

Faith, Ethics & the Biodiversity Crisis

(Br.) Keith Douglass Warner OFM

kwerner@scu.edu (better to not email me at: salvia@hollinet.com)

Winter 2005

ERES password: "bd"

Course description

Addressing the global collapse of biological diversity is an over-riding ecological and ethical challenge facing human society. Over the past two decades, virtually every religion has issued statements decrying the loss of biological diversity, framing the issue in religio-ethical terms. Yet conservation initiatives raise complex and contradictory religious issues, such as:

1. Does the Judeo-Christian tradition have a "domination" worldview that has contributed to this crisis?
2. Are there religio-ethical responsibilities for protecting endangered species?
3. How do contemporary religious ethics balance humanitarian concerns (such as social and economic development) with protection of biodiversity?

This course will explore the theological implications of the biodiversity collapse, and recent religious responses, from an interdisciplinary perspective. It will integrate a survey of this crisis with a critical analysis of the response by major faith traditions, paying particular attention to the distinct contribution that religion plays, could play, or has failed to play in addressing the root causes of biodiversity loss.

In 1967, historian Lynn White wrote a provocative and controversial essay suggesting that contemporary environmental problems emerged from a Judeo-Christian worldview of "domination" over non-human species. This triggered an outpouring of refutations and argumentation, but also a sober re-examination of inherited theological assumptions about nature. Over the past 15 years, many religious leaders and institutions have begun advocating a stance of stewardship, including for endangered species, and in the process have encountered the societal costs associated with their protection. They are now grappling with how to integrate concern for the diversity of life with their historic interest in human welfare. How to resolve these tensions is very much an open question in religion today.

The first third of this course lays out the core scientific and social issues of the biodiversity crisis, such as: what does biodiversity mean? And how much of it do we want to conserve? Who will pay for its conservation?

The second third develops the theological and religious lenses to interpret and analyze crisis. What guidance can historical religious teachings offer us? The development Roman Catholic social teaching about the environment will serve as one case study, but many other religious views will be considered. Students will be encouraged to research their own as well as other faith traditions.

The final third constructs the ethical tools necessary to organize social institutions on behalf of biodiversity protection. Protecting endangered species has wide appeal -- until the specific limitations on human activities are spelled out. This

provokes questions of authority and justice: who decides what activities are to be restricted? Who should pay for conservation initiatives? How are conservation needs balanced with the need for social and economic development? What tensions and contradictions emerge as religious traditions struggle to expand the scope of their ethical concerns? Ultimately, biodiversity protection is crucial to the future of life on Earth. Hope is essential for overcoming the despair that comes with knowledge of the scale of this environmental catastrophe, and faith may be crucial to sustaining this.

This class is designed to allow Biology and Environmental Studies/Science students to integrate their religious beliefs and environmental values. It will fulfill the third level course for the religious studies requirement in the area of Theology, Ethics, and Spirituality. It will compliment BIO 150--Conservation Biology by offering students the opportunity to explore the application of conservation biology principles in the social context of our contemporary world. This course assumes an introductory understanding of ethics, and will build on this. A course in ecology or conservation biology would be helpful, but is not required. This class will build on a continuing research project investigating the relationship between religious thought and the biological diversity crisis.

Course goals

1. To introduce the worldwide crisis in biodiversity loss, and understand the religious and ethical dimensions of efforts to address it.
2. To survey the diversity of religious responses to this crisis, both between religious institutions and as they have developed through time.
3. To identify and analyze some of the ethical conflicts which emerge in biological diversity protection initiatives.
4. To facilitate students' reflection on how their spirituality and values shape their own vocational engagement in biodiversity conservation activities.
5. To analyze the contribution to addressing the biodiversity crisis that religion has played, has failed to play, and could play.

Course evaluation

Analysis of why 1 species is going extinct	5%	(2 pg)
Op-ed (opinion-editorial) essay	10%	(2)
Two ethics and communication papers	30%	(2 pg each)
Communication strategy/final project	25%	(10 pg)
Group poster project	15%	
Class participation	10%	
Extra-class participation	5%	(see below)

Required assignments

I will not accept hand written assignments. Please print them on a computer printer. These assignments will have different target audiences. Be sure to pay attention to the needs and assumptions of your audience!

