

# “A Very Pleasant Place to Build a Towne On”: An Environmental History of Land Preservation in New York’s Hudson Highlands

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Today when motorists drive over the Bear Mountain Bridge, located in the heart of New York’s Hudson Highlands, they are often struck not only by the structure’s streamlined girders and rustic stone tollbooth but also by the scenic view that encompasses an unusual abundance of forest-covered hills on either side of the Hudson River. To the west sits a well-known patch of woodland called Bear Mountain State Park, and beyond it the Harriman section of the Palisades Interstate Park. Eastward lies the bulbous protrusion called Anthony’s Nose, also cloaked in trees, and to the north drivers can spy Storm King Mountain, which during the 1960s barely escaped development into a water-storage hydroelectric plant by Consolidated Edison. Upriver just past the West Point Military Academy, those crossing the bridge at Bear Mountain can also pick out another tuft of protected land called Black Rock Forest Preserve, an experimental forest located in Cornwall, New York (Figure 1).

Although less well-known than its downriver counterparts, Black Rock Forest has a similar history. During the late nineteenth century it too was part of a Hudson River estate owned by a wealthy industrial family. As with Bear Mountain, the Harriman section of the Palisades Interstate Park, and Anthony’s Nose, Black Rock Forest was also preserved during the early 1900s when its owner decided to remove the land from potential commercial development. And finally, each of these green swaths lining the shores of the Hudson River today host millions of outdoor recreationists annually.

The protected lands of the Hudson Highlands share a history primarily because they share an environment. Recently, historians have become increasingly interested in such links between human and natural history. Much as other scholars study the influence of workers, women, or African Americans on the history of a specific place, such as a plantation in ante-bellum Virginia or a factory in industrial New York, environmental historians focus on the interrelationship between

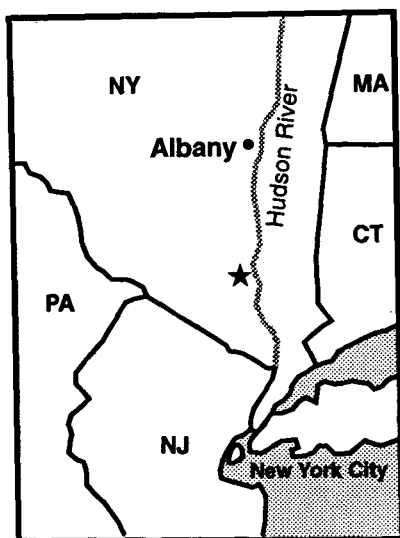


Figure 1. Location Map, Black Rock Forest, Cornwall, NY

the natural world and the human inhabitants of a region over time. Such a relationship, it is believed, is reciprocal, with the environment shaping society which in turn reshapes nature.<sup>1</sup>

This essay will trace such relationships by examining the environmental history of the Black Rock Forest Preserve, one of the protected lands of the Hudson Highland region. It will probe much deeper into the past than the Progressive Era, when wealthy philanthropists protected much of the region, and examine the actions not only of wealthy industrialists but of farmers and woodsmen living in the Hudson Highlands as well. It will argue that only by examining the evolving relationship between all of these people and their land, can we begin to truly understand the historic significance of the breathtaking view seen today by millions of drivers motoring across the Hudson Highlands' Bear Mountain Bridge.

## Hudson Highland Geology and Colonial Land Use

When in 1609 Henry Hudson became the first European to sail up the river that would eventually bear his name, he anchored his ship, the *Half Moon*, near what is today the village of Cornwall-on-Hudson. It was here, while looking out over the flat tableland along the western bank of the river, that Hudson's diarist,

Robert Juet, praised the land as “a very pleasant place to build a Towne on.”<sup>2</sup> In many respects Juet’s assessment was correct. The Highland terrace along the river was endowed with numerous natural meadows and a fertile soil so conducive to farming that the first settler arrived in 1684, a mere seventy-five years after the diarist first described it. Others quickly followed, with Dutch, English, and Scotch immigrants predominating. In March of 1788 these newly independent patriots followed the diarist’s suggestion and incorporated a town, calling it Cornwall.<sup>3</sup>

While historians have often cited Juet when writing the colonial history of Cornwall, his observations failed to accurately reflect the situation one mile farther inland, where the mountains of Black Rock Forest rise up with the rest of the Hudson Highlands from the tableland along the riverbank. Here different geological forces were at work, ones that would lead to different settlement patterns and unique land-use practices that would greatly influence the future of the region and help to preserve much of it.

According to most recent theories, the Hudson Highlands were uplifted along with the entire Appalachian chain during the Precambrian Era, when two tectonic plates underlying the Atlantic Ocean and the North American mainland gradually collided. As a result, Black Rock Forest contains steep-sided valleys running northeast to southwest and mountains such as Spy Rock whose elevation reaches 1,461 feet on its summit.<sup>4</sup> The same geological forces, along with subsequent glaciation, left the Highlands covered with a thin layer of rock-strewn soil which supported a forest dominated by oak.

