

HISTORIES OF ECOLOGY: REGIONAL, TRANSNATIONAL, AND GLOBAL TRENDS, 1750 TO 1970

This course explores the multifaceted histories of ecology, focusing especially on developments between 1750 and the Cold War. The term *oekologie* was coined in the 1860s by Ernst Haeckel, an advocate of Darwinian theories. As our readings will show, however, the field's suppositions and concerns have deeper historical roots. Scholars have characterized the discipline as a "pluralistic" and "synthetic" science, meaning its practitioners have pursued heterogeneous methods and objects of study. An overarching question we will consider throughout the course is the extent to which interdisciplinary coordination and pluralism were built into ecology's conceptual framework.

The readings and discussions should allow us to examine six intersecting topics. In any given week, we will likely take up two or more of these at a time:

1. The ways in which an array of different disciplines – from natural history, botany, and zoology to geography, oceanography, and even racial science and anthropology – approached the study of organisms in relation to their environments.
2. The place of diseases – infectious, chronic, and vector-borne – in generating new methodological, theoretical, and mathematical tools for ecological study.
3. How ecological science and its research methods were influenced by such macro developments as the rise of the nation-state, the growth of transnational trade, the construction of formal and informal empires, the proliferation of industries and urban centers, and the Cold War.
4. Intersections between ecology and efforts to conserve and restore natural and built environments, including the integration of social justice concerns.
5. The role of ecological research and fieldwork in generating a scientific interest in the study of "indigenous" and "traditional" knowledge.
6. Synergies between ecological science and other new disciplines including environmental history, environmental ethics, ecological economics, environmental law, and political ecology.

While intellectual histories of ecology usually focus on classic texts produced in Europe and North America, this course will also consider multiple sites around the world in which large and small-scale ecological studies, surveys, and projects were undertaken. This will include readings on South Asia, the Caribbean, the Pacific, Southern Africa, China, the Soviet Union, and Central America. We will not neglect significant trends in Western Europe or the United States, but we will situate these alongside other kinds of projects pursued in what is now often called "the developing world." By the second half of the twentieth century, ecological studies had achieved a global reach. This course should help students begin to answer how this happened, who controlled research and funding priorities, and with what consequences.

Students will be expected to participate actively in discussions and write 3 five-page papers.

WEEK 1 - ORIENTATIONS

Jan 26 Introductions, Syllabus Overview, Opening Discussion

Paul Sears, "Ecology-a Subversive Subject," *BioScience* 14 (1964): 11-13.

Patrick Blandin, "Ecology: From a Crossroads Discipline to a Synthetic Science," in P. Acot and B.P. Hamm, eds., *The European Origins of Scientific Ecology (1800-1901)* (Amsterdam: Editions des Archives Contemporaines, Gordon and Breach, 1998,) pp. 1-8.

WEEK 2 - SPACES AND TIMES

Jan 31 Sharon E. Kingsland, *The Evolution of American Ecology 1890-2000* (Baltimore: Johns Hopkins University Press, 2008), pp. 1-16.

Feb 2 Clarence Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967), excerpted in John Agnew, David Livingstone, and Alisdair Rogers, eds., *Human Geography: An Essential Anthology* (Oxford: Blackwell, 1996), pp. 246-251.

John K. Wright, "A Plea for the History of Geography," *Isis* v. 8 (1926), pp. 477-491.

WEEK 3 - NATURAL HISTORIES AND ECONOMIES

Feb 7 Emma Spary, "Political, natural, and bodily economies," in Nicholas Jardine, James A. Secord and Emma C. Spray (eds.), *Cultures of Natural History*, (Cambridge: Cambridge University Press, 1996), 178-196.

Feb 9 Carolus Linnaeus, "The Economy of Nature," Benjamin J. Stillingfleet (trans.), in *Human Life and the Natural World*, Owen Goldin and Patricia Kilroe (eds.), (Peterborough: Broadview press, 1997), 146-150.

WEEK 4 - COLLECTING AND THERAPEUTICS

Feb 14 Harold J. Cook, "Physicians and Natural History," in Jardine, Secord and Spary, eds., *Cultures of Natural History* (Cambridge: Cambridge University Press, 1996), pp. 91-105.

Feb 16 Londa Schiebinger, "Bioprospecting," from *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Harvard University Press, 2004), pp. 1-12 and 73-100.

WEEK 5 - EMPIRES AND EXCHANGES

Feb 21 Janet Browne, "A Science of Empire: British Biogeography before Darwin," *Revue d'Histoire des Sciences* v. 45 (1992), pp. 453-475.

- Feb 23** Jorge Canizares-Esguerra, "How Derivative was Humboldt? Microcosmic Nature Narratives in Early Modern Spanish America and the (Other) Origins of Humboldt's Ecological Sensibilities," in L. Schiebinger and C. Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania, 2004).

