

Colby Hill Ecological Project Historical Geography Report 2008

INTRO

For ten years, the Colby Hill Ecological Project has documented the natural history of 680 acres of conserved lands in Lincoln and Bristol, Vermont. Though historically characterized by the dairy farms that dotted its hillsides in years past, *little* else of this region had previously been studied. However, through biodiversity inventories and monitoring projects, researchers have since established a working understanding of the landscape and ecosystems that currently inhabit the lower west-slope of the Green Mountains.

This eight week study is an extension of the Project's endeavors to uncover and document the region's history. Its focus on the cultural history of the region- rather than the natural history, which has been the focus of years past- serves to emphasize the interconnectedness of human activity and landscape *change*. By reconstructing the chronology of human disturbances on the Guthrie-Bancroft property, the study aims to provide a historical context for the current condition of the area's ecosystems. It also seeks to emphasize the inevitability of landscape change resulting from various land use decisions, past and present, and the importance of conscientious land management practices.

METHODOLOGY

The Guthrie-Bancroft Farm contains 403 acres of forestland and 33 acres of meadow in the northwestern corner of Lincoln and the southeastern-most extent of Bristol. Purchased by Lester and Monique Anderson in 1965, the property has essentially been left to the rewilding process for almost half a century now, as agriculture on it was abandoned before the couple's arrival and forest management for timber ended in..... Consequently, the 43 years of the Andersons' ownership have witnessed a marked recovery of the parcel's forests. However, hints as to the land's historical usage are omnipresent, as stone walls and stone piles dot the forest floors, and because the very composition of today's forests is a product of past activities. To uncover the series of events and eras that has shaped the present landscape, this study gathered a variety of historical records including written histories, oral histories, historical maps and censuses, property deeds, aerial photos and GPS data.

Undoubtedly, the most valuable resources in the early stages of this project were written town and state histories. The variety of written histories from different time periods provides a thorough and often entertaining narrative of the cultural and economic goings-on in Vermont and Lincoln since the late 17th century. At the same time, the tones of these documents are important in providing a chronology of changing attitudes toward landuse.

With the general cultural and agricultural histories of the region thus accounted for, the next step was to narrow the scale of research down to the Guthrie-Bancroft Farm in particular. The Lincoln Town Clerk's office proved to be the most fruitful—if time consuming—resource for this aspect of the project. Though cumbersome, tracing the deed history of the Guthrie-Bancroft Farm back from the Andersons revealed not only the

names of previous residents, but also trends in the land's value, the viability of farming on it, and patterns of consolidation. Certain deeds, in their written descriptions of the property, also indicated specific tools and livestock to be transferred, thereby providing concrete indications of the activities, and their scale, taking place on the farm on a given year.

Beyond property deeds, specific information regarding the agricultural practices of any given landowner can be found in the Nonpopulation Census. This census, which was recorded in the decades between 1850 and 1870, quantifies 44 separate aspects of agricultural activities, from the value of tools and livestock to the quantity and types of grains produced. Though not readily available via internet or most library stacks, the Nonpopulation Census provides a detailed depiction of agricultural trends on the scale of single farmsteads. With the ownership information uncovered in the deeds research, it was possible to identify the exact yields of the two parcels that historically divided what is now owned entirely by the Andersons.

Oral histories were collected on a casual rather than formal basis, though perhaps they could have played a greater role in comprising this narrative. In a meeting between the Andersons, a representative from Vermont Family Forests, the researchers for this project and an ex-tenant from the Guthrie farm, several oral histories were recorded. The cultural perspectives and first hand accounts of agricultural activity and economic change revealed through this interview process are invaluable to this account of the farm's past. While the census and property deeds data contributed quantifiable information about the farm's size and agricultural yields, oral histories provide first hand, cultural perspectives on such activities and the economic processes that influenced them.

Finally, a combination of field work using a GPS and desk work georeferencing historical aerial photographs was employed in an effort to reconstruct the spatial organization of the farm's activities. Several trips to the farm revealed numerous stone walls, stone piles and old fences. By overlaying this data on top of historical photos and maps, we could begin to piece together the likely locations of such activities as pasturing, cultivation, and transportation networks. One of the benefits of this process was that, by directly relating historical manmade features on the farm to natural microtopological ones, it really emphasized the connection between environmental factors and land use.