Due to its precipitous topography and poor soils, colonists settled the Hudson Highlands at a later date than the riverfront area described by Juet from the deck of the *Half Moon*. Furthermore, those who did settle near Black Rock during the colonial period found it difficult to farm and nearly impossible to rely solely on single-crop agriculture, as did New Yorkers in other areas of the state.<sup>5</sup> Instead, these hardy mountain folk developed their own relationship to the local environment, one which resulted in a diversified economy based on agriculture, lumbering, dairying, fruit growing, and at a later date, tourism. As Black Rock forester Henry Tryon explained in 1930, “it was a community where agriculture and dairying went hand in hand with the exploitation of various minor forest products.”<sup>6</sup>

## Agricultural Evolution in the Hudson Highlands

If a farmer living in what would become Black Rock Forest fell asleep in 1790 only to re-awaken in 1840, he, like Washington Irving’s Rip Van Winkle, would

be shocked by what he saw. Instead of the garden plots and small fields of corn and grain so central to his subsistence way of life, this sleepy-eyed farmer would see an unfamiliar landscape dominated by apple and pear orchards and large fields of hay. Moreover, he would have snoozed right through an interim phase in this agricultural shift, occurring between 1790 and 1825, when his fellow Hudson Valley farmers were busy plowing under their garden plots and small fields of corn and expanding their acreage in wheat. Thus upon awakening in 1840 this nap-happy agriculturalist would have completely missed the three-staged evolution in farming practices that had occurred throughout the Hudson Highlands during the previous fifty years (Figure 2).

### ***Pioneering and Subsistence Agriculture: Pre-1790***

Throughout its history, the land that would become Black Rock Forest Preserve was never extensively cultivated; farmers cleared only 270 acres, or approximately 7.5 percent, of the preserve's forest throughout its history.<sup>7</sup> This was due primarily to the Forest's poor soil and steep topography, both of which limited the amount of land within the Forest that could be cleared and placed under the plow. As Black Rock forester Hugh Raup explained in 1938, "the nature of the soil has determined the general pattern of land utilization and has permitted only small areas to be used for agriculture."<sup>8</sup>

Along with its quality, the soil's location within the Forest also shaped farming patterns, as it did throughout the Hudson Highlands. According to Black Rock scientists, "the good, black soils are generally limited to the valley bottoms and coves."<sup>9</sup> The most intensively farmed regions within the Forest are therefore located between Black Rock's mountains and in flat areas along old valley roads.

While the acreage under the plow within Black Rock always remained small, farming in the region was even less widespread before 1790 than in later years. This was not only due to the fact that Highland population levels were lower during this earlier period, but also because of the type of farming being practiced. While there is little information describing agricultural techniques on farms within the Forest itself, historical evidence concerning homesteads throughout the Hudson Highlands provides a convincing portrait of colonial land-use practices within Black Rock.<sup>10</sup>

According to a number of local studies, most colonial farmers in the Hudson Highland region adhered to some form of subsistence agriculture. In his detailed analysis of pre-Revolutionary farms throughout the Hudson Valley, historian David Cohen argued that land similar to that found within Black Rock Forest was culti-

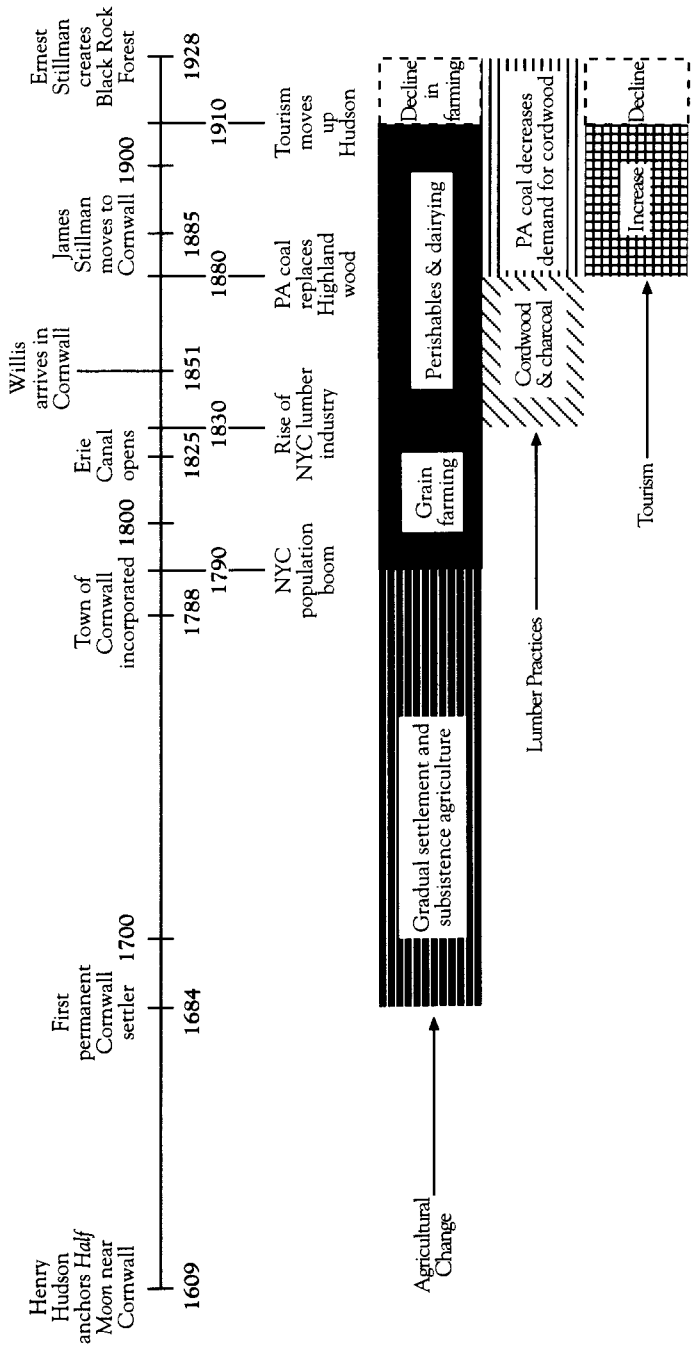


Figure 2. Time-Line of Land Use in Black Rock Forest Region. 1609–1928

vated on a small scale with a wide variety of crops. Most settlers maintained garden plots in which they grew snow peas, maize, pumpkins, squash and tobacco for home consumption. They also cultivated small fields of rye, wheat and barley in order to feed themselves and their domesticated animals, and grew flax and hemp to make clothing and rope. Preserving enabled these families to consume nearly the entire crop of vegetables and fruit throughout the year.<sup>11</sup>