WEEK 6 – NATURE'S ENTANGLED BANK - DARWIN & HAECKEL

- Feb 28** Robert Kohler, *All Creatures: Naturalists, Collectors, and Biodiversity, 1850-1950* (Princeton: Princeton University Press, 2006), Chapter 1.

Robert Clinton Stauffer, "Ecology in the Long Manuscript Version of Darwin's *Origin of Species* and Linnaeus' *Oeconomy of Nature*," *Proceedings of the American Philosophical Society* 104:2 (April 1960), 235-241.

- Mar 1** Pascal Ascot and Gerhard Müller, "The Birth of Scientific Ecology," in P. Ascot and B.P. Hamm, eds., *The European Origins of Scientific Ecology (1800-1901)* (Amsterdam: Editions des Archives Contemporaines, Gordon and Breach, 1998), pp. 671-679.

Joel Hagen, *An Entangled Bank: the Origins of Ecosystem Ecology* (Rutgers University Press, 1992), chapter 1.

WEEK 7 - FIELDWORK AND EMPIRES

- Mar 6** Eugene Cittadino, *Nature as the Laboratory: Darwinian Plant Ecology in the German Empire, 1880-1990*, (Cambridge: Cambridge University Press, 1990), pp. 134-157.

- Mar 8** Robert Kohler, *All Creatures: Naturalists, Collectors, and Biodiversity, 1850-1950* (Princeton: Princeton University Press, 2006), Chapter 5.

WEEK 8 – ECOLOGY AND CHANGING LANDSCAPES

- Mar 13** Sharon E. Kingsland, *The Evolution of American Ecology 1890-2000* (Baltimore: Johns Hopkins University Press, 2008), pp. 96-128.

- Mar 15** Douglas Weiner, "Models of Nature: The Zapovedniki and Community Ecology," in Weiner, *Models of Nature: Ecology, Conservation, and Cultural Revolution in Soviet Russia* (Bloomington: Indiana University Press, 1988), pp. 64-84.

WEEK 9 - DISEASE ECOLOGIES

- Mar 20** Warwick Anderson, "Natural Histories of Infectious Disease: Ecological Vision in 20th Century Medical Science," *Osiris* v. 19 (2004), pp. 39-61.

- Mar 22** Helen Tilley, "Ecologies of Complexity: Tropical Environments, African Trypanosomiasis, and the Science of Disease Control in British Colonial Africa, 1900-1940," *Osiris* v. 19 (2004), pp. 21-38.

WEEK 10 – A GLOBAL REACH OR OVER-REACHING?

Mar 27 Michael Lewis, *Inventing Global Ecology: Tracking the Biodiversity Ideal in India, 1947-1997* (Athens: Ohio University Press, 2004), pp. 1-24.

Mar 29 Michael Lewis, *Inventing Global Ecology: Tracking the Biodiversity Ideal in India, 1947-1997* (Athens: Ohio University Press, 2004), pp. 25-80.

WEEK 11 - ATOMIC ECOLOGIES

Apr 10 Joel Hagen, *An Entangled Bank: the Origins of Ecosystem Ecology* (Rutgers University Press, 1992), "Ecology and the Atomic Age," 100-121.

Apr 12 Stephen Bocking, "Ecosystems, ecologists, and the atom: Environmental research at Oak Ridge National Laboratory", *Journal of the History of Biology*, 28 (1995), 1-47.

WEEK 12 - COLD WAR ECOLOGIES

Apr 17 R.S. Reese, "The New Ecology of Power – Julian and Aldous Huxley in the Cold War Era," in J.R. McNeill and C.R. Unger, eds., *Environmental Histories of the Cold War* (Cambridge: Cambridge University Press, 2010), pp. 279-300.

Apr 19 Angela Creager, "Ecosystems," in *Life Atomic: Radioisotopes as Tools in Science and Medicine* (forthcoming, University of Chicago Press).

WEEK 13 - COLD WAR ENVIRONMENTS

Apr 24 Paul Josephson, "War on Nature as Part of the Cold War: the Strategic and Ideological Roots of Environmental Degradation in the Soviet Union," in McNeill/Unger, eds., *Environmental Histories of Cold War*, pp. 21-50.

Apr 26 Richard Tucker, "Containing Communism by Impounding Rivers: American Strategic Interests & the Global Spread of High Dams in Early Cold War," in McNeill/Unger, eds., *Environmental Histories of Cold War*, pp. 139-165.

WEEK 14

May 1 *Reserved for review*

May 3 *Reserved for review*

WEEK 15

May 8 *Reserved for review*

May 10 *Reserved for review*