FINDINGS- A Brief History of Lincoln, VT

It should be noted here that the omission of a precolonial history of Lincoln is due not to any editorial decisions of the researchers, but to a general lack of reliable information on the time and place. However, it is reasonable to speculate that, like most upland areas, Lincoln was likely used seasonally by Native Americans as a hunting ground.

Background research on the post-colonial history of Lincoln revealed the same patterns of economic and cultural change that have come to characterize Vermont as a whole. The hill town was settled in 1780, though permanent settlements did not arise until five years later, and by the census of 1800 there were reportedly only 97 individuals living there. Agriculture was largely subsistence based at the time, and the clearing of forests tended to serve the purposes of "improving" the land for agricultural activities and for the manufacturing of potash; the clearing of forests for timber was of negligible

importance until the later half of the 19th century (CITE). Despite the hardships of the early settlement years, Lincoln's population grew steadily throughout the 19th century, as the town's proximity to the New Haven River attracted the construction of several mills between 1825 and 1830. By 1830 Lincoln's population had reached 639.

As a whole, the town of Lincoln appears to have been bypassed by the merino sheep craze that afflicted much of Vermont, and certainly Addison County, during the years between 1830 and 1850. Interestingly, despite the fervent merino sheep trade in neighboring towns, and the existence of enough riverside property to sustain a substantial mill industry, it was iron works that comprised the core of the local economy up through the 1850's. This was during a time in which the iron industry statewide was actually in decline, giving way to the burgeoning sheep and dairy industries. The reported explanation for the fortitude of Lincoln's iron industry was that, unlike the rest of the state, which suffered from the inefficiency of low quality ore, Lincoln imported its from the Adirondacks, a region renowned for the high iron content of its ore (CITE).

Ultimately though, Lincoln's iron industry was surpassed, and by 1886 more than a third of the town was at least indirectly employed by the mill industry instead. This year, as reported in H.P. Smith's *History of Addison County*, signified the height of Lincoln's industrial prosperity, a statement supported by the 1880 census, which recorded the greatest population in Lincoln's history at 1,367 people. Around this time, Lincoln also housed 12 schools, three post offices, expanding sugaring and dairying industries and a profitable lumber company (CITE). And in 1899, just as advancements in technology allowed sweet cream and milk to become more profitable than butter, Lincoln opened its own creamery, which would purchase butterfat and butter tubs from local producers until 1942 (CITE).

Despite Lincoln's industrial boom in the late 19th century, the town suffered the same downward economic trends that afflicted the state as a whole during the early half of the 20th century. Just as the number of farms statewide was beginning to decline, as cropland was left to return to woodland and pasture, and as the number of horses and sheep per farm dropped exponentially, the Lincoln Lumber Company went bankrupt and two of the town's schools closed their doors (CITE). The Creamery closed in 1942, and in the following decade the town would close three more schools and two post offices. By 1960, the population had dropped to 481, the lowest in more than a century, and by the end of the 1960's, there would be neither a post office nor a school in Lincoln. The 60's in particular marked a turbulent decade for local farmers as the dairy industry began a mandatory transition from cans to bulk tanks, a costly transition that put many small dairies out of business (CITE).

When Lincoln's population began to show signs of recovery in 1970, the impacts of the past decade's economic restructuring manifested in new ways, and as interviews highlighted, the newcomers of this era were distinct from its old-time residents in both their livelihoods and attitudes toward the land. Many of these newcomers, like the Andersons, were foreigners who found little financial viability- and indeed little necessity- in agriculture and had settled in Lincoln to pursue different natural amenities than settlers of the past. Thus, while population did expand, agricultural decline in hill towns continued throughout this era. For Lincoln, this meant that within 6 years of the federal government's whole herd buyout of cattle in 1986, dairy farming ended entirely(CITE).

The History of Proprietorship and Agriculture on the Guthrie-Bancroft Farm

In many ways, the narrative that unfolds from the deed history of the Guthrie-Bancroft farm is similar to the story just told in that it conveys the same pattern of rise, decline, and subsequent rewilding. While the boundaries of the current parcel are the product of more than a hundred years of alternately splitting and consolidating a number of original lots, (deals often negotiated by geographically removed proprietors) a number of facts about the farm's earliest years of settlement are known. H.P. Smith's *History of Addison County*, tells us that at least part of the farm was first settled in 1795 by a man named David Hayes. This makes the farm, or this portion of the farm, one of the earliest locations to be settled in Lincoln, as there were reportedly only three families and a handful of men actually residing in the town as of 1796 (Smith).

