

**History 366: Global Environmental History**

Monday, Wednesday: 2:30-4:18

**LOCATION**Prof. John Brooke  
Dulles Hall 257 (292-8757)Dept. of History  
E-Mail: brooke.10@osu.edu**Office Hours: Wednesdays and Thursdays, 9:30-11:30**

This course explores the long history of the earth and humanity from an environmental perspective, focusing on the changing relationship of human societies and global ecologies and the problem of the sustainability of humanity as a species. A brief introduction to pre-human earth history establishes a picture of natural change in climate and the biosphere, setting the stage for a comparative overview of three broad "human revolutions" -- or crises in human sustainability: the origin of the human species, the agricultural revolution, and the industrial revolution. Themes of particular importance include issues in human demography, subsistence, and technology, and debates over gradual and catastrophic change in climate and the biosphere. The course closes with a look at the rise of environmental consciousness, our contemporary environmental situation, and the prospects for a sustainable future. Term projects allow students to explore problems of individual interest.

Requirements: Class attendance, participation in discussions, three in-class tests (75%), term project (see page 2) (25%).

It is Department policy that all students must be officially enrolled in the course by the end of the second full week of the quarter. No requests to add the course will be approved by the department chair after that time. Enrolling officially and on time is solely the responsibility of each student.

**Required texts available at SBX and the OSU Book Store and on reserve:**

Spencer Wells, The Journey of Man  
Jared Diamond, Guns, Germs, and Steel: The Fate of Human Societies  
Arno Karlen, Man and Microbes  
Robert Marks, The Origins of the Modern World  
Vaclav Smil, Energy in World History

Note: All required essays, in addition to the books at the bookstore, are included in a History 366 Reader available for purchase (\$24.50) through ZipPublishing. Essays in this reader are indicated with a "\*". Representatives from ZipPublishing will bring the reader to the end of the first class and to the beginning of the second class for sale to students.

**Some course materials**, and all visual materials used in class, will be posted on a passworded web-site linked to my home-page. Details will be distributed in class. Grades will **not** be posted on the course site.

**Tests:**

All three tests are based on ID lists developed by the class and the instructor. Shorter and longer essays will allow you to demonstrate your understanding of the significance and interconnection of various topics and themes developed in the readings, lectures, and discussions.

**Term projects:**

Everyone will do a term project that will reflect both a special interest and your understanding of the course readings. I will provide a list of previous topics to give you an idea of the sort of project that students have done. A number of books are on reserve for the course that may be helpful in thinking about your topic. Everyone should read Donald Worster's essay on "Doing Environmental History," in Worster, ed., The Ends of the Earth, 289-307, and consult his excellent bibliography, and look through William Turner et al., The Earth as Transformed by Human Action, a collection of essays on global environmental change since 1700, for items which might suggest or inform project topics.

**Project Deadlines:**

Project consultation by October 25: Please drop by to talk about a project plan -- I can provide you with start-up bibliography;

Project status report and bibliography by November 15; Internet citations must be approved by the instructor.

Project report due Friday, December 8, 12:00 noon.

Length: 6-8 pages, plus maps, charts, diagrams, and other visual aids.

**Course credit:** This course is approved by the International Studies Program for the "Economic, Environmental, & Political Dimensions" requirement of the **Minor in Globalization Studies**.

## CLASSES AND READINGS

## INTRODUCTION: DEFINITIONS AND ORIGINS

**Sept. 24: Prologue: Time, nature, humanity, history, ecology -- some concepts and definitions**

**Sept. 24, 30: Four billion years of evolution and catastrophe on the ancient earth: biosphere, atmosphere, geosphere**

- \*McKibben, "A Special Moment in History"
- \*Life in the Universe, 29-40, 53-65
- \*Monastersky, "Popsicle Planet."
- \*Fischer, Alfred. "The Two Phanerozoic Supercycles"
- \*Monastersky, "Shots from Outer Space"
- Diamond, Guns, Germs, and Steel, 13-28

## PART 1: THE EMERGENCE OF HUMANITY ON AN INCREASING COLD PLANET

**Oct. 1: Global climate change and the Genus Homo, 30 million-one million years BP**

- \*Bogucki, The Origins of Human Society, 29-54
- \*Potts, Humanity's Descent, 45-78
- \*Gore, "The Dawn of Humans: The First Steps"
- Begin reading Wells, The Journey of Man

**Oct. 7, 8: Ice age environments and Homo sapiens sapiens: one million to twelve thousand years BP**

- Wells, The Journey of Man, 1-145
- Diamond, Guns, Germs, and Steel, 35-52
- Karlen, Man and Microbes, 13-28
- Smil, Energy in World History, 17-22
- \*Hardin, "The Tragedy of the Commons," Science 162 (1968), 1243-8
- \*Stringer, "Out of Ethiopia"
- \*Fagan, "The Saharan Pump," in The Journey from Eden, 65-73.

