Itser](http://www.ieb-chile.cl/Itser)

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**INTRODUCTION TO SUB-ANTARCTIC BIOCULTURAL CONSERVATION**  
**Fall Semester 2010**

**Core Professors:**

Dr. Christopher Anderson, *ecologist*, UNT-UMAG-IEB  
Dr. Ricardo Rozzi, *conservation philosopher*, UNT-UMAG-IEB  
Dr. James Kennedy, *ecologist*, UNT

**Invited Lecturers:**

Dr. J. Baird Callicott, *philosopher*, UNT  
Dr. Bernard Goffinet, *bryologist*, University of Connecticut  
Melissa Armstrong, *SEEDS program manager*, Ecological Society of America  
Dr. Brendon Larson, *ecologist*, Waterloo University

**Teaching Assistant:**

Jean-Paul Zagarola, *program research assistant*

**Course Catalogue Information:**

PHIL 4960.001, PHIL 5960.001, BIOL 4005.004, BIOL 5040.004

**Class Schedule:**

Fall semester; Thursdays  
6:00 – 8:50 PM (Texas Time)  
Gateway 049

**Dr. Anderson's Office hours:**

Tuesday and Thursday 3pm to 5pm, EESAT 310AB

**Academic Dishonesty Policy:**

[www.vpaa.unt.edu/academic-integrity.htm](http://www.vpaa.unt.edu/academic-integrity.htm)

**ODA Statement:**

*The University of North Texas is on record as being committed to both the spirit and the letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.*

**Drop/Add Information:**

[www.essc.unt.edu/registrar/schedule/scheduleclass.html](http://www.essc.unt.edu/registrar/schedule/scheduleclass.html)

## INTRODUCTION TO SUB-ANTARCTIC BIOCULTURAL CONSERVATION

### Course Description:

The course will provide students with **an introduction to sub-Antarctic ecosystems and cultures of southern South America** (geography, climate, ethnography, environmental philosophy and ecology) and also expose them to both the practical and theoretical aspects of biocultural conservation, including its interdisciplinary character integrating the sciences and humanities. We all bring different skills and mindsets to this course and work as a group to broaden and integrate our approaches to biocultural conservation, focusing on the development and implementation of the Omora Park as a long-term ecological study site that serves to *link society and development with biodiversity, history and ecosystems* in the Cape Horn Biosphere Reserve.

This semester-long seminar course will have **bilingual** components and include some seminars and readings shared between Chilean and US institutions of higher learning. It is part of a broader International Research Experience for Students (IRES) program that includes a field experience, financed by the National Science Foundation (NSF), and a study-abroad field course, entitled Tracing Darwin's Path. Participation in the field components associated with the semester-long seminar course is not a requirement.

We will use various interactive features during the course, including Blackboard, videoconferences and live streaming. Course materials will be made available online through blackboard and [www.chile.unt.edu](http://www.chile.unt.edu). *Be aware that classes may be recorded and archived. Objections to this policy should be notified to the instructors before 31 August 2009.*

### Course Goals:

Through readings and seminars, students will develop:

- familiarity with both biological and cultural diversity
- an appreciation of the “socio-ecological” factors that constitute the world’s pressing environmental issues, including associated causes and consequences
- a basic understanding of the geography, history, culture and ecology of the subantarctic ecoregion of southern South American
- a comprehension of what a watershed is and how it relates to other ecological and cultural units of the landscape with a focus on:
  - under-appreciated biodiversity (bryophytes, lichens and freshwater invertebrates)
  - exotic species
  - indigenous knowledge
- a distinctive interdisciplinary approach to biocultural conservation that integrates the humanities and sciences

**Readings:**

Readings will be made available in PDF from the program website. Two required text purchases are:

- Primack, R. 2010. *Essentials of Conservation Biology*. Fifth edition. Sinauer Associates, Sunderland, MA.
- Rozzi, R., F. Massardo, C. Anderson, S. McGehee, G. Clark, G. Egli, E. Ramilo, U. Calderón, C. Calderón, L. Aillapan, & C. Zárraga. 2010. *Multi-Ethnic Bird Guide of the Sub-Antarctic Forests of South America*. UNT Press – Ediciones Universidad de Magallanes, Denton TX and Punta Arenas, Chile.

**Course Evaluation:****1) Group Presentations (10%)**

Students will be divided into groups of 4-5 to present 15 minute presentations. Guidelines = presentation (format individually decided such as using powerpoint, hand outs or other approaches) that introduces the week's topic, provides a brief synthesis of the readings and provides questions to initiate and lead the subsequent discussion.

**2) Attendance and Participation (10%)**

Attendance is mandatory. Students are responsible to prepare ahead of time, attend all lectures and discussion sessions, ask questions, and express themselves creatively and concisely in their work. Ways of earning points for class participation include being prepared to contribute positively to class discussion of the assigned readings. Contributing positively requires having read and as thoroughly as possible understood the assigned readings and at least being able to raise important questions if not provide definitive answers. Authorized absences that will be considered on a case-by-case basis and include: religious holidays, call to active military duty and a certified sickness by a medical professional. Unauthorized absences will affect participation grade.

**3) Comprehension/Preparation Quizzes (25%)**

Every week a short quiz will be taken regarding the material contained in the readings.

**4) Tests (25%)**

Two tests will be taken during the semester worth 10% and 15% of the grade respectively where. Graduate students will receive more comprehensive versions of the exam.

**5) Final Project (30%)**

*For Undergrads:* the final project will be a group project in the form of either a) a summary paper or b) poster on a topic. Choice of a) or b) should be done with the professors ahead of time and decided by the mid-term.