Thus, prior to 1790 the few permanent residents within what is today Black Rock Forest practiced a mixed form of subsistence agriculture on a limited number of acres. During the 1790s, however, this form of farming slowly gave way to a more commercial form of agriculture as demand for foodstuffs increased both in Europe and in the booming metropolis at the mouth of the Hudson River.

### *Cash-Crop Grain Farming: 1790–1825*

Whereas during the colonial period the Hudson Valley was sprinkled primarily with subsistence farms, by 1800 it and the Mohawk Valley had become the “breadbasket of the nation.” While this new emphasis on grain production was especially pronounced in Orange County, where Black Rock Forest is located, it should not be thought of as a dramatic shift when farmers suddenly stopped growing a diverse range of crops for home consumption and began cultivating cash-crop surpluses for the commercial market.<sup>12</sup> Instead, as David Cohen wrote of the farms along the post-Revolutionary Hudson River, “it is probably more useful to think in terms of relative percentages of subsistence and commercial agriculture, rather than subsistence versus commercial agriculture.”<sup>13</sup>

The causes of this shift in agricultural practices were part of an overall economic and demographic transformation that affected the entire Northeast during the half-century after 1790. The impetus for this change originated in Europe, where the economic disruptions of the Napoleonic Wars further aggravated what had already become a chronic food shortage. As European demand for American foodstuffs increased, so did prices for such commodities. Sensing a rare economic opportunity, farmers in New York’s Orange County began growing cereals and transporting them overland to nearby Newburgh, New York, which due to its location on the Hudson’s western shore quickly became a center for the collection and reshipment of local grains.<sup>14</sup>

Along with events in Europe, New York City was undergoing dramatic demographic changes that also encouraged this shift in the Highlands to a more

commercial form of agriculture. Between 1790 and 1820 the population of New York's urban area increased by more than 100,000, helping propel the metropolis to the pre-eminent position it would thereafter maintain over rival cities such as Boston and Philadelphia.<sup>15</sup> This population boom had obvious implications for upriver farmers, who responded by planting more acres with grain. Farmers in the Hudson Highlands, for example, began supplying the city with wheat and buckwheat for bread, with rye for whiskey and barley for beer, and even with oats as provender for livery horses. Along with these demographic changes, New York City at this time was also becoming the nation's commercial grain market, buying up cereals from its hinterland in the Hudson and Mohawk valleys and shipping them to points along the eastern seaboard and inland as well.<sup>16</sup> Farmers in what became the Black Rock Forest Preserve undoubtedly responded by increasing their acreage in grains.

While farmers already living in the Hudson Highlands expanded their cultivated holdings, newcomers to the region also began clearing forested land in order to capitalize on the booming grain market. Between 1790 and 1820 the population of the Hudson Valley skyrocketed, increasing by more than 150,000 inhabitants.<sup>17</sup> As good agricultural land became scarce, farmers like those in the Black Rock region did everything in their power to increase the output from their parcels already under cultivation. For instance, to make their fields more productive many Highland farmers began using more efficient plow animals. "The substitution of the horse for the ox in the first half of the nineteenth century was the beginning of commercial agriculture," wrote Ulysses Hedrick in his seminal work, *A History of Agriculture in the State of New York*. According to Hedrick, the horse was four times more efficient at plowing than the slower, lumbering ox. "It was the substitution of the horse for the ox that enabled American farmers to expand their operations and to subdue the vast expanse of the country's farmland."<sup>18</sup>

Between 1790 and 1825, then, farmers in the Black Rock region not only expanded the number of acres cultivated, but also came to rely on a less diverse array of crops. In many ways this shift towards commercial grain production represented the most economically rewarding period for Highland farmers. "Agricultural use of land was at its most extensive development . . . between 1815 and 1830," write ecologists Stephen Spurr and Burton Barnes. "Throughout the entire eastern seaboard, most upland sites were cleared and were farmed."<sup>19</sup> This boomtime was nevertheless short lived. The opening of the Erie Canal would soon initiate a long and steady decline in farming throughout the Hudson Valley.

## *The Erie Canal and the Shift to Perishables: Post-1825*

The Erie Canal radically altered farming throughout the Hudson Valley, the Hudson Highlands included. Completed in 1825, the Canal linking the waters of the Great Lakes with those of the upper Hudson River greatly reduced long-distance freight rates and thus provided western farmers, who already benefited from higher yields, larger farms, and lower production costs, with direct access to eastern markets. “The Erie Canal robbed the farmers along the Hudson of their supremacy as food providers,” explained Ulysses Hedrick, and “permitted the establishment of the Nation’s granaries farther and farther to the west.”<sup>20</sup> Unable to compete, Highland farmers sought a new niche and once again shifted their relationship with the land. Those residing in the Black Rock Forest region, similar to those throughout the Hudson Valley, chose to let their grain fields lie fallow and instead began growing goods such as fruits, vegetables, and dairy products. Hudson Highland farmers in particular knew only too well that their proximity to New York City gave them an advantage over western farmers whose perishables would spoil during the time-consuming 365-mile journey across the Erie Canal.

