

WINTER BREAK AT HARVARD FOREST
JANUARY 18-23, 2015
READING AND CONSERVING NEW ENGLAND:
Interdisciplinary insights into a landscape - past, present, and future

Every landscape has a history of natural and human processes that shape the land and condition its future. Scientific interpretations of modern landscapes and efforts to forge sustainable conservation futures for the land therefore depend on the successful interdisciplinary reading of the past and anticipation of how this will interact with new processes in the future. Winter Break Week will use the New England landscape and Harvard's 3,700-acre Harvard Forest in rural Petersham, Massachusetts as a backdrop and living classroom to explore a range of approaches used in reconstructing the past, interpreting the present, and envisioning and planning landscape conservation for the future. This week-long immersion experience will capitalize on Harvard Forest's extensive archive of historical documents, digitized images, and research data, to interpret more than a century of landscape history and project and plan for its future. Collaborative engagement of faculty from diverse fields and parts of the university will provide a broad and eye-opening exposure to ecological and conservation thought.

We will explore modern-day connections between humans and the natural environment through the lens of long-term landscape change, using the historical and archival records and ongoing research at the Harvard Forest. Students will accompany faculty, researchers, conservation specialists, and writers/artists into the New England landscape (snowshoes provided!) to discuss human-landscape experience over time and how this influences past, present, and future cultural shaping of the natural world. Topics explored will include pre-historical-to-historical-to-modern cultural and land-use changes, plant and ecosystem dynamics, climate change and environmental forecasting, invasive species, conservation management, and landscape design. At the same time, we will engage students in a range of interpretive media and contexts that comprise the "reading" of a landscape and inform our practical decisions about its future. The core instructors bring expertise in climate science, paleoecology, population biology, historical ecology, landscape design, and conservation biology. Affiliated artists and writers complement this group with their interpretations of landscape conservation issues for a broad audience.

During this unique immersive experience, students will spend a full week at the Harvard Forest in comfortable and typical rural New England accommodations with round-trip travel, day-trips, and meals provided. Through field excursions, hands-on workshops, and small group discussions, students will become versed in the long term and recent ecological history of New England, the many facets of human-landscape interaction through time, and the region's major conservation challenges for the next century. Guided by real-life scientists, conservation specialists, artists, and writers who have collectively devoted their work to understanding, interpreting, and conserving the regional landscape, students will also produce student work that interprets these issues for a broad audience through writing and visual art exercises. In their creative work, students will draw from elements of the surrounding forested landscape as well our collections of archival documents, images, and datasets.

Limited to 10 students.

LOGISTICS

On Sunday, January 18, students will meet the blue Harvard Forest van in front of the Harvard University Herbaria at 22 Divinity Ave at 4:00pm SHARP. Students will be housed at the Forest in Fisher House: a large, comfortable restored farmhouse including separate rooms and linens for each student, wireless internet access, and a fully equipped kitchen. The kitchen will be stocked with groceries (procured in advance by Harvard Forest administrative staff) for students to make their own snacks and continental breakfasts for each day of the program. A catered lunch and hot dinner will be provided each evening. Students will be fully engaged in class and outdoor activities all week. Students

should bring along **plenty of warm, layered clothes including high waterproof boots (preferably snow boots that cover the ankle) for snow and wet weather**. Some days will include excursions that require 3+ hours of walking in the snow. We will provide snowshoes but these are no substitute for boots.

Students will be driven back to Cambridge after dinner on the evening of Friday, January 23 (arriving ~8:30pm).

SCHEDULE

1/18 Sunday evening – Arrivals, Welcome Dinner, Introduction to the Harvard Forest & Fisher Museum diorama tour (*Prof David Foster, Clarisse Hart*)

1/19 Monday – New England’s Landscape History (*Prof David Foster*)

Morning Field Excursion: Learn to read the land and its history from vegetation, cultural artifacts, and other ecological clues. Prof. David Foster will provide an overview of Harvard Forest landscape and its regional context, major long-term and historical datasets, and pollen record evidence of landscape change. The group will hike to some of the most visually striking tracts of HF land including Slab City and Harvard Pond, and will participate in scientific collection of sediment cores for pollen record analysis. Along the way, students will discuss forest change from Native American and early European settlement through the present, and consider conservation in a historical context (e.g., wildlife and songbird biodiversity as relates to land use).

