



## River of Change

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The Deerfield River we see today is, in many ways, a waterway very similar to the one that drew the first settlers to its shores in 1669, where they founded Deerfield on a terrace just out of reach of the floodwaters of spring. We still see steam rise from the black surface on bitter winter days, coating every adjacent rock and root with hoar frost. In the heat of summer, mist still peels back to its shores at dawn, revealing a stream that looks placid and green. Spring rains still cause the river to boil through narrow upstream passages in a tumult of brown water and foam. And in autumn the colors continue to multiply, gold and orange and red reflected back to the trees, or collected in the layers of leaves themselves, caught in pools and strainers after fluttering down banks.

In other ways, however, it is a far different river from the one that provided good drinking water for both people and livestock, stop-over areas for migrating swans, and such heavy runs

of anadromous fish in the spring that native peoples converged at specific falls along its shores, maintaining a truce while the harvest was on and swapping tools and tales when not otherwise occupied gutting and drying fish. Most significantly, today's river is no longer one of extremes. Since the dam creating the Harriman Reservoir was completed in 1924, the river no longer runs dry in drought times, nor has it caused anywhere near the ruin experienced in adjoining watersheds, particularly during the devastating floods of 1926 and 1938. Today the Deerfield's highs and lows are controlled by an intricate system of dams and hydroelectric generating stations, fluctuations determined more by the market price for electricity than by the amount of melting snow or falling rain. And though the river is, once again, clean enough for swimming and host once more to the shad that spawn just below the confluence with the Connecticut—large bodies roiling the waters on a late May or June night—the intervening three-hundred-plus years include a history as murky and turbulent as the river's seasonal flow.

As with so many elements of nature—sun, wind, rain, insects—the river was seen as both boon and bane to the first inhabitants of the town of Deerfield. The width and depth of the river made travel and transport relatively easy (the Connecticut River was only four and a half miles down-stream, providing access to river towns and seaports further south), and the waters were rich sources of edible

fish and fowl. Yet its very existence made access difficult to the town's northern acreage, which originally extended all the way to the Leyden Hills (land now owned by the town of Greenfield), and friction persisted between the two communities over who would be allowed to build a bridge and collect tolls, and whose wharves would receive the best traffic in goods. Ultimately, Greenfield was the beneficiary in two of those disputes: The river became the dividing line between the towns, and the docks on the northern bank, due to the river's current and curve, proved much easier for boats to use. Iron, tea, crockery, rum, beaver hats, cigars and bolts of cloth were off-loaded on the Greenfield side, and such local products as wheat, rye, beef, lumber, potash and hard cider were then shipped downstream. A Deerfield man was awarded the bridge contract, however, erecting a span across the river near where a scow had once crossed along a wire cable. His tolls in 1798 ranged from 2¢ per foot passenger and 6¢ per horse and rider, to 25¢ for a coach or other four-wheeled conveyance.

Where there was little dissension with regard to the river, at least throughout the nineteenth century, was in the watershed's northern half, along the vertical stem of the river's "L"-shaped seventy-mile length. At its top, about seven miles west of the town of West Wardsboro, Vermont, underground springs percolate through a dense spruce and fir forest and into a quiet pond, created by a beaver sometime in the last decade.



In these dark headwaters, wood duck raise young, moose wander the shore, and other large mammals—deer, bear, coyote, bobcat and fisher—can all be found in increasing numbers in the surrounding Green Mountain National Forest. From here, the pond leaks into a narrow brook, which twists and falls over rounded, moss-covered rocks, building slowly in size as it wends its way southward past the towns of Wilmington, Readsboro, Monroe, Charlemont, and Shelburne before it joins the Connecticut River a few miles northeast of Old Deerfield.

Where it enters Massachusetts, the Deerfield has carved a valley through some of the most craggy of all the state's lands, with slopes so steep that old-growth forests can still be found, growing well out of reach of loggers' axes and saws. Some of the best whitewater in the northeast is found here as well, just below the site of the third nuclear power plant to be built in the U.S., which generated electricity for 31 years.



