Renaissance at Walden

Mary P. Sherwood

Valiant efforts at revegetation are restoring some of the lost charm and serenity of this renowned literary and historic site

The ongoing rehabilitation of Walden Pond has been a story of delay and frustration, progress and setback, caused by a superabundance of people, a near-total lack of money, and frequent misapplication of what little money there was. It has been a story, also, of coping with a habitat too harsh for most plants to get established in on their own, as well as with severe restrictions on the plants that would be appropriate for rehabilitating an historic natural site like Walden. In years long past—when people did not visit Walden in the huge numbers they now do (up to 17,000 on a single warm summer day)—the woods surrounding Walden had been able to grow spontaneously after having been cut for lumber or fuel during the last century. Even the site of a large, turn-of-the-century amusement park at the western end of the pond grew up to woods after the park was abandoned. Now, however, people visit Walden in such overwhelming numbers, trampling vegetation and disturbing the soil on the banks of the pond, that neither pioneer species of plants nor tree seedlings can get established on their own, but must have protection. Under the present conditions at Walden, revegetation requires persistent care and protection of plants that otherwise would succumb to the harsh environmental conditions or else be trampled by the throngs of visitors. The present urgent need for rehabilitation at Walden can be traced back three decades.

The Great Assault on Walden

In the summer of 1957, responding to a request by the local chapter of the American Red Cross, the commissioners of Middlesex County, Massachusetts, brought a bulldozer and power saws onto the Walden Pond Reservation to enlarge an existing small “beach,” or swimming area. About one hundred trees were cut on the steep slope just above the beach, and the slope itself was gouged out

Visitors stroll along the northern shore of Walden. Photographed by Albert W. Bussewitz in October 1975. Courtesy of the photographer.
with the bulldozer, which pushed some of the soil from the slope into the pond so as to enlarge the shallow-swimming area, and some of it to the southern, lower edge of the slope, in order to create a road for busses and ambulances. The Red Cross seems to have had something considerably more modest than this in mind when it communicated its request to the commissioners—namely, a truckload or two of sand to extend its swim-class beach.

Learning of the drastic alterations at Walden, the Thoreau Society, an international association of students and admirers of author Henry D. Thoreau, who had lived close to the shore of Walden in the 1840s, obtained an injunction to halt use of the saws and the bulldozer and then took the county commissioners to court. Three years later, on May 3, 1960, the state supreme court ruled that no more trees were to be cut, that no road was to be developed, that the soil removed from the slope had to be returned to its original location, and that trees must be planted to replace those that had been cut. The entire damaged area was to be returned to the "natural forest conditions of Emerson and Thoreau's day." (Descendants of Ralph Waldo Emerson had deeded Walden to the state of Massachusetts in 1922 with the stipulation that it be preserved as Emerson and Thoreau had known it. Middlesex County

View of the top of the denuded slope, looking westward. Nearly two hundred full-grown oaks and pines were cut down and tons of humus and topsoil pushed into the pond in a matter of two days. Photographed on August 11, 1957, by Roland Wells Robbins.
View toward the northeast along the western shore of Walden Pond, looking towards Thoreau's Cove, November 7, 1899. Photograph by Herbert Wendell Gleason. Courtesy of H. C. Conover and N. Mills.
assumed management of the new reservation. The County claimed that it had no money to carry out the court-ordered repairs. For the next twenty-two years, the damaged slope remained barren and exposed. Gullies developed and grew deeper by the year. In the meantime, people began visiting the reservation in far greater numbers than they had previously, compounding the damage.

Replanting the Damaged Slope

In 1979, I asked the state of Massachusetts, which in 1975 had taken over management of the Reservation from the County, for permission to repair the great bare gash above the beach. The state granted permission and, in the early spring of 1980, I began replanting the damaged slope with the help of four young people.

The slope, including the so-called "ambulance road," faces due south and is therefore fully exposed to the sun on clear summer days. It also bears the brunt of the prevailing westerly wind, which swoops down the full length of the pond and funnels up the open slope. The lack of vegetative cover, such as trees and shrubs, which would shield the slope from the force of the wind, and which would provide shade, results in stressful conditions comparable to those of a desert. Planting in such an environment would require careful planning, a fussy technique, and persistence—even to the point of con-

View of the same section of the western shore of Walden Pond, showing a footpath as it appeared in the late 1940s. Photograph by Roland Wells Robbins. Courtesy of the photographer.
The swimming beach at Walden. Photographed on May 30, 1903, by Herbert Wendell Gleason.