Afternoon/Early Evening Lab Exercise: Visit Harvard Forest paleoecology lab to view and analyze sediment cores.

1/20 Tuesday – Regional Landscape, Global Change (*David Orwig, Emery Boose*)

Morning Lecture/Workshop: Harvard Forest ecologist Dave Orwig will discuss his local-to-regional research on how invasive species are changing our forests. Collect and view a living sample of the hemlock woolly adelgid under the microscope.

Afternoon Excursion: Harvard Forest ecologist Emery Boose will lead a walking tour of the Forest’s main long-term research sites, discussing the role of forests in climate change and watersheds, and other important dynamics.

1/22 Wednesday – Land Management + Visual Interpretations of the Landscape (*TBD*)

Morning excursion: Conversation with local landowners (friends of the Forest) about managing a large land base for timber, recreation, wildlife, and aesthetics – at their property adjacent to the HF.

Afternoon workshop/free reflective time: Workshop on the visualizations of ecological research, from graphs to botanical drawings. Students will discuss what does and doesn’t work to convey ecological concepts to particular audiences, then practice simple techniques with drawing activities, and head out into the field to try their hands at creatively visualizing the landscape.

Evening workshop: After creating their own work, students will rejoin the instructor to discuss/workshop their pieces.

1/23 Thursday – Writing the Landscape (*Prof David Foster, HF Writer in Residence Lynda Mapes, Clarisse Hart*)

Morning activity: Walk and discussion with Prof David Foster, on natural history writing and the role of a research scientist in interpreting ecological research for a broad audience.

Afternoon/Evening Workshop: Creative writing with Lynda Mapes and Clarisse Hart. Read and discuss examples of landscape in literature, with an emphasis on New England writers. Students will then have an opportunity for reflective writing time, followed by constructive group discussion of student work.

1/24 Friday – Landscape Planning and Landscape Design (*Prof Richard Forman from the Harvard Graduate School of Design*)

Morning Lecture & Excursion: Prof. Richard Forman will discuss landscape ecology and related principles, theory, and models for an introduction to the concepts of landscape design, changing land mosaics, conservation and land use planning. On a morning excursion, students will explore the surrounding rural village of Petersham to see how roads, vehicles, and town integrate with the forested landscape.

Afternoon excursion: Field trip to the suburban Gardner, Mass., area, then informal discussion introducing proposed spatial plans, designs and ideas for optimally designing landscapes. Students will diagram/sketch ideas for designing a road system for different landscapes.

Evening - Synthesis Discussion & Dinner (All). Departure for Cambridge at ~7pm, arriving ~8:30pm.

READINGS

(will be provided to you on-site)

Foster, D. R. 2014. *Hemlock: A Forest Giant on the Edge*. Yale University Press, New Haven, CT.

Foster, D.R. et al. 2010. *Wildlands and Woodlands: A Vision for the New England Landscape*. Harvard Forest, distributed by Harvard University Press, Cambridge, Massachusetts. 36pp.

Assorted readings in natural history, environmental writing, and landscape design.

LEADERS

Principal Faculty: David R. Foster (drfoster@fas.harvard.edu)

Participating Harvard Faculty/Researchers: Richard Forman (GSD)

Associated Personnel:

Emery Boose (Ecologist, Information Manager, Harvard Forest; boose@fas.harvard.edu)

Clarisse Hart (Outreach and Education Manger, Harvard Forest; hart3@fas.harvard.edu)

Lynda Mapes (Harvard Bullard Fellow and Writer in Residence, Harvard Forest;
lyndamapes@comcast.net)

Dave Orwig (Forest Ecologist, Harvard Forest; orwig@fas.harvard.edu)

More about the Harvard Forest: <http://harvardforest.fas.harvard.edu/>