Unfortunately, from this date until the mid-nineteenth century there are few primary sources related to this, the northwest, region of Lincoln; until 1824, when it was annexed by Lincoln, the area was a part of the Town of Bristol, and it is unclear whether its records changed hands, remained in Bristol, or were lost entirely, as they never surfaced during the course of this research, despite repeated efforts to find them. However, we do know that this seeming blank period in the farm's history was a time of farm consolidation in other parts of Lincoln, and that the same must be true for the farm itself. When georeferenced with current town boundary maps, a map of original proprietors' grants shows that the Guthrie farm contains two 110 acre second division lots, initially belonging to Stephen and Uriah Fields, and that the Bancroft farm contains land from second division lots 20 through 23. By 1850, however, records show that all the land was owned by only two men and that one of them, Nathaniel Gove, had been buying up adjacent land for thirty years.

Arguably, the following decades encompass the height of the Guthrie-Bancroft farm, and fortunately, details of this era of ownership and agriculture are readily accessible. This owes to the Nonpopulation Census, which was taken from 1850 to 1870, and to the level of detail in some of the deeds from the time. Because of these records, we know that, in spite of industry's downward trend at the time and Lincoln's general isolation from the craze, both the Guthrie and Bancroft farm owned a significant number of sheep in 1850- 170 on the Bancroft farm and 111 on the Guthrie farm. However, perhaps trailing the trends of the sheep industry by a few years, there were no sheep recorded on either property a decade later (also perhaps as a consequence of the Civil War), and in 1870 there were less than two dozen on each.

In addition to sheep farming, both farms were involved in two of the most rapidly developing agricultural activities of the time- dairying and sugaring. Containing this insight is a deed to Samuel O'Bryan, dated in 1872, which mentions that along with the property, he purchased all the stock farming, dairy, and sugaring tools on the premises. This was apparently a worthwhile investment; according to the census records of 1870, the Guthrie farm (or the O'Bryan farm at the time) produced 750 pounds of butter and 1100 pounds of maple sugar. Similarly, in 1860, records show that Nathaniel Morrill's farm (now known as the Bancroft farm) produced 200 pounds of butter and 1000 pounds of maple sugar. According to these same records, both farms produced more than 1500 pounds of cheese that year.

According to Lincoln's birth and death records, Nathaniel Morrill died in 1891 at the age of 97, leaving his property to be "seized and possessed" by the town and leading us to the conclusion that he must have had incurred substantial debt on the farm by that point. Likewise, the O'Bryan farm was sold in 1903 and neither of them experienced a substantially long tenure again until the Guthrie and Bancroft families bought the parcels in 1916 and 1918, respectively. Thanks to a deed from Walter Kimball to Charles Bancroft, we know that there was some sugaring taking place on the farm, and that they still owned some livestock. However, there is no evidence to suggest that agricultural intensity ever reached the same heights it did during the mid to late 19th century. Though the first aerial photos of the region weren't taken until 1942—just a few years before the Andersons purchased the farm and ceased using it for production entirely—these earliest photos show that reforestation had already begun around the periphery of cultivated areas. Subsequent photos show the same trend of consistent and extensive rewilding to an even greater extent, especially beginning in the 1960's, when the region experienced some of its greatest economic hardships and the viability of small scale farming began to dwindle.

Though the Guthrie-Bancroft farm has been left largely to the process of rewilding, it still bears numerous remnants of its agricultural past. For example, field work revealed more than a few major stone walls, some of which align exactly with the boundaries of original lots, indicating their age to be over 100 years, before parcels were ever split or consolidated. Stone piles were also located and used as indications of land use; because the process of clearing land was so slow and tedious at the time, only areas of cultivation were cleared of the smallest rocks, while areas used for pasture or grazing were cleared of only larger rocks.