The swimming beach as it looked in 1948. This photograph, taken on July 11, 1948, by Roland Wells Robbins, shows the beach from the south, while Gleason’s view shows it from the west. The slope in the background was denuded of trees and bulldozed in 1957 to enlarge the beach.

View of the swimming beach at Walden, looking north toward the denuded slope. Photographed on August 11, 1957, by Roland Wells Robbins.
tinual replanting. When we started work on
the slope, only a few weeds, such as a wild
mustard, a few species of grass, and some
silvery cinquefoil (Potentilla argentea), grew
there. Some staghorn sumacs (Rhus typhina)
grew in one corner of the slope and, at the
other end, a white pine (Pinus strobus) or
two. In both areas, a horticultural variety of
juniper had been planted five years before
and, near the white pines, a cultivar of arbor
vitae (Thuja occidentalis).

The task would be complicated further
because, under the terms of the court order,
I could plant only trees or shrubs that had
made up the “natural forest conditions of
Emerson and Thoreau’s day.” This require-
ment limited the species I could use in
replanting. I could, however, use annuals and
weedy ground covers, whether native or
alien, because they would die out once the
trees formed a forest and cast too much shade
for them.

Adding significantly to the stresses that
the plants would have to endure were the
hundreds of thousands of people who were
visiting the Reservation each year. Children
on bicycles, horseback riders, visitors taking
shortcuts from and to the nearby state
highway, and sunbathers on blankets all pre-
vented even weeds from gaining a toehold on
the slope.

The plants I used, therefore, would not
impress the sophisticated horticulturist. I
selected them for their ability to withstand
harsh conditions and abuse, and for their his-
torical appropriateness when possible. Nor
were the techniques I used sophisticated.
The first major “technique,” or goal, was to
try to hold the soil in place with whatever
species could grow in it. Trees and grasses
proved best for this.

Holding the Soil in Place

Between the top of the damaged slope and a
higher, undamaged slope that extends to the

The footpath along the north shore of Walden Pond. It
leads from the swimming area to the site of Thoreau’s
hut (1845–1847). Photographed in 1948 by Roland
Wells Robbins.

Gladys B. Hosmer of the Thoreau Society and Alvan
G. Whitney, a forester from New York State, surveying
the same footpath in 1957. Photographed on August
10, 1957, by Roland Wells Robbins.

The same footpath in 1984, showing the continued
erosion of the banks. A boardwalk has been con-
structed in an effort to accommodate the thousands of
visitors who use the path every week. Photographed
on April 19, 1984, by Roland Wells Robbins.
state highway (Route 126) there is a flat, shady wooded area. The forty- to fifty-year-old trees in this area (mostly red oaks, white pines, and a few hickories and white oaks) had not been cut in 1957. They provided shade and had helped create some woodland soil. Yet by 1980, this area had been so trampled by the ever-increasing crowds of visitors that the ground was completely bare of vegetation. There was not a single tree seedling in the woodland; no understory of young trees was coming along, and no ground-level plants existed at all.

In this shaded area, I dug small, crude beds that I gradually filled with plants of native, shade-demanding species gleaned from other parts of the 400-acre reservation—Canada mayflower (Maianthemum canadense), pipsissewa (Chimaphila umbellata), early low blueberry (Vaccinium angustifolium), partridgeberry (Mitchella repens), checkerberry (Gaultheria procumbens), and many white pine (Pinus strobus) and red oak (Quercus rubra) seedlings. I covered the beds lightly with leaves, placing sticks on the leaves to keep them from blowing away. I was delighted that, even before a fence could be put up, people walked around rather than through the small mounds of leaves and sticks, sparing the vulnerable new transplants. By the end of the third year, when I had moved some of these plants onto it, the flat area became green from one end to the other, and the young white pines and red oaks were thriving.
Replanting the bare, damaged slope immediately above the beach has proven to be entirely another matter. In 1980, under the supervision of Roland W. Robbins, the well-known archaeologist, much of the original topsoil (which in 1957 had been moved to a turnaround on the "ambulance road") was put back on the slope with a bulldozer and backhoe. But the gullies had first been filled by the bulldozer with the gravel that originally had underlain the topsoil. Thus, more than two decades after the court ruling, the approximate original contours of the slope at Walden were back in place.

Once the contours had been more or less restored, my crew and I quickly planted perennial rye grass (Lolium perenne) to prevent the loose soil from eroding. We then covered the newly seeded slope with a layer of hay, over which we spread branches, to hold the hay in place. The next night there was a light shower, and in five days the green of the new grass began to show through the hay.