In many respects, raising vegetables for market was the easiest of all agricultural transitions to make for Hudson Highland farmers. First of all, Highland residents were already familiar with vegetable cultivation. Secondly, improved river transportation sparked by the spread of steamboat service after Robert Fulton’s *Clermont* powered to Albany in 1807, enabled less costly shipment of vegetable surpluses to downriver markets. As a result Hudson Highland farmers including those in Black Rock marketed an increasing amount and wider variety of vegetables, including tomatoes, sweet corn, squash, peppers, peas, beans, watermelons, and pumpkins.<sup>21</sup> Even the potato, which was being used widely for its starch by 1840, began to figure prominently in the local marketplace.<sup>22</sup>

Along with their previous knowledge concerning vegetable cultivation, farmers in the Black Rock region were also familiar with fruit production. During the colonial era travelers visiting the Cornwall area continuously noted that nearly every homestead maintained a small orchard.<sup>23</sup> When the Erie Canal opened and western wheat flooded the New York City market, Highland farmers planted more fruit trees and began marketing the surplus. This expansion into fruit production during the 1830s and 1840s was also promoted by the well-known landscape writer and Cornwall resident A.J. Downing, whose best-selling 1845 book, *Fruits and Fruit Trees of America*, helped make the Hudson Highlands the “heart of New York fruit growing.”<sup>24</sup>



A well-documented example of this shift towards fruit production in the Highlands region is evident in the experiences of a farmer in nearby Putnam County, New York. Lying just across the Hudson River from Black Rock Forest, Isaac Oakley's farm was also "small and rocky." According to historian Field Horne, who studied the Oakley homestead in depth, "apples were Oakley's earliest and most successful foray into the New York City market." Isaac Oakley's two-acre orchard of eighty trees produced one hundred and fifty bushels worth sixty dollars in 1879.<sup>25</sup> Although apples were the most popular fruit grown throughout the Highlands, farmers like Oakley also cultivated apricots, blackberries, cherries, peaches, plums, and pears, often shipping them by steamboat downriver to New York City.<sup>26</sup> Similar fruit production continued in the Black Rock region until the end of the nineteenth century.

Along with growing perishables including fruits and vegetables, after 1825 Highland farmers also began marketing surplus dairy products in an effort to offset losses from dwindling wheat returns. Orange County butter in particular was regarded in New York City as the standard of excellence during the 1830s.<sup>27</sup> Although dairy figures for farms within Black Rock are non-existent, the Oakley farm in neighboring Putnam County again proves suggestive. According to Horne, the Oakley family milked five cows and made five hundred to six hundred pounds of butter a year, most of which was shipped downriver to New York.<sup>28</sup> And because the land within Black Rock was more mountainous than that across the river, farmers living within the Forest probably relied even more heavily on dairying than the Oakleys.

The switch to dairying throughout the Hudson Highlands affected crop cultivation in the region as well. As farmers in Black Rock began augmenting their milk, butter, and cheese production, they were forced to increase their acreage in fodder crops. Such was the case throughout the entire Hudson Valley, which by mid-century produced more hay, oats, and corn than any other crop.<sup>29</sup> Regardless of such increases in fodder acreage, by 1890 Hudson Highland agriculture was experiencing a slow but steady decline in nearly all of its gross measures: in total land in farms, in cropland, and in number of farms.<sup>30</sup>

## Hudson Highland Timber Production

Around the turn of the century the seemingly indefatigable Hudson Highland hiker William Thompson Howell wrote often about the people living in the Black Rock region. "They are fairly prosperous mountain farmers," he recorded in

his diary in 1908, “but first of all they are woodsmen.”<sup>31</sup> Howell may have exaggerated the prosperity enjoyed by these mountain residents, but he correctly understood their reliance on timber. The great majority of Black Rock residents supplemented their cultivation of crops with the cutting of cordwood. While some felled trees for home use, others chopped wood and sold it commercially as fuel for the area’s two main industries: iron and brick making. In either case, the environmental history of Black Rock is incomplete without an examination of the residents’ changing relationship with the forest itself.

### ***Rise of New York’s Lumber Industry: 1830–1850***

Since colonial times settlers along the Hudson River had cut timber in order to manufacture goods for their homes. Many Black Rock residents fabricated a variety of everyday materials from local timber including household utensils, agricultural implements, fences, and even small baskets called “bockeyes.” Along with making items for the home, Hudson Highland farmers also used the surrounding forest to produce commodities for market. Many families manufactured railroad ties, posts, pulp, and pearlash, selling them in local commercial centers such as Newburgh or shipping them downriver to New York City.<sup>32</sup> Putnam County’s Isaac Oakley, for instance, frequently shipped hoop poles to nearby Peekskill, and sold wooden baskets to neighbors during this period as well.<sup>33</sup>

Along with the woodcutting done by local families, commercial lumbering also took its toll on Hudson Highland forests. Blessed with waterways far into its forested hinterland as well as an enormous wood-consuming population centralized in New York City, the “Empire State” surpassed New England in total timber output during the second quarter of the nineteenth century.<sup>34</sup> Lumbermen arrived in the Southern Adirondack region in the 1830s only to move southward into the Hudson Highlands as railroad expansion linked the more southerly area to New York City. By 1850 New York’s infrastructure for cutting and processing timber was so advanced that it accounted for thirty percent of the lumber cut in the United States.<sup>35</sup>

### ***Fueling Highland Industry: 1850–1880***

Although many homesteaders within the Forest cut trees in order to manufacture items both for home and market, the greatest use of Black Rock wood during this period involved cutting timber for fuel. Not only was there a continual

need for wood to heat settlers' homes, but lumber was also used to power much of the industrial revolution that was spreading up the Hudson Valley from New York City. Steamboats, railroads, and the numerous factories all along the Hudson burned wood in order to power their machinery.