DISCUSSION

As the previous section points to, the Guthrie-Bancroft Farm serves as a prime example of the land use and landscape changes that have come to characterize many of Vermont's hill farms throughout the past two centuries. For example, while the deed history of the Bancroft farm remains unfinished, Nathaniel Gove's pattern of purchasing smaller parcels around one central one seems to have been a common practice in the early 1800's. This pattern suggests that during this era proprietors were redistributing their original lots between one another to create, instead of three spatially isolated parcels, a single, contiguous one that was more efficient to manage. The findings also demonstrate an important link between land use, land tenure and economic change; the consolidation of parcels and fast rate at which the property changed hands in the years following the sheep and dairy booms seems indicative of a drastic shift in people's perception of agricultural viability and preferred land use. While this era of slowed productivity can be attributed partially to poor or unsustainable management practices, the centrality of policy changes and other outside factors to the era's economic decline cannot be understated. From tariff rates, which when favorable gave rise to the merino sheep trade and when lifted spelled its doom, to the bulk tank regulations that priced out many small scale dairy farmers, the effects of national policy measures have been played out time and time again on Vermont's hill farms.

While it can be said that, by and large, the Guthrie-Bancroft farm followed many of the same economic ebbs and flows that Lincoln as a whole did, in some important ways the farm differs from larger-scale trends. In this regard, this project really

highlighted the ways in which spatial organization in and around the farm played a role in determining its land use potentials. For example, while town histories depict the iron and mill industries as backbones of the economy on a town-wide scale, the history of the farm itself conveys a very different story. After all, the farm didn't share the same proximity to the New Haven River, which effectively gave rise to industry in the mid to late 19th century. The farm did, however, benefit from its proximity to (relatively) major transportation routes, which could have feasibly allowed for easy access to markets in Bristol and Starksboro. Field work also revealed an extensive network of old roads and trails, especially concentrated in the northeastern corner of the property, that connected with town roads. This detail, which conveys the centrality of the Guthrie-Bancroft farm to important transportation networks, perhaps helps to explain the success of both Samuel O'Bryan and Nathaniel Morrill's dairy and sheep endeavors, especially when compared to the rest of Lincoln at the time.

The farm and its activities did not align solely around man-made features like roads, however. While they were not the central focus of this research, it quickly became clear that natural features such as the farm's soil and mineral composition, drainage, and microtopography played equal, if not greater, roles in determining which activities were plausible and where. Perhaps the most striking evidence of this connection is the obvious concentration of both homesteads and cultivation in the center of the now consolidated parcel, which the georeferenced aerial photos highlighted. Here, a large outcrop of rock (dolomite?) provides a steady supply of lime in the soil, thus making the area prime for cultivation. Indeed, the continued presence of apple trees and carefully constructed stone walls in this section of the property points to its past agricultural importance and use. Other areas of the farm appear to have been less suited for cultivation, due to factors such as their slope, drainage, or proximity to the homestead. Pastured areas were likely further from the fertile soil at the center of the property, and were cleared less carefully than the cultivated areas, leaving smaller rocks on the field. Alternatively, given the history of sheep farming on the premises, some areas unsuited for cultivation were likely reserved for breeding purposes, as some now barely discernable, low lying fences suggest. Finally, some areas of the property are so poorly drained that early proprietors seem to have neglected to "improve" them much at all. Impressive stone walls stop abruptly where the ground becomes soft and permanently damp, and fence posts were either never placed there or have long since rotted away. One field visit in particular pointed out the complications in making use of such varying terrain and conditions, as it was evident in this visit, that different techniques were still employed to cut the grass in these poorly drained areas.

Overall, this analysis of census data, field studies, and the deed history supports the idea that these farms probably reached their productive zenith between 1850 and 1900. It is relatively clear that the farm experienced decline following the tenures of Nathaniel Morrill and Samuel O'Bryan, due, as mentioned early, to both overuse within the farm and policy changes outside of it. Furthermore, that many of the internal features that are visible today plausibly relate to livestock and livestock breeding suggests that the era in which these activities predominated was the one in which the landscape was most drastically altered. It is unlikely that many of the subsequent proprietors contributed to the construction of the stone walls and fences we see today, as their agricultural needs did

not require them. There is little evidence, therefore, that the decades of Guthrie-Bancroft ownership saw much resurgence or expansion of agricultural activities at all.

