A visit to the Harvard Forest could forever change the way you look at New England’s stone walls—and the woods that have reclaimed long-abandoned fields and pastures.

This year is the centennial of the Harvard Forest, located in the town of Petersham, Mass., some 70 miles west of Boston. The Forest’s brick headquarters for research and education is on a former farm site, and the surrounding hilly land, like so much of New England’s, was once pastures, orchards, and fields—but now is overgrown with maple, oak, and pine. In 1990, the Forest staff clear-cut some of the encroaching forest, effectively recreating the denuded agricultural landscape of 150 years ago. Saplings have already filled in much of this cleared land, but elsewhere cows have beaten back the arboreal encroachments, keeping the grass trimmed around one gnarled old apple tree.

A self-guided nature trail that’s open to the public (and available on the Web at harvardforest.fas.harvard.edu/museum/trails.html) highlights significant environmental factors as well as some of the 100 years of research that’s been undertaken at the Forest. A few strides up a dirt road into the woods, a rock wall along a hillside turns a corner and changes character with the addition of smaller stones. A sample pit dug into the ground on the low-lying side reveals plenty of plow-stopping rocks below the surface, suggesting that this area was only used for grazing. None but the biggest stones were moved to the wall.

But the story is very different higher up, where the wall contains telltale small stones. Excavation there reveals much finer soil—evidence of years of removing even quite small rocks, which were then added to the wall. Here the dirt has also shifted downward, piling against the uphill side of the wall and creating an ad hoc terrace, a sign of severe erosion. Most likely, the farmer furthered this erosion by choosing the easiest direction in which to plow: straight downhill. Although the wall is disappearing under the fast-growing forest, its boundary-making role endures in the differences in soil chemistry and composition from one side of the wall to the other. And such differences continue to affect the future biology of the forest.

As Harvard Forest researchers have documented and investigated for decades, today’s forest carries a strong cultural legacy of human activity, which continues to influence the local ecology with global consequences. The forest came back as agriculture moved to the Midwest and people who were spread evenly across the land moved and concentrated in cities, seeking the new factory jobs. Today, trees cover New England as much as they did before the Revolutionary War, making the Northeast the most densely forested region in the country. The environmentalist writer Bill McKibben has called this accidental reforestation the single greatest environmental story in the United States. Yet these forests are measurably different from those that came before.

“Every landscape has its history,” says David Foster, director of the Harvard Forest. “Forests in time are a synthesis of history and ecological consequences. In order to understand the forests, you need to understand people, history, basic biology, ecology, physical sciences, policy and management. Those are the pieces we bring together here.”

REINVENTING THE FOREST
The Harvard Forest is internationally known for its pioneering integration of social, physical, and biological sciences. During the 1960s and ’70s, research in the woods waned as intellectual interest traveled indoors to labs and greenhouses and tropical questions, Foster says. But in the early 1980s, director John Torrey reinvented the forest as a modern research station and educational forum.

Today, the Forest is a well-used lab and classroom for ecology and environmental studies, supplemented by a century of data. Except for the absence of forestry studies, “we’re returning to our roots,” Foster says.

Forty-five people work at the Forest fulltime. About that many more Harvard
Beyond its role as a living laboratory, the Harvard Forest actively promotes land conservation in New England. Last year, in a proposal called “Wildlands and Woodlands,” Forest Director David Foster and colleagues called for protecting 1.5 million acres of forest, beyond the approximately one million acres of land already protected in the state. Cumulative acreage would be roughly half of Massachusetts’s total area of about five million acres.

In April 2006, a nationwide group of experts in conservation finance—from groups such as the Nature Conservancy, the Massachusetts Audubon Society, the Trustees of Reservations, the Wilderness Society—gathered to discuss the feasibility and funding of Wildlands and Woodlands.

Their conclusions, issued in a November 2006 report, demonstrated support for the ambitious Forest proposal and detailed several strategies to finance it. These include a mix of conventional financing tools, such as bonds and tax incentives, and innovative mechanisms such as payments for ecosystem services and regulatory reform to facilitate smart growth.