Cutting wood and converting it to charcoal in order to more efficiently fuel local iron furnaces was one of the most important sources of income for Black Rock families and others living in the Hudson Highlands. When Henry Hudson's diarist Robert Juet wrote in 1609 that the mountains behind Cornwall "look as if some metall or minerall were in them," he had guessed correctly.<sup>36</sup> Riddled with deposits consisting largely of magnetite, an oxide rich in iron, the Hudson Highlands quickly became dotted with furnaces during the colonial period.<sup>37</sup> The foundry at Cold Springs across the Hudson River from Cornwall was only the largest of such ironworks. Other lesser-known furnaces in the Black Rock region include the Forest O'Dean Mine, Round Pond Mine, Greenwood and Stillwell Mines, and the Rich Mine.<sup>38</sup> Highland wood fueled these furnaces, including the one that forged the great iron chain spread across the Hudson at West Point during the Revolutionary War.

After the Civil War, when cheaper ore was discovered in the Lake Superior region, ironworks in the Hudson Highlands experienced a steady economic decline. Rather than putting away their axes, however, many local residents found a substitute market for their cordwood in the numerous brick kilns that lined the Hudson River's clay banks. During the postbellum period, nearby Haverstraw was the country's leading producer of bricks, and continued to rely on cordwood to fire its ovens.<sup>39</sup> Even closer to Black Rock Forest there were numerous brick manufacturers ready to buy up local cordwood. Leonard Clark ran a brickyard in Cornwall until 1872, as did Stephen Gillis, who manufactured more than four million bricks annually.<sup>40</sup> In order to fire these kilns, settlers cut down much of Black Rock Forest at relatively short intervals of perhaps thirty to forty years.<sup>41</sup> According to contemporary scientific estimates, approximately fifty percent of the total land within the Black Rock Forest Preserve had been cleared for such purposes.<sup>42</sup>

### ***Pennsylvania Coal and the Decline of Highland Woodcutting: 1880–1928***

Similar to the opening of the Erie Canal, the discovery of anthracite coal in eastern Pennsylvania during the 1830s set in motion a major transformation in the relationship between Hudson Highland residents and their natural environment. Because it weighed less than wood and was less bulky in relation to its

energy content, and because the physical storage of cordwood caused difficulties in urban areas, coal slowly replaced wood as fuel in both the Northeast and the old Northwest during the mid-nineteenth century. In addition, coal also became the domestic fuel during the late nineteenth century in nearly every city with a population of more than 15,000.<sup>43</sup>

The expansion of railroads throughout the Hudson Valley between 1850 and 1890 further exacerbated this shift to coal as an energy source. Entrepreneurs in Newburgh, just upriver from Black Rock Forest, first proposed in 1829 the construction of a railroad line to connect their city with the coal mines of eastern Pennsylvania. When this branch line from the Erie Railroad to Newburgh was finally completed in May of 1851, it initiated a gradual decrease in the amount of woodcutting throughout the Black Rock region.<sup>44</sup> Although the era of cordwood fuel may have lasted longer in the less accessible reaches of the Hudson Highlands, by 1880 its end had begun and by 1928, when the Black Rock Forest Preserve was created, it was clearly over. By then, according to Black Rock forester Henry Tryon, the brick manufacturers of Haverstraw had also turned to coal and local households had begun using gas and electricity for cooking and heating.<sup>45</sup>

## Tourism in the Hudson Highlands: 1850–1910

As woodcutting decreased in economic importance throughout the Black Rock region, tourism rose to take its place, again altering local inhabitants' relationship with their natural world. Beginning in the late nineteenth century and lasting until the end of the first decade of the twentieth, vacationers visited the Hudson Highlands in increasing numbers. And although such tourism declined after 1910 as more and more pleasure seekers ventured farther north, vacationers nevertheless left their mark on both the land and land-use practices of the Hudson Highlands.

### *Escaping the Diseased City*

The same railroad lines that brought Pennsylvania coal to the Hudson Valley also carried vacationing passengers to the region. Some sought pleasure in the beautiful Highland scenery, but most, at least in the early years, were fleeing New York City. Outbreaks of yellow fever and malaria swept through the city before the Civil War, and cholera epidemics struck in 1832, 1848 and again in 1854. In addition, tuberculosis became so widespread and lethal throughout the urban area that it precipitated a health crisis of major proportions.<sup>46</sup>

Although physicians were the first to recommend that people leave the city, it was not long before the tourist industry joined this chorus. For instance, advertisers promoted the idea that New York was unhealthy and that vacations beyond its borders proved curative. Steamboat operators also used the fear of disease as a way to encourage passenger service upriver. Most importantly, railroad companies, which had laid track up the Hudson Valley in 1848, began portraying the New York City environs as malarial and suggested that rail trips north would be restorative. Such promotion was enormously successful, with thousands of New Yorkers traveling northward, especially during the dangerous summer months.<sup>47</sup>