*For Graduates:* the final project will be a review style paper and/or research proposal, which ever is most relevant for the student.

**2010 Program:**

\* indicates videoconference between UNT and UMAG

# indicates videoconference between UNT and UConn

Date	Topic	Readings / Assignments	Lecturer
*26 August	General introduction to the course, sub-Antarctic ecosystems and comparisons with the Northern Hemisphere Introduction to UNESCO BR Program and Cape Horn Biosphere Reserve	Alaback 1991, 2008a, b ( <i>Frontiers</i> and <i>EE</i> ), Moore 1984  Film: <i>Homage to the Yagans</i>  <i>Supplemental: Primack Ch. 17</i>	C.B. Anderson
2 September	Introduction to biodiversity and biocultural diversity	Primack 2010. Part I (Ch. 1-3; pp. 1- 68), Rozzi et al. 2010 <i>Multi-ethnic Bird Guide</i> pp. 21-29.  <i>Supplemental: "Indicators for Monitoring Biodiversity: A Hierarchical Approach" (Noss 1990, Conservation Biology 4: 355-363);</i>  "Preserving Biodiversity: Species, Ecosystems, or Landscapes?" (Franklin 1993, Ecological Applications 3: 202-205);	R. Rozzi
9 September	Causes of habitat destruction and biological, cultural and linguistic diversity losses	Primack 2010. Part III (, Ch. 7-10; pp. 133 -244), Rozzi et al. 2010, <i>Multi-Ethnic Bird Guide</i> , pp 36-41  Maffi, Luisa. 2001. On Biocultural Diversity. Smithsonian.  Krauss 1992. "The world's languages in crisis", <i>Language</i> 68: 4-10  Carpenter  <i>Supplemental: Millennium</i>	A. Poole

		Ecosystem Assessment. Excerpts.  Anderson et al. 2006 ( <i>Biodiversity and Conservation</i> 15: 3295-3313).	
16 September	Valuing biodiversity	Primack 2010. Part II (Ch. 4-6; pp. 72 -130), Rozzi et al. 2010 <i>Multi-ethnic Bird Guide</i> pp. 29-34.  Hargrove, E. 1992. Weak anthropocentric intrinsic value. In M. Oelshlaeger (Ed.), <i>After Earth Day: Continuing the conservation effort</i> (pp. 141-169)	R. Rozzi
23 September	Conserving biodiversity	Primack 2010. Part VI (Ch. 20-22; pp. 389 – 413, 461-538, Box 17.3), Rozzi et al. 2006. <i>Ecology &amp; Society</i> .	R. Rozzi
30 September	Environmental ethics and philosophies: An ethno-ornithological approach to multiple perspectives of the natural world	Selections of the <i>Multi-ethnic Bird Guide</i> , Rozzi et al. 2010 <i>RCHHN</i> .  <i>Supplemental:</i> Lubchenco J, Am Olson, Lb Brubaker, Sr Carpenter, Mm Holland et al. (1991) The sustainable biosphere initiative: An ecological research agenda. <i>Ecology</i> 72: 371-412.  Ten Principles for Biocultural Conservation at the Southern Tip of the Americas: The Approach of the Omora Ethnobotanical Park. (Rozzi, R. F. Massardo, C. Anderson, K. Heidinger & J. Silander Jr. 2006. <i>Ecology &amp; Society</i> 11(1): 43. [online] URL: <a href="http://www.ecologyandsociety.org/vol11/iss1/art43/">http://www.ecologyandsociety.org/vol11/iss1/art43/</a> ) Students can revise the appendixes, including the Yahgan story of Omora.	R. Rozzi
7 October	Sub-Antarctic forests: One of the last wilderness areas?	Leopold 1949, Callicott 2008, Mittermeier et al. 2003, Selections from <i>Pristine Cape Horn Landscapes</i>	J.B. Callicott

14 October	<b><i>Topics for review essays should have been determined with instructors by this date.</i></b>  <b><i>Group presentations</i></b>	<b>Mid-Term Exam</b>	
21 October	Sub-Antarctic stream ecology  <b><i>Group presentations</i></b>	Anderson & Rosemond 2007, 2010	J. Kennedy
28 October	History and context matter: ecosystem ecology and thinking of the whole	Primack 2010 (pp. 11-19), Golley 1993 (ch. 5), Odum 1969, Pickett & Ostfeld  PBS American Experience video – <i>The Seeds of a Revolution: Earth Days</i>	C.B. Anderson
4 November	Integrating socio-ecological criteria in conservation education.	Roth 2008, Estevez et al. 2010, Armstrong et al. 2007  <i>Supplemental</i> : What is an education for anyway? Orr, D. 1991. <i>In Context</i> 27 pp. 52  Video - <i>Convivencia</i>	M. Armstrong, C.B. Anderson
#11 November	Bryology: “The Miniature Forests of Cape Horn” and “Tourism with a Hand Lens”	Rozzi et al. 2008, Goffinet et al. 2006	R. Rozzi, B. Goffinet & L. Lewis
18 November	Implementing conservation: field stations, long-term socio-ecological research and biosphere reserves	Primack 2010 (Part V. Ch. 15-17. pp. 337-400), Anderson et al. 2008, 2010, Janovy & Major 2009	C.B. Anderson
25 November	Thanksgiving	-----	-----
2 December	Invasive species: a concept and a reality that both have consequences  <b><i>Submission of final essays</i></b>	Larson 2005, Anderson et al. 2006, García-Llorante et al. 2008	B. Larson, C.B. Anderson & R. Rozzi
9 December	<b><i>Final Exam</i></b>		