The Deerfield's rugged river valley and equally rugged inhabitants elicited a lengthy description from Henry David Thoreau, when he visited in the mid-1800s ("Luke Rice in Florida"). Nathaniel Hawthorne was also much taken by the startling beauty, which he discovered in a journey undertaken in 1838: "[P]eaks a thousand or two feet high rush up on either side of the river," he notes in *The American Notebooks*. "[T]hey are almost precipitous, clothed in woods, through which the naked rock thrusts itself forth to view. I have never ridden through such romantic scenery." The eastward turn of the river delighted him as well, and he was much taken by the rock formations in Charlemont and by the potholes in Shelburne Falls. "At present," he writes of the latter, "the river rages and roars through a channel which it has worn in the rock, leaping down in two or three distinct falls, and rushing downward, as from flight to flight of a broken and irregular staircase. The mist rises from the highest of these cataracts, and forms a pleasant object in the sunshine. The best view, I think, is to stand on the verge of the upper and largest fall, and look down through the whole rapid descent of the river, as it hurries foaming downward through its rock-worn path—the

rocks seeming to have been hewn away, as when mortals make a road." He described the famed "potholes" as "circular hollows in the rock, where for ages stones have been whirled round and round by the eddies of the water; so that the interior of the pot is as circular and as smooth as it could have been made by art." The lodgings in the town, however, didn't match the aesthetics of the scene. "The tavern at Shelburne Falls was about the worst I ever saw."

Ten years after Hawthorne's journey, a more favorable aspect of the town was being pitched to state legislators and would-be financial backers, as part of the grandly optimistic scheme of one Alvah Crocker, a paper manufacturer from Fitchburg who would soon invest all his capital into advancing a rail line. The Deerfield valley was ideal, he believed, for a railroad that could connect Boston with Albany, with that one major obstacle—the Berkshire mountain range—easily penetrated by a four-mile tunnel. The river's power was already well known—by the 1870 census, 110 water-powered mills or mill sites were noted on the river or its tributaries—but Crocker touted an even greater potential. "The valley of the Deerfield affords sites for factories [at] intervals of half a mile," he insisted. "And Shelburne Falls alone furnishes water-power sufficient for ten or twelve manufacturing establishments of the largest class." The flood of 1869 hadn't yet occurred at the time Crocker made this claim, when raging waters swept away the

Lamson and Goodnow buildings on the banks of the river in Shelburne Falls, along with the bridge directly upstream, and the cotton mills in nearby Shattuckville and Griswoldville, each operating over 100 looms.

But in the 1850s, and despite the odds and the expense, Crocker infected enough backers with his enthusiasm for the Greenfield & Troy Railroad that by 1851 the Hoosac Tunnel was underway, designed to go through Hoosac Mountain at the crook of the river's "L." Hopes ran especially high that a fabulous new, 100-ton stone-cutting machine would bore right through the mountain of rock, but after it cut about twelve feet into the hillside—convincing cheering bystanders that the project would take but two years—it suddenly froze, never to move again. The tunnel would have to be dug with drills, black powder, and, eventually nitroglycerine (created on-site at "The Acid House"); and the legislature would have to be convinced to underwrite the project. Both events succeeded, and the "Great Bore" went on, despite floods and explosions, freezing temperatures and maimings, and deaths—195 of them—due to crushing and suffocation. For 22 years, miners and their families lived in company houses built alongside the Deerfield, in a village complete with a company store, a church, a school, and a blacksmith shop.

Today this area, near the oddly-named town of Florida, is completely wooded, with but a few foundations still visible through the trees. Remnants of an old powerhouse can be seen, as, for a short while, water power was used to run the compressor that ran the drills that bored the stone. To channel water from the river, a dam was built across the Deerfield about a mile above

the East Portal, and a canal was dug to divert that upstream water to a powerhouse. There, falling water spun the turbines that ran the first pneumatic jackhammers. But at this point in the river's history, the waterway often ran dry, either emptied by summer drought or jammed by the canal ice of winter, and some days no water reached the turbines. The project couldn't be slowed for such a reason, not with 900 men working around the clock, in three shifts of eight-hours each. Steam-powered compressors had to be brought in to replace those run by river water, and the tunnel slowly lengthened, with men chipping away at the stone from both ends. When the two tunnels finally met, in 1873, the degree of error consisted of an amazing one-and-a-half inches.



The spectacular success of this growing network of rail lines contributed to the lackluster success of much local industry (and each was then eclipsed by the even grander construction of the systems of canals and locks further west). More efficient factories were producing less expensive goods elsewhere, and finding cheaper ways to get those goods to

market. The small and demanding water-powered mills alongside the Deerfield's banks could not compete when the river's flow was inconsistent, labor was often scarce and travel between home and mill was often arduous. By the early 1900s, many of the mills had been abandoned, their dams left to crumble into the spring torrents. The scene was set for the usurpation of the river by two men with a vision as big as Alvah Crocker's.