### *Highlands as Healthful Retreat*

The Hudson Highlands were one of the most popular destinations for New York City vacationers during the second half of the nineteenth century. Throughout this period boosters all along the river promoted the region as healthful in an attempt to court tourists. One of the most well-known promoters was Knickerbocker writer Nathaniel Parker Willis, who after failing to find more salubrious surroundings in both Bermuda and the West Indies, finally retreated to the Highlands upon doctors' orders during the summer of 1851. There, he gradually recovered his health and in 1853 built a country estate in Cornwall that he called "Idlewild." Through weekly letters published in the *Home Journal*, which he later compiled into a book titled *Outdoors at Idlewild*, Willis publicized the rejuvenating qualities of what he called the "Highland Terrace." With New York City in the midst of a disease epidemic, and with more than fifty-thousand urbanites reading the *Home Journal* each week, anyone who could afford to follow Willis's example boarded a train and headed for the Highlands.<sup>48</sup>

With Willis's estate located on the outskirts of town and with four railroad lines making daily stops in the center of the village, Cornwall along with nearby West Point became the center of the Highlands tourist industry during the later part of the nineteenth century.<sup>49</sup> As local booster Lewis Beach wrote in 1873, "less than five-and-twenty years ago, the boarding houses in Cornwall could be numbered on the fingers. Now they are counted by scores."<sup>50</sup> That same year six thousand vacationers visited the town, many of whom spent the entire summer. According to local guide books, recreation in the area consisted of visiting the nearby mineral springs as well as eating healthy foods grown on surrounding farms.<sup>51</sup>

In his 1873 visitor's guide to Cornwall, Lewis Beach emphasized one of the area's most popular attractions—Mineral Spring—located on the southwestern border of what is today the Black Rock Forest. According to Beach, "Cornwall

possesses, in this Spring, an attraction which can, under proper management, make her equal, if not excel, Saratoga.”<sup>52</sup> Twenty years later guidebooks on Cornwall were still promoting the medicinal value of this mineral water. “The water is very cool and has an astringent taste,” explained guide-writer Addie Wright in 1892. “Its valuable properties as a chalybeate water, and its attractive surroundings, have induced hundreds of visitors to frequent this sequestered spot.”<sup>53</sup> So important was the spring to the local tourist trade that the town of Cornwall induced a chemist from the New York City Board of Health to analyze a specimen of Mineral Spring water in the early 1890s. Tourism promoters like Wright were only too happy to publicize such scientific findings. “His analysis,” Wright told her readers, “shows that the water contains 9.57 grains of salt in one gallon, and that it is especially rich in phosphate of soda, silica and bi-carbonate of iron.” She concluded her description by noting that “there is an old tradition that Indians were accustomed to resort to this spring for healing purposes, and we have heard of several instances where as a curative agent it has proved efficacious.”<sup>54</sup>

Although after 1910 healthful environs farther to the north such as Saratoga, replaced Cornwall as a tourist destination, vacationers to the Black Rock region nevertheless altered once again the relationship between Hudson Highland residents and their natural environment. Between 1850 and 1910, for instance, prices for farmland in the Black Rock region rose because increased tourism gave farmers a local market for their produce.<sup>55</sup> This, along with the fact that the year-round population of the Cornwall area was also rising, indicates that Black Rock farmers who had allowed former grainfields to lay fallow after the opening of the Erie Canal could now make a profit by increasing the percentage of their land used for agriculture. And because those fleeing the disease-ridden city expected healthful food, many farmers in the Hudson Highland region returned to growing fresh perishables on an extensive scale. In fact, so great was the demand by tourists for local produce that during the early 1870s Cornwall hotel operators were forced to import large quantities of fresh farm goods to get through the summer season.<sup>56</sup>

## The Birth of Black Rock Forest

The same qualities that drew thousands of New York City residents to the Hudson Highlands for summer vacations during the late nineteenth century, namely scenic and healthful natural surroundings, also enticed numerous wealthy industrialists to the region. One such man was James Stillman, who moved to Cornwall, in 1885. Similar to many of his wealthy business associates including

William Rockefeller, Edward Harriman, and J.P. Morgan, Stillman desired to build a family estate along the banks of the Hudson River. After being snubbed by residents of Tuxedo Park, who regarded his wealth as too recently acquired, Stillman decided to establish his own elite community in the nearby town of Cornwall, New York, where he had attended boarding school as a boy. He first purchased a large tract of land stretching westward from Storm King Mountain, and continued to acquire adjacent properties throughout the first two decades of the twentieth century with the hope that someday he would transform them into an exclusive compound for his family and friends.<sup>57</sup>

James Stillman never realized this dream. Upon his death in 1918 the property around Storm King remained undeveloped and reverted to his youngest son, Ernest, who at the time practiced medicine in the village of Cornwall. Although not yet built upon, the Stillman land was in a ruinous state.<sup>58</sup> Like most of the Highland forests during this period, it had been cut over numerous times and the timber used to fuel both local iron furnaces and the brick kilns of nearby Haverstraw. The elder Stillman, for instance, often leased the wood rights to his property to local woodcutters. And although Ernest also desired to gain financially from the forest on the Black Rock property, his approach to logging was radically different from that practiced by his father. Rather than selling timber rights to local woodcutters, who often logged indiscriminately because they did not own the land, the younger Stillman turned to the emerging field of professional forestry as a means of making his land more productive.