1. Write a two page essay describing the status of a threatened or endangered species. Include: its geographic range, habitat, its recent population dynamics/life history, ultimate and proximate factors threatening it, and public or private initiatives to save it. Bio, Environmental Science/Studies majors: you may not choose mammals or birds. All other majors: you may not choose mammals. Due **Thursday, January 13**, and worth 5% of the grade. The second assignment, the op-ed, will build on this. Pick an endangered species that interests you! See Appendix 1.
2. Write an op-ed (opinion-editorial) essay laying out your views on the intersection of faith, religion and ethics with conservation strategies. You must identify a venue where this could be published, and define the audience. Examples include: newspapers; scientific, educational, or religious newsletters; or national park/sanctuary outreach materials. Making it specific, local, or place-based will likely be easier. The essay must blend at least three components: a specific biodiversity conservation issue, religious or ethical principles, and your own opinions. It should be 600-8000 words (2 pages single spaced max). These kinds of essays are easier to write if you identify 1-2 key arguments, and then work backward to make an outline of your evidence. 10% of the course grade. **Due January 27.**
3. Two ethics and communication issues papers. Each assignment has two questions requiring one page answers for each.
 - a. The first builds on our initial discussions of the biodiversity crisis. Due **February 10.**
 - b. The second addresses educational interventions on behalf of conservation, and gets at the question of conservation ethics and public communication. **Due March 1.**These assignments are worth 15% of the grade each. Details forthcoming.
4. As a small group (2-3), create a poster proposing an outreach strategy on the conservation/religion interface. The educational outreach can be between any of the following organizations/groups: a scientific (research) organization, a public agency, an advocacy NGO, a religious denomination, a local faith community, or the public. The outreach can be designed to thrust in any direction. Design it to “sell” the idea to a funder of your own choosing. Describe the target audience, the conservation issue, a “statement of need,” the outreach strategy and its necessary resources, and what behavior you want to provoke. You may include a critique of faith communities, environmental NGOs, or existing outreach strategies, and a description of opportunities of creating stronger ties between organizations/groups. Be sure to reference current issues in conservation and existing statements by religious leaders/institutions, and describe the mutual benefits such an outreach program would bring. Lowry and Schwartz should substantially inform this project. Posters must participate in the ESI poster session in May. **Due March 10**, and to be presented in class: 15% of grade.

5. Develop a communication strategy similar to the one proposed in your poster. It may target any "public" or group. It must explicitly incorporate ethical reasoning and communication discussed in this course. You may want to contact a specific group and offer your research skills for a real-world situation. More information forthcoming. Due Monday **March 14**: 25% of grade. 10 pages.

Really important dates for extra-class participation in this course

This course requires activities outside routine classes, totaling at least **10 hours**.

Monterey aquarium & Pt. Lobos field trip:	8 hours
Work at Ulistac Natural Area:	4 hours
Attend two ESI biodiversity seminars	1 hour each (x2=2 hours)
Biodiversity movie night	2 hours

- The Monterey Bay Aquarium and Pt. Lobos field trip is **Saturday January 29**.
- Half days of work at the Ulistac Natural Area Restoration Project (<http://www.scu.edu/envs/ulistac/index.html>) are conducted on weekends 10am - 2 pm. They will be held:
 - January 8
 - January 16
 - February 5
 - February 20
 - March 5
- The Environmental Studies Institute Seminars have biodiversity as a theme on Fridays January 7, February 4, and March 4, at noon, in Casa. See below.
- Biodiversity movie night: *Never Cry Wolf* will be shown in the Sky Lounge of Swig on Thursday January 20 at 9 pm.

Deadline extensions>late papers

I routinely grant extensions of deadlines. Late papers will be marked off. You choose.

Attendance policy

You may miss two class meetings without penalty. Each subsequent class absence (starting with the second) will cost 5 of the 10 points for course participation.

Required Texts

Because of growing concerns about copyright laws, making free photocopies of articles is now much more difficult. I try to use ERES whenever legal because it is free, but some articles I need to post on Xanedu (www.xanedu.com).

