

Land Lines

Newsletter of the Lincoln Institute of Land Policy

Distance Learning for New England's Forests

Charles H.W. Foster

The Forest Setting

Forests presently cover approximately 25 percent of the world's land surface, excluding Greenland and Antarctica. Two-thirds of this important renewable natural resource lies in North America, South America, Europe and Russia. In the early 1990s, industrial wood products from North America and Europe alone contributed a robust 2 percent of Global Domestic Product (GDP), and wood-based fuels remain the primary sources of energy for many countries.

The United States is particularly blessed with forests. About one-third of its total land area (730 million acres) is woodland. The proportion rises to nearly two-thirds east of the Mississippi River. Contrary to prevailing public opinion, two out of every three acres of U.S. forest is in private, not governmental, hands. Some 9 million non-industrial private woodland owners control the future of these forests, a number that is rising steadily as land changes hands and is fragmented into smaller and smaller parcels.



Diorama of the primeval New England forest at the Fisher Museum, Harvard Forest, Petersham, Massachusetts.

In New England, these trends are even more pronounced. Of the region's 32 million acres of land base, approximately 80 percent (24 million acres) is now in forest, and 96 percent of this forest is controlled privately. In 1993, by Forest Service estimates, 737,000 owners held forested land in the six-state region, and two-thirds of these tracts were less than 10 acres in size. Newer landowners are frequently urban emigrants, more tied to technology and human-designed infrastructure than to the land. However, they tend to have a nascent interest in the natural world and the potential to become both skillful resource stewards and passionate advocates for the environment.

The Evolution of ENFOR

In the spring of 1999, the idea of distance learning courses, accessible on home computers and targeted to the nonindustrial

private sector in New England, seemed a promising way to tap the potential of these landowners. The New England Governors Conference, the U.S. Forest Service and the Lincoln Institute agreed to jointly sponsor a study that might point the way to developing such a course for the Institute's distance learning program, Lincoln Education Online (LEO).

A distinguished group of New England forestry and education leaders was recruited to serve as advisors. The organizational meeting of what came to be called ENFOR (ENvironmental FORestry) occurred in December 1999. Seven additional meetings were held subsequently over an eighteen-month period, including a region-wide Colloquium on Distance Learning and the Forest Environment held at the New England Center in Durham, New Hampshire, and attended by some forty

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selected New England forestry officials, educators and landowners. Specific ENFOR work products have included the following reports:

- Gail Michaels of the U.S. Forest Service prepared a summary paper, *Characteristics of New England Forest Landowners and Implications for Computer-based Learning*, which found that at least 40 percent of New England households are already computer-equipped, and the proportion is rising rapidly.

- An inventory of 66 existing distance learning resources relating to forestry, *Distance Learning for the Forestry Environment*, prepared by the Quebec-Labrador Foundation, found that none of the sites, of which 31 offered either online courses for credit or courses with online components, appeared to fulfill ENFOR's objectives in their entirety.

- A one-page questionnaire was developed and sent to 5,000 known forest landowners to evaluate the market for distance learning. An astonishing 10 percent of the owners responded, requesting further information on how to improve their forest, how to protect it for the future, and how to find programs and services. Since about 90 percent of respondents indicated they had already done some work on their land, it seemed likely that any information provided through home-computer-based means would be put to work promptly on individual woodlots throughout New England.

A Woodland Walk

Encouraged by these explorations and consultations, ENFOR commissioned Brian Donahue, an environmental historian at Brandeis University, to prepare a 30-minute pilot course built around a computerized walk through a typical New England forest. In this course, a New England landowner is first introduced to the place of his woodland in the world, the region, the state, the county and the community, using supportive maps of cultural features, land use and protected areas in a sample town. An attractive "woodswalker" icon helps the user navigate. "Poison ivy" and "chestnut" symbols

highlight points of particular concern and promise. The walk emphasizes the role of forests as ecological systems, as sources of products and values, and as places where interconnectedness and thoughtful stewardship are needed. Once the virtual walk is completed, the owner is encouraged to take a walk through his or her own woods,



perhaps seeing for the first time its attributes and potential.

Following a successful test of the pilot course in Middlesex County, Massachusetts, it is now being adapted for use in other parts of the region, and by the end of 2001 should be available throughout Rhode Island. The Lincoln Institute has asked Donahue to expand his introductory material to include five additional topics for future versions of the course. The Institute has also encouraged Charles Thompson of the New England Forestry Foundation to produce an interconnected, electronic version of his popular book, *Working with Your Woodland*, to serve as a second-level course for those wishing to apply more active forest management practices to their properties.