**October 14: First in-class test**

**PART 2: AGRICULTURAL SOCIETIES AND GLOBAL ECOLOGIES ON A WARM PLANET: 12,000 BP TO AD 1700**

**Oct. 15, 21: Agricultural Revolutions: 10,000 to 5,000 BC**

Wells, The Journey of Man 145-84 [185-96 optional]  
 Diamond, Guns, Germs, and Steel, 85-191  
 Karlen, Man and Microbes, 27-46  
 Smil, Energy in World History, 1-24  
 \*Sheratt, "Climatic cycles and behavioural revolutions"

rec: Smith, The Emergence of Agriculture, 207-14 [reserve]

**Oct. 21, 22: Intensification: Soils, States and Cities**

Diamond, Guns, Germs, and Steel, 215-16, 233-292  
 Smil, Energy in World History, 28-85  
 \*Carneiro, "A Theory of the Origins of the State," Science 169 (1970), 733-38  
 \*Hole, "Environmental Instabilities and Urban Origins," in Stein and Rothman, Chiefdoms and Early States  
 \*Boserup, "Environment, Population, and Technology," in Worster, ed., The Ends of the Earth, 23-39  
 \*Malthus, Thomas. An Essay on the Principle of Population, 67, 70-80

**Oct. 28, 29: Challenges: Climate, Disease, and culture**

Karlen, Man and Microbes, 47-91  
 Diamond, Guns, Germs, and Steel, 195-214, 295-333 (China), 376-401 (Africa)  
 \*Stark, "Epidemics, Networks, and the Rise of Christianity"  
 \*White, "The Historical Roots of our Ecological Crisis," Science 155 (1967), 1203-7  
 Marks, The Origins of the Modern World, 21-39

**Oct. 29, Nov. 4: Crossing the Bounds of Pangaea: Europe and the World, 1492-1700**

Diamond, Guns, Germs, and Steel, 334-75  
 Karlen, Man and Microbes, 93-128  
 Marks, The Origins of the Modern World, 1-16, 43-64, 67-92  
 \*Crosby, "Ecological Imperialism," in Worster, The Ends of the Earth, 103-117

rec: Turner, The Earth as Transformed, 163-197, 354-366, 371-391 [reserve only]

**November 5: Second in-class test**

**PART 3: INDUSTRIAL SOCIETIES ON A FRAGILE PLANET: 1700 TO PRESENT****Nov. 12, 18: Energy**

Smil, Energy in World History, 92-205, 223-242 (skim: 125-156)

\*Wilkinson, "The English Industrial Revolution," in Worster, ed., The Ends of the Earth, 80-99

Marks, The Origins of the Modern World, 95-118, 123-153, 155-162

rec: Turner, ed., Earth as Transformed by Human Action, 1-19, 55-69, 103-121 [reserve only]

**Nov. 19, 25: Population**

\*Coale, "The History of Human Population," Sci.Am. Sept. 1974, 41-51

\*Singer, "The Population Surprise."

Karlen, Man and Microbes, 129-213

**Nov. 26: Pre-Thanksgiving Review discussion****Dec. 2, 3: Impact, Consciousness, and the Coming Challenge**

\*Schneider, "The Changing Planet," Sci. Am. Sept. 1989

\*Monastersky, Four short essays on climate change, 1998-1999.

Smil, Energy in World History, 206-222, 242-256

reread: \*McKibben, "A Special Moment in History"

Karlen, Man and Microbes, 1-11, 215-230

\*Dasgupta, "Population, Poverty, and the Local Environment," Sci.Am. Feb. 1995, 40-45

**Dec. 8: Project essay due****Dec. [exam week]: Final test**

**READINGS RECOMMENDED FOR ADDITIONAL COVERAGE [all on reserve]**

The readings listed here, organized roughly by the chronology of the course, are all on reserve, either for three hour or three-day. I provide you this list as a backup to the syllabus. These readings all have contributed to the arguments that I develop in my lectures, some of them I have assigned in previous years. You may find them useful to fill out arguments that I develop in class, and **for exploring for project topics.**