The Bible. (also available on-line)

IUCN Species Survival Commission. 2004. *IUCN Red List of Threatened Species: A Global Species Assessment*. Download "complete book" at:

http://www.iucn.org/themes/ssc/red_list_2004/main_EN.htm, or enter:
http://www.iucn.org/themes/ssc/red_list_2004/GSA_book/Red_List_2004_book.pdf

Martin-Schramm, James, and Robert Stivers. 2003. *Christian Environmental Ethics: A Case Method Approach*. Maryknoll NY: Orbis Press. (purchase in bookstore!)

The Biodiversity Project. 2002. *Ethics For a Small Planet*. Madison: Biodiversity Project. Available at: <http://www.biodiversityproject.org/EthicsForASmallPlanet.htm>

Lowry, Suellen, and Rabbi Daniel Swartz. 2001. *Building Partnerships with the Faith Community: A Resource for Environmental Groups*. Madison: Biodiversity Project. Available at: <http://www.biodiversityproject.org/BuildingPartnerships.htm>

ERES Reader (see appendix 1). Password: "bd"

In the reading assignment list I have put in boldface the readings you should print out because we will discuss them more thoroughly in class.

Optional Media

Conserving Earth's Biodiversity. 1998. Wilson, Edward O., and Daniel Perlman. Island Press. An interactive computer program that provides multi-media learning modules on conservation issues. In the campus computer lab on stations 21-23.

Plagiarism Policy

All students will perform their assignments honestly and assignments will be original work. Any plagiarism will result in immediate and appropriate disciplinary action not limited to failing the course and possible expulsion from the University. (See "Student Handbook.") If you do not understand this policy please consult the instructor.

Disability Accommodation Policy:

To request academic accommodations for a disability, students must contact Disability Resources located in The Drahnann Center in Benson, room 214, (408) 554-4111; TTY (408) 554-5445. Students must provide documentation of a disability to Disability Resources prior to receiving accommodations.

For Environmental Science and Studies, and Biology majors...

I will ask you to extra reading. To be announced later. Plus, in lieu of profiling a species (assignment #1), answer the following question: ***does the biodiversity crisis form a reference point for your vocation?*** How does the crisis shape how you think of yourself as a scientist or a professional? What kinds of professional work do you plan to do to help address the crisis?

ESI Seminar Fridays at Noon: Featuring biodiversity

Casa Italiana Commons

January 7, Dr. Peter Kareiva: Why Should a Businessman Care about Biodiversity?

February 4, Dr. Betsy Herbert: Forest Ecosystem Services -- How West Coast Public Water Utilities Manage Forests for Water Quality

March 4, Dr. Grey Hayes: Interdisciplinary Training -- How-to Methods for the Modern World

Course outline and reading assignments (B=Bible; RED=IUCN Red List; E = ERES reader; X=Xanedu reader; W=found on the WWW; ESP = Ethics for a Small Planet; BP=Building Partnerships)