We then had to wait until the grass took hold before we could tuck in the sun-loving weeds that do best in such an environment. In front of the juniper cultivars and the Thuja we planted three- to four-foot-tall white pines. Though the junipers and the Thuja were horticultural varieties, I did not want to disturb them because their roots were deeply established, holding the soil in those spots; the pines eventually would shade them out, and the pines's roots would take over. Nor did we disturb a flowering crab at the east
end of the slope or a clump of flowering cherries at the edge of the ambulance road, all of which had been planted as nursery stock in 1975. They, too, will eventually die out; for the present, their roots serve to hold the soil.

Harsh conditions and trampling were not the only problems with which I had to contend. Sometimes it proved impossible to obtain the healthy nursery stock I needed. At one point, for example, I ordered twenty-five five-foot-tall red oaks that I planned to set out in groups of five in the middle of the slope and along the ambulance road, in order to create patches of shade for the native woodland ground-cover plants I intended to transplant there. What arrived were eight oaks, ten feet tall, which had only a few tufts of leaves remaining at their tops. They had sat unwatered at a nursery for a full month, and, though we immediately set up a bucket brigade to water them daily from the pond, all but three died the first winter—a record-cold and very windy winter. It was a merciless environment for them.

The "Ambulance Road"

Having failed in our attempt to plant the oaks as originally planned, we had to settle for using the same ground species on the ambulance road that we had used on the damaged slope. Again, we planted grass and then transplanted the same pioneer weeds we had used on the slope—red clover (Trifolium pratense), common cinquefoil (Potentilla simplex), silvery cinquefoil (P. argentea),

*The restored slope with a layer of hay, which was spread to protect the just-sown perennial rye grass (Lolium perenne). The green of the grass began to show through the hay within a matter of days. Photographed in June 1980 by Roland Wells Robbins.*
creeping lady’s sorrel (Oxalis corniculata), yarrow (Achillea millefolium), oxeye daisy (Chrysanthemum leucanthemum), and pussytoes (Antennaria neglecta). We even gathered tough clumps of grass from the Reservation’s parking lot and spot-planted them over both the upper and lower slopes.

We then moved the transplanted oak and pine seedlings from the beds in the flat, wooded area out onto the slope, planting them among the grasses and the weeds. I realized that, though the slope was loose gravel, their roots would have difficulty reaching the deep water table, or even capillary water. The oaks, with their long taproots, would have a better chance than the shallow-rooted pines. We mulched all of the seedlings with oak leaves and pine needles, which we had stockpiled on the flat. To prevent the mulch from blowing away, we placed small stones on it. Later, when wood chips became available, we added some to the mulch.

The second season, a crew of Reservation workers chopped two dozen white pine trees out of the frozen ground at the far end of the Reservation. These were planted, their roots in balls of ice, in two staggered rows, up the sides of the ambulance road. Most have survived, though during their second growing season gypsy moth caterpillars almost denuded them. They since have recovered and will, in time, provide the shade we had hoped the nursery-grown red oaks would provide. During the first two years, we transplanted many oak and pine seedlings on the ambulance road and on the slope; during the second year we planted countless Quercus rubra acorns.

On the beach side of the lower portion of the ambulance road was a cluster of staghorn sumac. We carefully avoided stepping on sprouts from this cluster that had come up in the roadway. The gullied slopes from the ambulance road down to the beach proved very difficult to control because young people persisted in vaulting the fence and clambering up and down the slope. We did succeed in planting a few native junipers (Juniperus communis) on the slope, as well as the same weed species and clumps of grass we had put elsewhere. Some spots on these slopes required three plantings because of the damage people caused. One slope beyond the beach area was damaged again, all of the plants on it having slid to the bottom by the time the winter of 1984 set in, children having broken the fence down. Thus, repair of this area must be a continuous process for a while. On the slope across the ambulance road from the stand of sumac there is a colony of sweetfern (Comptonia peregrina), a plant that holds the soil in place very well. We hope it will spread, now that people are being kept out of the area, for at last they have accepted the temporary snow fence.

Along much of the upper, eastern, edge of
the damaged slope above the beach, there is a stand of gray dogwood (*Cornus racemosa*) shrubs. When the backhoe was being used in 1980 to return the moved gravel to its original position, we had to move some of the shrubs because they were growing in the displaced gravel of the slope. We kept them in a temporary ditch, watering them well until we could gradually transplant them onto the ambulance road.