Malcolm Chace and Henry Harriman—their names still said with awe by engineers working today on the Deerfield— saw the potential for an intricate network of dams, creating a continuous source of reliable hydropower. When seen as one large unit, the features of the watershed were greatly attractive. The annual rainfall amounts are some of the highest in the northeast, the steep terrain means a higher-than-average force of water (the Deerfield drops 2200' before reaching the Connecticut, compared to the same drop for the Connecticut's entire 410-mile length), and the small communities in the area posed little resistance to a corporation's claiming of land. The men established Chace & Harriman, Inc., in 1903, with the goal of supplying electricity to New England's burgeoning industry, though the brilliance of their plan and the efficiency of their distribution system meant that homeowners were soon clamoring for access to this new power as well.

Their first major project in New England, in 1907, involved completing the Vernon Dam on the Connecticut River, which raised the river thirty feet and flooded all or part of 150 farms. Dam after dam followed on the Deerfield, as more land was acquired and electricity became

more profitable. The last piece of their ambitious project was the creation of Harriman Reservoir in southern Vermont, which is now the largest lake contained wholly within the state. Before the valley could be submerged, however, the company had to purchase the four hundred farms occupying it. For apparently few compromises—the loss of some agricultural land, the elimination of a few jobs—a greater good was achieved, in that downstream homes and facilities would be protected from damaging high waters (the reservoir contained the floods of 1928 and 1933, which killed hundreds of people elsewhere in the state), and clean and affordable electricity would be generated almost daily.

It was a worthwhile trade-off—or so most people believed.



Today, it strikes many as absurd to think that a few individuals could acquire absolute control over a river. After all, loggers have to pay to cut trees on state or national forest land; ranchers have to lease grazing rights; and similar cash exchanges happen when companies drill for natural gas or oil on land entrusted to the

government's protection. Yet control of this waterway was surrendered long before Malcolm Chace and Henry Harriman devised their grand plan. Relinquishing the river began over a century earlier, in an attitude toward local resources that can be traced to Old Deerfield.

When the first colonists began building their homes along Deerfield's Main Street, their relationship to the land and water around them was quite similar to that of the small band of Puritans who had landed in Plymouth in 1630. Knowing that he and his shipmates would succeed only if they protected and doled out their resources collectively, Governor Winthrop admonished them to "enter into a covenant... to be knit together in this work as one man... for the supply of others' necessities."

Four decades later, the small flock that traveled to the fertile meadows adjoining the Deerfield knew theirs had to be a communal village, not only to prove that they were truly God's chosen people, but because their physical survival depended on everybody having equal access to food and water and fuel. The town's lay-out inscribed that orientation—a cluster of homes along a main street, surrounded by fields and woodlots held in common. The river that flowed past the shared pasturage was there for everyone to use—a means of travel, a way to water cattle, a place to fish and hunt for geese and ducks, and a natural fertilizer of the meadows each spring.

The planners of Conway—most of whom lived in Deerfield and knew the pros and cons of shared existence— abandoned the model of a nuclear village encircled by common meadowland. They drew rectangles and squares

instead, dividing land into discrete farmsteads. No longer were farmers dependent on their neighbors for such seasonal chores as haying or harvesting. If a family had enough able bodies or could hire extra help, if they could raise or craft more than they needed, if they could transport that surplus to market without undue expense—potatoes, flax, sheep, corn, cattle, pigs, shingles—then their wealth was their own, their chances of getting ahead in this New World more clearly within their individual control. Land was no longer a common resource; nor, as it would soon appear, was water.

Rivers were being regarded as they had been in England, as an inexpensive way to power mills; too soon they would also be relegated to serving as civilization's waste streams.

Thirty years ago, I paddled a canoe the length of the Connecticut River, from its headwaters near the New Hampshire-Canada border down to Old Saybrook, Connecticut. It was a splendid journey through land that, for the most part, seemed lovely and wild, though there was that stretch below the paper mill in Groveton, where fish floated belly-up for miles downstream. And there were those awful miles further south, where factories turned the river sickening colors, and streams of sludge and dyed foams entered the water without regard to who lived or worked or planted downstream. "Too thick to drink, too thin to walk on," occurred to me more than once, and

afterward I was extra careful about where to pull out for the night. What took me longer to realize was that I saw scarcely anyone enjoying the river's edge, though it was late May and then early June, beautiful days to be fishing or wading or picnicking by this broad waterway.

It took me almost as long to realize that, whenever I stopped for supplies or a meal, I had to approach the town's marketplace via the rear entrance, the boat ramp down by the brush heap, the dirt road next to the sewer pipe, the path by the pile of uncollected trash. People everywhere had turned their backs to the river—their homes and businesses all faced away, in the direction of opportunity and easier means of travel. Nothing at the time could turn them back toward its shores.