Date	Readings for this class meeting	Class meeting topics
Jan 4	--	Lynn White's challenge What is the biodiversity crisis?
6	W: White: "The Historic Roots of Our Ecological Crisis" E: Pope John Paul II and Ecumenical Patriarch Bartholomew. Joint Declaration on Articulating a Code of Environmental Ethics. RED: Forward, Preface, Executive Summary, Sections 1-2 (pages vii-xxiii, and 1-32)	What is the biodiversity crisis and its causes? How are proximate and ultimate causes related? How could faith and ethics shape a response? Origins of the term "biodiversity" Taxonomy: how many of what kind?
11	W: Kareiva, and Marvier, "Conserving biodiversity coldspots" RED: Sections 3-5 (pages 33-84)	What are the ecological implications of biodiversity loss? <i>Guest speaker: Michelle Marvier</i>
13	B: Genesis chapters 1-2 (two accounts of creation) W: Skim sites on evolution, creationism and religion, in Appendix 2: Understanding Evolution, creationism, and NAS E: Guinan, The Creation Story of Genesis RED: Sections 6-9 (pages 85-140)	What is evolution? How is it related to biodiversity? Controversies: evolution and biodiversity loss The many causes of threat Social and economic context of biodiversity loss Conservation responses
18	B: Psalm 104 (the glories of creation) RED: Appendices 1-3 (ES and bio majors only!) X: Rolston, Duties to Animals, Plants, Species, Ecosystems E: Mann: Are Ecologists Crying Wolf? Handout: Warner, Extinction is Forever	Archeology of "biodiversity" Estimating species loss, ambiguities of "species" Thinking about norms, values, and biodiversity loss The op-ed as communication
20	W: ESP, 1-54: Intro & Sections 1-2 E: Streeter: "Christian Perspectives on Ocean Stewardship: Care, Sabbath, Gift, Restoration, Covenant." Skim: ocean conservation websites, Appendix 3	Communicating biodiversity to the public What's the difference between theology & ethics?
25	B: Genesis 6:5 - 9:17 (the flood, stewardship, & the covenant) W: ESP, 56-90: Sections 3-4 X: Kaza: "Buddhist Perspectives on Teaching and Doing Science"	How does the public value biodiversity? How are those values manifested? Theological principles of stewardship
27	ESP, 92-118: Sections 5 (skim section 6) W: BP, 7-15; "Building Partnerships with the Faith Community" Monterey Bay websites, in Appendix 4 below	Engaging the faith community Public communication <i>Guest speaker: Kelly Crowley</i>
SAT 29	VISIT THE MONTEREY BAY MARINE AQUARIUM & PT. LOBOS STATE RESERVE	Leave SCU at 8 am from the front of the Mission Back at 4:30 pm, or later if you want to play in Monterey

Feb 1	B: Daniel 3:51-90 (song of 3 men in furnace; <i>only in Catholic Bible!</i>) W: BP, 67-83: "Roots" "Quotes" "Traditions" W: Pope John Paul II: "The Ecological Crisis: A Common Responsibility"	Faith, emotion, and making interventions What does the faith community have to offer to biodiversity protection? Judaism and biodiversity
3	W: BP, 41-65: "Introduction to Aspects of the US Religious Community" W: Pope John Paul II: "Ecological Conversion" W: National Conference of Catholic Bishops: "Renewing the Earth"	Limitations of faith communities Building communication skills: faith and conservation Introduction and overview of Catholic theological resources for biodiversity protection
8	B: Psalm 148 (Cosmic hymn of praise) E: Warner: "Out of the Birdbath" W: BP, 17-39: "Outreach approaches" "Types of Activities" Skim Catholic environmental websites (see appendix 5)	Faith made public: how religion is bringing its values to public life The Franciscan tradition: a familial model as an alternative to the stewardship model?
10	ESP, 136-40: "The Assisi Declarations" X: DeWitt, 39-47: "Creation's Care and Keeping: A Biblical Perspective" X: Nash: "Toward the Ecological Reformation of Christianity" Appendix 6: Religion and the Environment websites	How the faith community "discovered" biodiversity Diversity and trends in faith community responses to the biodiversity crisis Protestants and Jews: The National Religious partnership for the Environment
15	X: Pederson, Environmental Ethics in Inter-Religious Perspective X: Vanderveer and Pierce, 1-15: "An intro to ethical theory" Martin-Schramm & Stiver: 1	World religions and biodiversity What are ethics? How can we use ethical theory? How can faith contribute to environmental ethics?
17	Martin-Schramm & Stiver: 2 E: Myers, Hatcheries and Endangered Salmon	Christian resources for environmental ethics Guest speaker: David DeCrosse
22	B: Proverbs 8 (Wisdom present at creation) Martin-Schramm & Stiver: 3 & 6	Writing about Moral Issues Moral deliberation: case studies and alternatives
24	B: Job 38 Martin-Schramm & Stiver: 7	Endangered Species Act Guest Speaker: Shana Weber
Mar 1	B: Colossians 1:15-20 Martin-Schramm & Stiver: 8	Environmental & professional ethics Ethical conflicts in conservation: "rights"
3	X: McHugh: "A Catholic Perspective on Population" X: McCormick: "Reproductive Sanity, So Long"	Biodiversity and conflict: population and growth Ethical conflicts in conservation
8	R: Fox: "A Spirituality Named Compassion"	Global North/South justice issues: protecting species when people are hungry
10		Poster presentations

ERES reader (password: bd)

Guinan, Michael. "The Creation Story of Genesis: Does it Really Contradict Evolution?" *Catholic Update* June 1994.