### ***Conservation Comes to the Hudson Highlands***

The ideas of Gifford Pinchot, the first American trained as a professional forester, appealed greatly to Ernest Stillman. Unlike many Americans at the turn of the century, Pinchot took a long-term view of the country's natural resources and promoted a conservation ethic that came to be known as "wise use." According to this school of thought, the country's resources—especially its timber reserves—should be used in an efficient manner that best promoted "the greatest good of the greatest number for the longest time."<sup>59</sup> Such a philosophy also appealed to President Theodore Roosevelt, who appointed Pinchot chief of the Division of Forestry in the Department of Agriculture in 1898, and head of the newly created United States Forest Service in 1905. Pinchot's conservationist ideas likewise interested Richard Thornton Fisher, director of the renowned Harvard Forest in Petersham, Massachusetts. It was Fisher who, while walking the Stillman property in 1926, recommended that Ernest establish a demonstration

forest in order to put Pinchot's vision into practice. Two years later Ernest Stillman created Black Rock Forest.<sup>60</sup>

Instead of fulfilling his father's dream of constructing an elite community along the banks of the Hudson River, Ernest Stillman thus decided to create an experimental forest that would illustrate a more efficient means of timber production. As Black Rock's first bulletin stated in 1930, the Forest was to function as a "laboratory for research in problems of forest management and for the demonstration of successful methods in practice."<sup>61</sup> To help accomplish this, Stillman added to the original parcel of land inherited from his father until his property covered 3,750 contiguous acres in the Hudson Highlands. He also personally funded numerous scientific experiments, and ensured the Forest's longevity by endowing Black Rock after his death in 1949 and willing it to his alma mater, Harvard University.

Harvard maintained the Forest, along with its more famous counterpart in Petersham, until 1989 when the University finally put Black Rock up for sale. In order to continue its role as a field station for research and education, and to stop it from being developed, a consortium of New York City institutions took over the administration of the Forest in 1989. Comprised of organizations including the American Museum of Natural History, Columbia and New York Universities, and the New York Academy of Sciences, the consortium continues to administer the Forest as a field station, research institution, and educational facility. The mission of the Consortium is to promote scientific research and excellence in education, while carefully managing the ecosystem of the Black Rock Forest Preserve.

## The Roots of Highland Preservation

Today much of the Hudson Highlands' past remains hidden from view, its history covered by the regrowth of forests on either side of the Hudson River. Motorists crossing the Bear Mountain Bridge, as well as the thousands of hikers, bikers and birders who visit the Black Rock Forest Preserve and the Hudson Highlands each year often fail to notice the crumbling stone walls bordering former grain fields, the unpruned apple, pear, and cherry trees standing conspicuously in a grove of oaks, or the sudden depressions in the landscape that long ago served as charcoal pits. Instead these outdoor recreationists marvel at the unusual abundance of preserved land located just an hour's drive north of New York City.

Too often these visitors to the Hudson Highlands, as well as historians writing about the region, look to a handful of philanthropists as responsible for land preservation along this stretch of the Hudson River. They posit E.H. Harriman as



having established Bear Mountain and Harriman State Park and Ernest Stillman as protecting Black Rock Forest from commercial development. Yet as the environmental history of Black Rock Forest indicates, land preservation in the Hudson Highlands has as much, if not more, to do with the evolving relationship between the residents of the region and the natural environment they inhabit.

The natural wonders of the Hudson Highland drew a whole host of European people to the region, beginning with Henry Hudson. Farmers were lured by fertile soil, woodcutters by plentiful timber, and tourists by the scenic juxtaposition of river and mountain, farm and forest. These settlers and visitors in turn altered the natural landscape. Farmers cleared fields, woodsmen cut forests, and tourists encouraged the construction of boarding houses, railroad lines and large estates in towns and villages like Cornwall and West Point. Such changes in the natural landscape ultimately reshaped the society inhabiting the Hudson Highland environment. While fresh produce from local farms helped fuel tourism in the area, extensive woodcutting in places such as Black Rock Forest threatened both the scenic idyll that so many vacationers found so appealing as well as the long-term viability of the lumber industry itself. In response, Ernest Stillman brought the forestry philosophy of Gifford Pinchot, foremost champion of the Progressive Era conservation movement, to the region. This movement eventually reshaped the Hudson Highland landscape once again by encouraging the preservation of large parcels of land.

Thus Ernest Stillman and others who helped protect land in the Hudson Highlands are only the most recent expression of a long history of causal relations between residents of this region and their natural environment. It is this environmental history, not merely the philanthropic actions of a handful of progressive industrialists, that today's visitors should keep in mind when traveling through the Hudson Highlands. Only then will the view from the Bear Mountain Bridge, one that embraces huge swaths of preserved land, truly come into focus.

## Notes

1. For a good introduction to the field of environmental history, see Richard White, "Environmental History, Ecology, and Meaning," *Journal of American History*, no. 76 (1990): 1111.
2. Lewis Beach, *Cornwall* (Newburgh, New York: E.M. Ruttenber & Son, Printers, 1873), 7.
3. For a description of Cornwall's earliest permanent settlers see Martha Schiff, In *Celebration of Cornwall: 200 Years* (Cornwall, New York: The News of the Highlands, Inc., 1976), 2. For information on the incorporation of the town of Cornwall see E.M. Ruttenber, *History of the County of Orange* (Newburgh, New York, 1875) 104.
4. Henry Tryon, "The Black Rock Forest," *Black Rock Forest Bulletin* (Cornwall-on-Hudson, New York), no. 1 (1930): 11.

