

## **The Eastern Forest: Paleoecology to Policy**

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Office Hours: Monday 10-2; Wednesday 10-2; or by appointment

### Course Description

The purpose of this course is to help students appreciate and live responsibly within the Eastern Forest. This major North American biome stretches from Arkansas to North Carolina, from Minnesota to Nova Scotia. It is flanked to the west by the Prairie, south by the Southern Pine Forest, east by the Atlantic, and north by the Boreal Forest and Great Lakes. It is the world's great temperate deciduous forest, retaining more of its biological richness than the similar forest that once covered Europe. It is our home.

The course will cover the paleoecological development of the forest, its ecological structure, and the history and prospects of human cultures within it. It will look at the development of American attitudes toward the forest, and at our record of stewardship and abuse. The course will conclude with an exploration of the current outlook for the Eastern Forest, and the difficult challenge of balancing sustainable use of forest resources with protection of biodiversity and ecological integrity.

The course will include several field trips to local forests. Each student will write a research paper on the past and future of forests in a nearby town, as part of a larger class project designing a regional "legacy forest." There will be no other papers or exams. The grade will be based 50% on the paper, and 50% on class participation.

If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately. You are expected to be honest in all your academic work. The University policy on academic honesty is distributed annually as section 5 of the *Rights and Responsibilities* handbook. Instances of alleged dishonesty will be forwarded to the Office of Campus Life for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University. If you have any questions about my expectations, please ask.

## Reading

### Required:

Gordon Whitney, *From Coastal Wilderness to Fruited Plain: A History of Environmental Change in Temperate North America from 1500 to the Present*, 1994.

Neil Jorgensen, *Sierra Club Naturalist's Guide to Southern New England*, 1982.

### Recommended (\* indicates a major portion of the book is assigned):

\*Charles H.W. Foster, *Stepping Back to Look Forward: A History of the Massachusetts Forest*, 1998.

Sheila Connor, *New England Natives*, 1994.

\*Christopher McGrory Klyza and Stephen C. Trombulak, eds, *The Future of the Northern Forest*, 1994.

\*Robert E. Pike, *Tall Trees, Tough Men*, 1967.

\*Mary Byrd Davis, *Eastern Old-Growth Forests: Prospects for Rediscovery and Recovery*, 1996.

John C. Kricher, *Peterson Field Guide to Eastern Forests*, 1988.

George F. Peterken, *Natural Woodland: Ecology and Conservation in Northern Temperate Regions*, 1996.

Richard Judd, *Common Land, Common People*, 1997.

Brian Donahue, *Reclaiming the Commons: Community Farms and Forests in a New England Town*, 1999.

## Course Schedule

Sep 8      Introduction

Sep 13-15 Old Growth: 100,000 year glacial cycles, paleoecological record of species migration since the glacial maximum 20,000 years ago, forest regions, ecosystem formation and stability under different climate, soil and disturbance regimes, landscape ecology.

Readings: Jorgensen, pp 56-62, (browse rest of book, especially Parts III-V); Margaret Davis, "Holocene Vegetational History of the Eastern United States," in H. E. Wright, Jr, ed, *Late-Quaternary Environments of the United States*, vol. 2, 1983; Whitney, Ch 3-4; Peterken, Ch 3.4—4.3, pp 45-73.

Sep 21-22 The People of the Forest: Native American occupancy, ecological impact of fire, hunting, shifting cultivation. Were the Indians any more or less "part of nature" than we are today?

Reading: Whitney, Ch 5; Foster, "Ecological History of Massachusetts Forests," pp 19-66.  
Charles H. W. Foster and David R. Foster, "Thinking in Forest Time"

Sep 27-29 America's Wooden Age: Colonial and early 19<sup>th</sup> C period of the farmer/logger and reliance on local woodlands.

Reading: Whitney, Ch 7; Connor, Ch 2; Foster, "Economic uses of Massachusetts Forests, pp 67-100.

Oct 2 Walk to Walden Pond and "Thoreau's Wild New England" conference.

Oct 4-6 "Letting Light into the Swamp": The forest under assault. 19<sup>th</sup> C logging boom and the impact of agricultural and industrial expansion.

Reading: Whitney, Ch 8-9; *Tall Trees, Tough Men* (cruise); Thomas Cox, "Transition in the Woods: Log Drivers, Raftsmen, and the Emergence of Modern Lumbering in Pennsylvania," 1980.

Oct 11-13 "Woodsman, Spare that Tree": 19<sup>th</sup> C Romantic art and literature, wilderness and conservation movements: Henry Thoreau, George Emerson, George Marsh.

Reading: Henry Thoreau, "Walking," "Huckleberries;" George B. Emerson, *Trees and Shrubs of Massachusetts*; other readings TBA.

- Oct 18-20 "Something for Hope": 20<sup>th</sup> C reforestation with agricultural decline, establishment of federal, state, and local forest.
- Reading: Whitney, from Ch 10 (pp 244-49); Richard Judd, *Common Land, Common People*, Ch 4; Foster, "Massachusetts Contributions to National Forest Conservation," and "Town Forests: The Massachusetts Plan," pp 257-316.
- Oct 25-27 "Behind the Beauty Strips": The environmental impact of modern industrial logging. Cycles of cutting in this century, economics and politics of the forest industry.
- Reading: TBA
- Nov 1-3 Ecosystem Decline: Forest fragmentation from development, impact of air pollution and acid rain, invasion of exotic pests and pathogens, threat of climate change.
- Reading: TBA
- Nov 8-10 "The Tonic of Wildness": What is the aesthetic and spiritual importance of contact with and care for natural ecosystems, a "sense of place," and familiarity with the home landscape of the forest?
- Reading: Davis, Chs 7-8, pp 89-109; Klyza, Ch 2, pp 27-35, Ch 13, pp 217-224; Peterken, Ch 2, pp 10-32; William Cronon, "The Trouble with Wilderness."
- Nov 15-17 Conservation Biology: Theory and practice of protecting biological diversity in the Eastern Forest. Is wilderness necessary? Is it enough?
- Reading: Davis, Part I, pp 3-32, Ch 10, pp 126-143, Ch 21, pp 305-320; other reading TBA.
- Nov 22-24 A Sustainable Forest Economy: Is it possible? Ecological forestry, low-impact logging, high-quality forest products, and forest recreation.
- Reading: Klyza, Chs 11-12, pp 177-211; other reading TBA.
- Nov 29-  
Dec 1 The Common Forest: Building a forest culture. Forest communities, forest land ownership, balancing stewardship and wildness.

Reading: Klyza, Chs 9-10, pp 135-176; Davis, Ch 23, pp 344-358;  
Donahue, Ch 5, pp 217-277.

Dec 6 Conclusion.