Myers, Ransom A., Simon A. Levin, Russell Lande, Frances C. James, William W. Murdoch, and Robert T. Paine. 2004. Hatcheries and Endangered Salmon. *Science* 303 (26 March):1980.

Pope John Paul II and Ecumenical Patriarch Bartholomew. 2002. Joint Declaration on Articulating a Code of Environmental Ethics.

Streeter, Deborah. 2004. "Christian Perspectives on Ocean Stewardship: Care, Sabbath, Gift, Restoration, Covenant."

Warner, Keith, OFM. 1998. Out of the Birdbath: Following the Patron Saint of Ecology. *The Cord* 48 (2):74-85.

Xanedu reader (you have to buy the password at the bookstore or on-line) <http://www.xanedu.com/>

DeWitt, Calvin. 1994. "Creation's Care and Keeping: A Biblical Perspective." In *Earthwise: A Biblical Response*. Grand Rapids: CRC.

Fox, Matthew. 1978. *A Spirituality Named Compassion*. Chicago: Winston Press.

Kaza, Stephanie. 1998. Infinite Realms of Observation: Buddhist Perspectives on Teaching and Doing Science. In *Ecology and Religion: Scientists Speak*, edited by J. E. Carroll and K. Warner. Quincy Illinois: Franciscan Press.

Mann, Charles. 1991. "Extinction: Are Ecologists Crying Wolf?" *Science* 253: 736-8.

McCormick, Bill. 1997. Reproductive Sanity, So Long. *Wild Earth Winter*:84-87.

McHugh, James T. 1997. A Catholic Perspective on Population. In *The Challenge of Global Stewardship: Roman Catholic Responses*, edited by M. A. Ryan and T. D. Whitmore. Notre Dame, Indiana: University of Notre Dame Press.

Nash, James A. 1996. Toward the Ecological Reformation of Christianity. *Interpretation* 50 (1):5-15.

Pedersen, Kusumita P. 1998. "Points of Religious Agreement in Environmental Ethics." In *Explorations in Global Ethics: Comparative Religious Ethics and Interreligious Dialogue* ed. Sumner B. Twiss and Bruce Grelle. Boulder CO: Westview Press.

Rolston, Holmes. 2004. Duties to Animals, Plants, Species, and Ecosystems: Challenges for Christians. In Gibson, William. *Ecojustice: the Unfinished Journey*. SUNY Press.

VanDeVeer D, Pierce C. 1994. *The Environmental Ethics and Policy Book: Philosophy, Ecology, Economics*. Belmont, California: Wadsworth. Introduction: pages 1-15.

Web-based readings

- White, Lynn. 1967. The Historical Roots of Our Ecological Crisis. *Science* 155: 1203-1207.

<http://www.bemidjistate.edu/peoplenv/lynnwhite.htm>, or www.uvm.edu/~gflomenh/ENV-NGO-PA395/articles/Lynn-White.pdf

- IUCN Species Survival Commission. 2004. *IUCN Red List of Threatened Species: A Global Species Assessment*. Download "complete book" at: http://www.iucn.org/themes/ssc/red_list_2004/main_EN.htm, or enter:

http://www.iucn.org/themes/ssc/red_list_2004/GSA_book/Red_List_2004_book.pdf

- Kareiva, Peter, and Michelle Marvier. 2003. Conserving biodiversity coldspots. *American Scientist* 91:344-351. <http://www.scu.edu/envs/howeare/howeare-facultyandstaff-mmavier.html>
- The Biodiversity Project. 2002. *Ethics For a Small Planet*. <http://www.biodiversityproject.org/EthicsForASmallPlanet.htm>
- Lowry, Suellen, and Rabbi Daniel Swartz. 2001. *Building Partnerships with the Faith Community: A Resource for Environmental Groups*. Madison: Biodiversity Project. <http://www.biodiversityproject.org/BuildingPartnerships.htm>
- Pope John Paul II. 1990. The Ecological Crisis: A Common Responsibility, Peace with God the Creator, Peace with all Creation. In "And God Saw That It Was Good", edited by D. Christiansen, SJ and W. Grazer. Washington DC: USCC. Also at: <http://conservation.catholic.org/ecologicalcrisis.htm>
- National Conference of Catholic Bishops. 1991. *Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching*. Washington DC: United States Catholic Conference. <http://www.usccb.org/sdwp/ejp/bishopsstatement.htm>
- Pope John Paul II. 2001. "Ecological Conversion," http://conservation.catholic.org/john_paul_ii.htm