5. Although in her book *The Hudson River Highlands* (New York: Columbia University Press, 1991) Frances Dunwell claims the Black Rock region "developed about two hundred years after the colonial manors to the north and south," other sources indicate that the region experienced a steady, if gradual, influx of settlers during the colonial period. See especially Tryon, "The Black Rock Forest": 12. For Dunwell's argument see, *The Hudson River Highlands*, 10.
6. Tryon, "The Black Rock Forest": 12.
7. Tryon, "The Black Rock Forest": 12.
8. Hugh Raup, "Botanical Studies in the Black Rock Forest," *Black Rock Forest Bulletin* (Cornwall-on-Hudson, New York), no. 7 (1938): 69.
9. Tryon, "The Black Rock Forest": 11. Raup, "Botanical Studies in the Black Rock Forest": 6.
10. John Thompson, *Geography of New York State* (Syracuse: Syracuse University Press, 1966), 165. Thompson argues that there was little regional variation in the pioneer agriculture of New York.
11. David Cohen, *The Dutch-American Farm* (New York: New York University Press, 1992), 112.
12. Thompson, *Geography of New York State*, 165.
13. Cohen, *The Dutch-American Farm*, 112.
14. Mark Carnes, "The Rise and Fall of a Mercantile Town: Family, Land and Capital in Newburgh, New York 1790-1844," *The Hudson Valley Regional Review* Vol. 3, no. 2 (September 1985): 21-22.
15. Thompson, *Geography of New York State*, 154.
16. For a good description of New York City's role in this shift to commercial agriculture in the Hudson Valley, see Ulysses Hedrick, *A History of Agriculture in the State of New York* (New York: Hill and Wang, 1933), 331-338.
17. Thompson, *Geography of New York State*, 154.
18. Hedrick, *A History of Agriculture*, 356.
19. Stephen Spurr and Burton Barnes, *Forest Ecology* (John Wiley & Sons Publishers, 1964), 444.
20. Hedrick, *A History of Agriculture*, 266.
21. Cohen, *The Dutch-American Farm*, 118.
22. Field Horne, "Life on a Rocky Farm," *The Hudson Valley Regional Review* Vol. 7, no. 1 (March 1990): 35.
23. Cohen, *The Dutch-American Farm*, 116.
24. Hedrick, *A History of Agriculture*, 394. Also see Cohen, *The Dutch-American Farm*, 118.
25. Field Horne, "Life on a Rocky Farm," 39.
26. Hedrick, *A History of Agriculture*, 39, 392.
27. On Orange County butter, see Hedrick, *A History of Agriculture*, 364; Carnes, "Rise and Fall of Mercantile Town": 23; and Thompson, *Geography of New York State*, 166.
28. Horne, "Life on a Rocky Farm," 37.
29. Cohen, *The Dutch-American Farm*, 125 and Thompson, *Geography of New York State*, 166, 177.
30. Thompson, *Geography of New York State*, 181.
31. William Thompson Howell, *The Hudson Highland: William Thompson Howell Memorial*, Vol. 1 (New York: Lenz & Riecker, Inc., 1933), 115.
32. Hedrick, *A History of Agriculture*, 137.
33. Horne, "Life on a Rocky Farm," 40.
34. Michael Williams, *Americans and their Forests: A Historical Geography* (New York: Cambridge University Press, 1989), 178.

35. Thompson, *Geography of New York State*, 98.
36. Quoted in Schiff, *In Celebration of Cornwall*, 36.
37. Ransom, *Ironworks of the Ramapos* (New Brunswick: Rutgers University Press), 3.
38. For information on iron furnaces in the Cornwall area see Schiff, *In Celebration of Cornwall*, 36; Beach, *Cornwall*, 173; and Peter Kick, *Fifty Hikes in the Hudson Valley* (Woodstock, Vermont: Backcountry Publications, 1994), 60.
39. For information concerning the brick-kilns of Haverstraw see Dunwell, *The Hudson River Highlands*, 151; and Solvitur Ambulando, ed., *In the Hudson Highlands* (New York: Appalachian Mountain Club, 1945), 227.
40. Beach, *Cornwall*, 171.
41. Raup, "Botanical Studies in the Black Rock Forest," 70.
42. Black Rock Forest Executive Director William Schuster, interview by author, Cornwall, New York, 26 July 1995.
43. Williams, *Americans and their Forests*, 334.
44. Ruttenber, *History of the County of Orange*, 223.
45. Henry Tryon, "A Portable Charcoal Kiln," *Black Rock Forest Bulletin* (Cornwall-on-Hudson, New York), no. 3: 13.
46. Dunwell, *The Hudson River Highlands*, 83-89.
47. Dunwell, *The Hudson River Highlands*, 83-89.
48. Dunwell, *The Hudson River Highlands*, 85-87.
49. The four rail lines stopping in Cornwall were the Ontario & Western, the West Shore, the New York Central, and the Erie Short Cut.
50. Beach, *Cornwall*, 153.
51. Schiff, *In Celebration of Cornwall*, 11.
52. Beach, *Cornwall*, 52.
53. Addie Wright, *The Standard Guide of Cornwall* (Cornwall: Thomas Pendell Publisher, 1892), 17.
54. Wright, *The Standard Guide of Cornwall*, 17.
55. Beach, *Cornwall*, 166.
56. Beach, *Cornwall*, 166.
57. Dunwell, *The Hudson River Highlands*, 123.
58. George Trow, "Annals of Discourse: The Harvard Black Rock Forest," *The New Yorker*, (11 June 1984): 49.
59. Roderick Nash, *Wilderness and the American Mind* (New Haven: Yale University Press, 1967), 130.
60. Trow, "Annals of Discourse," 65.
61. As quoted in Trow, "Annals of Discourse," 54.