Thirty years later, with the effects of the Clean Water Act permeating every aspect of the watershed, home owners are trying to figure out how to swivel their houses to face the clean running water, and real estate with river frontage has a whole new price and appeal.

When I recently returned to the river for the first time in years, I was astonished at how clean the water was and how far I could see into its depths— mussel beds, mergansers, and trout easy to distinguish by their spots and tail shapes. Bald eagles floated overhead, osprey whistled in the distance, and herons waded midstride as I passed.

Before federally-enforced changes in the treatment of water, what had happened to the Connecticut had happened to the Deerfield as well. And nowhere is that better documented than in the *WPA Guide to Sources of Domestic Pollution*, a compilation of data gathered in the 1930s, when the country was locked in the Great

Depression and nearly thirteen million people were without work.

One of FDR's responses to the crisis was the formation of the Works Progress Administration, and contained within that department was the Federal Writers Project, formed in 1935 to present to the American people "a portrait of America"—a task W. H. Auden called "one of the noblest and most absurd undertakings ever attempted by any state."

The WPA writers and researchers set forth from central offices across the country, collecting facts, gathering stories, and creating narratives that portrayed a multi-faceted, Whitmanesque America of quarry workers, prostitutes, clam diggers, and former slaves. They knocked on doors all over the U.S., taking photographs and generating reams of manuscript pages. A byproduct of the project was the American Guide Series, compendiums created for most states and many major cities, highlighting a region's history, architecture, and music, as well as its landscape and industry, its religions, its tensions, its racial composition.

In Massachusetts, the WPA also undertook to assess every watershed in the state for sources of domestic and industrial pollution—a bold and forward-thinking project when few had the means or the vision to consider a land or water ethic. With the help of biologists and engineers, a team of WPA workers began the disagreeable task of counting drains and sewer pipes, noting how much waste each emptied into the nearest stream. What they

discovered about the Deerfield was that house after house spilled raw sewage directly into the river.

In Charlemont, 50 tiles or drain pipes emptied into the waterway; in Buckland, 43; in Shelburne, 36. Some tiles served just one house; some served several. Larger pipes conveyed grinding sludge from the cutlery and bleaching wastes from the paper factories. Other pipes drained out of stores, the laundry, the garages, and the few restaurants. They ranged in width from two inches to 18, and ended at varying distances from the river—just above it, at the edge, five feet away, 50. Some were designed to blend with the river at a dam, a tailrace, or the overflow of a culvert. Most, however, simply dumped excrement on the banks, a scene the WPA writers found increasingly loathsome, particularly as they traipsed from river to river across the Commonwealth.

The conclusion to the study of the Deerfield River has the strained appeal of people who have had to pick their way over far too many stained riverbanks. "While domestic pollution has not reached the disgraceful condition of many of the other streams within the Commonwealth, it may be said that sewage is discharged promiscuously along the banks of the stream in such manner in some locations that a misstep may take the pleasure away from an otherwise enjoyable fishing trip." They reiterate the area's beauty, calling it "one of the commonwealth's greatest assets," and stress the need for legislation to end such discharge into the watershed: "If this report engenders such action its purpose will have been accomplished... The time has come to protect this historical and recreational stream and its tributaries from the

indecent and unsanitary conditions that too often follow human habitation."

Given this practice of discharging waste, it is no wonder that residents turned their backs to the river, no wonder they built windowless walls on any section of house that overlooked water, no wonder they threw tires and appliances down the more rural banks. The river had become a means of flushing away all they didn't want, and it would take four more decades, a fast-growing environmental movement, and enough federal muscle behind the Clean Water Act of 1972 to effect a radical shift in our attitudes toward water.



Today, the Deerfield River is one of the cleanest and coldest in the state. Its stocked waters have given it the reputation over the last few years as one of the best trout fishing streams in New England. Whether hiking, cross-country skiing or snowshoeing alongside it, or wading or fishing or canoeing its waters, the ways to enjoy the watershed are myriad. The popular Zoar Gap picnic area, just off River Road in Charlemont, is a wonderful place to observe the river; so are the rocks just below the old cemetery at the Mohawk

Trail's Shunpike Rest Area. From there, it's not uncommon to see a flock of Canada geese give way to a flotilla of canoes, and a pair of beaver surface right after they leave. Meditative moments can also be had amongst the scents and colors of the Bridge of Flowers in Shelburne Falls, or along the meandering River Walk, which departs from Old Deerfield's Main Street and soon curves close to the river under old cottonwoods and sycamores. Wherever one begins with an exploration of the Deerfield, a rich history will be found, telling us as much about ourselves as about the journey of these waters that have been carving out this valley for over 10,000 years.