Regional Course Development Center

Stimulated by the ENFOR inquiry, Vermont extension forester Thom J. McEvoy has proposed the development of a \$4.9 million curriculum and course development center at the University of Vermont, capable of serving the needs of the entire

New England region. The proposal is now pending before national funding sources. McEvoy envisions courses and services that are easy to use, amenable to either broadband or conventional Internet access, coupled with streaming audio and video, and capable of archiving information specific to a particular woodland site in an individualized "portfolio." The center's courses would range broadly from conventional biological, ecological and economic topics to practical information on how to plan, manage and secure small forests. In keeping with the broad view of the forest as both a physical and cultural environment, the curriculum will include course offerings in such areas as history, literature, folklore, art and even music.

ENFOR Findings and Recommendations

At their final meeting in July 2001, the ENFOR advisors urged the formation of a successor forest education council to encourage the use of distance learning materials in practice and to coordinate their

delivery to landowners through cooperating organizations and agencies. Charles Thompson agreed to organize and chair such a council. The advisors also reached several conclusions based upon the results of the ENFOR inquiry.

- New England is an established and recognized region, well-suited both environmentally and technologically for the use of distance learning techniques.
- Its forest resource, extensive both in acreage and the proportion held in private ownership, represents a unique facet of the environment on which to focus such approaches.
- Since New Englanders have a curious mix of concern for the well-being of the forest coupled with a pragmatic willingness to have its products and uses remain available for humankind, any distance

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learning program must deal with the forest as a total environment, recognizing the full range of its social, ecological, economic, aesthetic, and recreational uses and values.

- To be effective, forestry distance learning programs must be tailored to the individual, be sensitive to local conditions and concerns, be arrayed as a set of voluntary options, and be delivered to the extent possible through existing organizations and agencies.

- The advisors expressed their appreciation of the seeming willingness of diverse public and private institutions to work together collaboratively, as evidenced by the ENFOR project.

Distance learning seems to offer the distinct promise of helping landowners in urbanizing regions serve as more active forest managers and conservers and, collectively, become a new army of forest-wise citizens committed to ensuring the future of New England's important forest heritage. In pursuing this goal, New England may once again be on the threshold of serving as a leader for the nation as a whole. **L**

Charles H. W. Foster is an adjunct research fellow and lecturer at the Center for Science and International Affairs of Harvard University's John F. Kennedy School of Government. He was formerly dean of the Yale University School of Forestry and Environmental Studies and secretary of environmental affairs for the Commonwealth of Massachusetts. Contact: charles_foster@harvard.edu.

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The Overview presently posted on Lincoln Education Online (LEO) is the first lesson of a longer course still under development by Brian Donahue, assistant professor of American Environmental Studies, Brandeis University, Waltham, Massachusetts. Designed primarily as an introductory course for owners of small woodlands (e.g., land trusts, local governments, private landowners), this web-based course explores the fundamentals of small forests by revealing the elements of forest processes and encouraging active, private stewardship by the landowner. Small woodlands are often the result of parcelization and fragmentation of larger tracts within urbanizing regions. Viewed collectively, the significance of these properties to system-wide ecological integrity is enormous.

The Introduction to New England Forests Overview lesson presents six in-depth and illustrative segments, designed as a walk through a small woodland. Following are some brief excerpts from these segments.

The Place of Your Woodland

In making management choices, it helps to know how your woodland is connected to larger forest ecosystems, and its place in the ongoing story of change in the landscape.

The New England Forest

In a world that needs both healthy forests and abundant paper and lumber and that struggles to mitigate the environmental side-effects of economic growth, we in New England face the necessity of both protecting the ecological benefits of our forest and making sustainable use of this renewable resource. As stewards of most of the New England forest, small woodland owners are at the center of this picture.

The Changing Forest

Ecologists have discovered that in our part of the world, nature has not evolved one perfect ecosystem composed of a set group of species for each part of the landscape. Instead, species form a "shifting mosaic" of new ecosystems as conditions change.

Working with Your Woods

The key to sustainable forestry and wildlife enhancement is to have a good long-term management plan in place, based on an informed assessment of the trees that are now growing and that might grow in your woodland. Again, you need to think long-term, and to find out what is going on with the neighboring forest.

Protecting the Forest

Protecting a significant forest right here where people live, intertwined with farmland and residences, may be as important a way to preserve biodiversity and encourage sustainable use of renewable resources as setting aside large wilderness areas in remote places.

Walk Your Woodland

Can you see signs of past disturbances such as logging, or fire? It may not be possible to reach definitive conclusions about the history of your woodland at a glance, but this course will provide plenty of resources for further exploration.

The Overview also features a sample interactive map of the town of Concord, Massachusetts, that allows the viewer to explore local forests and other land uses. Maps of other locations will be added to the curriculum in the future. The course also offers numerous links to other web-based resources, instructive photographs, bibliographies and an interactive message board.

The Introduction to New England Forests Overview is being offered tuition-free through December 31, 2001, through the support of the Lincoln Institute's Ronald L. Smith Scholarship Program. To begin the lesson, visit the Lincoln Institute website (www.lincolninst.edu), click on the LEO icon, and follow the instructions to the Introduction to Forests course. The web screen on the back page of this newsletter presents a view of these instructions.