Thus, despite the irregularly high yields of wool and cheese on both farms between 1850 and 1900, those activities, along with the chronology of their rises and falls, are what make the Guthrie-Bancroft farm a prime example of agricultural trends in the Lincoln region. With the assertion that this farm and its story are common to the region, however, many questions remain to be answered and many new ones are raised. Ultimately, further study is needed to paint the full picture of this land's past and to place it within the context of Vermont's rich agricultural history.

RECOMMENDATIONS FOR FUTURE STUDY

A relatively simple addition to this research would be to take a closer look at the Nonpopulation Census data, taking into account fluctuations in agricultural yields amongst other residents of Lincoln. This would lend further depth to the understanding of the Guthrie-Bancroft's financial position relative to the rest of the town; whether Nathaniel Morrill and Samuel O'Bryan did indeed run two of the larger operations in the Lincoln, and whether the timing of their major land use changes can also be seen in the practices of other farmers. In the same sense, patterns in property values, which are typically noted in historical deeds, could be explored and identified in the future.

Another area to explore is the difference between the Guthrie and Bancroft farms themselves. While they seem to have produced similar quantities and products during the mid to late 19th century, aerial photos and a mere walk through the two properties today clearly suggest that their histories diverged substantially after that. By the 1940's, for example, the Guthrie Farm had experienced substantially more reforestation than the Bancroft Farm. As of now, however, there is no explanation for this difference and no indications as to the activities taking place on either parcel in the years directly leading up to their consolidation. This could potentially be addressed in interviews with Amon Guthrie.

The specifics of the earliest years are also still somewhat vague in that we found no data regarding the first clearing of the forests, the first cultivation of the land, or the first permanent settlements established on it. It is possible, though perhaps not likely, that another deed search could prove more fruitful than the last. Other resources regarding this aspect of the parcel's history should be explored. Further field work would also be beneficial. Stone piles were not recorded in the phase of the study, but their locations and any variations in stone sizes in them could be extremely helpful in placing particular activities, such as cultivation or pasturing, in particular areas of the lot.

Finally, it is unfortunate that the project's oral histories were limited to a small group of people. Many more were involved in creating the farm's history and their reflections on its past would contribute important information and character to this story. This recommendation, though labor intensive, would perhaps be the most fruitful and rewarding to pursue in the future.

<u>1850-1870 Nonpopulation Census Data</u>	Nathaniel Morrill (1850)	Nathaniel Morrill (1860)	Nathaniel Morrill (1870)	Nathan Gove (1850)	L. B. Morrill (1860)	O'Bryan/Downing (1870)
	Bancroft			Guthrie		
Improved Land (ac)	150	125	280	100	125	125
Unimproved Land (ac)	59	75	20	100	75	60
Cash value of Farm	2800	3000	6000	3000	3000	5000
Value of farming implements and Machinery	50	75		1000	50	400
<i>Total amount of wages paid during the year including board</i>	<i>n/a</i>	<i>n/a</i>		<i>n/a</i>	<i>n/a</i>	<i>125</i>
Horses	2	4	2	3	8	2
Milch Cows	4	15	16	6	15	12
Working Oxen	4	2	2	4		2
Other Cattle	1		12	4		10
Sheep	170		16	111		22
Swine	2	2	2	1	2	3
Value of Live Stock	570	800	1300	350	800	1400
Wheat, bushels of		30	20	48	50	60
Indian Corn, bushels of	10		15	100		115
Oats, bushels of		150	50	75	175	
wool, lbs of	477			300		100
Peas & Beans, bush. Of				3		
Irish Potatoes, ubsh. Of	200	75	100	300	50	150
Buckwheat, bushels of	12	15		25		
Value of Orchard Products in Dollars	10			12	10	
Butter, lbs. of	600	200		200	200	750
Cheese, lbs. of		2000		300	1600	
Hay, tons of	45	30	60	50	40	45
Maple Sugar, lbs. of	700	1000	500		300	1100
Beeswax and Honey, lbs. of				75		
Value of Animals Slaughtered	20	30	100	60	40	85
<i>Forest Products in dollars (1870)</i>	<i>n/a</i>	<i>n/a</i>	<i>50</i>			<i>45</i>
<i>Estimated Value of all Farm including betterments and additions to stock (1870)</i>	<i>n/a</i>	<i>n/a</i>	<i>875</i>			<i>1380</i>

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