**GENERAL WORKS IN GLOBAL ECOLOGICAL HISTORY**

Ponting, Clive. A Green History of the Earth  
 Simmons. I. G. Changing the Face of the Earth  
 Smith, Robert L. and Smith Thomas. M. Elements of Ecology, 4th ed.  
 Turner, B.L. et.al., The Earth as Transformed by Human Action  
 Worster, Donald, ed. The Ends of the Earth

**DEFINITIONS AND ORIGINS**

Schneider, Stephen. "Debating Gaia," Environment 32 (1990), 5-9, 29-31  
 Monastersky, Richard. "Shots from Outer Space," Science News 147 (Jan. 28, 1995), 58- 59, 63  
 "Debate: What Caused the Mass Extinction?" Sci.Am. Oct. 1990, 80-92  
 Veivers, "Tectonic-climatic supercycle in the billion-year plate-tectonic eon"  
 Lovelock, James. The Ages of Gaia  
 Wilson, Edward O. The Diversity of Life

**PART 1: THE EMERGENCE OF HUMANITY ON AN INCREASING COLD PLANET**

Potts, Rick. Humanity's Descent  
 Coppens, "East Side Story," Sci.Am. May 1994, 88-95  
 Bryson, Reed. Climates of Hunger, 123-42  
 Falk, Dean. "Brain evolution in Homo: The 'radiator' theory." Behavioral and Brain Sciences 13 (1990), 333-244  
 Lahr and Foley, "Multiple Dispersal and Modern Human Origins," Evolutionary Anthropology 3 (1994), 48-60  
 Schule, Wilhelm. "Anthropogenic trigger effects on Pleistocene climate?" Global Ecology and Biogeography Letters 2 (1992), 33-36.  
 Fagan, Brian. Journey from Eden  
 Foley, Robert. Another Unique Species  
 Gamble, Clive. Timewalkers  
 Jones, Eric L. The European Miracle  
 "The First Americans"

**PART 2: AGRICULTURAL SOCIETIES AND GLOBAL ECOLOGIES ON A WARM PLANET: 12,000 BP TO AD 1700**

- Harris, David. "The Origins of Agriculture in the Tropics," Am. Scientist 60 (1972), 180-93  
 Harlan, "Agricultural Origins: Centers and Non-Centers," Science (1971), 468-73  
 Cohen, The Food Crisis in Prehistory, 18-27...42-56, 279-286  
 Smith, Bruce. The Emergence of Agriculture, 1-33, 36-48 [skim volume]  
 Bryson, Reed. Climates of Hunger, 65-91  
 Fagan, Brian. Floods, Famine, and Emperors  
 Livi-Bacci, Massimo. Population and Nutrition, scan, esp. 79-121  
 Braudel, Fernand. Capitalism and Material Life.  
 Cronon, William. Changes in the Land  
 Crosby, Alfred. Ecological Imperialism  
 Harris, David. ed., The Origins and Spread of Agriculture and Pastoralism  
 Keys, David. Catastrophe: An Investigation in the Origins of the Modern World  
 McNeill, William. Plagues and Peoples  
 Mitchell, John. Ceremonial Time  
 Pomerance, Kenneth. The Great Divergence  
 White, Lynn. Medieval Technology and Social Change  
 Harris, Marvin. Cannibals and Kings

**PART 3: INDUSTRIAL SOCIETIES ON A FRAGILE PLANET: 1700 TO PRESENT**

- Dasgupta, "Population, Poverty, and the Local Environment," Sci.Am. Feb. 1995, 40-45  
 Hardin, "The Tragedy of the Commons," Science 162 (1968), 1243-8  
 Fogel, Robert W. and Dora L. Costa. "A Theory of Technophysical Evolution...," Demography 34 (1997), 49-63.  
 Homer-Dixon, et al., "Environmental Change and Violent Conflict," Sci.Am. Feb. 1993, 38-45  
 Cowley, "Outbreak of Fear," Newsweek May 22, 1995, 48-55  
 Easterbrook, "Here Comes the Sun," New Yorker Apr. 10, 1995, 38-43  
 Dasmann, "Toward a Biosphere Consciousness," in Worster, ed., The Ends of the Earth, 277-288  
 Botkin, Daniel. Discordant Harmonies, 3-13, 171-183  
 McMichael, A. J. Planetary Overload  
 Schama, Simon. Landscape and Memory, 3-19  
 Simmons. I. G. Changing the Face of the Earth  
 Worster, Donald. Nature's Economy