Appendix 1: Endangered Species sites

- The Extinction Files, <http://www.bbc.co.uk/education/darwin/exfiles/index.htm>
- The Red List, <http://www.redlist.org/>
- Sanctuary Integrated Monitoring Services (SIMON), <http://www.mbnms-simon.org/other/moreLinks/threatened.php>
- U.S. Fish and Wildlife Service's, Endangered Species Program website <http://endangered.fws.gov/>
- the National Marine Fisheries Service Endangered Species website <http://www.nmfs.noaa.gov/endangered.htm>
- Earth Witness Community (a list of species already extinct), <http://www.earthwitness.com/Home.htm>
- American Museum of Natural History Endangered Species Exhibit, <http://www.amnh.org/nationalcenter/Endangered/index.html>
- The Current Mass Extinction Underway, <http://www.well.com/user/davidu/extinction.html>
- Endangered Species Coalition, <http://www.stopextinction.org/>

Appendix 2: Evolution web-based readings

- National Academy of Sciences: "Science and Creationism: the view from the National Academy of Sciences" www.nap.edu/html/creationism
- Understanding Evolution, <http://evolution.berkeley.edu/>
- Creationism, www.creationism.org

Appendix 3: Ocean Conservation websites

- Pew Oceans Commission Report, <http://www.pewoceans.org/>

- An Ocean Blueprint for the 21st Century Final Report of the U.S. Commission on Ocean Policy, http://www.oceancommission.gov/documents/prepub_report/welcome.html#full
- Leon Panetta: “Cleaning Up the Oceans: A Global Ethical Challenge”, <http://www.scu.edu/ethics/practicing/events/lecture/2003/oceans.html>
- Ocean Conservancy, <http://www.oceanconservancy.org/>

Appendix 4: Monterey Bay & Conservation Biology websites

- Society for Conservation Biology FAQs <http://www.conbio.org/SCB/Services/Education/faq.cfm>
- Monterey Bay Aquarium <http://www.mbayaq.org/> (see especially “marine science collaborations)
- Monterey Bay National Marine Sanctuary <http://www.mbnms.nos.noaa.gov/>
- Sanctuary Integrated Monitoring Network <http://www.mbnms-simon.org/>
- Sanctuary Cruises <http://www.sanctuarycruises.com/>
- Save Our Shores <http://www.saveourshores.org/>
- MERITO (Multicultural Education for Resource Issues Threatening Oceans), <http://www.mbnms.nos.noaa.gov/educate/merito/welcome.html>
- Ventana Wilderness Society, <http://www.ventanaws.org/>
- Ventana Wilderness Association, <http://www.ventanawilderness.org/> (especially “projects” and “links”)
- Condor lookout, <http://condorlookout.org>

Appendix 5: Religion and the environment websites:

- Biodiversity Project publications, <http://www.biodiversityproject.org/publications.htm>
- Catholic conservation center, www.Conservation.catholic.org
- Coalition on the Environment and Jewish Life, www.coejl.org;
- Eco-Justice Ministries, <http://www.eco-justice.org>
- Evangelical Environmental Network, www.esa-online.org/een;
- Forum on Religion and Ecology, <http://environment.harvard.edu/religion/>;
- National Council of the Churches of Christ in the U.S.A. Eco-Justice Working Group, www.webofcreation.org/ncc/Workgrp.html;
- National Religious Partnership for the Environment, www.nrpe.org;
- U.S. Catholic Conference Environmental Justice Program, www.nccbuscc.org/sdwp/ejp/index.htm
- Web of Creation, www.webofcreation.org.
- Harvard Center for the Study of World Religions & Ecology: <http://www.hds.harvard.edu/cswr/ecology/ecoall.htm>