Across the bottom of the damaged slope, just above the beach, we planted a row of gray birches (*Betula populifolia*) and, behind it, staggered red oaks, our intention being to link the existing woods at either end of the damaged slopes. The birches, favoring open, hot sun, will grow faster than the oaks and will provide shade for the oaks, which when young do not do well in open locations. Being short-lived, the birches will have died out by the time the oaks are ready to stand on their own.

Progress and Setback: The Prospect of Success

Over the last six years we have experienced many setbacks in our rehabilitation work at Walden. For example, a large wild grapevine, the riverbank grape (*Vitis riparia*), had grown for many years at the foot of the ambulance road, near the bottom of the damaged slope. While we were working on the slope we kept the grape’s runners carefully tucked out of harm’s way. When the work there was completed, we spread the runners out onto the road, weighting their root-forming nodes against the soil with stones. By the fall of 1983, the grape was spreading over a wide area. The following year, this encouraging situation changed for the worse.

The level of water in Walden Pond, which is a groundwater lake (it has no inlet or outlet), fluctuates in an approximately thirty-year cycle. In 1984, the water was so high that it covered, to a level of two feet or more, the beach, the row of birches, and the oak seedlings in back of the birches. In response to the high water, the administration opened a path down the ambulance road, rather than asking visitors to use another, existing path to reach the site of Thoreau’s cabin. Within a week, everything we had planted on the lower portion of the ambulance road had been ground to dust. Not a single young oak or pine was left standing. The wild-grape runners were crushed dead—proof that people must be kept off wooded slopes in the Reservation. Nature is simply too fragile to endure such pummeling. Fortunately, now that the water has receded, permission has been given to close the path and to replant it in 1986. Vegetation now completely covers the once-gullied slope and the flat area above it.

Every spring, groups such as Friends of Walden, Walden Forever Wild, and, on Arbor Day, scouts and school children, plant a few more trees on the slope. It will take years for the trees to reach maturity, but in time the

*Figure 1: Walter Bream transplants a young pitch pine. Photograph by Lois Clark and Roslyn McNish.*
terrain that the County denuded of trees nearly thirty years ago will be covered with trees, restoring shade, coolness, and beauty to the beach area.

Note
Readers interested in further information about the situation at Walden Pond will find a useful overview and legal analysis in a recently completed study by David E. Rabinowitz, a student in the Harvard Law School. Entitled The Abuse of a Public Trust: A Case History of Walden Pond, the 67-page typescript report is available for $10.00 (prepaid) from: Walden Forever Wild, Post Office Box 275, Concord, Massachusetts 01742-0002.

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Mary P. Sherwood founded the Thoreau Lyceum in Concord, Massachusetts, and Walden Forever Wild, an organization dedicated to rehabilitating and protecting the shore of Walden Pond. For the past several years she has coordinated the revegetation of eroded and denuded areas around the pond.

Walden’s most critical problem is overuse, which is manifested in the physical deterioration of all areas adjacent to the pond edge. Most evident is the erosion of the sandy soil and vegetative cover flanking the main pond path. This erosion is due largely to the behavior patterns of Walden’s many visitors—random trampling of the shrubs and ground covers which stabilize and protect the soil in which they grow, random creation of footpaths, which results in loss of vegetation, and establishment of destructive stormwater drainage channels.

Efforts to limit the number of visitors have had limited success, and use of the reservation remains at a high level—700,000 users counted in 1983 (this figure is based on cars parked in authorized parking areas and does not include illegally parked cars or walk-in users).

The very noticeable erosion problem is the cause of a less easily perceived problem—the siltation of the pond and, ultimately, its eutrophication. Despite the pond’s high water quality and substantial depth, there is reason to be concerned over the increasing rate of material deposition within the pond.

Bank erosion at Walden Pond is not a new problem. For more than two decades there has been concern largely over the integrity of the pond path, and more recently over the loss of plants and soil. Various treatments have been applied, beginning with timber cribwalls, followed by rock embankments, and finally a small section of wood plank boardwalk. These treatments have solely addressed the issues related to path integrity—i.e., public safety—and to that end have served well. However, the most obvious deficiency of past efforts is the lack of concern for aesthetic quality. Their negative impact upon the visual character of the pond environment is striking even to the casual observer. The conglomeration of man-made elements, and the severe erosion problem combine to create a physical reality which is incongruous with the image of Walden the public has held since Thoreau’s time.